

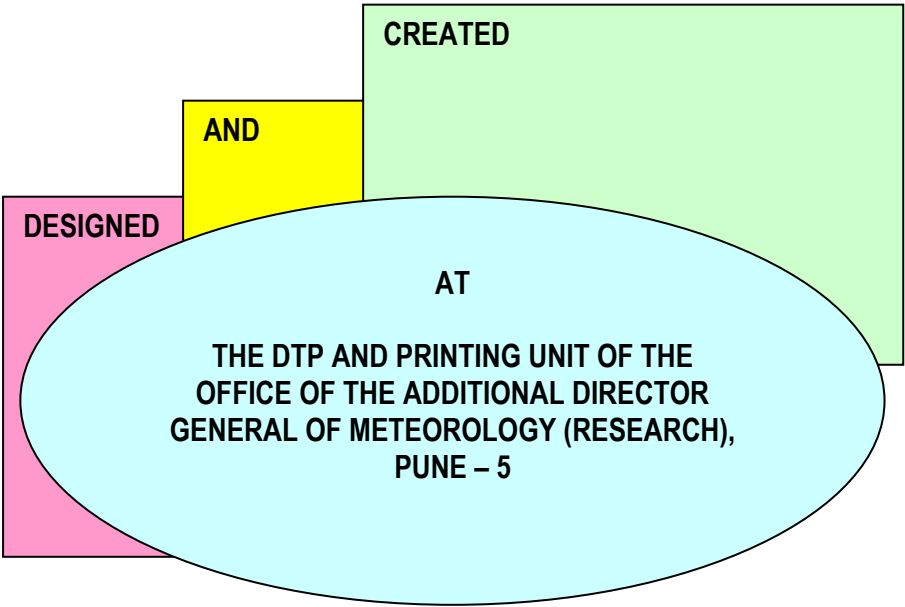
# RADIOSONDE AND RADIOWIND NORMALS



GOVERNMENT OF INDIA  
INDIA METEOROLOGICAL DEPARTMENT

1730 HRS

Issued by  
THE NATIONAL CLIMATE CENTRE  
Office of the  
Additional Director General of Meteorology (Research),  
Pune



## P R E F A C E

The India Meteorological Department has published climatological normals of important Surface Meteorological parameters from time to time since 1904. The first publication of upper air normals based on the data from 1971 to 1980 for 25 RS/RW stations was brought out in 1988. Subsequently more RS/RW stations have been added to the upper air network and data availability for existing stations have also been increased. Therefore a need, to bring out a second publication by incorporating the recent data and taking all the existing stations into consideration, was felt and accordingly a decision for this publication was taken during AMR meeting held at Ahmedabad on 25.2.2000.

This publication, second in the series brings out the climatology of upper air. It contains the mean monthly average values of upper air temperature, heights of pressure surfaces, dew point temperature, scalar wind and zonal and meridional wind components at standard and additional levels. The radiosonde data collected for the period 1971 to 1990 for 35 Indian RS/RW stations have been processed and monthly averages of these upper air parameters for 00 and 12 UTC hrs have been computed and included in the publication. Also the extremes of temperatures obtained at the different levels, the year of their occurrence and other statistical parameters have also been brought out in the publication. It is hoped that the publication will find use in operational and research activities in Meteorology.

I would like to acknowledge the contributions of Dr. S. K. Dikshit, Dr.(Smt.) B. Shyamala, Shri C.D. Padmanabhan, Shri. P. M. Gulhane, Shri. N. D. Sable, and Shri. P. Abraham in bringing out this publication.

New Delhi  
September, 2003

**R.R. Kelkar**  
Director General of  
Meteorology

## THE LIST OF RS/RW STATIONS

The index number and names of stations taking RS/RW observations at 0000 UTC and 1200 UTC are given below

S. No.	Index No.	Station
1	42724	Agartala
2	42647	Ahmedabad
3	43311	Amini
4	43295	Bangalore
5	42971	Bhubaneshwar
6	42667	Bhopal
7	43014	Chikalthana (Aurangabad)
8	43279	Chennai
9	43192	Goa (Panjim)
10	42379	Gorakhpur
11	42361	Gwalior
12	42410	Guwahati
13	43128	Hyderabad
14	43041	Jagdalpur
15	42339	Jodhpur
16	43346	Karaikal
17	43353	Kochi
18	42809	Kolkata
19	42369	Lucknow
20	43285	Mangalore
21	43185	Machilipatnam
22	42314	Mohanbari
23	43369	Minicoy
24	43003	Mumbai
25	42867	Nagpur
26	42182	New Delhi
27	42101	Patiala
28	42492	Patna
29	42779	Pendra Road
30	43333	Port Blair
31	42700	Ranchi
32	42397	Siliguri
33	42027	Srinagar
34	43371	Thiruvananthapuram
35	43150	Visakhapatnam

## SYMBOLS USED IN THE FORMAT

<b><i>N</i></b>	Number of observations on which the mean is based.
<b><i>P</i></b>	Pressure, given to the nearest whole millibar for surface, freezing level and tropopause levels.
<b><i>H</i></b>	Altitude of isobaric level, given in geopotential meters.
<b><i>T</i></b>	Mean temperature correct to the first place of decimal in degree Celsius.
<b><i>TX</i></b>	The highest temperature in degree Celsius at the level for the month.
<b><i>TN</i></b>	The lowest temperature in degree Celsius at the level for the month.
<b><i>TD</i></b>	Mean Dew point temperature correct to the first place of decimal in degree Celsius.
<b><i>DDD</i></b>	Mean resultant wind direction given as the number of degrees from true North.
<b><i>VM</i></b>	Mean wind speed in metres per second irrespective of direction.
<b><i>VR</i></b>	Direction in degrees from North and velocity in meters per second of the resultant mean wind (vector mean).
<b><i>SDHP</i></b>	Standard deviation of Altitude.
<b><i>SDTT</i></b>	Standard deviation of Temperature.
<b><i>YRTX</i></b>	The year in which the highest temperature has been recorded for the available period.
<b><i>YRTN</i></b>	The year in which the lowest temperature has been recorded for the available period.
<b><i>ALT</i></b>	Altitudes of freezing and tropopause levels in tens of gpm.

## NORMALS OF RADIOSONDE DATA

42724 AGARTALA

JANUARY 1979-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	273	1012	273	21.9	27.8	15.4	273	13.3	273	331	0.2	0.3	0.77	0.93	1982	1979
1000	267	121	267	21.4	27.4	15.6	265	12.3	267	333	1.9	2.7	7.44	0.83	1982	1979
950	267	552	267	18.8	27.8	12.8	260	8.0	267	303	1.9	3.2	15.65	0.85	1982	1989
900	267	1025	267	15.3	25.2	9.2	253	4.5	267	282	1.7	3.4	9.30	0.92	1982	1989
850	267	1506	267	12.1	22.0	6.0	234	0.0	267	278	2.8	4.5	10.35	0.97	1982	1989
800	267	2012	267	9.3	18.0	2.4	184	-4.5	267	281	4.5	5.9	11.85	1.01	1982	1989
750	267	2539	267	6.7	13.6	1.0	124	-7.2	267	285	6.9	8.2	13.91	1.20	1982	1980
700	267	3107	267	4.0	14.8	-2.1	85	-9.8	267	282	9.2	10.4	13.99	1.37	1988	1980
650	264	3704	264	1.1	11.0	-5.9	62	-12.2	261	281	11.4	12.6	15.73	1.53	1988	1980
600	258	4346	258	-2.3	7.8	-10.3	46	-15.4	247	278	13.6	14.7	16.55	1.70	1988	1979
550	247	5051	247	-6.1	3.8	-13.9	34	-18.2	226	276	16.6	17.7	17.75	1.71	1988	1989
500	235	5773	235	-10.6	-0.5	-19.5	29	-22.4	206	275	18.9	20.2	21.01	1.77	1988	1989
450	225	6581	225	-15.8	-6.3	-25.1	22	-28.4	188	274	22.7	23.9	21.26	1.95	1988	1989
400	211	7455	211	-21.5	-13.1	-37.5	16	-33.5	176	273	25.2	26.4	29.65	1.91	1988	1981
350	192	8438	192	-27.5	-17.1	-36.5	10	-36.4	164	271	28.0	29.6	29.98	1.99	1988	1982
300	181	9527	181	-34.4	-24.7	-44.9	4	-44.0	154	269	30.3	31.9	49.44	2.21	1988	1979
250	167	10783	167	-42.8	-33.5	-55.3			126	267	33.3	35.2	58.42	2.31	1987	1982
200	154	12254	154	-53.2	-43.3	-65.7			91	267	34.3	36.3	72.47	2.49	1980	1982
175	128	13110	128	-58.9	-47.5	-72.3			62	267	33.7	35.8	74.52	3.17	1988	1982
150	113	14061	113	-65.2	-53.1	-78.1			44	266	34.0	36.3	83.10	3.41	1988	1982
125	79	15166	79	-70.7	-61.3	-82.1			15	262	32.2	34.0	93.44	2.76	1988	1982
100	56	16464	56	-74.8	-66.3	-86.1			6	262	24.3	26.7	125.08	2.74	1980	1982
80	37	17777	37	-74.1	-63.7	-80.1			2	280	38.9	39.5	128.62	1.59	1980	1980
70	32	18558	32	-71.3	-59.3	-79.9			1	271	20.0	20.0	120.88	1.99	1980	1988
60	27	19476	27	-67.6	-56.5	-76.5			1	281	30.0	30.0	120.49	1.95	1988	1988
50	25	20579	25	-63.9	-53.7	-73.3			1	271	20.0	20.0	101.25	2.37	1987	1988
40	18	21954	18	-60.8	-52.7	-71.1			1	275	36.0	36.0			1988	1988
30	11	23818	11	-57.4	-50.1	-69.9			1	263	38.0	38.0			1988	1988
25	7	25023	7	-55.5	-48.5	-65.9									1988	1988
20	6	26451	6	-54.0	-46.5	-63.1									1988	1988
15																
10																
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

263 633 393

2 126 1391 -79.5

44 100 1656 -76.3

# NORMALS OF RADIOSONDE DATA

42724 AGARTALA

FEBRUARY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	306	1010	306	24.7	31.8	16.6	306	13.6	306	304	0.2	0.7	1.45	0.75	1981	1980
1000	267	100	267	24.3	31.0	15.8	266	12.8	267	298	1.1	2.5	12.93	0.64	1981	1980
950	267	530	267	21.0	28.4	12.6	266	8.7	267	266	2.0	3.5	15.40	0.69	1987	1980
900	267	1011	267	17.3	24.8	8.8	264	5.7	267	256	2.9	4.2	13.51	0.82	1981	1980
850	267	1497	267	13.8	20.8	2.0	256	2.0	267	265	4.1	5.4	13.81	0.80	1985	1983
800	267	2005	267	10.4	18.2	2.4	230	-1.8	267	275	5.9	7.0	14.23	0.84	1985	1983
750	267	2531	267	7.4	14.4	0.6	195	-4.2	267	280	8.3	9.3	17.35	0.94	1981	1982
700	267	3103	267	4.2	12.2	-2.9	170	-7.8	266	283	10.3	11.4	15.41	0.95	1989	1981
650	263	3694	263	0.9	10.0	-5.7	138	-11.4	261	282	12.5	13.6	14.73	1.12	1989	1979
600	255	4342	255	-2.5	7.8	-10.1	105	-14.1	249	281	14.9	15.8	16.78	1.29	1989	1979
550	249	5045	249	-6.6	5.0	-14.9	91	-17.7	232	280	16.6	17.8	19.29	1.38	1989	1979
500	239	5768	239	-11.1	0.2	-19.3	73	-21.6	209	277	19.1	20.2	22.57	1.86	1989	1979
450	234	6576	234	-16.0	-5.1	-24.9	53	-25.2	201	276	21.7	22.9	30.32	1.88	1990	1979
400	226	7450	226	-21.6	-9.1	-30.7	37	-29.1	193	276	25.6	27.1	37.33	2.17	1990	1990
350	213	8429	213	-27.9	-14.7	-38.5	27	-35.4	174	278	28.3	30.0	47.12	2.28	1990	1982
300	198	9515	198	-34.7	-21.3	-46.9	9	-40.6	156	275	32.6	34.5	50.68	2.69	1985	1979
250	182	10765	181	-43.2	-31.1	-55.7			125	275	34.5	35.9	59.42	2.47	1990	1982
200	166	12236	166	-52.5	-38.5	-63.3			91	276	36.0	37.6	70.16	2.58	1990	1988
175	137	13092	137	-57.5	-41.1	-68.7			60	276	34.9	36.7	83.25	2.89	1990	1979
150	116	14061	116	-62.5	-49.3	-73.9			42	276	32.9	34.5	82.00	2.97	1990	1988
125	97	15169	97	-68.0	-56.7	-80.3			29	279	30.6	33.4	89.14	3.82	1990	1988
100	77	16503	77	-72.3	-61.7	-81.9			19	279	31.8	33.2	127.12	2.66	1990	1988
80	59	17808	59	-72.0	-51.9	-81.5			10	261	26.5	30.5	140.19	2.73	1990	1979
70	52	18613	52	-69.7	-59.7	-77.1			8	267	30.8	32.6	180.30	2.16	1982	1980
60	47	19522	47	-65.4	-53.1	-73.5			4	250	26.2	29.0	180.18	2.53	1990	1987
50	39	20658	39	-61.1	-53.7	-69.9			2	296	8.0	11.0	167.58	2.98	1982	1986
40	24	22043	24	-58.4	-52.9	-65.1							218.39	3.00	1988	1987
30	13	23859	13	-55.3	-48.9	-59.1									1990	1987
25	5	25088	5	-53.8	-51.1	-57.7									1988	1987
20	3	26568	3	-52.4	-50.3	-56.3									1983	1987
15																
10																
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

260 637 386

1 155 1370 -63.3

64 094 1684 -74.3

## NORMALS OF RADIOSONDE DATA

42724 AGARTALA

MARCH 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	321	1007	321	28.5	36.0	19.2	321	16.7	321	187	0.8	1.8	1.21	1.06	1986	1987
1000	312	76	312	28.1	35.6	18.8	311	16.3	312	217	1.2	3.2	10.72	1.09	1986	1982
950	312	512	312	25.0	32.4	13.2	310	12.4	312	224	2.7	4.9	15.03	1.21	1986	1981
900	312	1001	312	21.5	29.2	13.8	308	9.5	312	238	3.8	5.5	8.36	1.13	1980	1982
850	312	1493	312	17.8	26.8	8.4	302	6.6	312	254	5.1	6.5	8.29	1.07	1989	1982
800	312	2009	312	13.9	24.4	3.8	289	2.9	312	265	6.7	8.0	8.59	0.98	1989	1982
750	312	2536	312	10.1	20.4	1.4	273	-1.3	311	274	8.5	9.7	12.66	0.96	1989	1982
700	312	3119	312	6.3	16.2	-0.9	244	-5.5	312	279	10.7	11.8	9.57	0.94	1989	1990
650	308	3712	308	2.6	12.2	-4.7	200	-8.8	307	282	12.7	13.7	15.51	1.06	1989	1990
600	304	4366	304	-1.1	9.2	-8.7	152	-12.4	294	282	14.9	15.9	11.86	1.14	1989	1982
550	296	5066	296	-5.1	7.6	-14.1	116	-16.1	276	282	16.5	17.4	22.52	1.32	1988	1982
500	289	5797	289	-9.7	1.8	-19.7	91	-19.2	253	278	17.7	19.1	16.15	1.22	1988	1982
450	275	6608	275	-14.8	-2.9	-24.3	71	-24.5	229	278	21.2	22.5	23.80	1.35	1988	1980
400	265	7485	265	-20.6	-6.7	-29.7	53	-30.5	210	279	23.4	24.9	23.28	1.73	1988	1987
350	251	8466	251	-26.8	-13.9	-36.1	39	-36.1	181	275	26.8	28.5	30.86	2.07	1990	1987
300	231	9556	231	-33.9	-22.7	-43.7	18	-42.3	155	274	29.3	31.4	36.31	2.24	1990	1981
250	217	10814	217	-41.8	-31.3	-55.3	3	-42.1	127	274	29.4	31.8	50.10	2.46	1983	1981
200	205	12296	205	-51.2	-40.5	-63.7			103	273	31.4	33.8	63.60	2.44	1990	1981
175	158	13149	158	-56.3	-45.3	-67.7			62	276	30.5	32.9	71.97	2.49	1990	1981
150	136	14118	135	-61.5	-50.9	-71.5			47	278	28.4	30.8	79.99	2.52	1989	1979
125	109	15239	108	-67.1	-55.9	-79.1			26	276	25.1	27.0	90.89	2.85	1990	1980
100	90	16584	90	-71.4	-57.5	-80.3			20	274	21.6	23.2	113.26	3.01	1990	1986
80	73	17915	73	-71.6	-62.5	-79.7			10	248	13.6	18.1	120.52	2.79	1990	1988
70	69	18717	69	-69.0	-59.7	-77.1			9	261	12.4	17.6	135.74	2.92	1987	1987
60	54	19648	54	-64.9	-52.7	-76.3			7	258	12.1	13.3	145.27	1.62	1990	1987
50	43	20778	43	-60.5	-49.3	-73.1			5	258	13.9	14.4	160.19	1.86	1988	1987
40	26	22178	26	-56.5	-44.1	-76.7			2	247	4.3	9.5	128.23	3.30	1988	1987
30	17	24010	17	-55.7	-43.1	-75.9			1	271	20.0	20.0			1989	1987
25	12	25132	12	-54.7	-40.1	-75.1									1989	1987
20	4	26552	4	-51.8	-36.7	-75.1									1989	1987
15	3	31644	3	-51.8	-32.9	-73.1									1989	1987
10	1	39718	1	-71.3	-71.3	-71.3									1987	1987

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

305 514 419

5 184 1276 -61.9

83 097 1634 -72.9



# NORMALS OF RADIOSONDE DATA

42724 AGARTALA

APRIL 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	330	1004	330	29.8	37.0	19.0	330	21.8	330	177	2.5	3.2	1.09	1.23	1979	1981
1000	320	47	299	29.6	36.8	18.6	296	21.4	299	178	2.7	3.8	8.54	1.31	1979	1987
950	320	489	320	27.3	34.0	16.0	317	19.6	320	188	5.1	6.4	15.13	1.19	1980	1987
900	320	980	320	24.2	34.8	15.6	315	16.5	320	207	5.9	6.9	6.97	1.09	1983	1987
850	320	1478	320	20.9	31.4	12.4	311	12.0	320	230	6.1	7.4	6.74	1.12	1983	1987
800	320	2000	320	17.4	27.6	9.0	306	6.6	320	249	7.4	8.6	8.16	1.18	1983	1987
750	320	2531	320	13.5	24.4	5.0	292	2.0	320	263	8.6	9.9	6.62	1.23	1985	1987
700	320	3125	320	9.3	21.6	0.8	278	-2.9	320	273	9.9	11.6	11.09	1.21	1985	1987
650	309	3719	309	5.1	17.0	-6.1	233	-7.1	296	278	11.2	12.8	11.29	1.07	1983	1983
600	298	4381	298	1.1	9.4	-6.3	189	-10.7	275	277	12.2	13.9	15.42	1.03	1985	1990
550	282	5086	282	-3.0	6.8	-10.9	143	-14.8	253	277	13.5	15.1	18.45	0.93	1990	1990
500	277	5826	277	-7.4	0.8	-15.3	104	-18.6	246	277	15.0	16.6	19.95	1.08	1990	1982
450	268	6643	268	-12.3	-1.1	-20.9	73	-23.0	226	277	16.1	18.2	24.37	1.14	1990	1990
400	259	7531	258	-18.2	-7.1	-26.7	54	-27.2	210	277	17.9	19.9	24.63	1.34	1990	1990
350	239	8520	238	-24.7	-15.1	-34.5	41	-33.3	171	274	20.0	22.3	28.61	1.65	1987	1982
300	225	9624	225	-32.2	-20.5	-43.7	27	-38.8	148	268	22.8	26.0	37.47	2.09	1987	1982
250	197	10891	197	-41.0	-27.5	-54.5	2	-46.4	115	269	24.4	28.0	50.92	2.11	1987	1982
200	178	12380	178	-51.0	-37.5	-67.5			87	261	23.7	26.2	61.52	2.08	1987	1982
175	151	13243	151	-56.3	-41.1	-65.9			64	261	25.5	28.2	54.43	2.12	1987	1979
150	126	14207	126	-61.9	-46.1	-73.1			46	263	23.6	26.1	56.15	2.00	1990	1980
125	101	15330	101	-67.2	-52.3	-79.1			31	264	18.7	20.6	71.01	2.78	1990	1980
100	93	16668	93	-71.4	-53.3	-80.1			26	261	16.7	18.1	94.34	3.37	1989	1988
80	65	17984	65	-70.1	-47.5	-82.1			18	273	11.0	13.5	104.13	3.11	1989	1988
70	57	18807	57	-68.1	-44.5	-80.1			15	287	6.6	11.4	121.12	3.63	1989	1988
60	47	19739	47	-63.8	-43.5	-75.1			12	349	1.8	11.0	136.63	5.12	1989	1988
50	39	20859	39	-58.7	-41.5	-71.7			9	093	0.7	9.0	160.62	4.84	1989	1987
40	28	22230	28	-54.7	-42.1	-68.9			6	051	4.7	10.8	104.13	3.89	1989	1987
30	19	24088	19	-50.2	-39.3	-62.5			3	011	5.8	8.7			1989	1987
25	15	25317	15	-46.6	-37.9	-59.1			2	075	5.3	6.0			1989	1987
20	11	26907	11	-43.5	-35.9	-57.9			1	096	10.0	10.0			1989	1987
15	4	29015	4	-45.1	-33.1	-54.9									1989	1987
10	2	31715	2	-44.0	-37.5	-50.5									1989	1987
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

290 587 456

71 095 1706 -73.3

## NORMALS OF RADIOSONDE DATA

42724 AGARTALA

MAY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	341	1001	341	29.8	38.4	20.8	341	23.6	341	167	1.4	2.3	1.31	1.23	1979	1986
<i>1000</i>	331	30	261	29.6	38.2	21.0	261	23.2	259	170	1.5	2.6	8.88	1.44	1979	1979
<i>950</i>	331	473	331	27.5	34.6	20.0	329	21.4	328	180	3.4	5.3	15.79	1.01	1987	1981
<i>900</i>	331	965	331	24.5	31.8	18.2	330	18.5	328	197	4.0	5.8	9.06	0.82	1987	1990
<i>850</i>	331	1464	331	21.4	29.8	15.2	328	14.5	328	221	4.3	6.2	9.02	0.77	1990	1981
<i>800</i>	331	1988	331	18.0	27.2	10.4	324	10.0	327	248	4.7	6.4	9.02	0.87	1990	1981
<i>750</i>	331	2523	331	14.5	24.2	5.8	317	5.3	327	268	5.5	7.5	9.60	0.95	1990	1981
<i>700</i>	331	3117	331	10.7	21.0	0.8	303	1.1	326	276	6.8	8.6	9.50	1.08	1990	1981
<i>650</i>	322	3721	322	6.9	17.5	-4.5	286	-3.4	308	282	7.6	9.5	12.61	1.14	1990	1981
<i>600</i>	310	4384	310	3.3	13.8	-3.7	245	-7.3	287	281	7.8	9.7	12.71	1.13	1990	1979
<i>550</i>	301	5103	300	-0.4	10.4	-9.5	197	-11.6	271	278	8.9	10.6	21.77	1.21	1990	1979
<i>500</i>	295	5844	294	-4.4	6.0	-12.7	152	-14.8	264	275	9.5	11.2	17.14	1.23	1990	1979
<i>450</i>	280	6675	279	-8.9	1.8	-16.9	114	-18.5	243	272	10.6	12.6	24.60	1.30	1988	1979
<i>400</i>	268	7570	267	-14.1	-2.5	-22.9	89	-23.6	228	271	11.7	13.7	19.71	1.45	1988	1979
<i>350</i>	259	8572	259	-20.2	-8.3	-31.9	64	-28.3	201	263	12.9	14.9	22.68	1.63	1988	1989
<i>300</i>	241	9698	241	-27.9	-16.9	-40.9	39	-34.6	177	261	14.9	17.0	32.56	1.70	1990	1989
<i>250</i>	225	10985	225	-37.3	-26.7	-49.3	14	-41.4	151	262	15.6	17.7	36.27	1.80	1990	1981
<i>200</i>	209	12493	209	-48.8	-35.9	-51.9	1	-44.5	124	256	16.4	18.8	48.75	1.74	1989	1981
<i>175</i>	172	13364	172	-55.4	-41.9	-66.9	1	-50.1	95	255	17.9	20.4	52.71	1.59	1989	1989
<i>150</i>	148	14332	148	-62.5	-48.7	-73.5			75	255	17.2	20.2	62.41	1.82	1989	1979
<i>125</i>	115	15452	115	-69.1	-55.9	-82.1			44	255	15.1	18.3	64.34	2.00	1989	1979
<i>100</i>	95	16762	95	-74.1	-61.9	-87.1			28	246	10.7	16.3	83.77	1.93	1989	1987
<i>80</i>	76	18085	76	-72.8	-60.1	-86.3			14	239	7.5	13.2	97.99	2.78	1988	1987
<i>70</i>	65	18880	65	-68.9	-52.1	-85.1			8	228	10.2	17.4	104.76	3.26	1988	1987
<i>60</i>	57	19828	57	-64.0	-44.1	-76.1			5	247	17.0	20.2	101.71	4.84	1988	1987
<i>50</i>	51	20963	51	-58.4	-37.3	-71.1			4	249	20.4	25.0	114.72	4.66	1988	1987
<i>40</i>	36	22382	36	-52.1	-33.9	-65.5			1	106	8.0	8.0	133.67	6.18	1988	1987
<i>30</i>	22	24273	22	-48.4	-39.9	-61.1			1	091	11.0	11.0	162.05	3.30	1989	1987
<i>25</i>	17	25463	17	-45.7	-38.9	-59.1									1988	1987
<i>20</i>	9	27018	9	-41.0	-34.3	-47.3									1989	1988
<i>15</i>	4	28858	4	-40.2	-34.3	-44.1									1988	1988
<i>10</i>	2	31518	2	-39.6	-39.3	-39.9									1982	1988
<i>7</i>	1	34090	1	-38.1	-38.1	-38.1									1982	1982

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
305	555	502	1	162	1397	-61.3	81	098	1695	-75.9

## NORMALS OF RADIOSONDE DATA

42724 AGARTALA

JUNE 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	301	998	301	29.6	37.4	23.6	301	25.1	301	172	2.3	2.7	1.45	0.67	1979	1989
1000	278	-2	63	28.4	33.4	23.4	63	25.0	61	174	1.7	2.4	6.48	1.26	1986	1989
950	278	441	278	27.2	33.8	20.0	278	23.2	259	180	4.7	5.8	31.78	0.88	1979	1979
900	278	932	278	24.5	30.2	16.8	278	20.7	259	189	5.4	6.6	7.02	1.13	1979	1979
850	278	1432	278	21.7	27.2	13.8	278	17.6	259	192	5.1	6.9	7.87	1.24	1989	1979
800	278	1958	278	18.9	25.2	11.0	275	14.2	258	195	4.3	6.7	10.00	1.36	1981	1989
750	278	2508	277	15.7	22.6	8.6	273	10.5	258	202	3.5	6.7	32.65	1.42	1989	1979
700	278	3093	277	12.4	20.2	5.2	270	6.6	258	206	3.0	6.9	15.77	1.46	1989	1979
650	270	3707	270	9.1	17.0	2.8	258	2.7	239	211	2.7	6.8	35.41	1.46	1989	1989
600	262	4372	262	5.8	13.4	-0.9	245	-0.9	226	213	2.9	7.0	23.04	1.53	1989	1989
550	256	5103	256	2.2	9.8	-5.1	230	-4.5	204	209	2.6	6.9	35.50	1.57	1989	1989
500	251	5845	251	-1.8	5.4	-9.7	215	-8.7	196	203	2.7	7.2	31.79	1.46	1989	1989
450	245	6686	245	-6.2	0.8	-14.7	197	-13.7	164	202	2.3	7.3	62.25	1.45	1989	1989
400	235	7591	235	-11.5	-4.1	-20.1	164	-19.3	156	191	2.4	7.6	41.87	1.47	1988	1989
350	226	8602	226	-17.6	-9.3	-26.1	130	-25.3	136	201	2.2	7.7	47.85	1.47	1988	1989
300	214	9740	214	-25.3	-16.7	-34.9	87	-32.5	125	207	2.0	8.5	54.44	1.44	1988	1981
250	202	11039	202	-35.0	-27.3	-46.1	42	-41.3	114	206	2.5	9.7	63.05	1.78	1988	1981
200	184	12559	184	-47.4	-39.5	-61.3	2	-48.5	102	182	2.3	11.0	67.08	2.18	1990	1981
175	153	13432	153	-54.9	-46.9	-70.9			76	168	1.3	11.7	78.40	2.59	1990	1981
150	132	14412	132	-62.5	-51.9	-74.7			61	088	2.1	11.6	84.81	2.66	1980	1981
125	106	15519	106	-70.2	-59.9	-80.1			48	076	4.0	11.1	95.93	2.67	1989	1982
100	93	16830	93	-75.6	-67.3	-84.1			41	086	8.5	12.7	113.80	2.86	1986	1979
80	67	18151	67	-72.5	-61.1	-83.9			28	096	11.3	13.7	127.34	3.50	1986	1982
70	52	18965	52	-68.3	-54.1	-79.5			20	099	12.0	13.5	153.74	4.21	1986	1987
60	46	19879	46	-63.0	-46.7	-74.7			18	095	12.0	14.0	161.30	4.88	1986	1988
50	40	21017	40	-57.3	-38.9	-68.3			13	091	14.7	15.2	180.61	5.26	1986	1979
40	26	22430	26	-53.2	-46.5	-62.1			6	100	16.0	17.7	249.65	5.06	1988	1979
30	18	24410	18	-46.9	-42.1	-52.3			5	082	19.8	20.2			1988	1987
25	10	25581	10	-45.3	-39.5	-48.5			4	091	21.8	22.3			1986	1988
20	8	26994	8	-48.1	-42.3	-74.9			1	116	16.0	16.0			1986	1989
15	5	28760	5	-48.8	-40.5	-73.9									1982	1989
10	3	31685	3	-39.2	-35.1	-43.1									1982	1988
7	2	34150	2	-38.9	-37.5	-40.3									1988	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

253 523 550

74 098 1698 -76.5

## NORMALS OF RADIOSONDE DATA

42724 AGARTALA

JULY 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	350	999	350	29.1	33.4	24.0	350	25.4	350	180	3.3	3.6	1.18	0.51	1979	1986
<i>1000</i>	312	6	117	28.3	31.8	24.0	117	25.0	117	183	4.0	4.2	13.00	0.97	1983	1986
<i>950</i>	312	446	312	26.9	33.4	21.2	312	23.9	304	189	6.4	7.3	13.81	0.84	1985	1985
<i>900</i>	312	939	312	24.4	30.8	18.6	312	21.6	304	194	7.0	7.9	11.24	0.90	1985	1979
<i>850</i>	312	1439	312	21.7	28.6	12.4	312	18.8	305	197	6.7	7.8	11.89	0.83	1985	1989
<i>800</i>	312	1964	312	18.9	26.8	13.0	312	15.7	305	199	5.8	7.6	12.48	0.80	1989	1979
<i>750</i>	312	2516	312	16.0	22.4	10.0	311	12.7	305	198	4.8	7.4	10.40	0.82	1988	1984
<i>700</i>	312	3100	312	13.0	19.8	7.8	310	9.2	305	199	4.0	7.0	13.92	0.98	1988	1984
<i>650</i>	302	3722	302	10.0	16.8	0.0	300	5.5	264	188	3.2	6.5	13.26	0.92	1988	1978
<i>600</i>	297	4383	297	6.7	17.0	1.2	295	1.3	242	176	3.2	6.6	16.63	0.90	1978	1981
<i>550</i>	295	5117	295	3.0	11.0	-3.3	291	-2.8	227	161	2.7	6.2	25.50	0.95	1985	1981
<i>500</i>	291	5860	291	-1.0	6.2	-0.1	284	-7.4	214	154	2.5	6.2	19.85	0.93	1988	1981
<i>450</i>	276	6705	276	-5.4	0.8	-13.3	264	-12.4	173	128	3.3	6.2	27.75	1.09	1988	1981
<i>400</i>	269	7612	269	-10.4	-2.7	-19.1	242	-18.2	163	115	3.8	6.5	26.57	1.18	1988	1981
<i>350</i>	249	8626	249	-16.8	-10.3	-24.5	197	-25.2	148	107	4.9	7.2	27.30	1.31	1979	1986
<i>300</i>	239	9771	239	-24.3	-17.9	-31.9	139	-32.8	143	098	5.6	8.2	42.21	1.50	1989	1986
<i>250</i>	226	11077	226	-34.1	-27.1	-43.5	58	-41.2	134	089	8.2	10.4	50.07	1.72	1989	1982
<i>200</i>	209	12602	209	-46.8	-39.9	-57.9			122	088	10.4	12.5	64.67	1.99	1988	1982
<i>175</i>	186	13475	185	-54.5	-45.9	-66.5			105	085	11.2	14.1	72.55	2.28	1988	1982
<i>150</i>	165	14450	154	-62.5	-53.3	-72.5			92	086	13.7	16.0	85.95	2.79	1988	1982
<i>125</i>	132	15551	132	-70.4	-62.1	-79.1			73	088	16.0	17.8	106.12	2.89	1988	1982
<i>100</i>	119	16862	119	-75.0	-61.7	-84.9			67	088	18.9	20.4	133.05	2.64	1989	1979
<i>80</i>	92	18173	92	-71.6	-58.1	-83.1			51	094	18.1	19.1	143.10	2.65	1989	1979
<i>70</i>	77	18975	76	-67.7	-56.9	-79.1			44	092	18.2	19.7	160.99	2.78	1988	1988
<i>60</i>	65	19898	65	-62.7	-51.1	-79.3			40	092	19.5	20.9	167.71	2.54	1988	1988
<i>50</i>	59	21036	59	-57.8	-47.3	-74.3			35	095	19.6	21.0	174.30	2.84	1989	1988
<i>40</i>	33	22417	33	-53.8	-45.5	-67.5			19	104	17.9	19.2	170.27	3.58	1986	1988
<i>30</i>	25	24297	25	-48.1	-41.3	-61.7			13	092	14.3	19.0	144.38	5.60	1990	1988
<i>25</i>	13	25589	13	-44.9	-40.1	-49.1			8	094	21.0	24.2			1990	1988
<i>20</i>	7	27127	7	-41.9	-33.7	-46.5			5	089	21.9	25.2			1990	1982
<i>15</i>	2	28903	2	-43.0	-42.5	-43.5			1	036	46.0	46.0			1986	1982
<i>10</i>	1	31873	1	-39.1	-39.1	-39.1			1	045	50.0	50.0			1986	1986
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
291	512	568					106	102	1677	-76.4

## NORMALS OF RADIOSONDE DATA

42724 AGARTALA

AUGUST 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	396	999	396	29.2	34.0	24.0	396	25.6	396	173	1.7	2.2	1.14	0.50	1978	1983
<i>1000</i>	352	9	132	28.8	33.6	23.8	131	25.3	130	182	2.3	2.6	11.16	0.54	1984	1983
<i>950</i>	352	449	352	27.1	32.2	22.2	351	23.8	347	180	4.3	5.7	6.86	0.43	1986	1987
<i>900</i>	352	941	352	24.6	31.2	18.0	351	21.3	347	181	5.3	6.6	9.96	0.43	1983	1990
<i>850</i>	352	1441	352	21.9	31.0	15.6	351	18.4	347	180	5.0	6.5	11.20	0.49	1978	1987
<i>800</i>	352	1967	352	19.0	31.0	12.0	351	15.2	347	180	4.8	6.6	12.32	0.51	1978	1988
<i>750</i>	352	2515	352	16.0	25.4	9.4	351	11.8	345	173	4.3	6.5	15.45	0.53	1985	1989
<i>700</i>	352	3103	352	12.9	22.0	5.4	351	8.0	346	166	3.9	6.4	13.95	0.57	1988	1989
<i>650</i>	346	3721	346	9.7	19.4	3.4	344	3.9	313	153	3.4	6.3	15.90	0.65	1988	1984
<i>600</i>	342	4386	342	6.3	16.2	0.0	336	-0.1	297	146	3.2	6.4	17.78	0.73	1988	1978
<i>550</i>	335	5116	335	2.7	12.2	-5.1	323	-4.2	277	139	3.2	6.3	28.24	0.83	1988	1984
<i>500</i>	328	5862	328	-1.4	7.6	-10.5	303	-8.6	267	129	3.1	6.1	20.65	0.88	1988	1984
<i>450</i>	319	6709	319	-5.8	2.6	-14.5	276	-13.5	250	119	3.3	6.3	24.80	0.87	1988	1984
<i>400</i>	315	7612	315	-11.0	-2.7	-19.1	257	-19.5	244	117	3.8	6.8	24.17	0.93	1988	1984
<i>350</i>	301	8625	301	-17.4	-9.1	-27.0	208	-26.1	225	103	4.9	7.9	24.25	1.13	1988	1978
<i>300</i>	292	9767	292	-25.1	-16.9	-35.0	148	-33.2	216	100	5.5	8.2	30.94	1.18	1988	1978
<i>250</i>	276	11069	276	-34.9	-26.1	-43.0	58	-42.7	206	094	7.2	9.7	39.73	1.19	1988	1978
<i>200</i>	250	12582	250	-47.7	-35.9	-58.0			179	091	9.9	12.2	53.47	1.45	1990	1978
<i>175</i>	217	13453	217	-55.3	-41.7	-69.1			156	091	10.6	12.8	50.50	1.46	1990	1981
<i>150</i>	192	14419	192	-63.3	-52.1	-73.3			140	092	11.7	14.3	58.01	1.68	1990	1979
<i>125</i>	153	15524	153	-70.9	-59.9	-80.3			106	095	12.6	15.5	74.69	1.93	1989	1987
<i>100</i>	141	16838	141	-74.9	-60.5	-84.0			94	092	14.3	16.6	79.30	2.56	1990	1978
<i>80</i>	105	18151	105	-70.9	-60.5	-79.1			72	095	14.8	16.1	94.46	2.70	1989	1986
<i>70</i>	89	18958	89	-66.8	-56.1	-74.1			63	094	16.4	17.4	101.09	3.42	1990	1979
<i>60</i>	75	19875	75	-62.6	-54.7	-72.7			54	092	16.7	17.7	104.02	2.33	1980	1990
<i>50</i>	61	21011	61	-58.2	-48.7	-67.1			42	098	15.8	17.9	94.17	2.31	1986	1990
<i>40</i>	38	22436	38	-54.1	-45.5	-59.9			27	100	16.5	17.8	107.17	1.18	1986	1988
<i>30</i>	21	24335	21	-50.3	-46.1	-54.9			15	100	17.0	17.6	138.47	1.42	1979	1986
<i>25</i>	16	25516	16	-48.6	-44.3	-53.7			11	101	20.1	21.0			1989	1986
<i>20</i>	9	27015	9	-47.0	-42.1	-52.1			7	112	18.9	19.3			1989	1986
<i>15</i>	7	28877	7	-46.4	-43.1	-50.1			5	108	17.2	17.6			1989	1986
<i>10</i>	2	31427	2	-47.5	-46.5	-48.5			1	101	15.0	15.0			1987	1986
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

337 518 560

124 104 1669 -76.5

## NORMALS OF RADIOSONDE DATA

42724 AGARTALA

SEPTEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	368	1002	368	28.6	34.6	23.0	368	25.4	368	174	1.1	1.5	1.18	0.54	1990	1984
<i>1000</i>	341	37	282	28.3	32.2	22.8	282	25.1	282	177	1.2	1.8	10.56	0.53	1990	1986
<i>950</i>	340	475	340	26.5	32.0	21.8	340	22.9	338	188	3.0	4.7	14.09	0.65	1990	1986
<i>900</i>	340	969	340	24.0	29.4	19.2	340	20.1	338	195	3.5	5.2	9.59	0.62	1986	1986
<i>850</i>	340	1469	340	21.3	27.4	16.0	340	16.9	339	199	3.7	5.5	10.18	0.68	1986	1986
<i>800</i>	340	1993	340	18.3	27.8	12.4	339	13.6	338	199	3.3	5.4	9.46	0.70	1983	1986
<i>750</i>	340	2535	340	15.2	23.0	8.2	337	10.3	338	200	3.0	5.6	13.44	0.73	1983	1989
<i>700</i>	340	3127	339	12.0	21.2	5.6	334	6.5	338	203	2.8	5.7	10.73	0.71	1983	1988
<i>650</i>	332	3736	332	8.7	17.0	1.8	325	2.2	295	205	2.2	5.3	13.36	0.82	1988	1988
<i>600</i>	324	4402	324	5.2	13.0	-0.5	308	-1.7	275	208	2.0	5.6	14.84	0.93	1988	1988
<i>550</i>	317	5127	317	1.3	8.8	-3.7	297	-5.8	260	211	1.7	5.7	23.16	1.03	1986	1980
<i>500</i>	315	5870	315	-2.8	4.6	-9.1	284	-10.4	257	203	1.7	6.2	19.25	1.02	1986	1987
<i>450</i>	299	6707	299	-7.4	-0.5	-16.0	251	-15.1	237	192	1.6	6.3	23.40	1.06	1986	1978
<i>400</i>	290	7610	290	-12.7	-5.5	-21.3	212	-20.6	224	178	1.5	6.7	25.19	1.17	1988	1987
<i>350</i>	267	8616	267	-19.2	-12.1	-28.7	162	-27.3	195	174	1.5	6.8	27.47	1.38	1987	1987
<i>300</i>	257	9751	257	-26.9	-19.1	-37.3	112	-34.7	186	147	2.0	7.8	35.27	1.52	1989	1987
<i>250</i>	229	11049	229	-36.7	-29.1	-46.3	38	-43.1	161	103	3.0	8.7	44.45	1.67	1989	1986
<i>200</i>	207	12555	206	-49.4	-41.5	-60.9			146	087	3.9	9.8	57.28	2.10	1982	1986
<i>175</i>	168	13420	168	-56.9	-47.9	-69.1			116	082	5.6	11.0	70.00	2.76	1987	1986
<i>150</i>	148	14382	148	-64.8	-54.1	-76.1			108	078	5.6	11.1	89.97	2.84	1987	1986
<i>125</i>	115	15479	115	-72.4	-61.9	-85.1			82	075	6.3	11.5	106.40	3.48	1989	1979
<i>100</i>	95	16793	95	-76.3	-58.1	-87.0			65	085	8.9	11.6	117.94	2.05	1988	1978
<i>80</i>	62	18112	62	-72.4	-62.1	-83.3			40	092	9.6	12.4	124.01	2.14	1986	1984
<i>70</i>	50	18936	50	-67.8	-55.5	-76.9			31	099	8.0	10.5	121.62	2.18	1987	1990
<i>60</i>	39	19883	39	-62.6	-51.9	-70.9			22	093	8.5	11.6	155.82	2.35	1986	1986
<i>50</i>	34	21016	34	-58.0	-44.3	-66.5			18	099	8.7	11.6	176.37	2.85	1987	1986
<i>40</i>	24	22427	24	-54.9	-45.5	-61.1			12	091	7.5	10.3	175.21	2.91	1987	1980
<i>30</i>	12	24279	12	-50.7	-45.3	-54.1			6	093	8.2	9.3			1989	1988
<i>25</i>	6	25542	6	-48.6	-43.5	-52.5			5	119	9.1	9.4			1989	1988
<i>20</i>	1	27298	1	-51.7	-51.7	-51.7									1988	1988
<i>15</i>																
<i>10</i>																
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

317 533 538

91 104 1658 -77.8

# NORMALS OF RADIOSONDE DATA

42724 AGARTALA

OCTOBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	378	1006	378	27.9	32.0	22.2	378	23.9	377	186	0.2	0.6	1.21	0.57	1989	1988
1000	334	73	328	27.7	32.6	22.2	328	23.4	325	350	0.2	1.5	10.09	0.63	1981	1988
950	334	508	334	25.6	32.0	20.0	334	19.9	330	305	0.5	3.6	15.76	0.66	1984	1987
900	334	1000	334	22.8	29.0	15.4	334	15.8	330	227	1.1	3.8	9.01	0.78	1984	1979
850	334	1497	334	19.7	27.8	11.8	331	11.5	330	231	1.7	4.2	8.28	0.89	1987	1990
800	334	2017	334	16.6	26.2	9.8	320	7.6	330	231	2.3	4.8	8.28	1.03	1987	1979
750	334	2553	334	13.3	22.8	6.8	307	4.0	330	241	2.6	5.2	11.93	1.09	1987	1979
700	334	3141	334	9.9	19.6	3.2	279	0.6	330	247	3.3	5.9	11.36	1.24	1988	1979
650	330	3743	330	6.5	17.6	-0.3	240	-2.9	307	253	4.1	6.5	16.00	1.25	1988	1979
600	318	4406	318	3.2	15.0	-3.9	204	-6.0	280	258	5.2	7.2	15.25	1.45	1988	1979
550	314	5123	314	-0.6	12.8	-8.3	169	-9.1	267	261	6.3	8.3	24.26	1.47	1988	1979
500	309	5863	309	-4.8	10.4	-14.3	144	-13.3	258	263	7.3	9.2	22.31	1.52	1988	1979
450	296	6691	296	-9.4	7.4	-20.5	111	-17.2	235	265	8.2	10.4	29.99	1.57	1988	1979
400	287	7589	287	-14.8	-7.1	-26.9	86	-22.1	228	266	8.7	11.3	33.25	1.71	1984	1979
350	274	8587	274	-21.2	-12.3	-32.7	65	-27.9	202	267	9.8	12.4	37.58	1.84	1986	1979
300	260	9711	260	-29.0	-20.7	-38.5	47	-35.0	185	263	11.2	14.3	47.33	1.97	1984	1979
250	238	10989	238	-39.0	-28.7	-48.7	18	-43.5	172	264	11.7	14.5	57.77	2.33	1989	1985
200	222	12481	222	-51.3	-40.5	-61.0			163	263	11.9	15.1	74.73	2.25	1989	1978
175	182	13333	182	-58.5	-49.9	-69.1			137	263	11.8	15.3	92.35	2.35	1987	1985
150	147	14283	147	-66.0	-56.1	-75.9			113	262	11.7	15.0	100.62	2.06	1989	1985
125	113	15368	113	-73.3	-60.7	-82.0			88	266	10.5	13.9	109.50	2.01	1989	1978
100	89	16664	89	-76.3	-65.3	-85.0			68	260	7.1	12.2	135.70	2.97	1989	1978
80	54	17969	54	-71.5	-60.5	-81.5			41	252	6.0	11.2	194.44	3.64	1989	1985
70	38	18749	38	-67.5	-57.5	-82.7			30	266	3.5	10.9	232.35	2.67	1987	1985
60	30	19669	30	-62.1	-53.9	-75.0			24	261	3.7	11.4	242.09	2.46	1987	1978
50	22	20774	22	-58.2	-48.0	-70.0			20	236	4.3	12.1	327.08	2.98	1978	1978
40	10	22179	10	-55.4	-49.5	-64.0			9	306	4.4	10.5			1989	1978
30	3	24168	3	-48.4	-47.1	-49.1			2	097	10.3	11.0			1985	1986
25	3	25313	3	-45.0	-42.5	-46.9			2	092	11.9	12.0			1986	1986
20	2	26828	2	-43.4	-43.1	-43.7			1	111	11.0	11.0			1985	1986
15																
10																
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

313 558 500

76 109 1619 -77.1

## NORMALS OF RADIOSONDE DATA

42724 AGARTALA

NOVEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	361	1010	361	25.4	30.0	18.0	361	20.1	361	027	0.1	0.3	0.88	0.75	1987	1978
1000	333	100	330	25.1	29.8	18.0	329	19.5	326	356	1.1	1.8	8.69	0.71	1987	1978
950	331	534	331	23.2	28.2	10.4	324	15.1	327	356	1.3	3.2	14.65	0.64	1982	1980
900	331	1019	331	20.2	27.6	11.8	322	11.3	328	301	0.5	3.2	8.70	0.94	1987	1982
850	331	1510	331	17.0	23.8	8.0	314	6.8	328	259	1.3	4.1	9.19	1.29	1987	1982
800	331	2025	331	13.7	22.4	5.8	286	2.1	327	255	2.2	4.7	9.59	1.41	1990	1982
750	331	2557	331	10.6	20.4	2.4	242	-2.1	327	262	3.4	5.7	11.85	1.42	1990	1982
700	331	3137	331	7.6	18.2	0.0	181	-4.4	328	269	5.1	7.1	11.95	1.53	1979	1982
650	324	3734	324	4.3	14.6	-5.1	133	-7.2	296	273	6.9	8.8	13.08	1.34	1990	1986
600	315	4390	318	1.0	11.4	-6.9	86	-9.8	280	273	9.0	10.9	15.89	1.25	1990	1982
550	316	5101	316	-2.9	7.8	-11.9	73	-12.9	260	274	10.9	12.6	21.39	1.30	1990	1982
500	308	5834	308	-7.4	4.0	-16.1	55	-15.5	249	272	12.7	14.4	20.27	1.35	1990	1982
450	290	6655	290	-12.2	0.2	-20.9	45	-19.5	216	274	14.9	16.5	25.42	1.40	1990	1982
400	278	7541	278	-18.0	-4.7	-26.5	37	-25.8	193	273	17.5	19.3	27.50	1.56	1990	1982
350	256	8536	256	-24.3	-11.1	-33.7	21	-30.4	173	271	20.2	22.2	36.17	1.72	1990	1982
300	230	9637	230	-31.9	-19.9	-41.9	9	-37.4	162	267	22.1	24.3	38.48	1.65	1984	1982
250	201	10900	201	-41.3	-27.5	-49.3	1	-47.3	147	268	23.9	25.7	40.66	1.67	1984	1980
200	179	12378	179	-52.9	-40.3	-61.3			132	269	25.3	27.6	47.48	1.87	1990	1979
175	137	13229	137	-59.3	-45.9	-68.3			93	267	24.8	26.9	50.05	1.87	1990	1986
150	109	14189	109	-66.1	-52.7	-74.1			77	267	25.4	27.4	55.32	2.03	1990	1979
125	74	15287	74	-71.9	-56.9	-83.3			46	267	23.2	25.2	53.20	3.53	1988	1979
100	54	16593	54	-75.6	-64.9	-84.5			33	271	20.2	21.9	81.77	3.92	1987	1988
80	40	17874	40	-73.3	-58.9	-85.0			20	263	12.1	16.5	99.05	5.68	1985	1978
70	34	18657	34	-70.3	-61.9	-82.1			16	259	10.9	16.5	104.87	3.38	1987	1979
60	25	19622	25	-65.1	-55.5	-79.3			11	267	7.4	19.1	128.37	3.36	1988	1979
50	20	20775	20	-59.8	-49.1	-70.5			7	254	6.4	17.0			1988	1979
40	13	22204	13	-54.7	-45.1	-61.5			4	147	4.6	18.3			1988	1979
30	11	24048	11	-51.2	-43.3	-58.1			2	187	7.1	17.5			1988	1979
25	9	25224	9	-49.3	-41.3	-56.1			1	082	12.0	12.0			1988	1979
20	8	26762	8	-47.5	-38.9	-56.7									1988	1989
15	3	28641	3	-47.3	-43.1	-50.1									1988	1979
10	2	31273	2	-43.5	-40.1	-46.9									1988	1979

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
321	587	456					45	103	1648	-77.3



# NORMALS OF RADIOSONDE DATA

42724 AGARTALA

DECEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	310	1012	310	22.1	26.2	17.2	310	16.3	310	344	0.2	0.3	0.95	0.70	1988	1979
<i>1000</i>	297	123	297	21.8	27.0	17.0	295	15.1	297	337	1.6	2.4	6.56	0.58	1978	1985
<i>950</i>	297	553	297	19.9	30.0	11.0	295	10.9	297	329	1.4	3.0	13.52	0.72	1978	1978
<i>900</i>	297	1031	297	16.8	25.8	8.8	284	6.9	297	290	0.7	3.1	6.71	1.05	1979	1981
<i>850</i>	297	1516	297	13.9	26.8	6.8	255	1.9	297	273	1.4	3.7	8.15	1.24	1979	1988
<i>800</i>	297	2025	297	11.3	23.8	2.8	198	-2.3	297	279	3.0	4.8	9.50	1.22	1979	1988
<i>750</i>	297	2555	297	8.8	19.2	-0.1	143	-6.1	297	285	5.1	6.7	14.58	1.20	1979	1988
<i>700</i>	297	3129	297	6.2	17.2	-3.3	98	-7.9	296	283	7.1	8.6	13.44	1.19	1990	1988
<i>650</i>	292	3728	292	3.2	14.8	-6.3	69	-9.6	279	282	9.2	10.4	16.50	1.20	1990	1988
<i>600</i>	289	4377	289	-0.2	10.6	-9.3	59	-12.2	266	281	11.3	12.5	18.62	1.24	1990	1988
<i>550</i>	286	5085	286	-4.2	6.0	-12.3	45	-15.4	246	278	13.1	14.5	24.21	1.21	1990	1981
<i>500</i>	281	5814	281	-8.8	1.0	-17.1	34	-18.9	234	277	15.2	16.7	23.28	1.16	1990	1979
<i>450</i>	269	6628	269	-14.0	-3.9	-21.7	30	-23.8	219	274	17.9	19.5	24.02	1.13	1981	1990
<i>400</i>	259	7510	259	-19.8	-8.5	-27.9	24	-27.0	213	273	20.8	22.5	29.44	1.22	1981	1988
<i>350</i>	246	8494	246	-26.3	-14.5	-35.1	21	-33.2	196	272	24.3	25.8	37.75	1.54	1981	1979
<i>300</i>	231	9585	231	-34.2	-21.5	-44.0	8	-40.0	181	271	27.0	28.6	39.73	1.72	1981	1978
<i>250</i>	207	10835	207	-43.5	-30.1	-53.0	1	-44.5	158	268	29.6	31.5	49.94	1.75	1981	1978
<i>200</i>	176	12307	176	-54.2	-41.5	-63.1			123	265	29.8	31.5	69.24	1.50	1981	1981
<i>175</i>	128	13153	128	-60.0	-50.5	-68.1			83	264	28.6	30.7	65.90	1.76	1986	1990
<i>150</i>	104	14100	104	-65.6	-54.3	-75.0			59	266	28.5	30.1	70.53	1.84	1986	1978
<i>125</i>	68	15190	68	-70.5	-59.5	-80.0			38	265	29.2	31.4	96.92	2.32	1986	1978
<i>100</i>	51	16504	51	-74.4	-63.9	-83.0			22	268	25.6	27.8	118.53	2.32	1987	1978
<i>80</i>	28	17819	28	-73.1	-66.7	-81.5			8	286	23.7	24.8	128.39	3.14	1988	1987
<i>70</i>	25	18604	25	-70.6	-62.7	-77.0			8	290	19.2	20.5	144.88	3.56	1988	1978
<i>60</i>	19	19555	19	-66.1	-58.1	-71.3			4	293	24.3	25.0			1988	1979
<i>50</i>	16	20686	16	-62.0	-56.3	-71.1			4	286	29.1	29.2			1988	1987
<i>40</i>	12	22044	12	-57.1	-52.0	-62.5			2	167	11.5	16.5			1978	1979
<i>30</i>	10	23916	10	-53.8	-47.0	-59.3			2	121	15.0	17.5			1978	1981
<i>25</i>	7	25072	7	-53.1	-49.3	-56.0			1	131	36.0	36.0			1986	1978
<i>20</i>	7	26566	7	-50.0	-46.9	-55.0			1	265	25.9	26.0			1986	1978
<i>15</i>																
<i>10</i>																
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

291 604 434

1 177 1292 -61.3

40 105 1630 -75.3

# NORMALS OF RADIOSONDE DATA

42647 AHMEDABAD

JANUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	619	1007	619	27.1	33.0	16.0	619	10.4	619	008	1.5	2.4	0.84	0.86	1972	1989
<i>1000</i>	513	115	511	26.5	32.0	16.0	486	10.0	477	008	1.9	3.0	6.17	0.71	1972	1989
<i>950</i>	512	552	511	21.8	30.6	12.8	481	5.1	465	007	2.2	4.4	21.16	0.93	1988	1989
<i>900</i>	513	1026	512	17.5	29.2	7.0	474	1.7	468	350	1.5	4.2	6.49	1.10	1988	1973
<i>850</i>	513	1510	511	14.2	26.0	5.0	427	-1.4	472	290	1.8	4.5	6.90	1.23	1988	1973
<i>800</i>	513	2019	510	11.7	22.0	3.0	343	-4.4	471	267	3.8	5.9	8.14	1.35	1974	1980
<i>750</i>	512	2553	511	9.0	18.0	0.0	278	-7.5	471	264	6.1	7.9	11.09	1.40	1974	1971
<i>700</i>	513	3123	511	6.1	14.4	-2.0	238	-11.2	471	267	8.3	9.9	10.34	1.32	1988	1971
<i>650</i>	508	3727	505	2.8	12.0	-10.0	208	-14.1	462	269	10.5	11.9	14.90	1.39	1976	1971
<i>600</i>	500	4372	498	-0.8	8.4	-10.0	200	-17.4	453	272	13.5	15.0	15.11	1.36	1989	1976
<i>550</i>	493	5062	491	-5.0	5.0	-13.9	182	-21.4	449	272	16.0	17.5	18.51	1.43	1972	1979
<i>500</i>	482	5804	481	-9.6	1.2	-21.0	178	-25.5	445	272	19.6	21.1	21.88	1.72	1989	1974
<i>450</i>	468	6610	467	-14.8	-2.9	-24.5	164	-29.6	421	272	23.3	24.9	26.75	1.89	1989	1982
<i>400</i>	464	7496	462	-20.5	-8.9	-32.0	151	-34.8	415	271	26.9	28.6	33.60	2.18	1989	1971
<i>350</i>	452	8472	450	-26.9	-15.7	-39.0	143	-41.2	396	272	30.3	32.2	42.65	2.20	1989	1974
<i>300</i>	444	9571	444	-34.1	-21.7	-48.9	127	-48.2	372	271	34.8	37.1	49.73	2.61	1987	1983
<i>250</i>	414	10827	413	-42.9	-31.1	-56.0	64	-55.6	314	268	37.3	39.6	61.32	3.08	1987	1972
<i>200</i>	375	12299	374	-53.0	-41.9	-64.0			236	269	38.5	41.1	76.04	3.01	1987	1972
<i>175</i>	342	13149	342	-58.4	-47.1	-69.3			182	269	38.2	40.5	88.84	2.82	1987	1979
<i>150</i>	318	14105	318	-63.7	-52.3	-76.0			145	268	36.3	38.1	97.66	2.45	1981	1973
<i>125</i>	284	15206	284	-69.3	-56.7	-81.0			109	268	32.2	33.8	105.22	2.78	1981	1973
<i>100</i>	255	16526	255	-74.2	-58.7	-86.0			76	271	28.0	29.5	122.33	3.09	1983	1972
<i>80</i>	220	17832	220	-73.6	-59.7	-86.0			56	268	21.0	22.5	140.93	3.02	1983	1972
<i>70</i>	185	18631	185	-71.1	-57.5	-82.0			46	275	16.3	18.0	160.28	3.29	1983	1972
<i>60</i>	159	19562	159	-67.1	-51.7	-81.3			35	278	12.5	14.5	172.33	3.50	1989	1980
<i>50</i>	134	20675	134	-62.2	-46.9	-77.7			33	283	10.0	11.7	168.27	3.41	1989	1980
<i>40</i>	88	22073	88	-57.3	-42.7	-72.9			23	282	6.9	9.0	194.05	4.34	1989	1980
<i>30</i>	53	23952	53	-52.2	-35.7	-66.5			9	265	7.0	7.4	250.30	5.18	1982	1980
<i>25</i>	32	25170	32	-49.4	-39.5	-61.0			7	268	7.9	9.0	298.24	5.62	1988	1973
<i>20</i>	13	26768	13	-45.4	-40.5	-51.1			5	287	6.8	7.8			1988	1983
<i>15</i>	5	28846	5	-42.3	-40.9	-44.3			1	240	4.0	4.0			1981	1983
<i>10</i>	3	31611	3	-38.5	-37.1	-40.3									1989	1983
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

503	612	422		24	225	1165	-55.0		232	097	1678	-76.1
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## NORMALS OF RADIOSONDE DATA

42647 AHMEDABAD

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	551	1005	551	29.6	37.0	17.0	551	10.2	551	337	1.3	2.6	1.10	1.43	1985	1972
<i>1000</i>	472	100	462	29.1	36.6	16.0	434	10.0	409	341	1.5	3.0	9.71	1.43	1985	1972
<i>950</i>	472	543	472	24.3	33.0	12.0	434	5.9	403	331	2.0	4.3	21.17	1.62	1974	1972
<i>900</i>	472	1019	472	19.8	29.6	9.8	431	2.8	409	309	1.8	4.5	9.03	1.62	1990	1983
<i>850</i>	472	1507	471	15.7	26.0	6.0	426	-0.1	413	291	2.2	4.8	9.81	1.84	1973	1972
<i>800</i>	472	2018	472	12.4	22.0	3.0	378	-3.1	413	277	4.1	6.4	11.13	1.80	1974	1983
<i>750</i>	472	2552	472	9.4	19.8	-4.0	315	-6.1	412	266	6.4	8.3	16.27	1.75	1989	1972
<i>700</i>	472	3124	467	6.3	16.2	-3.1	264	-9.6	410	267	8.4	10.2	14.95	1.70	1989	1979
<i>650</i>	464	3726	461	2.7	13.4	-6.9	244	-13.6	405	271	10.5	12.2	17.79	1.68	1985	1979
<i>600</i>	462	4369	458	-1.1	10.2	-12.0	211	-17.0	401	272	13.3	14.9	19.92	1.82	1985	1972
<i>550</i>	458	5057	455	-5.3	8.6	-15.1	197	-20.4	398	272	15.9	17.4	22.18	1.82	1980	1979
<i>500</i>	455	5800	450	-10.0	1.4	-20.0	182	-24.5	396	273	19.0	20.5	26.54	1.96	1985	1978
<i>450</i>	448	6604	445	-15.1	-2.9	-26.0	169	-29.4	389	273	22.4	23.9	29.91	2.31	1985	1975
<i>400</i>	442	7487	441	-20.8	-7.1	-33.0	161	-34.0	380	274	26.5	28.4	37.59	2.66	1985	1973
<i>350</i>	426	8462	425	-27.0	-14.1	-40.0	147	-40.1	360	274	31.1	33.2	46.15	2.82	1985	1975
<i>300</i>	407	9561	406	-33.9	-22.1	-45.0	127	-46.7	332	273	34.9	37.2	55.19	2.85	1985	1972
<i>250</i>	376	10817	374	-42.2	-31.3	-55.1	74	-54.6	292	272	39.2	41.6	67.57	2.68	1985	1982
<i>200</i>	346	12295	345	-52.2	-42.5	-64.1			223	273	40.8	43.6	89.07	2.70	1983	1982
<i>175</i>	312	13147	311	-57.8	-45.0	-71.0			169	273	39.6	42.4	100.02	3.20	1974	1972
<i>150</i>	280	14109	279	-63.4	-52.5	-81.0			125	274	38.5	40.6	108.72	3.51	1986	1972
<i>125</i>	248	15212	247	-69.3	-57.1	-89.0			88	273	34.0	35.9	122.15	3.24	1983	1972
<i>100</i>	216	16536	216	-74.0	-60.1	-90.0			65	276	28.9	30.8	135.67	3.95	1981	1972
<i>80</i>	178	17838	178	-74.8	-61.5	-88.0			47	271	22.5	23.8	152.68	3.11	1982	1972
<i>70</i>	153	18631	153	-71.8	-58.1	-86.0			43	273	18.4	20.1	157.70	3.17	1982	1972
<i>60</i>	128	19569	128	-67.1	-50.5	-80.0			33	280	16.9	18.2	179.83	2.91	1982	1977
<i>50</i>	106	20699	106	-62.0	-49.1	-74.0			25	277	10.7	12.0	197.95	3.39	1982	1973
<i>40</i>	75	22138	75	-55.9	-44.3	-71.0			16	288	7.3	8.4	232.47	5.24	1983	1973
<i>30</i>	50	24025	50	-52.1	-37.7	-67.0			11	243	3.0	8.1	303.42	5.78	1983	1973
<i>25</i>	33	25249	33	-48.9	-40.1	-58.0			7	252	2.3	7.4	252.62	3.74	1982	1971
<i>20</i>	17	26894	17	-45.3	-39.9	-52.7			3	279	4.9	5.3			1983	1988
<i>15</i>	7	28908	7	-43.0	-36.3	-46.9			2	252	7.4	7.5			1983	1989
<i>10</i>	4	31582	4	-41.6	-37.1	-45.3									1983	1989
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

457 615 418 24 203 1229 -58.7 187 095 1686 -76.4

## NORMALS OF RADIOSONDE DATA

42647 AHMEDABAD

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	1003	620	34.7	41.0	24.6	620	11.4	620	305	1.8	2.8	0.81	1.33	1971	1979
1000	533	80	482	34.0	41.0	25.0	435	10.8	429	315	1.9	3.1	7.43	1.19	1971	1979
950	533	530	533	29.4	38.0	19.0	468	7.9	470	304	3.1	4.9	16.44	1.36	1977	1972
900	533	1014	532	24.8	34.0	11.8	463	5.0	472	295	3.0	5.1	7.46	1.37	1973	1980
850	533	1510	532	20.2	28.0	9.0	475	2.0	475	286	3.4	5.2	8.38	1.46	1973	1972
800	533	2028	532	15.8	24.0	6.4	464	-0.9	478	279	4.2	5.9	9.81	1.48	1973	1979
750	533	2564	533	11.9	21.6	2.0	425	-4.1	478	272	5.9	7.3	13.92	1.34	1983	1971
700	533	3144	532	8.2	16.8	-3.0	362	-7.7	479	268	7.5	9.1	13.22	1.41	1983	1971
650	525	3747	524	4.3	13.0	-7.0	311	-11.0	466	268	9.2	10.8	16.94	1.49	1988	1971
600	519	4396	518	0.3	10.6	-11.0	281	-15.2	461	268	10.7	12.3	17.00	1.56	1988	1971
550	515	5085	513	-4.1	5.4	-15.0	246	-19.3	459	271	12.7	14.2	20.20	1.68	1988	1971
500	510	5833	507	-8.8	4.8	-20.0	229	-23.9	457	272	14.9	16.6	21.48	1.82	1989	1975
450	498	6638	496	-14.2	-3.0	-24.0	206	-28.9	443	272	17.0	18.8	26.47	1.96	1973	1976
400	488	7527	485	-20.1	-8.3	-31.0	191	-33.8	435	273	19.9	21.9	30.28	2.27	1988	1976
350	479	8502	476	-27.0	-12.3	-42.0	178	-40.1	419	274	23.4	25.5	37.46	2.70	1988	1972
300	464	9603	461	-34.1	-20.9	-45.0	153	-47.6	403	274	26.8	29.3	47.40	2.94	1990	1976
250	437	10859	433	-42.5	-28.5	-55.0	89	-55.3	376	273	29.9	32.8	63.62	3.08	1987	1972
200	404	12339	401	-51.7	-38.0	-63.0	4	-58.3	317	273	30.7	33.4	77.48	2.44	1978	1978
175	366	13195	364	-56.9	-45.0	-68.0			262	272	29.6	32.5	87.63	2.48	1978	1973
150	327	14158	325	-62.5	-50.0	-73.5			229	272	27.8	30.1	102.06	2.68	1971	1979
125	274	15267	272	-68.3	-55.5	-79.1			178	271	25.9	27.6	114.65	2.72	1983	1981
100	244	16583	244	-73.3	-51.5	-86.1			152	273	22.0	23.6	125.95	2.88	1989	1981
80	205	17901	205	-72.7	-61.3	-84.1			116	277	16.4	18.0	128.67	3.03	1983	1981
70	185	18699	185	-69.9	-56.3	-84.0			101	277	13.2	15.1	134.03	3.18	1982	1973
60	155	19635	155	-65.8	-53.9	-78.0			81	278	10.7	12.5	154.10	3.42	1981	1972
50	126	20764	126	-61.2	-47.9	-78.0			60	278	6.2	8.7	167.73	3.76	1983	1972
40	91	22181	91	-56.0	-41.5	-77.0			44	266	3.7	7.2	201.35	5.12	1983	1972
30	55	24066	55	-50.7	-37.1	-74.0			20	051	0.4	6.9	222.23	7.46	1983	1972
25	34	25249	34	-47.7	-36.5	-55.9			10	086	3.9	6.8	270.96	5.00	1988	1988
20	19	26823	19	-44.9	-32.5	-53.1			3	073	10.3	10.7			1983	1988
15	7	28779	7	-42.9	-34.1	-52.1									1989	1988
10	1	31181	1	-50.3	-50.3	-50.3									1988	1988
7	1	33510	1	-49.1	-49.1	-49.1									1988	1988

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

519	597	444		26	221	1167	-54.6		224	096	1685	-75.2
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# NORMALS OF RADIOSONDE DATA

42647 AHMEDABAD

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	999	600	38.9	44.0	25.0	600	15.1	599	284	2.4	3.3	0.97	1.27	1971	1983
<i>1000</i>	521	49	205	37.3	43.4	24.0	182	14.4	174	294	2.2	3.0	8.24	1.57	1987	1990
<i>950</i>	519	506	518	34.1	42.0	24.2	458	11.8	449	277	4.5	5.7	19.73	1.35	1973	1983
<i>900</i>	519	997	518	29.4	37.2	19.4	459	8.7	450	275	4.8	6.1	6.13	1.37	1990	1983
<i>850</i>	519	1500	518	24.6	32.8	14.8	468	5.6	452	274	5.0	5.9	5.92	1.42	1990	1983
<i>800</i>	519	2025	518	19.8	28.0	9.8	474	2.8	454	273	5.3	6.1	7.74	1.40	1973	1983
<i>750</i>	519	2568	518	15.0	23.4	4.0	456	-0.4	459	271	6.0	7.0	15.14	1.28	1990	1975
<i>700</i>	519	3153	518	10.8	19.0	1.0	398	-4.1	457	266	6.8	8.0	10.50	1.35	1983	1983
<i>650</i>	513	3763	512	6.6	16.4	-6.1	333	-8.3	449	264	7.3	8.9	13.83	1.41	1990	1980
<i>600</i>	508	4416	507	2.5	11.4	-5.1	274	-12.8	445	266	8.0	9.8	14.68	1.54	1990	1979
<i>550</i>	507	5111	506	-2.1	6.2	-11.0	230	-17.3	446	268	8.8	10.8	20.82	1.75	1990	1977
<i>500</i>	496	5864	495	-7.1	3.6	-14.9	210	-22.0	432	271	10.0	11.8	21.22	1.86	1987	1979
<i>450</i>	489	6675	489	-12.5	7.6	-21.0	198	-26.3	423	271	12.1	14.0	28.76	1.97	1989	1972
<i>400</i>	485	7569	482	-18.6	-7.3	-30.0	189	-31.4	418	271	14.8	16.9	31.27	1.99	1987	1974
<i>350</i>	473	8550	468	-25.5	-15.7	-35.0	174	-38.0	407	271	17.0	19.2	38.33	1.99	1990	1972
<i>300</i>	462	9656	457	-33.2	-23.1	-44.0	151	-45.6	391	271	20.5	23.1	45.61	2.18	1989	1975
<i>250</i>	439	10916	434	-41.9	-31.3	-55.0	96	-53.4	366	271	23.9	26.7	56.27	2.34	1990	1975
<i>200</i>	411	12399	409	-51.2	-40.7	-63.0	3	-57.7	329	267	25.6	28.3	70.82	2.48	1988	1972
<i>175</i>	373	13257	371	-56.2	-42.9	-71.0			275	266	25.1	27.3	80.33	2.46	1988	1972
<i>150</i>	339	14224	338	-61.8	-48.3	-74.3			238	266	24.5	26.3	89.76	2.82	1988	1981
<i>125</i>	303	15331	303	-67.8	-54.1	-84.1			188	268	20.8	22.9	103.76	2.91	1982	1981
<i>100</i>	257	16650	267	-73.1	-59.1	-88.7			160	271	16.2	18.5	116.73	2.92	1982	1981
<i>80</i>	229	17962	229	-73.3	-59.7	-87.5			125	275	9.0	13.0	134.98	2.80	1982	1981
<i>70</i>	206	18761	206	-70.5	-55.1	-80.7			101	273	6.4	11.2	144.95	2.98	1981	1979
<i>60</i>	174	19703	174	-65.5	-48.3	-76.1			79	280	2.6	8.8	155.29	2.76	1981	1982
<i>50</i>	149	20329	149	-59.9	-44.0	-78.0			66	062	0.8	8.3	171.30	4.02	1977	1971
<i>40</i>	105	22257	105	-54.6	-42.7	-70.0			43	108	2.1	6.7	176.37	4.87	1989	1971
<i>30</i>	67	24138	67	-49.3	-39.1	-62.1			28	105	2.6	6.0	192.63	2.60	1981	1985
<i>25</i>	45	25374	45	-47.0	-38.5	-58.9			16	115	2.8	5.3	217.30	3.11	1988	1985
<i>20</i>	28	26924	28	-43.8	-36.5	-55.1			6	360	0.8	5.0	156.97	2.28	1982	1985
<i>15</i>	13	28884	13	-41.2	-34.1	-50.3									1982	1985
<i>10</i>	5	31327	5	-36.2	-29.7	-44.9									1982	1982
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

506 572 480

10 186 1289 -60.9

241 095 1703 -75.0

## NORMALS OF RADIOSONDE DATA

42647 AHMEDABAD

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	996	620	40.5	46.0	26.4	620	17.5	620	255	2.9	3.9	1.43	1.13	1972	1982
1000	512	23	39	37.8	43.4	26.4	38	19.2	36	278	1.8	2.8	11.06	2.51	1983	1982
950	512	482	512	36.0	42.0	25.2	486	15.2	431	257	5.2	6.3	23.00	1.11	1973	1982
900	512	977	512	31.4	37.4	20.2	487	12.3	432	258	5.7	6.6	9.82	1.09	1989	1982
850	512	1484	512	26.6	33.6	18.0	485	9.7	434	262	6.0	6.7	9.94	1.12	1989	1978
800	512	2013	511	21.9	29.0	12.0	487	7.0	432	266	6.2	6.8	9.53	1.19	1983	1978
750	512	2561	510	17.3	25.0	8.0	475	3.2	433	269	6.0	6.8	14.10	1.25	1988	1982
700	511	3149	508	12.8	20.8	-5.0	439	-1.9	433	274	5.3	6.7	9.98	1.35	1988	1974
650	507	3764	502	8.5	17.2	1.0	376	-6.6	430	277	4.6	6.7	13.26	1.40	1988	1972
600	504	4421	502	4.1	13.2	-7.9	309	-11.2	426	287	4.0	6.7	12.09	1.40	1988	1981
550	499	5121	496	-0.2	8.8	-10.0	233	-15.8	421	298	4.6	7.1	15.44	1.59	1988	1971
500	494	5879	489	-4.8	5.0	-12.1	173	-20.5	414	301	5.5	8.0	17.16	1.64	1980	1979
450	486	6697	479	-9.9	2.4	-19.0	148	-25.7	407	299	6.7	9.3	22.31	1.77	1985	1972
400	477	7600	473	-15.6	-6.1	-27.0	133	-30.8	400	295	8.2	11.0	25.99	1.94	1989	1972
350	463	8593	457	-22.3	-11.7	-35.0	125	-36.8	387	286	9.8	12.6	35.34	2.23	1988	1972
300	451	9714	445	-29.7	-18.1	-41.0	106	-43.8	373	277	11.9	14.6	44.37	2.35	1990	1973
250	430	10992	427	-38.6	-27.7	-51.0	77	-51.9	356	273	13.1	15.9	56.87	2.38	1990	1974
200	403	12490	401	-49.2	-37.7	-61.1	6	-59.2	316	264	14.2	17.0	71.29	2.25	1990	1979
175	365	13362	362	-55.2	-45.3	-64.7			253	263	13.5	16.7	77.28	2.21	1990	1986
150	334	14337	331	-61.5	-49.9	-71.0			219	261	12.3	15.5	88.97	2.50	1982	1972
125	299	15443	297	-68.4	-56.3	-80.0			181	253	9.1	13.0	100.51	2.92	1982	1972
100	272	16764	269	-74.0	-60.3	-83.0			154	245	5.5	11.1	122.45	3.10	1982	1972
80	234	18077	232	-73.6	-60.1	-85.0			120	177	1.7	8.8	136.82	3.41	1982	1978
70	215	18870	214	-70.2	-53.1	-85.0			107	117	2.9	9.0	145.27	3.82	1982	1978
60	191	19808	191	-64.7	-50.3	-78.0			92	108	6.2	9.6	154.53	4.13	1982	1978
50	167	20944	167	-58.3	-45.1	-73.0			77	112	4.8	8.4	165.06	4.38	1982	1973
40	131	22374	131	-52.6	-39.1	-67.0			53	093	6.5	8.3	203.01	3.70	1990	1973
30	103	24269	103	-47.3	-35.1	-55.9			36	095	8.1	8.9	168.37	2.09	1982	1980
25	73	25483	73	-45.0	-33.1	-57.3			20	088	8.1	8.9	153.75	2.12	1982	1980
20	34	27001	34	-42.1	-32.1	-50.3			10	086	7.6	8.8	243.40	3.21	1990	1983
15	19	28872	19	-39.8	-33.3	-46.9			1	145	7.0	7.0			1988	1987
10	7	31570	7	-38.0	-31.9	-42.5									1983	1987
7	1	34192	1	-37.1	-37.1	-37.1									1985	1985

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

497 551 511

237 096 1703 -75.9

## NORMALS OF RADIOSONDE DATA

42647 AHMEDABAD

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	592	993	592	36.8	45.0	23.0	592	23.0	592	223	2.8	3.7	0.87	1.49	1973	1976
1000	509	-8											6.99			
950	508	447	508	32.8	41.2	21.0	503	20.5	470	222	5.2	6.6	18.81	1.56	1981	1983
900	508	937	507	28.6	38.0	17.2	502	18.0	471	227	5.6	7.1	8.49	1.52	1973	1980
850	508	1440	506	24.4	33.2	12.6	500	15.8	475	235	5.2	7.0	9.73	1.51	1988	1980
800	508	1967	507	20.5	30.0	10.4	497	13.2	475	245	4.3	7.0	11.10	1.56	1988	1980
750	508	2515	505	16.9	26.6	7.4	488	8.3	471	260	2.7	6.5	17.25	1.42	1982	1980
700	508	3103	505	13.7	23.8	4.2	458	3.0	473	301	1.2	6.3	14.56	1.17	1982	1980
650	501	3721	498	9.7	19.4	-1.0	420	-1.5	463	007	1.2	6.7	18.56	0.98	1982	1977
600	499	4380	498	5.4	13.8	-8.9	403	-5.9	458	023	1.8	6.8	17.47	1.01	1988	1983
550	492	5085	488	1.3	8.8	-7.9	355	-9.2	449	022	1.8	6.7	21.12	1.04	1988	1981
500	484	5846	478	-2.3	5.4	-11.0	287	-12.6	446	017	2.2	6.7	20.99	1.12	1982	1971
450	470	6675	465	-6.2	8.4	-15.0	247	-17.8	429	007	2.1	6.9	22.63	1.35	1980	1973
400	464	7591	461	-11.2	-3.9	-22.0	219	-23.3	419	016	1.9	7.0	23.66	1.33	1990	1976
350	456	8604	455	-17.4	-10.1	-28.0	195	-29.5	404	015	1.7	7.2	27.48	1.33	1990	1974
300	448	9747	446	-25.1	-17.3	-36.0	159	-37.0	396	038	1.4	7.8	31.27	1.48	1990	1974
250	430	11049	428	-34.7	-26.5	-44.5	128	-45.9	371	080	1.3	8.7	39.51	1.57	1981	1979
200	414	12570	414	-46.8	-38.1	-57.9	27	-55.8	341	094	3.0	9.8	48.44	1.74	1981	1981
175	398	13445	398	-54.0	-44.9	-63.5			301	099	4.5	10.6	53.49	1.85	1981	1973
150	370	14420	370	-61.9	-51.5	-71.7			270	093	6.2	11.3	59.35	1.81	1981	1982
125	344	15522	343	-70.1	-59.3	-80.3			244	093	8.6	12.2	68.69	2.07	1981	1979
100	315	16824	315	-77.2	-67.3	-87.0			217	091	12.0	14.4	84.54	2.59	1981	1972
80	278	18111	278	-76.4	-62.5	-89.0			181	093	13.8	15.1	105.89	3.25	1981	1973
70	256	18895	256	-72.0	-57.5	-86.0			164	092	14.6	15.8	117.24	3.45	1987	1973
60	228	19827	226	-65.4	-51.1	-81.0			140	098	13.6	14.5	130.01	3.12	1981	1973
50	198	20960	196	-58.8	-46.1	-77.0			117	093	12.8	13.5	140.06	3.09	1981	1973
40	138	22395	138	-53.8	-41.1	-74.0			76	095	14.0	14.6	135.77	3.68	1982	1978
30	96	24278	96	-48.9	-34.7	-67.0			52	094	14.7	15.1	161.23	4.56	1982	1978
25	72	25463	72	-46.8	-36.1	-59.7			36	093	14.9	15.3	194.78	4.43	1981	1985
20	39	26947	39	-45.2	-33.5	-56.9			14	081	16.3	16.9	237.42	4.30	1986	1985
15	18	28717	17	-45.0	-32.9	-54.1									1983	1980
10	14	31502	14	-39.3	-27.5	-49.5			1	083	13.9	14.0			1983	1985
7	2	33815	2	-40.0	-39.5	-40.5									1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

483 531 535

290 096 1708 -79.1

## NORMALS OF RADIOSONDE DATA

42647 AHMEDABAD

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	619	993	619	31.8	40.0	24.4	619	25.0	619	227	2.4	3.1	1.05	1.53	1987	1985
<i>1000</i>	545	-5											9.98			
<i>950</i>	545	445	545	28.6	36.8	19.4	545	22.3	503	233	5.3	6.6	18.96	1.32	1987	1983
<i>900</i>	545	928	545	25.1	33.2	17.2	545	19.7	502	239	6.4	7.6	10.99	1.37	1988	1983
<i>850</i>	545	1427	545	21.5	30.2	14.2	545	17.4	504	246	6.7	7.8	11.79	1.40	1988	1986
<i>800</i>	545	1950	545	18.4	31.0	12.0	543	14.8	507	250	6.4	7.7	12.48	1.41	1987	1972
<i>750</i>	545	2498	543	15.5	25.0	10.0	538	11.1	511	263	5.2	7.1	15.15	1.41	1978	1971
<i>700</i>	545	3081	542	13.1	20.2	7.0	530	6.0	515	284	3.6	6.5	15.45	1.29	1979	1973
<i>650</i>	539	3701	533	10.0	17.8	3.4	507	1.6	507	307	3.0	6.6	17.24	1.21	1988	1982
<i>600</i>	532	4361	528	6.3	15.2	0.8	485	-2.1	491	328	2.3	6.3	18.81	1.14	1989	1982
<i>550</i>	524	5069	517	2.4	11.4	-9.0	465	-5.6	482	347	2.1	6.1	20.08	1.21	1989	1972
<i>500</i>	514	5834	508	-1.4	7.2	-8.9	441	-9.4	470	017	1.6	5.8	23.02	1.35	1989	1987
<i>450</i>	501	6666	497	-5.5	2.8	-13.1	414	-14.3	453	058	1.9	5.9	24.12	1.28	1986	1982
<i>400</i>	492	7586	487	-10.4	-3.9	-18.5	361	-19.4	438	070	3.1	6.1	28.94	1.23	1989	1989
<i>350</i>	483	8602	478	-16.5	-8.9	-23.3	319	-26.2	426	080	4.7	6.8	33.18	1.39	1989	1981
<i>300</i>	464	9750	461	-24.1	-15.5	-32.0	248	-33.8	406	085	6.7	8.1	40.80	1.62	1989	1971
<i>250</i>	450	11056	446	-33.9	-25.3	-43.7	176	-43.7	389	092	9.0	10.3	48.35	1.75	1983	1981
<i>200</i>	428	12583	425	-46.3	-36.5	-59.1	29	-54.8	352	091	13.1	14.4	56.07	2.13	1983	1981
<i>175</i>	403	13457	401	-53.7	-43.5	-66.9			301	089	16.0	17.3	61.09	2.15	1983	1981
<i>150</i>	385	14428	383	-62.0	-50.9	-72.1			274	088	18.5	19.8	68.60	2.28	1983	1987
<i>125</i>	349	15531	349	-70.4	-59.5	-83.0			228	088	21.6	22.9	80.86	2.75	1982	1973
<i>100</i>	310	16836	310	-76.8	-64.5	-92.0			197	088	22.9	23.7	92.49	2.96	1990	1972
<i>80</i>	267	18128	267	-74.7	-58.1	-92.0			158	088	23.8	24.4	107.99	4.21	1989	1972
<i>70</i>	252	18920	251	-70.3	-52.5	-86.0			149	091	22.7	23.3	119.06	4.19	1981	1972
<i>60</i>	228	19851	227	-64.7	-47.1	-82.0			134	089	20.8	21.3	136.99	4.17	1981	1972
<i>50</i>	201	20994	200	-58.3	-41.1	-77.0			113	087	19.1	19.8	163.71	4.15	1981	1978
<i>40</i>	148	22437	147	-53.1	-33.7	-65.0			76	092	19.2	19.6	171.68	4.28	1981	1973
<i>30</i>	93	24315	92	-48.5	-33.9	-60.0			45	089	20.9	21.3	199.42	2.98	1990	1977
<i>25</i>	68	25545	68	-46.4	-36.3	-55.1			30	087	21.1	21.4	140.30	2.71	1987	1979
<i>20</i>	42	27051	42	-43.1	-33.7	-52.3			15	084	22.9	23.2	163.88	3.46	1981	1985
<i>15</i>	19	29021	19	-41.4	-34.5	-49.9			3	092	29.6	29.6			1982	1985
<i>10</i>	3	31723	3	-38.7	-36.9	-41.3									1983	1983
<i>7</i>	3	34184	3	-36.7	-35.3	-39.3									1984	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

512 518 554

281 098 1701 -78.5



# NORMALS OF RADIOSONDE DATA

42647 AHMEDABAD

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	614	995	614	30.5	40.0	23.4	614	24.7	614	245	2.0	2.6	0.95	1.47	1987	1979
<i>1000</i>	552	8	10	30.9	31.8	29.0	10	24.0	6	251	1.1	1.3	6.73		1979	1981
<i>950</i>	547	456	547	27.2	36.4	19.0	545	21.7	484	250	4.7	5.8	15.89	1.24	1987	1980
<i>900</i>	547	938	547	23.7	32.6	15.0	545	19.4	486	254	5.6	6.7	7.62	1.28	1987	1976
<i>850</i>	547	1434	546	20.4	28.8	14.8	544	16.9	494	258	5.9	7.2	8.60	1.37	1990	1990
<i>800</i>	547	1955	546	17.4	27.2	10.2	542	14.1	499	263	5.3	6.8	9.72	1.40	1987	1986
<i>750</i>	547	2502	546	15.0	25.2	6.2	537	10.3	500	276	3.9	6.3	11.65	1.22	1987	1986
<i>700</i>	547	3085	546	12.6	21.6	3.2	528	5.7	501	302	2.7	5.9	13.34	1.06	1988	1986
<i>650</i>	539	3703	537	9.2	18.0	-6.0	511	1.6	489	327	2.4	5.7	14.47	1.12	1988	1972
<i>600</i>	529	4362	527	5.7	14.0	-5.0	496	-2.4	481	342	2.2	5.7	16.73	1.26	1988	1972
<i>550</i>	518	5071	515	1.9	9.4	-7.0	467	-6.2	465	359	2.0	5.6	19.49	1.41	1988	1972
<i>500</i>	515	5833	511	-1.7	4.8	-10.0	443	-10.3	465	017	1.9	5.8	23.11	1.25	1988	1971
<i>450</i>	503	6665	498	-5.8	3.8	-17.0	400	-14.8	452	045	2.2	5.8	25.58	1.27	1981	1972
<i>400</i>	497	7582	492	-10.9	-2.3	-18.0	364	-20.2	448	066	3.1	6.0	30.33	1.36	1989	1974
<i>350</i>	489	8595	486	-17.1	-10.0	-27.0	322	-26.8	442	076	4.6	6.8	33.89	1.41	1972	1974
<i>300</i>	477	9740	475	-24.8	-17.0	-34.0	262	-34.4	425	083	6.9	8.3	39.86	1.60	1978	1974
<i>250</i>	459	11043	457	-34.4	-26.1	-44.0	197	-44.0	400	086	9.4	10.6	48.72	1.94	1984	1974
<i>200</i>	439	12568	435	-46.7	-34.1	-58.0	34	-54.8	367	091	13.2	14.4	62.52	2.27	1989	1972
<i>175</i>	413	13441	411	-54.0	-41.1	-64.0			322	092	15.5	16.8	71.46	2.34	1989	1976
<i>150</i>	397	14414	393	-62.2	-50.7	-74.0			306	089	18.0	19.3	78.74	2.55	1983	1976
<i>125</i>	362	15512	360	-70.9	-59.5	-82.0			270	089	20.2	21.4	94.59	3.08	1983	1972
<i>100</i>	321	16814	321	-76.9	-63.9	-89.0			231	087	21.3	22.3	110.38	3.31	1987	1973
<i>80</i>	282	18113	282	-73.8	-54.1	-86.0			193	088	20.7	21.4	128.60	3.77	1990	1977
<i>70</i>	256	18913	256	-69.5	-52.3	-83.0			169	092	19.9	20.5	131.30	3.69	1990	1973
<i>60</i>	225	19845	225	-63.9	-46.1	-75.0			144	091	18.4	18.8	142.62	3.80	1980	1973
<i>50</i>	184	20982	184	-59.0	-42.3	-74.0			115	089	18.8	19.2	157.48	3.70	1990	1973
<i>40</i>	135	22439	135	-54.6	-40.1	-66.7			85	092	18.8	19.1	171.54	3.28	1988	1985
<i>30</i>	103	24310	103	-49.9	-40.3	-62.0			55	093	21.0	21.3	206.84	3.10	1985	1972
<i>25</i>	75	25537	75	-47.1	-38.0	-57.1			38	091	19.5	19.8	231.15	4.12	1978	1984
<i>20</i>	49	27060	49	-44.3	-33.1	-54.7			18	094	23.5	23.7	136.33	1.65	1981	1984
<i>15</i>	24	28996	24	-42.3	-35.1	-51.7			6	094	24.3	24.5	81.84	1.71	1983	1984
<i>10</i>	11	31599	11	-41.4	-33.5	-48.3									1983	1984
<i>7</i>	4	33879	4	-42.4	-38.7	-47.1									1983	1984

**FREEZING LEVEL**

N	P	ALT
517	523	547

**1ST TROPOPAUSE**

N	P	ALT	T
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**2ND TROPOPAUSE**

N	P	ALT	T
313	101	1679	-78.3

# NORMALS OF RADIOSONDE DATA

42647 AHMEDABAD

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	598	998	597	32.8	42.0	23.0	597	23.4	598	266	1.2	1.9	1.00	1.78	1974	1975
<i>1000</i>	525	40	131	33.4	39.4	24.2	130	21.8	108	265	1.2	1.8	8.97	2.29	1987	1990
<i>950</i>	525	488	525	28.9	37.0	19.0	521	19.5	451	264	2.5	4.5	20.98	1.65	1974	1975
<i>900</i>	525	974	525	25.0	33.0	11.4	520	16.8	462	264	2.8	4.8	10.96	1.54	1974	1980
<i>850</i>	525	1472	524	21.0	29.4	13.6	517	14.0	476	269	2.9	5.1	11.48	1.45	1988	1985
<i>800</i>	523	1993	520	17.5	26.0	9.6	507	10.2	475	274	2.6	5.3	11.53	1.35	1988	1985
<i>750</i>	523	2539	518	14.2	22.2	5.4	486	5.5	481	284	1.7	5.2	12.99	1.33	1989	1985
<i>700</i>	523	3119	520	11.0	20.0	3.4	467	0.8	484	325	0.9	5.1	14.07	1.36	1978	1985
<i>650</i>	518	3734	517	7.5	17.0	-5.0	425	-3.4	474	348	0.9	5.2	15.82	1.45	1986	1972
<i>600</i>	512	4387	509	4.2	12.8	-5.0	371	-6.9	461	324	0.9	5.1	16.56	1.43	1986	1975
<i>550</i>	509	5092	504	1.2	8.2	-6.0	294	-9.4	463	309	1.2	5.2	19.29	1.33	1983	1974
<i>500</i>	500	5852	496	-2.3	6.4	-10.0	250	-13.8	458	305	1.2	5.5	21.66	1.33	1989	1972
<i>450</i>	496	6681	495	-6.6	6.0	-14.7	227	-18.6	451	291	1.0	5.8	24.98	1.43	1977	1982
<i>400</i>	487	7594	485	-12.2	-4.5	-21.3	201	-24.5	444	299	0.3	5.7	29.79	1.49	1989	1982
<i>350</i>	472	8603	471	-18.7	-10.3	-28.9	171	-31.0	428	128	0.3	6.0	34.54	1.56	1982	1982
<i>300</i>	457	9740	453	-26.7	-16.3	-37.1	144	-38.4	412	125	1.3	6.6	41.04	1.76	1982	1982
<i>250</i>	445	11032	442	-36.6	-24.9	-47.5	108	-48.0	396	124	2.6	7.6	51.18	1.93	1982	1982
<i>200</i>	422	12541	420	-48.9	-36.5	-59.7	10	-57.3	368	120	4.1	9.1	62.20	2.09	1982	1982
<i>175</i>	400	13406	398	-56.2	-43.1	-68.5			340	119	5.7	10.4	69.54	2.18	1982	1982
<i>150</i>	383	14367	381	-64.3	-52.1	-73.0			330	115	7.2	11.4	80.06	2.35	1982	1971
<i>125</i>	361	15458	360	-72.5	-62.1	-82.0			302	106	9.0	12.0	91.91	2.71	1982	1971
<i>100</i>	329	16748	327	-77.5	-57.5	-89.0			264	096	10.6	12.8	106.74	3.58	1987	1973
<i>80</i>	299	18043	299	-73.4	-56.7	-87.0			232	093	12.3	13.6	126.37	4.66	1984	1973
<i>70</i>	268	18841	268	-68.4	-54.5	-87.9			204	096	12.2	13.1	141.74	4.80	1987	1982
<i>60</i>	218	19790	218	-63.1	-48.7	-84.3			159	096	12.1	12.8	155.85	4.54	1989	1982
<i>50</i>	170	20932	170	-58.1	-44.9	-76.5			117	088	12.6	13.1	186.42	4.44	1989	1982
<i>40</i>	136	22369	136	-53.6	-42.3	-70.7			83	092	13.3	13.9	204.25	3.58	1987	1982
<i>30</i>	79	24258	79	-49.5	-39.5	-63.1			35	093	14.3	14.7	213.75	3.88	1983	1982
<i>25</i>	51	25445	51	-47.5	-37.5	-62.7			23	092	14.6	15.0	199.05	4.40	1984	1982
<i>20</i>	24	26925	24	-46.2	-34.7	-60.1			8	086	16.0	16.4	153.20	4.28	1984	1982
<i>15</i>	9	28799	9	-46.7	-39.1	-58.1			2	092	17.9	18.0			1983	1982
<i>10</i>	5	31421	5	-45.7	-39.3	-54.7									1988	1982
<i>7</i>	1	34359	1	-40.1	-40.1	-40.1									1988	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
503	534	533					317	101	1671	-79.3

# NORMALS OF RADIOSONDE DATA

42647 AHMEDABAD

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	618	1002	618	34.3	40.0	21.6	617	18.0	618	355	0.5	1.5	1.12	1.54	1987	1981
<i>1000</i>	558	74	450	34.2	40.0	21.8	428	17.0	408	360	0.7	1.7	8.84	1.51	1987	1981
<i>950</i>	558	525	558	29.9	38.0	21.4	531	12.7	499	358	1.3	3.9	19.01	1.58	1987	1981
<i>900</i>	558	1011	557	25.7	36.0	18.0	533	9.2	504	351	1.3	3.8	10.28	1.59	1987	1973
<i>850</i>	558	1509	557	21.4	31.4	13.0	536	6.2	512	349	1.4	3.9	11.30	1.48	1987	1973
<i>800</i>	558	2028	558	17.0	26.2	9.0	525	2.9	512	351	1.5	4.3	12.64	1.43	1987	1973
<i>750</i>	558	2570	557	12.9	21.0	5.0	483	-0.8	512	355	1.5	4.6	15.77	1.19	1987	1977
<i>700</i>	558	3148	556	9.2	18.0	-1.0	403	-4.6	509	346	1.5	4.9	15.53	1.12	1977	1972
<i>650</i>	550	3760	549	6.0	14.2	-8.0	292	-8.3	497	331	1.8	5.3	15.46	1.30	1989	1972
<i>600</i>	546	4408	543	3.1	13.2	-5.5	207	-12.4	490	310	2.7	5.9	17.51	1.45	1981	1980
<i>550</i>	538	5110	535	-0.3	8.2	-8.5	160	-16.0	484	304	3.6	6.8	18.34	1.61	1990	1979
<i>500</i>	534	5866	530	-4.5	3.2	-13.0	140	-20.1	480	295	4.7	8.1	21.73	1.72	1990	1972
<i>450</i>	523	6686	520	-9.5	-0.9	-19.0	128	-25.0	475	286	6.2	9.5	25.99	1.81	1983	1974
<i>400</i>	517	7593	516	-15.2	-6.1	-25.9	127	-30.6	465	279	8.0	11.1	37.03	1.76	1990	1979
<i>350</i>	505	8569	503	-21.8	-11.9	-33.5	120	-36.2	454	274	9.6	12.7	77.90	1.69	1983	1979
<i>300</i>	489	9711	486	-29.8	-21.5	-38.9	109	-43.3	436	266	11.5	14.2	47.37	1.83	1990	1979
<i>250</i>	476	10989	475	-39.3	-30.3	-49.1	86	-51.6	413	258	13.5	16.2	56.08	2.07	1990	1980
<i>200</i>	456	12478	453	-50.9	-40.1	-60.3	4	-58.3	397	250	14.9	17.9	66.72	2.36	1983	1979
<i>175</i>	424	13337	421	-57.5	-47.9	-78.0			329	247	14.6	17.7	74.41	2.40	1990	1974
<i>150</i>	392	14291	391	-64.9	-52.7	-76.3			299	245	13.5	16.5	85.93	2.53	1983	1984
<i>125</i>	360	15384	360	-71.6	-51.0	-89.5			266	242	10.5	14.1	102.58	3.01	1976	1984
<i>100</i>	336	16683	335	-76.1	-61.0	-89.0			239	228	5.5	10.5	117.20	3.74	1976	1971
<i>80</i>	301	17985	300	-72.6	-57.7	-86.0			210	190	1.8	8.3	138.06	4.50	1988	1971
<i>70</i>	270	18780	269	-68.4	-53.0	-84.0			187	122	2.1	7.0	151.98	4.40	1977	1971
<i>60</i>	243	19723	242	-63.5	-48.9	-83.0			160	105	3.2	6.8	174.29	4.01	1989	1971
<i>50</i>	203	20862	203	-58.3	-41.5	-80.0			129	111	4.5	7.2	195.36	4.03	1990	1971
<i>40</i>	155	22303	155	-54.1	-41.9	-70.0			97	099	5.5	7.5	219.55	4.03	1982	1972
<i>30</i>	99	24187	99	-49.6	-36.5	-60.0			58	100	7.1	8.5	277.89	4.35	1985	1973
<i>25</i>	75	25408	75	-47.2	-36.1	-55.3			45	100	8.0	8.8	261.76	3.35	1986	1979
<i>20</i>	43	26860	43	-44.7	-35.3	-51.1			20	087	7.8	8.8	121.27	1.54	1983	1983
<i>15</i>	14	28849	14	-44.1	-37.7	-56.3			3	079	9.9	10.3			1980	1990
<i>10</i>	2	31315	2	-39.3	-36.1	-42.5									1983	1980
<i>7</i>	1	33840	1	-39.9	-39.9	-39.9									1983	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
537	557	502					321	103	1656	-77.5

# NORMALS OF RADIOSONDE DATA

42647 AHMEDABAD

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	599	1005	599	31.2	37.0	20.0	599	13.6	598	042	1.3	1.9	1.28	1.26	1976	1978
1000	539	102	536	30.7	36.2	19.0	520	13.0	483	038	1.7	2.4	10.45	1.31	1986	1978
950	539	547	539	26.3	35.2	16.0	503	8.5	469	042	2.6	4.1	17.03	1.35	1987	1982
900	539	1027	539	22.0	30.0	11.2	503	5.6	471	045	2.2	3.9	10.94	1.34	1987	1982
850	539	1518	537	18.0	31.0	9.0	492	3.1	480	040	1.8	3.9	11.41	1.30	1972	1982
800	539	2032	539	14.2	23.8	7.0	437	0.3	475	025	1.2	4.3	12.03	1.09	1989	1973
750	539	2572	537	11.6	22.4	2.0	349	-3.3	475	353	0.9	4.7	12.78	1.10	1987	1974
700	539	3146	536	8.8	19.2	0.0	273	-6.8	479	309	1.7	5.3	13.80	1.20	1987	1977
650	537	3757	535	5.8	15.8	-4.0	219	-10.3	471	298	3.1	6.4	16.07	1.12	1987	1977
600	535	4406	532	2.3	11.4	-6.0	191	-13.5	463	290	4.7	7.8	16.95	1.18	1987	1972
550	531	5104	528	-1.8	6.8	-10.0	173	-17.3	458	286	6.2	9.3	18.25	1.10	1987	1972
500	525	5856	523	-6.5	2.2	-13.5	166	-22.0	453	284	8.3	11.2	20.53	1.19	1987	1979
450	522	6669	520	-11.7	8.4	-19.0	156	-27.0	448	280	10.7	13.5	22.37	1.28	1982	1972
400	510	7564	507	-17.8	-8.0	-25.0	154	-31.9	440	276	13.6	16.3	26.79	1.52	1976	1971
350	495	8548	494	-24.6	-15.0	-33.0	145	-38.7	418	273	16.8	19.4	29.62	1.67	1976	1971
300	476	9656	476	-32.4	-22.5	-43.0	133	-46.3	403	269	19.8	22.3	36.51	1.87	1986	1971
250	449	10916	447	-41.7	-26.3	-52.0	56	-54.1	373	265	22.9	25.2	44.40	2.05	1989	1971
200	424	12397	423	-52.5	-42.5	-63.0	1	-60.0	342	260	24.9	27.1	56.75	2.26	1986	1971
175	387	13250	386	-58.6	-49.3	-69.1			296	258	24.5	26.8	67.86	2.43	1984	1980
150	352	14202	352	-64.8	-55.9	-75.9			256	259	23.1	24.8	76.67	2.50	1987	1979
125	310	15292	310	-70.4	-60.0	-80.3			223	259	19.7	21.3	87.45	3.50	1974	1979
100	273	16601	272	-75.1	-61.1	-85.9			198	259	13.9	16.0	101.87	2.70	1980	1979
80	240	17900	239	-74.3	-63.3	-84.9			170	258	8.1	11.9	115.92	3.05	1989	1979
70	219	18689	219	-71.3	-59.7	-82.0			150	260	5.5	9.4	127.18	2.90	1983	1971
60	196	19618	196	-66.4	-53.7	-75.7			130	267	4.0	7.8	143.52	2.78	1979	1988
50	153	20740	153	-60.9	-47.5	-70.0			93	264	2.6	6.9	148.94	2.85	1980	1974
40	97	22165	97	-56.0	-46.9	-65.0			58	273	1.2	6.7	172.42	3.20	1983	1974
30	70	24053	70	-51.4	-41.1	-60.5			35	142	1.9	6.2	168.77	2.98	1980	1990
25	45	25250	45	-49.4	-37.5	-59.1			19	263	0.7	7.9	137.29	3.17	1980	1990
20	24	26735	24	-47.7	-32.5	-57.5			12	073	2.4	6.7	96.41	3.74	1980	1990
15	13	28619	12	-46.3	-40.1	-55.5			3	106	10.6	11.3			1982	1990
10	3	31507	3	-38.9	-34.5	-43.3									1982	1988
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
531	572	479	1	112	1600	-70.1	261	099	1671	-76.7

## NORMALS OF RADIOSONDE DATA

42647 AHMEDABAD

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	1007	620	28.0	32.4	18.2	620	11.8	620	028	1.4	2.2	0.81	0.75	1984	1990
<i>1000</i>	530	118	528	27.5	32.0	16.0	514	11.3	496	027	1.9	2.8	7.68	0.68	1972	1975
<i>950</i>	530	559	529	23.1	29.0	11.4	510	6.6	488	033	2.4	4.0	17.96	0.70	1972	1980
<i>900</i>	530	1033	529	19.0	29.4	7.4	501	3.6	489	035	1.6	3.8	7.82	0.88	1987	1980
<i>850</i>	530	1520	530	15.6	26.4	4.2	455	0.4	490	338	0.5	4.0	7.65	1.00	1987	1980
<i>800</i>	530	2030	528	12.8	23.2	4.6	354	-2.8	488	276	1.7	4.8	8.53	1.20	1987	1980
<i>750</i>	530	2567	527	10.4	20.4	1.8	266	-6.0	488	269	3.3	5.8	10.93	1.33	1980	1980
<i>700</i>	530	3140	530	7.6	18.0	-0.9	208	-9.2	491	268	5.2	7.4	10.90	1.43	1987	1980
<i>650</i>	523	3747	520	4.4	16.0	-6.9	198	-12.8	481	269	7.0	9.1	14.02	1.48	1984	1980
<i>600</i>	518	4394	511	0.9	12.0	-7.9	170	-16.3	477	269	9.5	11.5	16.79	1.45	1984	1982
<i>550</i>	513	5085	506	-3.4	7.8	-12.3	152	-19.6	468	271	11.9	13.7	21.70	1.49	1985	1982
<i>500</i>	506	5834	503	-8.2	1.2	-17.1	143	-23.3	464	269	14.9	16.5	23.91	1.41	1987	1982
<i>450</i>	501	6641	500	-13.6	-3.0	-21.7	140	-28.2	459	268	17.8	19.4	28.81	1.44	1977	1980
<i>400</i>	494	7529	492	-19.8	-8.0	-35.0	135	-33.8	451	267	21.0	22.6	32.81	1.52	1977	1972
<i>350</i>	484	8506	484	-26.7	-16.3	-36.7	126	-39.9	436	266	24.8	26.5	38.73	1.56	1982	1988
<i>300</i>	469	9606	468	-34.5	-22.9	-45.1	112	-47.4	418	264	28.6	30.6	46.21	1.81	1982	1990
<i>250</i>	436	10857	434	-43.6	-30.9	-53.9	60	-55.4	364	261	32.8	34.9	53.21	1.94	1982	1990
<i>200</i>	402	12326	401	-54.0	-42.1	-66.5			309	258	35.2	37.6	63.72	2.07	1982	1990
<i>175</i>	364	13171	364	-59.4	-47.0	-68.0			251	258	35.2	37.4	69.15	2.32	1972	1975
<i>150</i>	314	14121	313	-64.4	-53.9	-75.0			213	259	34.0	35.9	78.31	2.76	1980	1971
<i>125</i>	272	15228	271	-68.4	-59.1	-80.0			168	259	31.3	32.8	90.52	2.88	1980	1971
<i>100</i>	240	16555	239	-72.9	-63.9	-85.0			132	260	24.3	25.7	112.50	3.12	1980	1971
<i>80</i>	214	17861	214	-73.1	-63.0	-85.0			110	259	18.2	19.9	121.05	3.42	1976	1971
<i>70</i>	198	18651	198	-70.7	-60.0	-85.0			101	260	14.7	16.1	141.26	3.44	1976	1971
<i>60</i>	167	19582	166	-66.9	-53.9	-80.1			87	267	11.1	12.9	150.10	2.88	1981	1982
<i>50</i>	134	20697	134	-61.7	-45.7	-78.0			59	261	6.6	9.1	166.85	3.32	1981	1977
<i>40</i>	87	22106	86	-57.2	-47.7	-70.0			36	282	4.1	6.8	170.73	3.70	1985	1971
<i>30</i>	58	23964	58	-52.1	-42.9	-62.1			18	275	3.4	6.3	167.43	3.80	1980	1982
<i>25</i>	33	25189	33	-49.2	-38.3	-58.1			11	260	4.5	7.6	163.73	3.34	1980	1982
<i>20</i>	14	26612	14	-47.3	-39.5	-53.3			4	300	3.5	5.5			1981	1982
<i>15</i>	4	28481	4	-46.5	-44.1	-48.9									1981	1982
<i>10</i>																
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

508	593	449		37	167	1351	-64.7		227	096	1677	-74.6
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## NORMALS OF RADIOSONDE DATA

43311 AMINI

JANUARY 1980-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	279	1009	279	29.3	32.2	25.2	279	22.5	279	013	2.7	3.3	1.11	0.76	1988	1984
<i>1000</i>	183	82	183	28.7	31.8	24.6	183	22.2	183	017	3.2	3.9	7.21	0.83	1988	1982
<i>950</i>	183	523	183	24.6	28.6	17.4	182	18.8	183	028	3.7	4.3	14.73	1.23	1988	1982
<i>900</i>	183	1006	183	21.1	27.0	14.2	182	14.0	183	045	3.0	3.7	4.16	1.48	1989	1982
<i>850</i>	183	1498	183	18.2	25.2	11.2	181	7.6	183	071	2.5	3.9	3.46	1.58	1989	1986
<i>800</i>	183	2016	183	15.8	23.4	8.8	159	1.6	183	079	2.0	4.2	4.99	1.93	1987	1986
<i>750</i>	183	2556	183	13.5	22.4	5.8	110	-3.9	182	086	1.7	4.5	8.25	2.16	1989	1986
<i>700</i>	183	3138	183	10.8	18.6	2.4	68	-7.5	182	093	1.7	4.8	12.69	2.23	1989	1982
<i>650</i>	183	3746	183	7.5	14.8	-1.7	46	-8.7	183	087	2.1	4.7	15.02	2.29	1989	1986
<i>600</i>	181	4406	181	3.9	11.0	-3.1	40	-11.3	181	093	2.6	5.3	21.91	2.05	1989	1986
<i>550</i>	181	5110	181	0.0	7.2	-6.5	30	-12.3	180	086	3.0	6.1	29.19	1.97	1987	1986
<i>500</i>	181	5865	181	-4.3	3.4	-11.5	25	-15.1	180	087	3.0	6.8	31.70	2.15	1989	1986
<i>450</i>	180	6689	180	-9.2	-0.9	-17.1	20	-20.7	179	086	2.2	7.1	41.05	2.24	1987	1982
<i>400</i>	177	7589	177	-14.9	-5.1	-22.1	11	-27.0	176	042	1.4	8.2	45.96	2.38	1987	1982
<i>350</i>	170	8586	170	-21.5	-11.9	-29.1	7	-30.4	170	310	1.2	9.0	54.19	2.44	1987	1982
<i>300</i>	168	9707	167	-29.9	-20.7	-38.5	6	-38.1	166	259	2.6	9.6	66.09	2.57	1987	1988
<i>250</i>	158	10979	157	-40.4	-30.1	-47.7	2	-45.5	155	205	5.3	11.6	78.71	2.78	1987	1986
<i>200</i>	141	12456	140	-53.0	-43.5	-61.1			139	202	6.9	12.2	91.76	2.91	1987	1986
<i>175</i>	110	13300	110	-59.8	-50.1	-69.1			108	201	5.0	10.9	103.48	3.07	1987	1986
<i>150</i>	75	14229	75	-67.2	-56.9	-77.1			73	220	3.8	9.9	114.72	3.05	1987	1980
<i>125</i>	41	15275	41	-73.6	-66.7	-81.3			40	221	2.9	10.1	112.54	2.66	1987	1980
<i>100</i>	28	16553	28	-78.7	-70.3	-85.7			28	160	0.9	8.4	145.23	4.11	1982	1980
<i>80</i>	23	17810	23	-78.0	-72.5	-87.1			23	094	3.7	7.7	71.40	2.30	1982	1980
<i>70</i>	20	18596	20	-74.0	-65.5	-85.3			20	103	4.6	6.8			1982	1980
<i>60</i>	16	19518	16	-70.2	-59.5	-80.3			16	102	2.9	6.5			1982	1980
<i>50</i>	15	20633	15	-65.0	-57.1	-70.9			15	093	5.0	8.3			1982	1980
<i>40</i>	13	22035	13	-59.5	-54.1	-65.7			13	105	12.0	12.8			1982	1980
<i>30</i>	9	23826	9	-55.9	-51.9	-58.9			9	100	14.7	15.6			1980	1980
<i>25</i>	8	24992	8	-53.5	-47.7	-57.9			8	103	18.0	19.6			1982	1980
<i>20</i>	5	26526	5	-48.5	-43.5	-54.1			5	100	21.4	22.0			1982	1982
<i>15</i>	3	28558	3	-42.7	-38.9	-48.3			3	104	22.9	23.6			1982	1982
<i>10</i>																
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
183	552	509					28	093	1699	-80.9

# NORMALS OF RADIOSONDE DATA

43311 AMINI

FEBRUARY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	262	1009	262	30.1	32.6	26.6	262	22.0	262	351	3.2	3.7	0.63	1.19	1988	1981
<i>1000</i>	237	84	237	29.3	32.0	25.2	237	22.2	237	351	3.4	4.0	5.11	1.16	1990	1981
<i>950</i>	237	516	237	24.7	29.4	18.2	237	18.1	237	004	3.4	4.2	23.80	1.32	1989	1980
<i>900</i>	237	1008	237	21.6	28.8	12.2	234	11.8	237	025	2.2	3.5	4.20	1.29	1990	1987
<i>850</i>	237	1501	237	19.0	26.2	11.8	228	6.4	237	066	2.1	4.1	5.47	1.36	1990	1987
<i>800</i>	237	2019	237	16.1	24.0	8.0	211	1.8	237	086	3.0	5.0	7.72	1.61	1990	1987
<i>750</i>	237	2554	237	13.5	22.8	6.0	162	-3.2	236	081	3.0	5.2	12.37	1.88	1990	1986
<i>700</i>	237	3141	237	10.5	19.8	2.8	97	-7.0	236	064	2.4	5.3	14.26	1.92	1990	1986
<i>650</i>	235	3744	235	7.1	16.0	-1.1	58	-8.9	234	065	1.8	5.5	17.52	1.78	1990	1986
<i>600</i>	231	4407	231	3.6	12.0	-4.3	45	-11.9	229	041	1.5	6.3	21.30	1.70	1990	1986
<i>550</i>	226	5113	226	-0.4	8.0	-7.9	31	-15.2	225	019	1.6	6.6	27.50	1.85	1990	1986
<i>500</i>	220	5864	220	-4.8	3.8	-11.9	24	-18.8	219	004	1.3	6.8	31.79	1.94	1990	1986
<i>450</i>	218	6686	218	-9.6	-0.9	-16.5	16	-23.0	217	322	1.8	7.1	36.48	2.03	1990	1986
<i>400</i>	217	7587	217	-15.1	-6.1	-23.1	9	-27.2	216	312	3.1	8.5	45.68	2.20	1990	1986
<i>350</i>	214	8583	214	-21.7	-12.3	-30.7	5	-31.3	213	292	4.3	9.4	51.22	2.33	1990	1986
<i>300</i>	207	9709	207	-29.8	-19.9	-39.5	5	-43.5	207	265	5.1	9.6	65.08	2.46	1990	1986
<i>250</i>	192	10980	192	-40.1	-29.9	-50.3			191	256	6.0	11.2	77.15	2.46	1990	1986
<i>200</i>	174	12464	173	-52.4	-42.5	-62.7			173	266	4.8	11.0	88.87	2.53	1990	1986
<i>175</i>	144	13314	143	-59.3	-49.1	-67.1			142	271	4.4	11.2	97.83	2.58	1990	1980
<i>150</i>	125	14270	125	-66.3	-55.1	-75.5			122	281	4.8	11.3	116.53	2.85	1990	1980
<i>125</i>	89	15347	89	-72.4	-61.5	-81.5			87	275	6.1	11.1	161.16	2.95	1990	1980
<i>100</i>	68	16620	67	-77.6	-64.1	-85.5			66	299	2.4	7.8	168.28	3.30	1990	1980
<i>80</i>	42	17875	41	-77.1	-69.5	-83.5			41	298	0.9	6.7	236.21	2.00	1980	1980
<i>70</i>	39	18642	38	-74.2	-68.1	-81.5			38	258	2.0	6.8	243.34	2.96	1981	1982
<i>60</i>	35	19542	35	-70.6	-63.1	-80.5			34	254	2.9	6.8	272.82	2.52	1982	1982
<i>50</i>	33	20644	33	-65.2	-56.1	-76.7			31	254	0.4	7.1	273.58	3.35	1982	1982
<i>40</i>	26	21967	26	-61.2	-51.7	-71.9			25	191	0.0	7.6	128.64	4.84	1988	1982
<i>30</i>	19	23724	19	-57.4	-46.3	-63.7			17	092	7.4	10.5			1988	1982
<i>25</i>	12	24889	12	-54.1	-42.9	-60.5			10	121	6.8	10.5			1988	1982
<i>20</i>	8	26315	8	-49.9	-39.5	-58.3			8	096	8.5	12.2			1988	1982
<i>15</i>																
<i>10</i>																
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
224	554	503					51	099	1670	-79.4

# NORMALS OF RADIOSONDE DATA

43311 AMINI

MARCH 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	310	1008	310	30.8	33.6	24.6	310	23.8	310	339	3.4	3.9	0.71	0.84	1989	1990
1000	297	75	297	30.1	33.2	24.4	296	23.3	297	341	3.7	4.1	6.12	0.94	1989	1990
950	297	521	297	25.3	32.8	20.0	295	20.0	297	350	3.5	4.2	14.36	1.33	1989	1980
900	297	1002	295	22.9	32.2	16.0	289	12.4	297	007	2.6	4.0	6.75	1.18	1989	1980
850	297	1498	297	20.7	28.2	14.6	288	7.1	297	044	2.2	4.3	8.38	1.32	1989	1983
800	297	2019	297	17.6	25.8	10.8	279	4.0	297	074	3.1	5.3	10.20	1.48	1989	1987
750	297	2564	297	14.1	24.0	7.4	256	-0.2	297	091	4.4	6.3	14.10	1.75	1990	1986
700	297	3144	297	10.6	21.6	4.2	208	-4.5	297	094	3.9	6.0	17.03	1.98	1990	1986
650	289	3755	289	7.3	16.8	0.4	125	-8.4	289	086	2.7	5.4	20.22	2.04	1989	1980
600	287	4412	287	4.0	13.2	-2.7	78	-10.6	287	070	2.2	5.5	26.12	2.20	1989	1986
550	285	5116	285	0.2	9.8	-7.1	50	-13.8	284	056	2.2	5.7	33.51	2.43	1990	1986
500	278	5874	278	-3.9	6.0	-11.5	38	-18.6	278	039	1.7	6.2	39.40	2.46	1990	1986
450	271	6697	270	-8.6	1.2	-16.3	25	-20.2	271	001	1.6	7.0	46.89	2.51	1989	1986
400	269	7602	267	-14.3	-4.7	-23.1	23	-26.0	268	320	1.9	7.6	54.39	2.61	1990	1979
350	259	8601	255	-20.9	-8.1	-28.3	14	-31.9	256	292	2.8	8.7	64.66	2.80	1990	1982
300	251	9725	249	-28.8	-19.1	-36.3	7	-37.8	248	274	4.0	9.6	76.09	2.77	1990	1980
250	225	11006	224	-38.8	-28.3	-47.3	3	-40.2	224	265	4.8	10.8	94.70	2.99	1990	1979
200	203	12494	203	-51.3	-41.1	-60.5			201	261	6.1	11.6	114.62	3.04	1990	1979
175	161	13341	161	-58.3	-47.7	-71.3			159	268	6.2	11.5	114.62	2.71	1987	1979
150	136	14294	136	-65.7	-54.7	-74.9			134	279	5.9	10.7	123.37	2.93	1987	1979
125	92	15350	92	-73.1	-60.3	-81.3			90	277	4.3	9.9	157.30	3.32	1990	1979
100	69	16610	69	-79.2	-67.1	-86.1			69	284	1.7	8.0	222.09	3.51	1990	1980
80	43	17873	43	-76.0	-64.1	-84.9			43	226	1.3	6.9	272.82	1.94	1983	1981
70	38	18653	38	-72.0	-57.5	-78.3			38	254	2.3	6.1	298.06	2.81	1983	1979
60	34	19574	34	-67.0	-51.7	-74.3			33	276	4.3	6.7	304.20	2.96	1983	1982
50	31	20656	31	-62.6	-50.5	-73.5			31	250	3.5	8.0	282.96	5.05	1981	1980
40	22	22037	22	-58.4	-48.7	-70.3			22	231	2.3	8.1	309.57	6.18	1981	1981
30	18	23873	18	-52.9	-44.5	-63.1			18	127	1.6	7.2			1981	1982
25	13	25059	13	-50.5	-41.3	-59.7			13	094	4.0	8.9			1989	1982
20	11	26457	11	-46.9	-37.9	-55.9			11	068	5.3	12.0			1989	1982
15	6	28444	6	-44.7	-41.7	-51.5			6	125	4.1	11.7			1987	1982
10	3	31471	3	-38.9	-35.1	-41.1			3	290	4.1	15.7			1987	1983
7	2	33899	2	-34.4	-29.9	-38.9			2	297	3.7	17.5			1987	1990

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
284	547	516					53	098	1680	-81.0



# NORMALS OF RADIOSONDE DATA

43311 AMINI

APRIL 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	329	1007	329	31.6	34.6	26.4	329	24.5	329	316	3.7	4.2	1.00	0.77	1988	1989
<i>1000</i>	286	62	286	30.9	33.8	26.2	286	24.2	286	318	3.7	4.3	6.27	0.96	1987	1989
<i>950</i>	286	505	286	26.1	31.2	19.8	286	21.1	286	325	3.7	4.4	13.76	1.42	1989	1985
<i>900</i>	286	991	286	23.6	32.0	17.6	283	14.3	286	339	2.7	4.2	5.91	1.14	1989	1985
<i>850</i>	286	1488	286	21.9	30.0	15.2	275	8.2	286	017	2.4	4.3	6.71	1.50	1989	1985
<i>800</i>	286	2011	286	18.9	26.4	7.2	273	5.8	286	048	3.2	4.7	7.98	1.61	1989	1979
<i>750</i>	286	2554	286	15.3	23.4	6.4	262	2.9	286	073	4.5	5.7	8.12	1.71	1990	1985
<i>700</i>	286	3141	286	11.3	20.4	0.8	249	-0.9	286	084	5.8	6.8	13.20	1.84	1989	1985
<i>650</i>	283	3749	283	7.4	15.4	-5.7	205	-5.0	282	087	5.7	6.8	11.50	1.85	1990	1979
<i>600</i>	279	4409	279	3.8	12.0	-7.3	148	-9.5	278	088	4.6	6.2	21.52	1.87	1987	1987
<i>550</i>	274	5112	274	0.2	9.0	-7.7	96	-13.5	273	085	3.4	5.8	28.74	2.14	1987	1985
<i>500</i>	270	5869	270	-3.8	5.6	-11.1	64	-17.5	268	075	2.8	5.6	33.19	2.30	1989	1980
<i>450</i>	265	6692	263	-8.6	1.0	-16.9	40	-21.4	263	074	2.2	6.3	41.25	2.37	1990	1985
<i>400</i>	255	7598	255	-14.3	-6.1	-24.1	24	-25.6	253	051	1.4	7.0	49.50	2.45	1989	1979
<i>350</i>	246	8595	246	-20.8	-12.3	-29.1	18	-30.4	243	306	0.7	8.5	54.31	2.45	1990	1980
<i>300</i>	236	9723	236	-28.8	-19.7	-36.7	9	-37.4	233	268	2.5	9.1	68.12	2.32	1989	1979
<i>250</i>	218	11003	218	-38.8	-29.1	-47.7	2	-45.9	212	258	4.4	10.8	80.07	2.28	1989	1979
<i>200</i>	188	12494	188	-51.0	-40.3	-61.1			187	235	5.8	12.1	92.97	2.31	1989	1979
<i>175</i>	148	13346	148	-58.0	-46.1	-69.1			148	230	5.5	11.6	102.62	2.45	1989	1979
<i>150</i>	112	14282	112	-65.6	-53.5	-75.7			109	237	4.6	10.9	113.85	2.39	1989	1979
<i>125</i>	71	15354	71	-72.5	-61.1	-81.1			71	239	2.0	8.2	181.17	4.33	1989	1979
<i>100</i>	45	16622	45	-78.8	-69.9	-85.3			44	108	2.9	6.7	192.02	3.97	1989	1979
<i>80</i>	38	17898	38	-76.2	-70.1	-84.1			36	091	3.2	6.3	217.34	2.34	1981	1979
<i>70</i>	33	18679	33	-72.4	-65.5	-79.5			32	099	3.2	6.1	245.88	2.10	1981	1979
<i>60</i>	29	19595	29	-68.1	-61.1	-75.3			28	088	1.2	6.4	238.03	3.76	1981	1989
<i>50</i>	26	20705	26	-63.1	-56.1	-74.5			26	105	4.2	8.1	243.78	5.35	1981	1989
<i>40</i>	21	22087	21	-58.3	-52.3	-68.7			21	105	7.2	10.4	241.24	4.53	1981	1989
<i>30</i>	17	23937	17	-52.6	-43.1	-61.7			16	099	9.7	11.0			1982	1989
<i>25</i>	11	25104	11	-51.8	-45.1	-59.9			11	099	10.4	12.3			1981	1989
<i>20</i>	7	26456	7	-51.9	-46.9	-57.5			7	102	11.1	12.0			1982	1979
<i>15</i>	3	28449	3	-46.8	-41.1	-54.3			3	097	10.6	12.0			1985	1989
<i>10</i>	1	30812	1	-50.3	-50.3	-50.3			1	108	18.0	18.0			1989	1989
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

275 547 516

42 098 1680 -80.3

## NORMALS OF RADIOSONDE DATA

43311 AMINI

MAY 1977-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	367	1006	367	31.4	35.0	25.0	367	24.0	367	303	4.5	5.3	0.76	0.91	1987	1988
<i>1000</i>	318	55	318	30.9	34.0	24.6	316	25.0	318	306	4.5	5.2	7.69	0.95	1986	1981
<i>950</i>	318	500	318	26.1	32.4	20.0	316	21.7	317	310	4.5	5.2	17.02	1.32	1989	1979
<i>900</i>	318	984	318	23.0	30.0	15.8	315	17.2	317	309	4.0	5.0	7.66	1.47	1990	1979
<i>850</i>	318	1480	318	20.7	29.8	12.0	312	11.3	318	319	3.0	4.7	8.75	1.53	1990	1985
<i>800</i>	318	2003	318	18.2	27.6	11.0	303	6.9	317	353	2.4	4.9	10.23	1.75	1990	1977
<i>750</i>	318	2547	318	14.9	23.6	7.0	300	3.7	317	039	2.4	5.5	15.07	1.84	1990	1977
<i>700</i>	318	3132	318	11.2	20.0	4.0	291	0.5	318	066	3.0	6.1	15.07	1.66	1990	1977
<i>650</i>	307	3742	307	7.2	16.0	-2.5	271	-3.4	306	076	3.4	6.3	17.50	1.73	1990	1983
<i>600</i>	301	4399	301	3.4	10.8	-3.0	240	-7.4	299	077	3.2	6.1	21.59	1.67	1990	1977
<i>550</i>	292	5100	292	-0.3	7.2	-6.7	189	-11.4	291	066	2.3	5.9	28.72	1.75	1990	1979
<i>500</i>	286	5857	286	-4.2	3.0	-10.3	137	-14.5	286	051	2.3	6.1	31.07	1.81	1990	1985
<i>450</i>	277	6678	277	-8.8	-1.7	-15.9	110	-18.6	276	051	2.6	6.4	39.29	1.86	1988	1979
<i>400</i>	266	7584	265	-14.3	-6.5	-21.1	83	-24.1	265	052	1.8	6.5	41.63	1.95	1988	1985
<i>350</i>	248	8584	247	-20.6	-11.1	-28.1	64	-29.8	246	083	0.8	6.6	49.45	1.96	1990	1985
<i>300</i>	240	9711	240	-28.4	-19.5	-36.5	45	-36.9	240	132	0.7	6.8	59.63	1.99	1990	1986
<i>250</i>	227	10995	227	-38.4	-29.1	-47.7	12	-45.3	227	158	1.7	7.0	70.42	2.26	1988	1986
<i>200</i>	200	12489	200	-50.9	-40.5	-61.7	1	-49.9	199	142	3.8	8.8	88.30	2.53	1990	1986
<i>175</i>	169	13346	169	-58.1	-46.1	-69.5	1	-54.7	167	139	5.2	10.0	97.49	2.76	1990	1986
<i>150</i>	129	14307	129	-65.4	-49.9	-75.1			127	128	7.3	11.8	108.63	2.67	1990	1979
<i>125</i>	83	15387	83	-72.9	-57.1	-85.9			83	111	9.3	12.2	126.49	2.90	1990	1979
<i>100</i>	67	16654	67	-79.3	-65.1	-88.9			66	099	9.4	10.6	144.42	3.08	1990	1979
<i>80</i>	41	17875	41	-77.2	-65.9	-86.0			40	100	6.3	8.2	155.74	3.74	1983	1977
<i>70</i>	38	18641	38	-72.8	-62.7	-87.0			36	101	6.1	8.3	164.53	2.84	1982	1977
<i>60</i>	27	19610	27	-67.7	-61.1	-88.0			26	101	5.6	7.3	187.67	2.63	1981	1977
<i>50</i>	23	20712	23	-62.2	-53.3	-71.1			23	100	8.5	10.9	193.95	3.91	1982	1990
<i>40</i>	14	22175	14	-56.8	-52.1	-61.5			13	099	11.9	13.6			1983	1990
<i>30</i>	13	24015	13	-49.6	-45.1	-54.0			11	087	17.1	19.4			1982	1977
<i>25</i>	6	25353	6	-47.6	-41.9	-53.1			5	099	25.4	26.4			1982	1990
<i>20</i>	4	26904	4	-44.0	-37.7	-50.3			4	100	24.6	24.8			1982	1990
<i>15</i>	3	28938	3	-39.1	-32.1	-47.1			3	115	19.0	20.3			1982	1990
<i>10</i>	2	31590	2	-37.7	-32.3	-43.1			2	123	14.4	16.0			1987	1990
<i>7</i>	1	34070	1	-39.9	-39.9	-39.9			1	360	8.0	8.0			1990	1990

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

300 555 504

63 099 1669 -81.3

# NORMALS OF RADIOSONDE DATA

43311 AMINI

JUNE 1977-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	342	1006	342	29.1	34.4	24.8	342	25.1	342	267	8.6	9.3	0.71	0.71	1983	1989
<i>1000</i>	302	53	302	28.7	33.2	24.6	289	25.5	302	269	8.6	9.3	3.66	0.74	1983	1981
<i>950</i>	302	497	302	25.1	30.0	19.0	290	21.9	302	274	9.9	10.5	13.19	0.93	1990	1977
<i>900</i>	302	979	302	22.0	29.2	15.0	290	18.4	302	278	11.4	12.1	5.61	1.12	1990	1977
<i>850</i>	302	1472	302	19.1	27.8	12.2	289	14.5	302	280	11.5	12.2	7.53	1.23	1990	1983
<i>800</i>	302	1993	302	16.3	27.0	10.0	288	10.5	302	280	10.8	11.7	9.79	1.43	1990	1977
<i>750</i>	302	2535	302	13.4	25.6	8.0	288	5.7	302	280	9.5	10.7	15.72	1.54	1990	1977
<i>700</i>	302	3116	302	10.2	20.0	2.0	280	1.2	302	280	8.3	9.9	16.03	1.65	1990	1987
<i>650</i>	297	3726	297	6.8	15.8	-0.7	266	-2.7	297	279	7.6	9.6	20.99	1.78	1990	1987
<i>600</i>	293	4383	293	3.3	11.8	-2.7	250	-6.3	293	274	6.8	9.1	25.31	1.83	1990	1980
<i>550</i>	289	5085	289	-0.2	8.4	-6.3	217	-9.0	288	271	6.0	8.5	37.02	1.95	1990	1979
<i>500</i>	280	5843	280	-4.1	4.2	-10.7	200	-12.6	280	264	5.3	7.9	36.43	2.10	1990	1982
<i>450</i>	263	6670	263	-8.3	1.0	-18.3	174	-16.4	263	264	3.5	6.7	42.67	2.29	1990	1982
<i>400</i>	254	7577	254	-13.5	-3.7	-21.0	166	-21.7	254	275	1.1	6.2	53.15	2.60	1990	1977
<i>350</i>	239	8581	239	-19.9	-9.7	-27.9	140	-27.7	239	103	2.3	6.4	58.57	2.62	1990	1986
<i>300</i>	227	9712	227	-27.7	-17.7	-35.5	113	-35.8	227	093	6.2	8.6	74.58	2.50	1990	1986
<i>250</i>	212	10997	212	-37.7	-26.9	-47.0	46	-45.0	211	088	10.3	12.1	86.85	2.66	1990	1977
<i>200</i>	185	12491	184	-50.4	-41.7	-60.0			185	087	15.2	16.9	95.56	2.58	1988	1977
<i>175</i>	152	13347	152	-57.9	-50.1	-68.0			150	088	18.2	19.8	107.60	2.57	1987	1977
<i>150</i>	115	14295	115	-65.8	-56.9	-74.0			114	093	23.3	24.3	115.78	2.54	1987	1977
<i>125</i>	61	15339	61	-74.3	-65.5	-82.0			61	093	26.7	27.8	162.30	3.43	1983	1977
<i>100</i>	38	16598	38	-79.0	-70.7	-88.5			37	098	26.3	27.0	104.78	2.89	1981	1981
<i>80</i>	22	17846	22	-76.4	-67.7	-88.7			21	086	21.4	23.7	113.44	6.37	1981	1987
<i>70</i>	16	18591	16	-73.6	-66.3	-87.0			16	091	17.6	19.8			1981	1977
<i>60</i>	12	19492	12	-69.9	-63.5	-82.0			12	086	12.2	15.4			1986	1977
<i>50</i>	10	20643	10	-64.5	-57.9	-70.0			10	091	12.8	15.0			1986	1977
<i>40</i>	8	22039	8	-59.6	-55.1	-63.0			8	095	17.0	19.6			1986	1977
<i>30</i>	5	23815	5	-53.7	-49.5	-55.7			5	096	22.9	23.0			1981	1981
<i>25</i>	5	24997	5	-51.2	-47.3	-52.7			5	092	30.6	31.2			1981	1981
<i>20</i>	3	26472	3	-48.0	-45.3	-49.7			3	097	43.8	44.3			1981	1981
<i>15</i>	3	28378	3	-45.3	-44.1	-46.5			3	091	42.5	43.0			1981	1981
<i>10</i>																
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

290 553 504

28 099 1665 -80.0

# NORMALS OF RADIOSONDE DATA

43311 AMINI

JULY 1977-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	364	1007	364	28.6	31.8	24.2	364	25.9	364	275	8.0	8.6	0.91	0.59	1987	1981
<i>1000</i>	250	61	250	28.2	30.8	24.2	249	25.3	250	278	8.4	8.9	6.14	1.04	1983	1989
<i>950</i>	250	498	250	24.6	29.2	18.4	249	21.7	250	283	10.1	10.6	16.26	0.88	1988	1988
<i>900</i>	250	985	250	21.2	28.8	15.0	249	17.9	250	287	11.9	12.4	6.82	1.03	1990	1986
<i>850</i>	250	1478	250	18.4	25.2	12.0	249	14.1	250	290	12.3	12.9	7.79	1.16	1990	1986
<i>800</i>	250	1996	250	15.5	22.4	8.8	249	10.2	250	290	11.3	11.9	11.22	1.29	1989	1986
<i>750</i>	250	2535	250	12.7	20.0	6.2	243	5.7	250	290	9.9	10.5	15.27	1.51	1989	1986
<i>700</i>	250	3117	250	9.7	17.8	3.8	238	0.7	249	290	8.4	9.1	16.53	1.74	1989	1985
<i>650</i>	242	3726	242	6.3	14.4	-2.5	224	-3.0	238	292	7.1	8.0	22.70	1.99	1989	1987
<i>600</i>	235	4384	235	2.8	10.8	-5.1	213	-6.2	228	290	5.7	7.0	25.82	2.14	1990	1987
<i>550</i>	229	5087	228	-0.8	6.2	-6.3	194	-9.6	217	290	4.3	6.2	42.89	2.24	1990	1985
<i>500</i>	223	5840	223	-4.6	3.0	-10.0	174	-13.0	212	288	2.4	5.5	39.50	2.46	1990	1977
<i>450</i>	221	6662	221	-9.1	0.2	-16.0	164	-17.3	210	314	0.5	5.7	50.83	2.31	1990	1977
<i>400</i>	217	7570	217	-14.5	-4.7	-22.0	142	-22.5	205	100	2.2	6.0	55.39	2.50	1990	1977
<i>350</i>	209	8570	209	-21.0	-10.1	-30.5	130	-28.8	197	102	5.4	7.4	64.65	2.41	1990	1985
<i>300</i>	201	9693	201	-28.9	-16.7	-37.0	96	-36.4	190	095	9.0	10.2	72.67	2.34	1990	1977
<i>250</i>	191	10973	191	-38.9	-28.1	-47.1	30	-44.5	181	096	13.1	14.4	85.85	2.48	1990	1983
<i>200</i>	167	12468	167	-50.8	-41.3	-60.1	1	-50.9	157	093	21.0	21.7	95.74	2.37	1990	1983
<i>175</i>	132	13310	132	-58.0	-50.5	-68.1			127	094	25.0	26.0	102.21	2.86	1988	1983
<i>150</i>	104	14262	104	-65.5	-56.5	-76.0			98	094	31.7	32.9	119.11	2.24	1988	1977
<i>125</i>	64	15310	64	-73.4	-64.1	-84.5			63	094	35.7	36.8	147.45	2.90	1987	1981
<i>100</i>	48	16567	48	-76.4	-66.1	-85.0			47	095	31.7	32.6	181.79	2.77	1981	1977
<i>80</i>	30	17857	30	-70.7	-64.1	-83.0			29	095	21.0	22.0	110.95	3.46	1981	1977
<i>70</i>	29	18666	29	-68.3	-59.1	-79.0			28	095	19.6	20.3	106.58	2.84	1981	1977
<i>60</i>	28	19599	28	-65.9	-59.1	-71.0			25	087	17.3	18.4	136.29	2.93	1981	1977
<i>50</i>	24	20708	24	-62.6	-54.9	-70.0			21	095	16.7	17.9	141.26	2.91	1981	1977
<i>40</i>	22	22102	22	-58.2	-49.9	-66.0			19	094	20.1	21.1	153.80	3.03	1981	1977
<i>30</i>	19	23953	19	-54.4	-43.7	-60.7			17	098	25.4	25.7			1981	1981
<i>25</i>	16	25117	16	-51.7	-39.7	-58.1			16	095	30.9	31.4			1981	1981
<i>20</i>	13	26589	13	-48.3	-39.9	-55.5			13	089	31.5	32.0			1981	1981
<i>15</i>	9	28456	9	-46.0	-42.1	-53.5			9	092	32.8	33.0			1981	1981
<i>10</i>	3	31088	3	-46.1	-42.1	-50.1			3	091	29.2	29.3			1985	1981
<i>7</i>	1	33608	1	-41.1	-41.1	-41.1			1	099	21.0	21.0			1985	1985

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
229	559	496					39	109	1609	-78.7

# NORMALS OF RADIOSONDE DATA

43311 AMINI

AUGUST 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	341	1007	341	28.4	30.6	24.8	341	25.7	341	281	7.7	8.4	0.43	0.26	1987	1982
1000	270	63	269	28.1	30.2	24.0	268	25.4	269	285	8.0	8.6	5.09	0.28	1987	1990
950	269	505	269	24.5	29.6	19.4	268	21.4	269	290	9.5	10.1	11.96	0.79	1987	1983
900	269	988	269	21.2	28.0	13.4	268	17.4	269	294	11.1	11.6	6.07	1.05	1989	1983
850	269	1482	269	18.4	25.8	10.6	268	13.8	269	296	11.5	11.9	7.09	1.15	1989	1983
800	269	2000	269	15.6	24.0	8.2	268	9.6	269	296	10.7	11.1	8.06	1.23	1989	1983
750	269	2542	269	12.9	22.4	5.4	266	5.3	269	294	9.7	10.0	10.27	1.36	1989	1986
700	269	3123	269	9.8	20.2	3.2	263	0.6	268	293	8.5	8.9	12.99	1.45	1989	1986
650	258	3733	258	6.5	16.0	0.0	246	-3.4	258	292	7.1	7.7	17.23	1.54	1989	1983
600	256	4388	256	3.2	10.8	-4.3	225	-6.2	256	290	5.6	6.7	19.10	1.65	1989	1983
550	253	5094	252	-0.3	8.2	-7.5	210	-10.0	253	291	4.2	6.1	28.90	1.68	1985	1983
500	242	5848	241	-4.1	4.6	-10.9	180	-13.6	242	288	2.8	5.4	27.38	1.76	1989	1981
450	238	6673	237	-8.5	1.2	-16.9	168	-17.7	238	309	1.1	5.4	36.39	1.92	1989	1983
400	232	7581	232	-13.8	-4.1	-20.3	153	-22.9	232	105	1.6	5.7	39.04	1.94	1989	1980
350	228	8583	228	-20.4	-11.1	-28.5	128	-29.1	227	101	5.0	7.1	47.66	1.97	1981	1988
300	220	9712	220	-28.3	-20.9	-36.3	78	-36.5	218	099	8.8	10.0	56.54	1.98	1989	1986
250	202	10997	201	-38.3	-29.9	-48.1	29	-44.4	200	099	13.6	14.9	67.77	2.11	1989	1986
200	185	12490	184	-50.9	-40.1	-61.1			182	098	20.7	21.6	78.57	1.93	1990	1990
175	141	13347	141	-58.0	-49.5	-66.7			139	098	25.2	26.1	99.26	2.21	1989	1990
150	100	14301	100	-65.7	-54.9	-75.9			99	099	27.6	28.4	109.82	2.25	1989	1990
125	57	15345	57	-73.8	-63.1	-85.7			56	098	30.7	31.5	128.68	2.44	1989	1990
100	37	16588	37	-76.1	-68.1	-87.9			37	099	22.2	23.4	249.95	4.53	1981	1990
80	26	17884	26	-69.2	-61.7	-77.9			26	093	17.7	18.1	142.43	4.15	1985	1982
70	24	18690	24	-65.9	-57.9	-75.9			24	093	15.8	16.8	41.72	3.29	1985	1982
60	21	19646	21	-62.9	-54.1	-71.3			19	097	15.4	16.1	62.27	3.69	1985	1982
50	20	20776	20	-58.7	-50.7	-64.1			19	082	12.8	14.6			1980	1981
40	14	22192	14	-55.1	-45.5	-63.1			12	100	15.7	16.4			1982	1981
30	10	24079	10	-50.0	-40.5	-56.9			8	097	20.9	21.4			1985	1983
25	6	25238	6	-49.2	-43.7	-54.7			6	095	25.9	26.0			1983	1983
20	5	26720	5	-48.0	-44.9	-52.1			5	088	34.5	34.8			1981	1983
15	2	28642	2	-41.4	-39.9	-42.9			2	095	35.4	36.0			1981	1983
10																
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

253 555 502

37 111 1595 -78.7

# NORMALS OF RADIOSONDE DATA

43311 AMINI

SEPTEMBER 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	330	1007	330	28.5	32.0	23.0	330	25.4	330	299	5.9	6.6	0.95	0.52	1988	1981
1000	285	65	285	28.2	31.6	24.4	284	24.9	285	301	6.0	6.7	7.57	0.48	1988	1986
950	285	509	285	24.5	30.0	19.2	284	21.2	285	306	6.5	7.2	11.22	0.94	1990	1990
900	285	990	285	21.5	30.4	14.4	284	17.6	285	307	6.9	7.6	8.21	1.07	1990	1990
850	285	1484	284	18.7	28.0	12.2	283	13.8	285	305	6.6	7.4	8.71	1.08	1990	1990
800	285	2003	284	16.1	23.6	9.4	283	10.2	285	301	6.1	7.0	8.99	1.12	1990	1990
750	285	2544	285	13.3	21.0	7.0	281	5.7	285	300	5.1	6.4	9.94	1.15	1990	1990
700	285	3127	285	10.3	18.4	5.4	275	1.4	285	297	4.4	6.2	10.96	1.28	1990	1980
650	283	3738	283	7.1	17.8	1.4	260	-2.6	282	292	4.0	6.1	13.14	1.36	1987	1990
600	280	4395	280	3.8	11.0	-1.7	246	-5.9	279	294	3.1	5.6	14.90	1.34	1990	1979
550	273	5101	273	0.2	7.0	-5.3	228	-9.8	272	302	1.7	4.9	24.38	1.48	1990	1979
500	267	5857	266	-3.8	3.0	-9.9	208	-13.6	265	330	0.5	4.8	22.00	1.60	1987	1979
450	260	6684	260	-8.4	-1.1	-15.1	176	-17.8	259	078	1.4	4.9	29.15	1.77	1987	1979
400	252	7592	252	-13.8	-5.9	-23.3	152	-23.4	250	099	3.2	5.6	31.40	1.92	1987	1982
350	245	8594	245	-20.4	-12.1	-31.7	120	-30.3	243	102	5.1	6.7	39.65	2.09	1987	1982
300	239	9723	238	-28.4	-19.5	-40.1	73	-37.8	237	104	8.0	9.0	49.44	2.24	1987	1982
250	222	11009	221	-38.3	-29.9	-50.7	20	-46.0	220	104	12.2	13.2	57.07	2.23	1990	1982
200	200	12503	199	-50.7	-39.5	-59.7			197	102	17.3	18.4	72.79	2.41	1988	1981
175	161	13360	161	-58.0	-49.9	-67.1			159	101	21.0	22.0	80.72	2.46	1990	1981
150	115	14305	115	-66.0	-58.7	-76.3			114	103	23.3	24.3	87.67	2.53	1988	1979
125	61	15367	61	-74.1	-65.9	-85.7			60	106	24.8	25.4	131.62	2.69	1987	1979
100	37	16639	37	-77.5	-71.1	-83.5			36	104	17.7	18.7	93.46	2.23	1989	1979
80	21	17932	21	-72.0	-66.5	-80.1			21	103	16.5	17.2	106.42	1.57	1982	1981
70	19	18721	19	-68.6	-65.5	-75.3			19	083	7.6	12.4			1983	1981
60	11	19636	11	-65.6	-61.7	-70.1			10	083	11.4	13.2			1980	1981
50	10	20758	10	-62.4	-57.9	-67.3			10	104	16.1	16.6			1986	1981
40	9	22133	9	-59.0	-51.5	-63.9			9	086	14.1	15.8			1986	1981
30	7	23990	7	-53.3	-47.5	-58.3			7	091	19.4	20.1			1986	1990
25	5	25188	5	-50.2	-45.9	-56.1			5	102	17.1	17.6			1986	1990
20	2	26677	2	-46.1	-45.7	-46.5			2	093	21.8	24.0			1981	1982
15																
10																
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

273 549 513

39 110 1612 -79.0

# NORMALS OF RADIOSONDE DATA

43311 AMINI

OCTOBER 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	341	1007	340	29.3	33.0	25.2	340	24.9	341	310	2.7	3.8	0.80	0.60	1988	1989
<i>1000</i>	287	69	287	28.8	32.2	25.0	287	24.4	287	311	2.9	4.2	8.50	0.70	1988	1989
<i>950</i>	287	509	287	24.9	31.6	20.4	287	20.9	287	320	2.9	4.4	21.01	0.96	1990	1983
<i>900</i>	287	994	287	21.9	31.0	15.6	287	16.9	287	329	2.1	4.3	8.14	1.09	1990	1987
<i>850</i>	287	1489	286	19.1	28.4	13.0	283	12.8	287	345	1.5	4.5	9.07	1.30	1990	1987
<i>800</i>	287	2008	286	16.2	26.2	10.2	281	8.7	287	026	1.0	4.8	10.76	1.44	1990	1987
<i>750</i>	287	2547	287	13.2	23.0	7.2	277	4.5	287	025	0.9	5.3	14.86	1.41	1990	1985
<i>700</i>	287	3130	287	10.1	20.6	5.0	260	0.7	287	010	0.7	5.0	15.05	1.47	1990	1982
<i>650</i>	278	3739	278	7.0	17.2	1.4	229	-3.2	278	344	0.8	5.0	15.64	1.47	1988	1983
<i>600</i>	275	4396	275	3.6	14.0	-6.7	201	-6.0	275	355	0.5	4.7	19.34	1.43	1988	1988
<i>550</i>	270	5104	270	0.1	10.0	-9.7	186	-10.2	269	068	0.5	4.5	28.89	1.58	1988	1986
<i>500</i>	265	5856	265	-3.9	6.2	-14.7	163	-14.4	265	092	1.4	4.6	24.92	1.61	1988	1986
<i>450</i>	257	6631	257	-8.5	2.2	-22.9	137	-19.1	256	092	2.3	4.8	30.94	1.82	1988	1986
<i>400</i>	247	7588	246	-13.8	-2.1	-21.1	109	-23.9	247	094	2.6	5.0	34.32	1.92	1990	1979
<i>350</i>	237	8587	236	-20.5	-9.9	-28.7	77	-29.6	236	098	3.3	5.9	38.98	1.89	1990	1982
<i>300</i>	225	9717	225	-28.5	-12.5	-41.3	51	-37.3	224	113	3.9	6.6	48.10	2.08	1990	1979
<i>250</i>	202	11000	202	-38.7	-29.7	-48.7	20	-46.3	202	117	5.8	8.5	56.88	2.17	1988	1982
<i>200</i>	180	12500	180	-51.1	-39.5	-62.7			180	117	8.3	11.1	66.96	2.20	1988	1982
<i>175</i>	150	13353	150	-58.1	-46.1	-69.3			150	120	10.9	13.5	77.13	2.25	1988	1981
<i>150</i>	122	14305	122	-66.1	-54.1	-78.3			122	121	12.2	14.3	82.18	2.28	1988	1981
<i>125</i>	69	15377	69	-73.5	-61.9	-83.9			68	117	10.5	13.3	99.52	2.88	1988	1979
<i>100</i>	34	16625	34	-79.0	-71.3	-88.7			33	119	7.8	11.2	152.38	3.89	1988	1979
<i>80</i>	22	17872	22	-75.1	-60.1	-87.1			22	107	7.9	8.9	224.34	6.59	1990	1979
<i>70</i>	19	18692	19	-70.5	-56.5	-82.1			19	109	7.9	9.3			1990	1979
<i>60</i>	17	19600	17	-66.5	-52.1	-79.3			17	103	7.2	8.4			1990	1979
<i>50</i>	16	20739	16	-61.2	-47.7	-70.3			16	100	11.5	12.1			1990	1979
<i>40</i>	12	22161	12	-57.3	-42.9	-66.3			11	088	16.9	17.8			1990	1979
<i>30</i>	7	24188	7	-50.3	-40.1	-61.9			7	104	15.2	15.7			1990	1979
<i>25</i>	5	25406	5	-49.1	-38.7	-59.5			5	101	19.5	20.0			1990	1979
<i>20</i>	4	26903	4	-46.3	-36.7	-56.3			4	125	21.5	24.8			1990	1979
<i>15</i>	3	28615	3	-45.4	-40.1	-52.3			3	101	37.7	38.0			1988	1979
<i>10</i>	1	31825	1	-32.1	-32.1	-32.1			1	106	11.0	11.0			1988	1988
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
271	549	512					34	103	1644	-81.3

# NORMALS OF RADIOSONDE DATA

43311 AMINI

NOVEMBER 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	330	1008	330	29.3	32.4	24.2	330	23.9	330	339	1.4	3.0	0.85	1.12	1988	1990
1000	311	72	310	28.8	32.0	24.4	309	23.6	311	343	1.7	3.4	5.95	1.10	1988	1982
950	311	507	310	25.0	30.8	19.6	308	20.2	311	006	1.8	4.0	19.69	1.28	1988	1985
900	311	997	311	21.7	29.8	14.0	309	16.2	311	029	1.7	4.2	7.43	1.40	1988	1985
850	311	1491	311	18.8	28.2	11.6	307	11.5	311	055	1.6	4.2	8.89	1.47	1990	1985
800	311	2009	311	15.9	24.4	9.0	296	7.5	310	063	1.6	4.5	11.27	1.55	1988	1985
750	311	2548	311	13.2	22.0	5.8	275	4.3	310	061	1.6	4.8	12.62	1.66	1988	1981
700	311	3132	311	10.3	19.2	2.4	255	0.4	309	068	1.5	5.0	16.65	1.88	1990	1981
650	302	3740	302	7.1	15.8	-0.5	213	-3.0	298	072	1.8	5.0	20.08	2.01	1990	1981
600	299	4398	299	3.6	12.0	-5.1	197	-6.8	296	078	2.4	5.4	25.38	2.06	1987	1983
550	295	5106	294	-0.1	8.0	-7.3	170	-9.7	294	075	2.8	5.5	35.95	2.10	1990	1981
500	287	5858	287	-4.3	4.2	-11.9	159	-14.3	286	079	3.4	6.0	35.19	2.15	1990	1981
450	278	6682	278	-8.9	0.4	-18.7	129	-18.5	277	078	3.5	6.3	42.32	2.15	1990	1983
400	262	7589	262	-14.3	-4.9	-22.3	99	-23.9	261	080	3.3	6.6	50.48	2.37	1990	1985
350	250	8588	250	-20.9	-8.9	-29.1	78	-29.9	250	099	2.7	6.8	59.70	2.51	1990	1985
300	239	9711	238	-29.0	-18.9	-37.7	59	-37.9	238	120	2.2	6.9	72.52	2.61	1990	1981
250	214	10992	214	-39.1	-27.9	-49.3	18	-45.8	213	148	3.6	8.1	89.15	2.70	1990	1981
200	198	12482	198	-51.8	-41.5	-62.3	1	-55.3	197	150	5.8	10.9	108.45	2.81	1990	1981
175	159	13342	159	-58.5	-49.3	-70.1			159	147	7.2	11.9	114.03	2.98	1988	1979
150	116	14301	116	-65.7	-55.3	-79.1			115	140	6.4	11.3	129.72	3.07	1988	1979
125	72	15391	72	-72.4	-61.3	-81.5			72	136	4.6	9.2	115.80	2.95	1988	1979
100	47	16670	47	-78.6	-69.3	-86.7			46	116	4.8	7.9	166.93	2.60	1990	1980
80	31	17942	31	-75.0	-63.1	-82.9			31	092	3.6	7.0	195.40	3.45	1989	1989
70	24	18690	24	-71.1	-62.1	-77.7			24	082	2.3	5.7	196.91	3.74	1981	1979
60	19	19634	19	-66.7	-59.7	-70.9			19	053	2.4	5.8			1981	1989
50	12	20734	12	-63.8	-56.5	-68.7			12	088	4.0	7.8			1981	1990
40	9	22145	9	-60.3	-55.9	-67.7			9	119	5.3	8.4			1981	1990
30	8	23957	8	-54.2	-47.7	-56.3			7	115	11.3	12.6			1981	1989
25	4	25185	4	-53.7	-51.9	-56.9			4	097	11.4	11.8			1980	1989
20	2	26823	2	-52.9	-48.9	-56.9			2	097	21.9	22.0			1983	1989
15	2	28689	2	-49.9	-45.3	-54.5			2	096	7.0	22.0			1983	1989
10	2	31361	2	-45.6	-39.9	-51.3			2	172	22.1	28.0			1983	1989
7	1	33690	1	-48.9	-48.9	-48.9			1	279	33.0	33.0			1989	1989

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

295 554 505

34 101 1657 -79.2



## NORMALS OF RADIOSONDE DATA

43311 AMINI

DECEMBER 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	311	1009	311	29.2	32.4	23.6	311	23.2	311	025	2.1	3.0	0.90	1.05	1990	1986
<i>1000</i>	241	82	241	28.5	32.0	23.4	241	23.0	241	027	2.5	3.5	8.19	1.17	1990	1986
<i>950</i>	241	519	241	24.8	30.2	20.8	241	19.8	241	039	2.8	3.9	17.89	1.76	1990	1981
<i>900</i>	241	1007	241	21.5	30.0	16.4	240	15.6	241	058	2.3	3.7	9.07	2.10	1990	1986
<i>850</i>	241	1501	241	18.6	28.6	12.8	237	10.6	241	077	2.2	3.8	11.34	2.37	1990	1985
<i>800</i>	241	2019	241	16.0	26.2	9.2	215	6.6	240	083	2.4	4.2	14.88	2.42	1990	1985
<i>750</i>	241	2560	240	13.4	23.8	6.0	189	2.5	240	082	2.2	4.5	15.61	2.29	1990	1985
<i>700</i>	241	3143	241	10.5	20.0	2.4	162	-1.5	241	086	2.6	4.8	22.68	2.06	1987	1985
<i>650</i>	240	3751	240	7.2	17.0	-0.1	142	-4.9	240	084	2.8	5.1	29.77	2.11	1987	1985
<i>600</i>	233	4412	233	3.6	14.0	-3.9	125	-8.5	231	083	3.4	5.8	31.01	2.20	1987	1983
<i>550</i>	230	5118	230	-0.3	10.0	-9.1	106	-12.1	229	084	3.2	5.9	48.46	2.54	1987	1985
<i>500</i>	228	5869	228	-4.5	8.4	-15.1	85	-15.9	227	082	3.0	6.2	43.98	2.85	1990	1985
<i>450</i>	225	6693	225	-9.2	2.2	-19.9	68	-20.4	224	084	2.6	6.7	62.02	3.00	1990	1985
<i>400</i>	220	7596	220	-14.9	-4.1	-24.9	53	-24.7	219	061	1.1	7.2	61.07	2.68	1990	1985
<i>350</i>	212	8595	212	-21.6	-11.9	-29.3	34	-30.3	211	220	0.5	8.0	72.23	2.95	1990	1985
<i>300</i>	205	9715	205	-29.6	-20.3	-37.3	23	-38.1	204	230	3.6	9.0	84.00	3.01	1990	1979
<i>250</i>	189	10988	189	-39.7	-29.7	-47.1	5	-47.2	188	223	7.0	11.5	101.00	3.34	1990	1985
<i>200</i>	174	12472	174	-52.2	-41.3	-60.3			172	226	8.3	12.8	125.93	3.99	1989	1985
<i>175</i>	131	13318	131	-59.2	-49.5	-67.3			130	234	7.9	12.5	91.91	2.39	1990	1981
<i>150</i>	101	14256	101	-66.7	-57.1	-75.5			100	238	8.2	11.6	118.22	2.93	1988	1979
<i>125</i>	60	15321	60	-73.6	-63.3	-82.9			57	243	7.0	9.9	135.31	2.84	1986	1990
<i>100</i>	45	16592	45	-78.9	-69.3	-83.7			44	219	0.8	6.4	149.10	2.56	1986	1981
<i>80</i>	33	17836	33	-75.9	-61.1	-81.3			32	113	3.0	6.3	191.48	2.25	1982	1980
<i>70</i>	30	18620	30	-71.4	-57.1	-79.3			29	108	1.2	5.7	201.07	3.42	1982	1980
<i>60</i>	27	19535	27	-67.3	-56.1	-74.9			26	120	1.5	7.1	201.63	2.95	1982	1980
<i>50</i>	20	20614	20	-61.9	-53.1	-71.1			19	076	1.8	6.7			1982	1985
<i>40</i>	19	22048	19	-57.9	-50.5	-66.3			18	130	1.9	8.7			1982	1985
<i>30</i>	15	23857	15	-52.9	-46.7	-63.1			15	074	4.1	10.1			1982	1985
<i>25</i>	12	25036	12	-51.9	-42.5	-61.1			12	132	4.1	13.3			1982	1985
<i>20</i>	7	26478	7	-50.5	-45.1	-58.5			7	086	8.9	10.8			1986	1985
<i>15</i>	3	28467	3	-46.5	-44.1	-50.3			3	097	11.5	12.0			1990	1985
<i>10</i>	2	30975	2	-45.3	-42.1	-48.5			2	111	21.7	22.0			1985	1985
<i>7</i>	1	33272	1	-46.9	-46.9	-46.9			1	091	21.0	21.0			1985	1985

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

229 553 508

43 100 1663 -81.5

## NORMALS OF RADIOSONDE DATA

43295 BANGALORE

JANUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	433	910	433	25.9	31.6	19.2	433	10.3	433	084	2.5	2.7	0.85	0.77	1983	1986
<i>1000</i>	354	82											7.26			
<i>950</i>	353	535											8.01			
<i>900</i>	344	1016	343	25.2	34.0	18.0	343	9.1	332	081	4.2	4.7	7.48	0.88	1973	1972
<i>850</i>	343	1513	343	19.8	26.0	9.0	340	5.8	332	084	4.6	5.3	8.18	1.23	1989	1971
<i>800</i>	343	2031	343	15.0	23.0	9.0	332	2.4	332	085	4.4	5.4	9.63	1.49	1990	1971
<i>750</i>	343	2572	343	11.8	21.4	6.0	283	-2.7	332	081	3.5	5.3	12.00	1.55	1990	1971
<i>700</i>	343	3148	343	9.7	19.6	0.6	220	-8.9	332	065	2.6	5.9	13.53	1.75	1990	1982
<i>650</i>	338	3758	337	6.9	15.6	-0.3	162	-13.9	327	047	2.1	6.0	16.64	1.61	1990	1986
<i>600</i>	338	4412	337	3.3	11.8	-2.1	143	-17.6	326	046	2.4	6.5	19.05	1.52	1989	1981
<i>550</i>	336	5112	336	-0.6	8.0	-6.0	135	-20.9	314	035	1.6	6.9	23.32	1.53	1989	1971
<i>500</i>	332	5868	332	-5.1	4.0	-11.0	128	-24.7	311	011	1.1	7.4	25.97	1.61	1989	1971
<i>450</i>	325	6688	325	-10.1	-0.5	-16.0	124	-29.3	301	304	1.3	8.3	29.12	1.77	1989	1972
<i>400</i>	321	7588	320	-15.8	-5.7	-22.3	115	-34.3	296	285	2.5	9.3	38.50	2.02	1989	1982
<i>350</i>	308	8582	307	-22.5	-14.1	-29.1	104	-40.4	283	269	4.5	10.5	45.07	2.15	1989	1987
<i>300</i>	301	9699	301	-30.8	-21.3	-37.9	99	-47.5	275	253	6.2	11.5	54.57	2.29	1990	1982
<i>250</i>	286	10965	286	-41.1	-30.1	-49.3	65	-55.7	256	236	8.0	12.8	66.63	2.50	1990	1982
<i>200</i>	269	12444	269	-53.2	-40.3	-63.9			238	224	9.3	14.4	82.84	2.90	1990	1982
<i>175</i>	241	13291	241	-60.0	-45.5	-70.5			210	218	9.3	15.0	97.00	3.11	1990	1982
<i>150</i>	219	14241	218	-67.1	-52.5	-75.9			190	215	7.2	13.8	112.58	3.05	1990	1983
<i>125</i>	178	15322	177	-73.7	-59.1	-82.7			156	206	4.8	11.9	136.62	3.46	1990	1982
<i>100</i>	154	16603	153	-79.0	-63.5	-89.5			138	157	2.3	10.0	150.87	2.94	1990	1983
<i>80</i>	126	17880	126	-76.6	-63.5	-86.1			108	132	1.9	7.7	164.36	3.14	1990	1983
<i>70</i>	114	18657	114	-73.1	-60.1	-84.1			96	126	0.7	7.5	167.52	2.89	1990	1983
<i>60</i>	91	19582	91	-68.4	-55.9	-77.0			75	188	1.2	8.2	176.46	2.39	1990	1971
<i>50</i>	78	20700	78	-63.5	-49.5	-73.0			65	102	1.0	11.0	196.19	2.57	1990	1973
<i>40</i>	53	22130	53	-59.2	-48.3	-74.0			36	107	3.1	11.6	216.89	3.36	1983	1973
<i>30</i>	39	24005	39	-54.7	-49.3	-62.3			27	109	3.1	11.3	253.08	2.38	1981	1987
<i>25</i>	35	25195	35	-52.2	-45.7	-59.3			21	118	6.1	10.9	263.82	2.63	1981	1987
<i>20</i>	26	26695	26	-49.9	-42.9	-57.9			15	100	7.7	10.7	218.21	3.50	1981	1990
<i>15</i>	17	28653	17	-47.9	-40.1	-56.1			4	179	2.1	8.2			1983	1990
<i>10</i>	4	31337	4	-45.8	-39.5	-53.3									1988	1990
<i>7</i>	2	33818	2	-47.5	-43.9	-51.1									1990	1990

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

337 558 499

136 097 1677 -80.7

## NORMALS OF RADIOSONDE DATA

43295 BANGALORE

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	395	908	395	29.0	34.0	20.6	395	9.0	394	089	1.9	2.4	1.20	1.34	1983	1984
<i>1000</i>	319	65											6.90			
<i>950</i>	319	524											7.91			
<i>900</i>	313	1009	311	28.3	32.8	23.0	309	8.0	303	084	3.4	4.4	7.96	1.03	1983	1972
<i>850</i>	311	1510	311	22.8	29.8	16.0	305	4.7	301	089	3.7	5.1	8.18	1.25	1990	1971
<i>800</i>	311	2033	311	17.7	27.4	3.0	296	3.1	302	085	3.5	5.0	10.01	1.57	1990	1973
<i>750</i>	311	2577	311	12.8	24.6	7.0	287	0.8	304	078	2.9	4.7	14.10	1.61	1990	1971
<i>700</i>	311	3154	311	9.0	20.4	3.0	258	-4.7	303	049	1.7	4.9	15.13	1.47	1990	1972
<i>650</i>	309	3764	309	6.1	15.6	-4.9	191	-11.5	300	344	1.0	5.8	17.31	1.39	1990	1986
<i>600</i>	305	4416	305	2.9	10.6	-3.1	147	-16.3	297	323	1.6	6.4	20.30	1.24	1990	1982
<i>550</i>	303	5115	302	-1.0	8.0	-6.0	116	-20.5	292	307	2.4	7.1	23.17	1.26	1982	1971
<i>500</i>	299	5869	298	-5.4	3.4	-12.0	107	-24.8	288	293	3.3	7.8	26.13	1.23	1981	1972
<i>450</i>	296	6688	295	-10.4	-1.9	-19.0	101	-29.0	286	285	4.2	8.8	26.76	1.26	1988	1972
<i>400</i>	293	7587	292	-16.0	-6.5	-23.0	96	-34.1	282	282	6.1	10.4	33.66	1.35	1990	1973
<i>350</i>	286	8580	286	-22.6	-12.1	-31.3	89	-39.7	273	275	8.3	12.5	39.52	1.63	1990	1982
<i>300</i>	280	9699	280	-30.8	-20.7	-40.7	83	-46.6	263	264	9.6	13.5	47.37	2.00	1990	1982
<i>250</i>	261	10970	261	-40.7	-30.7	-51.3	40	-55.4	237	253	10.5	14.3	59.27	2.35	1990	1982
<i>200</i>	247	12455	247	-52.7	-41.9	-60.7			216	250	9.1	14.7	77.34	2.66	1990	1982
<i>175</i>	232	13307	232	-59.4	-48.5	-68.7			197	251	8.2	14.5	87.13	2.79	1990	1982
<i>150</i>	203	14263	202	-66.3	-55.1	-74.0			167	249	5.9	14.4	101.11	2.86	1990	1971
<i>125</i>	174	15350	173	-72.6	-61.5	-83.5			135	240	3.6	11.7	113.62	2.85	1990	1983
<i>100</i>	146	16643	146	-78.1	-66.5	-87.9			113	259	0.7	9.2	134.71	3.62	1990	1983
<i>80</i>	121	17926	121	-76.1	-59.5	-89.1			92	254	0.8	6.7	157.11	3.26	1990	1983
<i>70</i>	112	18710	112	-72.8	-55.5	-84.3			83	253	1.8	6.8	165.79	3.12	1989	1983
<i>60</i>	96	19628	96	-68.0	-53.5	-81.9			65	267	1.5	8.1	165.14	3.17	1989	1987
<i>50</i>	86	20756	86	-62.5	-50.1	-75.9			54	238	1.1	9.4	187.32	3.11	1987	1987
<i>40</i>	71	22153	71	-58.5	-46.5	-72.5			45	037	0.9	8.8	200.61	3.61	1989	1987
<i>30</i>	56	23999	56	-54.2	-41.9	-68.1			30	065	2.0	9.2	233.17	3.41	1989	1987
<i>25</i>	50	25158	50	-52.3	-38.3	-66.1			23	111	6.6	10.9	270.98	3.50	1983	1987
<i>20</i>	44	26603	44	-49.8	-35.1	-62.7			15	084	5.5	12.3	293.59	3.23	1989	1987
<i>15</i>	29	28403	29	-48.2	-41.9	-58.9			7	093	7.6	17.3	286.73	3.01	1983	1987
<i>10</i>	18	31090	18	-44.4	-36.7	-53.5			4	103	13.2	20.2			1989	1988
<i>7</i>	7	33328	7	-45.1	-35.9	-53.1			1	091	14.0	14.0			1990	1988

**FREEZING LEVEL**  
N P ALT

**1ST TROPOPAUSE**  
N P ALT T

**2ND TROPOPAUSE**  
N P ALT T

302 564 491

124 095 1695 -80.2

## NORMALS OF RADIOSONDE DATA

43295 BANGALORE

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	450	908	450	31.2	35.6	20.4	450	9.4	450	092	2.3	2.8	0.68	1.16	1983	1984
<i>1000</i>	379	49											8.25			
<i>950</i>	378	513											10.46			
<i>900</i>	375	999	374	30.6	35.0	22.0	373	8.6	358	086	3.6	4.6	6.32	1.04	1988	1981
<i>850</i>	374	1505	374	25.1	31.6	18.0	371	5.3	359	093	4.3	5.6	6.10	1.16	1988	1972
<i>800</i>	374	2032	374	19.9	28.0	12.0	369	3.2	359	086	4.3	5.6	6.97	1.32	1988	1971
<i>750</i>	374	2581	374	14.9	24.4	7.0	367	1.3	359	080	3.8	5.4	9.75	1.42	1988	1971
<i>700</i>	374	3162	373	9.8	16.2	2.8	364	-1.9	358	066	3.5	5.4	11.40	1.35	1990	1986
<i>650</i>	370	3771	370	5.5	12.8	-1.1	330	-6.8	351	055	2.7	5.8	15.16	1.35	1990	1983
<i>600</i>	369	4422	367	2.3	10.4	-4.0	244	-14.1	346	033	1.4	5.8	17.99	1.36	1990	1971
<i>550</i>	366	5120	364	-1.1	6.6	-8.0	179	-20.6	342	012	1.5	6.3	21.72	1.47	1988	1971
<i>500</i>	364	5875	362	-5.5	2.4	-13.3	145	-25.8	341	355	1.8	6.7	25.56	1.65	1988	1989
<i>450</i>	362	6694	361	-10.4	-2.3	-17.3	131	-30.4	338	319	2.6	7.8	28.27	1.96	1988	1982
<i>400</i>	360	7592	359	-16.2	-7.9	-23.0	126	-35.3	333	291	4.3	9.3	37.08	2.21	1990	1971
<i>350</i>	350	8584	348	-22.8	-13.1	-31.0	123	-41.5	315	280	6.4	10.8	45.37	2.27	1989	1974
<i>300</i>	344	9700	343	-30.8	-20.7	-38.3	114	-48.3	308	266	8.6	12.5	55.02	2.30	1989	1982
<i>250</i>	338	10971	337	-40.5	-30.9	-48.3	63	-56.0	296	257	9.7	14.0	67.43	2.49	1990	1981
<i>200</i>	330	12457	329	-52.1	-41.9	-60.9			278	251	9.9	14.3	84.04	2.72	1990	1981
<i>175</i>	313	13310	313	-58.8	-48.9	-68.5			253	246	9.2	14.2	95.29	2.76	1990	1981
<i>150</i>	297	14261	297	-65.9	-53.7	-76.7			232	246	7.5	13.3	106.67	2.72	1990	1986
<i>125</i>	259	15356	259	-72.3	-59.1	-85.1			197	239	3.9	11.3	117.72	3.26	1990	1982
<i>100</i>	222	16650	222	-77.7	-64.9	-89.9			165	114	1.0	9.3	125.20	3.05	1990	1982
<i>80</i>	181	17945	181	-75.5	-64.5	-86.3			126	110	1.7	8.5	139.38	2.72	1990	1987
<i>70</i>	167	18736	167	-71.7	-60.7	-83.9			115	074	0.5	7.7	146.32	2.80	1990	1987
<i>60</i>	149	19659	149	-67.3	-56.1	-78.9			97	201	0.6	9.1	157.57	2.80	1990	1987
<i>50</i>	125	20780	125	-62.3	-50.9	-73.3			78	228	1.1	10.9	182.44	2.65	1990	1987
<i>40</i>	105	22187	105	-57.8	-46.9	-68.3			58	210	1.2	11.4	201.14	3.06	1990	1987
<i>30</i>	86	24032	86	-52.8	-41.9	-65.5			41	184	1.6	8.8	281.12	4.61	1990	1987
<i>25</i>	70	25203	70	-50.5	-36.7	-63.7			27	201	0.4	7.8	313.33	3.27	1989	1987
<i>20</i>	57	26666	57	-48.3	-34.5	-61.1			14	089	4.5	10.1	293.68	2.18	1990	1987
<i>15</i>	39	28604	39	-45.2	-35.5	-58.1			3	117	4.0	17.7	292.28	2.04	1988	1987
<i>10</i>	17	31291	17	-42.9	-33.9	-53.9			1	247	26.0	26.0			1989	1987
<i>7</i>	8	33532	8	-42.6	-37.3	-49.9									1986	1987

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

363 569 485

201 095 1693 -79.8

## NORMALS OF RADIOSONDE DATA

43295 BANGALORE

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	450	906	450	32.6	37.0	20.0	450	12.8	450	082	1.3	2.5	0.63	0.98	1973	1984
1000	409	27											7.24			
950	407	491											6.57			
900	401	982	398	32.1	36.0	20.0	398	12.3	383	081	2.4	4.4	7.27	0.94	1973	1971
850	398	1490	398	26.6	35.4	18.0	398	8.4	381	084	3.2	5.1	8.22	1.26	1990	1971
800	398	2021	398	21.7	31.0	14.0	396	6.5	382	076	3.4	5.2	9.98	1.49	1990	1972
750	398	2572	398	16.7	26.8	9.8	394	4.9	382	064	3.9	5.4	12.56	1.68	1990	1985
700	397	3158	397	11.6	20.8	5.0	391	2.1	380	059	4.4	5.9	15.08	1.68	1989	1972
650	392	3771	391	6.9	16.6	-2.0	378	-2.3	375	058	5.1	6.6	18.80	1.69	1989	1974
600	392	4425	390	2.7	12.2	-5.7	347	-8.6	374	061	4.2	6.4	21.91	1.76	1989	1981
550	390	5125	388	-0.7	8.0	-8.0	287	-15.1	368	063	2.6	5.7	25.95	1.94	1989	1971
500	386	5883	385	-4.8	3.8	-12.1	216	-20.7	359	051	1.8	5.9	31.03	2.00	1989	1980
450	383	6704	382	-9.6	-0.9	-21.0	188	-25.1	352	021	2.0	6.9	35.46	2.01	1989	1971
400	379	7606	378	-15.2	-6.5	-24.1	166	-30.3	347	337	1.6	8.0	42.87	1.90	1989	1985
350	371	8602	369	-21.8	-10.1	-29.9	149	-36.6	333	285	2.9	9.7	50.85	2.02	1990	1982
300	363	9723	362	-29.9	-18.5	-39.5	138	-43.9	321	265	5.1	10.6	61.31	2.23	1990	1982
250	346	10997	345	-39.8	-28.9	-48.1	85	-52.4	306	247	6.9	11.7	73.70	2.53	1990	1982
200	335	12486	335	-51.6	-40.1	-60.3	2	-60.0	280	240	8.0	12.5	92.24	2.78	1990	1981
175	309	13344	309	-58.4	-46.9	-68.9			253	237	7.7	11.8	105.14	2.94	1990	1980
150	293	14298	293	-65.7	-52.5	-75.3			234	237	6.2	11.0	120.57	3.00	1990	1980
125	259	15386	259	-72.4	-58.5	-82.3			201	214	2.4	9.8	135.34	3.23	1990	1980
100	227	16686	226	-78.3	-66.1	-89.1			174	110	4.0	9.1	154.11	2.98	1990	1981
80	190	17966	190	-76.2	-66.1	-88.1			146	096	4.9	8.5	173.87	2.72	1989	1982
70	177	18761	177	-72.0	-61.7	-88.1			135	091	3.4	7.9	190.13	2.66	1983	1982
60	157	19688	157	-66.9	-56.1	-83.1			110	097	2.2	8.4	204.92	2.31	1990	1982
50	137	20833	137	-60.9	-50.1	-72.0			90	119	1.2	8.9	232.60	2.59	1990	1972
40	105	22256	104	-55.8	-44.5	-71.0			70	162	1.6	7.9	297.59	5.16	1983	1972
30	92	24133	92	-50.5	-34.9	-59.3			61	114	2.5	7.8	280.98	2.89	1990	1987
25	84	25320	84	-48.0	-36.3	-57.3			46	099	5.0	8.7	277.74	3.90	1990	1982
20	67	26773	67	-45.7	-34.1	-54.9			30	101	7.3	10.5	250.77	2.92	1981	1987
15	49	28684	49	-43.1	-33.5	-51.5			9	100	12.9	15.0	311.60	2.38	1990	1986
10	28	31308	28	-40.8	-29.5	-47.9			1	158	9.0	9.0	185.16	1.94	1989	1986
7	15	33852	15	-39.5	-34.1	-44.5									1983	1987

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
389	560	493					206	096	1694	-80.0

# NORMALS OF RADIOSONDE DATA

43295 BANGALORE

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	465	905	465	31.3	37.0	20.0	465	16.4	465	296	0.9	2.7	0.93	1.12	1983	1971
1000	415	21											7.86			
950	414	482											6.90			
900	405	972	405	30.7	35.4	20.0	405	16.1	394	312	1.4	4.4	8.10	1.15	1980	1971
850	405	1480	405	25.7	34.6	17.0	405	12.9	394	322	2.1	5.6	8.69	1.42	1983	1972
800	405	2010	405	21.1	31.6	13.0	405	10.7	394	336	2.4	5.8	10.87	1.30	1983	1972
750	405	2561	405	16.6	26.2	8.0	404	8.3	393	005	2.8	5.8	12.24	1.32	1983	1971
700	405	3147	405	12.1	20.4	6.0	404	4.5	392	027	3.5	6.3	13.92	1.40	1983	1971
650	403	3762	403	7.7	15.6	2.0	398	-0.6	383	050	4.1	6.9	15.82	1.44	1983	1971
600	396	4419	394	3.4	11.2	-3.0	382	-5.6	372	052	4.4	7.3	18.92	1.54	1983	1971
550	388	5119	386	-0.5	7.8	-6.0	337	-10.4	355	052	3.3	6.8	21.97	1.45	1990	1971
500	384	5877	382	-4.1	4.2	-10.9	289	-15.4	352	032	2.5	6.5	25.29	1.36	1985	1987
450	380	6701	379	-8.6	0.4	-15.0	241	-20.4	344	027	2.2	6.6	27.47	1.48	1990	1971
400	376	7605	376	-14.0	-4.3	-21.1	215	-26.9	339	030	1.8	6.5	31.50	1.57	1990	1982
350	373	8605	373	-20.6	-10.9	-27.3	188	-33.0	327	027	0.6	6.1	37.61	1.81	1990	1985
300	361	9733	360	-28.7	-19.9	-35.0	151	-40.7	315	145	0.5	6.5	45.40	2.09	1990	1972
250	345	11013	344	-38.6	-29.1	-46.0	94	-49.6	297	162	1.7	7.2	56.72	2.36	1989	1972
200	331	12513	330	-50.7	-38.1	-59.1	3	-59.0	273	133	4.8	9.6	78.09	2.62	1989	1982
175	306	13370	305	-57.7	-45.1	-67.5			249	123	6.8	11.5	89.01	2.81	1989	1986
150	284	14329	283	-65.2	-51.5	-73.7			232	115	9.0	13.1	101.60	2.87	1989	1985
125	253	15421	250	-72.5	-58.5	-83.9			199	106	10.3	14.0	119.98	3.44	1989	1986
100	214	16708	213	-78.6	-64.5	-87.9			163	098	12.6	14.4	136.94	3.08	1989	1981
80	172	17996	171	-76.2	-63.1	-89.1			112	097	12.4	14.1	157.68	3.26	1989	1985
70	154	18798	154	-71.9	-59.5	-87.1			100	094	10.0	11.3	167.20	3.17	1989	1987
60	140	19724	140	-66.5	-55.5	-82.5			84	094	7.2	9.4	179.87	3.19	1989	1983
50	122	20850	122	-60.7	-48.3	-72.3			65	093	7.9	9.5	197.72	2.87	1990	1983
40	104	22284	104	-55.6	-45.1	-66.1			44	101	8.5	10.3	215.93	3.09	1990	1988
30	85	24161	85	-50.7	-38.1	-62.5			29	097	7.9	10.7	238.29	2.45	1989	1988
25	79	25347	79	-48.0	-36.5	-60.3			21	100	7.7	10.1	245.99	3.02	1989	1988
20	59	26823	58	-46.1	-37.5	-57.9			13	091	6.3	9.6	308.61	3.15	1990	1988
15	38	28748	38	-42.4	-29.5	-55.1			2	108	14.8	15.0	370.32	4.43	1989	1988
10	13	31482	13	-40.5	-22.7	-52.1									1989	1985
7	6	33703	6	-42.3	-32.5	-51.1									1988	1985

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
390	556	503					188	095	1699	-80.5

## NORMALS OF RADIOSONDE DATA

43295 BANGALORE

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	448	905	448	27.3	35.0	20.0	448	18.2	447	266	4.3	4.8	0.58	1.06	1972	1982
1000	377	30											6.65			
950	376	487											7.22			
900	372	969	372	27.0	34.0	19.8	372	17.9	360	266	6.0	6.7	6.53	1.06	1972	1982
850	372	1471	372	22.1	30.0	16.4	371	15.1	361	265	9.1	9.9	7.45	0.91	1982	1980
800	372	1995	372	17.8	24.8	13.0	371	12.7	360	272	9.6	10.4	9.18	0.94	1982	1972
750	372	2542	372	14.2	21.4	9.0	370	9.7	359	277	9.3	10.4	10.56	0.94	1983	1987
700	372	3125	372	11.0	18.8	6.0	370	5.6	359	280	7.9	9.6	12.53	0.98	1983	1987
650	370	3739	370	7.5	13.4	2.0	366	1.0	350	278	6.3	8.7	13.97	0.99	1982	1981
600	367	4397	367	3.8	9.6	-2.9	358	-2.8	343	274	5.2	8.2	16.42	1.04	1985	1980
550	361	5099	361	0.1	6.6	-9.3	349	-7.8	330	274	4.7	7.5	18.87	1.02	1989	1982
500	359	5859	359	-3.8	3.0	-10.1	332	-12.6	326	272	4.3	6.9	21.38	1.04	1989	1981
450	356	6684	356	-8.3	-1.1	-18.0	304	-17.8	318	274	3.0	6.2	22.62	1.13	1989	1971
400	353	7594	353	-13.5	-6.1	-19.5	276	-23.8	315	289	1.3	5.6	27.54	1.11	1989	1980
350	350	8596	350	-20.0	-12.9	-27.1	247	-31.2	307	069	1.7	5.4	32.32	1.25	1989	1982
300	345	9727	345	-28.0	-20.5	-35.9	195	-39.2	299	080	4.3	6.7	37.33	1.49	1986	1985
250	335	11011	335	-38.1	-29.1	-45.7	131	-48.2	288	088	9.3	10.8	45.00	1.68	1986	1989
200	320	12509	320	-50.4	-41.3	-60.7	7	-57.0	275	087	17.0	17.9	57.09	1.93	1986	1981
175	306	13367	306	-57.7	-49.7	-67.5			258	088	21.3	22.3	65.07	2.05	1986	1986
150	286	14319	286	-65.6	-56.9	-76.1			238	088	26.3	27.1	73.73	1.91	1990	1986
125	251	15403	249	-73.3	-63.1	-82.3			199	089	29.3	30.4	84.59	2.58	1989	1982
100	210	16683	210	-78.6	-64.9	-89.9			163	093	28.0	28.9	110.09	3.20	1990	1987
80	164	17971	164	-75.0	-56.5	-87.1			115	085	20.0	21.7	130.96	3.47	1990	1983
70	148	18757	148	-70.8	-54.1	-84.1			104	088	18.9	19.9	144.42	3.53	1990	1987
60	124	19676	124	-65.9	-51.1	-77.9			82	091	16.4	17.2	140.34	3.15	1990	1986
50	105	20798	105	-60.6	-47.7	-72.5			67	096	16.6	17.2	155.28	3.11	1990	1986
40	83	22207	83	-55.9	-41.9	-69.1			43	099	15.2	15.9	177.90	3.23	1990	1986
30	66	24060	66	-50.8	-38.7	-64.7			23	092	18.5	19.1	226.56	3.12	1989	1986
25	52	25260	52	-48.3	-35.1	-61.9			14	088	22.4	22.7	227.47	3.23	1989	1986
20	42	26726	42	-45.8	-35.9	-58.5			10	094	19.7	20.1	241.66	3.67	1989	1986
15	24	28578	24	-44.7	-33.3	-54.1			1	103	4.0	4.0	279.67	4.27	1988	1986
10	17	31275	17	-41.5	-34.1	-50.1									1989	1987
7	6	33529	6	-42.0	-38.3	-44.5									1987	1986

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

360 548 512

183 102 1657 -80.2

## NORMALS OF RADIOSONDE DATA

43295 BANGALORE

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	465	905	465	26.6	32.4	19.0	465	18.1	465	266	3.9	4.2	0.58	0.88	1987	1974
1000	402	35											6.07			
950	402	490											7.31			
900	393	973	391	26.2	32.2	19.0	389	17.7	371	266	6.0	6.5	8.23	0.77	1988	1974
850	391	1475	391	21.3	28.0	13.6	389	15.0	371	267	9.1	9.6	9.04	0.82	1988	1982
800	391	1997	391	17.0	24.2	11.0	389	12.7	369	274	9.9	10.3	11.02	0.97	1988	1982
750	391	2543	391	13.4	21.0	8.0	389	9.8	369	280	9.9	10.4	13.03	0.99	1988	1974
700	391	3124	391	10.1	19.0	5.0	387	6.1	368	282	9.0	9.9	14.62	0.98	1974	1987
650	386	3736	386	6.9	14.6	2.0	382	1.5	354	281	7.7	8.5	17.52	1.02	1988	1988
600	384	4393	384	3.4	10.8	-2.1	375	-2.7	346	276	6.0	7.5	19.17	1.10	1988	1988
550	381	5094	381	-0.1	9.8	-6.0	360	-7.2	340	273	5.6	7.2	21.38	1.15	1988	1974
500	375	5856	375	-3.9	5.6	-10.0	343	-12.4	338	269	4.3	6.4	24.55	1.15	1988	1974
450	373	6681	373	-8.5	1.2	-15.1	324	-17.7	332	265	2.7	6.0	26.24	1.23	1988	1985
400	368	7589	367	-13.8	-4.1	-21.1	299	-24.0	327	187	0.5	5.6	32.41	1.32	1988	1985
350	356	8592	356	-20.5	-9.7	-28.5	259	-30.5	312	097	2.8	6.8	36.53	1.47	1988	1985
300	351	9718	350	-28.5	-17.3	-37.1	223	-38.4	306	093	6.9	9.1	43.55	1.66	1988	1985
250	338	11003	337	-38.3	-27.5	-45.9	145	-47.0	297	093	13.7	14.6	53.06	2.02	1988	1985
200	327	12500	326	-50.6	-40.5	-61.0	13	-57.0	286	088	22.1	22.8	65.74	2.18	1988	1972
175	310	13359	310	-57.6	-46.7	-68.1	1	-58.5	270	086	27.0	27.6	73.96	2.34	1988	1986
150	280	14318	280	-65.1	-52.9	-79.5			236	086	31.9	32.6	84.48	2.48	1988	1986
125	245	15414	244	-72.4	-58.9	-82.1			184	088	36.1	37.0	97.84	2.63	1988	1986
100	201	16708	201	-76.3	-56.3	-87.1			145	091	31.5	32.2	99.72	3.08	1990	1987
80	161	18011	161	-71.0	-56.9	-84.0			104	088	23.4	24.2	117.57	3.35	1990	1972
70	143	18809	143	-67.7	-53.3	-83.5			89	087	21.1	21.7	137.03	3.19	1990	1987
60	129	19750	129	-63.4	-49.5	-78.1			68	092	20.7	21.3	149.20	3.33	1989	1987
50	111	20900	111	-58.7	-44.5	-72.1			50	094	21.4	21.7	158.89	3.12	1989	1987
40	99	22321	99	-54.3	-39.5	-68.7			36	099	22.7	23.0	182.77	3.34	1989	1987
30	82	24177	82	-50.0	-33.5	-64.1			21	094	21.2	21.7	214.77	2.98	1989	1987
25	68	25337	68	-48.4	-37.9	-60.9			14	092	23.6	24.2	219.85	2.77	1986	1987
20	55	26786	55	-46.6	-37.1	-57.1			8	088	24.6	24.8	266.47	3.44	1990	1987
15	34	28630	34	-45.0	-34.9	-53.1			2	088	12.9	13.0	261.08	3.46	1981	1987
10	16	31321	16	-42.2	-34.5	-50.3									1987	1983
7	4	33709	3	-42.2	-37.1	-48.3									1988	1983

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

381 551 508

190 105 1641 -78.3



# NORMALS OF RADIOSONDE DATA

43295 BANGALORE

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	465	905	465	25.8	31.0	18.0	465	18.6	465	268	3.7	4.0	0.68	0.68	1987	1973
1000	405	38											4.20			
950	404	493											5.11			
900	398	973	397	25.4	32.2	16.0	397	18.3	370	271	5.4	5.9	5.64	0.69	1987	1971
850	397	1473	397	20.9	27.0	15.0	397	15.3	371	273	8.7	9.2	7.05	0.72	1981	1971
800	397	1995	397	16.9	24.0	10.0	397	12.7	370	279	9.7	10.2	9.03	0.98	1974	1971
750	397	2540	397	13.4	20.4	7.0	397	9.8	368	284	9.9	10.4	10.97	1.15	1981	1971
700	397	3121	397	10.2	18.5	4.4	396	6.0	369	285	9.1	9.7	12.79	1.25	1987	1981
650	395	3734	395	7.1	13.8	-1.5	390	1.7	353	285	7.6	8.5	15.64	1.25	1988	1980
600	395	4391	395	3.7	10.0	-5.3	386	-2.4	350	281	6.2	7.4	17.81	1.30	1989	1982
550	388	5093	387	0.3	8.8	-7.0	369	-7.3	340	276	5.4	7.0	20.83	1.28	1990	1971
500	385	5855	384	-3.7	2.8	-10.0	358	-13.0	336	273	3.9	6.3	23.61	1.33	1987	1971
450	379	6679	378	-8.1	-1.5	-14.1	339	-18.9	328	273	2.4	5.6	27.37	1.46	1987	1982
400	372	7588	370	-13.6	-6.9	-19.3	297	-24.5	322	143	0.3	5.6	32.09	1.49	1989	1980
350	364	8591	362	-20.1	-12.5	-26.3	262	-31.0	318	102	3.2	6.5	38.28	1.58	1989	1985
300	356	9721	355	-28.2	-17.3	-35.1	229	-38.6	307	096	7.8	9.2	44.97	1.78	1989	1985
250	346	11002	346	-38.3	-29.1	-46.3	144	-47.6	291	095	14.3	15.1	53.99	2.01	1989	1985
200	329	12500	329	-50.5	-40.3	-60.7	3	-55.9	269	088	22.9	23.6	68.38	2.29	1989	1985
175	304	13361	304	-57.5	-45.5	-67.9	1	-57.3	234	085	26.8	27.6	79.58	2.42	1989	1988
150	282	14320	282	-65.1	-52.1	-76.1			211	085	31.1	31.8	88.49	2.45	1989	1988
125	250	15416	250	-72.5	-59.1	-82.3			177	084	34.2	35.1	103.28	2.85	1989	1985
100	228	16711	228	-76.7	-65.7	-86.5			142	089	30.1	30.8	118.03	2.49	1989	1981
80	188	18018	188	-70.6	-58.1	-84.5			102	088	21.0	21.5	133.83	2.91	1989	1987
70	173	18820	173	-67.2	-55.0	-79.7			85	087	19.8	20.5	138.27	2.94	1971	1982
60	151	19768	151	-63.7	-50.1	-77.0			65	091	18.7	19.4	147.55	2.98	1989	1973
50	129	20908	129	-59.6	-42.1	-76.0			46	096	19.7	20.2	160.61	3.98	1989	1973
40	104	22344	104	-55.1	-36.5	-65.5			27	095	19.1	19.6	166.71	4.00	1989	1980
30	84	24205	84	-50.8	-39.5	-60.0			14	095	20.8	21.3	170.39	2.94	1989	1973
25	74	25403	74	-48.3	-37.1	-56.3			12	092	22.8	23.2	155.81	2.00	1989	1987
20	54	26893	54	-46.4	-35.7	-54.1			4	088	22.1	22.3	184.42	2.04	1987	1987
15	35	28819	35	-45.0	-35.9	-51.9			1	106	8.0	8.0	201.53	2.43	1989	1982
10	18	31443	18	-43.7	-38.9	-48.3									1983	1983
7	5	34050	5	-40.9	-36.9	-44.1									1983	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
389	546	515					214	104	1646	-78.6

## NORMALS OF RADIOSONDE DATA

43295 BANGALORE

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	450	906	450	26.6	31.2	19.0	450	18.5	450	275	1.8	2.6	0.73	0.99	1982	1971
1000	411	40											4.61			
950	411	495											6.31			
900	402	977	402	26.1	30.6	19.0	402	18.3	380	277	2.9	4.2	6.27	0.96	1982	1971
850	402	1478	402	21.6	29.2	14.0	402	15.2	381	276	4.0	6.0	7.93	0.88	1987	1972
800	402	2001	402	17.5	24.2	11.2	401	12.6	378	284	4.2	6.3	10.00	1.09	1987	1985
750	402	2547	402	13.7	20.0	7.4	401	9.4	375	288	4.0	6.4	11.93	1.20	1988	1980
700	402	3129	402	10.4	19.0	4.0	399	5.4	375	288	3.5	6.2	14.20	1.31	1974	1985
650	401	3741	401	7.1	16.0	-5.0	397	0.3	359	285	2.5	5.7	17.13	1.41	1988	1974
600	398	4398	398	3.9	13.6	-1.7	383	-4.2	356	277	1.9	5.5	20.25	1.42	1988	1980
550	397	5100	397	0.3	10.4	-5.9	366	-8.6	346	271	1.2	5.5	23.96	1.39	1988	1980
500	395	5861	394	-3.7	4.4	-9.5	353	-13.4	343	316	0.3	5.5	26.74	1.40	1988	1980
450	391	6685	390	-8.4	-1.1	-15.5	342	-19.0	332	084	1.2	5.4	31.11	1.51	1988	1987
400	387	7594	386	-13.8	-6.5	-21.1	295	-24.7	326	094	2.8	5.5	35.97	1.53	1988	1987
350	381	8595	380	-20.5	-12.1	-27.1	249	-31.0	317	096	4.7	6.8	42.53	1.75	1988	1985
300	368	9723	367	-28.6	-20.1	-36.7	206	-38.6	306	096	7.3	8.5	49.95	1.87	1990	1985
250	353	11001	352	-38.8	-28.3	-47.7	125	-48.1	286	096	11.3	12.2	58.98	2.02	1990	1985
200	340	12495	340	-51.4	-40.1	-61.7	8	-57.4	273	093	17.4	18.0	74.19	2.41	1989	1986
175	307	13352	306	-58.5	-45.7	-71.3	1	-60.3	238	093	20.7	21.4	85.13	2.66	1989	1986
150	283	14310	282	-66.1	-52.3	-77.0			220	092	25.5	26.2	98.84	2.93	1989	1971
125	241	15392	240	-73.2	-59.5	-84.9			177	092	27.3	28.0	116.20	3.46	1990	1985
100	204	16683	203	-76.3	-60.7	-85.0			137	092	21.3	22.0	129.93	2.83	1990	1971
80	159	17992	158	-71.2	-58.5	-86.1			91	091	15.9	16.6	135.82	2.53	1981	1987
70	141	18792	141	-67.6	-56.1	-82.7			78	087	15.8	16.5	142.63	2.62	1990	1987
60	129	19735	128	-64.0	-51.3	-76.9			66	091	15.7	16.2	155.29	3.00	1990	1987
50	108	20881	108	-59.6	-47.7	-71.0			49	100	15.3	16.0	163.38	3.11	1990	1974
40	93	22300	93	-55.2	-43.3	-68.0			30	095	9.7	11.3	180.33	3.98	1985	1974
30	82	24141	82	-51.1	-42.3	-66.1			24	089	9.8	11.7	214.16	4.68	1982	1982
25	61	25334	61	-48.9	-37.3	-60.1			13	081	11.1	12.0	182.98	2.31	1982	1987
20	50	26803	50	-46.8	-36.5	-57.9			7	093	8.7	10.1	194.22	2.29	1982	1987
15	36	28735	36	-44.5	-35.5	-55.1			4	091	13.8	14.0	191.66	2.30	1982	1987
10	18	31352	18	-43.3	-34.9	-51.9			1	092	26.0	26.0			1989	1987
7	7	33618	7	-45.2	-40.1	-47.3									1982	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
394	546	516					192	107	1631	-78.3

## NORMALS OF RADIOSONDE DATA

43295 BANGALORE

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	465	907	465	26.0	30.4	17.8	465	17.2	465	019	0.5	2.1	0.82	0.90	1982	1984
1000	396	56											7.54			
950	395	510											8.60			
900	390	991	390	25.5	29.6	19.8	387	16.9	370	025	1.3	4.2	9.04	0.82	1982	1980
850	390	1490	390	21.0	27.0	14.0	389	13.6	374	026	2.1	5.7	10.62	0.99	1990	1980
800	390	2012	390	16.8	24.8	11.0	389	10.9	372	029	1.9	5.6	12.62	1.25	1987	1971
750	390	2557	390	13.0	22.2	7.0	389	7.7	371	025	1.9	5.5	14.66	1.38	1987	1971
700	390	3136	390	9.6	17.8	3.4	386	3.3	371	017	1.3	5.4	16.54	1.56	1987	1982
650	387	3748	387	6.6	15.6	-5.5	369	-1.7	361	008	0.7	5.3	18.84	1.53	1987	1988
600	385	4402	385	3.6	11.0	-2.5	345	-5.9	351	049	0.2	5.2	20.90	1.10	1987	1985
550	383	5104	383	0.1	7.0	-6.9	319	-9.9	338	087	0.7	5.3	23.57	1.07	1972	1985
500	380	5864	380	-4.0	2.2	-18.0	288	-14.5	331	085	1.4	5.4	25.63	1.24	1988	1971
450	374	6688	373	-8.6	-1.3	-13.7	263	-19.6	320	085	2.0	5.5	28.35	1.31	1986	1982
400	367	7594	366	-14.2	-7.3	-19.3	236	-25.6	312	093	2.4	5.8	33.13	1.32	1990	1982
350	360	8594	359	-20.8	-14.3	-27.0	208	-32.2	303	097	2.8	5.9	37.74	1.42	1983	1973
300	353	9719	352	-29.1	-20.9	-35.9	169	-39.9	295	105	3.9	6.8	44.13	1.50	1989	1985
250	344	10995	343	-39.5	-29.9	-47.7	102	-49.8	286	112	6.3	8.6	50.57	1.62	1989	1982
200	326	12484	325	-52.1	-44.1	-62.1	5	-59.9	267	107	9.6	12.0	61.49	1.86	1986	1982
175	293	13336	292	-59.3	-49.5	-69.3			234	104	12.2	14.4	69.80	2.06	1989	1985
150	264	14280	264	-67.2	-55.3	-77.7			214	107	14.1	16.3	78.37	2.39	1989	1985
125	218	15359	218	-74.2	-61.5	-83.3			167	106	14.1	15.7	93.52	2.96	1989	1985
100	190	16645	190	-78.5	-67.1	-88.0			144	100	11.5	12.7	109.18	2.64	1989	1972
80	153	17934	153	-73.0	-61.7	-85.3			111	089	9.4	10.5	132.85	2.92	1981	1981
70	138	18736	138	-68.7	-58.3	-81.3			97	095	8.3	9.7	141.92	2.94	1988	1980
60	119	19676	119	-64.6	-52.5	-77.7			78	104	6.1	8.1	159.78	2.81	1981	1980
50	107	20810	107	-60.2	-45.9	-73.3			62	109	5.5	7.0	163.38	3.06	1981	1980
40	84	22250	84	-55.5	-43.5	-63.7			48	104	5.1	7.6	186.67	3.33	1988	1980
30	66	24094	66	-50.7	-35.1	-58.5			36	094	7.9	9.8	177.27	2.74	1988	1985
25	53	25284	53	-48.5	-29.9	-57.9			23	087	8.9	10.5	218.68	2.90	1988	1983
20	43	26749	43	-45.9	-37.5	-57.1			17	087	13.3	13.9	230.75	3.11	1988	1983
15	16	28805	16	-43.5	-37.7	-56.1			3	098	21.2	21.3			1989	1983
10	7	31470	7	-41.5	-35.7	-53.1									1983	1983
7	2	33483	2	-43.0	-35.1	-50.9									1988	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

382 550 510

174 103 1647 -80.4

## NORMALS OF RADIOSONDE DATA

43295 BANGALORE

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDIT	YRTX	YRTN
<b>SURFACE</b>	450	909	450	25.1	29.0	19.4	450	14.9	449	061	1.6	2.3	0.86	0.52	1988	1984
1000	408	74											7.63			
950	408	526											7.87			
900	402	1006	399	24.5	28.2	19.4	396	14.6	386	056	3.2	4.6	8.45	0.60	1988	1985
850	399	1503	399	19.9	26.0	13.0	397	11.4	386	060	3.7	5.5	9.23	0.99	1984	1971
800	399	2022	399	15.6	22.0	8.0	396	8.7	388	060	3.6	5.4	10.68	1.34	1989	1971
750	399	2565	399	12.2	20.2	4.0	385	4.8	388	052	2.9	5.2	12.05	1.28	1987	1974
700	399	3143	399	9.6	17.8	3.0	355	-0.1	387	055	2.3	5.2	14.02	1.11	1988	1971
650	393	3754	392	7.0	15.6	-1.9	313	-4.6	373	057	2.0	5.5	15.90	1.07	1985	1985
600	392	4409	391	3.6	10.0	-4.0	270	-8.3	367	058	2.4	5.6	17.99	1.11	1983	1971
550	389	5110	388	-0.2	6.8	-9.0	255	-12.9	358	061	3.0	6.1	20.46	1.13	1990	1972
500	387	5868	386	-4.4	4.6	-13.0	240	-17.9	355	061	3.4	6.5	23.44	1.33	1990	1972
450	381	6691	381	-9.3	-0.3	-18.5	216	-23.4	346	057	3.5	7.0	25.23	1.42	1990	1985
400	374	7594	374	-14.9	-7.5	-21.1	182	-28.9	338	064	2.4	7.0	32.31	1.54	1990	1983
350	370	8591	370	-21.7	-13.7	-30.0	168	-35.8	323	071	0.5	6.6	38.25	1.68	1990	1973
300	361	9711	361	-30.0	-21.1	-37.5	150	-42.8	310	207	1.7	7.1	46.24	1.89	1989	1983
250	354	10984	353	-40.3	-30.7	-47.9	85	-52.8	297	183	4.2	8.8	55.89	2.09	1989	1983
200	335	12470	334	-52.7	-43.1	-62.1	5	-56.8	283	166	7.2	11.7	71.72	2.34	1989	1985
175	315	13320	315	-59.7	-49.9	-70.1			263	163	8.2	12.6	82.80	2.61	1989	1985
150	289	14272	289	-66.9	-56.3	-79.3			243	168	6.2	11.4	94.47	2.64	1986	1985
125	244	15353	244	-73.8	-62.7	-85.5			204	150	4.1	8.9	109.94	3.00	1989	1985
100	204	16643	204	-79.3	-68.5	-89.9			166	100	4.5	7.6	138.98	2.86	1989	1986
80	178	17910	178	-75.5	-63.1	-88.7			138	102	5.9	8.0	155.03	2.55	1988	1980
70	155	18703	155	-71.0	-57.1	-84.1			118	094	3.4	6.5	161.44	2.36	1988	1987
60	137	19627	137	-66.4	-54.1	-80.1			101	106	3.4	7.0	165.99	2.69	1988	1987
50	122	20759	122	-61.1	-50.1	-75.1			88	119	2.9	8.3	177.27	2.28	1990	1987
40	104	22165	104	-57.0	-45.5	-67.1			71	109	2.9	9.2	193.94	2.03	1988	1987
30	82	24033	82	-52.5	-38.9	-61.5			46	118	2.8	11.5	208.66	2.13	1988	1984
25	59	25203	59	-51.0	-42.9	-59.9			26	112	3.3	12.2	219.33	1.87	1988	1984
20	39	26658	39	-48.7	-38.1	-58.3			12	082	4.2	14.1	242.90	2.36	1988	1984
15	22	28558	22	-47.5	-37.5	-56.7			7	082	12.6	18.6	296.70	3.82	1983	1984
10	12	31142	12	-46.4	-38.9	-53.9			3	115	10.9	18.7			1990	1984
7	8	33386	8	-46.4	-40.3	-52.1									1988	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

389 552 507

184 099 1672 -80.9

## NORMALS OF RADIOSONDE DATA

43295 BANGALORE

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	440	910	440	24.5	28.4	17.0	440	13.5	440	076	2.6	2.9	0.89	0.74	1980	1973
<i>1000</i>	352	86											11.65			
<i>950</i>	352	538											11.44			
<i>900</i>	346	1015	344	23.6	27.4	16.0	343	13.1	339	076	4.6	5.3	13.11	0.74	1987	1973
<i>850</i>	344	1511	344	18.7	25.2	10.0	343	9.8	339	080	5.4	6.3	13.92	0.98	1990	1972
<i>800</i>	344	2027	344	14.4	21.0	8.8	336	6.8	339	083	5.1	6.1	16.81	1.27	1985	1986
<i>750</i>	344	2567	344	11.8	19.8	4.2	307	1.7	338	085	4.3	5.8	18.67	1.42	1985	1986
<i>700</i>	344	3145	344	9.7	17.2	3.0	256	-2.7	339	081	3.7	5.9	21.51	0.88	1990	1971
<i>650</i>	343	3756	343	6.7	15.2	-5.7	229	-6.9	327	080	3.4	6.0	22.44	0.93	1990	1982
<i>600</i>	340	4410	340	3.2	10.2	-3.5	210	-10.6	320	078	3.1	6.4	23.52	1.05	1990	1981
<i>550</i>	338	5109	338	-0.8	6.0	-12.0	193	-15.0	313	078	3.1	6.7	23.33	1.11	1990	1974
<i>500</i>	336	5866	336	-5.1	2.6	-11.1	182	-19.4	313	078	2.5	7.2	25.90	1.00	1990	1983
<i>450</i>	333	6687	333	-9.9	-0.9	-15.1	162	-23.8	308	072	1.6	7.4	25.14	1.03	1986	1982
<i>400</i>	330	7585	330	-15.7	-9.5	-22.9	141	-30.0	304	326	0.6	7.9	32.27	1.25	1990	1985
<i>350</i>	315	8580	315	-22.6	-15.9	-32.0	121	-35.9	289	271	2.3	8.8	35.41	1.55	1990	1971
<i>300</i>	307	9696	306	-30.9	-23.9	-39.5	98	-43.2	281	238	5.1	10.9	43.92	1.69	1982	1985
<i>250</i>	297	10964	297	-41.1	-33.5	-49.0	47	-51.6	268	221	7.5	13.7	52.01	1.73	1987	1972
<i>200</i>	284	12445	284	-53.3	-45.7	-63.3	1	-57.5	248	215	9.3	16.2	62.58	1.91	1988	1981
<i>175</i>	256	13292	256	-60.2	-49.5	-71.3			221	220	9.1	15.7	68.09	2.08	1988	1981
<i>150</i>	237	14239	237	-67.3	-55.5	-76.9			203	231	7.8	14.1	75.99	2.12	1988	1987
<i>125</i>	200	15315	200	-73.9	-62.3	-85.7			165	235	5.6	11.2	96.00	3.11	1988	1981
<i>100</i>	164	16599	164	-79.4	-65.7	-87.9			127	184	1.4	8.3	115.82	3.06	1990	1987
<i>80</i>	133	17885	133	-76.9	-57.5	-87.3			100	109	3.7	6.9	122.14	4.29	1990	1981
<i>70</i>	119	18663	119	-73.1	-59.3	-86.9			86	116	2.1	6.4	131.49	4.10	1988	1981
<i>60</i>	110	19576	110	-68.1	-53.9	-79.3			73	059	0.7	6.3	143.89	3.51	1987	1981
<i>50</i>	93	20694	93	-62.7	-50.1	-76.3			63	279	1.5	7.1	169.78	3.28	1980	1987
<i>40</i>	75	22100	75	-58.0	-47.3	-71.5			45	258	1.0	8.0	171.63	4.06	1988	1987
<i>30</i>	61	23935	61	-53.2	-41.1	-65.9			38	086	2.8	11.7	185.66	4.06	1988	1987
<i>25</i>	50	25089	50	-52.0	-39.5	-64.5			28	083	3.5	13.9	208.94	4.86	1983	1987
<i>20</i>	35	26517	35	-49.8	-38.9	-63.1			17	088	3.8	16.1	211.59	2.79	1988	1987
<i>15</i>	26	28378	26	-47.1	-39.5	-55.1			5	119	2.6	11.0	225.38	3.61	1986	1986
<i>10</i>	9	31076	9	-45.6	-32.1	-52.5			2	115	4.2	9.0			1986	1986
<i>7</i>	2	33252	2	-46.1	-44.1	-48.1									1987	1985

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

339 558 498

143 096 1685 -80.5

## NORMALS OF RADIOSONDE DATA

42971 BHUBANESWAR

JANUARY 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	588	1008	588	25.9	32.6	16.4	588	12.7	588	155	0.9	2.2	0.97	1.03	1990	1981
<i>1000</i>	564	115	559	25.3	31.4	16.4	559	12.5	552	152	1.0	2.6	8.06	1.04	1990	1986
<i>950</i>	559	544	557	21.4	31.4	10.0	555	9.4	552	125	0.8	3.9	20.15	1.39	1986	1975
<i>900</i>	559	1026	558	17.6	26.0	8.0	552	6.9	553	341	1.1	3.7	8.16	1.67	1986	1974
<i>850</i>	559	1511	559	14.4	23.8	7.0	537	3.2	552	325	3.3	4.7	10.20	1.64	1990	1975
<i>800</i>	559	2021	558	11.8	21.6	3.0	439	-1.1	552	320	5.3	6.5	11.64	1.37	1990	1984
<i>750</i>	558	2549	557	9.5	18.2	2.0	325	-4.9	551	313	7.0	8.3	15.08	1.21	1990	1975
<i>700</i>	558	3127	558	7.0	16.0	-2.0	218	-7.7	553	302	8.2	9.5	14.54	1.24	1987	1972
<i>650</i>	548	3731	547	4.2	12.8	-5.0	150	-10.7	538	291	9.7	11.1	12.80	1.20	1990	1972
<i>600</i>	546	4380	545	0.9	10.2	-10.3	96	-13.6	532	283	11.6	12.8	18.13	1.26	1990	1988
<i>550</i>	544	5077	543	-3.1	7.6	-15.3	68	-16.0	531	280	13.7	14.9	26.58	1.32	1990	1983
<i>500</i>	539	5823	538	-7.7	4.4	-18.5	53	-19.5	524	278	15.8	17.1	21.64	1.51	1990	1986
<i>450</i>	524	6631	523	-12.8	-0.3	-22.0	46	-23.6	511	275	18.5	20.0	28.16	1.72	1990	1978
<i>400</i>	513	7527	513	-18.6	-6.9	-33.0	37	-28.9	499	273	21.2	22.8	29.20	1.85	1990	1975
<i>350</i>	494	8512	494	-25.3	-14.9	-35.1	27	-34.6	473	272	24.1	25.8	31.62	1.89	1990	1988
<i>300</i>	477	9616	477	-33.1	-23.9	-44.1	12	-40.4	451	268	26.7	28.5	41.49	2.16	1990	1988
<i>250</i>	454	10876	454	-42.5	-34.3	-53.3	1	-46.1	420	262	28.5	30.7	51.05	2.09	1990	1988
<i>200</i>	418	12348	418	-53.6	-43.9	-63.1			380	258	29.4	31.3	63.41	2.04	1983	1988
<i>175</i>	367	13197	367	-59.8	-50.1	-69.3			309	257	28.2	29.9	67.00	1.96	1987	1986
<i>150</i>	324	14150	324	-65.9	-56.3	-76.9			271	256	25.6	27.3	73.02	2.01	1983	1986
<i>125</i>	285	15242	285	-72.4	-61.7	-83.5			216	257	22.7	24.5	78.47	2.34	1982	1989
<i>100</i>	247	16544	247	-76.8	-66.9	-84.7			185	258	16.5	18.4	79.31	2.07	1982	1986
<i>80</i>	201	17832	201	-74.7	-61.1	-88.1			139	261	10.6	13.4	95.54	2.93	1986	1988
<i>70</i>	177	18635	177	-70.6	-58.1	-82.7			115	258	9.0	11.6	107.31	3.75	1986	1988
<i>60</i>	155	19545	155	-65.9	-54.1	-79.0			93	264	8.3	10.6	122.29	4.34	1983	1972
<i>50</i>	131	20673	131	-60.8	-50.5	-72.9			71	280	3.3	7.3	130.07	3.32	1986	1990
<i>40</i>	94	22075	94	-57.0	-46.5	-69.1			40	262	2.2	6.4	108.98	2.34	1983	1988
<i>30</i>	53	23934	53	-53.7	-45.5	-61.5			20	213	1.4	6.4	99.57	2.03	1983	1987
<i>25</i>	32	25101	32	-52.9	-46.3	-62.1			13	257	2.4	8.8	119.92	2.06	1984	1986
<i>20</i>	18	26560	18	-51.5	-43.7	-58.5			6	347	1.1	5.7			1984	1988
<i>15</i>	5	28483	5	-49.5	-46.5	-53.7									1987	1990
<i>10</i>	2	31016	2	-49.7	-47.9	-51.5									1987	1990
<i>7</i>	1	33465	1	-46.9	-46.9	-46.9									1987	1987

**FREEZING LEVEL**

**1ST TROPOPAUSE**

**2ND TROPOPAUSE**

N P ALT

N P ALT T

N P ALT T

548 590 453

1 203 1213 -56.0

231 102 1651 -78.5

## NORMALS OF RADIOSONDE DATA

42971 BHUBANESWAR

FEBRUARY 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	537	1006	537	28.4	34.4	17.0	537	14.3	536	170	2.2	3.6	1.32	1.16	1989	1972
<i>1000</i>	497	96	491	27.7	34.2	17.0	491	14.0	486	169	2.3	3.8	11.94	1.16	1989	1972
<i>950</i>	497	525	496	23.7	36.0	15.0	495	11.3	492	176	2.4	5.2	21.40	1.09	1989	1983
<i>900</i>	497	1014	495	20.2	33.8	11.6	488	8.6	492	248	1.2	4.4	11.99	1.19	1989	1983
<i>850</i>	497	1504	495	16.6	27.4	7.0	483	5.5	492	299	3.3	5.3	12.03	1.23	1989	1975
<i>800</i>	497	2017	496	13.3	22.8	5.0	459	1.8	492	306	5.6	7.0	12.60	1.27	1989	1972
<i>750</i>	497	2541	496	10.0	18.6	3.0	405	-2.2	492	303	7.8	9.2	15.83	1.12	1981	1978
<i>700</i>	495	3126	495	7.0	15.2	0.0	320	-5.7	490	298	9.4	10.8	13.50	1.15	1981	1973
<i>650</i>	487	3725	487	3.7	12.8	-6.0	246	-9.1	480	290	10.5	11.8	16.79	1.20	1985	1974
<i>600</i>	482	4377	482	0.5	8.8	-8.1	192	-13.1	471	282	12.1	13.3	15.31	1.21	1985	1981
<i>550</i>	476	5072	476	-3.4	4.4	-13.3	133	-15.9	460	279	14.3	15.6	25.41	1.23	1985	1981
<i>500</i>	472	5819	472	-7.8	1.2	-15.5	105	-19.6	454	276	16.5	17.9	18.21	1.30	1985	1981
<i>450</i>	468	6627	468	-12.7	0.4	-22.0	87	-23.9	446	275	19.1	20.6	23.90	1.50	1985	1978
<i>400</i>	468	7521	467	-18.5	-5.1	-30.0	69	-28.6	441	272	21.7	23.5	23.45	1.70	1985	1978
<i>350</i>	458	8510	458	-24.9	-13.3	-36.1	42	-34.3	427	271	24.5	26.5	30.42	1.78	1985	1988
<i>300</i>	445	9613	445	-32.4	-21.7	-46.0	23	-40.7	414	268	27.8	29.9	34.60	1.87	1985	1972
<i>250</i>	422	10874	422	-41.7	-30.0	-52.9	4	-47.2	385	266	30.3	32.6	44.53	1.92	1978	1986
<i>200</i>	406	12352	406	-52.6	-42.9	-66.9			353	263	30.2	32.5	57.31	2.16	1981	1986
<i>175</i>	346	13204	346	-58.5	-48.5	-70.3	1	-60.0	276	261	30.5	33.0	65.21	2.24	1990	1986
<i>150</i>	314	14158	314	-64.8	-51.7	-75.9			254	261	27.6	30.1	70.58	2.18	1990	1986
<i>125</i>	263	15252	263	-70.9	-57.9	-80.5			193	263	24.4	26.7	74.57	2.69	1990	1988
<i>100</i>	226	16557	226	-75.7	-62.5	-88.9			162	266	19.6	21.4	86.76	2.45	1980	1988
<i>80</i>	181	17853	181	-75.2	-62.1	-88.3			116	272	12.7	14.7	100.34	3.09	1986	1988
<i>70</i>	157	18646	157	-72.1	-55.9	-83.5			102	273	9.8	12.1	109.29	3.60	1986	1988
<i>60</i>	132	19557	132	-67.7	-54.5	-82.5			79	279	5.9	9.5	126.36	4.28	1990	1988
<i>50</i>	114	20677	114	-62.2	-50.7	-74.9			65	282	3.7	7.9	130.23	2.89	1983	1986
<i>40</i>	81	22080	81	-57.5	-44.9	-69.1			41	287	2.8	7.6	133.02	2.50	1983	1986
<i>30</i>	48	23915	48	-54.3	-40.5	-65.5			25	255	1.3	6.8	165.76	2.25	1983	1987
<i>25</i>	34	25039	34	-53.0	-38.9	-64.1			15	059	1.4	9.2	163.25	2.06	1987	1987
<i>20</i>	22	26486	22	-52.1	-42.7	-62.5			7	297	2.8	7.4	184.75	2.10	1985	1987
<i>15</i>	8	28470	8	-48.6	-41.3	-60.5			2	259	7.6	8.0			1987	1987
<i>10</i>	1	31375	1	-48.1	-48.1	-48.1									1990	1990
<i>7</i>	1	33700	1	-46.1	-46.1	-46.1									1990	1990

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE				
N	P	ALT	N	P	ALT	T	N	P	ALT	T	
483	594	446	1	154	1392	-68.0		207	097	1680	-78.1

## NORMALS OF RADIOSONDE DATA

42971 BHUBANESWAR

MARCH 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	1003	589	31.1	37.8	19.0	589	18.4	589	181	4.1	5.1	0.97	1.06	1989	1973
1000	564	71	514	30.4	36.8	20.0	513	17.9	504	180	4.2	5.2	8.26	1.01	1984	1974
950	564	506	564	26.9	36.0	17.0	556	14.0	552	190	5.0	6.8	19.60	1.09	1974	1974
900	564	1000	563	24.2	32.8	13.2	549	9.7	552	225	2.6	5.2	6.64	1.38	1986	1986
850	564	1497	564	20.8	30.4	8.0	545	6.0	552	286	3.2	5.2	6.49	1.33	1981	1972
800	564	2017	564	16.9	28.2	6.4	533	2.6	552	301	5.0	6.5	7.32	1.29	1981	1986
750	564	2541	564	12.8	25.6	0.0	513	-0.7	551	304	7.0	8.2	15.05	1.30	1981	1975
700	564	3136	564	8.6	22.4	0.4	465	-4.0	551	302	8.4	9.7	10.44	1.38	1981	1986
650	562	3735	562	4.6	17.6	-5.7	387	-7.6	541	300	9.3	10.6	15.91	1.40	1981	1987
600	559	4392	558	1.0	11.0	-10.5	305	-11.3	533	293	10.1	11.4	14.72	1.36	1981	1987
550	555	5082	552	-3.1	5.0	-14.5	227	-15.5	526	289	11.1	12.6	25.82	1.40	1981	1987
500	548	5834	547	-7.7	1.0	-17.9	170	-19.6	519	284	13.1	14.4	20.78	1.43	1988	1987
450	541	6638	541	-12.8	-3.1	-21.9	126	-23.2	507	280	14.7	16.2	27.19	1.62	1988	1987
400	538	7536	538	-18.8	-8.7	-33.0	103	-28.5	502	278	17.3	19.0	28.55	1.88	1988	1975
350	528	8520	528	-25.4	-13.3	-37.5	71	-34.3	480	275	20.0	22.0	36.00	2.03	1987	1987
300	510	9623	510	-33.0	-22.5	-43.0	47	-41.0	461	273	23.9	26.3	43.18	2.02	1989	1972
250	485	10883	485	-41.8	-31.1	-53.0	4	-43.9	433	267	26.9	29.3	53.24	1.83	1980	1972
200	460	12361	460	-52.3	-41.7	-61.0	1	-57.7	408	263	28.6	30.8	61.83	1.66	1987	1977
175	401	13219	401	-58.3	-46.1	-68.0			339	262	27.4	29.2	69.03	1.89	1987	1972
150	361	14175	361	-64.4	-54.1	-74.1			301	262	25.6	27.2	76.90	1.96	1985	1988
125	305	15271	305	-70.9	-52.7	-82.0			248	264	21.9	23.5	79.08	2.16	1984	1978
100	269	16579	269	-75.8	-63.9	-89.3			214	265	16.4	17.9	89.31	1.90	1983	1982
80	204	17869	204	-74.9	-60.1	-85.1			152	272	10.4	12.7	111.50	2.80	1982	1979
70	184	18664	184	-72.0	-57.7	-84.0			132	274	8.5	10.9	120.85	3.28	1982	1972
60	165	19580	165	-67.4	-51.7	-80.1			111	288	4.9	8.6	113.96	3.96	1982	1988
50	144	20702	144	-61.4	-44.1	-76.7			94	286	3.1	7.1	125.67	4.14	1982	1979
40	100	22124	100	-56.5	-44.5	-70.1			63	277	1.8	6.3	133.96	4.94	1983	1979
30	71	23956	71	-51.7	-37.9	-61.1			41	145	0.7	5.5	211.39	4.38	1983	1988
25	48	25176	48	-49.2	-41.5	-58.7			26	107	2.0	5.7	232.43	3.68	1984	1987
20	23	26629	23	-47.9	-40.9	-58.1			9	208	1.7	5.4	191.20	2.51	1984	1987
15	9	28496	9	-47.8	-39.5	-55.9			3	350	4.3	7.0			1987	1987
10	4	31141	4	-47.7	-43.1	-52.5									1985	1987
7	1	33727	1	-40.9	-40.9	-40.9									1985	1985

**FREEZING LEVEL**

N	P	ALT
552	587	457

**1ST TROPOPAUSE**

N	P	ALT	T
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**2ND TROPOPAUSE**

N	P	ALT	T
236	097	1685	-78.1



## NORMALS OF RADIOSONDE DATA

42971 BHUBANESWAR

APRIL 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	569	999	569	32.1	40.6	22.0	568	22.2	567	189	6.4	7.0	0.92	0.84	1979	1977
1000	542	38	192	31.3	37.0	20.4	192	20.9	193	184	5.4	6.3	7.37	1.13	1972	1990
950	543	476	543	28.7	37.8	18.8	541	18.3	538	200	7.8	8.7	19.89	0.96	1985	1990
900	543	973	541	27.2	36.2	17.0	533	12.3	539	222	4.7	6.3	7.45	1.04	1989	1990
850	543	1475	541	24.1	32.4	14.2	522	8.2	539	274	3.5	5.3	6.94	1.06	1989	1990
800	543	2001	543	20.2	29.0	11.8	513	4.4	539	296	4.5	5.9	7.25	1.07	1973	1990
750	543	2529	541	15.7	23.4	3.0	508	1.1	539	303	5.6	6.8	12.64	1.08	1989	1975
700	543	3132	540	11.1	19.0	3.0	500	-2.2	537	307	6.5	7.8	8.23	1.10	1981	1977
650	531	3734	527	6.3	18.0	-1.0	459	-5.6	521	307	7.6	8.9	13.86	1.16	1982	1972
600	522	4396	519	1.9	13.2	-7.0	398	-9.5	509	304	8.3	9.6	10.73	1.25	1989	1977
550	513	5090	513	-2.3	9.6	-12.0	325	-13.8	495	298	8.9	10.1	17.85	1.27	1989	1974
500	507	5843	507	-6.5	4.2	-16.1	230	-17.7	488	291	10.0	11.3	15.22	1.23	1989	1982
450	494	6654	493	-11.3	-1.5	-21.9	189	-22.2	473	287	11.9	13.4	19.42	1.21	1989	1982
400	485	7554	484	-16.9	-7.5	-24.1	149	-26.3	467	282	14.1	16.0	23.16	1.21	1983	1982
350	468	8545	466	-23.6	-14.7	-32.3	125	-31.6	440	279	16.5	18.5	26.12	1.47	1984	1987
300	460	9656	459	-31.5	-22.3	-41.5	84	-38.9	430	276	19.1	21.5	32.03	1.86	1984	1982
250	446	10924	446	-40.7	-30.3	-49.9	24	-46.2	409	271	21.5	23.9	40.79	1.97	1983	1982
200	422	12410	420	-51.7	-39.5	-62.9	1	-57.1	388	265	22.2	24.5	51.02	1.94	1983	1989
175	373	13265	371	-57.6	-44.1	-68.9			329	263	21.2	23.3	59.10	2.06	1985	1987
150	337	14223	337	-64.1	-50.5	-77.0			292	261	19.4	21.2	70.11	2.45	1985	1977
125	299	15323	298	-70.7	-59.1	-80.3			248	265	15.7	17.7	79.27	2.65	1985	1984
100	269	16625	269	-76.1	-66.1	-86.1			220	269	9.5	12.8	92.72	2.17	1980	1982
80	204	17923	204	-75.4	-59.1	-86.3			147	282	4.0	9.2	106.45	2.88	1986	1987
70	184	18720	184	-72.1	-56.1	-83.1			130	304	1.5	7.8	118.97	3.66	1983	1987
60	160	19634	160	-67.0	-45.7	-79.7			110	354	0.7	6.6	143.72	4.85	1983	1987
50	142	20757	142	-61.1	-43.5	-74.1			97	074	1.2	5.8	153.35	3.01	1983	1987
40	116	22175	116	-55.0	-36.1	-67.9			68	112	2.7	5.8	144.78	2.70	1983	1987
30	80	24038	80	-49.8	-36.3	-61.3			46	098	3.1	6.6	157.89	2.80	1985	1987
25	56	25209	56	-47.4	-36.3	-59.1			32	080	2.6	5.9	183.28	3.29	1985	1987
20	42	26687	42	-44.9	-35.5	-56.3			21	098	3.1	6.2	211.68	3.76	1981	1987
15	21	28573	21	-44.1	-37.3	-51.1			5	065	2.6	6.8	61.44	1.34	1988	1984
10	6	31262	6	-42.8	-32.3	-48.9									1984	1984
7	5	33560	5	-42.0	-38.9	-45.5									1984	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

515 575 473

237 097 1686 -78.0

## NORMALS OF RADIOSONDE DATA

42971 BHUBANESWAR

MAY 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	996	589	32.9	43.0	20.0	589	23.9	589	188	6.3	7.0	1.59	0.86	1974	1977
<i>1000</i>	553	11	60	31.2	36.6	21.0	60	22.3	59	187	5.2	6.0	13.94	2.75	1982	1977
<i>950</i>	555	452	555	29.5	40.0	21.0	554	20.7	548	196	7.5	8.6	29.62	0.98	1978	1978
<i>900</i>	555	949	555	27.5	38.0	19.0	551	15.5	548	218	4.2	6.5	13.41	1.25	1978	1977
<i>850</i>	555	1451	555	24.8	34.4	13.0	543	10.5	548	279	2.7	5.5	12.67	1.55	1988	1972
<i>800</i>	555	1978	555	21.3	31.0	12.0	533	6.4	548	312	3.6	5.9	11.38	1.60	1978	1982
<i>750</i>	555	2515	554	17.0	25.0	8.0	525	2.8	548	323	4.5	6.4	13.79	1.50	1978	1982
<i>700</i>	555	3115	553	12.4	20.2	3.0	521	-1.0	549	327	5.5	7.4	10.40	1.39	1981	1972
<i>650</i>	552	3718	551	7.6	18.0	-3.3	508	-4.2	541	326	6.3	8.2	13.44	1.23	1977	1982
<i>600</i>	549	4384	549	3.1	12.8	-4.3	469	-7.8	538	322	6.6	8.5	11.35	1.23	1986	1982
<i>550</i>	541	5088	540	-0.8	9.4	-11.3	375	-11.7	524	315	6.8	8.6	22.91	1.19	1986	1982
<i>500</i>	535	5840	534	-4.5	4.8	-14.0	284	-15.4	520	306	6.9	8.9	14.04	1.24	1986	1972
<i>450</i>	531	6663	531	-8.9	0.8	-18.0	212	-19.4	511	298	7.1	9.4	22.63	1.43	1989	1972
<i>400</i>	524	7568	523	-14.2	-4.1	-23.9	174	-23.7	504	288	7.4	10.1	22.17	1.65	1989	1982
<i>350</i>	516	8569	515	-20.8	-9.3	-31.1	136	-29.6	488	278	7.7	10.6	31.30	1.56	1985	1987
<i>300</i>	508	9695	507	-28.5	-18.3	-37.7	82	-35.4	478	266	8.4	11.2	35.10	1.64	1988	1987
<i>250</i>	496	10976	495	-38.2	-27.5	-49.3	36	-42.6	464	258	9.3	12.1	42.74	1.84	1983	1987
<i>200</i>	481	12477	481	-50.0	-39.1	-60.1			444	248	8.6	12.0	52.76	1.90	1988	1987
<i>175</i>	451	13340	451	-56.8	-45.5	-69.0			413	242	7.3	11.7	58.57	2.02	1988	1974
<i>150</i>	427	14299	427	-64.0	-53.5	-77.0			392	231	5.6	11.0	68.96	2.00	1985	1974
<i>125</i>	390	15394	390	-71.5	-59.0	-82.0			353	204	3.1	9.7	79.98	2.01	1977	1977
<i>100</i>	348	16694	348	-77.0	-65.7	-89.0			314	120	3.2	9.2	95.89	2.07	1980	1972
<i>80</i>	291	17984	291	-75.8	-61.0	-85.9			255	102	6.3	9.3	106.94	2.91	1978	1982
<i>70</i>	266	18777	266	-71.6	-54.1	-85.1			233	098	7.5	9.6	124.17	3.72	1982	1987
<i>60</i>	221	19701	221	-65.8	-50.9	-82.7			190	099	7.8	9.3	127.32	3.53	1989	1988
<i>50</i>	188	20818	188	-59.3	-48.1	-76.1			156	098	8.2	9.2	145.09	3.02	1986	1988
<i>40</i>	140	22230	140	-54.6	-44.1	-67.7			103	094	9.1	9.7	175.34	5.28	1984	1979
<i>30</i>	112	24095	112	-49.4	-39.5	-60.9			74	086	9.3	10.1	203.48	4.56	1985	1979
<i>25</i>	80	25318	80	-46.4	-36.7	-57.7			50	086	8.1	9.2	166.61	2.72	1984	1990
<i>20</i>	49	26811	49	-43.7	-33.9	-54.9			22	080	9.0	10.2	162.16	3.01	1988	1990
<i>15</i>	22	28692	22	-41.9	-31.7	-51.3			7	087	7.2	8.6	277.28	3.30	1982	1990
<i>10</i>	10	31360	10	-40.1	-32.3	-46.1			3	118	8.6	9.3			1984	1988
<i>7</i>	4	33559	4	-39.7	-30.1	-43.3			3	100	10.5	12.3			1984	1984

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

544 558 497

318 097 1691 -79.0

# NORMALS OF RADIOSONDE DATA

42971 BHUBANESWAR

JUNE 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	570	993	570	31.5	40.0	23.8	570	24.7	570	196	3.8	5.2	1.10	1.14	1987	1980
1000	539	-19											8.56			
950	540	422	539	28.6	40.0	18.8	538	22.2	530	209	4.6	7.3	21.94	0.88	1972	1989
900	540	916	539	25.8	37.4	16.4	537	19.2	530	244	3.4	7.1	8.84	0.81	1983	1989
850	540	1416	539	22.9	32.2	11.0	535	15.9	530	289	3.6	7.1	9.53	0.76	1983	1972
800	540	1941	539	19.7	27.2	11.6	536	12.3	529	306	4.1	7.4	9.45	0.75	1982	1989
750	540	2487	539	16.2	23.8	8.8	535	8.8	529	310	4.4	7.8	13.35	0.73	1983	1989
700	540	3076	540	12.5	20.0	5.6	532	5.3	528	313	4.3	8.0	9.77	0.76	1973	1989
650	536	3688	535	8.8	17.4	1.8	527	1.4	518	315	4.0	8.0	17.10	0.86	1979	1982
600	536	4351	536	5.0	13.0	-6.3	521	-2.6	513	313	3.6	7.8	11.00	1.02	1979	1987
550	530	5065	530	1.2	8.6	-10.1	498	-6.1	504	307	3.3	7.6	18.72	1.16	1983	1982
500	517	5818	517	-2.7	4.0	-13.0	460	-10.1	491	306	2.7	7.3	11.92	1.20	1973	1972
450	509	6650	509	-6.9	2.2	-18.0	419	-15.1	476	312	1.5	7.0	17.63	1.21	1980	1978
400	501	7561	501	-11.9	-6.1	-22.9	351	-20.2	469	360	0.8	6.7	16.01	1.28	1980	1982
350	492	8572	492	-18.2	-9.0	-28.5	275	-26.2	462	071	1.4	6.8	24.25	1.41	1973	1982
300	483	9709	483	-26.1	-16.0	-37.3	208	-33.4	454	089	3.3	7.2	27.77	1.43	1973	1982
250	464	11005	464	-36.1	-28.3	-48.1	106	-42.9	430	092	5.4	8.3	34.74	1.62	1980	1982
200	445	12517	445	-48.6	-38.9	-60.5	3	-53.0	410	091	8.8	10.9	47.07	1.84	1980	1982
175	409	13385	409	-56.0	-46.5	-68.5			375	089	10.6	12.6	55.17	1.97	1982	1987
150	380	14349	380	-63.9	-53.9	-78.5			352	084	13.3	15.0	66.23	2.15	1982	1987
125	347	15443	347	-72.2	-60.5	-85.3			314	084	15.2	17.1	76.41	2.56	1982	1986
100	306	16738	306	-78.3	-68.3	-92.3			278	084	18.6	19.9	85.96	2.15	1982	1982
80	253	18021	253	-76.0	-59.9	-89.0			225	086	19.9	20.5	102.79	2.23	1987	1977
70	222	18809	222	-71.8	-54.7	-85.0			199	091	19.4	19.9	115.80	3.25	1982	1977
60	184	19725	184	-65.5	-50.1	-83.0			162	094	17.6	18.1	111.40	3.50	1982	1977
50	162	20860	162	-59.8	-46.9	-75.1			139	095	15.7	16.3	115.07	2.95	1982	1990
40	129	22278	129	-55.0	-44.1	-67.9			104	095	15.4	16.2	146.64	2.04	1982	1990
30	80	24152	80	-50.5	-39.9	-60.0			66	091	17.0	17.6	134.01	4.32	1985	1976
25	63	25331	63	-47.9	-36.3	-58.0			44	088	17.2	17.7	158.71	3.68	1985	1976
20	44	26836	44	-45.3	-33.9	-53.1			26	083	18.5	19.0	211.64	3.04	1985	1983
15	30	28793	30	-42.4	-30.5	-49.1			9	081	16.5	17.7	252.36	2.63	1985	1983
10	13	31511	13	-40.2	-29.9	-45.1			2	106	12.3	12.5			1985	1985
7	2	33878	2	-40.1	-40.1	-40.1			1	091	21.0	21.0			1983	1983

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

528 534 529

281 098 1687 -80.2

## NORMALS OF RADIOSONDE DATA

42971 BHUBANESWAR

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	579	994	579	29.2	39.6	24.0	579	25.2	579	213	3.3	4.5	1.38	0.79	1982	1971
1000	540	-6	2	26.2	26.4	26.0	2	24.4	1	316	3.0	3.0	11.20		1986	1978
950	540	434	539	26.6	36.0	20.2	539	23.0	531	226	4.9	7.2	21.49	0.84	1982	1990
900	541	922	541	23.8	33.0	18.0	541	20.2	531	251	4.5	7.4	11.19	0.86	1982	1977
850	541	1418	541	21.0	30.2	11.0	541	17.5	532	268	4.4	7.6	11.24	0.88	1982	1982
800	541	1941	540	18.2	27.0	13.0	540	14.6	531	276	4.4	7.5	11.33	1.00	1990	1973
750	541	2489	540	15.2	22.2	10.0	540	11.4	530	275	4.3	7.5	13.49	1.10	1988	1974
700	541	3072	540	12.2	19.4	6.0	539	7.7	530	271	3.6	7.2	12.83	1.05	1989	1984
650	538	3686	536	8.9	16.8	0.8	536	3.9	521	266	3.1	7.0	16.96	1.19	1988	1984
600	535	4348	532	5.4	13.4	-5.0	527	0.1	507	268	2.3	6.6	15.02	1.28	1988	1974
550	523	5068	519	1.8	9.2	-6.3	509	-3.7	495	277	1.5	6.5	19.71	1.24	1988	1984
500	510	5819	508	-2.1	5.0	-14.9	496	-8.3	484	315	0.4	6.2	18.54	1.30	1988	1985
450	502	6653	500	-6.3	4.2	-15.0	462	-13.2	471	073	1.1	6.0	23.52	1.33	1984	1977
400	496	7563	492	-11.5	-3.3	-19.5	426	-19.0	464	083	3.1	6.6	25.29	1.54	1988	1981
350	478	8577	476	-17.8	-8.5	-25.1	358	-25.6	446	086	4.9	7.4	27.87	1.76	1988	1981
300	466	9712	465	-25.8	-15.1	-36.0	265	-33.1	432	087	7.6	9.3	35.02	1.83	1988	1977
250	457	11010	457	-35.8	-27.1	-47.0	144	-42.8	418	086	11.4	12.6	44.88	1.63	1986	1977
200	443	12521	442	-48.6	-39.1	-61.0	1	-55.3	400	081	16.1	17.2	54.42	2.02	1990	1977
175	424	13388	423	-56.0	-46.1	-69.0			378	079	18.8	19.7	60.99	2.13	1988	1977
150	393	14352	393	-64.0	-52.7	-76.0			351	078	21.4	22.3	70.36	2.27	1988	1971
125	350	15452	350	-72.2	-60.5	-85.0			312	079	24.5	25.7	77.74	2.24	1980	1977
100	316	16756	316	-77.2	-61.5	-94.3			275	083	27.3	28.1	86.63	1.93	1988	1987
80	255	18055	255	-73.3	-52.1	-87.1			199	085	25.8	26.4	105.69	3.64	1988	1982
70	223	18866	223	-68.8	-52.7	-86.0			180	086	24.2	24.5	115.31	3.53	1989	1977
60	190	19793	190	-63.7	-51.5	-79.0			157	089	22.1	22.5	138.51	5.66	1986	1977
50	167	20918	167	-58.8	-46.1	-72.0			137	093	20.9	21.3	161.61	5.22	1989	1974
40	123	22340	123	-54.9	-44.3	-68.0			89	093	20.0	20.5	154.84	4.49	1989	1977
30	77	24199	77	-50.8	-38.3	-58.3			54	088	20.4	20.7	125.95	2.26	1985	1983
25	53	25392	52	-49.1	-39.7	-56.9			27	085	20.4	20.9	145.00	2.42	1982	1982
20	33	26839	33	-47.0	-36.3	-56.3			15	089	20.4	20.7	135.58	2.84	1988	1982
15	10	28662	10	-45.0	-40.9	-49.3			1	094	23.9	24.0			1983	1982
10	3	31514	3	-41.3	-39.1	-43.3									1987	1986
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

518 527 540

297 103 1663 -78.7

# NORMALS OF RADIOSONDE DATA

42971 BHUBANESWAR

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	619	994	619	29.0	37.0	24.0	619	25.3	619	211	2.7	4.2	0.95	0.73	1978	1971
1000	585	-7	5	30.3	31.0	29.0	5	25.1	5	206	5.3	6.0	9.09		1979	1979
950	585	428	585	26.2	34.0	19.0	585	22.6	578	227	4.1	7.2	20.45	0.81	1972	1971
900	585	921	585	23.3	31.6	17.0	584	19.9	578	249	3.6	7.5	8.42	0.91	1989	1971
850	585	1417	585	20.5	29.0	14.0	584	16.9	578	268	3.5	7.6	8.35	0.93	1982	1971
800	585	1939	585	17.8	26.8	9.8	584	14.1	578	275	3.5	7.6	8.56	1.03	1984	1982
750	585	2485	585	14.9	23.6	7.0	582	10.8	575	271	3.3	7.4	11.57	1.03	1980	1982
700	585	3069	585	11.9	21.0	5.0	581	7.1	572	264	2.8	7.1	10.39	1.08	1980	1982
650	572	3685	572	8.8	18.4	1.2	565	3.1	539	260	2.1	6.9	14.21	1.07	1980	1982
600	569	4345	569	5.4	15.2	-0.9	562	-0.7	531	261	1.3	6.7	12.89	1.12	1980	1983
550	566	5060	565	1.7	9.2	-4.9	553	-4.8	521	295	0.5	6.5	22.09	1.13	1980	1982
500	556	5815	556	-2.4	4.2	-9.7	522	-9.4	516	056	0.4	6.3	16.75	1.23	1988	1982
450	548	6648	548	-6.8	-0.3	-15.1	497	-14.2	496	078	1.5	6.6	21.85	1.33	1988	1982
400	540	7560	540	-12.0	-5.1	-21.1	454	-20.1	488	086	2.8	6.7	24.40	1.44	1988	1982
350	531	8573	530	-18.4	-11.1	-27.0	383	-26.6	477	087	4.4	7.6	28.57	1.50	1988	1972
300	519	9707	518	-26.4	-18.7	-36.0	277	-34.1	461	091	6.9	8.8	34.22	1.62	1980	1977
250	510	11001	510	-36.4	-25.7	-47.0	112	-42.4	444	088	9.7	11.1	41.08	1.79	1988	1977
200	489	12509	489	-49.0	-40.3	-62.0	1	-46.1	419	084	14.0	15.0	50.78	2.12	1980	1977
175	455	13374	454	-56.4	-47.7	-69.0			383	081	15.9	16.8	57.19	2.28	1980	1977
150	427	14340	425	-64.3	-54.5	-76.1			355	078	17.3	18.5	64.04	2.14	1980	1986
125	371	15427	369	-72.7	-61.1	-82.1			306	078	19.3	20.5	75.36	2.21	1981	1987
100	336	16713	330	-77.5	-63.9	-92.1			276	081	23.2	24.1	83.08	1.79	1986	1990
80	273	18013	272	-72.5	-55.5	-86.1			212	085	23.4	23.9	88.68	3.39	1985	1982
70	244	18823	244	-68.2	-52.9	-81.7			181	088	22.1	22.4	96.88	4.45	1985	1988
60	205	19757	203	-63.5	-49.3	-78.0			146	089	21.1	21.5	102.97	3.99	1985	1974
50	171	20891	171	-59.3	-45.5	-72.0			120	092	20.3	20.7	102.95	3.21	1985	1978
40	122	22310	122	-55.3	-39.5	-71.7			76	091	19.4	19.8	99.61	3.18	1985	1982
30	70	24164	70	-51.3	-40.1	-62.5			39	091	20.3	20.7	112.86	3.67	1987	1988
25	50	25346	50	-49.1	-39.1	-61.1			28	087	20.8	21.3	153.31	3.42	1987	1988
20	33	26821	33	-47.2	-41.1	-58.5			18	086	22.7	22.9	134.22	3.03	1985	1988
15	14	28791	14	-44.5	-40.5	-50.9			3	085	24.0	24.6			1984	1983
10	7	31619	7	-41.7	-36.7	-47.5			1	087	27.0	27.0			1984	1982
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

565	528	537		1	161	1368	-71.9		312	104	1653	-79.2
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## NORMALS OF RADIOSONDE DATA

42971 BHUBANESWAR

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	998	600	29.2	34.0	22.0	600	24.9	600	193	1.9	3.6	0.71	0.65	1971	1974
1000	567	27	138	29.5	34.0	23.4	138	24.5	137	186	2.4	3.3	6.13	1.18	1980	1979
950	567	460	567	26.3	34.6	20.0	566	22.0	563	202	2.6	5.9	18.12	0.86	1988	1974
900	567	955	567	23.4	34.6	17.8	565	19.1	564	224	1.6	6.1	6.89	0.98	1988	1989
850	567	1451	567	20.5	31.4	14.0	565	15.8	564	267	1.0	6.0	7.15	1.03	1988	1989
800	567	1972	567	17.5	30.0	11.6	560	12.4	563	296	1.0	6.1	7.76	1.01	1988	1989
750	567	2509	567	14.5	28.6	8.6	555	9.0	563	304	1.0	6.1	9.12	0.94	1988	1989
700	567	3100	567	11.4	25.4	5.8	555	5.1	562	290	0.8	6.0	8.94	0.90	1988	1989
650	565	3711	565	8.2	19.0	0.0	546	1.0	553	248	0.5	6.0	10.11	0.95	1988	1979
600	561	4373	561	4.7	12.2	-6.7	520	-2.7	542	205	0.5	5.9	9.64	0.95	1988	1982
550	555	5083	555	1.0	9.0	-6.1	507	-7.2	532	165	0.7	6.0	19.93	1.10	1980	1980
500	547	5838	547	-3.2	4.2	-10.1	474	-11.7	526	134	1.1	5.8	13.18	1.23	1980	1980
450	533	6667	533	-7.8	7.0	-15.0	410	-16.6	500	115	1.3	5.7	19.80	1.42	1986	1972
400	527	7574	527	-13.2	-5.9	-28.9	345	-22.0	492	111	2.0	5.8	21.24	1.46	1987	1988
350	513	8582	513	-19.8	-11.3	-29.9	267	-28.4	470	109	3.1	6.2	28.89	1.64	1988	1981
300	504	9708	504	-28.0	-19.9	-39.5	177	-35.6	462	109	4.6	6.9	35.12	1.72	1982	1981
250	483	10994	483	-38.2	-29.1	-52.1	62	-44.0	435	103	6.5	8.4	43.25	1.69	1982	1981
200	463	12494	463	-50.7	-41.3	-64.5			412	092	8.8	10.5	52.52	1.92	1983	1986
175	418	13354	418	-58.1	-48.5	-75.1			363	087	9.9	11.9	57.76	1.98	1981	1986
150	386	14305	386	-66.1	-52.1	-82.1			338	084	11.3	13.1	67.55	2.15	1981	1986
125	339	15388	339	-74.0	-57.9	-87.1			290	083	13.9	15.1	79.61	2.04	1989	1982
100	308	16678	308	-77.5	-63.3	-87.3			257	085	16.8	17.4	91.44	2.29	1985	1982
80	246	17982	244	-71.8	-58.1	-84.1			196	088	17.5	17.9	98.91	3.48	1982	1988
70	216	18797	216	-67.2	-51.3	-82.1			169	094	15.4	15.8	113.72	4.08	1989	1982
60	178	19729	178	-62.9	-50.7	-78.0			135	098	14.4	14.8	108.71	3.82	1985	1977
50	146	20876	146	-58.3	-46.7	-77.0			114	095	14.0	14.4	101.85	5.78	1984	1975
40	107	22298	107	-54.2	-41.7	-66.9			72	094	15.4	15.6	114.13	3.77	1984	1982
30	64	24139	63	-50.8	-43.1	-58.7			40	093	15.1	15.5	134.16	2.28	1989	1979
25	41	25315	41	-49.1	-43.3	-57.1			21	093	16.3	16.8	154.76	2.23	1990	1979
20	21	26799	21	-46.7	-40.1	-52.3			11	083	16.3	16.4	200.92	3.21	1990	1983
15	6	28715	6	-46.0	-43.9	-48.7									1983	1983
10	1	31060	1	-46.7	-46.7	-46.7									1983	1983
7	1	33431	1	-45.1	-45.1	-45.1									1983	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
555	538	526					292	106	1640	-79.4

## NORMALS OF RADIOSONDE DATA

42971 BHUBANESWAR

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	1003	620	29.0	34.0	23.0	620	22.1	620	127	0.7	2.4	1.52	1.03	1976	1976
1000	565	69	453	28.9	34.0	21.0	451	21.1	447	127	0.8	2.3	13.63	1.05	1976	1971
950	565	504	565	25.5	31.6	18.0	563	17.9	553	099	1.3	4.8	25.62	1.12	1982	1977
900	565	995	565	22.2	30.2	15.0	563	15.0	553	053	1.5	5.1	14.59	1.07	1981	1987
850	565	1489	565	19.0	27.2	10.0	561	11.7	553	027	2.0	5.4	15.09	0.93	1981	1971
800	565	2007	565	15.9	24.0	7.0	548	7.7	552	012	2.1	5.7	15.94	0.86	1981	1971
750	565	2537	565	12.9	22.0	5.0	516	4.2	550	001	1.8	5.8	17.95	0.72	1974	1988
700	565	3128	565	9.9	17.8	2.0	467	0.6	550	323	1.4	5.8	16.30	0.72	1984	1988
650	559	3735	558	6.8	14.4	-6.3	409	-2.7	536	291	1.3	5.7	16.93	0.68	1990	1980
600	550	4393	549	3.6	11.0	-3.3	362	-6.1	520	268	1.5	5.7	16.79	0.85	1987	1979
550	547	5100	546	-0.2	6.8	-10.0	308	-9.5	517	266	1.6	5.9	25.30	1.01	1987	1973
500	541	5853	540	-4.3	2.6	-13.3	272	-13.5	512	264	2.0	6.4	17.55	1.11	1989	1979
450	529	6673	528	-9.1	0.0	-17.9	237	-18.0	496	259	2.5	6.6	20.00	1.25	1974	1979
400	527	7579	526	-14.7	-6.5	-23.0	179	-23.2	491	248	3.4	7.3	20.78	1.41	1982	1977
350	512	8578	511	-21.3	-10.7	-32.0	130	-29.5	474	247	4.3	8.1	26.94	1.41	1982	1977
300	500	9701	500	-29.6	-21.1	-41.0	80	-36.4	460	242	5.0	9.3	28.66	1.52	1984	1977
250	484	10977	484	-39.6	-28.9	-53.0	27	-45.5	443	238	5.8	10.4	36.67	1.68	1980	1977
200	466	12463	466	-52.0	-42.1	-67.0			417	228	5.7	10.9	44.01	1.78	1981	1977
175	430	13316	430	-59.0	-49.1	-76.0			377	222	5.3	10.9	53.67	1.92	1981	1977
150	398	14267	398	-66.6	-55.1	-79.0			349	207	4.6	10.7	63.11	1.86	1981	1977
125	344	15348	344	-74.2	-61.1	-83.3			300	185	4.0	10.3	70.66	1.63	1982	1985
100	291	16639	291	-78.2	-64.1	-87.9			252	134	4.5	9.5	65.53	1.68	1982	1983
80	222	17936	222	-73.4	-57.1	-87.7			177	103	5.9	8.2	76.13	2.98	1985	1981
70	196	18734	196	-68.9	-53.1	-83.1			155	101	6.3	8.3	90.02	3.79	1985	1982
60	162	19664	162	-64.5	-48.5	-83.0			124	099	7.4	8.4	89.19	4.39	1985	1975
50	139	20801	139	-59.4	-46.1	-71.5			111	097	7.7	8.7	110.65	3.75	1985	1982
40	101	22216	101	-55.4	-47.1	-66.1			76	096	9.0	9.8	158.33	2.99	1985	1983
30	66	24102	66	-51.2	-41.1	-61.1			50	094	10.0	10.7	120.90	2.05	1985	1983
25	46	25265	46	-50.1	-41.1	-58.1			31	093	9.3	10.4	114.64	1.47	1985	1983
20	23	26730	23	-48.3	-40.1	-55.1			14	089	10.2	10.9	190.30	2.73	1983	1983
15	4	28343	4	-49.9	-46.7	-53.3			2	106	10.3	11.0			1984	1983
10	1	30761	1	-48.9	-48.9	-48.9									1982	1982
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

551 551 508

271 105 1643 -79.8

## NORMALS OF RADIOSONDE DATA

42971 BHUBANESWAR

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	1006	600	27.2	32.4	19.0	600	17.2	600	058	1.0	2.3	1.16	1.18	1981	1975
<i>1000</i>	540	100	537	26.8	32.2	19.0	536	16.6	529	055	1.2	2.6	8.22	1.27	1981	1975
<i>950</i>	540	531	539	23.5	33.0	14.2	537	12.6	532	051	3.0	4.8	19.23	1.36	1985	1986
<i>900</i>	540	1018	539	20.0	28.6	8.0	535	10.0	532	031	3.4	5.0	7.95	1.61	1981	1975
<i>850</i>	540	1508	539	16.7	26.0	4.0	518	7.0	532	017	3.1	5.1	8.56	1.74	1981	1971
<i>800</i>	540	2022	540	14.0	23.2	4.0	452	3.7	532	004	2.9	5.3	10.04	1.52	1981	1971
<i>750</i>	540	2553	540	11.7	20.0	3.0	370	-0.1	532	334	2.5	5.5	14.81	1.24	1987	1971
<i>700</i>	540	3138	540	9.2	20.2	2.0	291	-3.1	532	311	2.7	5.8	12.57	0.95	1985	1971
<i>650</i>	532	3747	531	6.2	15.0	-3.7	235	-5.5	524	292	3.3	6.1	17.64	0.95	1987	1979
<i>600</i>	527	4400	527	2.8	10.8	-4.0	195	-9.1	517	286	4.1	6.6	15.43	0.87	1985	1971
<i>550</i>	520	5105	518	-1.1	7.4	-9.0	165	-12.2	508	282	5.0	7.5	26.04	0.93	1989	1971
<i>500</i>	514	5854	513	-5.6	3.8	-11.0	131	-15.8	500	279	6.2	8.8	20.06	1.08	1989	1973
<i>450</i>	505	6668	504	-10.6	-0.9	-19.0	112	-20.7	488	275	8.1	10.5	27.93	1.19	1986	1974
<i>400</i>	498	7569	497	-16.5	-6.1	-24.0	90	-25.4	482	273	9.7	12.1	25.76	1.13	1989	1973
<i>350</i>	487	8561	486	-23.3	-11.7	-32.7	73	-32.0	461	268	11.9	14.2	28.18	1.12	1990	1990
<i>300</i>	476	9674	475	-31.4	-21.1	-41.9	42	-39.4	447	261	14.3	16.3	31.12	1.32	1989	1990
<i>250</i>	458	10941	457	-41.3	-30.5	-52.1	13	-46.4	427	253	16.4	18.3	36.03	1.49	1981	1990
<i>200</i>	436	12421	435	-53.2	-43.5	-64.9	3	-58.4	395	243	17.7	19.8	42.92	1.59	1981	1987
<i>175</i>	393	13270	393	-59.9	-48.1	-70.9			354	242	17.6	20.1	49.38	1.65	1981	1984
<i>150</i>	364	14217	364	-67.0	-54.1	-81.1			329	240	16.0	18.4	55.59	1.84	1981	1987
<i>125</i>	307	15301	307	-73.8	-62.3	-86.3			275	245	13.3	15.3	65.42	1.83	1989	1987
<i>100</i>	270	16587	270	-78.0	-61.5	-87.1			235	247	8.3	11.2	67.86	1.99	1984	1983
<i>80</i>	218	17875	218	-74.7	-53.1	-85.3			171	260	2.5	7.5	81.40	2.87	1984	1986
<i>70</i>	194	18670	194	-71.1	-54.1	-84.9			151	299	0.6	7.0	92.30	3.18	1985	1987
<i>60</i>	159	19588	159	-66.4	-52.9	-85.5			119	051	0.9	6.0	108.52	4.05	1984	1987
<i>50</i>	131	20716	131	-61.4	-48.1	-79.3			92	076	0.3	6.1	137.45	4.27	1988	1987
<i>40</i>	93	22143	93	-56.9	-47.1	-76.0			53	137	0.3	6.4	170.78	6.09	1982	1971
<i>30</i>	58	24013	58	-52.5	-42.5	-74.0			26	087	3.0	6.7	213.82	7.11	1982	1972
<i>25</i>	30	25162	30	-50.0	-39.9	-62.1			15	095	5.1	7.7	218.36	3.01	1982	1987
<i>20</i>	19	26617	19	-48.3	-36.5	-58.3			9	074	5.1	9.3			1982	1987
<i>15</i>	8	28358	8	-49.5	-45.7	-54.5									1989	1987
<i>10</i>	1	30704	1	-53.1	-53.1	-53.1									1988	1988
<i>7</i>	1	33013	1	-51.9	-51.9	-51.9									1988	1988

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

514 564 489

253 104 1637 -79.2



## NORMALS OF RADIOSONDE DATA

42971 BHUBANESWAR

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	1009	620	25.3	30.6	16.0	620	12.9	620	062	0.7	1.7	1.05	1.10	1984	1978
1000	572	120	572	24.7	30.4	16.4	572	12.2	568	063	0.9	2.2	7.02	1.15	1984	1984
950	572	549	572	21.2	33.0	12.0	571	8.1	568	040	1.8	3.8	21.38	1.43	1985	1987
900	572	1031	572	17.5	29.2	7.8	555	6.1	568	007	2.2	3.8	7.02	1.53	1985	1982
850	572	1516	571	14.6	25.0	6.0	508	2.9	568	342	3.0	4.4	8.05	1.38	1985	1973
800	572	2027	571	12.6	23.0	4.6	409	-1.3	568	328	4.1	5.6	10.01	1.15	1982	1982
750	572	2558	570	10.7	21.2	2.2	290	-4.4	567	314	4.9	6.7	14.28	1.02	1982	1982
700	572	3137	571	8.2	18.6	-3.0	200	-6.4	568	302	5.7	7.5	12.85	1.02	1982	1974
650	568	3746	567	5.1	15.4	-5.0	145	-9.1	560	292	6.7	8.6	15.69	1.13	1987	1976
600	563	4395	563	1.6	10.4	-7.1	102	-11.6	555	287	8.3	9.9	15.86	1.11	1987	1980
550	555	5093	552	-2.4	6.8	-11.1	87	-15.0	546	282	9.9	11.5	27.09	1.22	1982	1980
500	549	5842	546	-6.9	0.4	-15.7	71	-18.6	539	279	11.5	13.1	20.47	1.23	1982	1980
450	544	6652	543	-12.2	-1.1	-21.5	65	-23.4	528	273	13.7	15.2	27.71	1.34	1981	1980
400	535	7548	534	-18.3	-9.5	-33.0	54	-28.0	519	273	16.1	17.7	28.27	1.39	1982	1974
350	527	8535	526	-25.3	-15.1	-35.7	34	-32.7	510	271	19.2	20.8	33.52	1.51	1982	1984
300	516	9635	515	-33.4	-22.5	-42.7	18	-39.5	498	267	22.4	24.3	38.09	1.58	1982	1985
250	498	10892	497	-42.9	-31.9	-53.1	4	-48.8	472	263	25.3	27.5	46.65	1.58	1982	1982
200	470	12361	469	-54.1	-41.9	-66.1			434	256	26.8	29.2	54.38	1.53	1985	1982
175	417	13207	417	-60.3	-48.1	-72.3			370	254	25.9	28.1	53.48	1.55	1985	1982
150	370	14154	370	-66.6	-55.7	-80.1			325	256	24.4	26.3	56.77	1.71	1985	1987
125	315	15241	315	-72.5	-61.5	-86.7			266	258	20.8	22.6	64.05	2.21	1988	1987
100	266	16533	266	-77.1	-66.7	-88.1			219	261	15.2	17.1	73.54	1.83	1980	1987
80	206	17813	206	-75.3	-65.1	-87.5			165	265	9.6	12.3	77.54	2.21	1982	1987
70	175	18611	175	-72.0	-58.1	-85.7			145	273	7.6	11.0	92.92	3.44	1984	1987
60	152	19526	152	-67.6	-53.9	-86.1			119	281	4.4	8.2	96.13	3.22	1988	1987
50	134	20644	134	-62.8	-49.9	-81.3			100	289	3.7	7.5	111.12	3.57	1982	1987
40	93	22053	93	-58.6	-44.1	-74.1			68	286	1.7	7.5	110.84	3.04	1985	1987
30	63	23899	63	-55.1	-45.9	-70.3			43	188	0.7	7.4	144.61	4.19	1985	1987
25	39	25064	39	-54.0	-45.9	-65.5			25	101	1.3	7.2	126.33	2.39	1982	1987
20	24	26499	24	-51.5	-38.5	-62.9			13	063	2.2	7.3	131.77	3.01	1982	1987
15	10	28293	10	-52.0	-44.1	-59.5									1984	1987
10	1	31006	1	-51.5	-51.5	-51.5									1988	1988
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

560 580 467

243 101 1651 -78.6

# NORMALS OF RADIOSONDE DATA

42667 BHOPAL

JANUARY 1983-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	186	955	186	24.1	31.2	15.8	186	7.8	186	008	0.8	2.5	1.41	0.81	1989	1987
1000	176	121							1	271	4.0	4.0	13.16			
950	176	549	176	23.3	30.8	15.0	172	7.1	175	013	0.8	2.5	7.65	1.08	1989	1987
900	176	1035	176	18.4	25.2	10.8	167	2.9	176	334	1.0	3.8	11.04	0.99	1986	1985
850	176	1522	176	14.6	21.8	7.8	159	0.8	176	275	2.6	4.4	10.95	0.90	1989	1983
800	176	2031	176	11.6	20.0	5.8	143	-1.3	176	266	5.2	6.4	10.08	0.98	1987	1983
750	176	2568	176	8.7	17.8	1.8	110	-4.2	175	269	7.5	8.7	9.06	1.23	1988	1983
700	176	3134	176	5.7	15.8	-1.5	84	-7.8	176	274	9.6	11.0	8.11	1.35	1989	1983
650	174	3733	174	2.7	12.0	-6.5	57	-12.5	171	276	12.2	13.5	8.52	1.72	1989	1983
600	174	4380	174	-0.7	7.6	-15.5	40	-16.3	170	276	14.6	16.0	8.53	1.76	1989	1985
550	172	5083	172	-4.5	5.2	-12.9	22	-18.5	167	276	17.4	19.0	12.08	1.73	1989	1985
500	168	5816	168	-8.9	2.2	-16.3	18	-22.8	162	275	20.4	22.1	14.87	1.84	1989	1985
450	168	6631	158	-13.9	-3.9	-21.3	17	-26.5	153	274	24.1	25.6	25.35	2.00	1989	1985
400	161	7512	161	-19.4	-9.3	-27.3	15	-31.2	140	275	27.6	29.5	27.28	2.28	1989	1985
350	157	8500	157	-25.5	-15.3	-34.5	8	-34.2	122	274	30.8	32.6	31.11	2.11	1989	1985
300	142	9601	142	-32.1	-22.9	-43.3	5	-40.7	94	273	33.8	35.9	42.94	2.10	1989	1985
250	118	10869	118	-40.5	-31.1	-50.1	1	-41.9	62	269	37.0	39.0	59.80	2.23	1989	1983
200	94	12352	94	-50.9	-42.5	-61.3			32	271	36.0	38.2	72.61	2.59	1987	1983
175	73	13216	73	-56.6	-48.5	-64.9			18	273	36.1	37.9	81.01	2.40	1983	1983
150	57	14170	57	-62.4	-54.1	-70.5			11	261	28.9	30.8	103.52	1.87	1988	1983
125	41	15265	41	-66.9	-58.3	-73.7			7	273	28.5	30.0	140.21	1.72	1988	1983
100	35	16593	35	-71.1	-63.5	-79.1			5	263	15.6	16.4	171.43	2.33	1983	1983
80	27	17916	27	-70.7	-63.5	-78.1			4	268	11.4	12.3	170.03	3.89	1988	1983
70	27	18730	27	-68.4	-56.9	-76.7			4	276	8.7	9.5	171.22	3.27	1983	1983
60	26	19653	26	-64.3	-53.9	-71.1			4	287	4.9	8.5	175.97	2.06	1983	1983
50	22	20787	22	-58.4	-52.5	-64.9			3	292	7.3	7.7	176.90	2.69	1983	1983
40	20	22221	20	-54.2	-46.7	-61.1			3	286	8.4	8.7			1989	1983
30	12	24101	12	-50.6	-42.7	-56.7									1989	1983
25	5	25338	5	-47.9	-42.7	-53.7									1983	1983
20	3	26920	3	-43.6	-39.3	-46.7									1983	1983
15	1	28947	1	-42.5	-42.5	-42.5									1989	1989
10	1	31705	1	-42.9	-42.9	-42.9									1989	1989
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

174 612 423

28 091 1716 -73.1

# NORMALS OF RADIOSONDE DATA

42667 BHOPAL

FEBRUARY 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	195	953	195	26.9	34.6	18.2	195	6.0	195	299	1.3	2.8	1.65	1.64	1985	1987
1000	181	98											13.67			
950	180	539	162	26.4	34.2	18.0	157	5.6	162	307	1.1	2.9	9.31	1.67	1989	1983
900	181	1023	181	21.3	33.4	10.4	153	2.2	181	285	2.3	4.6	10.18	2.08	1989	1983
850	181	1513	181	16.9	29.2	5.0	161	0.5	181	277	3.0	4.8	7.44	2.14	1989	1983
800	181	2025	181	12.7	24.8	2.4	155	-1.2	181	269	4.4	5.9	6.28	2.00	1989	1983
750	181	2558	181	8.9	19.2	-3.3	147	-4.4	181	264	6.5	7.8	7.20	2.05	1989	1983
700	181	3130	181	5.4	13.6	-2.9	120	-7.5	181	271	9.6	10.9	8.79	2.00	1989	1987
650	181	3725	181	2.3	11.2	-6.5	86	-10.7	177	274	11.8	13.2	11.84	1.93	1985	1983
600	180	4375	179	-1.1	9.2	-10.9	65	-13.9	174	275	14.6	16.0	14.70	2.05	1985	1983
550	179	5077	178	-5.0	5.0	-16.3	54	-16.8	170	276	17.4	18.9	15.92	2.21	1985	1983
500	176	5809	174	-9.5	0.4	-20.3	46	-20.9	167	275	20.5	21.8	24.73	2.17	1985	1988
450	173	6624	172	-14.5	-3.7	-22.9	36	-23.9	157	275	23.5	25.1	29.33	2.37	1990	1988
400	170	7502	170	-20.0	-6.7	-30.7	34	-30.2	148	275	27.2	28.8	36.87	2.79	1990	1989
350	166	8484	166	-25.8	-14.1	-35.7	24	-35.0	133	274	31.0	32.8	41.90	2.89	1990	1988
300	162	9586	162	-32.6	-21.7	-43.3	12	-41.4	110	274	34.1	36.2	59.09	2.56	1985	1986
250	145	10847	144	-40.9	-27.9	-49.5	1	-47.9	71	274	34.3	36.4	68.35	1.87	1987	1983
200	124	12333	124	-49.6	-37.5	-59.9			39	277	35.7	38.4	77.05	1.82	1989	1986
175	100	13191	100	-54.6	-43.9	-64.9			22	272	34.1	35.9	69.21	1.78	1990	1983
150	77	14175	77	-59.8	-46.9	-70.7			13	274	38.2	39.4	59.98	2.91	1990	1983
125	53	15290	53	-65.6	-55.7	-74.7			7	267	30.4	31.4	42.32	3.99	1983	1983
100	41	16627	41	-69.6	-60.9	-81.1			2	278	37.6	39.5	53.69	1.76	1983	1983
80	32	17945	32	-70.5	-62.9	-81.1							69.82	1.63	1983	1983
70	30	18756	30	-67.7	-59.7	-76.5							94.63	2.37	1990	1990
60	27	19657	27	-63.9	-56.1	-70.5							96.47	3.19	1990	1983
50	25	20793	25	-58.5	-52.9	-66.3							70.11	2.09	1990	1983
40	22	22203	22	-55.7	-50.1	-61.5							77.04	0.72	1983	1983
30	15	24023	15	-52.6	-50.1	-57.1									1983	1983
25	12	25142	12	-50.3	-46.5	-55.3									1983	1983
20	9	26571	9	-48.2	-42.1	-53.1									1983	1983
15	5	28590	5	-46.4	-42.5	-50.3									1986	1983
10	2	31481	2	-43.2	-40.9	-45.5									1986	1983
7																

**FREEZING LEVEL**

N P ALT

181 616 416

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

30 092 1708 -72.0

## NORMALS OF RADIOSONDE DATA

42667 BHOPAL

MARCH 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	215	951	215	32.0	38.0	18.2	215	6.4	215	286	2.6	3.7	1.20	1.48	1986	1989
<i>1000</i>	196	69											12.15			
<i>950</i>	186	522	132	31.0	37.0	22.0	130	5.7	135	297	2.1	3.2	5.88	1.46	1985	1987
<i>900</i>	194	1010	194	26.3	36.6	17.2	182	1.4	194	282	3.7	5.4	10.74	1.32	1990	1988
<i>850</i>	194	1509	194	21.8	31.6	13.4	175	-0.4	194	277	4.5	5.7	9.79	1.56	1990	1983
<i>800</i>	194	2029	194	17.1	26.8	8.2	174	-1.9	194	275	4.8	5.7	9.17	1.60	1988	1983
<i>750</i>	194	2567	194	12.3	22.8	4.2	170	-3.6	194	271	5.7	6.7	6.68	1.55	1988	1983
<i>700</i>	194	3148	194	7.7	18.6	-0.5	155	-6.1	194	271	7.8	9.1	10.24	1.21	1988	1983
<i>650</i>	193	3743	192	3.5	12.8	-4.3	136	-8.5	190	269	10.2	11.5	18.54	1.04	1988	1983
<i>600</i>	191	4398	190	-0.4	10.2	-7.7	103	-12.4	185	271	12.8	14.1	11.74	1.24	1990	1983
<i>550</i>	188	5096	187	-4.4	6.8	-14.1	70	-16.3	181	274	14.8	16.2	9.56	1.61	1990	1985
<i>500</i>	185	5834	185	-8.9	0.2	-17.9	52	-21.6	177	275	17.4	18.8	18.18	1.76	1990	1987
<i>450</i>	184	6648	184	-13.8	-0.7	-23.1	33	-25.1	171	276	20.8	22.5	19.52	1.96	1990	1983
<i>400</i>	179	7530	179	-19.5	-6.5	-27.3	21	-30.4	164	277	23.2	25.2	29.41	2.17	1990	1983
<i>350</i>	175	8513	174	-25.6	-13.9	-34.3	10	-35.3	147	277	27.5	29.9	31.65	2.29	1990	1983
<i>300</i>	167	9613	167	-32.4	-23.5	-42.1	5	-43.0	119	275	31.3	33.9	44.68	2.37	1990	1983
<i>250</i>	150	10875	150	-40.9	-32.7	-52.1	1	-46.3	86	274	34.3	37.2	55.06	2.12	1987	1985
<i>200</i>	123	12362	123	-49.8	-42.1	-60.5			50	280	34.4	37.3	60.26	1.64	1987	1983
<i>175</i>	108	13221	108	-54.6	-45.3	-63.3			34	281	34.5	36.5	72.34	1.78	1988	1983
<i>150</i>	91	14184	91	-60.1	-48.1	-70.7			23	286	32.0	33.6	74.47	2.52	1988	1986
<i>125</i>	71	15308	71	-65.2	-53.1	-78.3			10	287	28.7	29.9	85.65	2.39	1988	1983
<i>100</i>	60	16643	60	-69.9	-56.9	-82.3			4	291	25.5	26.7	84.63	3.10	1988	1983
<i>80</i>	48	17959	48	-71.3	-60.3	-81.9			1	289	21.0	21.0	117.38	3.70	1988	1983
<i>70</i>	42	18756	42	-70.0	-60.3	-82.5			1	289	19.0	19.0	127.81	4.24	1990	1983
<i>60</i>	38	19658	38	-66.7	-52.1	-78.1			1	289	23.0	23.0	142.12	3.75	1990	1983
<i>50</i>	36	20782	36	-61.7	-50.1	-76.1			1	289	17.0	17.0	156.11	3.02	1990	1983
<i>40</i>	31	22177	31	-56.6	-48.9	-68.3							183.75	3.15	1990	1983
<i>30</i>	20	24047	20	-52.1	-43.5	-61.5									1990	1983
<i>25</i>	14	25214	14	-49.7	-42.9	-58.1									1987	1983
<i>20</i>	12	26657	12	-46.5	-38.9	-55.7									1987	1983
<i>15</i>	3	28465	3	-46.9	-40.9	-52.7									1990	1983
<i>10</i>	1	31862	1	-39.1	-39.1	-39.1									1990	1990

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
189	602	435					41	093	1713	-73.7

NORMALS OF RADIOSONDE DATA

42667 BHOPAL

APRIL 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	210	947	210	36.9	41.0	25.0	210	8.3	210	281	4.1	4.9	1.36	1.26	1987	1983
1000	191	32											13.66			
950	175	484	32	33.8	39.8	25.0	30	9.5	42	288	4.0	4.8	8.78	2.54	1988	1983
900	189	989	189	31.3	42.4	17.4	164	3.9	188	277	5.5	6.5	10.43	1.63	1987	1983
850	189	1495	189	26.6	37.6	14.6	161	1.9	188	280	5.4	6.3	8.40	1.90	1987	1983
800	189	2024	189	22.0	31.6	11.4	162	0.1	188	278	5.4	6.3	6.13	2.02	1987	1983
750	189	2565	189	16.8	26.2	6.6	166	-1.5	188	276	5.8	6.8	6.47	2.12	1987	1983
700	189	3158	189	11.6	20.8	2.6	170	-3.4	188	274	6.5	7.5	9.34	1.89	1987	1985
650	186	3759	186	6.5	15.0	-2.9	161	-5.8	185	273	7.5	8.6	12.38	1.73	1987	1985
600	186	4424	186	1.8	9.6	-7.1	147	-8.9	183	272	9.8	10.7	17.20	1.49	1990	1985
550	185	5126	185	-2.6	4.6	-12.9	114	-13.4	182	275	11.5	12.5	21.77	1.42	1990	1985
500	182	5869	182	-6.9	1.4	-14.7	88	-18.3	175	279	13.2	14.4	23.80	1.34	1990	1985
450	181	6689	181	-11.8	-1.5	-25.1	61	-23.2	165	281	15.8	17.3	29.91	1.55	1990	1983
400	175	7577	175	-17.6	-6.9	-27.5	45	-28.3	150	279	18.6	20.0	32.33	1.41	1990	1985
350	172	8564	172	-24.2	-14.1	-34.9	33	-34.0	128	275	22.2	24.0	33.06	1.26	1990	1985
300	166	9673	165	-31.5	-22.1	-40.9	19	-41.0	104	276	25.3	27.5	42.89	1.26	1989	1985
250	157	10940	156	-40.2	-31.7	-47.7	3	-49.8	80	277	29.5	32.3	48.46	1.54	1990	1987
200	141	12435	140	-49.5	-41.7	-61.9			48	273	27.7	30.9	50.06	1.57	1989	1983
175	117	13300	117	-54.4	-45.1	-65.1			32	269	26.4	27.7	59.77	1.80	1989	1983
150	98	14270	98	-59.6	-50.7	-68.1			21	278	26.7	27.7	76.93	1.70	1989	1983
125	80	15384	80	-65.2	-57.1	-74.3			13	273	23.0	24.4	91.98	2.01	1989	1983
100	66	16721	66	-70.0	-58.7	-78.9			8	286	17.9	19.0	109.19	2.34	1989	1983
80	50	18036	50	-70.6	-57.9	-79.3			4	294	25.6	28.8	128.67	2.53	1990	1983
70	45	18854	45	-68.3	-51.9	-77.5			4	291	22.3	23.5	124.29	3.86	1990	1983
60	44	19767	44	-64.6	-48.3	-73.7			1	305	68.0	68.0	154.40	4.34	1990	1983
50	41	20898	41	-59.1	-44.5	-68.3							142.00	4.60	1989	1983
40	30	22321	30	-55.2	-41.5	-65.3							193.51	5.27	1989	1983
30	24	24162	24	-50.0	-44.1	-60.9							161.48	1.01	1988	1983
25	21	25385	21	-46.9	-38.7	-58.1							167.36	1.51	1990	1983
20	15	26865	15	-44.6	-35.3	-54.7									1987	1983
15	8	28639	8	-42.4	-36.1	-50.3									1983	1983
10	1	31583	1	-37.9	-37.9	-37.9									1987	1987
7																

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

186 579 470

2 114 1606 -69.0

43 090 1742 -72.6

# NORMALS OF RADIOSONDE DATA

42667 BHOPAL

MAY 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	215	945	215	38.6	44.0	26.4	215	12.1	215	287	3.4	5.0	1.73	1.71	1989	1985
<i>1000</i>	190	1											17.86			
<i>950</i>	190	456	9	36.8	38.2	35.0	9	10.1	8	290	2.1	3.0	15.34		1987	1987
<i>900</i>	190	963	190	33.2	40.8	23.4	183	7.9	187	290	4.6	6.5	16.39	1.44	1989	1989
<i>850</i>	190	1473	190	28.7	36.2	19.4	181	5.7	187	294	5.1	6.9	15.07	1.31	1988	1989
<i>800</i>	190	2006	190	24.0	32.0	14.8	181	4.0	187	297	5.1	6.6	13.82	1.36	1986	1989
<i>750</i>	190	2557	190	19.1	26.8	10.0	183	2.5	187	298	5.3	6.6	7.04	1.37	1988	1989
<i>700</i>	190	3150	190	13.8	21.6	5.0	185	0.6	187	295	5.2	6.7	11.21	1.37	1988	1989
<i>650</i>	188	3754	187	8.6	16.0	1.6	181	-1.9	183	295	5.1	6.8	6.60	1.37	1989	1989
<i>600</i>	188	4424	187	3.4	11.6	-3.7	172	-5.0	180	299	5.8	7.4	10.84	1.32	1989	1989
<i>550</i>	187	5133	187	-1.1	6.2	-9.1	147	-9.7	170	299	6.1	8.1	13.03	1.57	1986	1989
<i>500</i>	184	5878	183	-5.2	9.0	-13.5	104	-14.1	165	301	7.5	9.5	13.75	1.87	1989	1985
<i>450</i>	182	6706	180	-9.5	0.2	-17.5	65	-19.0	153	301	9.1	11.3	20.32	2.02	1989	1989
<i>400</i>	180	7602	178	-14.7	-4.1	-22.9	44	-24.2	148	296	10.1	12.6	24.18	2.31	1990	1989
<i>350</i>	173	8599	172	-20.8	-10.7	-29.3	34	-30.7	131	288	11.6	13.9	35.31	2.45	1990	1989
<i>300</i>	163	9729	162	-28.1	-17.5	-37.3	18	-36.6	108	273	12.8	15.1	41.29	2.01	1989	1989
<i>250</i>	155	11015	154	-36.8	-26.7	-47.7	6	-43.2	92	264	14.6	17.1	52.19	1.80	1989	1989
<i>200</i>	140	12525	140	-47.3	-40.1	-57.1			74	263	15.1	17.7	66.39	1.13	1989	1989
<i>175</i>	121	13406	121	-53.0	-44.7	-62.7			60	259	13.6	16.1	61.82	0.69	1990	1989
<i>150</i>	105	14376	105	-59.4	-51.5	-69.1			49	264	13.5	16.5	61.39	0.93	1990	1983
<i>125</i>	92	15499	92	-65.5	-57.7	-72.9			34	265	11.8	16.6	63.13	1.62	1987	1988
<i>100</i>	80	16840	80	-70.7	-61.5	-91.1			29	283	4.2	14.4	64.58	1.82	1987	1985
<i>80</i>	63	18166	63	-69.9	-56.1	-81.1			25	360	4.1	16.5	65.39	2.36	1989	1990
<i>70</i>	58	18992	58	-66.8	-50.9	-79.1			23	032	3.3	14.7	54.51	2.31	1990	1990
<i>60</i>	55	19909	55	-62.2	-46.1	-73.5			21	058	6.9	12.7	63.89	2.53	1990	1990
<i>50</i>	51	21034	51	-55.5	-41.5	-67.3			16	082	6.1	11.3	81.45	2.83	1990	1988
<i>40</i>	43	22466	43	-51.8	-39.9	-60.9			11	083	5.0	9.8	69.11	2.54	1990	1985
<i>30</i>	32	24339	32	-47.6	-35.1	-55.3			7	087	4.6	9.2	255.28	5.23	1989	1985
<i>25</i>	26	25472	26	-44.8	-37.1	-52.1			3	138	4.3	9.7	65.69	2.17	1987	1987
<i>20</i>	21	27031	21	-41.6	-33.7	-48.5			2	047	5.5	6.0	95.43	2.51	1987	1983
<i>15</i>	12	29003	12	-38.5	-30.3	-46.7			1	088	9.0	9.0			1985	1983
<i>10</i>	5	31705	5	-36.5	-27.5	-44.1			1	063	16.0	16.0			1985	1983
<i>7</i>	3	33958	3	-38.0	-34.7	-42.1			1	052	19.0	19.0			1983	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
185	561	495					60	095	1714	-72.8

## NORMALS OF RADIOSONDE DATA

42667 BHOPAL

JUNE 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	210	942	210	33.7	42.6	22.6	210	19.4	209	280	3.5	5.5	0.93	1.73	1987	1990
1000	181	-19											9.62			
950	181	436											23.08			
900	181	931	181	30.0	40.0	20.0	181	15.7	181	287	5.0	7.3	7.96	1.59	1988	1988
850	181	1438	181	26.2	35.8	18.4	181	13.4	181	298	5.0	7.1	7.45	1.43	1986	1990
800	181	1969	181	22.2	30.6	15.6	181	11.5	181	304	4.8	6.8	7.84	1.24	1988	1990
750	181	2524	181	17.8	25.4	11.0	180	9.1	178	311	4.2	6.6	10.39	1.27	1988	1983
700	181	3110	181	13.7	20.0	7.4	180	6.1	178	322	3.7	6.4	9.93	1.23	1990	1985
650	173	3725	173	9.4	17.8	4.0	171	1.5	166	331	3.4	6.5	10.78	1.12	1990	1986
600	169	4389	169	5.5	13.6	-1.3	163	-2.5	158	326	3.4	6.5	13.11	1.11	1990	1986
550	166	5115	166	1.8	10.4	-4.5	148	-6.2	153	315	3.4	6.4	20.74	1.38	1990	1985
500	165	5861	165	-1.9	6.2	-10.5	120	-9.4	151	305	2.8	6.3	16.54	1.37	1990	1986
450	164	6710	163	-5.4	2.2	-12.9	100	-13.9	150	301	3.1	6.7	22.39	1.34	1990	1983
400	160	7611	159	-10.2	-2.5	-18.1	80	-18.9	146	294	3.2	7.0	24.33	1.44	1986	1983
350	157	8627	157	-16.1	-8.7	-24.3	61	-24.4	141	294	1.9	7.0	33.48	1.57	1989	1983
300	153	9774	153	-23.5	-14.3	-31.7	40	-30.6	136	255	1.4	7.2	35.34	1.58	1989	1983
250	143	11081	142	-32.8	-25.5	-40.3	27	-39.6	119	178	1.2	8.6	46.75	1.56	1990	1986
200	126	12609	125	-44.9	-39.1	-52.9			92	128	3.5	10.3	47.55	1.25	1985	1986
175	112	13483	112	-52.2	-46.7	-59.9			79	125	4.5	11.4	56.17	1.21	1988	1985
150	101	14462	101	-59.6	-52.7	-67.9			65	108	7.6	12.9	64.72	1.04	1988	1990
125	79	15593	79	-66.9	-56.3	-73.9			50	098	8.9	13.1	69.12	0.94	1989	1990
100	64	16916	64	-72.6	-64.3	-78.1			37	098	12.2	14.6	76.31	1.41	1986	1983
80	47	18232	47	-72.0	-58.3	-85.5			29	097	13.5	15.9	87.10	3.87	1990	1985
70	40	19045	40	-68.0	-59.7	-76.1			26	097	13.8	15.7	98.73	3.39	1989	1983
60	33	19965	33	-62.0	-50.9	-69.1			20	096	11.8	12.2	110.04	2.20	1989	1989
50	26	21116	26	-56.2	-46.1	-64.3			15	088	11.0	11.4	131.58	2.46	1989	1987
40	18	22575	18	-51.9	-43.5	-58.5			13	091	13.9	14.1			1989	1983
30	15	24418	15	-46.7	-36.1	-54.1			7	086	14.8	14.8			1989	1983
25	11	25583	11	-45.5	-40.5	-57.1			5	080	12.3	13.0			1989	1983
20	7	27009	7	-43.7	-38.5	-47.7			3	080	12.3	12.7			1988	1983
15	4	28954	4	-41.0	-38.5	-43.5			3	078	18.1	18.3			1983	1983
10	2	31528	2	-38.3	-37.3	-39.3			1	067	22.0	22.0			1983	1985
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

166 524 549

42 096 1710 -74.7

# NORMALS OF RADIOSONDE DATA

42667 BHOPAL

JULY 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	227	943	227	28.8	35.6	21.6	227	22.4	227	263	4.7	6.3	1.17	0.92	1985	1990
1000	210	0											11.66			
950	194	437											11.74			
900	207	933	207	25.5	32.8	19.6	202	19.7	202	268	6.5	8.2	13.40	0.98	1987	1985
850	207	1434	207	22.0	29.6	16.0	203	17.1	202	277	6.7	8.6	13.30	1.10	1987	1985
800	207	1957	207	18.6	26.0	11.8	203	14.8	202	283	6.1	8.2	12.52	1.25	1987	1985
750	207	2513	207	15.6	22.4	8.0	202	11.9	200	289	4.9	7.4	7.00	1.25	1987	1985
700	207	3091	207	12.7	18.8	5.0	202	8.0	198	301	3.7	6.6	12.35	1.26	1988	1985
650	206	3709	206	9.8	17.0	2.0	201	3.6	191	310	3.2	6.2	11.09	1.35	1986	1985
600	204	4371	203	6.7	11.8	-2.3	197	-0.7	188	312	3.1	6.4	15.42	1.45	1989	1985
550	201	5103	200	3.1	9.0	-6.9	190	-4.1	182	324	1.8	5.6	16.37	1.49	1989	1985
500	199	5847	198	-0.3	11.8	-9.1	184	-8.1	179	015	1.2	5.3	22.25	1.53	1989	1985
450	197	6700	195	-4.4	2.2	-12.3	166	-13.1	177	065	1.8	5.3	25.08	1.44	1990	1985
400	191	7607	189	-9.2	-2.1	-18.3	150	-17.9	170	084	3.1	6.0	29.50	1.38	1990	1985
350	185	8627	185	-15.1	-8.9	-23.9	126	-24.6	159	087	4.1	6.7	33.75	1.31	1986	1985
300	176	9781	176	-22.5	-16.1	-31.7	94	-31.8	148	091	7.4	8.8	37.10	1.15	1986	1985
250	168	11095	168	-32.0	-24.9	-41.3	49	-40.4	134	094	10.3	11.4	45.12	1.24	1988	1985
200	137	12625	137	-44.6	-38.3	-55.3	3	-53.0	95	092	15.2	16.2	49.99	1.20	1988	1985
175	125	13502	125	-52.1	-44.7	-64.3	1	-58.5	74	089	18.0	19.0	59.17	1.42	1988	1985
150	108	14490	108	-59.6	-51.5	-73.5			59	084	20.6	22.0	61.82	1.47	1988	1985
125	81	15611	81	-67.7	-59.9	-79.7			42	079	21.4	22.7	77.21	1.46	1987	1990
100	57	16924	57	-72.6	-54.3	-83.3			29	080	24.0	24.8	102.02	3.39	1990	1983
80	47	18247	47	-70.4	-54.7	-81.1			17	091	20.1	20.7	109.29	3.72	1990	1988
70	39	19063	39	-66.3	-53.9	-81.5			13	089	22.3	23.0	144.62	6.38	1990	1988
60	36	20003	36	-60.9	-46.1	-77.3			13	092	18.5	19.3	128.73	6.28	1990	1988
50	30	21130	30	-56.2	-44.3	-64.9			12	102	16.6	17.5	159.80	4.71	1987	1988
40	25	22569	25	-52.3	-41.3	-63.9			8	098	16.3	16.7	142.63	5.44	1987	1984
30	14	24428	14	-49.8	-43.1	-59.1			3	091	19.2	19.7			1988	1984
25	11	25638	11	-46.6	-39.7	-52.7			1	099	24.0	24.0			1988	1984
20	6	27113	6	-45.4	-39.9	-52.7			1	095	21.0	21.0			1988	1984
15	4	28987	4	-44.2	-37.9	-49.1			1	089	15.0	15.0			1988	1984
10																
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

198 507 576

43 100 1696 -74.4



# NORMALS OF RADIOSONDE DATA

42667 BHOPAL

AUGUST 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SOTT	YRTX	YRTN
SURFACE	247	944	247	27.6	33.6	21.0	247	22.5	246	272	3.8	5.4	0.79	0.94	1987	1985
1000	200	7											9.31			
950	201	438											10.93			
900	201	939	201	24.3	31.2	18.6	200	20.1	192	279	5.8	8.0	6.86	1.04	1983	1985
850	201	1436	201	21.2	28.0	15.4	200	17.7	192	291	5.3	7.9	4.95	1.16	1985	1985
800	201	1958	201	18.2	24.8	13.0	200	15.1	188	295	4.4	7.3	4.70	1.20	1987	1985
750	201	2515	200	15.3	20.6	10.0	199	11.6	188	307	3.0	6.5	6.37	1.06	1987	1985
700	201	3090	201	12.5	19.2	7.4	199	8.0	188	319	2.6	6.2	7.81	1.10	1987	1985
650	199	3713	198	9.6	15.0	3.6	195	4.0	180	341	2.2	6.0	11.28	1.17	1987	1988
600	194	4371	193	6.4	12.2	0.8	184	-0.4	172	354	1.9	5.7	13.95	1.05	1988	1985
550	192	5106	189	3.0	8.2	-2.7	173	-4.4	170	019	1.7	5.8	13.63	1.02	1988	1985
500	188	5848	186	-0.6	4.2	-6.7	161	-8.9	165	055	2.0	6.1	18.31	1.20	1989	1985
450	185	6701	184	-4.7	3.8	-10.9	151	-13.6	159	067	2.2	6.0	22.81	1.31	1987	1985
400	179	7604	178	-9.7	-5.1	-16.1	133	-18.8	151	077	3.0	5.9	25.36	1.33	1988	1985
350	173	8626	173	-15.6	-10.1	-23.1	113	-25.0	136	091	4.6	6.5	31.30	1.45	1984	1985
300	169	9774	169	-23.0	-17.3	-31.1	87	-31.7	121	089	6.3	7.7	39.20	1.37	1988	1985
250	154	11086	154	-32.3	-26.3	-40.5	39	-39.9	97	089	8.6	9.7	46.92	1.49	1988	1985
200	127	12624	127	-44.5	-38.1	-54.5	5	-53.1	71	089	12.5	14.0	54.15	1.81	1987	1986
175	110	13501	110	-51.9	-45.3	-62.7			57	095	14.9	16.3	63.46	2.10	1987	1986
150	92	14478	92	-59.8	-51.9	-70.1			39	091	16.9	18.6	74.50	2.31	1987	1985
125	67	15599	67	-67.6	-60.5	-79.1			24	081	16.2	19.0	82.86	2.23	1987	1985
100	48	16934	48	-72.0	-66.3	-83.1			14	078	19.9	20.3	99.64	1.78	1988	1990
80	39	18274	39	-68.4	-60.7	-78.9			8	092	18.6	18.7	142.95	3.76	1987	1984
70	32	19128	32	-63.8	-54.1	-75.3			6	083	17.6	17.7	137.80	3.65	1987	1988
60	26	20032	26	-59.2	-51.5	-70.3			6	080	16.6	16.8	147.74	3.36	1987	1988
50	22	21186	22	-55.2	-51.1	-66.1			4	093	20.4	20.8	143.44	3.18	1987	1988
40	16	22646	16	-52.0	-46.7	-59.7			2	087	22.5	22.5			1987	1984
30	11	24492	11	-47.3	-41.3	-56.3			2	092	22.5	22.5			1986	1984
25	7	25611	7	-45.8	-36.9	-54.1			1	099	29.0	29.0			1985	1984
20	4	27027	4	-46.7	-41.3	-51.3									1987	1984
15	2	28804	2	-45.5	-42.9	-48.1									1988	1984
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
186	509	572					39	103	1675	-72.7

# NORMALS OF RADIOSONDE DATA

42667 BHOPAL

SEPTEMBER 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	212	947	212	29.3	34.6	22.4	212	20.4	212	291	3.1	4.5	1.41	1.72	1987	1985
<i>1000</i>	182	32											15.12			
<i>950</i>	182	471	13	29.3	33.2	25.2	12	20.2	9	272	3.0	3.5	16.23		1986	1985
<i>900</i>	182	968	182	25.7	34.4	18.0	180	16.8	174	302	4.4	6.9	12.36	1.86	1988	1984
<i>850</i>	182	1467	182	21.9	32.8	13.8	180	14.3	174	314	4.6	7.0	10.74	1.72	1988	1990
<i>800</i>	182	1990	182	18.2	27.6	8.4	179	11.8	174	322	4.3	6.8	9.39	1.43	1988	1989
<i>750</i>	182	2539	182	14.8	23.2	8.2	179	7.5	174	332	3.7	6.4	11.48	1.34	1988	1984
<i>700</i>	182	3119	181	11.4	20.4	5.6	174	3.1	174	332	3.4	6.1	8.88	1.33	1988	1984
<i>650</i>	179	3736	178	8.0	17.2	1.2	165	-0.7	163	326	3.6	6.2	8.52	1.32	1988	1985
<i>600</i>	177	4392	175	5.0	13.0	-3.7	149	-4.3	157	322	2.8	6.2	12.94	1.16	1988	1985
<i>550</i>	172	5122	170	1.9	8.8	-4.7	123	-7.2	154	306	2.1	5.5	13.61	1.22	1989	1985
<i>500</i>	171	5863	171	-1.5	5.2	-8.1	104	-11.0	150	295	1.5	5.4	18.21	1.31	1989	1985
<i>450</i>	167	6712	166	-5.5	4.4	-11.9	79	-14.8	140	298	0.6	5.4	24.54	1.45	1987	1985
<i>400</i>	162	7611	161	-10.9	-5.3	-17.9	72	-20.9	133	343	0.6	5.6	25.79	1.22	1989	1985
<i>350</i>	158	8627	158	-17.3	-9.7	-24.5	56	-26.7	123	118	1.3	5.8	29.90	1.31	1987	1985
<i>300</i>	147	9769	147	-24.8	-16.3	-32.3	39	-35.1	109	112	2.7	6.3	39.12	1.42	1987	1985
<i>250</i>	132	11075	132	-34.3	-26.7	-43.7	15	-43.4	92	108	4.6	8.3	45.61	1.62	1987	1985
<i>200</i>	113	12609	112	-46.6	-39.9	-57.1	4	-59.8	66	104	7.7	10.6	61.38	1.89	1987	1985
<i>175</i>	91	13493	89	-53.4	-45.7	-65.1			50	104	10.0	12.4	71.67	1.97	1987	1985
<i>150</i>	68	14476	67	-61.0	-53.1	-73.3			36	105	11.6	13.5	104.59	3.60	1987	1985
<i>125</i>	51	15611	51	-67.8	-58.1	-80.5			26	099	12.7	13.5	147.33	4.78	1987	1985
<i>100</i>	35	16969	35	-71.0	-62.5	-80.5			15	087	13.1	13.4	111.49	2.82	1987	1990
<i>80</i>	27	18310	27	-66.3	-53.5	-78.1			9	092	15.7	16.0	149.07	6.18	1987	1990
<i>70</i>	21	19150	21	-62.0	-49.5	-73.3			7	098	15.5	15.7	137.02	3.62	1987	1990
<i>60</i>	19	20078	19	-57.6	-47.1	-68.7			4	098	14.1	14.2			1987	1990
<i>50</i>	15	21283	15	-52.6	-43.5	-59.1			2	084	17.9	18.0			1987	1990
<i>40</i>	11	22724	11	-49.1	-39.1	-56.5			2	108	11.9	12.0			1987	1989
<i>30</i>	5	24600	5	-47.8	-42.1	-54.3			1	095	18.0	18.0			1987	1990
<i>25</i>	4	25707	4	-47.3	-42.7	-54.3			1	081	23.0	23.0			1987	1990
<i>20</i>	4	27187	4	-44.2	-39.5	-50.3			1	079	29.0	29.0			1987	1990
<i>15</i>	2	28925	2	-44.2	-41.7	-46.7			1	095	26.0	26.0			1988	1990
<i>10</i>	1	31592	1	-47.3	-47.3	-47.3			1	088	26.0	26.0			1990	1990
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

172 523 553

27 106 1667 -71.9

# NORMALS OF RADIOSONDE DATA

42667 BHOPAL

OCTOBER 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	232	951	232	30.1	35.4	21.0	232	11.4	232	349	1.3	2.8	1.12	1.52	1986	1985
1000	210	74											13.58			
950	203	521	134	29.8	35.0	23.6	134	10.7	129	350	1.3	2.3	17.03	1.17	1986	1987
900	210	1009	209	25.7	36.8	17.2	205	6.9	202	354	2.6	5.0	11.09	1.68	1989	1985
850	210	1507	210	21.4	33.4	12.4	203	4.7	206	358	2.7	5.2	9.85	1.76	1989	1983
800	210	2027	210	16.9	27.0	7.0	202	2.6	205	358	2.8	5.5	10.01	1.56	1990	1983
750	210	2569	210	12.4	23.0	3.4	199	0.2	205	360	2.6	5.4	9.21	1.33	1990	1990
700	210	3146	210	8.6	18.4	1.0	173	-3.2	205	345	2.3	5.5	10.17	0.96	1990	1983
650	206	3754	205	5.8	15.6	-2.3	120	-6.0	200	312	2.6	5.6	10.44	0.97	1988	1990
600	204	4408	202	3.3	13.6	-3.1	73	-10.3	195	298	3.8	6.5	9.68	1.13	1988	1990
550	200	5126	199	0.1	9.8	-9.3	42	-9.8	189	292	5.6	8.1	13.95	1.02	1988	1990
500	198	5868	197	-3.8	5.0	-13.1	31	-12.6	187	290	6.4	9.0	12.32	0.89	1988	1990
450	194	6702	194	-8.4	3.6	-19.7	27	-18.3	181	283	7.8	10.1	15.79	0.97	1983	1990
400	188	7597	188	-14.3	-4.9	-25.3	19	-24.2	171	277	9.7	11.8	16.92	0.94	1988	1990
350	181	8597	178	-20.7	-11.1	-28.5	12	-29.5	158	267	10.8	12.9	21.64	1.08	1988	1985
300	161	9726	160	-28.1	-19.9	-39.5	6	-36.9	130	258	12.8	14.5	27.62	1.23	1988	1990
250	151	11008	151	-37.8	-29.7	-48.1	2	-43.1	113	255	14.3	16.0	36.02	1.31	1987	1990
200	120	12515	120	-49.2	-41.9	-59.1			80	246	14.9	16.7	42.97	1.42	1987	1985
175	85	13378	85	-55.6	-47.5	-66.9			49	243	13.8	15.5	51.86	1.99	1987	1985
150	59	14362	59	-62.0	-54.3	-69.7			29	230	10.7	13.0	60.36	2.16	1987	1985
125	49	15480	49	-68.6	-58.1	-79.7			19	246	4.4	9.2	70.12	2.07	1987	1988
100	36	16818	36	-71.6	-57.1	-83.5			13	141	2.9	7.0	115.43	3.40	1987	1988
80	29	18146	29	-67.5	-52.1	-79.7			9	096	6.1	8.1	120.39	4.13	1987	1988
70	26	18948	26	-63.5	-48.1	-74.3			5	089	10.9	11.2	128.58	4.46	1987	1983
60	23	19880	23	-59.3	-43.9	-70.7			5	101	10.8	11.2	140.76	4.32	1987	1983
50	17	20971	17	-57.3	-48.9	-66.1			5	092	9.5	10.2			1987	1983
40	15	22353	15	-54.7	-48.1	-61.7			4	110	8.1	8.7			1989	1983
30	10	24153	10	-51.6	-45.1	-57.5			3	076	12.5	13.0			1990	1983
25	8	25303	8	-49.5	-44.7	-56.3			3	095	10.6	11.0			1986	1983
20	6	26774	6	-48.1	-41.1	-54.9			3	081	15.6	16.0			1986	1983
15	4	28688	4	-46.8	-45.1	-47.9			1	081	10.0	10.0			1983	1990
10	1	31561	1	-43.7	-43.7	-43.7									1983	1983
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
202	552	508					25	106	1642	-73.5

## NORMALS OF RADIOSONDE DATA

42667 BHOPAL

NOVEMBER 1982-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	261	955	261	27.2	31.4	20.4	261	8.8	261	025	1.4	2.1	1.56	1.16	1987	1982
1000	232	113											15.81			
950	232	549	227	26.6	31.4	19.8	226	8.0	226	026	1.6	2.3	15.30	1.41	1987	1983
900	232	1038	232	22.2	32.6	9.8	226	2.3	230	023	2.4	3.9	11.74	1.94	1989	1982
850	232	1531	230	17.8	26.6	7.0	222	0.5	231	014	1.9	3.7	9.89	1.83	1989	1982
800	232	2045	231	13.6	21.6	4.2	214	-1.7	230	001	2.1	3.9	7.80	1.80	1987	1982
750	232	2585	232	10.4	19.0	-0.9	175	-5.1	229	330	2.5	4.7	8.10	1.87	1987	1982
700	232	3156	232	7.6	16.6	-1.9	117	-7.0	230	309	3.3	5.5	8.28	1.87	1987	1984
650	228	3764	227	4.9	14.6	-4.7	69	-9.6	223	296	4.9	6.9	10.35	1.77	1987	1984
600	225	4413	225	2.0	10.8	-5.7	43	-11.2	217	288	6.7	8.8	14.60	1.73	1987	1982
550	222	5124	222	-1.9	7.2	-9.1	26	-14.8	213	286	8.5	10.6	17.74	1.73	1987	1982
500	220	5860	219	-6.5	2.2	-13.5	19	-17.3	212	284	11.1	13.1	21.65	1.77	1987	1985
450	218	6682	217	-11.7	-1.5	-19.5	15	-22.4	201	279	13.5	15.6	27.54	1.79	1988	1982
400	207	7571	206	-17.6	-6.3	-28.3	14	-27.7	192	276	16.7	18.8	31.97	1.75	1988	1989
350	196	8559	196	-24.3	-13.1	-32.9	11	-35.0	175	273	19.8	21.9	35.44	1.60	1986	1982
300	186	9669	186	-31.8	-21.3	-41.1	6	-40.9	155	271	22.4	24.8	43.10	1.51	1988	1986
250	169	10937	168	-40.7	-30.5	-48.7	2	-50.3	119	263	25.0	27.2	50.46	1.71	1988	1985
200	140	12425	139	-51.1	-41.9	-59.7			82	259	26.4	28.4	59.76	2.39	1988	1983
175	107	13289	107	-56.4	-48.3	-65.1			64	260	26.4	28.3	62.87	2.85	1989	1983
150	75	14252	75	-62.1	-53.1	-70.7			36	254	22.8	24.6	108.92	3.28	1986	1983
125	52	15363	52	-67.8	-57.9	-78.1			24	258	15.0	17.0	136.17	3.27	1987	1982
100	36	16660	36	-71.4	-62.1	-79.7			14	263	10.3	12.1	143.95	4.94	1987	1988
80	29	17975	29	-70.9	-60.9	-78.3			11	245	3.0	10.4	156.97	3.31	1987	1982
70	27	18767	27	-68.1	-59.9	-75.1			10	131	2.7	10.5	180.92	2.96	1987	1982
60	21	19715	21	-64.2	-58.1	-68.5			7	101	1.5	7.3	213.09	2.24	1987	1982
50	19	20870	19	-59.4	-53.3	-65.1			5	063	4.6	9.6			1987	1982
40	14	22322	14	-54.8	-49.7	-62.1			4	059	6.9	7.2			1982	1982
30	11	24122	11	-52.0	-44.9	-59.1			3	060	8.9	9.0			1982	1982
25	6	25302	6	-50.7	-44.3	-57.1			1	050	6.0	6.0			1988	1982
20	3	26412	3	-50.4	-48.1	-54.3			1	052	11.0	11.0			1982	1982
15																
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
221	580	470	3	133	1491	-70.6	32	098	1684	-73.4

## NORMALS OF RADIOSONDE DATA

42667 BHOPAL

DECEMBER 1982-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	229	956	229	24.5	32.0	17.0	229	8.0	229	028	0.9	2.0	2.05	0.87	1990	1990
<i>1000</i>	205	129											17.39			
<i>950</i>	203	559	200	23.9	29.0	17.6	199	7.4	202	029	0.9	2.2	16.97	1.05	1984	1987
<i>900</i>	203	1047	203	19.5	32.2	11.4	202	2.9	203	019	1.3	3.7	14.04	1.34	1990	1982
<i>850</i>	203	1535	203	15.4	26.4	7.2	193	0.3	203	326	0.9	3.8	12.94	1.41	1990	1983
<i>800</i>	203	2046	203	12.6	23.0	6.4	155	-2.6	203	281	2.3	4.9	13.89	1.38	1990	1984
<i>750</i>	203	2585	203	10.1	20.2	2.2	115	-5.6	203	279	3.9	6.1	14.33	1.96	1990	1983
<i>700</i>	203	3156	203	7.5	16.8	-0.5	81	-8.9	202	278	5.7	7.8	13.12	2.58	1990	1985
<i>650</i>	202	3760	202	4.5	14.4	-5.9	59	-12.7	200	278	7.9	10.0	17.04	2.43	1990	1985
<i>600</i>	199	4409	199	0.9	10.2	-6.9	40	-15.1	194	278	9.8	11.8	18.02	2.21	1987	1984
<i>550</i>	195	5117	195	-3.5	6.4	-11.3	28	-17.9	190	278	12.6	14.4	19.82	2.04	1987	1984
<i>500</i>	192	5849	192	-8.1	0.8	-15.3	26	-21.8	186	275	15.0	16.5	24.58	1.79	1988	1986
<i>450</i>	191	6665	191	-13.4	-4.3	-21.1	22	-26.4	180	273	17.3	18.9	25.51	1.56	1988	1982
<i>400</i>	183	7547	183	-19.7	-10.9	-26.9	19	-30.4	165	271	21.0	22.8	33.74	1.59	1988	1986
<i>350</i>	173	8530	173	-26.4	-17.9	-33.7	18	-37.3	147	268	23.8	25.6	34.49	1.51	1987	1986
<i>300</i>	160	9626	160	-33.9	-23.3	-41.9	6	-42.4	122	265	27.1	29.3	42.95	1.52	1982	1988
<i>250</i>	147	10885	147	-42.9	-32.7	-51.7	2	-51.3	97	260	31.8	34.0	47.42	1.25	1990	1988
<i>200</i>	117	12368	116	-52.8	-41.7	-51.3			61	260	34.7	37.1	46.49	1.36	1990	1990
<i>175</i>	90	13222	89	-58.0	-47.7	-69.7			46	259	34.4	36.6	54.56	2.89	1990	1982
<i>150</i>	68	14192	68	-62.5	-51.7	-71.1			25	262	31.5	33.4	48.45	3.20	1986	1982
<i>125</i>	57	15305	57	-67.6	-58.1	-76.5			16	268	28.1	30.2	28.92	1.94	1986	1982
<i>100</i>	37	16625	37	-72.5	-65.7	-80.1			2	264	28.8	29.5	73.97	2.76	1986	1982
<i>80</i>	28	17922	28	-73.7	-66.9	-83.9							64.29	3.63	1988	1982
<i>70</i>	25	18712	25	-71.8	-63.7	-79.9							83.21	4.40	1988	1982
<i>60</i>	23	19597	23	-68.2	-58.1	-77.1							75.14	4.68	1987	1987
<i>50</i>	23	20704	23	-64.0	-52.9	-70.7							73.61	5.54	1987	1982
<i>40</i>	17	22090	17	-60.7	-57.5	-67.9									1982	1982
<i>30</i>	10	23843	10	-56.0	-51.3	-61.1									1982	1982
<i>25</i>	7	24993	7	-53.8	-50.1	-55.5									1982	1982
<i>20</i>	5	26413	5	-51.3	-48.1	-53.9									1982	1982
<i>15</i>	3	28265	3	-48.5	-46.1	-52.5									1982	1982
<i>10</i>																
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
196	594	451	3	130	1479	-66.5	32	095	1701	-75.1

## NORMALS OF RADIOSONDE DATA

43014 CHIKALTHANA(AURANGABAD)

JANUARY 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	310	947	310	28.1	32.8	15.4	310	8.4	309	226	0.8	2.5	1.05	1.13	1990	1981
<i>1000</i>	231	104											6.73			
<i>950</i>	231	531	2	28.6	30.6	26.6	2	4.6	2	000	0.0	0.0	13.93		1987	1987
<i>900</i>	231	1033	231	23.1	29.4	12.6	225	4.9	226	225	1.7	4.2	6.85	1.12	1989	1981
<i>850</i>	231	1525	231	18.4	25.2	9.0	225	3.6	226	232	1.8	4.6	6.60	1.16	1989	1981
<i>800</i>	231	2039	231	13.8	20.4	6.0	220	1.1	226	236	2.3	5.2	6.85	1.09	1987	1981
<i>750</i>	230	2567	230	9.9	19.0	2.8	171	-1.9	225	252	3.6	6.7	11.15	1.41	1983	1981
<i>700</i>	230	3147	230	7.1	16.0	-1.1	124	-7.0	225	262	5.8	8.9	10.69	1.88	1983	1981
<i>650</i>	226	3740	226	4.3	14.2	-6.3	65	-12.3	221	264	8.6	11.3	18.33	1.94	1989	1980
<i>600</i>	226	4400	226	1.4	9.6	-5.9	42	-16.5	221	264	11.8	14.5	16.90	1.83	1983	1981
<i>550</i>	222	5107	222	-2.5	7.0	-10.5	26	-18.4	214	263	14.9	17.4	27.16	1.90	1983	1982
<i>500</i>	219	5845	219	-7.0	2.0	-16.1	16	-22.0	212	261	17.5	20.3	24.62	2.01	1983	1983
<i>450</i>	218	6660	218	-11.9	-2.7	-21.5	12	-25.7	208	261	22.3	25.0	38.32	2.14	1983	1982
<i>400</i>	214	7552	214	-17.7	-7.9	-27.9	9	-29.7	200	263	26.1	29.2	38.73	2.17	1983	1987
<i>350</i>	210	8545	210	-23.7	-13.9	-34.1	6	-35.1	189	262	31.1	34.1	44.39	1.98	1983	1982
<i>300</i>	206	9655	206	-30.7	-21.5	-40.7	3	-43.6	172	256	35.3	39.0	54.77	1.90	1983	1982
<i>250</i>	197	10929	197	-39.6	-30.5	-48.9			147	255	34.9	39.3	63.63	1.94	1983	1981
<i>200</i>	178	12417	178	-50.7	-40.9	-59.5			115	255	36.6	40.6	68.89	1.87	1983	1980
<i>175</i>	158	13274	158	-56.8	-47.1	-68.1			90	250	33.5	37.1	76.89	1.82	1987	1980
<i>150</i>	143	14235	143	-62.9	-49.7	-73.1			73	250	32.5	35.4	87.43	2.11	1983	1980
<i>125</i>	125	15342	125	-68.5	-53.9	-79.1			51	251	26.8	30.6	92.31	2.28	1983	1982
<i>100</i>	110	16664	110	-72.9	-63.1	-81.3			36	246	19.5	23.8	110.19	1.81	1983	1980
<i>80</i>	92	17985	92	-71.8	-56.3	-80.7			20	258	8.7	20.0	118.09	2.04	1983	1988
<i>70</i>	87	18803	87	-68.7	-49.1	-78.3			21	242	5.6	21.1	118.80	2.43	1989	1988
<i>60</i>	77	19729	77	-64.4	-45.7	-77.1			14	347	1.2	14.4	130.25	3.28	1989	1988
<i>50</i>	70	20858	70	-59.2	-43.5	-73.1			13	098	2.0	15.5	149.44	3.50	1989	1988
<i>40</i>	56	22294	56	-54.0	-41.9	-72.1			10	119	4.2	14.5	179.87	7.26	1989	1980
<i>30</i>	42	24137	42	-50.6	-37.7	-69.7			5	222	16.0	22.8	226.40	7.77	1986	1981
<i>25</i>	36	25296	36	-49.3	-37.3	-68.5			2	306	22.2	26.0	240.48	7.82	1986	1981
<i>20</i>	28	26713	28	-46.1	-35.7	-67.1			1	303	39.0	39.0	319.67	8.13	1986	1981
<i>15</i>	12	28538	12	-45.3	-38.1	-58.7									1986	1980
<i>10</i>	5	31213	5	-41.7	-37.1	-49.9									1988	1988
<i>7</i>	1	33097	1	-46.7	-46.7	-46.7									1988	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

221 586 460 16 129 1524 -69.2 104 099 1681 -73.8

## NORMALS OF RADIOSONDE DATA

43014 CHIKALTHANA(AURANGABAD)

FEBRUARY 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	283	946	283	30.6	35.0	17.6	283	6.1	283	272	1.9	3.2	0.77	0.91	1981	1984
1000	231	88											7.92			
950	230	520											9.67			
900	231	1025	231	25.5	33.0	18.8	208	1.2	226	264	2.9	4.9	8.25	0.78	1989	1981
850	231	1521	231	20.8	28.0	13.6	208	0.3	226	260	3.4	5.3	8.37	0.86	1989	1988
800	231	2039	231	16.0	23.8	7.6	214	-1.0	226	258	3.6	5.6	9.32	0.98	1990	1988
750	230	2560	230	11.6	22.0	2.6	206	-3.2	225	256	4.8	6.9	14.09	0.90	1990	1988
700	229	3151	229	7.3	15.6	0.0	165	-5.8	225	259	6.6	9.1	11.49	1.11	1989	1986
650	227	3740	227	3.8	12.4	-4.9	120	-9.8	223	265	9.2	11.7	18.92	1.38	1989	1988
600	224	4400	224	0.6	9.6	-9.3	70	-14.2	220	265	13.0	14.8	14.67	1.37	1990	1988
550	223	5104	223	-3.2	6.8	-10.9	52	-18.9	217	265	16.2	18.2	20.61	1.28	1988	1981
500	220	5842	220	-7.6	3.4	-14.9	37	-23.4	216	266	19.9	21.7	20.45	1.49	1990	1981
450	219	6661	219	-12.5	-4.1	-20.1	30	-28.2	211	266	24.6	26.8	31.66	1.68	1990	1981
400	214	7545	214	-18.2	-7.7	-32.7	22	-31.8	204	265	29.6	32.3	28.91	1.82	1990	1988
350	208	8535	208	-24.0	-12.7	-35.9	15	-37.4	186	263	35.2	38.6	28.77	1.97	1990	1982
300	201	9644	201	-30.7	-18.7	-45.3	3	-40.0	167	264	40.3	44.2	39.46	2.28	1990	1982
250	189	10922	189	-39.3	-25.5	-57.3	1	-40.3	128	262	42.3	46.9	48.92	2.57	1986	1982
200	169	12414	169	-49.7	-39.9	-64.5			96	258	42.1	47.7	67.84	2.73	1986	1982
175	161	13276	161	-55.4	-46.3	-72.1			70	256	40.0	46.0	78.45	2.87	1990	1982
150	147	14240	147	-61.4	-52.1	-76.5			50	257	36.6	42.8	88.15	2.88	1987	1982
125	127	15348	127	-67.5	-59.3	-83.1			33	257	26.6	32.0	106.50	2.97	1986	1982
100	109	16673	109	-71.9	-58.9	-83.3			22	260	17.1	23.7	121.53	2.82	1986	1990
80	89	17968	89	-71.3	-56.7	-86.7			9	237	12.4	18.9	131.65	2.83	1983	1990
70	76	18778	76	-67.7	-52.1	-81.1			9	251	14.0	17.6	143.92	2.61	1983	1990
60	67	19700	67	-63.1	-49.5	-75.9			7	274	11.5	17.8	150.31	2.31	1983	1990
50	56	20862	56	-57.6	-45.1	-72.1			6	343	12.6	22.2	152.42	2.64	1983	1990
40	49	22295	49	-52.8	-42.1	-63.9			4	040	12.8	21.8	198.34	2.62	1988	1987
30	42	24171	42	-48.8	-34.9	-60.3			2	221	12.1	24.0	199.33	3.12	1988	1987
25	33	25360	33	-46.8	-38.3	-58.3			2	275	17.7	38.5	222.92	2.87	1983	1987
20	28	26867	28	-43.7	-36.5	-52.7			2	131	11.8	22.5	209.91	2.47	1986	1986
15	16	28907	16	-40.5	-33.5	-50.5									1988	1986
10	6	31544	6	-40.0	-34.1	-47.1									1983	1986
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
224	593	451	7	137	1486	-64.5	98	099	1683	-73.1

NORMALS OF RADIOSONDE DATA

43014 CHIKALTHANA(AURANGABAD)

MARCH 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	279	944	279	33.7	38.6	16.6	279	8.6	278	278	2.4	4.2	0.58	0.88	1986	1989
1000	224	67											7.74			
950	224	506											11.32			
900	224	1012	224	28.6	36.0	16.0	200	2.5	214	272	3.8	5.6	6.72	1.25	1988	1989
850	224	1514	224	24.0	31.8	14.8	202	1.0	214	269	4.0	5.9	7.40	1.52	1990	1983
800	224	2038	224	19.3	27.6	10.4	206	0.2	214	264	4.2	5.9	8.65	1.83	1990	1982
750	224	2564	224	14.5	23.0	5.0	206	-1.6	214	255	4.7	6.5	12.34	1.88	1988	1982
700	223	3162	223	9.5	17.6	2.4	198	-3.3	214	251	5.4	7.4	13.27	1.56	1988	1989
650	223	3755	223	5.0	11.8	-0.5	175	-7.0	214	257	7.1	9.3	19.34	1.43	1986	1989
600	223	4418	223	1.1	11.0	-4.5	130	-11.5	214	262	9.3	11.4	18.39	1.71	1988	1988
550	223	5123	223	-2.5	8.4	-9.3	80	-17.1	214	267	12.4	14.3	28.21	2.12	1988	1988
500	218	5864	218	-6.6	5.4	-15.9	52	-21.7	208	269	15.9	18.0	27.77	2.48	1988	1987
450	214	6684	214	-11.3	-0.5	-20.3	36	-26.0	199	271	19.0	21.2	46.28	2.65	1988	1983
400	211	7576	211	-16.9	-5.9	-26.9	23	-30.7	197	269	23.5	25.8	43.72	3.11	1990	1988
350	204	8575	204	-22.7	-12.9	-36.5	15	-35.9	183	269	28.5	31.3	54.83	2.86	1986	1988
300	198	9685	198	-29.6	-19.9	-46.1	4	-44.6	169	267	33.2	37.2	65.26	2.24	1986	1988
250	187	10961	187	-38.2	-27.9	-46.5			140	264	36.7	41.4	73.30	1.75	1986	1981
200	167	12457	167	-48.6	-40.1	-59.9			105	261	37.7	43.0	82.34	1.38	1987	1981
175	158	13321	158	-54.8	-45.7	-66.7			87	260	37.2	42.6	85.07	1.70	1990	1988
150	145	14295	145	-60.6	-49.5	-73.9			72	262	34.0	38.3	93.86	2.44	1990	1988
125	129	15412	129	-66.5	-51.5	-79.1			44	265	31.6	35.5	101.71	2.87	1990	1988
100	117	16752	117	-70.9	-57.5	-84.3			32	263	25.1	29.4	119.52	2.72	1990	1988
80	96	18092	96	-69.9	-56.3	-82.1			10	290	11.8	17.3	144.17	2.89	1990	1988
70	91	18906	91	-67.1	-52.1	-77.7			8	271	11.7	17.0	149.21	2.73	1990	1988
60	81	19855	81	-62.6	-47.7	-75.5			3	261	4.9	11.3	166.10	3.54	1990	1988
50	72	21001	72	-56.0	-41.5	-68.3			3	180	0.7	18.3	191.76	3.01	1986	1983
40	60	22449	60	-51.3	-38.1	-65.1			2	086	13.5	15.0	253.01	3.38	1990	1987
30	48	24318	48	-46.6	-34.9	-55.5			2	129	6.6	10.5	298.23	1.61	1983	1983
25	43	25502	43	-44.4	-33.5	-52.1							299.98	2.16	1986	1989
20	34	27041	34	-42.0	-31.9	-49.9							266.32	2.01	1989	1989
15	19	28919	19	-40.0	-33.1	-47.9									1983	1989
10	10	31594	10	-37.4	-32.5	-44.5									1988	1989

7

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

223 581 468 11 134 1512 -65.6 109 100 1682 -72.0



## NORMALS OF RADIOSONDE DATA

43014 CHIKALTHANA(AURANGABAD)

APRIL 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	296	942	296	37.3	41.6	29.0	295	9.3	295	288	2.9	4.0	0.63	0.61	1990	1982
1000	233	37											6.67			
950	233	485											11.37			
900	233	994	233	32.6	40.2	26.2	214	1.9	218	294	3.9	5.6	7.68	0.91	1989	1988
850	233	1502	233	28.0	38.2	22.2	212	0.7	218	294	4.0	5.7	7.96	0.98	1990	1988
800	233	2033	233	23.2	33.2	12.4	215	-0.1	218	292	4.0	5.8	8.25	0.95	1990	1990
750	233	2563	233	18.2	28.2	7.8	220	-1.0	218	291	3.7	5.6	8.16	1.07	1990	1990
700	233	3172	233	12.9	26.0	3.6	224	-2.7	218	283	3.3	5.9	9.57	1.24	1990	1988
650	232	3764	232	7.7	22.4	1.4	211	-5.2	216	272	3.5	6.4	14.22	1.45	1990	1982
600	231	4440	231	3.0	17.6	-3.9	180	-8.3	215	271	3.8	6.8	13.36	1.62	1990	1982
550	230	5147	230	-1.0	12.6	-8.1	126	-12.9	213	274	5.4	8.3	19.44	1.81	1990	1980
500	229	5892	229	-5.3	8.6	-13.5	86	-18.9	212	277	7.4	10.2	21.51	2.02	1990	1980
450	225	6718	225	-10.0	4.0	-18.5	48	-23.0	209	273	10.4	13.0	33.42	2.07	1990	1981
400	222	7612	222	-16.0	-3.3	-28.3	30	-27.6	206	272	13.5	16.3	32.78	3.94	1990	1983
350	219	8611	219	-22.5	-11.5	-31.5	24	-33.6	201	265	17.1	20.2	35.82	2.05	1990	1982
300	209	9725	209	-29.9	-20.9	-39.3	11	-38.8	193	264	21.0	25.0	50.12	2.13	1990	1981
250	201	11000	201	-38.6	-29.5	-49.1	2	-49.3	180	261	23.4	28.4	58.06	2.60	1988	1983
200	177	12500	177	-48.8	-38.3	-59.9			151	260	27.3	31.3	74.23	3.01	1988	1987
175	157	13363	157	-54.4	-44.1	-64.5			125	261	26.4	30.2	124.76	3.83	1988	1983
150	141	14342	141	-60.0	-47.5	-69.1			105	259	23.9	27.1	134.32	3.43	1988	1981
125	110	15474	110	-65.3	-53.9	-75.5			80	262	22.2	25.0	148.92	3.13	1986	1989
100	93	16811	93	-70.4	-60.1	-80.1			64	259	12.6	18.1	161.36	3.01	1990	1982
80	77	18140	77	-70.3	-56.3	-80.3			32	313	2.0	13.3	194.28	3.57	1986	1989
70	69	18946	69	-66.8	-49.9	-78.9			26	099	3.2	12.3	206.10	2.84	1986	1989
60	61	19896	61	-61.6	-43.7	-73.9			21	089	4.6	12.6	217.19	3.09	1986	1989
50	55	21041	55	-55.7	-41.7	-68.3			18	087	5.1	11.9	228.14	2.87	1990	1982
40	42	22463	42	-51.0	-41.1	-64.1			16	112	3.3	10.9	260.60	3.10	1989	1982
30	35	24346	35	-45.9	-35.9	-58.5			9	093	5.4	10.1	260.95	1.66	1989	1982
25	29	25596	29	-42.2	-31.5	-54.9			5	055	13.9	15.6	206.92	2.28	1985	1985
20	18	27100	18	-41.0	-32.7	-52.5			2	128	4.8	7.5			1986	1982
15	10	28888	10	-40.7	-32.1	-50.5			1	209	11.0	11.0			1985	1982
10	5	31417	5	-41.9	-37.7	-47.7									1985	1982
7	1	34264	1	-37.5	-37.5	-37.5									1989	1989

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

229 562 498

8 125 1556 -65.2

83 097 1716 -71.9

## NORMALS OF RADIOSONDE DATA

43014 CHIKALTHANA(AURANGABAD)

MAY 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	307	939	307	37.4	42.0	22.2	307	13.6	306	300	3.4	5.1	1.34	1.69	1988	1990
1000	247	18											15.56			
950	247	465											17.77			
900	247	975	247	32.6	39.8	21.6	239	7.4	209	305	4.7	7.0	13.54	1.12	1989	1990
850	247	1483	247	28.0	35.0	18.4	237	6.1	209	303	5.1	7.0	12.99	0.99	1988	1990
800	246	2014	246	23.5	30.0	15.6	239	4.8	209	306	4.7	6.6	12.91	1.09	1988	1987
750	246	2550	246	18.6	26.2	11.2	240	3.6	208	307	4.4	6.4	14.00	1.31	1988	1987
700	245	3155	245	13.5	24.4	6.4	237	1.6	209	307	3.6	6.0	12.19	1.51	1990	1987
650	243	3749	243	8.4	22.8	1.4	226	-1.9	206	298	2.6	6.0	16.30	1.93	1990	1987
600	240	4425	240	3.7	13.0	-4.1	203	-5.7	202	291	1.9	6.1	14.39	2.19	1990	1980
550	234	5134	234	-0.4	8.8	-9.9	151	-10.5	193	315	2.1	7.0	26.16	1.72	1988	1980
500	232	5880	232	-4.2	4.0	-12.5	101	-15.7	191	313	3.3	8.9	21.73	1.82	1986	1981
450	231	6709	231	-8.6	0.0	-20.3	67	-19.0	185	310	4.8	10.8	36.68	1.90	1989	1990
400	227	7608	227	-13.8	-3.7	-23.1	48	-25.2	182	296	6.0	12.0	31.89	2.15	1990	1981
350	219	8615	218	-19.9	-10.5	-29.3	28	-31.2	169	276	8.1	13.5	47.17	2.45	1988	1981
300	215	9742	214	-27.2	-16.1	-36.9	22	-39.0	167	263	9.9	14.7	51.28	2.57	1988	1982
250	195	11032	195	-36.3	-25.1	-47.7	8	-44.3	148	249	11.2	15.8	67.25	2.67	1988	1987
200	179	12542	179	-47.3	-36.3	-58.5			131	236	12.1	17.6	86.77	2.65	1988	1981
175	159	13420	159	-53.7	-43.1	-65.1			107	231	11.0	17.7	93.94	2.53	1988	1981
150	146	14405	146	-60.3	-48.1	-70.9			95	224	7.0	16.1	99.89	2.34	1990	1980
125	118	15542	118	-66.6	-53.7	-77.1			69	174	3.9	15.1	103.53	2.32	1990	1981
100	103	16881	103	-71.4	-59.1	-84.1			58	111	6.4	15.0	121.75	2.56	1986	1980
80	77	18215	77	-70.6	-52.1	-84.1			33	094	12.4	14.0	132.78	3.37	1986	1980
70	73	19026	73	-67.6	-46.9	-79.5			31	094	12.4	13.7	153.36	3.87	1986	1980
60	63	19948	63	-62.3	-45.9	-75.1			21	093	11.9	12.8	161.80	2.89	1982	1980
50	54	21106	54	-55.8	-39.1	-73.1			17	088	13.4	15.3	211.30	4.15	1982	1980
40	40	22534	40	-50.9	-42.3	-69.1			12	085	11.8	12.7	184.50	4.79	1982	1980
30	32	24434	32	-45.6	-36.5	-66.7			7	087	14.8	15.1	265.82	6.12	1982	1980
25	27	25653	27	-42.9	-33.3	-66.3			5	086	15.0	15.2	307.62	6.39	1988	1980
20	18	27049	18	-41.8	-32.3	-65.5			2	081	14.8	17.0			1982	1980
15	9	29014	9	-40.1	-36.1	-44.1									1982	1982
10	5	31697	5	-39.5	-35.5	-42.9									1986	1982
7	1	34484	1	-37.3	-37.3	-37.3									1985	1985

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

237 554 509

4 131 1536 -62.9

81 098 1707 -72.8

## NORMALS OF RADIOSONDE DATA

43014 CHIKALTHANA(AURANGABAD)

JUNE 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	319	937	319	31.8	41.2	17.0	319	19.9	320	272	4.7	5.9	0.74	1.56	1983	1979
1000	258	5											7.54			
950	258	444											15.61			
900	258	947	258	28.6	39.4	18.0	258	16.1	224	276	6.3	8.4	7.14	0.97	1983	1979
850	258	1450	258	24.6	38.8	16.0	258	14.2	223	279	6.6	8.6	7.03	0.97	1983	1988
800	258	1976	258	20.5	28.0	11.2	258	12.3	223	283	6.2	8.4	7.16	0.91	1979	1981
750	258	2517	258	16.6	23.4	7.8	258	9.6	220	287	4.9	8.0	8.80	0.75	1988	1981
700	258	3110	258	12.7	19.4	5.4	257	5.8	220	290	3.2	7.1	7.01	0.84	1990	1981
650	258	3716	258	8.8	16.0	3.2	250	1.6	206	287	1.9	6.5	11.82	1.06	1986	1980
600	256	4384	256	5.2	12.2	-1.1	248	-2.8	205	296	1.5	6.2	8.88	1.29	1988	1988
550	253	5109	253	1.4	8.4	-5.5	236	-6.5	198	299	1.3	6.1	17.52	1.55	1990	1981
500	250	5851	250	-2.0	7.6	-9.1	206	-10.4	198	302	1.3	5.9	15.00	1.62	1987	1979
450	247	6691	247	-5.6	3.8	-12.1	175	-15.2	190	003	0.7	6.1	25.01	1.76	1990	1979
400	238	7597	238	-10.4	-2.1	-19.7	147	-20.4	178	032	1.5	6.4	26.23	1.87	1988	1989
350	235	8616	235	-16.4	-6.3	-27.9	122	-26.4	171	053	3.0	6.9	31.22	1.90	1988	1989
300	229	9757	229	-23.9	-10.1	-38.1	85	-33.2	166	066	4.7	8.6	40.13	1.87	1988	1989
250	212	11065	212	-33.4	-24.3	-41.9	33	-41.4	146	079	7.2	10.6	54.17	2.16	1988	1981
200	194	12582	194	-45.6	-36.1	-55.3	1	-45.7	127	085	12.1	14.8	71.47	2.20	1988	1981
175	179	13460	179	-52.8	-40.3	-63.1			116	088	15.4	18.0	83.12	2.65	1988	1981
150	159	14440	159	-60.6	-48.5	-72.3			104	086	19.3	21.8	93.81	2.65	1986	1980
125	129	15544	129	-68.6	-59.1	-84.1			80	088	21.2	22.8	106.76	3.00	1988	1980
100	111	16857	111	-74.5	-64.1	-89.9			69	084	23.4	24.5	117.43	3.38	1988	1980
80	86	18152	86	-72.1	-57.7	-84.5			47	082	24.6	25.4	154.93	5.37	1990	1980
70	76	18954	76	-67.5	-53.5	-82.1			40	082	21.6	22.6	163.20	5.57	1990	1979
60	58	19884	58	-61.5	-48.3	-78.1			27	088	20.3	21.0	218.78	7.17	1990	1979
50	48	21051	48	-55.3	-42.1	-71.1			23	084	19.4	20.1	252.26	6.41	1990	1979
40	35	22517	35	-49.5	-40.9	-59.3			8	080	21.6	22.2	230.25	4.90	1986	1983
30	27	24407	27	-44.2	-35.1	-58.7			4	089	24.9	25.3	269.36	6.19	1989	1980
25	24	25614	24	-42.3	-35.1	-55.5			2	073	24.8	25.0	295.99	5.76	1982	1980
20	15	27089	15	-41.5	-33.5	-51.5			2	076	22.0	22.0			1983	1980
15	9	28971	9	-40.3	-33.5	-48.7			1	075	30.0	30.0			1990	1982
10	2	31634	2	-39.8	-37.1	-42.5									1982	1983
7	1	33860	1	-42.1	-42.1	-42.1									1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

250 528 544

4 132 1538 -65.8

99 099 1693 -76.3

## NORMALS OF RADIOSONDE DATA

43014 CHIKALTHANA(AURANGABAD)

JULY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	328	938	328	28.1	35.0	21.4	328	20.9	328	271	5.6	6.4	0.67	0.94	1982	1985
1000	274	21											7.20			
950	271	451											10.63			
900	271	950	271	24.6	30.6	19.2	271	18.4	217	267	9.5	10.5	7.04	0.81	1983	1988
850	270	1447	270	21.0	27.8	15.0	270	16.3	217	266	11.2	12.1	7.46	0.86	1983	1980
800	270	1967	270	17.5	23.6	10.0	270	13.9	215	267	10.9	12.1	7.31	0.83	1983	1980
750	270	2509	270	14.3	21.2	7.4	269	11.1	213	267	9.8	11.4	5.49	0.93	1989	1979
700	270	3093	270	11.4	18.2	5.0	270	7.3	209	272	8.0	9.9	7.34	0.99	1989	1979
650	265	3707	265	8.6	16.8	1.0	263	2.9	191	273	6.0	9.1	9.44	1.06	1989	1982
600	262	4367	262	5.3	14.0	-1.9	258	-1.1	185	282	4.6	7.7	11.90	0.94	1990	1979
550	260	5097	260	1.7	9.2	-4.7	250	-5.0	169	294	3.9	7.9	10.13	1.01	1990	1979
500	255	5834	255	-2.0	5.4	-9.1	240	-9.0	164	315	1.7	7.2	16.35	1.09	1989	1987
450	250	6678	250	-5.9	2.0	-11.9	223	-13.3	149	034	0.8	6.5	19.82	1.12	1989	1979
400	242	7582	242	-10.8	-0.9	-20.7	204	-19.2	145	066	2.7	7.0	22.74	1.16	1989	1989
350	236	8600	236	-16.7	-9.1	-24.3	177	-25.7	135	070	6.8	9.0	20.88	1.52	1989	1979
300	228	9745	228	-24.0	-15.7	-34.5	145	-33.2	127	077	11.2	13.0	32.31	1.73	1990	1979
250	214	11050	214	-33.5	-23.1	-42.7	61	-41.9	118	083	16.3	17.7	43.74	1.91	1990	1986
200	197	12575	197	-45.9	-32.9	-59.3	3	-47.4	111	082	23.4	24.4	53.88	2.26	1988	1980
175	177	13449	177	-53.6	-43.9	-67.3			96	078	27.6	28.8	63.98	2.31	1989	1987
150	153	14421	153	-61.8	-50.1	-76.1			81	077	33.3	34.4	81.09	2.53	1990	1988
125	123	15542	123	-68.9	-44.1	82.1			68	079	38.4	40.2	96.61	2.91	1990	1982
100	96	16863	96	-73.5	-61.9	-87.7			52	078	38.3	40.0	120.54	4.07	1990	1988
80	69	18192	69	-69.9	-53.9	-87.7			32	079	34.3	35.4	147.51	6.54	1990	1988
70	59	19004	59	-66.1	-53.5	-76.5			24	077	30.6	31.1	180.57	4.30	1987	1982
60	49	19960	49	-60.4	-47.3	-77.3			19	081	27.8	28.2	193.79	4.41	1989	1986
50	42	21110	42	-55.3	-41.1	-72.9			13	083	24.3	24.7	226.08	5.80	1989	1980
40	30	22524	30	-52.4	-39.5	-67.1			5	081	25.1	26.6	267.15	5.18	1989	1981
30	25	24405	25	-48.5	-35.7	-58.5			2	083	26.7	27.0	318.22	5.21	1987	1982
25	20	25686	20	-44.4	-33.7	-54.3									1987	1990
20	16	27214	16	-41.6	-32.3	-51.9									1987	1983
15	9	29161	9	-39.6	-33.5	-49.9									1987	1983
10	2	31810	2	-38.3	-30.5	-46.1									1987	1983
7	1	33714	1	-42.5	-42.5	-42.5									1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

259 526 544

88 106 1659 -74.4

## NORMALS OF RADIOSONDE DATA

43014 CHIKALTHANA(AURANGABAD)

AUGUST 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	338	938	338	27.2	33.6	22.2	338	21.1	337	278	5.0	5.6	0.57	0.75	1987	1979
<i>1000</i>	264	27											5.47			
<i>950</i>	264	456											9.88			
<i>900</i>	264	955	264	24.3	32.2	17.8	262	18.6	216	280	8.3	9.3	5.65	0.50	1987	1987
<i>850</i>	264	1451	264	20.7	28.4	15.2	262	16.2	214	276	9.8	10.9	7.02	0.47	1989	1987
<i>800</i>	264	1971	264	17.4	26.0	10.6	263	13.8	213	275	9.8	11.0	5.93	0.68	1989	1989
<i>750</i>	264	2512	264	14.2	22.8	6.6	263	10.8	211	277	8.9	10.3	8.83	0.79	1990	1989
<i>700</i>	264	3095	264	11.3	19.8	4.8	262	7.0	208	279	7.3	9.3	6.91	0.91	1990	1989
<i>650</i>	263	3707	263	8.4	17.6	1.4	256	2.8	173	282	5.8	8.5	11.05	0.98	1990	1989
<i>600</i>	261	4367	261	5.4	14.8	-1.7	248	-1.2	166	287	4.5	8.0	9.13	0.91	1990	1989
<i>550</i>	258	5096	258	2.0	12.0	-5.1	232	-4.6	157	300	3.0	7.1	11.30	1.05	1990	1986
<i>500</i>	254	5838	254	-1.5	7.8	-8.7	224	-9.5	153	317	1.7	6.8	12.76	0.99	1990	1986
<i>450</i>	249	6680	249	-5.5	5.2	-11.5	203	-14.1	142	047	1.9	6.8	19.36	1.10	1981	1989
<i>400</i>	244	7586	244	-10.6	-0.9	-18.7	182	-20.0	134	066	4.1	7.1	16.97	1.12	1990	1989
<i>350</i>	238	8600	238	-16.7	-6.7	-25.9	157	-26.7	122	073	6.1	8.1	21.41	1.40	1990	1988
<i>300</i>	235	9746	235	-24.1	-12.3	-31.9	110	-34.0	118	078	9.3	10.9	28.06	1.48	1989	1989
<i>250</i>	220	11052	220	-33.7	-20.7	-43.1	45	-42.4	106	079	14.4	15.5	38.02	1.69	1989	1987
<i>200</i>	208	12574	208	-46.1	-37.9	-58.1	1	-49.7	93	080	20.2	21.5	45.43	1.70	1989	1987
<i>175</i>	188	13446	188	-53.6	-44.1	-65.1			79	082	24.0	25.3	51.98	1.93	1989	1987
<i>150</i>	167	14419	167	-61.8	-49.7	-75.1			71	080	26.8	28.6	60.90	2.25	1990	1989
<i>125</i>	123	15531	123	-69.8	-56.1	-84.9			51	081	31.0	32.5	79.24	3.13	1990	1988
<i>100</i>	84	16836	84	-75.0	-61.3	-89.5			39	080	32.4	33.8	101.36	3.54	1990	1986
<i>80</i>	66	18123	66	-71.7	-60.9	-86.1			20	080	30.7	31.2	158.66	5.49	1987	1988
<i>70</i>	52	18939	52	-66.8	-55.1	-78.3			16	081	28.8	30.0	169.69	3.71	1986	1989
<i>60</i>	40	19906	40	-60.5	-51.1	-72.9			9	082	30.8	31.9	148.86	3.92	1986	1989
<i>50</i>	36	21046	36	-55.1	-43.7	-65.3			7	092	27.5	27.9	156.81	5.30	1986	1983
<i>40</i>	26	22484	26	-51.9	-43.3	-59.5			2	084	21.9	22.0	153.52	3.41	1987	1986
<i>30</i>	19	24365	19	-48.0	-37.5	-57.1			1	065	30.0	30.0			1983	1986
<i>25</i>	17	25569	17	-46.8	-40.5	-57.9			1	064	25.0	25.0			1983	1983
<i>20</i>	12	27029	12	-44.2	-35.3	-49.7									1987	1989
<i>15</i>	6	28980	6	-40.9	-38.7	-44.7									1983	1989
<i>10</i>	2	31923	2	-35.9	-35.3	-36.5									1989	1983
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

254 522 550

74 102 1677 -76.2

## NORMALS OF RADIOSONDE DATA

43014 CHIKALTHANA(AURANGABAD)

SEPTEMBER 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	296	941	296	28.6	36.2	22.0	296	19.7	296	311	2.4	3.6	1.34	1.39	1987	1988
1000	267	46											9.46			
950	266	477											10.55			
900	267	976	267	25.4	32.2	16.8	266	16.9	246	320	4.1	6.0	10.82	0.96	1987	1989
850	267	1473	267	21.7	29.8	14.0	266	14.5	246	315	4.0	6.4	11.22	0.96	1989	1980
800	267	1994	267	17.9	29.0	10.8	266	12.1	245	311	3.3	6.3	11.41	0.97	1989	1989
750	266	2527	266	14.2	21.4	7.8	266	8.9	243	311	2.4	5.7	8.41	1.02	1989	1989
700	266	3119	266	10.9	18.0	5.0	260	4.7	242	309	1.8	5.4	10.46	1.20	1989	1989
650	263	3723	263	7.5	15.2	1.4	251	0.4	228	303	1.7	5.2	13.19	1.36	1989	1982
600	259	4387	259	4.5	12.2	-1.7	237	-3.3	219	305	1.6	5.1	10.97	1.52	1989	1982
550	253	5109	253	1.3	8.0	-5.7	215	-7.8	198	313	1.1	5.0	13.20	1.49	1990	1987
500	252	5852	252	-2.3	5.8	-8.5	191	-11.4	191	333	1.0	5.5	15.49	1.43	1988	1982
450	247	6689	247	-6.5	1.8	-18.1	164	-15.7	173	054	1.7	5.7	24.13	1.39	1988	1986
400	242	7594	242	-11.4	-3.3	-18.1	155	-21.9	169	076	3.1	6.2	24.23	1.43	1988	1980
350	238	8607	238	-17.6	-8.5	-24.9	133	-28.4	161	084	4.7	7.6	30.03	1.46	1988	1988
300	223	9747	223	-25.3	-13.5	-33.9	74	-35.0	148	085	6.4	8.7	34.30	1.44	1988	1988
250	208	11042	208	-35.3	-23.9	-44.9	23	-42.5	136	091	8.9	11.2	40.35	1.58	1988	1988
200	192	12556	191	-47.9	-39.1	-58.7	1	-50.1	124	098	13.3	15.5	49.81	1.85	1988	1985
175	173	13423	173	-55.3	-45.1	-65.5			106	099	16.5	18.3	56.50	2.00	1988	1982
150	156	14387	156	-63.5	-51.3	-73.5			97	097	18.7	20.1	62.04	2.31	1988	1989
125	118	15495	118	-71.1	-55.3	-85.3			66	094	23.0	24.5	74.51	2.88	1988	1989
100	90	16789	90	-75.7	-63.9	-87.7			49	087	23.8	24.7	87.09	3.05	1986	1989
80	74	18078	74	-71.9	-61.9	-88.9			40	085	23.0	23.6	96.48	4.48	1985	1989
70	64	18874	64	-66.5	-52.7	-81.1			33	085	21.8	22.5	112.72	3.71	1990	1989
60	55	19805	55	-61.5	-50.5	-76.9			21	093	19.4	20.3	93.24	5.70	1990	1988
50	47	20945	47	-56.4	-45.1	-66.1			14	086	20.2	22.0	134.15	2.77	1989	1980
40	32	22328	32	-53.8	-43.5	-65.1			9	094	19.6	21.0	252.43	4.95	1985	1980
30	24	24129	24	-50.9	-43.7	-61.3			3	083	26.6	26.7	203.45	5.14	1985	1988
25	19	25342	19	-47.9	-41.1	-56.1									1989	1989
20	12	26856	12	-45.4	-38.5	-52.9									1986	1986
15	9	28756	9	-42.6	-39.3	-46.5									1982	1989
10	3	31481	3	-41.3	-39.3	-43.5									1982	1989
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

249 533 536

87 106 1649 -76.2

## NORMALS OF RADIOSONDE DATA

43014 CHIKALTHANA(AURANGABAD)

OCTOBER 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	309	944	309	30.1	36.2	20.6	309	13.5	309	024	1.8	3.2	0.55	1.83	1986	1990
1000	275	73											3.70			
950	274	506											13.21			
900	274	1009	273	26.5	32.8	19.8	261	9.0	266	021	3.8	6.0	6.53	1.39	1986	1983
850	274	1508	274	22.3	31.2	16.0	265	7.6	266	026	3.7	5.9	8.28	1.37	1990	1981
800	274	2028	274	17.8	28.0	12.0	267	5.9	266	028	3.3	5.8	9.40	1.35	1986	1981
750	274	2558	274	13.2	22.8	7.2	266	3.4	265	028	2.7	5.6	12.60	1.27	1990	1981
700	274	3148	274	9.1	18.8	2.2	241	0.3	265	013	2.0	5.6	11.67	1.33	1990	1988
650	271	3750	270	6.2	16.4	-0.9	180	-3.7	254	350	2.1	5.9	17.36	1.88	1990	1988
600	271	4408	270	3.5	12.8	-5.1	123	-6.7	253	350	2.0	6.0	14.28	2.05	1990	1980
550	269	5127	268	0.6	11.6	-8.9	89	-9.7	243	339	1.9	6.3	22.23	1.98	1990	1982
500	267	5869	267	-3.2	5.6	-11.9	60	-13.3	240	321	2.6	6.8	21.49	1.98	1990	1982
450	265	6700	265	-7.8	2.4	-16.9	46	-17.0	233	302	3.0	7.2	35.32	1.89	1990	1988
400	261	7602	261	-13.5	-1.9	-24.3	35	-22.2	229	291	4.2	8.3	33.33	2.01	1990	1988
350	257	8611	257	-19.9	-6.7	-31.7	29	-29.5	225	272	5.5	9.1	39.30	1.97	1986	1988
300	253	9736	253	-27.4	-11.9	-39.3	21	-35.6	222	254	7.3	10.1	48.25	1.95	1989	1983
250	236	11021	236	-37.4	-27.9	-45.5	7	-44.6	206	237	9.1	11.8	54.58	1.97	1990	1982
200	218	12518	218	-49.5	-39.1	-58.9			187	220	10.4	13.8	67.99	2.13	1986	1980
175	195	13374	195	-56.9	-43.5	-65.9			160	215	10.4	14.2	75.89	2.24	1986	1980
150	168	14340	168	-64.2	-50.3	-76.1			136	210	8.9	13.1	94.00	2.51	1986	1989
125	138	15433	138	-71.4	-59.9	-82.5			104	194	6.3	11.2	100.62	2.45	1990	1989
100	110	16732	110	-75.5	-65.5	-87.9			80	136	4.9	10.0	118.09	2.70	1990	1989
80	96	18031	96	-71.6	-62.3	-87.7			59	094	6.7	8.7	129.81	3.36	1985	1989
70	86	18827	86	-67.1	-56.1	-85.1			50	097	8.1	9.7	143.79	3.03	1988	1989
60	78	19767	78	-62.2	-50.3	-78.1			40	095	8.3	9.2	147.63	2.85	1986	1989
50	66	20914	66	-58.0	-46.9	-68.5			31	086	9.6	10.5	188.12	2.86	1989	1982
40	57	22342	57	-53.4	-43.9	-61.9			21	086	10.3	10.9	201.23	2.81	1989	1982
30	42	24215	42	-49.2	-38.5	-59.7			14	087	12.3	12.8	226.74	2.68	1990	1982
25	32	25376	32	-47.2	-33.7	-54.1			5	079	13.0	13.8	246.53	4.15	1990	1981
20	21	26863	21	-45.2	-34.9	-52.3			3	094	13.6	13.7	242.38	4.69	1990	1987
15	8	28774	8	-44.1	-32.9	-49.5			1	084	13.0	13.0			1990	1982
10	1	31552	1	-39.1	-39.1	-39.1			1	081	23.0	23.0			1988	1988
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

266 547 517

102 105 1653 -76.0

## NORMALS OF RADIOSONDE DATA

43014 CHIKALTHANA(AURANGABAD)

NOVEMBER 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	289	946	289	28.6	33.0	21.0	289	10.9	289	063	1.3	2.4	0.63	0.85	1986	1988
1000	239	98											7.56			
950	239	527	8	27.0	30.2	23.6	8	11.5	8	095	2.4	2.6	15.48		1989	1983
900	239	1028	239	24.3	32.8	15.8	232	6.1	234	052	2.6	4.4	7.86	1.03	1990	1990
850	239	1522	239	19.8	32.8	12.8	233	4.6	234	055	2.6	4.5	8.76	1.28	1990	1989
800	239	2039	239	15.3	29.2	7.4	230	3.2	234	048	2.3	4.6	9.60	1.47	1990	1989
750	239	2568	239	11.4	23.6	2.8	199	1.2	233	042	1.7	4.9	14.89	1.29	1990	1989
700	238	3153	238	8.8	19.2	0.0	135	-2.0	232	002	1.4	5.7	11.90	1.14	1990	1989
650	234	3754	234	6.3	17.4	-2.1	82	-5.5	225	322	1.4	6.4	20.37	1.28	1990	1987
600	230	4414	230	3.4	15.6	-4.1	54	-8.5	220	301	2.5	7.6	15.04	1.21	1990	1988
550	230	5127	230	-0.2	10.6	-6.9	40	-10.8	217	294	4.0	8.6	19.43	1.18	1990	1989
500	228	5870	228	-4.6	9.4	-11.3	30	-13.8	214	292	5.8	10.0	20.37	1.31	1990	1989
450	222	6696	222	-9.6	3.6	-18.7	26	-19.4	208	284	7.5	11.5	27.47	1.19	1990	1990
400	220	7594	220	-15.6	-1.7	-26.7	22	-26.0	206	276	9.7	13.3	24.94	1.20	1990	1988
350	217	8588	216	-22.1	-9.5	-34.9	14	-29.9	200	271	12.2	15.0	27.45	1.32	1990	1990
300	210	9708	210	-29.9	-19.7	-44.1	10	-37.1	191	262	15.3	18.2	34.31	1.41	1990	1990
250	193	10984	193	-39.3	-30.5	-48.5	3	-44.8	174	252	19.2	21.6	42.45	1.71	1988	1987
200	180	12477	180	-50.7	-40.1	-58.5			159	242	22.4	24.9	55.08	2.07	1988	1983
175	156	13326	156	-57.3	-46.3	-68.1			129	238	22.2	24.6	49.89	2.03	1988	1989
150	141	14289	141	-63.9	-49.7	-74.5			113	242	19.6	22.0	59.54	2.43	1988	1980
125	114	15388	114	-69.7	-57.1	-81.9			85	244	11.2	15.7	72.90	3.09	1986	1989
100	95	16696	95	-74.1	-61.3	-87.9			74	243	5.1	11.4	94.17	3.16	1987	1989
80	82	17983	82	-73.2	-55.5	-88.7			52	241	1.2	10.1	118.49	4.01	1981	1989
70	80	18779	80	-69.0	-49.5	-87.1			46	004	1.6	7.4	135.03	3.60	1981	1989
60	73	19712	73	-64.0	-48.9	-80.3			38	072	2.0	7.0	143.41	3.10	1988	1989
50	68	20834	68	-59.2	-43.9	-72.9			32	084	2.9	7.4	158.22	2.53	1987	1988
40	58	22269	58	-55.1	-40.5	-67.1			17	100	4.8	8.6	164.55	2.61	1987	1989
30	42	24136	42	-50.7	-35.5	-62.5			10	076	8.6	10.3	205.01	3.47	1987	1989
25	30	25293	30	-49.3	-41.1	-61.9			6	072	9.8	10.5	255.25	3.59	1987	1989
20	15	26852	15	-46.7	-36.9	-60.1			5	061	8.7	9.0			1986	1989
15	7	28674	7	-47.7	-40.1	-54.5			2	067	10.9	11.5			1986	1986
10	4	31413	4	-45.8	-39.5	-51.3									1986	1986
7	1	33829	1	-42.3	-42.3	-42.3									1987	1987

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

228 558 501

6 140 1476 -64.8

92 102 1662 -75.2



## NORMALS OF RADIOSONDE DATA

43014 CHIKALTHANA(AURANGABAD)

DECEMBER 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	310	948	309	26.8	30.8	16.8	309	10.0	310	110	0.7	2.1	0.89	0.93	1990	1986
<i>1000</i>	195	115											12.43			
<i>950</i>	195	538	15	25.9	28.4	17.8	15	11.9	14	097	1.7	2.1	16.09		1982	1986
<i>900</i>	195	1040	195	22.4	29.0	12.8	193	5.5	190	088	1.7	4.0	12.78	1.75	1990	1986
<i>850</i>	195	1531	195	17.8	26.2	11.0	191	3.6	190	089	1.3	4.4	15.82	2.55	1990	1981
<i>800</i>	195	2045	195	13.5	22.4	6.6	175	1.5	190	076	0.4	4.7	20.15	2.49	1990	1981
<i>750</i>	194	2576	194	10.4	19.8	3.4	122	-2.3	188	265	0.6	5.7	30.65	1.59	1980	1980
<i>700</i>	194	3154	194	8.3	15.4	0.8	75	-7.9	188	263	2.4	6.9	24.41	1.33	1987	1981
<i>650</i>	194	3757	194	5.4	17.0	-2.3	41	-10.5	188	261	4.2	8.5	31.55	1.18	1990	1980
<i>600</i>	192	4412	192	2.2	12.0	-4.5	28	-11.8	184	265	6.0	10.1	27.41	1.15	1990	1981
<i>550</i>	191	5123	191	-2.0	9.2	-9.1	21	-15.1	183	266	7.8	11.4	33.40	1.19	1990	1980
<i>500</i>	189	5861	189	-6.7	5.0	-17.5	17	-18.2	182	263	10.1	13.6	30.90	1.28	1990	1980
<i>450</i>	188	6681	188	-11.7	-0.3	-21.1	16	-23.9	180	262	12.6	16.0	47.43	1.22	1990	1980
<i>400</i>	186	7573	186	-17.7	-6.7	-24.9	10	-27.5	179	260	17.0	20.0	35.44	1.24	1990	1980
<i>350</i>	184	8563	184	-24.1	-13.9	-32.3	10	-34.4	172	259	21.4	24.5	31.13	1.40	1990	1988
<i>300</i>	179	9670	178	-31.6	-22.1	-40.5	7	-41.8	163	256	26.2	30.1	45.83	1.59	1990	1990
<i>250</i>	173	10934	172	-41.2	-28.7	-51.5	1	-53.5	149	250	30.7	35.7	54.44	1.78	1985	1981
<i>200</i>	163	12412	163	-52.4	-39.1	-62.9			127	248	33.3	38.5	69.43	2.65	1990	1985
<i>175</i>	141	13270	141	-58.0	-43.9	-69.1			101	249	32.5	36.5	76.00	2.97	1990	1990
<i>150</i>	121	14223	121	-63.7	-47.9	-73.1			82	253	29.2	33.4	89.78	3.46	1990	1990
<i>125</i>	107	15329	107	-68.2	-52.1	-77.1			53	249	25.8	28.9	114.45	3.88	1990	1981
<i>100</i>	93	16653	93	-72.7	-60.7	-83.5			40	250	18.6	23.2	132.99	3.23	1988	1990
<i>80</i>	77	17955	77	-73.0	-58.1	-84.1			21	260	6.7	16.5	158.53	3.48	1988	1981
<i>70</i>	70	18763	70	-70.0	-54.9	-82.1			20	010	3.2	14.9	168.73	3.97	1988	1981
<i>60</i>	59	19691	59	-65.1	-46.3	-75.5			17	072	6.7	16.7	180.77	4.24	1988	1982
<i>50</i>	53	20823	53	-59.5	-46.3	-72.1			14	091	1.5	11.5	188.54	4.67	1988	1981
<i>40</i>	50	22234	50	-54.7	-39.9	-63.1			9	125	6.6	15.3	197.98	4.20	1987	1981
<i>30</i>	45	24084	45	-50.9	-38.9	-60.9			6	163	6.2	15.3	205.55	4.08	1988	1987
<i>25</i>	33	25276	33	-48.6	-35.9	-58.9			3	128	1.9	17.3	184.43	4.31	1988	1987
<i>20</i>	16	26649	16	-50.4	-40.5	-59.5			1	079	23.0	23.0			1985	1987
<i>15</i>	10	28460	10	-48.7	-40.3	-55.7									1987	1987
<i>10</i>	3	31031	3	-47.6	-43.3	-50.3									1983	1983
<i>7</i>	1	33280	1	-48.5	-48.5	-48.5									1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

193 575 478

9 148 1436 -63.1

85 103 1658 -73.8

## NORMALS OF RADIOSONDE DATA

43279 MADRAS

JANUARY 1971-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	1010	589	26.7	32.2	17.0	587	18.9	589	057	4.3	4.9	0.86	0.67	1980	1975
<i>1000</i>	573	104	573	26.0	31.8	17.0	573	18.4	565	057	5.0	5.6	6.61	0.72	1980	1978
<i>950</i>	573	549	573	22.1	30.2	14.0	571	15.4	565	058	5.1	5.8	7.30	1.37	1980	1975
<i>900</i>	573	1018	573	18.8	27.8	12.0	566	10.9	564	053	4.9	5.7	7.71	1.40	1980	1975
<i>850</i>	573	1507	573	16.4	26.0	9.0	550	5.0	564	053	4.7	5.9	8.52	1.23	1981	1976
<i>800</i>	573	2022	573	14.4	27.0	6.0	483	-0.3	563	054	4.1	5.8	8.98	1.15	1973	1976
<i>750</i>	573	2561	573	12.3	22.0	5.0	389	-4.1	563	055	3.0	5.6	11.10	1.11	1988	1974
<i>700</i>	573	3139	573	9.9	18.8	3.0	340	-7.9	563	047	1.8	5.2	11.81	1.22	1988	1976
<i>650</i>	565	3750	565	6.9	15.0	-1.0	285	-10.9	555	031	1.2	5.2	13.40	1.13	1981	1975
<i>600</i>	562	4404	561	3.4	11.4	-4.0	262	-14.6	551	017	0.9	5.4	15.57	1.13	1989	1972
<i>550</i>	558	5103	557	-0.7	6.0	-9.0	241	-18.6	545	349	1.3	5.8	19.32	1.17	1983	1972
<i>500</i>	556	5860	555	-5.2	2.0	-14.0	235	-22.9	544	323	1.6	6.5	20.77	1.27	1983	1972
<i>450</i>	550	6677	549	-10.2	-0.3	-20.0	215	-27.5	535	293	2.5	7.6	25.07	1.47	1983	1972
<i>400</i>	544	7580	544	-15.8	-8.1	-26.0	203	-32.9	529	281	3.5	8.8	29.80	1.69	1983	1972
<i>350</i>	532	8572	532	-22.7	-13.3	-32.0	165	-38.9	515	277	5.9	10.5	36.53	1.77	1980	1972
<i>300</i>	526	9691	526	-30.8	-23.3	-40.0	151	-46.2	510	259	7.2	11.4	43.16	1.92	1982	1972
<i>250</i>	509	10961	509	-40.8	-31.0	-48.3	88	-54.3	487	242	9.3	13.2	53.23	2.00	1975	1980
<i>200</i>	490	12443	490	-52.7	-44.5	-62.1	1	-59.0	465	233	10.4	14.9	65.77	2.04	1983	1982
<i>175</i>	439	13296	439	-59.3	-51.3	-72.0			398	232	10.2	15.0	74.24	2.08	1983	1971
<i>150</i>	401	14249	401	-66.5	-56.1	-76.0			366	230	8.9	13.9	84.06	1.88	1983	1971
<i>125</i>	332	15334	332	-73.1	-61.1	-83.0			297	226	6.4	12.6	95.32	2.10	1983	1976
<i>100</i>	305	16618	305	-78.9	-68.5	-90.0			272	203	2.6	9.5	107.17	2.23	1981	1978
<i>80</i>	236	17902	236	-76.3	-64.1	-92.0			209	158	1.0	7.2	122.93	3.50	1981	1978
<i>70</i>	214	18705	214	-72.4	-57.9	-88.0			193	194	0.3	6.6	140.80	3.86	1981	1978
<i>60</i>	188	19614	188	-67.6	-53.5	-84.0			165	226	1.2	6.4	153.89	3.98	1981	1977
<i>50</i>	166	20740	166	-62.1	-48.1	-80.0			142	240	1.1	7.2	173.12	4.84	1981	1973
<i>40</i>	116	22188	116	-56.9	-44.5	-73.0			92	088	1.3	9.1	220.96	5.08	1981	1978
<i>30</i>	75	24082	75	-51.7	-40.1	-64.0			58	099	5.6	10.4	220.04	4.28	1981	1978
<i>25</i>	46	25269	46	-50.1	-37.1	-62.0			30	095	5.7	10.9	191.92	3.36	1981	1978
<i>20</i>	30	26737	30	-47.3	-34.1	-59.9			14	095	10.6	13.4	115.40	2.62	1981	1987
<i>15</i>	6	28343	6	-47.2	-42.5	-58.1									1987	1987
<i>10</i>	1	30416	1	-55.9	-55.9	-55.9									1987	1987
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

560 558 498

257 097 1677 -80.5

# NORMALS OF RADIOSONDE DATA

43279 MADRAS

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	564	1009	564	28.3	32.0	19.0	564	20.0	564	095	3.8	4.7	1.38	0.53	1972	1976
<i>1000</i>	538	92	538	27.6	32.0	22.8	537	19.5	531	095	4.2	5.1	10.79	0.60	1973	1984
<i>950</i>	538	539	538	23.7	31.0	14.0	537	15.0	531	103	4.0	5.5	10.37	1.24	1976	1972
<i>900</i>	538	1011	538	21.2	29.8	10.0	524	9.3	531	081	3.1	5.1	10.64	1.48	1983	1978
<i>850</i>	538	1504	538	18.6	27.4	10.0	504	4.2	531	062	3.7	5.5	10.94	1.58	1983	1978
<i>800</i>	538	2021	538	15.6	24.4	2.0	459	0.5	531	050	4.0	5.9	11.71	1.56	1990	1977
<i>750</i>	538	2562	538	12.8	20.6	5.0	424	-3.4	530	040	3.7	5.9	13.69	1.36	1983	1973
<i>700</i>	537	3141	537	10.1	17.2	4.0	378	-8.0	529	030	2.6	5.5	15.34	1.28	1983	1978
<i>650</i>	532	3752	532	7.0	16.0	-1.0	307	-11.8	524	352	1.5	5.7	16.93	1.24	1976	1978
<i>600</i>	531	4406	531	3.5	11.2	-4.0	272	-15.6	523	322	1.7	6.1	18.26	1.30	1983	1978
<i>550</i>	527	5105	527	-0.6	7.0	-8.0	233	-19.1	520	307	1.9	6.6	21.31	1.23	1983	1974
<i>500</i>	525	5862	523	-4.9	2.0	-13.0	220	-23.7	518	295	2.5	7.2	23.94	1.28	1983	1974
<i>450</i>	522	6680	520	-9.8	-2.3	-20.0	199	-27.7	509	281	3.2	8.2	27.11	1.34	1983	1978
<i>400</i>	518	7584	517	-15.3	-7.1	-24.0	198	-32.8	507	282	4.7	9.6	29.63	1.62	1983	1978
<i>350</i>	509	8578	508	-22.2	-14.1	-31.0	177	-38.8	496	275	6.9	11.3	36.78	1.88	1983	1978
<i>300</i>	503	9699	503	-30.3	-22.1	-40.0	163	-45.9	491	261	8.1	12.2	43.89	2.04	1983	1978
<i>250</i>	484	10970	484	-40.3	-29.5	-48.9	102	-53.6	465	248	9.5	13.1	53.71	2.18	1983	1982
<i>200</i>	468	12457	468	-52.2	-40.9	-63.0	2	-60.0	450	241	9.5	14.4	67.59	2.34	1983	1971
<i>175</i>	415	13310	415	-58.8	-47.3	-68.0			396	240	9.1	14.9	73.91	2.31	1983	1978
<i>150</i>	393	14263	393	-65.9	-54.7	-76.0			371	241	7.9	14.4	84.73	2.24	1983	1978
<i>125</i>	335	15351	335	-72.6	-62.0	-84.1			315	240	5.9	12.2	101.52	2.28	1974	1982
<i>100</i>	285	16639	284	-78.8	-67.3	-90.0			267	251	3.7	9.8	117.48	2.10	1983	1975
<i>80</i>	207	17910	207	-76.7	-65.1	-89.0			196	274	2.0	7.5	139.98	2.43	1982	1978
<i>70</i>	189	18713	189	-73.1	-62.1	-88.0			174	244	2.5	7.0	146.77	2.54	1982	1978
<i>60</i>	157	19610	157	-68.4	-55.1	-87.0			137	258	2.8	7.2	154.50	2.50	1982	1978
<i>50</i>	125	20735	125	-62.3	-53.5	-86.0			107	258	1.1	7.9	159.59	2.59	1983	1978
<i>40</i>	90	22158	90	-58.0	-49.1	-81.0			70	093	2.4	9.3	167.97	3.45	1989	1978
<i>30</i>	63	24045	63	-53.3	-44.7	-75.0			41	096	8.8	12.4	236.28	5.29	1982	1978
<i>25</i>	44	25232	44	-50.7	-39.5	-72.0			23	091	11.0	13.3	319.34	6.84	1982	1978
<i>20</i>	31	26752	31	-47.7	-39.5	-57.1			11	097	11.0	12.6	157.20	2.69	1986	1984
<i>15</i>	18	28687	18	-45.5	-35.1	-55.3									1987	1984
<i>10</i>	6	31223	6	-46.8	-40.5	-52.9									1983	1984
<i>7</i>	1	33250	1	-50.7	-50.7	-50.7									1984	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

527 557 500

229 097 1681 -80.7

# NORMALS OF RADIOSONDE DATA

43279 MADRAS

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	1007	620	30.2	36.0	22.4	620	21.8	620	119	4.0	4.7	0.87	0.47	1975	1980
1000	610	77	610	29.6	34.6	23.0	609	21.3	603	119	4.3	5.1	6.38	0.57	1980	1975
950	610	528	610	26.1	33.8	17.0	604	15.7	603	138	4.5	5.6	6.69	1.06	1983	1975
900	610	1004	610	24.0	33.8	16.2	589	8.0	603	131	2.3	4.3	5.46	1.24	1983	1986
850	610	1501	610	21.3	30.0	14.0	573	2.4	603	087	3.3	5.1	5.63	1.30	1988	1971
800	610	2022	610	17.9	26.2	10.0	539	-0.8	602	057	4.8	6.3	6.63	1.29	1988	1971
750	610	2566	610	14.2	22.0	6.0	516	-3.3	602	055	5.6	7.2	8.72	1.23	1977	1971
700	610	3147	610	10.3	21.0	3.0	478	-6.8	602	046	5.4	7.3	10.04	1.23	1975	1978
650	606	3759	606	6.8	13.8	1.0	398	-10.8	600	043	3.9	6.5	12.48	1.27	1980	1978
600	605	4412	605	3.4	10.0	-4.0	333	-15.7	599	037	2.2	5.9	15.13	1.27	1989	1973
550	602	5111	602	-0.5	6.8	-9.0	278	-20.1	597	019	1.2	6.1	18.29	1.33	1980	1977
500	601	5868	601	-5.0	2.8	-15.0	261	-24.5	596	328	1.3	6.3	20.78	1.48	1980	1978
450	597	6686	597	-9.9	-1.0	-17.5	231	-28.8	591	302	2.5	7.1	25.31	1.72	1977	1982
400	593	7589	593	-15.5	-6.9	-23.0	221	-34.0	587	283	4.3	8.4	31.04	1.98	1987	1971
350	584	8582	584	-22.3	-13.5	-31.0	195	-39.8	579	269	6.5	10.4	38.00	2.02	1983	1974
300	572	9703	572	-30.3	-21.9	-39.3	178	-46.7	567	261	8.5	12.1	45.72	2.04	1980	1983
250	550	10976	550	-39.9	-29.5	-48.0	94	-54.0	544	253	10.3	13.8	57.30	2.15	1980	1974
200	532	12466	532	-51.6	-39.9	-63.9	1	-56.0	523	246	11.0	14.5	70.73	2.31	1980	1982
175	482	13318	482	-58.3	-45.5	-68.0			463	246	10.7	14.7	76.36	2.31	1980	1972
150	449	14275	449	-65.5	-50.9	-74.5			430	249	9.1	14.0	82.45	2.21	1980	1979
125	379	15358	379	-72.3	-56.5	-85.0			354	247	5.8	11.2	89.10	2.45	1980	1978
100	332	16644	332	-78.9	-63.1	-89.5			308	253	2.3	8.7	103.79	2.49	1980	1982
80	259	17920	259	-77.0	-55.7	-89.0			232	106	0.5	7.1	118.32	2.24	1981	1978
70	236	18720	236	-73.0	-51.1	-85.0			205	194	0.3	6.7	124.24	2.48	1981	1978
60	200	19623	200	-68.4	-46.1	-82.0			168	249	1.2	7.2	140.54	2.93	1981	1973
50	170	20745	170	-62.4	-52.1	-75.0			144	240	0.8	7.3	150.58	3.10	1981	1978
40	124	22152	124	-57.9	-47.1	-73.0			94	091	2.8	8.8	187.41	3.45	1981	1978
30	97	24019	97	-52.1	-40.5	-70.0			72	089	7.1	11.5	237.91	6.17	1981	1978
25	69	25179	69	-49.6	-39.1	-69.0			44	092	11.2	14.1	291.51	6.97	1981	1978
20	49	26645	49	-47.0	-38.5	-56.1			26	098	14.1	17.5	160.91	2.28	1981	1982
15	9	28447	9	-45.3	-39.3	-52.1			1	247	9.0	9.0			1989	1984
10	3	31120	3	-41.7	-39.1	-44.9									1987	1989
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
602	555	502					284	096	1687	-80.9

## NORMALS OF RADIOSONDE DATA

43279 MADRAS

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	1004	600	32.0	36.8	26.0	600	24.2	599	133	5.1	5.6	0.89	0.51	1985	1988
<i>1000</i>	584	50	574	31.5	36.4	21.6	572	23.8	561	132	5.3	5.8	6.60	0.50	1985	1982
<i>950</i>	584	505	584	28.3	34.4	20.2	579	19.2	571	155	5.6	6.5	7.43	1.15	1979	1988
<i>900</i>	584	984	583	26.4	34.2	16.0	569	12.4	571	174	2.2	4.1	7.13	1.18	1979	1977
<i>850</i>	584	1485	583	23.6	30.6	14.0	561	6.1	571	098	1.2	4.0	7.73	1.14	1990	1977
<i>800</i>	584	2010	584	20.2	27.4	9.8	546	1.6	570	066	3.5	5.3	8.53	1.15	1980	1982
<i>750</i>	584	2558	584	16.3	23.0	6.0	528	-1.4	570	058	5.5	6.7	11.01	1.23	1982	1974
<i>700</i>	584	3143	584	11.9	18.2	5.6	517	-4.3	571	053	6.6	7.7	11.05	1.23	1983	1982
<i>650</i>	579	3756	578	7.7	15.2	1.0	464	-7.7	566	049	6.4	7.7	14.19	1.39	1983	1974
<i>600</i>	575	4411	574	3.8	14.0	-3.0	416	-12.8	564	050	4.7	6.5	16.26	1.50	1977	1972
<i>550</i>	575	5112	574	0.1	8.4	-7.1	329	-17.4	562	050	2.6	5.7	21.00	1.51	1983	1982
<i>500</i>	573	5871	573	-4.1	4.6	-12.1	283	-21.6	561	031	1.3	5.7	23.37	1.45	1983	1982
<i>450</i>	565	6692	565	-9.0	-0.5	-18.1	252	-25.9	551	355	1.5	6.4	28.16	1.53	1983	1982
<i>400</i>	558	7599	557	-14.5	-6.1	-26.1	244	-30.9	542	317	2.0	7.2	32.32	1.76	1983	1982
<i>350</i>	554	8595	553	-21.4	-12.3	-34.0	215	-36.7	537	287	3.3	8.4	40.95	1.91	1983	1975
<i>300</i>	544	9721	544	-29.4	-21.1	-42.9	196	-44.0	526	263	5.4	10.0	47.92	2.22	1980	1982
<i>250</i>	528	10998	528	-39.3	-28.7	-55.1	125	-52.9	506	247	7.7	11.6	59.41	2.50	1980	1982
<i>200</i>	510	12491	510	-51.0	-40.1	-61.0	4	-57.5	489	237	8.6	12.6	76.21	2.74	1980	1971
<i>175</i>	473	13349	473	-57.7	-46.1	-67.1			448	235	8.5	12.3	86.54	2.93	1980	1982
<i>150</i>	449	14306	449	-65.1	-52.3	-73.7			425	235	7.2	11.2	98.92	2.90	1980	1982
<i>125</i>	374	15396	374	-72.1	-55.1	-82.0			349	233	3.3	9.3	118.83	3.58	1980	1972
<i>100</i>	342	16689	342	-78.7	-59.5	-89.9			317	116	2.1	8.0	138.49	4.20	1980	1982
<i>80</i>	263	17967	263	-76.4	-61.7	-87.0			243	089	4.6	8.1	148.54	4.36	1980	1978
<i>70</i>	240	18774	240	-72.3	-60.1	-84.0			223	087	3.9	7.5	162.99	4.08	1980	1971
<i>60</i>	210	19684	210	-67.1	-53.7	-80.0			184	088	3.1	7.5	174.29	3.78	1983	1971
<i>50</i>	177	20807	177	-61.4	-46.3	-76.0			155	097	4.2	8.2	228.17	4.01	1983	1971
<i>40</i>	131	22222	131	-56.6	-45.9	-73.0			116	098	6.7	9.7	208.99	2.81	1982	1971
<i>30</i>	106	24116	106	-50.4	-41.1	-70.0			90	093	9.3	12.4	254.86	3.98	1990	1971
<i>25</i>	82	25320	82	-47.6	-38.3	-68.0			64	091	12.0	14.8	268.20	4.07	1990	1971
<i>20</i>	59	26849	59	-44.1	-36.1	-52.9			47	095	13.5	16.0	127.60	2.30	1990	1982
<i>15</i>	28	28721	28	-42.4	-33.3	-48.7			6	103	10.9	15.0	175.83	2.08	1990	1984
<i>10</i>	7	31312	7	-40.4	-35.5	-44.3			1	104	15.0	15.0			1984	1984
<i>7</i>	1	33400	1	-40.5	-40.5	-40.5									1984	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

574 549 512

289 095 1695 -80.8

# NORMALS OF RADIOSONDE DATA

43279 MADRAS

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	1001	620	33.5	42.0	24.0	620	23.9	620	133	4.0	5.4	1.20	0.84	1978	1990
1000	601	25	432	32.6	40.0	24.0	432	24.0	420	131	4.4	5.6	9.90	0.67	1972	1990
950	602	481	602	30.3	40.2	19.6	602	19.5	592	152	3.9	6.4	10.23	1.24	1980	1981
900	602	964	602	27.9	38.0	17.2	600	15.4	592	245	1.5	4.7	9.71	1.28	1980	1981
850	602	1467	602	24.4	34.0	10.4	594	11.7	592	300	2.4	4.8	9.94	1.53	1980	1982
800	602	1994	601	20.6	30.2	11.4	589	7.9	591	329	2.8	5.5	11.15	1.52	1980	1985
750	602	2543	601	16.6	26.2	7.0	588	3.7	591	003	3.1	6.2	13.86	1.55	1988	1975
700	602	3128	602	12.5	21.0	3.0	583	-0.7	591	025	4.0	6.9	13.99	1.44	1980	1971
650	594	3744	594	8.0	16.4	0.0	557	-4.3	585	036	4.6	7.4	16.70	1.51	1989	1978
600	585	4400	586	3.8	14.4	-4.7	524	-8.0	574	035	4.4	7.4	19.07	1.55	1982	1982
550	580	5100	580	-0.2	8.2	-10.3	456	-12.1	566	031	3.1	6.8	23.52	1.57	1980	1982
500	574	5858	574	-4.0	3.0	-15.9	380	-16.6	560	014	2.2	6.4	25.33	1.45	1983	1982
450	567	6681	567	-8.3	-1.1	-22.3	309	-20.8	551	003	1.9	6.4	29.83	1.49	1983	1982
400	563	7591	563	-13.6	-5.5	-29.1	279	-26.3	548	358	1.6	6.3	33.64	1.68	1983	1982
350	553	8591	553	-20.4	-11.9	-38.5	223	-32.4	535	347	0.9	6.0	41.45	1.82	1983	1982
300	547	9722	547	-28.3	-19.5	-39.0	185	-39.7	526	205	0.5	6.2	47.78	2.01	1985	1977
250	533	11005	533	-38.2	-28.1	-49.0	125	-49.2	506	167	1.7	7.1	59.84	2.20	1982	1977
200	514	12504	514	-50.3	-39.1	-62.9	8	-58.5	484	143	3.7	8.8	75.60	2.54	1980	1982
175	466	13365	466	-57.2	-45.5	-71.0			437	130	5.3	10.2	83.20	2.45	1980	1977
150	436	14325	435	-64.8	-53.9	-79.0			409	118	7.6	11.8	94.71	2.45	1980	1977
125	355	15413	355	-72.4	-60.3	-85.0			328	106	10.0	13.0	103.05	2.87	1980	1977
100	314	16709	314	-78.8	-65.7	-90.0			293	098	12.4	13.9	115.51	2.76	1982	1977
80	235	17984	235	-76.0	-63.1	-92.0			208	093	10.5	11.9	146.87	3.94	1982	1978
70	210	18792	210	-71.5	-53.5	-88.0			186	093	9.7	11.1	167.15	4.24	1982	1978
60	179	19705	179	-66.0	-50.5	-90.0			155	094	9.7	11.0	186.38	4.74	1982	1978
50	149	20863	149	-59.7	-46.9	-73.0			125	095	9.8	11.2	222.00	4.45	1982	1978
40	100	22335	100	-53.9	-40.9	-65.0			82	098	11.8	12.9	252.32	4.13	1982	1978
30	76	24203	76	-47.8	-33.3	-56.1			56	088	16.2	17.1	244.43	2.93	1982	1984
25	51	25417	51	-45.5	-32.1	-52.5			33	094	17.1	18.5	203.42	2.90	1982	1984
20	39	26886	39	-42.7	-33.1	-49.1			21	091	19.1	20.3	197.66	2.66	1982	1984
15	16	28806	16	-40.4	-31.1	-47.1			5	087	25.7	26.8			1982	1989
10	4	31467	4	-41.0	-35.5	-44.5									1984	1990
7	2	33890	2	-38.9	-37.5	-40.3									1984	1989

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

581 552 508

256 097 1685 -80.6

# NORMALS OF RADIOSONDE DATA

43279 MADRAS

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	1000	600	33.8	41.0	24.0	600	22.6	599	196	1.8	5.3	0.55	0.89	1972	1972
<i>1000</i>	552	14	286	33.1	39.0	24.0	286	22.8	273	179	2.2	5.5	4.48	0.93	1978	1972
<i>950</i>	551	471	551	30.6	39.0	23.0	550	19.2	541	231	3.8	7.2	4.22	1.04	1973	1978
<i>900</i>	551	954	551	27.2	37.2	20.0	550	16.8	541	261	5.9	7.2	4.57	1.17	1987	1971
<i>850</i>	551	1456	551	23.2	32.4	16.0	550	14.8	541	273	7.3	8.1	5.82	1.28	1987	1971
<i>800</i>	551	1980	551	19.1	28.0	13.0	548	12.5	539	279	8.4	9.0	7.65	1.33	1975	1985
<i>750</i>	551	2528	551	15.1	23.8	9.0	547	9.4	538	282	9.0	9.9	10.04	1.30	1987	1978
<i>700</i>	551	3110	551	11.4	19.2	4.0	546	5.1	538	283	8.7	10.1	12.42	1.19	1987	1978
<i>650</i>	544	3724	544	7.8	16.0	1.0	539	0.6	530	282	7.8	9.8	14.94	1.27	1972	1978
<i>600</i>	538	4380	538	4.1	12.4	-3.0	525	-3.4	520	281	6.9	9.2	17.92	1.30	1988	1978
<i>550</i>	529	5082	529	0.3	6.2	-6.0	499	-7.9	508	282	6.2	8.3	20.66	1.33	1983	1977
<i>500</i>	525	5841	525	-3.8	5.0	-10.0	476	-13.3	505	280	5.2	7.4	24.35	1.23	1976	1977
<i>450</i>	520	6664	520	-8.2	-1.5	-18.0	435	-18.2	496	283	4.0	6.6	28.98	1.42	1983	1976
<i>400</i>	511	7575	511	-13.3	-5.5	-23.0	383	-23.9	487	284	2.2	5.9	33.46	1.70	1987	1978
<i>350</i>	499	8577	499	-19.9	-13.1	-27.0	303	-29.8	476	339	0.4	5.7	41.81	1.72	1983	1978
<i>300</i>	494	9710	494	-27.8	-20.1	-37.0	257	-38.0	470	082	2.8	6.4	48.40	1.83	1983	1978
<i>250</i>	473	10998	473	-37.6	-29.1	-46.0	148	-47.9	450	088	7.9	9.8	58.25	2.04	1980	1977
<i>200</i>	456	12502	456	-49.8	-40.5	-59.0	15	-58.3	437	087	15.2	16.2	73.26	2.41	1980	1975
<i>175</i>	412	13366	412	-56.7	-46.9	-67.0			388	085	19.0	20.0	81.79	2.50	1980	1977
<i>150</i>	388	14329	388	-64.6	-53.5	-77.0			364	085	24.1	24.8	90.51	2.50	1980	1977
<i>125</i>	338	15417	338	-72.5	-58.1	-84.0			312	086	28.7	29.6	105.34	2.84	1980	1977
<i>100</i>	301	16712	301	-78.6	-59.9	-91.0			276	089	28.2	28.9	121.08	3.02	1980	1978
<i>80</i>	216	17994	216	-74.2	-63.5	-88.0			190	087	20.7	21.4	136.31	3.84	1985	1977
<i>70</i>	189	18810	189	-70.1	-57.1	-90.0			167	085	17.7	18.5	157.61	3.77	1981	1977
<i>60</i>	159	19724	159	-65.3	-47.1	-82.0			140	088	16.3	17.1	159.36	3.60	1981	1977
<i>50</i>	139	20850	139	-59.9	-45.5	-75.0			121	094	14.7	15.6	197.77	4.27	1983	1977
<i>40</i>	103	22278	103	-55.0	-40.1	-67.1			75	092	16.7	17.2	190.37	2.65	1983	1980
<i>30</i>	72	24144	72	-49.8	-41.1	-59.1			53	091	20.6	21.0	241.10	3.86	1982	1984
<i>25</i>	50	25378	50	-47.0	-38.1	-57.1			27	089	21.7	22.1	173.54	2.83	1982	1984
<i>20</i>	33	26891	32	-43.5	-34.3	-52.1			16	092	21.8	22.3	125.46	2.24	1982	1982
<i>15</i>	16	28888	16	-40.7	-27.7	-45.9			5	082	23.6	24.0			1983	1983
<i>10</i>	6	31788	6	-39.5	-35.9	-43.9									1982	1988
<i>7</i>	2	34252	2	-39.0	-36.3	-41.7									1983	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
531	547	512					242	100	1669	-80.2

# NORMALS OF RADIOSONDE DATA

43279 MADRAS

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	1001	620	32.4	39.0	24.0	620	23.1	620	180	1.3	4.4	0.74	0.84	1980	1974
1000	588	23	431	31.9	39.0	24.8	431	22.9	419	157	1.7	4.3	5.91	0.82	1980	1989
950	597	477	597	29.0	36.2	19.8	596	19.3	587	235	2.8	6.1	6.83	0.94	1979	1985
900	597	958	596	25.5	32.8	15.6	595	17.0	587	266	5.6	6.9	6.83	1.07	1988	1985
850	597	1458	597	21.7	29.4	13.2	596	14.9	587	276	7.5	8.2	8.43	1.12	1988	1985
800	597	1980	597	17.9	25.4	10.6	595	12.7	587	279	8.8	9.3	10.25	1.08	1988	1985
750	597	2525	597	14.2	21.4	8.0	595	9.5	586	279	9.9	10.4	12.83	1.00	1980	1980
700	597	3106	597	10.7	17.0	5.0	595	5.4	586	279	9.5	10.2	13.77	0.85	1989	1973
650	590	3720	590	7.4	12.8	1.8	586	1.0	576	277	8.6	9.4	16.13	0.83	1989	1979
600	588	4375	588	3.9	9.4	-5.0	578	-3.2	572	275	7.7	8.9	17.88	0.99	1988	1972
550	584	5076	584	0.3	8.2	-6.9	555	-8.0	565	273	6.5	8.0	20.79	0.92	1990	1979
500	579	5837	579	-3.6	1.2	-10.3	532	-13.1	559	271	5.2	7.3	22.28	0.93	1983	1979
450	574	6660	574	-8.3	-1.3	-16.1	491	-18.5	548	261	3.4	6.5	25.54	1.10	1988	1985
400	571	7570	571	-13.7	-5.9	-21.0	459	-24.1	539	242	1.3	6.1	29.31	1.25	1980	1978
350	557	8570	557	-20.4	-13.1	-28.0	390	-29.8	522	106	1.5	6.6	33.84	1.27	1988	1977
300	551	9701	551	-28.4	-20.1	-38.0	342	-37.5	517	093	5.3	8.0	38.15	1.50	1980	1977
250	531	10983	531	-38.3	-30.9	-49.0	214	-47.7	495	088	11.3	12.7	45.39	1.72	1983	1971
200	510	12483	510	-50.4	-39.9	-59.0	22	-56.8	470	085	19.8	20.5	56.36	1.88	1980	1971
175	471	13343	471	-57.5	-46.9	-69.0			420	083	24.5	25.1	64.90	2.06	1980	1977
150	442	14304	442	-65.3	-50.9	-73.1			396	082	29.4	30.0	70.33	2.08	1980	1985
125	386	15391	386	-72.9	-60.0	-87.0			343	084	34.1	34.8	78.87	2.26	1977	1978
100	346	16689	346	-77.3	-61.9	-90.1			308	087	33.3	33.9	81.51	2.60	1990	1982
80	274	17990	274	-71.0	-58.1	-88.0			231	087	25.3	25.8	95.67	3.25	1980	1978
70	244	18807	244	-67.1	-51.5	-79.1			208	088	22.3	22.8	110.49	3.26	1990	1982
60	219	19728	219	-63.3	-50.1	-75.5			180	087	20.3	20.8	114.66	3.29	1983	1982
50	190	20869	190	-59.2	-44.1	-72.0			149	092	19.9	20.2	131.09	4.05	1983	1972
40	146	22292	146	-54.6	-39.9	-70.0			93	092	19.8	20.1	181.16	5.01	1981	1972
30	113	24145	113	-50.2	-38.5	-66.0			64	094	22.3	22.6	188.56	5.42	1990	1972
25	82	25310	82	-48.3	-38.9	-58.7			37	089	24.3	24.5	110.94	2.59	1982	1985
20	63	26794	63	-45.7	-37.5	-55.3			20	093	23.9	24.7	183.18	2.67	1982	1985
15	30	28668	30	-44.3	-34.1	-50.3			2	095	29.9	30.0	65.94	1.81	1984	1983
10	17	31303	17	-41.7	-35.7	-48.5									1985	1984
7	2	33969	2	-40.7	-39.1	-42.3									1984	1985

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

585 545 513

311 105 1641 -79.1



# NORMALS OF RADIOSONDE DATA

43279 MADRAS

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	616	1001	616	31.9	37.4	23.8	616	23.3	616	211	1.1	4.2	0.67	0.75	1979	1988
1000	584	25	455	31.5	37.0	24.4	455	23.3	439	175	1.1	4.1	5.74	0.80	1978	1988
950	584	479	584	28.9	36.2	22.0	584	19.6	575	248	3.3	5.9	6.23	0.90	1984	1971
900	584	960	584	25.3	32.2	19.0	584	17.3	575	271	5.9	6.9	7.16	1.03	1984	1973
850	584	1459	584	21.5	28.0	16.0	584	15.3	575	279	7.7	8.3	8.34	1.09	1984	1973
800	584	1981	584	17.7	25.0	12.0	584	12.8	575	282	9.1	9.6	10.34	1.14	1987	1973
750	584	2526	584	14.1	22.4	7.8	582	9.7	573	283	10.0	10.6	12.68	1.16	1982	1979
700	584	3107	583	10.9	18.4	5.0	581	5.7	573	283	10.1	10.6	14.28	1.11	1982	1982
650	579	3720	578	7.7	15.0	1.8	577	1.1	561	281	9.1	9.9	16.20	1.08	1988	1979
600	577	4377	577	4.3	11.2	-3.0	573	-3.2	559	279	8.1	9.1	19.30	1.15	1988	1974
550	575	5079	574	0.7	7.6	-7.0	558	-8.0	552	276	6.8	8.2	22.78	1.19	1988	1976
500	569	5842	566	-3.3	4.0	-10.0	529	-13.4	545	274	5.4	7.2	24.56	1.21	1987	1975
450	561	6666	559	-7.8	-0.3	-14.1	477	-18.5	531	267	3.7	6.4	29.42	1.36	1987	1979
400	557	7578	557	-13.2	-5.7	-20.0	444	-24.1	528	261	1.8	6.0	32.95	1.56	1989	1978
350	554	8580	554	-20.0	-12.7	-28.0	389	-30.0	516	121	1.3	6.2	39.13	1.66	1990	1976
300	548	9711	547	-28.2	-19.1	-38.0	344	-38.3	509	099	5.4	7.9	44.69	1.87	1990	1976
250	537	10995	537	-38.2	-26.7	-49.0	209	-47.6	496	094	11.7	12.7	53.74	2.11	1990	1976
200	522	12494	522	-50.4	-40.3	-61.0	20	-57.8	477	087	19.6	20.2	67.14	2.42	1981	1976
175	479	13353	479	-57.4	-47.5	-69.0	1	-65.1	431	084	23.4	24.1	75.40	2.57	1981	1976
150	456	14310	456	-65.3	-54.5	-78.0			407	083	27.8	28.4	85.81	2.79	1981	1976
125	401	15399	401	-73.0	-61.1	-83.0			357	084	31.5	32.2	104.47	3.04	1981	1978
100	356	16699	356	-77.1	-65.0	-90.0			311	086	30.9	31.5	117.82	3.00	1976	1978
80	286	18006	286	-70.7	-58.3	-87.0			227	087	23.4	23.9	131.26	3.54	1985	1977
70	247	18828	247	-66.5	-54.1	-83.0			195	086	20.6	21.1	156.05	4.04	1980	1975
60	198	19763	198	-62.9	-44.9	-80.0			150	091	19.2	19.7	185.08	5.11	1980	1975
50	158	20917	158	-58.7	-43.9	-76.0			116	091	18.8	19.5	219.84	5.54	1980	1975
40	101	22365	101	-54.4	-41.5	-67.0			56	095	18.0	18.7	225.32	5.10	1980	1977
30	67	24260	67	-49.6	-37.1	-61.0			36	088	18.1	18.8	275.62	5.11	1980	1978
25	44	25435	44	-48.0	-38.1	-54.5			17	091	22.6	22.9	256.81	3.58	1980	1988
20	37	26934	37	-45.2	-35.5	-52.3			10	091	23.2	23.3	244.46	3.42	1980	1988
15	15	28897	15	-42.6	-32.1	-49.3			1	086	38.0	38.0			1980	1988
10	8	31511	8	-40.2	-37.1	-44.3									1988	1988
7	2	33906	2	-37.2	-34.5	-39.9									1988	1988

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

571 541 521

335 106 1638 -79.1

# NORMALS OF RADIOSONDE DATA

43279 MADRAS

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	1003	600	30.9	37.0	22.6	600	23.9	600	125	1.6	4.0	0.71	0.69	1978	1988
1000	586	38	561	30.6	36.2	23.0	559	23.6	552	123	1.8	4.0	5.02	0.69	1982	1988
950	586	490	586	27.6	34.8	19.2	584	20.2	578	182	1.1	5.1	7.13	1.10	1982	1979
900	586	970	586	24.4	33.0	16.8	584	17.5	578	275	2.5	4.9	7.16	1.28	1976	1979
850	586	1467	586	21.0	29.0	10.0	584	14.9	578	288	3.9	5.8	8.68	1.31	1977	1975
800	586	1989	586	17.5	25.2	9.6	583	11.8	577	292	4.7	6.5	10.83	1.28	1990	1979
750	586	2534	586	14.2	21.8	8.0	582	8.1	576	291	4.6	6.7	14.03	1.18	1990	1974
700	586	3115	586	10.8	18.0	5.0	581	4.0	575	289	4.4	6.6	14.93	1.11	1990	1975
650	579	3728	579	7.6	16.0	0.0	570	-0.7	562	288	3.6	6.3	17.32	1.02	1975	1975
600	576	4385	576	4.1	10.2	-2.0	554	-4.8	557	283	2.5	5.9	18.38	1.06	1983	1976
550	573	5086	573	0.3	6.0	-7.0	540	-9.5	549	284	1.7	5.7	22.32	1.11	1983	1973
500	571	5847	571	-3.7	4.0	-14.0	516	-14.6	546	292	0.7	5.4	22.90	1.07	1975	1972
450	562	6670	562	-8.3	-1.0	-18.0	467	-19.5	528	103	0.5	5.4	25.89	1.15	1975	1976
400	553	7579	553	-13.7	-5.0	-21.0	414	-25.2	518	100	1.9	5.7	28.91	1.22	1977	1977
350	543	8580	543	-20.5	-13.7	-31.0	328	-31.1	505	099	3.8	6.4	34.35	1.41	1990	1977
300	531	9710	531	-28.6	-21.3	-39.0	271	-39.5	494	098	6.1	7.7	37.89	1.52	1990	1977
250	514	10993	513	-38.7	-30.0	-51.0	158	-48.9	471	095	10.0	10.9	44.33	1.70	1974	1977
200	504	12485	504	-51.0	-42.5	-66.0	13	-58.8	459	092	15.0	15.7	57.12	1.92	1984	1972
175	461	13344	461	-58.1	-49.5	-71.0	2	-60.6	413	089	18.3	19.0	63.86	2.08	1984	1976
150	440	14299	440	-66.0	-57.5	-76.0			394	089	22.0	22.7	70.02	1.92	1984	1971
125	377	15383	376	-73.5	-65.1	-83.9			341	088	25.2	25.9	81.33	2.05	1984	1981
100	333	16670	333	-77.4	-66.0	-90.0			305	091	23.6	24.1	91.53	2.26	1976	1978
80	260	17970	260	-71.7	-58.9	-86.0			230	087	16.9	17.5	94.48	2.85	1985	1977
70	227	18792	227	-67.9	-55.5	-83.0			196	087	14.9	15.3	112.22	3.07	1985	1977
60	201	19715	201	-64.2	-52.9	-79.0			171	091	14.6	15.2	125.05	3.97	1985	1972
50	171	20858	171	-59.7	-45.1	-74.0			149	094	13.6	14.2	150.22	4.33	1981	1977
40	116	22278	116	-55.7	-41.3	-74.0			90	095	13.7	14.5	159.42	5.35	1990	1977
30	78	24140	78	-50.6	-38.1	-58.1			57	095	13.9	15.3	89.69	1.52	1986	1983
25	51	25287	51	-49.3	-42.1	-57.7			32	089	14.9	16.4	82.55	1.73	1981	1981
20	36	26787	36	-46.4	-38.1	-55.1			14	086	16.7	17.1	93.16	3.25	1983	1981
15	11	28637	11	-46.2	-38.1	-51.3			3	084	22.5	22.7			1990	1985
10	4	31287	4	-43.9	-35.1	-48.1			1	091	41.0	41.0			1990	1985
7	1	33530	1	-45.7	-45.7	-45.7									1985	1985

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
576	545	515					302	107	1629	-79.4

## NORMALS OF RADIOSONDE DATA

43279 MADRAS

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	618	1005	618	29.3	35.0	23.0	618	23.5	618	065	2.2	4.1	1.24	0.59	1978	1971
<i>1000</i>	585	61	575	29.1	34.0	23.0	575	23.2	563	066	2.5	4.3	10.03	0.73	1978	1971
<i>950</i>	585	510	585	26.0	34.8	15.2	585	20.0	572	056	2.6	5.5	10.32	1.05	1979	1982
<i>900</i>	585	987	585	22.8	31.2	13.0	585	16.5	572	025	2.5	5.4	10.71	1.27	1979	1982
<i>850</i>	585	1483	585	19.8	28.0	10.8	585	12.8	572	011	2.8	5.8	11.70	1.28	1979	1982
<i>800</i>	584	2003	584	16.7	25.0	8.2	579	9.4	570	003	2.7	5.8	13.30	1.23	1979	1982
<i>750</i>	583	2546	583	13.6	22.6	5.8	575	6.2	567	360	2.3	5.7	15.73	1.13	1980	1982
<i>700</i>	583	3127	582	10.5	18.8	2.8	568	2.3	567	360	1.7	5.5	16.53	0.95	1980	1982
<i>650</i>	576	3739	576	7.3	15.0	-0.3	548	-1.8	553	006	0.8	5.2	19.34	0.92	1975	1982
<i>600</i>	574	4395	574	3.9	9.8	-6.0	529	-5.9	551	059	0.3	5.1	20.11	1.06	1979	1974
<i>550</i>	572	5096	572	0.2	5.8	-6.5	487	-9.7	547	096	0.8	5.1	22.55	1.05	1979	1979
<i>500</i>	566	5857	566	-3.8	2.0	-10.9	459	-14.6	542	097	1.3	5.2	24.10	1.07	1979	1979
<i>450</i>	560	6681	559	-8.4	-1.9	-16.0	412	-19.2	537	102	1.8	5.4	26.24	1.25	1979	1977
<i>400</i>	554	7589	553	-13.9	-5.5	-23.0	369	-25.2	531	104	2.3	5.6	28.87	1.41	1990	1975
<i>350</i>	547	8588	547	-20.7	-9.9	-30.0	304	-31.5	518	105	2.8	5.8	34.40	1.49	1990	1977
<i>300</i>	539	9717	539	-29.0	-18.1	-38.0	264	-39.8	511	108	3.9	6.3	38.68	1.60	1990	1977
<i>250</i>	522	10995	522	-39.3	-28.5	-50.0	153	-49.6	491	110	5.4	7.5	47.56	1.78	1990	1977
<i>200</i>	510	12486	510	-51.6	-41.5	-62.0	17	-57.9	481	108	7.8	10.2	57.89	1.91	1990	1977
<i>175</i>	473	13343	473	-58.7	-48.1	-71.0	2	-68.9	437	107	9.4	11.9	64.10	2.08	1990	1977
<i>150</i>	452	14296	452	-66.5	-56.7	-79.0			416	105	11.5	13.8	73.96	2.19	1990	1977
<i>125</i>	386	15377	386	-73.9	-59.1	-85.0			361	105	12.8	14.6	86.62	2.51	1982	1977
<i>100</i>	343	16661	343	-78.7	-69.1	-90.0			321	099	12.1	13.3	98.23	2.45	1979	1978
<i>80</i>	276	17951	276	-73.7	-60.7	-89.0			253	093	10.5	11.6	107.68	3.48	1987	1977
<i>70</i>	245	18763	245	-69.4	-58.1	-86.0			216	096	8.9	9.9	116.47	3.31	1980	1977
<i>60</i>	205	19680	205	-65.2	-52.3	-84.0			182	096	9.3	10.1	132.63	4.00	1987	1977
<i>50</i>	169	20838	169	-60.3	-47.5	-82.0			149	093	9.7	10.8	150.79	5.08	1982	1977
<i>40</i>	114	22276	114	-55.8	-43.1	-76.0			91	099	10.7	12.2	161.65	4.36	1987	1977
<i>30</i>	83	24119	83	-51.7	-41.1	-70.0			62	095	13.9	15.1	215.26	4.66	1981	1977
<i>25</i>	54	25290	54	-49.8	-36.5	-59.9			38	093	14.5	16.1	201.90	4.62	1981	1990
<i>20</i>	37	26804	37	-47.0	-35.3	-58.1			24	093	17.7	19.1	163.10	4.21	1981	1990
<i>15</i>	14	28705	14	-45.0	-35.3	-56.9			4	087	16.7	18.0			1982	1990
<i>10</i>	3	31627	3	-41.0	-36.9	-45.9									1984	1989
<i>7</i>	2	33963	2	-39.9	-37.3	-42.5									1983	1989

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

573 547 514

310 103 1650 -80.5

## NORMALS OF RADIOSONDE DATA

43279 MADRAS

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	599	1008	599	27.4	31.2	20.0	599	21.6	599	031	4.0	5.3	1.12	0.49	1985	1971
<i>1000</i>	575	82	574	27.0	31.0	20.0	574	21.2	561	032	4.5	5.7	9.30	0.53	1976	1971
<i>950</i>	575	528	575	23.9	30.4	16.0	575	18.4	561	035	5.7	7.5	9.48	1.14	1990	1971
<i>900</i>	575	1002	574	20.6	28.8	10.0	573	14.9	560	036	5.5	7.6	9.02	1.42	1979	1971
<i>850</i>	575	1493	575	17.9	29.4	10.0	572	11.0	561	038	5.1	7.3	9.39	1.35	1981	1971
<i>800</i>	575	2010	575	15.3	23.0	9.0	558	7.1	559	042	4.1	6.6	10.41	1.34	1976	1971
<i>750</i>	575	2551	575	12.9	20.4	6.0	525	3.8	559	051	3.4	6.3	12.79	1.10	1979	1971
<i>700</i>	575	3131	575	10.2	19.4	2.0	508	0.1	559	061	2.9	6.0	13.57	1.09	1990	1971
<i>650</i>	569	3743	569	7.1	15.4	-3.0	468	-3.2	548	070	2.5	5.8	15.17	1.05	1990	1976
<i>600</i>	566	4397	566	3.7	11.6	-4.0	455	-7.5	543	073	2.7	5.9	17.13	1.08	1987	1974
<i>550</i>	557	5098	557	-0.1	7.0	-11.0	419	-11.3	534	076	3.0	6.2	19.78	1.05	1990	1974
<i>500</i>	553	5857	553	-4.2	4.0	-10.0	394	-16.0	532	075	3.1	6.6	21.76	1.02	1975	1976
<i>450</i>	547	6679	547	-9.0	-2.1	-16.0	347	-20.6	526	073	3.2	7.1	24.74	1.19	1987	1975
<i>400</i>	543	7585	542	-14.5	-7.1	-22.0	326	-26.3	522	075	2.8	7.1	27.98	1.41	1987	1977
<i>350</i>	536	8582	536	-21.3	-13.1	-28.0	292	-32.8	512	092	1.9	6.8	34.67	1.47	1979	1976
<i>300</i>	530	9709	530	-29.4	-21.3	-36.0	253	-40.6	508	136	1.9	6.8	39.22	1.64	1979	1971
<i>250</i>	524	10985	524	-39.7	-31.5	-48.1	159	-49.9	504	151	4.1	8.1	47.78	1.78	1984	1980
<i>200</i>	514	12473	514	-52.0	-43.0	-61.0	8	-56.5	494	155	6.2	10.2	60.74	1.91	1974	1976
<i>175</i>	476	13327	476	-59.0	-49.0	-70.0	2	-63.4	456	153	6.7	11.2	68.36	2.02	1974	1976
<i>150</i>	458	14279	458	-66.7	-56.0	-78.0			440	149	6.7	11.2	78.05	2.04	1974	1976
<i>125</i>	399	15358	399	-73.9	-64.1	-88.0			382	133	5.8	10.0	91.13	2.25	1980	1977
<i>100</i>	361	16644	361	-79.7	-68.5	-89.1			344	113	5.5	8.5	103.14	2.14	1981	1982
<i>80</i>	279	17924	279	-75.5	-61.1	-88.0			259	098	5.6	7.4	118.55	2.97	1985	1977
<i>70</i>	250	18730	250	-71.5	-56.7	-89.0			229	098	4.3	6.7	130.96	2.94	1985	1977
<i>60</i>	218	19638	218	-66.9	-53.1	-80.0			200	100	3.3	6.4	146.83	2.93	1985	1976
<i>50</i>	188	20776	188	-61.7	-50.5	-76.0			171	103	4.0	7.6	157.11	3.18	1985	1977
<i>40</i>	134	22177	134	-57.6	-45.1	-72.0			113	104	6.7	10.6	157.06	4.25	1985	1977
<i>30</i>	93	24028	93	-53.1	-42.9	-66.0			75	093	9.0	13.4	173.11	4.74	1982	1976
<i>25</i>	58	25164	58	-51.9	-42.7	-65.0			40	095	10.9	14.5	185.13	4.45	1987	1976
<i>20</i>	34	26660	34	-49.7	-42.1	-57.5			21	084	13.1	14.5	192.60	3.06	1983	1984
<i>15</i>	16	28572	16	-47.9	-43.5	-52.7			3	101	14.5	16.3			1986	1984
<i>10</i>	7	31320	7	-44.3	-40.9	-52.1			1	120	12.0	12.0			1984	1984
<i>7</i>	1	33200	1	-45.3	-45.3	-45.3									1984	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

561 551 503

316 100 1660 -81.3

# NORMALS OF RADIOSONDE DATA

43279 MADRAS

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	619	1010	619	26.5	30.0	20.6	619	20.0	619	038	5.0	5.6	0.95	0.52	1973	1980
<i>1000</i>	578	101	578	25.9	29.0	20.0	576	19.7	557	039	5.8	6.5	8.69	0.61	1973	1972
<i>950</i>	578	546	578	22.5	31.0	17.0	576	17.2	557	042	7.0	7.8	10.18	1.23	1983	1971
<i>900</i>	578	1016	578	19.2	28.4	12.0	576	14.0	557	045	6.8	7.7	10.65	1.41	1987	1971
<i>850</i>	578	1505	578	16.6	26.0	8.0	565	9.1	556	051	6.0	7.2	12.17	1.23	1987	1971
<i>800</i>	578	2021	578	14.6	23.8	7.0	528	4.7	557	059	5.1	6.7	13.11	1.06	1987	1971
<i>750</i>	578	2561	578	12.4	20.2	6.0	485	0.8	556	067	4.5	6.3	14.40	0.99	1981	1973
<i>700</i>	578	3139	578	10.0	19.0	4.0	440	-3.0	556	071	3.9	6.0	15.41	0.90	1972	1977
<i>650</i>	573	3751	573	6.9	14.0	-5.0	395	-6.7	546	071	3.4	5.8	16.87	0.96	1981	1976
<i>600</i>	569	4405	569	3.5	10.2	-5.0	370	-10.6	541	068	3.0	5.7	18.49	1.03	1979	1975
<i>550</i>	565	5105	565	-0.4	5.6	-11.0	341	-14.3	536	068	2.8	6.0	21.79	1.09	1990	1975
<i>500</i>	564	5862	564	-4.8	1.2	-11.0	325	-19.0	534	068	2.5	6.4	23.54	1.19	1990	1975
<i>450</i>	557	6681	557	-9.7	-3.3	-21.0	281	-23.6	527	054	1.6	6.9	27.84	1.45	1990	1977
<i>400</i>	552	7586	551	-15.2	-6.9	-23.0	271	-29.3	525	358	0.5	7.5	31.80	1.53	1987	1977
<i>350</i>	544	8580	543	-22.1	-14.0	-30.0	227	-35.5	515	272	2.0	8.6	37.82	1.61	1974	1977
<i>300</i>	535	9701	535	-30.2	-22.0	-37.0	205	-42.3	508	246	4.2	9.9	44.61	1.83	1974	1977
<i>250</i>	518	10973	518	-40.3	-32.5	-48.0	140	-51.3	493	221	7.1	11.9	53.17	1.85	1984	1975
<i>200</i>	500	12460	500	-52.4	-43.5	-62.0	4	-62.0	477	212	9.0	13.9	66.55	2.02	1984	1973
<i>175</i>	453	13308	452	-59.3	-50.5	-67.0	1	-61.1	421	214	9.2	14.2	74.11	2.19	1982	1977
<i>150</i>	428	14259	427	-66.6	-56.1	-75.0			396	222	8.3	13.2	83.13	2.09	1982	1974
<i>125</i>	362	15339	361	-73.2	-62.1	-88.0			336	225	6.6	11.6	97.46	2.25	1981	1977
<i>100</i>	308	16631	308	-79.0	-68.1	-88.0			287	203	2.7	8.7	106.75	1.75	1981	1977
<i>80</i>	245	17904	245	-76.3	-64.7	-89.0			216	124	2.7	7.5	87.42	2.69	1988	1977
<i>70</i>	219	18701	219	-72.2	-59.3	-89.0			192	107	1.8	5.9	102.76	3.14	1988	1977
<i>60</i>	188	19610	188	-67.4	-56.1	-82.0			162	121	0.7	5.9	111.72	2.60	1988	1976
<i>50</i>	160	20740	160	-61.7	-50.9	-78.0			137	178	0.5	7.3	133.26	3.39	1988	1976
<i>40</i>	117	22155	117	-57.4	-47.5	-74.0			89	086	1.8	8.8	157.44	4.75	1988	1976
<i>30</i>	82	24006	82	-52.2	-41.7	-63.7			64	093	5.5	10.4	123.53	2.73	1983	1984
<i>25</i>	50	25200	50	-50.7	-40.3	-62.1			33	093	7.7	10.6	149.54	3.75	1980	1984
<i>20</i>	36	26693	36	-47.8	-38.5	-58.5			19	088	11.4	13.8	108.32	2.47	1980	1984
<i>15</i>	11	28688	11	-44.5	-33.3	-55.9			1	101	9.0	9.0			1980	1984
<i>10</i>	1	30829	1	-51.5	-51.5	-51.5									1984	1984
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
568	555	502					269	098	1675	-80.8

# NORMALS OF RADIOSONDE DATA

43192 GOA

JANUARY 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	527	1004	527	28.4	33.0	20.0	527	18.5	526	278	3.5	4.4	0.69	0.37	1975	1974
1000	436	95	436	28.0	32.0	21.0	436	17.6	424	277	3.9	4.9	6.08	0.42	1975	1975
950	436	531	436	24.5	31.6	12.0	435	9.9	423	276	2.4	4.6	18.88	1.08	1988	1974
900	436	1015	436	21.6	29.0	13.0	428	6.4	424	091	1.3	4.2	5.95	1.14	1979	1975
850	436	1506	435	18.0	28.0	9.0	424	3.6	424	086	3.8	5.5	6.82	1.14	1976	1975
800	436	2021	434	14.5	24.0	7.0	403	-0.5	423	086	4.7	6.8	8.25	1.29	1976	1975
750	436	2558	434	11.6	20.0	3.0	278	-5.6	424	077	3.9	6.8	16.41	1.61	1976	1975
700	435	3135	434	9.3	17.0	1.0	136	-10.3	425	045	2.1	6.2	12.91	1.71	1980	1975
650	429	3746	426	6.3	19.0	0.0	62	-12.6	418	339	1.8	6.4	15.16	1.48	1973	1974
600	426	4396	424	2.5	10.2	-4.0	39	-14.9	412	303	2.5	6.8	18.33	1.30	1980	1975
550	420	5093	417	-1.6	7.0	-9.0	30	-18.5	411	292	3.9	7.5	24.87	1.33	1988	1973
500	416	5846	412	-6.2	1.6	-13.7	19	-20.3	403	286	5.1	8.7	25.26	1.47	1988	1979
450	410	6659	408	-11.4	-3.9	-19.0	9	-23.5	395	281	7.2	10.4	34.76	1.73	1989	1974
400	407	7558	405	-17.1	-8.5	-25.0	10	-31.3	394	283	9.6	12.7	33.60	1.97	1989	1974
350	396	8549	394	-23.8	-14.5	-33.0	3	-36.9	382	278	12.9	15.7	36.54	2.07	1989	1972
300	387	9660	385	-31.6	-22.1	-39.0	1	-43.0	374	269	14.9	17.6	48.64	2.19	1989	1972
250	371	10925	369	-41.4	-28.1	-50.0			357	264	15.8	18.8	60.46	2.36	1988	1972
200	354	12403	354	-53.3	-42.0	-62.3			340	257	16.7	19.9	77.29	2.34	1972	1979
175	304	13262	304	-59.5	-50.5	-69.5			280	254	15.5	18.3	94.45	2.37	1989	1979
150	270	14214	269	-66.2	-57.1	-79.0			239	255	13.9	16.9	105.98	2.33	1980	1974
125	233	15307	233	-72.2	-61.1	-82.1			192	256	9.9	13.5	119.04	2.46	1981	1988
100	185	16611	185	-76.5	-59.5	-87.3			149	257	4.6	9.7	138.60	3.05	1981	1989
80	146	17912	146	-75.2	-61.9	-86.9			110	265	1.9	8.1	163.07	4.01	1981	1988
70	130	18701	130	-71.7	-57.5	-84.1			95	218	0.7	6.9	157.37	4.14	1983	1988
60	116	19618	116	-67.2	-54.5	-80.0			86	248	0.9	7.6	172.45	4.53	1981	1977
50	103	20741	103	-61.7	-43.9	-76.0			70	138	0.5	8.0	207.46	5.73	1989	1977
40	82	22173	82	-56.8	-45.1	-68.1			51	106	3.0	8.7	214.27	4.92	1983	1979
30	56	23996	56	-52.6	-44.3	-61.1			28	111	4.8	11.0	172.80	3.15	1980	1982
25	36	25136	36	-51.2	-43.1	-57.1			12	127	2.0	10.8	196.43	2.02	1983	1982
20	13	26530	13	-50.3	-46.9	-54.7			3	120	1.4	8.0			1988	1983
15	6	28610	6	-47.6	-41.5	-51.9									1988	1983
10	3	31351	3	-46.6	-44.5	-49.1									1987	1983
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

421 568 485

142 099 1679 -78.1

# NORMALS OF RADIOSONDE DATA

43192 GOA

FEBRUARY 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	480	1004	480	28.6	33.0	20.0	480	19.5	480	288	4.3	5.1	0.97	0.64	1973	1973
<i>1000</i>	444	91	441	28.1	33.0	23.0	441	18.6	426	288	4.5	5.4	6.38	0.71	1976	1975
<i>950</i>	444	527	444	24.7	34.0	16.0	431	10.1	428	287	4.2	5.4	20.37	1.44	1973	1975
<i>900</i>	444	1011	444	22.8	32.0	14.6	416	5.1	428	295	1.2	4.1	7.87	1.63	1983	1986
<i>850</i>	444	1505	444	19.5	29.0	9.0	405	2.4	429	097	0.9	4.6	10.10	1.64	1975	1973
<i>800</i>	444	2022	444	15.8	23.8	9.0	397	-0.6	431	110	2.1	5.9	11.66	1.52	1988	1972
<i>750</i>	444	2561	444	12.0	21.0	5.0	362	-4.1	432	095	2.4	7.1	20.71	1.51	1980	1974
<i>700</i>	444	3138	444	8.7	18.4	1.0	261	-9.3	432	053	1.2	6.9	16.13	1.56	1980	1974
<i>650</i>	438	3749	437	5.5	14.8	-4.0	140	-14.0	424	313	2.2	6.9	19.14	1.57	1989	1974
<i>600</i>	437	4397	435	2.0	10.8	-6.0	89	-17.4	418	292	4.0	7.4	22.34	1.56	1980	1975
<i>550</i>	431	5091	429	-1.9	6.0	-11.0	53	-19.9	414	284	5.4	8.4	31.98	1.70	1989	1975
<i>500</i>	429	5845	427	-6.5	1.2	-15.0	37	-23.4	410	282	7.4	9.8	30.71	1.58	1989	1975
<i>450</i>	425	6659	423	-11.6	7.6	-22.0	20	-27.3	406	279	9.1	11.8	37.70	1.65	1983	1972
<i>400</i>	420	7555	416	-17.1	-7.1	-26.0	13	-30.9	400	276	11.6	14.3	41.57	1.63	1990	1975
<i>350</i>	404	8545	402	-23.6	-11.1	-33.0	4	-36.0	385	274	14.8	17.4	46.99	1.93	1990	1974
<i>300</i>	389	9660	386	-31.3	-20.3	-40.7	4	-43.6	373	266	17.1	19.4	57.06	2.25	1990	1982
<i>250</i>	373	10930	372	-41.0	-30.0	-50.9	1	-53.3	356	262	18.3	20.9	68.29	2.41	1977	1982
<i>200</i>	357	12412	357	-52.7	-43.1	-62.1			329	265	17.7	20.8	83.67	2.40	1990	1979
<i>175</i>	303	13276	303	-58.9	-49.3	-68.1			263	266	15.9	19.1	93.47	2.66	1990	1979
<i>150</i>	278	14231	275	-65.4	-55.5	-76.0			240	269	14.3	17.7	96.77	3.07	1980	1978
<i>125</i>	246	15327	243	-71.4	-55.1	-82.5			192	272	11.9	14.8	114.36	3.73	1981	1979
<i>100</i>	199	16626	199	-76.3	-63.1	-88.7			149	276	8.4	11.6	135.59	3.57	1986	1979
<i>80</i>	166	17915	166	-74.9	-59.1	-87.1			108	274	5.5	9.6	160.50	3.35	1990	1982
<i>70</i>	152	18701	152	-71.7	-52.1	-83.5			95	261	5.0	8.7	147.28	3.43	1990	1979
<i>60</i>	120	19615	120	-66.9	-54.9	-78.1			74	262	4.1	6.9	152.08	3.01	1982	1982
<i>50</i>	106	20716	106	-62.4	-51.0	-74.3			62	249	1.9	8.0	165.22	3.56	1978	1986
<i>40</i>	77	22121	77	-57.6	-45.3	-67.7			37	045	1.4	7.4	155.99	2.87	1989	1982
<i>30</i>	45	23935	45	-53.9	-42.9	-63.7			18	099	6.3	8.4	243.67	3.62	1989	1982
<i>25</i>	34	25129	34	-51.4	-43.7	-61.5			12	084	7.2	8.5	265.88	4.22	1980	1982
<i>20</i>	12	26778	12	-47.7	-40.9	-54.3			2	069	12.6	13.0			1980	1983
<i>15</i>	4	28568	4	-46.8	-40.9	-51.9									1987	1983
<i>10</i>	1	31424	1	-45.1	-45.1	-45.1									1990	1990
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

434 574 476

163 098 1679 -78.1

# NORMALS OF RADIOSONDE DATA

43192 GOA

MARCH 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	526	1003	526	29.5	32.4	25.8	526	21.7	526	287	4.8	5.6	0.84	0.68	1979	1983
<i>1000</i>	458	81	438	29.0	32.6	24.8	438	21.2	417	286	5.1	5.9	5.80	0.77	1981	1983
<i>950</i>	458	521	458	25.4	33.2	16.0	457	13.1	437	291	4.9	5.9	16.92	1.04	1990	1986
<i>900</i>	458	1004	458	24.7	35.4	14.8	445	6.1	438	304	2.5	4.6	6.97	0.98	1990	1989
<i>850</i>	458	1502	458	22.1	33.4	11.8	433	2.3	443	328	1.2	4.4	8.13	1.03	1990	1982
<i>800</i>	458	2024	458	18.4	29.8	8.6	425	0.6	443	073	1.3	5.0	9.50	0.92	1990	1981
<i>750</i>	457	2565	457	14.1	25.0	6.6	422	-1.5	440	096	3.3	6.3	15.04	0.98	1990	1982
<i>700</i>	457	3148	457	9.7	20.0	2.6	397	-4.8	439	093	3.9	7.0	13.04	1.00	1990	1982
<i>650</i>	446	3760	444	5.8	16.4	-5.1	311	-10.4	425	078	2.8	6.7	16.51	1.12	1990	1990
<i>600</i>	440	4408	438	2.5	14.8	-4.7	155	-14.7	421	014	1.3	6.6	17.70	1.52	1990	1982
<i>550</i>	432	5105	431	-1.4	9.0	-12.0	72	-18.8	412	310	2.1	6.8	25.33	1.75	1990	1975
<i>500</i>	425	5859	424	-5.9	4.0	-15.3	34	-22.8	407	294	3.7	7.6	25.72	1.92	1988	1982
<i>450</i>	416	6675	415	-11.0	-0.7	-21.9	22	-26.1	397	288	5.8	9.1	33.91	2.20	1990	1982
<i>400</i>	412	7572	410	-17.0	-6.9	-28.9	14	-29.4	394	287	8.2	11.5	38.22	2.35	1990	1982
<i>350</i>	397	8566	395	-23.5	-14.1	-33.1	6	-35.4	373	279	11.6	14.7	44.29	2.46	1990	1982
<i>300</i>	386	9676	384	-31.2	-21.7	-44.0	6	-40.0	362	272	13.9	17.2	55.56	2.53	1990	1974
<i>250</i>	366	10945	366	-40.6	-31.1	-53.7			346	267	16.0	19.4	68.57	2.44	1990	1982
<i>200</i>	350	12425	350	-52.1	-42.7	-66.5			318	265	15.4	18.4	83.23	2.50	1980	1982
<i>175</i>	303	13291	303	-58.2	-49.1	-67.0			263	263	14.6	17.9	91.96	2.56	1981	1972
<i>150</i>	266	14252	266	-64.8	-54.7	-74.0			227	263	12.8	16.0	103.08	2.83	1981	1978
<i>125</i>	242	15349	242	-71.4	-59.9	-81.0			194	265	9.4	12.9	112.02	3.09	1981	1975
<i>100</i>	219	16649	219	-76.3	-65.5	-89.0			164	274	5.6	10.0	133.44	3.34	1981	1978
<i>80</i>	181	17935	181	-75.1	-62.1	-85.0			128	275	3.3	7.7	154.53	2.98	1980	1978
<i>70</i>	164	18721	164	-72.1	-56.1	-82.0			114	279	3.0	7.4	163.90	3.45	1983	1977
<i>60</i>	136	19636	136	-68.1	-52.0	-79.9			90	264	3.6	6.8	149.42	3.75	1978	1982
<i>50</i>	114	20747	114	-63.2	-46.7	-79.0			73	297	0.9	6.9	174.61	3.52	1981	1972
<i>40</i>	90	22141	89	-58.0	-40.1	-73.0			52	096	2.7	8.4	202.80	4.33	1981	1972
<i>30</i>	55	23942	54	-53.9	-38.5	-67.0			31	095	9.2	13.1	223.07	5.21	1981	1972
<i>25</i>	34	25141	34	-50.8	-43.1	-63.0			14	107	8.1	12.7	204.27	5.41	1983	1972
<i>20</i>	15	26591	15	-48.6	-38.7	-57.1			3	082	6.7	11.3			1989	1982
<i>15</i>	4	28438	4	-48.4	-44.3	-54.7									1988	1982
<i>10</i>	1	30782	1	-50.9	-50.9	-50.9									1982	1982
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

434 568 487

182 096 1692 -78.1



# NORMALS OF RADIOSONDE DATA

43192 GOA

APRIL 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	540	1001	540	30.4	35.0	25.0	540	23.3	539	288	5.2	6.1	0.82	0.65	1978	1975
<i>1000</i>	470	67	345	29.8	33.0	21.0	345	22.9	338	287	5.2	6.2	6.05	0.67	1973	1978
<i>950</i>	470	508	470	25.9	33.4	18.8	467	18.1	455	292	5.4	6.3	20.23	1.04	1981	1986
<i>900</i>	470	992	469	25.1	32.2	17.0	463	11.7	460	310	3.0	4.8	5.47	0.76	1983	1985
<i>850</i>	470	1492	468	23.6	31.8	17.0	461	5.3	461	346	2.5	4.8	6.22	1.14	1989	1974
<i>800</i>	470	2017	468	20.5	28.4	14.0	458	1.6	460	016	2.2	5.0	8.38	1.28	1989	1974
<i>750</i>	470	2565	470	16.2	24.0	9.0	455	-0.2	457	066	2.4	5.4	15.40	1.37	1985	1974
<i>700</i>	470	3150	469	11.5	19.6	3.0	444	-2.2	459	087	3.4	6.1	12.06	1.44	1989	1974
<i>650</i>	458	3764	456	6.9	16.0	-2.0	414	-6.3	440	089	4.0	6.3	14.78	1.47	1975	1974
<i>600</i>	455	4415	452	2.9	10.0	-5.0	317	-11.4	432	082	3.3	6.1	19.38	1.53	1989	1975
<i>550</i>	449	5114	446	-0.8	8.2	-9.0	189	-16.8	433	050	1.8	5.6	24.50	1.64	1989	1974
<i>500</i>	439	5871	436	-5.0	6.0	-13.0	85	-22.3	424	341	1.1	6.0	28.38	1.80	1987	1974
<i>450</i>	429	6691	426	-9.9	-1.9	-19.0	56	-26.7	413	300	2.0	7.0	38.74	1.97	1989	1974
<i>400</i>	427	7593	424	-15.8	-8.1	-25.0	47	-31.4	412	283	3.9	8.5	39.56	1.92	1987	1974
<i>350</i>	420	8586	419	-22.7	-13.7	-33.3	30	-36.4	402	276	6.5	10.6	49.59	1.86	1989	1986
<i>300</i>	402	9705	402	-30.6	-20.9	-39.5	15	-43.4	383	269	9.1	13.2	54.29	1.98	1990	1988
<i>250</i>	389	10976	389	-40.2	-29.9	-49.1	2	-47.7	371	261	11.3	15.2	66.79	2.27	1990	1988
<i>200</i>	373	12466	373	-51.4	-40.5	-62.1			352	252	12.3	15.4	83.09	2.47	1990	1986
<i>175</i>	340	13326	340	-57.7	-46.5	-68.1			315	250	11.7	14.9	79.47	2.46	1990	1982
<i>150</i>	313	14282	313	-64.4	-53.7	-74.3			287	251	9.9	13.3	90.72	2.55	1990	1986
<i>125</i>	274	15384	274	-71.2	-59.1	-81.1			244	251	6.0	10.4	101.00	2.84	1981	1979
<i>100</i>	228	16677	228	-76.8	-65.9	-85.5			203	208	1.3	8.6	114.98	3.64	1980	1982
<i>80</i>	194	17965	194	-75.4	-57.1	-87.7			158	094	1.9	8.5	144.05	3.18	1983	1989
<i>70</i>	165	18750	165	-72.0	-56.1	-84.3			134	087	2.9	7.3	149.35	3.48	1981	1982
<i>60</i>	139	19673	139	-66.9	-51.5	-82.1			114	070	1.8	6.6	175.18	3.93	1981	1982
<i>50</i>	119	20815	119	-61.0	-47.7	-74.1			94	095	1.4	6.0	197.82	3.84	1981	1988
<i>40</i>	94	22212	93	-55.8	-43.7	-67.3			65	086	4.3	7.8	214.48	4.11	1981	1988
<i>30</i>	63	24089	63	-50.6	-39.3	-63.3			37	097	9.0	10.8	253.35	4.21	1989	1982
<i>25</i>	45	25232	44	-48.5	-39.1	-61.5			23	096	10.8	11.8	278.53	4.41	1981	1982
<i>20</i>	30	26769	30	-45.6	-36.3	-57.5			8	087	13.4	13.5	298.10	4.54	1981	1982
<i>15</i>	17	28512	17	-45.3	-38.1	-53.1									1989	1982
<i>10</i>	7	31239	7	-42.0	-38.5	-48.5									1990	1982
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
447	560	499					177	096	1697	-78.5

# NORMALS OF RADIOSONDE DATA

43192 GOA

MAY 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	558	1000	557	30.8	34.2	25.0	557	24.0	558	291	5.5	6.5	0.94	0.58	1980	1974
<i>1000</i>	500	58	225	30.4	33.0	25.0	225	23.6	206	293	5.9	6.8	8.07	1.19	1973	1974
<i>950</i>	500	498	500	26.2	35.2	18.2	499	19.9	459	293	6.5	7.4	19.43	0.97	1989	1985
<i>900</i>	500	984	500	24.1	33.2	16.6	496	15.1	462	305	4.7	6.2	7.46	1.03	1989	1985
<i>850</i>	500	1481	500	22.1	30.8	10.0	492	9.6	464	335	3.3	5.5	7.59	1.20	1989	1972
<i>800</i>	500	2004	500	19.7	28.8	11.8	482	4.2	461	349	3.1	5.9	9.04	1.53	1989	1987
<i>750</i>	500	2551	500	16.3	27.0	8.6	475	1.5	462	015	2.3	5.9	16.22	1.61	1972	1985
<i>700</i>	500	3138	500	12.0	21.2	4.0	462	-1.3	461	061	2.3	6.0	13.10	1.73	1988	1974
<i>650</i>	482	3754	482	7.7	17.4	-1.0	432	-4.9	449	084	3.1	6.1	14.43	1.70	1986	1974
<i>600</i>	473	4407	473	3.4	13.8	-4.3	385	-9.0	440	084	3.2	6.1	19.78	1.65	1990	1987
<i>550</i>	463	5108	463	-0.3	10.6	-7.0	288	-13.3	436	063	3.1	6.1	24.09	1.76	1990	1975
<i>500</i>	451	5865	450	-4.2	7.2	-11.0	196	-17.3	426	045	3.2	6.5	31.42	1.87	1990	1975
<i>450</i>	446	6688	443	-8.6	1.4	-16.0	132	-21.2	422	039	2.7	6.9	39.31	1.89	1990	1974
<i>400</i>	442	7594	441	-14.0	-5.1	-23.0	82	-26.3	417	018	1.5	7.4	46.49	2.28	1989	1974
<i>350</i>	426	8595	425	-20.6	-12.3	-30.1	60	-31.2	401	307	1.1	7.8	54.93	2.39	1990	1985
<i>300</i>	412	9722	411	-28.4	-18.7	-39.5	35	-39.3	391	261	1.8	8.3	67.49	2.45	1990	1985
<i>250</i>	401	11006	400	-38.0	-28.5	-50.5	6	-43.8	378	235	2.9	8.8	81.27	2.56	1989	1985
<i>200</i>	374	12509	374	-50.1	-40.3	-68.0			353	198	3.7	10.0	99.19	2.84	1990	1972
<i>175</i>	348	13376	348	-56.7	-46.5	-69.1			324	178	4.1	10.6	109.18	2.72	1981	1985
<i>150</i>	310	14341	310	-64.0	-54.1	-77.0			290	147	5.1	11.2	116.08	2.69	1980	1977
<i>125</i>	272	15444	271	-71.3	-61.3	-85.0			255	120	6.6	11.5	122.45	3.26	1980	1977
<i>100</i>	234	16741	234	-76.8	-65.1	-88.7			224	103	8.8	11.9	130.89	3.81	1980	1967
<i>80</i>	194	18028	193	-75.1	-63.3	-87.0			182	098	9.1	10.7	156.66	4.42	1982	1978
<i>70</i>	172	18821	171	-70.9	-53.9	-84.7			160	094	7.5	8.9	188.59	3.34	1980	1988
<i>60</i>	145	19751	144	-65.6	-52.7	-79.9			123	102	7.2	9.1	199.64	3.74	1980	1983
<i>50</i>	118	20875	118	-60.0	-41.7	-71.9			95	103	6.9	8.7	212.88	2.95	1980	1983
<i>40</i>	89	22287	89	-55.2	-39.3	-67.5			68	098	8.1	9.4	194.51	3.21	1980	1988
<i>30</i>	62	24151	62	-49.7	-38.5	-59.5			36	084	11.1	13.1	204.21	3.26	1983	1988
<i>25</i>	45	25309	45	-47.2	-38.5	-56.5			22	092	12.8	13.7	179.24	2.24	1983	1988
<i>20</i>	24	26812	24	-44.0	-37.3	-52.1			7	088	11.5	12.1	231.92	3.29	1989	1988
<i>15</i>	8	28743	8	-42.9	-38.5	-47.9									1983	1983
<i>10</i>	1	31174	1	-39.9	-39.9	-39.9									1988	1988
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

471 555 504

187 096 1701 -78.2

# NORMALS OF RADIOSONDE DATA

43192 GOA

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	563	999	562	28.1	33.0	23.0	562	24.6	562	260	5.3	7.1	0.76	0.72	1972	1971
<i>1000</i>	480	49	123	28.3	33.0	23.6	123	24.4	122	261	5.3	6.8	5.03	1.21	1972	1988
<i>950</i>	480	488	480	24.9	31.0	18.0	479	21.5	438	265	7.3	9.1	19.83	0.69	1973	1985
<i>900</i>	479	971	479	22.0	29.0	15.2	479	18.4	439	271	8.8	10.3	4.89	0.71	1974	1985
<i>850</i>	479	1466	479	19.1	28.2	11.6	479	14.9	441	273	8.4	10.3	5.65	0.90	1990	1985
<i>800</i>	478	1984	477	16.4	26.0	9.6	477	11.2	438	271	7.5	10.0	6.20	1.07	1983	1985
<i>750</i>	478	2527	478	13.6	21.0	6.0	476	6.8	438	268	6.6	9.7	9.14	1.18	1973	1974
<i>700</i>	478	3109	478	10.6	18.0	3.0	475	2.4	439	266	5.9	9.3	8.65	1.25	1973	1974
<i>650</i>	469	3724	468	7.2	14.0	0.0	458	-1.6	425	265	4.8	8.8	11.77	1.21	1975	1988
<i>600</i>	457	4377	456	3.7	10.0	-3.9	433	-4.8	414	262	3.8	8.2	12.79	1.37	1975	1983
<i>550</i>	442	5079	440	0.1	7.0	-8.0	402	-7.8	403	256	2.7	7.5	16.62	1.42	1989	1974
<i>500</i>	433	5840	430	-3.5	5.0	-11.0	368	-11.9	396	245	1.6	6.8	18.65	1.41	1978	1976
<i>450</i>	424	6666	419	-7.6	8.0	-15.0	324	-16.1	386	201	0.7	6.3	24.37	1.57	1981	1976
<i>400</i>	414	7576	408	-12.8	-5.1	-20.3	289	-21.4	375	101	1.6	5.8	24.32	1.45	1989	1982
<i>350</i>	407	8583	404	-19.0	-9.7	-26.1	235	-27.3	367	092	3.8	6.3	30.31	1.68	1980	1982
<i>300</i>	391	9719	389	-26.7	-19.7	-41.0	176	-34.8	355	089	5.8	7.7	36.91	2.11	1989	1974
<i>250</i>	366	11012	364	-36.6	-28.1	-46.0	69	-44.0	332	088	9.4	11.0	44.41	2.20	1990	1977
<i>200</i>	350	12524	348	-48.8	-40.7	-60.0	1	-54.1	314	088	14.7	15.9	57.52	2.28	1988	1976
<i>175</i>	319	13389	317	-56.0	-47.1	-65.0			284	092	18.1	19.4	65.26	2.34	1989	1974
<i>150</i>	284	14353	282	-63.8	-54.9	-73.5			252	093	21.1	22.3	68.97	2.18	1989	1980
<i>125</i>	246	15456	244	-71.4	-53.7	-83.0			206	094	24.6	25.6	89.93	2.59	1989	1976
<i>100</i>	201	16757	201	-76.3	-63.0	-89.0			163	091	24.9	25.5	111.97	3.60	1975	1977
<i>80</i>	150	18043	149	-74.1	-56.3	-86.0			122	092	20.5	21.2	122.00	4.37	1980	1976
<i>70</i>	130	18843	130	-69.5	-50.1	-82.5			102	091	17.4	18.0	130.13	3.99	1981	1985
<i>60</i>	106	19775	106	-64.5	-45.9	-78.0			83	088	15.8	16.3	141.27	4.61	1981	1978
<i>50</i>	84	20911	84	-59.1	-42.1	-74.0			63	095	15.2	15.6	166.71	3.71	1981	1978
<i>40</i>	61	22312	61	-54.4	-44.5	-68.0			42	095	15.6	16.2	201.55	4.99	1981	1978
<i>30</i>	34	24154	34	-50.4	-42.9	-59.5			17	087	17.7	18.3	265.22	3.18	1982	1985
<i>25</i>	24	25325	24	-47.9	-40.1	-56.7			12	087	19.8	20.1	233.48	2.69	1982	1985
<i>20</i>	11	26767	11	-48.6	-42.1	-55.1			3	091	22.5	22.7			1982	1987
<i>15</i>	7	28594	7	-46.1	-42.5	-52.1									1983	1985
<i>10</i>	2	31278	2	-46.2	-44.1	-48.3									1983	1985
<i>7</i>	1	33416	1	-45.1	-45.1	-45.1									1985	1985

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
445	548	512					150	100	1681	-78.3

# NORMALS OF RADIOSONDE DATA

43192 GOA

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	999	589	27.2	30.0	23.0	589	24.5	589	272	6.5	7.1	1.05	0.54	1971	1974
1000	461	54	181	27.4	31.0	23.0	181	24.4	168	276	6.5	7.0	8.23	1.21	1972	1975
950	461	493	460	24.2	31.6	18.6	460	21.2	425	275	9.5	10.1	22.58	0.74	1985	1990
900	460	975	460	21.2	28.2	15.2	460	18.0	424	278	10.8	11.4	9.46	0.87	1989	1990
850	460	1468	459	18.3	27.0	11.0	459	14.8	424	277	10.9	11.4	10.51	0.94	1972	1974
800	460	1985	459	15.5	23.4	6.0	459	11.8	423	275	10.0	10.5	11.60	1.05	1989	1974
750	460	2527	459	12.7	21.2	6.0	458	7.9	423	275	9.4	10.0	14.92	1.14	1989	1974
700	460	3106	459	10.1	19.0	2.0	455	2.9	422	278	8.9	9.7	14.89	1.21	1989	1974
650	452	3721	450	7.1	18.0	-1.0	443	-1.8	414	280	8.0	9.1	15.02	1.26	1971	1974
600	444	4373	442	3.6	11.4	-5.0	431	-5.2	402	283	6.3	8.2	20.52	1.39	1989	1974
550	432	5075	430	0.1	8.0	-9.0	409	-8.6	390	283	4.5	7.1	24.91	1.44	1989	1974
500	420	5834	418	-3.8	4.8	-12.0	392	-12.4	380	274	2.4	6.1	28.73	1.42	1989	1974
450	416	6659	414	-8.0	9.0	-17.0	362	-16.7	375	275	0.2	5.7	34.69	1.64	1976	1971
400	408	7569	406	-13.2	-5.5	-22.0	343	-22.0	368	084	2.6	5.8	39.44	1.74	1989	1974
350	393	8573	391	-19.6	-10.1	-28.1	292	-28.8	354	088	5.8	7.5	45.10	1.89	1986	1987
300	376	9707	376	-27.4	-17.7	-34.1	205	-36.4	333	087	9.6	10.6	53.66	2.05	1989	1986
250	357	10995	357	-37.4	-26.5	-46.1	83	-44.5	312	089	15.0	15.8	65.73	2.34	1989	1986
200	328	12501	328	-49.6	-36.5	-59.0	1	-46.1	289	089	22.6	23.1	83.91	2.62	1989	1976
175	306	13363	306	-56.9	-42.7	-72.0			262	088	27.1	27.9	88.17	3.37	1989	1974
150	277	14329	277	-64.5	-50.5	-76.0			228	088	32.9	33.3	99.87	2.62	1989	1976
125	243	15419	243	-72.0	-57.1	-85.1			200	091	36.2	36.8	117.99	2.74	1981	1983
100	200	16721	200	-74.7	-60.5	-89.0			155	089	31.9	32.4	136.94	3.94	1980	1972
80	156	18038	156	-70.5	-51.5	-83.5			106	086	25.5	26.4	167.38	4.20	1981	1979
70	130	18849	130	-66.9	-50.9	-78.9			73	089	21.9	22.7	180.87	4.12	1989	1979
60	108	19780	107	-62.9	-47.5	-75.0			55	094	20.8	21.2	193.15	4.75	1981	1977
50	82	20891	82	-59.0	-42.5	-69.9			35	095	20.9	21.3	202.94	3.69	1981	1982
40	53	22297	53	-55.4	-45.5	-63.9			19	089	19.1	19.3	192.81	3.54	1989	1987
30	32	24107	32	-51.6	-39.3	-62.9			9	087	21.0	21.3	266.24	5.45	1981	1987
25	25	25248	25	-50.0	-39.1	-61.9			3	091	24.3	24.3	265.83	4.50	1989	1987
20	14	26691	14	-48.5	-37.9	-60.3			1	093	16.0	16.0			1989	1987
15	8	28540	8	-47.7	-45.3	-51.7									1987	1985
10	4	31276	4	-46.2	-44.1	-48.9									1983	1985
7	1	33705	1	-50.1	-50.1	-50.1									1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

432 549 511

164 107 1637 -77.1

## NORMALS OF RADIOSONDE DATA

43192 GOA

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	582	1000	582	26.8	30.0	23.0	582	24.2	582	279	6.5	7.0	0.97	0.38	1978	1971
1000	481	58	252	27.0	29.2	22.6	252	23.9	223	284	6.2	7.4	7.16	0.44	1979	1979
950	481	494	479	23.8	29.0	18.0	478	21.0	428	282	9.7	10.3	20.03	0.60	1981	1974
900	481	977	481	20.8	26.4	15.0	480	17.7	428	284	11.4	11.9	8.42	0.68	1981	1983
850	481	1469	480	18.0	26.4	10.8	480	14.7	427	284	11.0	11.5	9.18	0.76	1983	1983
800	481	1987	480	15.1	22.6	6.6	479	11.9	427	282	10.3	10.9	10.04	0.91	1982	1983
750	481	2527	480	12.5	19.0	5.0	477	8.0	426	282	10.1	10.7	13.75	1.04	1978	1974
700	481	3107	479	9.9	17.2	3.6	475	3.3	428	282	9.5	10.3	13.13	1.15	1979	1983
650	474	3720	472	6.9	14.4	0.0	462	-1.3	420	281	8.7	9.6	13.73	1.20	1989	1974
600	466	4374	464	3.7	11.0	-3.0	446	-5.0	412	283	7.0	8.3	17.77	1.23	1978	1974
550	462	5075	459	0.1	7.0	-7.9	423	-8.3	406	280	4.7	6.8	19.82	1.33	1978	1983
500	453	5833	450	-3.5	6.0	-12.1	398	-12.8	396	277	2.4	5.3	23.38	1.35	1974	1983
450	442	6659	440	-7.8	3.0	-15.9	362	-17.4	385	299	0.6	5.2	27.81	1.64	1972	1983
400	436	7569	433	-13.1	-6.5	-21.0	323	-22.6	379	083	1.8	5.5	34.38	1.77	1981	1974
350	422	8574	417	-19.5	-12.1	-28.0	270	-28.9	370	082	4.8	7.0	38.18	1.98	1990	1976
300	412	9707	408	-27.4	-19.5	-35.0	209	-36.8	362	086	8.8	9.8	49.64	2.18	1988	1976
250	396	11000	395	-37.1	-27.7	-47.0	64	-43.5	344	091	13.9	14.7	60.04	2.49	1982	1974
200	372	12503	372	-49.5	-40.9	-59.0			319	091	22.0	22.5	73.83	2.66	1989	1976
175	332	13370	331	-56.6	-47.5	-67.1			276	091	25.9	26.5	86.30	2.93	1989	1982
150	305	14331	304	-64.4	-53.1	-77.3			254	089	30.1	30.8	95.55	2.90	1980	1982
125	259	15428	259	-72.1	-59.1	-87.9			208	091	32.5	33.1	108.02	3.31	1980	1982
100	203	16726	203	-75.4	-58.3	-89.1			158	088	29.5	30.0	133.94	3.78	1980	1988
80	155	18052	155	-69.3	-50.3	-85.5			102	087	24.3	24.7	146.62	4.43	1980	1983
70	128	18846	128	-66.0	-51.1	-79.5			89	091	22.3	22.8	173.95	4.40	1980	1983
60	104	19806	104	-62.3	-49.1	-75.0			58	094	20.9	21.3	194.17	4.58	1980	1975
50	90	20946	90	-58.2	-45.9	-74.0			42	096	19.2	19.5	195.74	5.62	1981	1976
40	62	22363	62	-54.2	-42.7	-64.7			18	102	20.4	21.6	205.49	4.17	1980	1983
30	38	24226	38	-49.5	-38.1	-58.9			5	097	23.0	23.6	272.30	5.55	1980	1988
25	25	25474	25	-46.6	-35.1	-54.5			3	098	14.2	15.0	297.47	5.52	1980	1983
20	12	26958	12	-46.8	-37.9	-59.1									1987	1982
15	6	28787	6	-46.4	-37.9	-57.1									1987	1982
10	3	31321	3	-44.3	-40.7	-47.9									1981	1982
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
459	548	513					152	107	1635	-78.1

# NORMALS OF RADIOSONDE DATA

43192 GOA

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	569	1000	569	27.6	30.0	23.0	569	24.0	569	291	4.1	5.3	1.24	0.35	1972	1976
<i>1000</i>	483	63	324	27.5	30.0	23.0	324	23.7	306	295	4.7	5.7	9.70	0.45	1974	1976
<i>950</i>	483	502	482	24.1	33.4	18.0	480	20.3	463	293	6.0	7.2	19.42	0.74	1990	1977
<i>900</i>	483	983	482	21.3	30.0	15.0	482	17.2	463	294	5.9	7.2	10.81	0.88	1990	1977
<i>850</i>	483	1476	483	18.6	29.8	11.0	483	14.1	464	294	4.7	6.7	11.91	0.96	1990	1983
<i>800</i>	483	1994	483	15.8	24.4	9.0	483	10.4	463	290	4.0	6.4	13.17	1.08	1987	1974
<i>750</i>	483	2535	483	12.9	23.0	5.0	482	6.0	464	284	3.3	6.3	18.37	1.14	1978	1974
<i>700</i>	483	3115	483	10.1	19.0	3.0	474	1.5	463	283	3.2	6.5	16.56	1.17	1978	1974
<i>650</i>	473	3729	473	7.1	15.2	-1.0	451	-2.5	448	283	2.5	6.0	18.85	1.27	1990	1974
<i>600</i>	465	4382	464	3.9	12.8	-3.0	416	-5.9	440	279	1.7	5.5	21.11	1.32	1988	1974
<i>550</i>	454	5084	454	0.4	11.0	-8.3	374	-9.5	426	250	0.7	5.3	26.40	1.34	1990	1980
<i>500</i>	444	5845	444	-3.6	5.6	-11.0	343	-13.5	419	112	0.7	5.3	26.55	1.46	1990	1974
<i>450</i>	429	6670	427	-8.2	0.8	-16.0	325	-18.3	407	094	1.8	5.5	32.53	1.58	1990	1971
<i>400</i>	421	7581	419	-13.5	-5.5	-22.0	280	-23.5	403	092	3.5	5.9	34.65	1.68	1987	1975
<i>350</i>	417	8586	412	-20.0	-12.5	-28.0	229	-29.7	396	091	5.7	7.1	40.64	1.99	1988	1975
<i>300</i>	402	9717	398	-27.9	-19.3	-36.0	159	-36.7	384	088	8.0	9.0	47.79	2.11	1990	1975
<i>250</i>	383	11003	380	-38.0	-27.3	-47.0	47	-45.0	364	088	11.3	12.2	60.67	2.15	1980	1976
<i>200</i>	369	12504	365	-50.3	-40.3	-61.0	1	-53.3	348	093	16.4	17.2	68.33	2.36	1980	1971
<i>175</i>	322	13368	320	-57.3	-46.5	-68.1	1	-72.9	299	094	19.8	20.5	87.32	2.67	1980	1985
<i>150</i>	298	14326	297	-65.1	-53.3	-77.9			276	095	22.8	23.9	96.36	2.88	1988	1985
<i>125</i>	259	15417	258	-72.7	-59.5	-85.1			234	096	24.1	24.8	107.76	3.03	1980	1985
<i>100</i>	203	16715	202	-75.4	-59.5	-90.1			189	089	20.4	21.3	127.81	3.92	1980	1983
<i>80</i>	167	18027	167	-70.4	-52.1	-87.1			143	091	17.5	18.1	139.43	4.19	1980	1983
<i>70</i>	142	18827	142	-66.4	-46.1	-86.0			120	094	15.3	16.0	151.28	4.72	1980	1975
<i>60</i>	119	19783	119	-62.2	-42.1	-75.3			92	098	14.6	15.1	162.61	4.37	1980	1983
<i>50</i>	101	20929	101	-57.9	-45.1	-69.0			64	095	14.3	15.2	187.17	4.34	1980	1975
<i>40</i>	78	22386	78	-53.2	-40.9	-66.7			41	092	13.2	13.7	205.40	4.00	1980	1983
<i>30</i>	44	24269	44	-48.6	-39.5	-65.5			18	093	15.6	17.2	227.58	3.33	1980	1983
<i>25</i>	28	25488	28	-47.4	-39.1	-60.5			5	082	14.8	15.4	242.61	2.63	1980	1983
<i>20</i>	17	27039	17	-43.9	-39.1	-54.5			3	068	19.3	21.7			1981	1983
<i>15</i>	9	28880	9	-41.6	-35.9	-50.5			2	105	16.6	17.0			1989	1983
<i>10</i>	2	31088	2	-44.2	-40.3	-48.1									1987	1983
<i>7</i>	1	32879	1	-46.3	-46.3	-46.3									1983	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
456	545	518					178	106	1640	-77.1

# NORMALS OF RADIOSONDE DATA

43192 GOA

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	586	1001	587	28.7	33.0	23.6	587	23.5	587	284	2.7	4.1	0.83	0.79	1972	1985
1000	492	71	384	28.6	33.0	23.0	384	23.0	380	283	3.0	4.3	7.33	0.78	1972	1974
950	493	509	493	25.6	33.4	13.4	493	18.5	486	291	2.9	5.1	22.11	1.43	1990	1990
900	493	995	491	23.0	32.0	10.8	490	14.7	485	332	1.2	4.6	10.40	1.60	1990	1990
850	493	1490	491	19.9	29.0	9.6	488	11.2	485	054	1.8	5.2	12.61	1.54	1976	1990
800	493	2009	492	16.5	24.4	5.6	486	8.1	484	066	3.4	6.4	15.16	1.33	1990	1990
750	493	2548	492	13.0	22.4	3.6	483	4.2	482	068	3.9	6.9	22.26	1.17	1990	1990
700	493	3130	493	9.8	19.4	2.6	457	-0.4	484	066	3.1	6.3	19.62	1.11	1990	1983
650	489	3742	488	6.7	15.8	-4.9	403	-4.2	473	064	1.9	5.4	22.06	1.28	1990	1986
600	480	4395	480	3.5	12.4	-5.0	359	-8.3	459	067	1.3	5.1	24.46	1.43	1990	1974
550	474	5095	473	0.0	9.0	-9.0	305	-11.5	453	070	1.6	5.1	30.00	1.46	1990	1974
500	461	5856	461	-4.1	3.8	-13.0	265	-15.7	443	073	2.1	5.5	31.05	1.52	1990	1974
450	455	6679	454	-8.8	8.0	-17.0	231	-20.3	436	076	2.4	5.8	35.48	1.44	1974	1974
400	446	7585	445	-14.4	-7.1	-24.9	190	-25.4	428	084	2.4	5.7	38.74	1.63	1989	1981
350	435	8586	434	-21.1	-13.0	-30.0	151	-31.1	416	089	2.1	6.1	42.62	1.68	1972	1978
300	424	9711	423	-29.2	-21.3	-38.0	90	-37.3	403	130	2.0	6.5	49.78	1.83	1988	1977
250	411	10989	409	-39.3	-30.5	-50.0	30	-45.5	384	149	3.4	8.6	60.30	1.97	1989	1977
200	396	12477	395	-51.6	-40.3	-64.0	2	-58.0	369	143	5.9	10.7	70.20	2.07	1989	1977
175	346	13341	346	-58.6	-47.7	-73.0			317	140	6.9	11.9	77.97	2.20	1989	1977
150	323	14293	323	-66.1	-54.1	-77.0			301	131	8.3	12.3	86.62	2.53	1989	1977
125	282	15381	281	-73.2	-62.1	-86.0			259	120	9.0	12.1	108.40	3.15	1989	1977
100	246	16682	245	-77.0	-63.5	-88.1			228	103	9.4	10.8	133.66	3.93	1981	1982
80	202	17989	202	-71.8	-58.1	-84.0			184	097	8.8	10.0	150.01	4.64	1980	1976
70	182	18786	182	-67.6	-54.3	-79.5			167	092	8.6	9.6	173.68	5.01	1985	1988
60	153	19726	153	-63.2	-51.1	-79.0			138	099	9.1	10.1	192.50	5.58	1985	1973
50	123	20862	123	-58.9	-45.7	-73.0			114	096	8.7	9.8	205.51	4.63	1981	1972
40	97	22276	97	-54.7	-45.3	-65.5			81	095	8.9	10.0	226.25	3.58	1981	1988
30	62	24165	62	-49.6	-39.9	-61.3			53	093	10.6	11.7	265.27	3.23	1988	1988
25	48	25355	48	-48.0	-40.5	-59.3			33	095	12.0	12.9	245.43	2.82	1980	1988
20	20	26777	20	-47.3	-39.5	-57.7			10	088	8.5	9.5			1987	1988
15	8	28707	8	-46.2	-40.5	-55.9			2	089	7.7	8.5			1982	1988
10	5	31421	5	-43.3	-32.1	-52.9									1982	1988
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

469 551 510

207 104 1648 -78.6

# NORMALS OF RADIOSONDE DATA

43192 GOA

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	570	1002	570	29.1	34.0	22.0	570	21.0	570	283	2.1	4.0	1.03	0.56	1972	1972
<i>1000</i>	462	80	404	28.8	33.2	24.0	404	20.2	384	280	2.2	4.2	8.03	0.59	1980	1976
<i>950</i>	462	520	462	25.8	31.4	18.4	461	14.1	439	318	1.3	4.7	20.66	1.04	1988	1982
<i>900</i>	462	1003	462	22.6	29.8	14.0	459	10.9	436	071	2.3	5.1	8.83	1.18	1979	1974
<i>850</i>	462	1496	461	18.9	27.6	10.0	457	8.2	436	080	4.5	6.3	10.28	1.25	1989	1974
<i>800</i>	463	2013	462	15.4	22.6	8.6	445	5.4	436	078	6.0	7.7	11.41	1.31	1979	1982
<i>750</i>	463	2551	463	12.4	20.4	4.0	393	1.1	437	076	5.7	7.7	17.46	1.11	1979	1974
<i>700</i>	463	3131	463	9.7	17.6	1.0	316	-2.0	439	077	4.5	6.9	14.41	1.06	1979	1974
<i>650</i>	453	3742	452	6.5	13.6	-5.0	252	-4.2	423	077	3.6	6.3	19.69	1.02	1979	1977
<i>600</i>	443	4395	442	3.1	12.4	-6.5	207	-7.0	412	075	3.2	6.4	18.82	1.08	1990	1981
<i>550</i>	432	5092	430	-0.5	8.2	-10.0	163	-10.3	401	067	3.1	6.6	25.81	1.19	1990	1974
<i>500</i>	426	5853	425	-4.8	4.0	-15.0	139	-13.7	395	065	2.5	6.9	24.42	1.33	1990	1974
<i>450</i>	420	6672	419	-9.6	9.0	-20.0	122	-19.1	388	059	1.6	7.4	29.39	1.33	1976	1974
<i>400</i>	417	7575	416	-15.5	-5.3	-24.0	103	-24.8	386	019	0.6	7.4	31.96	1.38	1990	1974
<i>350</i>	405	8570	404	-22.4	-14.1	-34.0	81	-31.2	375	277	1.6	8.0	37.32	1.59	1989	1974
<i>300</i>	388	9688	387	-30.6	-21.3	-45.0	49	-39.2	357	246	3.9	9.3	42.26	1.88	1989	1974
<i>250</i>	371	10961	370	-40.5	-27.9	-50.9	8	-46.0	341	230	6.9	11.2	52.18	1.99	1990	1990
<i>200</i>	343	12444	342	-52.5	-39.7	-64.5			319	208	8.5	13.0	64.40	1.93	1990	1985
<i>175</i>	296	13306	295	-59.5	-48.5	-70.0			273	206	8.0	13.0	66.33	2.23	1990	1977
<i>150</i>	270	14259	269	-66.4	-55.1	-77.9			248	208	5.8	11.4	74.54	2.74	1981	1979
<i>125</i>	237	15347	236	-72.7	-62.3	-84.1			222	197	3.4	8.9	91.17	2.80	1979	1979
<i>100</i>	212	16647	212	-76.8	-64.1	-88.0			199	121	3.0	8.6	112.13	3.40	1981	1977
<i>80</i>	187	17942	187	-74.1	-62.1	-86.0			167	095	3.9	7.6	135.61	4.24	1981	1976
<i>70</i>	172	18732	172	-69.9	-57.9	-84.0			155	089	3.4	6.1	137.71	3.68	1981	1977
<i>60</i>	150	19665	150	-64.6	-46.7	-80.0			134	100	2.5	6.1	145.77	3.44	1982	1977
<i>50</i>	134	20792	134	-59.6	-47.1	-76.0			113	110	3.8	7.3	170.33	3.46	1982	1977
<i>40</i>	95	22211	95	-55.8	-44.3	-71.0			79	101	4.2	8.1	211.62	3.39	1980	1977
<i>30</i>	63	24077	63	-51.7	-40.9	-63.5			45	086	7.8	11.0	199.13	2.46	1987	1990
<i>25</i>	36	25198	36	-51.0	-43.7	-60.1			22	094	10.2	12.5	208.39	1.51	1982	1990
<i>20</i>	23	26650	23	-48.2	-36.1	-54.7			9	085	9.8	11.7	214.54	2.51	1985	1990
<i>15</i>	11	28544	11	-45.2	-30.1	-54.9			1	091	17.0	17.0			1985	1990
<i>10</i>	4	31470	4	-44.3	-37.1	-52.3									1988	1990
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

437 557 503

188 102 1659 -77.9



# NORMALS OF RADIOSONDE DATA

43192 GOA

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	1004	589	28.9	33.4	19.6	589	19.1	588	289	1.9	3.9	0.86	0.50	1989	1988
1000	465	91	464	28.6	32.4	21.0	464	18.4	438	288	1.9	4.2	6.09	0.45	1987	1974
950	465	532	465	25.4	31.2	15.6	464	11.9	441	355	1.1	4.4	20.25	0.96	1979	1990
900	465	1014	463	22.1	29.4	13.4	461	9.0	441	076	3.4	4.8	7.23	1.06	1979	1990
850	465	1506	463	18.3	25.0	7.0	452	6.1	441	079	5.2	6.2	7.82	1.15	1987	1974
800	464	2021	462	14.8	25.8	7.0	412	1.9	444	078	5.6	6.8	9.50	1.18	1990	1974
750	464	2558	463	12.3	21.8	3.0	296	-2.9	446	077	4.4	6.4	19.02	1.17	1990	1974
700	464	3139	462	9.7	19.0	-1.0	192	-6.8	447	072	2.8	5.9	12.50	1.17	1977	1974
650	454	3749	452	6.5	15.0	-5.3	136	-9.6	437	057	1.7	5.6	18.56	1.16	1971	1979
600	448	4401	448	2.8	10.6	-6.0	99	-12.2	425	042	0.8	5.9	17.82	1.11	1979	1974
550	440	5098	438	-1.2	7.0	-10.0	85	-16.2	417	344	0.5	6.4	26.51	1.14	1974	1974
500	432	5853	431	-5.7	2.6	-14.0	68	-19.8	411	285	1.7	7.3	23.69	1.34	1987	1974
450	419	6669	419	-10.9	-2.1	-19.0	57	-23.8	400	275	3.6	8.3	33.66	1.39	1990	1974
400	413	7568	411	-16.9	-8.1	-29.3	56	-28.6	392	266	6.0	10.1	31.73	1.42	1990	1988
350	399	8558	398	-23.7	-15.7	-39.0	44	-34.9	381	266	8.6	12.4	37.02	1.58	1987	1974
300	388	9671	385	-31.8	-22.7	-40.7	21	-40.2	368	257	11.1	14.8	41.84	1.70	1987	1990
250	371	10934	369	-41.6	-30.0	-53.5	1	-47.3	349	248	14.1	18.1	50.77	1.79	1977	1990
200	357	12412	356	-53.6	-45.0	-63.0			332	243	15.2	19.3	61.83	1.87	1976	1971
175	303	13273	302	-59.8	-51.3	-70.0			275	247	15.7	19.1	78.81	2.23	1980	1971
150	268	14223	267	-66.1	-54.5	-77.0			247	246	14.1	16.9	87.00	2.57	1982	1971
125	229	15318	228	-71.7	-60.9	-82.0			206	253	10.4	13.0	91.12	2.71	1980	1978
100	206	16617	206	-76.5	-65.7	-88.5			185	249	4.4	9.0	86.55	2.68	1982	1985
80	167	17915	167	-75.0	-59.0	-86.0			145	216	0.2	7.3	100.16	2.80	1971	1977
70	152	18692	152	-71.6	-60.3	-83.0			130	111	1.2	6.1	106.51	3.06	1980	1977
60	134	19622	134	-66.2	-55.5	-81.0			106	114	1.3	5.4	124.02	3.28	1986	1977
50	105	20740	105	-60.7	-47.9	-77.0			83	184	0.9	6.7	170.74	5.35	1987	1976
40	80	22176	80	-56.9	-47.1	-77.3			54	140	0.4	8.6	167.60	4.00	1982	1986
30	43	23996	43	-53.4	-40.3	-75.5			26	083	1.3	12.6	188.40	5.91	1980	1986
25	31	25148	31	-52.3	-43.3	-74.7			17	163	1.9	14.4	210.03	4.79	1981	1986
20	17	26644	17	-47.7	-43.1	-53.7			11	128	4.3	15.3			1982	1981
15	4	28501	4	-46.4	-43.3	-49.5									1986	1982
10	1	31487	1	-43.5	-43.5	-43.5									1982	1982
7	1	33891	1	-42.1	-42.1	-42.1									1982	1982

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

442 564 490

160 098 1680 -77.9

## NORMALS OF RADIOSONDE DATA

42379 GORAKHPUR

JANUARY 1982-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	279	1005	279	21.0	27.6	10.6	279	12.7	279	269	1.1	1.4	1.41	1.38	1982	1990
1000	189	131	185	20.8	27.4	10.6	182	11.8	181	269	1.7	2.5	9.89	1.55	1982	1983
950	188	541	188	16.7	24.4	8.2	181	6.7	187	274	2.5	4.1	11.14	1.11	1982	1986
900	188	1027	188	13.6	22.4	5.4	171	1.7	187	282	3.3	5.0	10.95	1.15	1982	1986
850	188	1506	188	11.1	21.2	3.6	158	-3.3	187	287	4.6	6.8	12.05	1.25	1982	1983
800	188	2010	188	8.9	18.2	0.6	131	-7.1	187	288	6.8	8.7	14.11	1.42	1982	1989
750	188	2540	188	6.5	16.8	-2.9	89	-9.3	187	285	9.6	10.8	18.10	1.55	1982	1989
700	188	3105	188	3.7	14.8	-6.3	71	-11.7	187	281	12.0	13.0	17.92	1.50	1983	1989
650	187	3697	187	0.3	11.8	-8.9	63	-14.1	185	279	14.0	15.2	21.59	1.68	1982	1986
600	186	4342	186	-3.6	7.2	-12.9	54	-16.6	183	276	16.6	17.9	23.85	1.63	1982	1985
550	182	5048	181	-7.8	1.8	-15.5	46	-19.9	177	273	19.9	21.3	32.35	1.69	1982	1985
500	181	5762	181	-12.3	-3.5	-19.7	48	-23.8	175	271	23.4	25.2	30.14	1.73	1988	1983
450	178	6562	178	-17.3	-6.7	-24.7	40	-28.4	163	268	28.0	29.9	31.77	2.08	1989	1985
400	177	7436	177	-22.9	-12.1	-31.7	34	-33.8	152	266	32.8	34.8	35.90	2.51	1989	1985
350	176	8412	176	-29.0	-18.1	-38.5	23	-39.6	128	264	35.3	37.5	44.53	2.56	1989	1985
300	173	9492	173	-35.9	-24.7	-47.9	5	-44.1	98	261	37.5	40.1	52.47	2.67	1989	1985
250	171	10740	171	-43.1	-27.9	-54.5			62	256	39.4	41.3	67.68	2.38	1988	1983
200	164	12214	164	-51.0	-39.3	-61.3			33	255	41.9	44.5	80.14	2.03	1983	1985
175	155	13072	155	-55.0	-41.5	-66.3			21	254	40.4	43.3	83.63	2.08	1983	1985
150	149	14046	149	-59.4	-42.9	-71.1			18	253	39.3	42.0	87.91	2.54	1983	1986
125	135	15169	135	-63.5	-47.9	-75.9			12	255	41.7	45.2	95.60	3.77	1983	1986
100	123	16522	123	-66.9	-53.9	-78.3			5	245	47.8	50.4	109.21	3.07	1983	1986
80	108	17866	108	-67.6	-56.1	-79.9			2	224	28.6	33.5	125.81	2.41	1989	1989
70	100	18674	100	-66.0	-55.9	-77.3			2	237	25.7	28.0	141.79	2.47	1985	1989
60	92	19611	91	-63.1	-51.5	-77.1			2	233	29.0	32.5	142.50	2.28	1988	1988
50	85	20740	85	-59.3	-45.3	-71.7			1	230	59.0	59.0	167.34	2.98	1983	1988
40	66	22134	66	-55.8	-46.7	-68.1							207.83	2.73	1985	1989
30	52	23969	52	-52.2	-42.7	-65.1							231.37	3.53	1988	1989
25	43	25159	43	-49.9	-36.5	-57.1							259.43	3.88	1988	1985
20	34	26620	34	-48.3	-41.1	-55.7							157.78	2.09	1987	1985
15	21	28541	21	-45.6	-39.3	-51.9							67.36	2.00	1985	1986
10	14	31259	14	-44.4	-37.3	-50.5									1988	1987
7	5	33635	5	-43.4	-39.7	-46.9									1988	1987

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

186 649 372

44 190 1260 -57.0

113 098 1681 -69.6

# NORMALS OF RADIOSONDE DATA

42379 GORAKHPUR

FEBRUARY 1982-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	254	1002	254	24.6	31.6	14.0	254	13.0	254	267	2.0	2.7	1.83	1.38	1989	1984
1000	208	101	158	24.2	31.4	15.8	155	12.4	158	263	2.1	2.9	17.09	1.12	1989	1990
950	207	515	207	20.1	29.2	12.4	201	7.1	207	267	4.1	5.6	18.03	1.20	1983	1982
900	207	1008	207	16.4	25.4	8.2	200	3.5	207	275	4.9	6.3	16.40	1.22	1989	1982
850	207	1491	207	13.1	26.4	4.0	192	-1.1	207	282	6.5	7.7	16.30	1.07	1983	1982
800	207	1996	207	10.3	20.8	0.8	159	-5.2	207	281	8.3	9.5	16.64	0.85	1983	1982
750	207	2523	207	7.4	19.8	-2.5	122	-7.1	207	283	10.7	11.5	18.46	0.86	1983	1989
700	207	3095	207	4.3	16.8	-4.9	102	-9.4	207	282	12.8	13.4	17.27	0.94	1983	1989
650	207	3685	206	0.8	13.0	-7.5	87	-12.1	204	281	15.0	15.7	19.41	0.90	1983	1985
600	207	4334	207	-3.0	8.0	-11.1	72	-15.5	202	279	17.5	18.1	17.37	0.91	1983	1989
550	205	5030	205	-7.6	3.6	-17.5	59	-19.4	197	277	19.8	20.7	21.21	0.94	1989	1982
500	204	5754	204	-12.1	-0.5	-19.9	51	-22.9	190	276	23.7	24.8	18.85	1.20	1989	1989
450	203	6557	203	-17.2	-5.5	-29.7	41	-27.0	175	272	26.8	28.2	21.04	1.46	1989	1983
400	202	7429	202	-22.7	-11.5	-32.5	40	-32.3	163	271	31.2	33.0	20.87	1.68	1989	1983
350	200	8405	200	-28.7	-16.5	-39.7	28	-37.7	135	269	36.1	38.3	24.46	1.98	1990	1986
300	198	9489	197	-35.2	-19.1	-46.9	9	-44.2	103	268	40.3	43.5	28.26	2.14	1990	1986
250	191	10743	191	-42.0	-28.3	-57.1	1	-41.5	58	272	40.3	43.7	35.15	2.24	1983	1988
200	183	12231	183	-49.3	-31.1	-63.1			28	265	43.3	44.9	54.13	2.78	1983	1985
175	175	13099	175	-53.4	-35.1	-69.5			19	272	41.5	42.5	63.65	3.14	1983	1990
150	170	14087	170	-57.8	-39.1	-75.9			12	271	38.3	38.8	72.95	3.48	1983	1990
125	154	15230	154	-62.4	-46.1	-78.1			7	267	34.6	35.0	89.24	3.55	1983	1985
100	135	16597	134	-66.3	-52.1	-78.1			5	267	34.2	34.6	111.35	3.96	1983	1985
80	121	17953	120	-65.9	-50.7	-81.1			2	266	17.4	17.5	138.75	4.68	1983	1985
70	115	18779	115	-64.2	-48.3	-79.9			1	301	19.0	19.0	156.74	4.86	1983	1985
60	108	19711	108	-60.6	-44.5	-78.9			1	126	4.0	4.0	182.39	4.86	1983	1985
50	96	20865	93	-56.0	-36.1	-70.1							212.55	4.92	1983	1985
40	88	22290	87	-52.4	-40.1	-69.1							234.86	4.25	1983	1985
30	79	24153	79	-48.5	-37.5	-60.1							270.08	3.82	1983	1989
25	63	25322	62	-47.3	-36.7	-59.1							321.76	3.63	1982	1989
20	49	26797	48	-46.8	-36.9	-57.9							371.65	3.35	1983	1985
15	39	28658	39	-45.7	-36.3	-56.3							411.71	3.40	1983	1985
10	25	31329	25	-44.3	-35.5	-53.1							519.49	4.60	1983	1987
7	7	33639	7	-43.8	-35.1	-51.1									1983	1987

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

206	639	384		27	188	1270	-54.1		128	098	1676	-68.5
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## NORMALS OF RADIOSONDE DATA

42379 GORAKHPUR

MARCH 1981-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	308	998	308	31.2	39.2	16.4	308	13.4	308	268	2.8	3.5	1.41	1.20	1986	1982
1000	237	70	74	27.8	33.6	15.8	74	13.3	72	260	1.2	2.0	12.16	1.55	1990	1982
950	237	495	237	24.9	35.6	12.2	222	7.0	235	271	4.7	6.0	13.54	1.50	1986	1982
900	237	992	237	20.7	31.2	9.8	221	4.5	235	272	6.1	7.2	10.35	1.64	1982	1983
850	237	1481	237	16.8	27.0	5.8	217	1.7	235	277	7.3	8.2	9.61	1.46	1987	1983
800	237	1996	237	13.0	22.0	3.0	200	-1.3	234	280	9.0	9.8	11.10	1.25	1982	1983
750	237	2525	237	9.4	19.8	-1.9	172	-4.9	234	282	10.7	11.6	13.00	1.46	1982	1990
700	237	3102	236	5.8	15.6	-4.7	148	-8.6	234	283	12.7	13.6	10.53	1.31	1982	1983
650	236	3693	235	2.0	10.6	-8.5	120	-12.0	231	282	14.5	15.4	15.04	1.36	1982	1983
600	235	4348	234	-2.0	6.6	-12.9	94	-15.0	228	280	16.4	17.4	12.29	1.39	1986	1983
550	235	5049	233	-6.4	3.0	-18.5	69	-18.6	228	277	18.5	19.6	16.92	1.53	1990	1983
500	233	5774	232	-11.2	-0.9	-21.9	54	-23.4	224	277	21.0	22.1	17.31	1.53	1982	1983
450	233	6579	231	-16.6	-7.1	-26.3	44	-27.1	216	275	23.8	25.1	19.17	1.62	1982	1983
400	231	7452	230	-22.5	-11.7	-31.5	30	-32.9	202	274	27.2	28.7	27.42	1.68	1989	1983
350	227	8429	226	-29.1	-13.1	-38.1	16	-37.8	174	274	28.9	30.7	30.25	2.08	1990	1990
300	223	9508	222	-36.3	-20.3	-49.3	6	-43.2	148	273	32.5	34.8	37.81	2.45	1990	1981
250	214	10755	214	-43.4	-28.7	-61.3	2	-52.2	108	274	34.4	38.0	46.20	2.93	1990	1981
200	204	12231	204	-51.1	-35.7	-64.3			76	275	38.4	41.9	66.12	3.25	1990	1981
175	194	13091	194	-55.1	-40.1	-68.1			52	275	34.9	37.9	80.74	3.01	1990	1985
150	176	14067	176	-59.6	-44.3	-73.3			41	279	36.3	39.1	94.62	3.13	1990	1985
125	156	15193	156	-64.3	-51.7	-81.5			24	279	31.6	33.6	95.41	3.11	1982	1983
100	133	16546	130	-68.1	-52.1	-87.5			19	281	30.5	32.4	107.43	3.00	1982	1983
80	120	17885	119	-68.3	-51.7	-86.1			13	280	20.9	25.8	119.70	3.24	1982	1983
70	112	18691	112	-66.2	-50.7	-84.1			9	259	17.2	19.6	116.24	3.33	1982	1983
60	105	19614	105	-62.3	-42.1	-78.9			8	245	9.6	16.1	118.13	3.95	1989	1990
50	95	20744	95	-57.5	-46.1	-73.1			9	268	6.0	11.2	113.65	4.66	1982	1985
40	85	22160	85	-53.3	-41.5	-67.5			9	290	4.6	8.1	129.26	3.67	1982	1985
30	67	24021	67	-48.8	-35.3	-61.1			6	268	5.7	6.8	142.80	3.31	1982	1986
25	49	25217	49	-47.5	-33.1	-59.7			4	027	2.8	14.0	192.01	3.56	1982	1986
20	35	26597	35	-46.4	-37.5	-55.9			2	101	6.9	14.0	190.77	2.62	1987	1989
15	23	28479	23	-44.5	-34.5	-52.9			1	196	11.0	11.0	231.49	2.59	1983	1989
10	16	31258	16	-42.3	-33.5	-49.7			1	199	6.0	6.0			1987	1989
7	6	33704	6	-40.9	-31.5	-45.9									1987	1986

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

234 624 403

47 211 1195 -55.8

129 097 1670 -70.8

## NORMALS OF RADIOSONDE DATA

42379 GORAKHPUR

APRIL 1981-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	300	993	300	35.8	42.0	20.6	299	14.8	300	272	2.7	4.1	1.38	1.24	1985	1983
1000	205	25	2	30.6	31.0	30.2	2	12.1	1	271	2.0	2.0	15.13		1986	1983
950	204	458	202	30.8	40.0	17.6	168	8.7	203	277	4.8	6.9	20.04	1.50	1988	1990
900	204	967	203	26.8	36.2	16.8	157	6.6	203	275	5.9	7.6	13.61	1.19	1988	1989
850	204	1467	204	22.8	32.2	13.0	153	5.0	203	275	8.2	9.2	13.37	1.16	1988	1990
800	204	1990	204	18.8	28.0	9.0	152	2.0	203	279	9.3	10.0	13.96	1.10	1988	1990
750	204	2521	204	14.6	24.2	4.4	142	-1.9	203	280	11.4	12.0	13.20	1.19	1990	1990
700	204	3116	204	10.3	20.4	1.2	121	-5.2	203	283	12.8	13.6	15.25	1.38	1990	1990
650	202	3707	201	5.9	17.0	-4.5	98	-9.1	198	284	14.7	15.2	20.06	1.41	1990	1983
600	199	4378	196	1.5	13.0	-7.5	79	-13.0	192	282	15.7	16.5	17.83	1.48	1990	1986
550	198	5078	195	-3.1	9.0	-13.7	59	-17.0	190	283	17.4	18.1	24.34	1.59	1990	1986
500	198	5819	196	-8.2	4.8	-19.1	47	-20.9	186	281	19.2	20.0	24.09	1.58	1990	1986
450	196	6627	196	-13.7	3.0	-24.9	40	-25.5	176	279	20.4	21.4	28.96	1.63	1981	1986
400	193	7517	193	-19.9	-5.1	-33.3	25	-30.3	170	278	22.6	23.8	34.39	1.98	1990	1986
350	191	8504	191	-26.8	-12.5	-36.5	20	-36.9	155	276	25.2	26.8	39.49	2.15	1990	1983
300	186	9594	186	-34.4	-18.7	-45.5	7	-45.1	135	276	27.1	28.9	49.46	2.28	1990	1983
250	182	10848	182	-42.6	-25.7	-53.1			111	275	29.5	31.7	58.18	2.41	1990	1987
200	172	12329	172	-50.4	-38.1	-62.5			73	273	25.7	28.3	72.51	2.11	1990	1986
175	158	13197	158	-54.1	-44.1	-65.5			61	274	25.1	27.2	77.11	2.23	1981	1989
150	151	14169	151	-58.5	-44.3	-73.1			54	268	24.0	25.9	86.71	2.84	1981	1985
125	133	15301	133	-64.0	-45.1	-77.1			47	266	20.5	21.9	96.90	3.79	1981	1989
100	120	16645	120	-68.3	-53.7	-79.1			36	271	16.9	18.3	120.39	3.64	1981	1989
80	106	17982	106	-68.3	-51.1	-78.7			28	255	6.7	12.7	143.81	4.28	1981	1987
70	101	18796	101	-66.1	-49.5	-81.1			25	284	2.7	8.7	156.64	4.65	1982	1985
60	93	19730	92	-62.4	-43.1	-75.3			25	060	1.0	8.7	178.10	4.92	1982	1988
50	89	20862	89	-57.3	-40.1	-72.5			25	068	1.5	5.8	179.28	4.45	1987	1988
40	79	22287	79	-52.6	-37.1	-67.5			24	102	1.2	7.0	211.64	4.74	1981	1990
30	70	24160	70	-47.2	-30.1	-65.9			23	329	0.8	6.6	251.41	5.60	1981	1990
25	57	25311	57	-46.1	-28.5	-64.7			16	289	4.1	6.2	253.07	5.24	1987	1990
20	47	26834	47	-44.4	-36.1	-63.1			16	285	2.7	7.7	247.13	3.61	1986	1990
15	34	28756	34	-42.5	-32.7	-55.3			12	280	7.6	8.7	289.47	2.85	1983	1985
10	26	31491	26	-40.0	-30.1	-51.7			9	285	10.2	11.3	378.62	3.37	1983	1985
7	10	33792	10	-40.3	-37.1	-47.1			5	286	12.9	13.4			1988	1985

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

200 583 460

30 203 1215 -52.7

113 098 1682 -70.2

## NORMALS OF RADIOSONDE DATA

42379 GORAKHPUR

MAY 1981-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	309	991	309	37.2	43.4	22.6	309	20.5	309	045	0.2	2.8	1.84	0.92	1987	1990
<i>1000</i>	255	6											15.98			
<i>950</i>	253	445	253	32.5	40.2	21.6	239	15.8	253	328	0.4	5.0	26.35	0.93	1983	1987
<i>900</i>	253	951	253	28.3	43.2	17.0	233	13.0	253	282	1.4	5.3	15.38	1.25	1983	1987
<i>850</i>	253	1454	253	24.4	37.8	13.0	234	10.0	253	273	3.4	5.9	16.32	1.18	1983	1987
<i>800</i>	253	1981	253	20.6	32.0	11.0	230	6.4	252	279	6.3	7.7	16.30	1.16	1983	1983
<i>750</i>	253	2523	252	16.5	27.0	7.2	212	2.2	252	286	8.6	9.6	17.55	1.28	1983	1987
<i>700</i>	253	3116	251	12.5	22.2	4.2	193	-1.8	251	287	10.3	11.3	20.33	1.48	1983	1987
<i>650</i>	252	3724	251	8.1	17.6	-5.5	173	-6.7	249	286	11.3	12.3	21.92	1.54	1983	1982
<i>600</i>	249	4388	249	4.1	13.2	-5.3	137	-10.1	244	286	11.8	13.0	24.58	1.55	1983	1987
<i>550</i>	245	5108	245	-0.3	8.4	-10.1	96	-13.5	236	283	12.4	13.5	28.21	1.58	1990	1989
<i>500</i>	244	5846	244	-4.9	5.0	-16.1	65	-17.4	235	282	13.0	14.5	31.67	1.87	1990	1987
<i>450</i>	241	6671	240	-9.9	1.2	-22.9	41	-20.5	231	278	13.4	14.9	37.42	2.15	1990	1987
<i>400</i>	240	7569	240	-15.5	-2.5	-29.3	29	-25.9	228	277	14.7	16.8	44.93	2.49	1990	1987
<i>350</i>	238	8570	237	-21.6	-5.5	-32.9	25	-32.1	217	272	16.8	19.2	55.40	2.65	1990	1985
<i>300</i>	232	9689	231	-28.7	-9.9	-43.9	14	-37.9	208	266	19.0	21.6	65.87	2.80	1990	1987
<i>250</i>	227	10975	226	-36.9	-18.9	-49.1	4	-41.3	200	261	21.4	24.0	80.01	2.65	1990	1985
<i>200</i>	214	12491	214	-46.7	-30.1	-56.3	1	-45.7	174	257	22.9	25.1	91.29	2.22	1990	1989
<i>175</i>	205	13363	204	-52.3	-34.5	-61.9			157	257	22.3	24.6	97.43	2.14	1990	1989
<i>150</i>	196	14342	195	-58.4	-40.9	-68.7			140	256	20.1	22.4	105.61	2.42	1990	1989
<i>125</i>	182	15471	182	-64.6	-48.5	-77.9			112	254	15.0	17.6	112.68	2.83	1990	1989
<i>100</i>	165	16813	165	-69.3	-54.3	-81.9			101	247	8.9	13.0	150.13	3.76	1983	1989
<i>80</i>	144	18142	143	-69.3	-54.1	-82.1			86	234	2.6	8.6	168.27	3.46	1983	1985
<i>70</i>	138	18956	137	-66.1	-50.9	-81.5			80	175	1.9	8.3	164.18	3.51	1982	1988
<i>60</i>	127	19888	126	-61.5	-46.1	-74.3			73	110	4.3	8.7	179.26	3.12	1982	1985
<i>50</i>	119	21021	119	-55.6	-39.7	-68.1			70	095	6.1	9.2	185.62	3.08	1983	1985
<i>40</i>	105	22447	105	-50.5	-38.7	-61.3			64	087	6.0	9.0	213.56	2.70	1983	1988
<i>30</i>	93	24350	93	-45.3	-35.1	-54.7			58	087	6.0	8.7	201.35	3.00	1981	1988
<i>25</i>	79	25542	79	-43.0	-32.1	-50.7			51	092	5.5	8.3	225.53	2.52	1981	1988
<i>20</i>	57	27044	56	-40.9	-30.1	-54.7			37	079	3.4	8.9	252.59	2.94	1981	1985
<i>15</i>	33	28974	33	-39.5	-27.5	-47.7			20	087	2.7	8.1	370.55	4.46	1986	1983
<i>10</i>	20	31752	20	-37.8	-24.1	-45.7			13	084	3.0	7.6			1986	1983
<i>7</i>	13	34083	13	-37.8	-33.3	-43.1			7	066	1.6	7.3			1988	1983

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

246 552 507

9 177 1325 -57.2

173 098 1700 -70.9

## NORMALS OF RADIOSONDE DATA

42379 GORAKHPUR

JUNE 1981-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	270	987	270	36.4	43.8	25.6	270	24.5	270	066	0.9	2.6	1.00	1.65	1983	1982
<i>1000</i>	231	-35											8.36			
<i>950</i>	228	404	228	32.5	44.2	23.8	225	20.9	228	060	1.0	5.0	13.52	1.47	1983	1982
<i>900</i>	228	911	228	28.6	39.4	20.4	225	18.1	228	001	0.3	5.1	8.14	1.36	1988	1982
<i>850</i>	228	1416	228	24.8	36.6	14.8	220	15.3	228	297	1.0	5.8	10.16	1.22	1988	1982
<i>800</i>	228	1943	228	21.2	32.6	12.0	221	12.0	228	296	2.7	7.2	12.15	1.15	1988	1982
<i>750</i>	228	2498	228	17.6	28.2	8.0	217	7.8	227	300	4.4	8.6	13.09	1.03	1988	1981
<i>700</i>	228	3083	228	14.0	23.6	6.2	213	3.3	228	300	5.0	9.4	15.56	1.03	1982	1989
<i>650</i>	227	3707	227	10.4	21.8	2.0	197	-0.7	227	301	5.4	9.6	17.80	1.13	1983	1985
<i>600</i>	227	4367	227	6.5	17.6	-6.1	181	-4.6	225	300	5.3	9.3	20.90	1.23	1983	1983
<i>550</i>	227	5105	227	2.9	12.6	-6.9	160	-8.3	222	293	5.2	9.1	22.89	1.16	1983	1988
<i>500</i>	224	5840	224	-1.1	8.8	-11.5	138	-12.1	218	286	5.3	9.2	24.31	1.29	1982	1988
<i>450</i>	222	6690	222	-5.2	7.8	-15.1	110	-16.8	214	275	5.5	9.5	27.74	1.39	1983	1981
<i>400</i>	219	7590	219	-10.6	0.0	-18.1	81	-21.0	208	265	6.2	10.0	29.60	1.25	1983	1981
<i>350</i>	215	8612	215	-16.5	-6.1	-25.5	55	-25.4	200	262	7.0	10.4	37.73	1.24	1983	1990
<i>300</i>	212	9758	211	-23.6	-13.3	-33.5	36	-31.9	195	257	7.5	11.2	38.46	1.27	1981	1990
<i>250</i>	201	11063	199	-32.9	-21.3	-42.5	18	-40.1	177	248	7.5	11.5	45.52	1.55	1983	1989
<i>200</i>	196	12591	195	-44.5	-32.5	-53.9	3	-48.0	167	231	7.1	11.5	49.70	2.00	1983	1989
<i>175</i>	185	13467	185	-51.6	-36.5	-62.5			149	231	6.9	11.2	48.57	2.22	1983	1989
<i>150</i>	175	14451	175	-59.2	-44.1	-70.7			138	227	5.3	10.1	58.42	2.56	1983	1989
<i>125</i>	158	15579	158	-66.6	-52.1	-80.3			121	197	3.6	9.3	85.53	3.23	1982	1987
<i>100</i>	140	16907	139	-72.5	-56.7	-89.9			105	146	4.2	9.4	107.75	3.66	1983	1988
<i>80</i>	123	18232	122	-70.8	-53.3	-87.9			84	115	7.2	11.2	132.74	3.75	1983	1988
<i>70</i>	122	19052	121	-66.6	-51.9	-82.1			79	101	9.2	11.0	138.68	3.21	1983	1988
<i>60</i>	114	19963	113	-61.8	-49.3	-74.9			76	093	9.1	10.7	143.90	2.68	1989	1988
<i>50</i>	105	21108	105	-56.1	-43.7	-69.1			68	088	10.2	11.3	144.89	2.72	1989	1985
<i>40</i>	97	22533	97	-51.2	-39.7	-64.1			64	087	10.8	11.6	151.04	1.99	1981	1985
<i>30</i>	81	24415	81	-46.8	-34.1	-59.3			52	089	11.6	12.3	158.13	1.84	1987	1988
<i>25</i>	72	25596	72	-44.7	-31.1	-56.9			49	085	12.1	13.2	177.90	2.06	1987	1988
<i>20</i>	61	27087	61	-42.8	-27.9	-54.1			44	082	11.7	12.5	181.34	1.73	1987	1982
<i>15</i>	47	29034	47	-40.8	-31.1	-50.1			32	074	10.4	12.3	230.44	2.89	1983	1988
<i>10</i>	24	31798	24	-40.4	-31.3	-48.9			14	083	11.7	15.2	207.38	3.94	1982	1985
<i>7</i>	15	34282	15	-39.0	-31.1	-46.5			6	073	10.0	11.2			1983	1983

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

221	514	565		3	146	1449	-67.2		138	100	1697	-74.1
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## NORMALS OF RADIOSONDE DATA

42379 GORAKHPUR

JULY 1981-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	310	988	310	31.3	42.4	24.4	310	26.7	310	087	1.0	1.7	0.77	1.05	1987	1982
<i>1000</i>	244	-20											8.46			
<i>950</i>	240	406	240	28.5	40.6	18.4	239	24.0	239	097	2.6	5.2	7.13	1.28	1982	1990
<i>900</i>	240	914	240	25.5	37.0	16.2	238	21.5	239	109	2.5	6.0	6.16	2.10	1982	1985
<i>850</i>	240	1414	240	22.7	33.0	13.2	237	18.5	238	111	2.1	6.4	6.26	2.09	1982	1985
<i>800</i>	240	1939	240	20.0	29.4	10.6	238	15.1	239	115	1.8	6.7	7.08	2.29	1982	1985
<i>750</i>	240	2495	240	17.0	26.0	8.0	238	11.5	239	118	1.4	6.9	38.16	2.52	1982	1985
<i>700</i>	240	3077	240	13.9	22.0	5.0	238	7.9	239	114	1.4	7.0	15.63	3.00	1982	1984
<i>650</i>	239	3705	239	10.8	19.2	0.4	234	4.1	232	106	1.4	6.9	41.27	3.43	1982	1984
<i>600</i>	235	4364	235	7.5	16.8	-2.9	226	-0.1	226	099	1.4	6.7	30.00	3.42	1982	1984
<i>550</i>	234	5102	234	4.0	12.0	-6.5	218	-4.1	221	097	1.7	6.8	64.54	3.44	1985	1984
<i>500</i>	231	5846	230	0.2	10.2	-10.5	209	-8.1	212	098	1.9	6.5	46.63	3.47	1990	1984
<i>450</i>	226	6697	225	-4.0	6.2	-15.1	196	-13.1	200	102	2.1	6.9	65.31	3.60	1990	1984
<i>400</i>	224	7606	223	-9.1	-0.9	-28.5	164	-18.3	194	106	2.7	7.2	69.56	3.71	1990	1985
<i>350</i>	220	8626	218	-15.1	-5.1	-26.3	135	-24.6	179	101	2.9	7.2	64.80	2.19	1990	1981
<i>300</i>	217	9781	215	-22.5	-11.7	-34.7	96	-31.7	173	100	3.9	7.4	98.23	3.35	1990	1981
<i>250</i>	213	11096	213	-32.2	-18.3	-44.3	51	-40.3	161	097	4.5	8.4	115.13	3.61	1990	1985
<i>200</i>	204	12625	204	-45.0	-32.5	-60.1	9	-50.8	148	095	6.1	10.0	141.02	4.27	1981	1985
<i>175</i>	196	13505	195	-52.4	-41.1	-71.1	2	-56.9	133	091	7.1	10.8	164.83	5.40	1983	1985
<i>150</i>	186	14487	185	-60.4	-47.7	-80.9			124	089	8.8	12.4	188.92	6.27	1982	1985
<i>125</i>	177	15603	176	-68.1	-53.5	-89.7			113	091	10.1	13.5	213.39	5.17	1983	1985
<i>100</i>	154	16914	154	-73.8	-61.7	-90.1			92	081	13.7	15.5	231.06	4.41	1983	1985
<i>80</i>	132	18222	132	-70.3	-53.1	-87.5			79	082	14.3	15.8	249.64	4.57	1983	1985
<i>70</i>	124	19038	124	-65.9	-48.1	-85.3			72	082	15.1	16.0	265.64	4.41	1983	1985
<i>60</i>	109	19972	109	-60.6	-41.9	-80.1			60	083	16.4	17.2	294.71	3.88	1983	1985
<i>50</i>	100	21125	100	-55.5	-39.1	-72.5			59	082	16.3	17.2	302.29	3.92	1983	1985
<i>40</i>	94	22558	94	-50.4	-34.7	-63.5			56	083	15.8	16.2	331.16	3.85	1983	1987
<i>30</i>	73	24421	73	-46.4	-33.3	-63.5			45	084	17.0	17.4	356.41	5.01	1983	1990
<i>25</i>	62	25601	62	-44.4	-33.3	-55.7			37	085	17.0	17.6	373.84	4.80	1983	1988
<i>20</i>	49	27122	49	-42.3	-29.1	-53.3			30	080	17.6	18.5	408.27	4.37	1982	1988
<i>15</i>	32	29120	32	-40.4	-27.1	-51.3			18	086	19.0	20.3	455.90	3.14	1983	1985
<i>10</i>	19	31938	19	-37.7	-23.1	-45.9			10	077	24.3	25.1			1985	1987
<i>7</i>	5	34088	5	-39.1	-37.7	-43.1			2	083	29.4	29.5			1987	1987

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

228	500	587														
			2	131	1484	-73.9							152	101	1688	-75.4



# NORMALS OF RADIOSONDE DATA

42379 GORAKHPUR

AUGUST 1981-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	309	989	309	32.0	37.6	24.6	309	26.9	309	089	1.0	1.9	0.77	0.53	1986	1987
<i>1000</i>	264	-14											8.01			
<i>950</i>	259	417	259	28.9	37.6	21.4	258	23.7	256	097	2.4	5.2	11.60	0.77	1982	1981
<i>900</i>	259	924	259	25.7	35.0	16.6	258	21.1	255	104	2.9	6.4	9.80	0.90	1983	1985
<i>850</i>	259	1425	259	22.7	30.0	13.0	258	17.9	255	109	3.3	7.2	11.10	0.84	1983	1985
<i>800</i>	259	1950	259	19.8	27.6	10.4	258	14.3	255	108	3.4	7.3	11.85	0.68	1989	1985
<i>750</i>	259	2508	259	16.8	24.4	7.6	258	10.8	255	108	3.6	7.5	14.90	1.02	1989	1981
<i>700</i>	259	3087	259	14.0	22.0	4.8	257	7.0	255	105	3.3	7.4	15.19	1.15	1981	1981
<i>650</i>	256	3715	256	10.8	19.6	2.2	248	2.9	244	099	3.7	7.3	19.34	1.29	1982	1981
<i>600</i>	253	4370	252	7.7	15.4	-3.9	238	-1.2	235	099	4.0	7.5	21.34	1.32	1982	1983
<i>550</i>	253	5113	253	4.2	11.2	-6.1	227	-5.2	229	093	3.8	7.1	23.45	1.27	1990	1983
<i>500</i>	253	5853	253	0.3	7.8	-9.5	211	-9.6	228	096	4.0	6.8	28.33	1.31	1990	1983
<i>450</i>	252	6703	252	-4.0	6.2	-12.5	193	-14.4	218	088	3.8	6.7	36.10	1.44	1984	1983
<i>400</i>	240	7615	240	-9.2	-0.5	-18.9	154	-19.5	208	077	3.9	7.0	37.08	1.46	1990	1989
<i>350</i>	238	8640	237	-15.3	-7.9	-25.9	109	-25.6	202	075	4.4	7.5	40.26	1.60	1990	1989
<i>300</i>	228	9790	227	-22.8	-14.1	-30.3	70	-32.0	192	077	4.9	8.0	47.99	1.61	1988	1986
<i>250</i>	220	11106	220	-32.3	-23.7	-41.9	33	-40.5	183	077	5.8	8.7	54.21	2.02	1990	1986
<i>200</i>	212	12638	212	-44.7	-33.5	-56.5			174	077	6.8	10.2	64.86	2.62	1990	1986
<i>175</i>	202	13521	202	-51.9	-39.5	-66.1			159	081	6.8	11.2	70.46	2.87	1983	1986
<i>150</i>	192	14504	192	-59.6	-48.1	-75.7			152	072	8.1	11.8	82.16	3.42	1982	1986
<i>125</i>	178	15633	178	-67.1	-54.1	-86.1			134	076	10.9	13.4	92.71	3.79	1981	1986
<i>100</i>	162	16974	162	-71.3	-56.5	-84.1			119	075	13.5	15.5	121.43	3.15	1981	1988
<i>80</i>	144	18303	144	-68.2	-52.9	-86.7			98	081	14.8	16.1	135.36	2.42	1983	1988
<i>70</i>	137	19127	137	-63.9	-51.5	-79.7			94	080	16.1	17.6	137.24	2.40	1983	1988
<i>60</i>	124	20054	124	-59.0	-49.1	-76.9			84	082	16.7	18.2	143.90	2.50	1983	1988
<i>50</i>	114	21197	114	-54.8	-43.1	-73.3			76	084	15.9	17.0	130.77	2.30	1981	1988
<i>40</i>	101	22627	101	-50.4	-38.3	-69.1			65	082	18.8	19.5	158.97	2.91	1990	1988
<i>30</i>	87	24501	87	-46.7	-36.1	-66.3			56	082	18.6	20.8	165.29	2.87	1987	1988
<i>25</i>	68	25702	68	-44.8	-27.9	-64.7			45	080	23.0	23.5	180.28	3.39	1987	1988
<i>20</i>	51	27158	51	-44.2	-37.7	-62.5			34	078	26.2	26.7	183.40	3.19	1981	1988
<i>15</i>	36	29136	36	-42.5	-36.5	-59.9			25	080	27.1	27.4	204.30	2.96	1982	1988
<i>10</i>	22	31911	22	-40.3	-34.1	-56.5			13	083	30.4	30.7	328.66	2.97	1983	1988
<i>7</i>	10	34214	9	-41.1	-31.5	-53.9			4	079	41.2	41.5			1983	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

250 496 594

1 140 1479 -69.1

166 105 1667 -73.3

## NORMALS OF RADIOSONDE DATA

42379 GORAKHPUR

SEPTEMBER 1981-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	300	993	300	31.3	36.4	23.0	300	25.7	300	089	0.6	1.8	0.77	0.66	1982	1986
1000	268	22	2	24.6	26.2	23.0	2	21.4	2	091	5.0	5.0	8.27		1986	1986
950	266	451	265	28.1	39.0	14.6	265	21.9	262	102	1.1	5.2	16.21	1.01	1989	1989
900	266	957	266	24.9	35.0	11.6	266	19.2	262	111	1.1	6.1	6.87	1.03	1989	1989
850	266	1456	266	21.8	31.0	8.8	265	15.7	262	116	0.8	6.8	5.91	1.10	1989	1989
800	266	1980	266	19.0	29.2	6.6	259	12.1	262	114	0.6	7.3	5.02	1.13	1983	1989
750	266	2532	266	16.0	25.6	4.4	257	8.0	261	116	0.3	7.1	11.14	1.24	1983	1989
700	266	3114	266	12.9	22.6	2.0	249	4.0	262	097	0.6	7.1	8.40	1.34	1989	1989
650	264	3738	263	9.8	20.0	-0.5	241	0.1	255	115	0.5	6.7	11.00	1.31	1989	1989
600	264	4395	262	6.5	16.2	-3.7	222	-3.4	253	210	0.5	6.6	13.31	1.31	1989	1989
550	262	5129	261	2.8	13.0	-7.9	199	-6.7	247	229	1.3	6.7	21.00	1.41	1983	1989
500	261	5869	261	-1.2	10.2	-12.1	176	-10.9	245	240	2.4	7.2	20.90	1.36	1983	1989
450	261	6713	261	-5.7	2.0	-16.9	146	-15.5	236	243	3.6	7.8	27.03	1.27	1990	1989
400	258	7622	256	-10.9	-2.7	-22.1	125	-20.6	231	241	4.8	8.6	26.81	1.20	1989	1989
350	257	8638	255	-17.1	-9.1	-28.5	99	-26.6	225	242	5.7	9.3	36.08	1.24	1990	1989
300	253	9780	251	-24.7	-16.1	-36.1	65	-33.1	218	242	6.0	9.7	34.71	1.40	1983	1989
250	244	11083	244	-34.4	-26.1	-44.9	34	-42.8	209	238	6.5	10.5	43.09	1.88	1989	1989
200	237	12606	237	-46.5	-35.1	-56.9	4	-50.6	200	230	5.4	11.1	52.54	2.22	1983	1986
175	228	13478	228	-53.6	-39.9	-64.1			187	231	4.6	10.7	63.71	2.58	1983	1986
150	215	14457	215	-60.9	-50.3	-73.7			175	234	3.6	10.6	76.00	3.26	1988	1985
125	198	15568	198	-68.6	-56.7	-83.1			158	218	1.2	8.8	88.98	3.60	1983	1985
100	186	16896	185	-73.2	-59.3	-84.3			144	091	2.9	8.9	116.03	2.71	1981	1986
80	172	18214	171	-69.5	-53.1	-82.1			126	092	5.2	8.7	128.38	2.32	1981	1987
70	166	19039	165	-64.5	-49.3	-76.9			119	086	6.1	8.7	128.81	2.41	1981	1984
60	158	19967	158	-59.6	-45.1	-75.9			117	085	7.4	9.5	125.88	2.30	1981	1984
50	151	21126	151	-54.9	-40.1	-63.7			109	084	9.5	11.1	120.20	1.90	1981	1984
40	129	22562	129	-51.0	-37.1	-60.3			95	084	10.3	11.6	126.14	1.75	1981	1984
30	105	24458	105	-46.8	-33.5	-58.5			71	083	13.5	14.5	145.49	1.63	1981	1984
25	87	25660	87	-44.8	-32.9	-56.9			60	083	13.6	14.3	172.42	1.74	1984	1984
20	63	27167	63	-44.0	-33.1	-54.9			45	087	13.5	14.4	291.31	2.99	1983	1984
15	45	29033	45	-42.0	-31.5	-52.5			33	080	14.2	14.8	219.30	2.14	1988	1984
10	31	31785	31	-40.0	-27.5	-49.1			24	082	17.8	19.3	226.58	2.59	1990	1984
7	14	34111	14	-39.4	-34.3	-43.1			8	075	21.8	23.5			1983	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

263	516	566		3	112	1618	-74.5		181	103	1675	-74.3
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# NORMALS OF RADIOSONDE DATA

42379 GORAKHPUR

OCTOBER 1981-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	310	998	310	31.0	35.4	21.4	310	21.4	310	280	0.3	0.7	1.30	0.93	1990	1987
<i>1000</i>	266	72	84	30.5	34.8	22.2	82	19.3	82	290	0.5	0.9	10.52	1.54	1987	1985
<i>950</i>	265	497	265	27.0	35.4	19.0	262	14.6	264	282	1.7	3.6	18.98	1.22	1982	1989
<i>900</i>	265	1001	265	23.2	31.2	11.8	261	11.6	264	281	1.8	4.0	9.06	1.22	1982	1990
<i>850</i>	265	1496	265	19.7	28.6	7.6	254	7.9	264	282	2.2	4.4	9.09	1.24	1988	1990
<i>800</i>	265	2015	265	16.4	27.0	5.6	242	3.3	264	290	2.0	4.9	8.35	1.29	1988	1990
<i>750</i>	265	2554	265	13.2	25.6	4.2	217	-1.0	254	298	2.0	5.3	11.04	1.29	1988	1990
<i>700</i>	265	3137	265	10.1	21.8	0.0	167	-3.7	264	298	2.5	6.0	10.31	1.34	1988	1989
<i>650</i>	263	3745	263	6.9	16.8	-4.7	126	-6.7	262	289	3.4	6.8	13.48	1.57	1988	1989
<i>600</i>	263	4402	263	3.6	13.0	-8.7	96	-9.1	260	277	5.3	7.7	15.82	1.71	1988	1989
<i>550</i>	263	5123	263	-0.3	10.2	-13.9	74	-11.6	261	275	7.2	9.1	18.69	1.83	1988	1989
<i>500</i>	261	5859	260	-4.7	5.6	-17.5	56	-14.5	258	271	10.1	11.7	22.84	1.77	1990	1989
<i>450</i>	259	6684	258	-9.7	4.0	-21.5	48	-19.2	254	267	13.0	14.5	22.73	1.75	1988	1989
<i>400</i>	256	7582	254	-15.4	-5.1	-26.7	32	-24.1	252	264	15.9	17.5	29.82	1.62	1989	1989
<i>350</i>	252	8581	251	-21.7	-10.9	-33.5	19	-28.2	245	260	19.0	20.6	38.48	1.63	1989	1989
<i>300</i>	247	9699	247	-29.2	-17.3	-40.7	11	-36.6	236	256	23.0	24.8	42.14	1.81	1989	1982
<i>250</i>	240	10980	240	-38.1	-27.5	-50.7			219	254	24.6	26.6	53.32	1.97	1984	1989
<i>200</i>	225	12484	225	-49.1	-36.9	-62.5			189	250	25.4	27.2	61.19	2.57	1984	1986
<i>175</i>	210	13352	210	-55.3	-43.5	-67.5			166	250	25.1	26.9	70.32	2.66	1984	1985
<i>150</i>	199	14324	199	-61.8	-48.1	-74.1			146	250	22.1	23.9	78.23	2.90	1987	1986
<i>125</i>	175	15437	175	-68.1	-55.9	-81.5			119	249	16.4	18.7	100.91	3.15	1987	1986
<i>100</i>	159	16761	159	-71.5	-58.7	-87.1			103	253	9.8	12.8	112.68	2.59	1982	1986
<i>80</i>	142	18084	142	-67.7	-56.3	-80.1			88	263	2.9	10.1	126.45	1.93	1982	1988
<i>70</i>	133	18911	133	-63.8	-53.1	-75.9			79	353	0.7	8.3	127.28	1.61	1985	1986
<i>60</i>	125	19844	125	-59.3	-50.1	-72.1			74	069	2.8	6.8	149.30	1.14	1985	1986
<i>50</i>	110	20981	110	-54.7	-45.1	-68.9			62	070	4.4	9.1	162.41	1.46	1981	1983
<i>40</i>	98	22444	98	-50.6	-38.9	-61.1			55	087	3.6	8.1	158.04	1.56	1988	1983
<i>30</i>	70	24330	70	-46.9	-33.5	-57.9			37	087	3.2	7.9	158.89	1.46	1988	1988
<i>25</i>	56	25508	56	-45.3	-35.5	-56.1			27	079	4.0	9.0	134.95	2.44	1985	1988
<i>20</i>	39	27000	39	-44.2	-32.1	-53.5			19	078	2.0	10.3	88.73	2.71	1986	1988
<i>15</i>	24	28880	24	-43.3	-30.7	-52.1			12	339	0.7	9.9	106.14	3.68	1986	1983
<i>10</i>	13	31607	13	-43.6	-36.5	-51.1			9	085	2.5	8.7			1988	1988
<i>7</i>	5	33898	5	-41.6	-36.5	-45.5			1	237	7.0	7.0			1987	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

261	554	505						3	133	1508	-70.1						162	105	1647	-73.1
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## NORMALS OF RADIOSONDE DATA

42379 GORAKHPUR

NOVEMBER 1981-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	300	1003	300	27.6	32.6	19.6	300	16.3	300	279	0.4	0.4	0.84	0.79	1988	1982
1000	269	109	232	27.4	32.2	19.8	232	15.4	230	284	0.5	0.9	7.18	0.95	1988	1982
950	269	526	269	22.7	33.2	13.0	266	7.8	269	282	2.1	3.1	10.09	1.41	1990	1985
900	269	1023	268	18.7	27.4	8.2	258	4.6	269	286	2.4	3.6	8.18	1.52	1990	1984
850	269	1509	269	15.2	25.4	7.2	253	0.6	269	288	2.4	4.2	9.23	1.58	1990	1982
800	269	2020	269	12.4	24.6	3.6	208	-3.8	269	294	2.9	5.2	11.53	1.52	1990	1982
750	269	2551	269	9.8	22.6	-0.3	122	-7.4	269	295	4.3	6.5	15.31	1.68	1990	1989
700	269	3127	269	7.0	20.2	-5.5	73	-10.2	269	294	6.1	8.0	15.34	1.74	1990	1983
650	269	3727	269	3.8	14.2	-7.7	50	-12.9	269	291	7.9	9.5	20.38	1.80	1990	1981
600	265	4379	265	0.2	11.0	-9.1	34	-14.6	263	286	10.5	11.8	21.34	1.76	1987	1981
550	262	5088	262	-3.9	6.4	-12.5	24	-17.5	261	283	13.8	14.8	24.13	1.67	1987	1982
500	260	5818	260	-8.6	1.2	-16.9	18	-19.6	258	279	17.2	18.4	29.62	1.64	1987	1986
450	256	6626	256	-13.8	-3.7	-22.5	16	-22.8	254	275	20.6	21.9	36.36	1.76	1990	1985
400	253	7512	253	-19.7	-8.7	-28.7	14	-29.3	249	273	24.8	26.4	38.57	1.88	1990	1986
350	252	8494	251	-26.2	-15.5	-35.5	8	-35.2	243	269	29.2	31.0	44.25	1.96	1990	1983
300	248	9593	247	-33.3	-22.5	-44.7	5	-41.3	228	266	32.7	34.9	52.80	2.02	1990	1983
250	235	10852	235	-41.6	-30.9	-52.1			184	265	37.0	39.4	59.15	2.01	1981	1986
200	223	12336	223	-50.8	-40.9	-65.3			133	262	38.6	41.0	73.12	2.77	1988	1986
175	218	13196	218	-56.2	-42.5	-71.7			97	260	39.0	41.4	81.39	3.08	1989	1990
150	207	14164	207	-61.4	-49.3	-74.9			69	261	38.0	39.8	90.21	3.10	1981	1990
125	195	15279	194	-66.2	-53.1	-82.1			46	261	34.0	36.2	106.52	3.11	1981	1986
100	176	16618	176	-69.9	-56.9	-84.1			31	262	28.8	31.1	113.36	2.70	1981	1986
80	153	17930	153	-69.1	-54.1	-85.9			18	254	8.5	13.6	133.00	2.71	1981	1986
70	140	18750	140	-66.4	-55.5	-80.1			14	254	2.5	8.6	141.86	2.59	1983	1986
60	132	19668	132	-62.4	-51.3	-77.1			14	278	1.6	8.6	146.69	2.32	1983	1986
50	120	20796	120	-58.0	-47.5	-66.9			13	278	4.0	7.7	168.50	1.63	1986	1986
40	103	22210	103	-53.7	-44.1	-62.7			12	257	5.7	9.0	208.29	2.60	1981	1984
30	82	24075	82	-50.6	-40.9	-59.5			11	255	8.3	10.5	218.69	2.83	1982	1984
25	67	25231	67	-49.1	-39.5	-63.9			8	265	10.2	12.0	230.89	3.32	1983	1984
20	49	26705	49	-47.6	-36.9	-56.9			6	265	11.2	12.1	265.30	3.60	1983	1984
15	28	28577	28	-46.5	-35.7	-53.5			4	254	8.0	11.7	260.79	2.13	1985	1984
10	10	31141	10	-44.3	-42.3	-47.1									1988	1988
7	3	33866	3	-43.4	-41.9	-45.3									1988	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

266	598	440		23	169	1357	-61.0		172	104	1643	-71.5
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## NORMALS OF RADIOSONDE DATA

42379 GORAKHPUR

DECEMBER 1981-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	310	1005	310	22.9	28.8	13.0	310	13.6	310	277	0.6	0.9	1.22	1.24	1984	1989
1000	238	129	231	22.8	28.0	13.0	229	12.7	231	272	1.5	2.2	13.31	0.66	1984	1986
950	238	544	236	18.2	24.6	6.8	231	6.0	237	277	2.4	4.0	15.67	0.86	1988	1990
900	238	1030	238	14.7	23.2	4.6	229	2.0	237	284	2.8	4.9	13.69	0.87	1985	1990
850	238	1511	238	12.1	22.2	2.2	210	-2.9	237	293	3.6	6.3	14.02	1.03	1985	1986
800	238	2017	238	9.9	18.8	-1.3	158	-7.1	237	290	5.5	7.9	14.06	1.34	1985	1990
750	238	2549	238	7.7	18.0	-6.5	104	-8.9	237	290	8.0	9.7	14.43	1.82	1982	1990
700	238	3116	238	5.1	14.8	-9.3	75	-10.8	236	285	10.0	11.3	16.25	1.85	1982	1990
650	233	3713	233	1.8	10.8	-10.1	59	-13.1	232	284	12.0	13.0	21.32	1.78	1982	1990
600	233	4359	231	-1.9	6.4	-12.1	50	-16.4	231	281	14.3	15.4	21.56	1.96	1987	1990
550	232	5060	232	-6.2	2.4	-17.5	45	-19.9	229	278	16.9	18.2	31.78	1.95	1987	1990
500	232	5784	232	-11.1	1.8	-24.1	43	-25.0	224	274	20.4	21.8	29.63	2.08	1981	1990
450	231	6586	231	-16.4	-6.7	-32.1	38	-29.5	223	272	24.4	25.9	39.01	2.08	1987	1990
400	229	7462	228	-22.3	-11.9	-37.3	31	-33.0	211	268	29.0	31.0	41.86	2.12	1988	1990
350	227	8438	226	-28.9	-17.9	-42.9	19	-39.5	182	267	32.5	34.3	53.11	2.09	1987	1990
300	221	9521	218	-36.3	-24.9	-51.7	5	-45.9	161	266	37.5	39.4	58.16	2.33	1987	1990
250	215	10765	213	-44.6	-32.1	-58.7	2	-62.3	118	264	39.4	41.6	71.62	2.61	1982	1990
200	201	12236	200	-53.5	-40.5	-67.1			77	266	40.4	42.5	85.88	2.38	1982	1990
175	193	13091	191	-57.9	-44.1	-73.1			64	265	40.6	42.7	89.48	1.97	1982	1990
150	181	14062	181	-62.0	-48.1	-76.1			53	264	39.0	40.9	94.06	1.61	1988	1986
125	170	15185	170	-65.9	-54.5	-81.5			38	265	34.1	35.5	99.26	1.75	1988	1990
100	160	16528	160	-69.4	-56.1	-83.1			26	255	26.3	26.7	111.48	2.09	1988	1990
80	141	17858	141	-69.1	-55.7	-83.9			21	262	17.6	19.5	116.60	1.97	1982	1986
70	133	18667	133	-66.7	-52.1	-79.5			20	271	16.0	17.8	121.96	2.23	1982	1990
60	129	19596	129	-63.2	-48.1	-77.9			20	263	14.7	16.2	123.57	2.76	1982	1987
50	121	20722	121	-59.5	-45.3	-72.5			18	268	14.6	16.1	128.94	2.81	1987	1987
40	102	22140	102	-55.5	-44.3	-70.5			16	278	6.0	8.9	144.07	3.13	1990	1987
30	80	23957	80	-51.7	-38.3	-69.1			16	269	5.4	12.2	147.18	3.22	1990	1987
25	68	25113	68	-50.3	-33.5	-68.1			12	273	6.4	10.9	152.75	3.10	1990	1987
20	50	26609	50	-47.9	-34.1	-65.5			11	258	14.6	17.2	135.02	3.65	1987	1987
15	35	28501	35	-47.1	-37.9	-64.1			8	263	15.4	21.3	171.52	3.81	1984	1987
10	18	31171	18	-45.9	-37.1	-60.3			6	260	20.6	21.6			1985	1987
7	2	33241	2	-49.4	-48.7	-50.1									1984	1986

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

234	626	404		40	176	1316	-61.6		149	100	1657	-70.9
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## NORMALS OF RADIOSONDE DATA

42361 GWALIOR

JANUARY 1979-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	273	991	273	20.4	26.4	11.2	272	7.6	273	016	0.6	0.9	0.88	0.74	1980	1980
<i>1000</i>	229	129											8.72			
<i>950</i>	229	552	228	17.1	25.0	7.8	225	3.8	224	010	2.0	3.8	19.48	0.78	1980	1987
<i>900</i>	229	1029	229	13.8	25.0	4.6	209	1.3	224	307	1.5	4.0	6.76	0.66	1988	1987
<i>850</i>	229	1508	229	11.1	22.0	3.8	189	-1.5	224	283	3.7	5.5	7.04	0.58	1988	1987
<i>800</i>	229	2012	227	8.5	18.8	0.4	155	-3.7	224	278	5.7	6.8	7.16	0.92	1987	1981
<i>750</i>	229	2539	227	6.0	16.4	-4.1	122	-5.7	223	276	7.8	9.0	5.69	0.99	1988	1981
<i>700</i>	229	3104	228	3.0	13.0	-7.1	104	-9.2	224	274	9.8	11.1	8.42	1.17	1988	1981
<i>650</i>	223	3697	221	-0.4	9.4	-10.5	82	-12.7	212	274	11.8	13.0	8.33	1.15	1988	1981
<i>600</i>	223	4338	219	-4.1	5.4	-12.9	66	-16.4	206	275	14.3	15.6	11.94	1.08	1989	1983
<i>550</i>	223	5019	222	-8.4	0.8	-15.3	59	-20.2	204	275	16.8	18.1	14.48	1.21	1989	1987
<i>500</i>	221	5754	220	-13.0	-4.9	-20.1	52	-24.3	199	275	19.6	21.1	18.28	1.45	1989	1981
<i>450</i>	210	6548	209	-18.3	-10.5	-25.7	43	-28.7	179	273	23.2	24.7	22.66	1.72	1983	1988
<i>400</i>	200	7421	199	-23.9	-13.7	-31.1	36	-33.1	163	273	27.5	29.6	29.88	1.83	1983	1979
<i>350</i>	192	8389	190	-30.0	-21.5	-39.1	25	-38.6	143	272	30.9	33.2	37.55	2.07	1988	1979
<i>300</i>	177	9472	176	-36.9	-27.3	-47.7	13	-44.2	129	272	35.8	38.4	49.45	2.08	1987	1982
<i>250</i>	156	10711	156	-44.3	-35.5	-60.5			96	271	37.8	41.5	55.21	2.59	1987	1982
<i>200</i>	131	12169	130	-51.7	-42.1	-63.7			75	264	41.2	43.4	74.18	2.77	1983	1982
<i>175</i>	103	13010	102	-55.2	-43.3	-66.9			55	264	34.4	38.3	135.41	4.26	1983	1982
<i>150</i>	89	13981	89	-60.1	-49.9	-72.5			52	265	33.2	35.9	147.68	5.07	1983	1979
<i>125</i>	70	15075	70	-65.4	-54.3	-77.1			42	269	27.5	30.8	165.97	3.90	1987	1982
<i>100</i>	64	16426	64	-69.4	-59.9	-81.1			38	266	24.8	26.7	199.16	1.98	1982	1982
<i>80</i>	56	17756	56	-69.3	-56.3	-79.5			36	272	19.4	22.3	155.93	4.24	1982	1981
<i>70</i>	51	18552	51	-67.8	-57.3	-77.3			34	269	17.0	21.3	114.76	4.38	1987	1980
<i>60</i>	44	19492	44	-64.1	-53.3	-78.1			30	261	13.8	20.7	106.01	4.98	1981	1982
<i>50</i>	36	20620	36	-59.5	-49.9	-67.9			27	287	3.9	22.0	117.68	3.48	1981	1982
<i>40</i>	30	22038	30	-54.7	-46.3	-68.1			23	042	6.0	19.3	140.77	4.32	1981	1982
<i>30</i>	17	23887	17	-52.8	-41.3	-62.3			12	033	3.9	14.2			1981	1982
<i>25</i>	13	25070	13	-50.1	-39.7	-59.1			10	081	14.6	16.1			1981	1982
<i>20</i>	8	26508	8	-50.3	-45.3	-55.9			5	080	10.4	12.4			1981	1982
<i>15</i>	1	28284	1	-52.7	-52.7	-52.7									1987	1987
<i>10</i>	1	30913	1	-50.9	-50.9	-50.9									1987	1987
<i>7</i>	1	33192	1	-41.9	-41.9	-41.9									1987	1987

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

223 657 362

8 245 1051 -51.5

56 100 1651 -71.5

## NORMALS OF RADIOSONDE DATA

42361 GWALIOR

FEBRUARY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	281	989	281	24.1	34.4	13.4	281	7.2	274	353	0.7	1.2	0.84	1.76	1989	1982
1000	245	106											7.09			
950	245	530	245	20.9	29.4	9.4	240	3.8	237	356	2.6	4.6	25.13	2.10	1989	1982
900	245	1016	245	17.1	26.6	6.4	229	1.5	237	318	2.3	4.9	8.26	2.26	1987	1982
850	245	1500	245	13.4	24.6	3.8	216	-0.9	237	281	3.8	5.7	11.49	2.33	1981	1983
800	245	2007	245	10.2	20.8	0.0	194	-2.7	237	277	5.3	6.9	14.03	1.88	1981	1983
750	245	2535	243	6.8	16.0	-4.3	176	-5.8	234	274	8.0	9.5	18.24	1.68	1988	1983
700	244	3103	240	3.4	13.8	-8.3	144	-8.8	234	274	10.4	12.0	19.21	1.62	1990	1989
650	239	3696	236	-0.1	10.6	-11.3	128	-11.8	222	275	12.6	13.9	19.33	1.50	1990	1989
600	235	4338	233	-3.8	7.0	-18.9	102	-14.2	214	276	14.7	15.9	24.45	1.38	1990	1989
550	233	5021	231	-8.2	3.4	-22.3	96	-18.5	211	276	17.2	18.4	31.67	1.51	1990	1989
500	230	5754	227	-12.9	-1.5	-26.1	93	-23.4	201	276	19.7	21.0	31.72	1.69	1990	1989
450	225	6550	222	-18.0	-6.9	-32.1	74	-27.8	186	273	22.6	24.2	37.78	1.84	1990	1989
400	217	7424	213	-23.7	-10.1	-36.9	55	-32.6	177	273	25.7	27.8	38.75	1.79	1990	1989
350	210	8392	209	-29.8	-15.1	-41.9	34	-38.5	164	273	29.3	31.4	47.65	2.03	1990	1979
300	203	9475	201	-36.5	-25.1	-45.5	13	-45.4	156	274	33.6	36.2	51.42	2.37	1990	1979
250	186	10727	186	-43.4	-33.9	-55.5			124	272	38.1	41.0	54.40	2.73	1987	1979
200	163	12194	160	-51.8	-39.1	-64.5			97	272	40.4	42.7	69.38	3.98	1990	1981
175	148	13050	146	-55.8	-43.9	-75.1			78	271	39.5	41.9	79.41	4.94	1990	1979
150	135	14019	134	-60.0	-50.1	-77.1			68	275	42.1	44.5	96.47	5.35	1987	1979
125	101	15129	101	-64.5	-53.3	-81.1			49	276	40.1	42.7	119.32	5.97	1990	1979
100	84	16468	83	-68.7	-58.7	-79.3			36	274	34.1	36.2	156.20	4.09	1990	1979
80	77	17805	77	-68.5	-59.9	-77.1			33	279	23.6	28.8	205.47	2.01	1983	1982
70	70	18612	70	-66.3	-57.7	-76.5			30	262	16.4	25.1	137.18	1.94	1989	1990
60	68	19548	66	-62.8	-54.3	-72.9			27	278	14.0	23.5	130.05	1.71	1983	1990
50	67	20692	67	-58.8	-49.7	-71.5			25	102	3.8	23.5	119.79	1.90	1982	1987
40	62	22107	62	-55.1	-47.1	-68.1			25	113	12.4	20.2	114.68	1.72	1981	1987
30	44	23979	44	-51.9	-44.3	-65.3			16	093	17.5	22.7	173.52	2.66	1982	1987
25	33	25188	33	-50.0	-40.9	-55.7			11	112	8.5	21.2	160.24	2.26	1982	1987
20	17	26731	17	-49.6	-42.9	-54.1			2	087	14.2	16.5			1981	1987
15	10	28583	10	-48.2	-39.1	-52.9			1	102	15.0	15.0			1981	1987
10	5	31179	4	-49.3	-47.1	-50.5									1983	1987
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
237	655	367	22	214	1185	-56.4	74	097	1666	-70.5

# NORMALS OF RADIOSONDE DATA

42361 GWALIOR

MARCH 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	296	985	296	29.8	38.2	17.4	296	5.8	296	335	1.1	2.0	0.95	0.89	1988	1979
1000	271	73											7.14			
950	271	506	271	26.5	35.0	14.0	264	4.4	265	333	3.2	5.1	20.17	0.67	1986	1979
900	271	1000	271	22.0	31.8	9.0	260	2.4	266	312	3.5	5.2	7.33	0.69	1987	1979
850	271	1492	270	17.7	27.6	6.4	259	0.2	266	287	4.1	5.5	6.84	0.69	1987	1990
800	271	2006	270	13.3	22.4	2.8	256	-2.0	266	276	5.2	6.5	7.25	0.76	1990	1990
750	271	2542	271	9.1	17.0	-1.1	235	-4.1	266	271	7.6	8.9	8.93	0.88	1981	1990
700	271	3111	271	5.1	13.0	-7.3	204	-7.1	266	269	9.9	11.2	9.42	0.67	1981	1983
650	267	3712	267	1.2	8.2	-6.7	182	-11.1	259	271	12.3	13.7	14.21	0.68	1982	1987
600	265	4354	265	-2.6	8.0	-11.7	147	-14.4	257	272	14.9	16.2	12.85	0.72	1982	1987
550	261	5042	261	-6.9	2.4	-16.3	120	-18.3	246	273	16.4	17.8	18.37	1.06	1982	1987
500	258	5777	256	-11.5	-1.3	-20.3	97	-22.2	243	275	18.6	19.9	16.27	1.14	1988	1986
450	251	6581	248	-16.6	-5.7	-24.5	75	-27.2	227	275	21.9	23.4	23.33	1.61	1988	1989
400	241	7458	238	-22.5	-12.1	-32.3	63	-31.8	211	275	24.8	26.5	28.14	1.93	1990	1979
350	232	8430	229	-28.9	-13.3	-40.7	40	-37.0	190	276	28.0	29.9	38.78	2.40	1990	1979
300	220	9516	217	-35.9	-19.1	-51.3	18	-43.4	170	277	32.1	34.9	60.36	3.76	1990	1979
250	199	10764	197	-43.1	-29.1	-58.5	1	-48.1	131	276	35.0	37.5	82.48	3.69	1990	1979
200	173	12242	171	-50.7	-41.3	-62.5			106	276	34.8	37.6	130.02	4.06	1983	1979
175	154	13102	151	-54.5	-44.1	-68.5			89	268	34.0	36.9	140.81	3.50	1987	1986
150	137	14080	136	-58.7	-48.1	-73.5			78	273	33.4	35.2	159.91	4.26	1987	1986
125	124	15206	124	-63.6	-53.1	-76.5			69	272	32.6	34.0	173.67	3.70	1983	1990
100	102	16551	102	-67.4	-57.1	-75.9			61	272	27.4	29.3	92.83	2.49	1989	1981
80	85	17878	84	-67.6	-48.9	-75.1			49	267	20.6	24.3	104.52	2.45	1989	1990
70	79	18693	78	-65.2	-46.1	-76.7			45	265	14.8	21.4	105.82	3.61	1989	1990
60	72	19644	70	-61.5	-43.3	-71.7			42	256	8.2	19.5	105.77	2.92	1989	1980
50	61	20782	60	-57.7	-39.9	-66.3			34	263	4.2	16.5	87.52	3.30	1989	1980
40	49	22187	48	-54.0	-45.1	-60.7			29	107	7.2	20.4	114.00	3.27	1982	1980
30	41	24047	41	-49.5	-39.5	-57.5			20	060	3.1	14.9	138.45	3.29	1981	1980
25	32	25239	32	-47.9	-36.1	-56.1			13	109	4.7	17.7	168.88	3.56	1981	1982
20	11	26740	11	-47.2	-41.1	-52.3			2	233	5.4	19.0			1981	1982
15	2	28621	2	-45.3	-42.5	-48.1									1989	1989
10	2	31336	2	-42.7	-38.9	-46.5									1989	1989
7	1	33775	1	-35.1	-35.1	-35.1									1989	1989

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

265 633 393

27 232 1122 -51.9

92 099 1661 -69.2



# NORMALS OF RADIOSONDE DATA

42361 GWALIOR

APRIL 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	307	981	307	37.0	43.6	20.8	307	5.2	305	313	2.2	2.7	0.90	1.54	1979	1983
<i>1000</i>	265	27											12.41			
<i>950</i>	265	471	265	34.1	42.8	20.2	233	4.9	261	314	5.1	6.2	21.05	1.54	1988	1983
<i>900</i>	265	976	265	29.7	39.8	18.4	211	4.1	261	306	5.5	6.5	8.26	1.67	1988	1983
<i>850</i>	265	1481	265	25.1	36.0	11.0	219	2.3	261	298	6.0	6.9	8.29	1.73	1988	1982
<i>800</i>	265	2007	265	20.4	31.6	9.4	227	-0.1	261	290	6.2	7.0	7.98	1.62	1988	1983
<i>750</i>	265	2552	265	15.4	28.0	4.8	235	-2.3	260	284	6.9	7.9	8.80	1.56	1988	1983
<i>700</i>	265	3137	265	10.3	22.0	0.4	231	-4.9	261	279	8.0	9.0	11.24	1.45	1988	1983
<i>650</i>	261	3742	261	5.3	16.6	-4.3	205	-7.7	251	277	9.7	10.8	15.08	1.31	1989	1983
<i>600</i>	258	4395	258	0.8	11.0	-8.1	177	-11.7	242	278	11.6	12.6	14.55	1.20	1989	1983
<i>550</i>	255	5093	254	-3.7	5.8	-11.9	139	-16.3	240	280	13.3	14.3	20.62	1.42	1989	1979
<i>500</i>	252	5835	252	-8.6	3.4	-16.9	105	-20.7	233	281	15.0	16.0	19.14	1.47	1983	1982
<i>450</i>	250	6645	250	-13.9	-4.9	-21.7	80	-25.7	224	282	16.4	17.8	21.31	1.66	1990	1989
<i>400</i>	242	7530	242	-19.9	-7.5	-28.3	58	-29.6	213	282	19.1	20.7	28.07	1.78	1990	1990
<i>350</i>	238	8509	238	-26.7	-12.5	-37.1	45	-34.8	200	280	21.1	23.0	34.04	1.91	1990	1983
<i>300</i>	233	9608	233	-34.0	-21.1	-45.1	25	-42.2	186	278	25.0	27.5	42.37	2.22	1990	1986
<i>250</i>	215	10865	215	-42.2	-30.1	-54.9	3	-49.0	163	276	27.8	30.3	52.61	2.90	1990	1982
<i>200</i>	194	12344	192	-50.5	-37.5	-63.5			143	275	28.4	31.6	72.29	2.91	1985	1981
<i>175</i>	173	13201	171	-54.5	-43.1	-68.9			111	274	27.5	30.2	75.67	3.03	1988	1981
<i>150</i>	151	14174	150	-58.9	-48.3	-73.5			94	274	26.7	29.4	91.54	2.77	1988	1981
<i>125</i>	129	15300	128	-63.8	-53.1	-76.5			83	276	25.2	26.9	118.44	2.87	1983	1981
<i>100</i>	111	16669	111	-67.8	-56.9	-80.1			72	279	20.9	24.4	126.13	3.48	1990	1981
<i>80</i>	93	18021	93	-67.0	-54.1	-79.9			58	283	12.9	18.7	149.18	3.19	1990	1989
<i>70</i>	88	18839	87	-64.5	-51.7	-76.1			52	284	7.6	18.5	167.46	4.24	1981	1982
<i>60</i>	81	19768	81	-61.0	-47.9	-74.9			48	281	6.2	15.8	166.92	4.27	1981	1980
<i>50</i>	76	20900	76	-56.2	-44.5	-72.9			44	359	2.2	14.5	180.31	3.38	1981	1982
<i>40</i>	71	22323	71	-51.4	-37.1	-69.1			36	085	1.8	15.9	185.89	3.19	1990	1982
<i>30</i>	46	24181	46	-47.3	-35.1	-61.9			19	096	4.3	11.5	153.69	4.00	1990	1982
<i>25</i>	31	25394	31	-44.4	-31.3	-56.3			8	219	4.4	15.4	202.89	4.30	1990	1982
<i>20</i>	22	26872	22	-42.3	-27.3	-53.5			2	308	12.4	26.0	290.79	4.65	1990	1982
<i>15</i>	9	28742	9	-43.1	-35.7	-56.1			1	121	12.0	12.0			1990	1982
<i>10</i>	4	31159	4	-42.6	-31.7	-50.1									1985	1982
<i>7</i>	1	33317	1	-48.3	-48.3	-48.3									1987	1987

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

256	592	451														
			13	209	1196	-55.0										
											96	096	1691	-59.1		

## NORMALS OF RADIOSONDE DATA

42361 GWALIOR

MAY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	331	977	331	39.3	45.8	22.8	331	9.3	331	307	1.8	2.7	2.34	1.99	1988	1987
<i>1000</i>	293	2											23.67			
<i>950</i>	293	446	293	36.6	46.0	19.2	266	9.1	276	319	3.7	5.8	30.23	2.09	1990	1987
<i>900</i>	293	952	292	32.1	44.0	19.8	246	7.6	276	313	4.2	6.0	16.97	2.15	1989	1987
<i>850</i>	293	1461	291	27.7	39.0	16.2	246	5.8	277	301	4.7	6.2	14.24	2.16	1989	1987
<i>800</i>	293	1992	293	23.0	34.4	12.6	253	4.1	276	297	5.3	6.6	10.63	2.19	1989	1987
<i>750</i>	293	2544	293	18.0	30.8	8.2	261	2.0	276	285	5.7	7.0	9.89	2.22	1989	1987
<i>700</i>	293	3132	293	12.7	25.2	3.6	268	-0.8	277	283	7.0	8.1	8.63	2.19	1989	1979
<i>650</i>	291	3743	291	7.5	19.4	-2.9	263	-4.5	267	283	7.9	9.0	7.44	2.06	1990	1989
<i>600</i>	289	4402	289	2.5	14.8	-7.1	241	-8.7	263	284	9.1	10.5	14.15	2.02	1990	1979
<i>550</i>	284	5103	283	-2.2	6.4	-12.1	187	-13.1	253	286	10.0	11.5	21.90	1.87	1989	1987
<i>500</i>	278	5851	277	-6.5	3.0	-16.3	129	-18.5	242	287	10.7	12.3	21.19	1.98	1990	1987
<i>450</i>	273	6669	273	-11.3	0.4	-20.1	78	-23.4	226	289	12.0	13.9	30.19	2.25	1990	1979
<i>400</i>	268	7562	266	-16.9	-4.1	-25.7	54	-28.5	215	286	13.7	15.8	35.82	2.52	1990	1979
<i>350</i>	262	8552	259	-23.3	-11.3	-35.5	37	-34.5	197	281	15.5	18.0	41.97	2.88	1990	1979
<i>300</i>	250	9668	248	-30.2	-17.7	-42.1	18	-39.3	177	274	17.6	20.3	59.86	3.25	1990	1979
<i>250</i>	244	10945	243	-38.6	-27.1	-50.9	2	-42.2	163	267	19.9	22.6	80.06	3.55	1990	1979
<i>200</i>	228	12443	227	-48.6	-35.5	-61.3			147	262	21.1	23.7	100.36	3.42	1989	1979
<i>175</i>	208	13320	205	-53.6	-42.1	-64.9			123	262	19.5	21.8	116.86	2.95	1990	1979
<i>150</i>	191	14301	189	-59.0	-47.7	-70.1			106	260	17.2	19.5	134.16	2.93	1983	1979
<i>125</i>	171	15427	170	-65.0	-50.3	-78.5			94	261	13.5	16.6	192.34	4.31	1983	1979
<i>100</i>	155	16771	154	-69.5	-55.3	-83.7			85	267	9.1	12.9	208.12	3.57	1983	1979
<i>80</i>	123	18101	121	-70.2	-56.3	-82.1			67	230	2.0	12.4	212.40	3.58	1983	1980
<i>70</i>	112	18904	110	-67.0	-51.7	-78.1			64	140	1.5	10.8	177.37	3.19	1990	1982
<i>60</i>	108	19837	107	-62.4	-46.7	-75.7			62	149	2.3	10.2	180.25	2.66	1990	1982
<i>50</i>	92	20980	92	-56.7	-42.5	-69.9			50	084	5.1	9.6	166.19	1.50	1986	1980
<i>40</i>	78	22419	78	-51.2	-40.9	-66.9			44	082	6.7	9.4	146.87	1.90	1982	1989
<i>30</i>	61	24300	61	-46.6	-36.1	-63.5			35	097	8.0	9.1	173.91	1.50	1990	1989
<i>25</i>	52	25517	52	-44.2	-32.1	-61.3			23	100	7.4	9.3	190.74	1.78	1990	1989
<i>20</i>	26	27017	26	-42.5	-35.5	-48.9			7	083	4.1	6.3	234.81	1.64	1983	1987
<i>15</i>	17	29021	17	-40.3	-33.1	-45.7			3	347	7.9	13.7			1983	1989
<i>10</i>	8	31919	8	-39.5	-30.7	-52.1			1	180	4.0	4.0			1983	1989
<i>7</i>	3	34615	3	-35.4	-29.3	-40.3									1983	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE				
N	P	ALT	N	P	ALT	T	N	P	ALT	T	
282	573	478	7	206	1206	-52.8		137	095	1710	-71.8

## NORMALS OF RADIOSONDE DATA

42361 GWALIOR

JUNE 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	311	973	311	38.1	45.0	23.2	311	16.0	311	322	1.2	2.5	0.90	1.44	1979	1986
<i>1000</i>	272	-20	1	32.8	32.8	32.8	1	9.8	1	024	3.0	3.0	36.01		1988	1988
<i>950</i>	272	420	270	35.7	44.0	22.0	268	15.2	249	331	3.0	6.0	23.86	1.37	1967	1988
<i>900</i>	272	920	270	31.7	40.0	16.8	262	13.6	250	330	3.7	6.3	14.98	1.06	1987	1988
<i>850</i>	272	1429	272	27.5	37.4	13.8	263	12.0	250	324	4.2	6.2	13.87	1.16	1988	1988
<i>800</i>	272	1962	272	23.1	31.8	11.8	264	9.8	250	322	4.5	6.7	12.89	1.05	1988	1988
<i>750</i>	272	2518	271	18.6	27.4	9.8	263	7.2	250	318	4.9	6.9	13.76	1.18	1988	1988
<i>700</i>	272	3106	272	13.9	22.6	6.8	266	3.6	250	315	5.2	7.6	12.83	1.31	1988	1983
<i>650</i>	270	3721	270	9.3	18.8	3.0	260	-0.6	241	309	5.1	8.0	10.60	1.32	1988	1990
<i>600</i>	267	4382	267	5.0	14.0	-2.9	239	-4.8	234	310	6.3	8.7	16.52	1.38	1988	1990
<i>550</i>	265	5098	265	1.1	11.8	-8.9	202	-7.7	222	304	6.2	9.0	21.45	1.44	1988	1982
<i>500</i>	263	5849	263	-2.6	6.8	-10.9	164	-11.1	216	302	6.3	9.0	17.98	1.41	1988	1979
<i>450</i>	261	6686	261	-6.4	2.2	-17.5	134	-15.1	203	297	6.6	9.5	25.94	1.52	1988	1979
<i>400</i>	256	7592	255	-11.3	-2.7	-23.7	88	-19.2	199	288	6.6	10.0	24.12	1.70	1988	1979
<i>350</i>	252	8609	250	-17.3	-8.1	-29.5	63	-25.1	191	283	6.3	10.3	29.36	1.86	1988	1979
<i>300</i>	247	9748	245	-24.7	-15.3	-35.1	45	-30.9	182	269	7.0	11.1	37.44	1.77	1988	1979
<i>250</i>	236	11049	232	-34.2	-25.3	-44.1	28	-39.8	163	254	6.5	11.4	45.43	1.84	1988	1986
<i>200</i>	219	12571	217	-46.1	-37.1	-56.9	2	-49.2	150	249	6.1	12.2	53.31	2.29	1988	1981
<i>175</i>	204	13451	203	-53.0	-41.7	-64.3			136	245	5.5	11.9	62.10	2.64	1989	1981
<i>150</i>	182	14438	180	-60.3	-46.5	-69.3			115	223	2.6	11.0	63.32	2.43	1988	1979
<i>125</i>	148	15556	148	-68.0	-50.5	-79.1			91	181	2.2	10.7	77.56	2.63	1988	1979
<i>100</i>	127	16882	127	-73.6	-53.9	-82.5			71	110	4.0	10.5	84.94	3.23	1988	1979
<i>80</i>	105	18176	104	-72.7	-59.1	-82.1			56	098	8.0	11.0	161.92	2.93	1981	1979
<i>70</i>	95	18981	95	-68.7	-50.9	-78.1			49	098	9.0	11.8	173.56	3.85	1981	1987
<i>60</i>	85	19888	85	-63.0	-49.1	-76.7			43	096	10.4	11.4	132.13	3.33	1987	1987
<i>50</i>	74	21012	74	-57.3	-40.5	-72.7			38	087	12.1	12.5	169.91	3.97	1981	1987
<i>40</i>	66	22424	66	-52.4	-36.9	-68.5			33	093	13.6	13.9	141.51	3.84	1981	1987
<i>30</i>	52	24322	52	-47.7	-39.5	-65.1			26	091	12.1	13.6	173.80	2.85	1981	1987
<i>25</i>	42	25511	42	-46.2	-38.1	-62.7			20	086	11.2	13.4	140.93	3.47	1989	1987
<i>20</i>	36	27011	36	-43.6	-32.1	-59.5			14	085	14.4	15.0	175.70	4.01	1982	1987
<i>15</i>	19	28875	19	-43.1	-34.7	-55.1			6	098	12.0	12.6			1990	1987
<i>10</i>	11	31599	11	-40.6	-31.9	-53.5			6	080	9.3	10.7			1990	1987
<i>7</i>	2	33721	2	-40.5	-38.5	-42.5									1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

262 534 533

114 097 1705 -75.7

# NORMALS OF RADIOSONDE DATA

42361 GWALIOR

JULY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	329	974	329	31.8	43.2	20.0	329	23.4	329	281	0.9	1.9	0.67	1.78	1982	1980
<i>1000</i>	311	-23											20.35			
<i>950</i>	311	414	307	29.8	40.0	20.4	306	22.5	258	283	1.8	5.2	18.48	1.40	1982	1985
<i>900</i>	311	910	308	26.5	38.0	15.2	307	20.3	260	295	2.2	5.7	8.43	1.25	1987	1985
<i>850</i>	311	1414	311	23.2	31.0	10.6	310	18.2	261	302	2.6	6.1	8.54	0.92	1982	1983
<i>800</i>	311	1942	311	20.0	26.0	12.2	310	15.4	261	306	2.6	6.5	9.08	0.72	1982	1987
<i>750</i>	311	2496	311	16.7	22.4	9.4	310	12.5	261	313	2.9	6.7	8.85	0.64	1988	1987
<i>700</i>	311	3080	310	13.5	20.0	6.8	308	8.7	260	319	2.8	6.5	9.19	0.77	1988	1983
<i>650</i>	308	3697	304	10.3	17.4	3.4	298	4.3	232	331	2.7	6.5	9.86	0.91	1988	1986
<i>600</i>	302	4364	295	6.8	14.2	-10.7	283	0.3	223	334	2.6	6.4	11.62	1.08	1988	1980
<i>550</i>	300	5080	295	3.3	11.0	-10.9	278	-3.7	211	328	1.5	6.2	20.21	1.09	1988	1987
<i>500</i>	296	5840	290	-0.5	7.2	-9.7	258	-7.9	203	332	0.7	6.5	16.93	0.99	1988	1987
<i>450</i>	291	6681	285	-4.6	9.8	-14.7	240	-12.4	188	048	0.2	6.0	21.94	1.03	1989	1987
<i>400</i>	288	7599	283	-9.6	-1.9	-17.1	224	-17.7	181	130	0.1	6.7	21.88	1.04	1988	1988
<i>350</i>	281	8615	278	-15.4	-7.1	-25.7	198	-23.7	168	121	1.8	7.4	24.76	1.16	1981	1988
<i>300</i>	275	9773	272	-22.7	-13.9	-31.3	154	-30.8	160	113	3.1	7.9	35.01	1.32	1981	1986
<i>250</i>	256	11087	254	-32.3	-23.9	-41.1	94	-39.3	143	117	4.4	8.2	40.79	1.55	1981	1985
<i>200</i>	241	12619	241	-44.9	-36.1	-58.9	4	-48.2	130	103	6.8	10.5	46.62	1.61	1988	1989
<i>175</i>	215	13498	215	-52.2	-41.1	-63.1			117	098	7.9	11.2	50.18	1.70	1981	1986
<i>150</i>	192	14485	192	-60.2	-50.1	-71.3			105	099	9.5	13.4	53.02	1.72	1987	1989
<i>125</i>	162	15601	161	-68.3	-56.7	-77.9			89	094	12.4	14.8	71.75	2.24	1987	1981
<i>100</i>	133	16902	132	-74.6	-67.1	-84.9			77	087	15.7	17.1	82.38	2.78	1983	1981
<i>80</i>	109	18202	109	-72.3	-56.9	-81.9			65	091	17.2	18.0	104.51	3.26	1990	1979
<i>70</i>	100	19000	100	-68.1	-52.5	-79.1			57	087	16.3	17.4	121.78	4.15	1986	1979
<i>60</i>	90	19929	89	-62.2	-48.3	-74.7			54	089	18.6	19.3	122.44	4.14	1986	1979
<i>50</i>	78	21077	78	-57.1	-47.1	-67.5			46	086	16.5	17.9	128.80	3.20	1983	1979
<i>40</i>	70	22511	70	-52.4	-37.5	-63.5			39	093	17.3	18.3	122.90	3.63	1983	1979
<i>30</i>	56	24373	56	-48.0	-36.5	-58.3			32	093	19.4	20.5	151.69	3.93	1983	1979
<i>25</i>	41	25554	41	-46.0	-38.1	-55.9			21	077	18.6	19.5	179.24	3.67	1982	1979
<i>20</i>	19	27169	19	-43.1	-36.7	-51.9			8	092	22.9	23.1			1989	1982
<i>15</i>	12	29139	12	-41.2	-35.7	-48.7			5	100	24.1	25.0			1989	1982
<i>10</i>	3	32137	3	-37.7	-35.1	-41.9			1	072	23.0	23.0			1989	1989
<i>7</i>	1	34792	1	-38.3	-38.3	-38.3									1989	1989

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
290	508	570					112	098	1701	-76.0

# NORMALS OF RADIOSONDE DATA

42361 GWALIOR

AUGUST 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	333	975	333	31.0	39.6	23.4	333	24.1	333	347	0.3	2.0	0.74	1.18	1987	1987
<i>1000</i>	289	-17											7.62			
<i>950</i>	289	427	288	29.2	37.0	22.4	285	22.8	250	331	1.1	5.3	17.07	0.89	1987	1983
<i>900</i>	289	922	289	25.9	33.6	19.0	287	20.5	250	342	1.4	5.9	8.86	0.87	1987	1981
<i>850</i>	289	1423	288	22.5	31.4	16.0	286	17.9	250	345	1.5	6.2	9.67	0.88	1987	1981
<i>800</i>	289	1949	289	19.4	27.6	14.0	287	15.3	250	007	1.7	6.2	10.78	0.86	1987	1982
<i>750</i>	289	2504	289	16.3	22.8	10.4	283	11.5	249	004	1.8	6.3	12.86	0.78	1988	1982
<i>700</i>	289	3086	288	13.1	20.0	4.6	278	7.2	250	018	2.4	6.7	13.03	0.83	1989	1979
<i>650</i>	282	3703	280	9.9	16.0	0.0	269	2.5	227	015	2.3	6.3	13.44	0.76	1989	1979
<i>600</i>	280	4365	278	6.5	13.0	-1.3	264	-1.6	219	022	2.1	6.1	15.38	0.76	1990	1968
<i>550</i>	277	5082	275	3.0	9.4	-5.9	237	-5.1	204	041	1.6	6.0	21.83	0.70	1988	1986
<i>500</i>	275	5842	272	-0.9	6.0	-8.7	216	-9.0	195	056	1.4	5.6	19.47	0.71	1988	1986
<i>450</i>	270	6679	268	-5.2	2.6	-14.1	201	-13.9	181	077	1.7	5.9	24.46	0.79	1983	1979
<i>400</i>	260	7595	257	-10.4	-2.9	-18.5	161	-18.8	167	079	1.9	6.3	23.01	0.77	1988	1987
<i>350</i>	248	8615	245	-16.3	-6.1	-25.9	138	-24.9	147	088	3.1	6.4	27.38	1.05	1982	1987
<i>300</i>	238	9761	236	-23.8	-15.9	-31.9	111	-31.7	142	095	4.2	7.2	36.13	1.28	1988	1982
<i>250</i>	226	11072	225	-33.2	-25.3	-41.5	75	-40.2	127	103	5.8	8.2	43.18	1.69	1988	1979
<i>200</i>	207	12606	206	-45.7	-37.9	-55.3	2	-48.7	113	104	8.0	10.6	53.35	2.14	1988	1982
<i>175</i>	192	13479	191	-53.2	-45.9	-63.9			105	101	9.0	11.8	62.61	2.15	1988	1979
<i>150</i>	181	14454	181	-61.5	-53.3	-72.1			97	099	10.6	13.2	76.79	2.00	1988	1979
<i>125</i>	157	15563	157	-69.6	-59.5	-79.1			78	096	13.1	14.9	97.00	2.10	1990	1979
<i>100</i>	137	16874	137	-74.1	-58.3	-86.7			69	091	15.0	15.7	89.09	2.07	1990	1979
<i>80</i>	113	18182	113	-70.8	-54.7	-82.5			56	099	16.0	17.0	92.80	3.33	1990	1982
<i>70</i>	104	18991	104	-66.2	-48.5	-78.7			50	096	16.6	17.7	103.62	3.57	1990	1983
<i>60</i>	89	19926	89	-61.1	-47.7	-76.7			46	095	15.2	15.6	107.75	3.16	1989	1983
<i>50</i>	74	21067	74	-57.3	-42.9	-70.3			36	089	16.6	17.3	120.53	2.94	1989	1983
<i>40</i>	59	22478	59	-53.4	-38.5	-62.9			25	087	16.8	17.9	134.66	2.57	1989	1983
<i>30</i>	41	24343	41	-50.4	-41.5	-59.9			17	089	17.9	19.1	160.16	2.54	1990	1983
<i>25</i>	38	25539	38	-47.9	-39.7	-57.1			15	084	19.6	21.0	166.90	2.86	1981	1983
<i>20</i>	30	27051	30	-45.7	-39.9	-54.1			8	087	18.5	21.2	105.16	2.54	1983	1982
<i>15</i>	18	28913	18	-44.4	-39.9	-52.7			4	098	23.0	23.3			1990	1983
<i>10</i>	10	31739	10	-41.4	-32.1	-52.1			2	091	19.9	20.0			1990	1983
<i>7</i>	4	34114	4	-41.8	-35.7	-48.1			1	092	37.0	37.0			1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

273 512 566

129 102 1679 -75.4

## NORMALS OF RADIOSONDE DATA

42361 GWALIOR

SEPTEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	314	979	314	32.2	38.4	23.4	314	21.1	313	332	0.8	1.4	1.04	1.54	1987	1989
<i>1000</i>	281	20											9.03			
<i>950</i>	281	460	280	30.1	37.0	20.4	279	18.6	258	335	2.9	5.6	22.67	1.37	1989	1990
<i>900</i>	281	960	279	26.5	33.4	18.0	276	15.9	258	338	3.5	5.7	9.86	1.09	1988	1989
<i>850</i>	281	1461	281	22.8	29.4	14.0	278	13.7	258	332	4.2	6.3	10.39	0.94	1980	1989
<i>800</i>	281	1986	280	19.1	28.0	10.8	277	10.9	260	327	4.6	6.7	10.09	1.03	1987	1989
<i>750</i>	281	2534	278	15.3	24.8	8.0	272	6.5	260	327	4.8	6.9	10.72	1.22	1990	1986
<i>700</i>	281	3117	279	11.6	22.2	4.4	265	2.0	260	328	4.8	7.1	8.91	1.41	1990	1986
<i>650</i>	275	3730	273	8.0	19.0	0.2	240	-1.9	249	324	4.4	7.1	11.34	1.49	1990	1979
<i>600</i>	270	4390	269	4.7	16.4	-4.1	207	-5.1	234	315	3.7	6.4	11.02	1.44	1988	1982
<i>550</i>	266	5098	264	1.5	13.6	-9.1	165	-7.9	230	307	3.4	6.6	19.22	1.39	1988	1982
<i>500</i>	266	5856	264	-2.0	9.4	-11.9	138	-12.4	228	293	3.7	7.2	14.69	1.55	1988	1982
<i>450</i>	264	6687	261	-6.4	5.6	-16.9	99	-16.5	216	284	4.1	7.1	21.19	1.52	1982	1980
<i>400</i>	253	7601	251	-11.6	-2.1	-19.7	69	-21.5	205	274	5.1	7.7	26.08	1.62	1988	1979
<i>350</i>	239	8611	238	-18.0	-10.9	-26.9	47	-26.9	189	263	5.8	8.4	32.00	1.73	1987	1979
<i>300</i>	229	9745	229	-25.8	-18.3	-36.9	32	-33.7	178	257	6.2	9.0	40.52	1.83	1987	1982
<i>250</i>	218	11041	217	-35.7	-27.7	-44.9	15	-42.5	167	240	6.3	9.5	44.82	1.79	1987	1979
<i>200</i>	204	12562	204	-47.6	-38.7	-57.5			153	239	6.4	10.7	58.39	1.95	1980	1979
<i>175</i>	182	13436	182	-54.6	-43.7	-63.1			132	229	6.2	11.4	75.88	1.84	1987	1979
<i>150</i>	165	14415	165	-62.2	-49.9	-71.9			115	232	4.3	9.8	85.30	2.39	1987	1985
<i>125</i>	149	15517	149	-69.9	-56.1	-79.1			103	182	1.1	8.6	102.01	2.81	1987	1979
<i>100</i>	128	16835	128	-74.4	-62.1	-82.1			85	112	4.6	8.5	108.58	2.73	1985	1990
<i>80</i>	110	18152	109	-70.7	-58.1	-80.9			72	094	5.4	7.8	126.16	4.99	1987	1982
<i>70</i>	100	18961	99	-65.7	-51.5	-76.9			63	094	5.5	7.6	127.05	3.50	1985	1983
<i>60</i>	94	19902	93	-60.6	-52.1	-71.9			58	093	6.9	8.7	120.62	2.69	1989	1987
<i>50</i>	85	21042	85	-56.7	-46.7	-69.3			50	096	8.5	9.7	147.85	3.86	1987	1987
<i>40</i>	75	22464	75	-52.6	-44.7	-66.9			38	089	9.9	11.2	176.29	3.41	1987	1987
<i>30</i>	61	24342	61	-48.7	-40.3	-63.3			28	093	11.5	13.0	214.19	4.16	1983	1987
<i>25</i>	55	25526	55	-46.9	-38.1	-61.1			23	087	12.6	13.9	216.86	4.41	1985	1987
<i>20</i>	38	27035	38	-45.8	-39.1	-59.9			13	076	12.8	14.9	235.40	4.61	1986	1987
<i>15</i>	22	28915	22	-44.9	-37.5	-58.1			5	095	21.6	21.8	313.37	5.21	1986	1987
<i>10</i>	10	31659	10	-42.4	-37.5	-47.1			2	088	27.2	27.5			1989	1987

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

261 530 541

1 167 1300 -72.7

124 103 1677 -75.2

# NORMALS OF RADIOSONDE DATA

42361 GWALIOR

OCTOBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDIT	YRTX	YRTN
<i>SURFACE</i>	360	985	360	31.0	37.4	20.6	360	15.1	360	352	0.4	0.7	0.71	1.66	1986	1987
1000	336	70											6.79			
950	336	505	334	28.5	36.0	16.0	328	10.3	332	351	2.7	4.5	20.34	1.37	1989	1978
900	336	1005	335	24.7	34.0	14.6	324	6.6	332	341	2.8	4.4	7.87	1.22	1990	1981
850	336	1501	336	20.5	28.8	10.8	322	4.8	332	325	3.2	4.7	8.03	1.22	1987	1985
800	336	2020	336	16.2	26.4	7.8	317	2.1	331	317	3.9	5.5	8.58	1.27	1989	1985
750	336	2557	336	11.9	23.0	3.8	291	-0.8	331	313	4.6	6.3	7.54	1.31	1989	1983
700	336	3137	336	7.9	17.4	0.0	249	-4.6	332	309	5.0	6.9	9.46	1.48	1983	1978
650	332	3739	329	4.3	15.8	-4.1	180	-8.1	327	303	5.7	7.5	9.71	1.59	1988	1980
600	329	4391	327	1.1	12.8	-9.5	118	-12.2	319	296	6.2	8.1	9.86	1.38	1988	1980
550	324	5087	321	-2.3	8.8	-12.9	65	-15.3	318	289	7.6	9.6	18.19	1.46	1988	1980
500	319	5838	318	-6.6	3.6	-15.3	44	-18.6	310	284	9.7	11.8	14.60	1.69	1988	1980
450	307	6652	307	-11.4	2.2	-21.3	27	-20.5	298	280	11.8	13.9	18.69	1.80	1988	1980
400	295	7550	293	-17.1	-8.5	-28.0	15	-25.8	283	275	14.4	16.4	25.80	1.89	1989	1978
350	278	8540	276	-23.4	-12.7	-35.0	14	-33.1	257	272	17.0	18.9	27.64	2.05	1983	1978
300	267	9651	264	-30.9	-20.9	-41.3	7	-36.6	233	267	19.6	21.5	38.42	2.42	1989	1979
250	251	10922	248	-40.0	-30.3	-50.3	2	-43.4	208	265	21.1	23.1	49.05	2.69	1989	1982
200	228	12414	226	-50.9	-40.7	-60.1			180	261	22.0	24.2	75.32	3.40	1988	1987
175	199	13272	199	-57.1	-47.1	-68.0			153	260	22.4	24.7	82.56	3.32	1989	1978
150	174	14231	174	-63.5	-50.7	-76.0			133	257	19.7	21.4	98.75	3.78	1988	1978
125	148	15344	148	-69.8	-54.9	-84.0			110	259	16.5	18.7	140.48	5.49	1988	1978
100	123	16677	123	-74.1	-65.1	-86.0			90	256	9.7	14.2	128.59	3.72	1989	1978
80	109	17981	109	-72.1	-63.1	-85.1			78	248	1.7	11.4	141.80	3.26	1989	1979
70	99	18784	99	-68.1	-59.7	-83.0			73	136	1.2	9.7	144.53	3.37	1980	1978
60	90	19726	90	-63.2	-53.1	-75.3			63	082	1.7	9.4	162.08	2.52	1980	1983
50	75	20866	75	-59.0	-44.1	-69.5			49	089	4.4	8.4	178.83	2.56	1980	1981
40	66	22292	66	-54.9	-47.1	-62.1			44	097	6.5	8.9	137.94	2.56	1980	1979
30	54	24160	54	-50.5	-43.9	-56.9			34	097	6.7	7.7	172.57	1.85	1986	1982
25	46	25338	46	-48.9	-41.9	-55.1			31	092	7.8	8.9	208.86	2.83	1986	1979
20	25	26801	25	-47.3	-41.3	-53.9			10	103	5.4	6.4	183.11	1.98	1983	1982
15	13	28797	13	-44.7	-40.5	-49.1			3	101	2.7	5.0			1983	1989
10	2	31412	2	-46.3	-44.9	-47.7			1	071	8.0	8.0			1983	1986
7	2	33779	2	-46.1	-44.9	-47.3									1983	1986

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

324 584 462

122 104 1644 -74.1

# NORMALS OF RADIOSONDE DATA

42361 GWALIOR

NOVEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	320	989	320	25.5	36.0	17.0	320	12.0	320	325	0.3	0.5	0.91	1.17	1978	1978
<i>1000</i>	291	109											6.65			
<i>950</i>	291	535	290	23.3	30.4	14.4	283	7.0	290	356	2.5	3.9	25.15	0.89	1986	1979
<i>900</i>	291	1027	290	19.8	28.0	9.8	270	3.5	290	338	2.4	4.0	8.94	1.02	1986	1990
<i>850</i>	291	1516	291	16.1	23.8	5.8	259	0.9	290	317	2.6	4.5	8.52	1.15	1988	1990
<i>800</i>	291	2027	291	12.7	25.0	2.6	212	-1.6	290	309	3.8	5.4	9.44	1.11	1978	1990
<i>750</i>	291	2563	291	9.6	18.8	-0.5	162	-5.0	287	303	4.6	6.1	10.11	1.04	1987	1990
<i>700</i>	291	3135	290	6.6	15.8	-2.9	114	-7.5	290	293	6.2	7.7	11.28	1.16	1987	1990
<i>650</i>	284	3735	283	3.5	14.0	-8.3	81	-9.9	277	290	7.4	8.9	14.20	1.26	1990	1990
<i>600</i>	278	4386	277	0.1	8.4	-9.5	61	-13.0	270	287	9.1	10.6	13.36	1.18	1990	1990
<i>550</i>	272	5081	272	-3.9	4.6	-11.3	50	-16.0	260	283	11.6	13.1	16.61	1.14	1987	1990
<i>500</i>	262	5824	260	-8.5	0.6	-15.7	38	-19.6	253	281	14.4	16.1	17.30	1.27	1987	1990
<i>450</i>	255	6633	254	-13.5	-3.3	-21.5	31	-23.4	241	278	17.2	18.9	21.59	1.39	1990	1979
<i>400</i>	248	7522	248	-19.5	-9.9	-34.0	24	-28.5	234	277	20.5	22.5	22.47	2.29	1987	1978
<i>350</i>	240	8503	239	-25.9	-16.3	-36.3	20	-34.3	210	274	24.8	26.8	24.13	2.22	1987	1990
<i>300</i>	226	9607	224	-33.5	-24.1	-44.3	9	-40.8	190	272	28.7	31.2	32.98	2.13	1986	1986
<i>250</i>	195	10867	193	-42.1	-32.9	-53.0			157	273	31.8	34.0	42.11	2.49	1990	1978
<i>200</i>	163	12342	163	-52.3	-42.9	-61.5			130	268	33.3	36.0	60.09	2.93	1988	1979
<i>175</i>	138	13196	137	-57.8	-48.1	-66.1			114	268	33.4	35.7	92.19	3.30	1989	1979
<i>150</i>	124	14162	123	-63.1	-53.3	-73.5			97	266	31.4	33.6	102.96	4.06	1988	1979
<i>125</i>	107	15271	107	-67.7	-57.3	-80.9			78	274	26.2	28.3	110.79	4.52	1988	1979
<i>100</i>	93	16599	93	-71.6	-60.5	-83.7			70	275	23.1	25.9	122.22	4.07	1982	1979
<i>80</i>	77	17912	77	-70.4	-59.7	-80.5			60	273	15.9	21.9	87.52	3.19	1982	1979
<i>70</i>	70	18717	70	-67.7	-57.1	-80.1			53	276	11.5	20.5	104.92	3.51	1983	1979
<i>60</i>	67	19651	67	-64.1	-53.9	-78.1			49	281	5.2	17.0	110.75	3.79	1983	1979
<i>50</i>	58	20788	58	-59.1	-46.3	-70.9			43	333	1.8	16.3	89.69	2.30	1983	1981
<i>40</i>	48	22193	48	-54.9	-47.1	-66.7			36	121	2.8	14.6	109.94	2.86	1980	1981
<i>30</i>	36	24049	36	-49.6	-39.5	-57.9			26	110	6.2	15.1	140.28	2.58	1980	1981
<i>25</i>	22	25189	22	-48.7	-42.1	-54.1			13	105	2.2	16.0	181.09	1.66	1983	1980
<i>20</i>	11	26649	11	-48.6	-44.9	-52.1			6	105	10.4	18.8			1983	1985
<i>15</i>	4	28637	4	-46.6	-41.9	-51.1			2	188	20.0	20.0			1983	1990
<i>10</i>																
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
278	604	436	3	253	1075	-45.9	92	105	1637	-72.1



# NORMALS OF RADIOSONDE DATA

42361 GWALIOR

DECEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	301	992	301	21.1	26.0	13.0	301	9.0	301	356	0.4	0.5	1.21	0.73	1987	1978
<i>1000</i>	268	135											9.11			
<i>950</i>	268	552	268	18.6	26.4	11.0	264	4.1	263	358	2.4	3.9	23.74	0.58	1990	1978
<i>900</i>	268	1038	268	15.4	23.6	8.2	252	0.6	263	330	2.3	4.2	8.17	0.95	1990	1990
<i>850</i>	268	1520	265	12.6	21.4	5.2	211	-2.3	263	303	3.2	5.1	8.27	1.10	1987	1990
<i>800</i>	268	2025	267	10.1	19.8	1.8	171	-5.5	263	294	4.1	6.0	8.22	1.35	1987	1990
<i>750</i>	268	2555	267	7.5	17.0	-1.7	118	-7.8	263	287	5.6	7.5	10.24	1.45	1988	1990
<i>700</i>	268	3124	267	4.7	14.6	-5.5	88	-10.6	263	284	6.8	8.4	11.98	1.62	1988	1990
<i>650</i>	264	3721	263	1.4	10.6	-8.3	67	-13.7	257	280	8.5	10.2	17.64	1.63	1988	1990
<i>600</i>	258	4363	256	-2.2	6.8	-11.3	49	-15.1	248	277	10.8	12.4	17.22	1.60	1988	1990
<i>550</i>	252	5051	248	-6.5	4.8	-15.3	41	-19.2	240	277	13.1	14.5	24.85	1.74	1982	1990
<i>500</i>	245	5789	243	-11.2	-1.3	-21.3	36	-24.5	232	273	16.0	17.6	25.34	1.87	1990	1990
<i>450</i>	241	6590	240	-16.7	-7.3	-28.3	27	-28.6	219	274	19.2	20.8	31.68	2.05	1988	1990
<i>400</i>	231	7465	229	-22.9	-14.1	-35.1	24	-32.4	209	272	22.4	24.3	35.00	2.27	1982	1990
<i>350</i>	221	8430	218	-29.7	-19.1	-41.7	22	-36.7	191	271	26.6	28.7	42.68	2.32	1988	1981
<i>300</i>	207	9514	205	-37.3	-24.5	-50.9	13	-42.4	178	268	31.2	33.6	53.70	2.70	1982	1981
<i>250</i>	191	10753	191	-46.0	-33.5	-59.0			147	266	34.8	37.9	73.22	2.67	1982	1978
<i>200</i>	157	12205	157	-55.1	-38.5	-67.0			119	261	36.9	39.2	89.48	2.87	1990	1978
<i>175</i>	134	13044	134	-59.6	-48.1	-73.0			100	261	36.1	38.5	101.12	3.15	1980	1978
<i>150</i>	122	13992	122	-63.2	-53.9	-76.0			90	260	37.7	39.4	118.37	3.51	1982	1978
<i>125</i>	106	15104	106	-66.5	-58.1	-79.0			79	262	35.0	36.2	152.62	3.13	1980	1978
<i>100</i>	91	16453	91	-69.6	-54.5	-80.0			69	265	28.5	30.1	156.01	4.14	1988	1978
<i>80</i>	73	17780	73	-70.8	-64.1	-79.1			56	267	24.5	27.7	171.18	3.71	1983	1980
<i>70</i>	70	18577	70	-69.3	-60.7	-78.1			52	269	23.0	25.6	180.62	3.57	1981	1987
<i>60</i>	59	19505	59	-66.8	-54.9	-76.9			46	275	18.2	26.5	152.80	2.77	1981	1987
<i>50</i>	53	20638	53	-62.9	-49.1	-74.5			41	277	11.4	23.3	145.50	3.70	1980	1987
<i>40</i>	44	22025	44	-58.5	-45.9	-73.1			34	292	3.7	22.5	152.28	5.69	1980	1987
<i>30</i>	35	23860	35	-54.5	-45.1	-67.5			26	272	10.8	23.3	187.08	6.20	1980	1987
<i>25</i>	26	25011	26	-53.0	-41.3	-66.5			17	352	4.0	19.4	172.96	5.86	1980	1987
<i>20</i>	16	26446	16	-53.1	-42.5	-65.1			9	299	7.2	22.3			1982	1987
<i>15</i>	9	28273	9	-52.7	-39.3	-66.5			3	098	5.7	24.3			1981	1987
<i>10</i>	3	30509	3	-61.0	-53.7	-68.5			1	263	36.0	36.0			1983	1987
<i>7</i>	2	32717	2	-54.1	-53.3	-54.9									1983	1987

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
258	634	395	16	183	1275	-62.3	77	100	1657	-71.5

# NORMALS OF RADIOSONDE DATA

42410 GUWAHATI

JANUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	570	1007	570	20.6	27.0	15.0	570	13.2	570	036	0.2	0.5	1.12	1.13	1982	1971
<i>1000</i>	513	114	511	20.3	25.8	13.0	511	12.8	510	028	0.6	1.4	7.90	0.94	1990	1974
<i>950</i>	513	550	513	17.0	23.0	6.0	512	8.6	511	027	1.1	3.0	9.36	0.82	1983	1977
<i>900</i>	513	1013	513	13.3	19.2	6.6	512	6.0	510	244	0.4	3.0	8.47	0.81	1983	1983
<i>850</i>	513	1491	513	9.8	15.6	3.0	506	2.2	511	245	2.4	4.2	8.78	0.94	1983	1983
<i>800</i>	513	1992	513	6.3	12.0	-0.7	500	-1.1	513	237	4.0	5.5	9.29	1.03	1975	1983
<i>750</i>	513	2516	512	2.8	9.0	-4.5	478	-5.1	511	244	5.0	6.6	10.89	1.22	1971	1983
<i>700</i>	513	3074	512	0.1	9.0	-8.5	415	-10.2	510	264	7.3	8.9	11.89	1.35	1986	1983
<i>650</i>	510	3666	510	-2.0	11.8	-12.1	312	-14.5	492	272	13.3	14.4	14.82	1.60	1990	1983
<i>600</i>	506	4300	506	-4.5	9.6	-16.5	222	-17.2	485	271	18.7	19.5	16.12	1.94	1990	1983
<i>550</i>	500	4982	500	-8.2	4.6	-18.0	199	-21.2	465	272	21.9	22.6	20.06	2.12	1990	1978
<i>500</i>	499	5716	499	-12.8	-0.9	-23.0	184	-25.3	463	273	24.9	25.9	22.63	2.27	1990	1978
<i>450</i>	497	6512	497	-18.0	-6.5	-30.0	175	-30.2	450	273	28.7	29.9	29.10	2.52	1989	1978
<i>400</i>	492	7384	490	-23.9	-12.1	-37.0	167	-35.1	440	273	33.7	35.3	35.23	2.79	1989	1978
<i>350</i>	485	8348	483	-30.1	-16.3	-45.0	145	-41.0	414	272	39.1	41.0	44.84	3.04	1990	1978
<i>300</i>	476	9429	474	-37.2	-25.1	-53.0	128	-46.9	403	268	43.9	45.9	58.23	3.15	1990	1978
<i>250</i>	452	10667	451	-45.0	-34.0	-60.0	84	-53.7	371	266	48.4	50.5	69.91	2.59	1978	1978
<i>200</i>	420	12131	419	-53.7	-44.7	-65.9	3	-57.3	341	262	48.9	50.7	77.24	1.67	1987	1988
<i>175</i>	384	12976	383	-58.7	-45.9	-71.1			311	261	46.3	47.6	79.41	1.56	1987	1988
<i>150</i>	365	13934	365	-63.8	-52.0	-74.7			300	261	41.4	42.7	77.22	1.87	1978	1989
<i>125</i>	343	15038	343	-69.2	-56.0	-83.7			279	263	37.8	38.8	80.99	2.01	1976	1989
<i>100</i>	312	16357	312	-73.6	-62.7	-86.5			257	265	28.4	29.5	83.81	2.68	1990	1981
<i>80</i>	266	17654	266	-73.6	-60.0	-84.3			221	266	19.7	21.1	92.15	1.69	1976	1982
<i>70</i>	241	18437	241	-71.4	-58.1	-86.0			203	269	15.1	17.2	102.14	1.96	1989	1978
<i>60</i>	215	19352	215	-67.6	-54.3	-83.0			177	266	11.4	13.7	100.96	2.28	1989	1978
<i>50</i>	183	20469	183	-63.2	-49.9	-77.0			144	260	7.7	11.6	101.10	2.90	1989	1978
<i>40</i>	131	21859	131	-59.8	-48.1	-71.1			98	246	6.8	10.5	123.60	3.51	1989	1985
<i>30</i>	69	23669	69	-57.9	-47.3	-70.0			46	257	7.5	9.7	131.98	4.17	1989	1971
<i>25</i>	49	24772	49	-57.1	-48.3	-66.1			34	261	8.4	10.6	144.51	3.91	1984	1985
<i>20</i>	24	26183	24	-56.4	-41.5	-64.5			17	267	10.5	11.2	222.96	4.27	1984	1985
<i>15</i>	9	27995	9	-56.4	-48.7	-61.5			7	273	14.8	15.8			1989	1985
<i>10</i>	4	30793	4	-51.8	-46.3	-54.9			2	259	10.6	11.0			1989	1985
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

510	690	320		57	229	1128	-55.9		295	098	1650	-75.4
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# NORMALS OF RADIOSONDE DATA

42410 GUWAHATI

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	537	1005	537	23.5	30.0	15.4	537	12.5	537	326	0.4	1.2	1.38	1.05	1974	1989
1000	500	93	484	23.1	29.8	15.0	484	12.1	482	337	0.6	1.5	13.62	1.10	1981	1972
950	499	533	498	19.3	26.6	9.0	497	8.3	497	317	1.5	3.8	13.82	1.16	1981	1978
900	499	998	498	15.4	22.4	8.2	498	5.8	496	265	2.4	4.1	13.68	1.20	1981	1982
850	499	1480	499	11.7	20.0	1.0	497	3.3	496	248	5.0	5.8	13.99	1.24	1975	1982
800	499	1984	499	7.9	16.4	-3.9	489	0.2	497	242	7.5	8.2	14.43	1.39	1990	1982
750	499	2511	499	4.2	13.2	-9.1	472	-4.2	497	248	9.1	9.9	15.90	1.42	1990	1982
700	499	3071	499	0.9	9.2	-13.7	413	-8.7	496	260	11.3	12.2	17.43	1.45	1990	1982
650	496	3663	496	-1.8	8.0	-10.1	338	-12.6	485	267	15.5	16.2	21.65	1.63	1972	1982
600	495	4298	495	-4.4	9.0	-14.7	268	-15.7	476	269	19.6	20.2	22.45	1.79	1977	1982
550	493	4980	493	-8.0	6.0	-17.9	228	-19.7	469	271	22.6	23.3	26.64	1.96	1977	1982
500	488	5714	488	-12.7	1.0	-22.9	210	-24.1	463	272	25.1	26.1	28.73	2.02	1972	1982
450	484	6510	484	-17.9	-1.9	-29.0	188	-28.7	450	272	28.3	29.5	36.19	2.26	1988	1976
400	479	7383	479	-23.8	-10.0	-37.1	173	-33.6	444	271	32.0	33.5	38.85	2.63	1972	1982
350	475	8350	475	-30.0	-16.3	-43.1	158	-39.2	430	269	36.9	38.7	47.95	3.01	1990	1981
300	473	9431	473	-36.8	-22.5	-52.1	131	-45.5	421	267	42.1	44.4	57.62	3.00	1989	1981
250	453	10675	452	-44.4	-32.9	-59.0	87	-51.6	390	265	45.7	47.8	69.68	2.82	1990	1978
200	429	12142	427	-53.1	-40.0	-66.0	10	-57.7	368	263	46.9	48.8	82.11	2.08	1975	1978
175	391	12992	390	-57.9	-47.3	-68.0			329	264	45.1	46.6	87.79	1.81	1986	1978
150	361	13951	360	-63.4	-51.5	-72.1			309	263	41.6	43.0	93.33	2.18	1990	1984
125	322	15054	322	-69.3	-50.9	-78.1			279	263	36.2	37.2	95.16	2.58	1989	1984
100	290	16370	290	-73.8	-59.3	-83.1			256	266	27.9	28.8	97.10	2.73	1990	1984
80	246	17673	246	-74.2	-63.0	-89.5			212	268	19.0	19.9	106.11	2.58	1973	1985
70	221	18457	221	-71.8	-60.9	-84.1			201	267	14.1	15.6	107.43	2.78	1989	1985
60	194	19373	194	-67.6	-55.9	-82.1			175	262	9.7	12.4	106.68	3.00	1989	1985
50	163	20482	163	-63.4	-53.1	-77.0			141	260	6.9	10.4	114.02	2.75	1984	1974
40	112	21872	112	-59.9	-46.5	-73.5			91	253	5.5	9.0	123.51	2.39	1984	1985
30	56	23696	56	-57.3	-49.9	-64.0			43	243	5.0	9.0	106.69	3.10	1982	1973
25	39	24839	39	-56.1	-48.9	-62.9			29	242	6.4	11.6	136.75	3.07	1987	1985
20	25	26234	25	-54.6	-47.9	-62.3			16	263	4.8	8.1	193.99	2.83	1990	1985
15	5	28005	5	-52.3	-48.1	-55.5			3	241	6.0	6.3			1984	1984
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
497	679	333	90	258	1056	-50.2	263	099	1647	-75.6

# NORMALS OF RADIOSONDE DATA

42410 GUWAHATI

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	586	1002	586	27.4	36.0	16.6	586	13.9	586	311	0.6	1.8	1.34	1.35	1986	1990
1000	564	68	453	26.8	34.0	16.4	453	13.8	450	356	0.6	1.7	11.20	1.34	1971	1990
950	564	513	564	23.6	31.0	12.2	551	10.9	560	299	1.7	4.7	11.15	1.33	1972	1981
900	564	986	564	19.8	28.0	10.6	551	8.6	561	259	3.3	5.1	9.84	1.23	1972	1980
850	564	1476	564	15.9	23.6	7.6	552	6.2	561	249	6.2	6.9	9.84	1.12	1986	1980
800	564	1987	564	12.0	19.4	4.0	552	3.4	561	245	8.7	9.1	10.47	0.99	1986	1980
750	564	2521	564	7.9	15.0	-0.3	543	-0.4	559	248	10.6	11.1	11.70	0.96	1973	1980
700	564	3089	564	3.9	11.0	-5.0	501	-4.9	559	258	12.0	12.7	12.41	0.93	1973	1972
650	561	3687	561	0.4	8.0	-8.9	440	-9.6	544	265	14.3	15.1	17.07	1.05	1973	1980
600	559	4327	558	-2.9	8.8	-13.1	348	-14.0	534	269	16.8	17.7	15.79	1.13	1986	1980
550	558	5012	557	-6.7	1.4	-17.9	284	-18.7	527	271	18.6	19.4	18.57	1.21	1985	1980
500	556	5751	555	-11.4	-3.1	-22.1	231	-23.5	524	273	20.5	21.6	19.94	1.35	1985	1982
450	553	6551	553	-17.0	-7.5	-27.1	211	-28.9	514	274	22.2	23.6	24.38	1.44	1988	1981
400	544	7426	543	-23.5	-12.1	-33.0	198	-34.3	501	273	24.9	26.7	27.19	1.57	1989	1974
350	536	8392	532	-30.4	-16.9	-43.0	188	-40.8	481	272	29.1	31.3	35.13	2.08	1990	1978
300	527	9473	524	-37.5	-24.9	-51.9	150	-47.0	466	269	34.0	36.6	40.28	2.52	1986	1981
250	496	10712	494	-45.0	-33.1	-59.3	107	-52.7	425	266	40.1	42.7	51.55	2.73	1987	1981
200	464	12180	464	-52.8	-41.3	-66.7	6	-58.7	394	264	41.8	44.0	66.73	2.49	1990	1981
175	429	13029	429	-57.5	-45.7	-70.1			362	264	39.6	41.3	73.49	2.14	1987	1981
150	405	13989	405	-62.7	-50.7	-76.1			341	264	36.2	37.7	82.81	2.21	1990	1982
125	371	15095	371	-68.3	-53.5	-81.0			304	265	31.2	32.5	92.58	2.47	1990	1978
100	339	16421	339	-73.1	-57.5	-88.0			273	267	23.3	24.9	103.70	2.96	1990	1978
80	304	17727	304	-74.0	-61.3	-87.0			237	273	14.5	16.4	106.97	2.70	1990	1978
70	268	18510	268	-72.1	-57.1	-83.5			207	274	9.1	12.3	117.07	3.35	1982	1988
60	228	19432	228	-68.3	-50.5	-80.0			168	266	5.8	10.0	119.62	3.83	1982	1978
50	186	20548	186	-63.2	-50.1	-78.0			139	252	4.2	9.4	124.71	3.86	1986	1973
40	122	21937	122	-59.4	-46.1	-80.0			92	256	2.2	8.0	140.91	3.98	1982	1972
30	76	23745	76	-55.5	-47.3	-71.0			55	223	2.3	7.3	157.02	3.83	1990	1971
25	44	24933	44	-53.6	-43.3	-68.0			33	247	1.7	7.3	203.24	4.50	1989	1971
20	20	26417	20	-50.5	-43.1	-61.1			14	265	1.7	9.9			1989	1980
15	5	28503	5	-45.8	-41.1	-49.1			3	317	7.3	10.3			1990	1985
10																
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

559	642	379		81	231	1131	-53.1		315	096	1671	-75.4
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## NORMALS OF RADIOSONDE DATA

42410 GUWAHATI

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	558	999	558	28.4	36.0	20.0	558	19.0	558	033	0.8	2.4	1.45	1.47	1975	1971
1000	537	40	221	27.5	36.0	20.0	221	18.5	219	040	1.1	2.1	12.23	1.55	1975	1971
950	537	487	537	25.0	34.4	17.0	533	16.1	534	030	0.9	4.5	10.73	1.40	1986	1977
900	537	964	537	21.7	31.0	14.0	533	13.7	534	249	2.2	4.8	9.82	1.24	1986	1977
850	537	1458	537	18.4	26.2	10.0	533	11.0	534	242	6.3	7.4	9.21	1.13	1986	1977
800	537	1975	537	14.9	21.0	8.4	531	7.8	534	246	9.3	10.0	9.50	1.05	1972	1987
750	537	2513	537	11.1	17.2	5.0	526	3.3	534	253	11.5	12.2	10.53	1.11	1980	1983
700	537	3089	537	7.1	14.0	0.2	509	-1.6	533	261	13.0	13.8	11.47	1.11	1973	1983
650	533	3694	531	3.3	11.0	-4.0	468	-6.4	520	267	13.9	14.8	13.62	1.16	1973	1978
600	530	4340	528	-0.5	12.0	-6.3	402	-11.0	511	271	15.2	16.2	14.37	1.20	1973	1982
550	523	5032	521	-4.2	6.0	-11.5	337	-16.1	501	272	16.1	17.2	16.66	1.28	1973	1983
500	519	5777	518	-8.7	0.0	-18.1	265	-20.7	496	273	16.2	17.5	19.99	1.38	1974	1986
450	516	6585	515	-14.1	-5.0	-24.0	240	-26.0	482	274	17.6	19.1	23.83	1.37	1974	1972
400	512	7470	509	-20.4	-9.1	-29.0	226	-31.8	478	274	19.5	21.1	27.05	1.49	1989	1978
350	507	8447	504	-27.3	-15.3	-37.1	212	-37.9	464	273	22.6	24.5	33.67	1.81	1989	1990
300	499	9541	497	-35.0	-22.5	-44.9	177	-44.8	452	269	26.3	28.4	39.90	2.33	1989	1990
250	491	10792	491	-43.4	-32.1	-55.7	98	-52.0	427	267	31.1	33.6	51.92	2.65	1989	1982
200	472	12267	471	-52.3	-42.9	-64.1	12	-57.5	417	266	34.2	36.5	63.20	1.90	1983	1983
175	443	13120	442	-57.2	-48.1	-69.0			391	266	32.5	34.3	72.68	1.64	1988	1972
150	411	14085	410	-62.6	-50.1	-72.0			370	267	29.7	31.2	82.30	1.83	1990	1978
125	385	15193	385	-68.4	-56.0	-78.1			347	271	24.6	25.7	84.89	2.15	1975	1982
100	362	16514	362	-73.5	-61.1	-82.3			324	275	17.1	18.5	90.83	2.32	1990	1982
80	308	17815	308	-74.6	-63.3	-83.0			260	274	7.9	11.2	92.58	2.32	1990	1978
70	269	18590	269	-72.8	-56.0	-81.9			228	275	4.2	9.1	98.38	2.97	1977	1980
60	226	19510	226	-68.8	-52.0	-78.7			186	247	2.1	7.0	104.07	2.74	1977	1982
50	195	20612	195	-63.5	-50.1	-77.5			152	254	0.7	5.6	108.47	2.99	1989	1982
40	140	22001	140	-58.5	-47.1	-70.1			108	189	0.5	5.4	110.72	3.12	1982	1984
30	96	23814	96	-53.8	-43.5	-65.1			78	201	1.6	5.5	130.66	3.00	1986	1984
25	69	24998	69	-51.7	-37.9	-60.3			55	272	1.2	5.5	152.87	4.54	1986	1982
20	38	26444	38	-50.1	-42.9	-57.9			33	302	1.2	6.2	215.12	3.52	1984	1985
15	22	28314	22	-47.6	-40.1	-52.5			18	357	1.7	6.5	268.48	3.83	1988	1982
10	7	31049	7	-43.3	-41.1	-48.1			7	264	4.0	7.6			1985	1982
7	1	33601	1	-41.1	-41.1	-41.1			1	205	3.0	3.0			1984	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

527	605	427		25	213	1183	-56.1		339	095	1684	-75.5
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## NORMALS OF RADIOSONDE DATA

42410 GUWAHATI

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	605	997	605	28.9	36.0	19.4	605	22.4	605	047	0.6	1.7	1.34	1.18	1978	1987
1000	584	22	91	27.4	34.0	19.2	91	20.6	89	075	1.1	2.1	10.66	1.55	1987	1987
950	584	470	584	25.7	33.0	17.0	584	19.8	579	052	0.8	3.5	11.76	1.10	1978	1977
900	584	950	584	22.5	30.8	12.8	583	17.0	579	249	1.1	3.8	10.50	1.05	1983	1985
850	584	1445	584	19.5	27.0	11.0	582	14.1	579	241	4.4	5.8	10.77	0.94	1978	1977
800	584	1965	584	16.3	23.0	8.0	582	10.8	579	243	6.1	7.4	11.23	0.84	1972	1977
750	584	2508	584	12.9	19.0	4.0	581	6.5	577	253	7.2	8.5	11.73	0.92	1972	1977
700	584	3087	584	9.3	18.8	0.0	568	1.9	576	259	7.7	9.2	11.62	1.07	1988	1977
650	580	3698	580	5.5	12.0	-3.9	540	-2.4	552	264	7.7	9.3	12.31	1.07	1989	1985
600	576	4348	576	2.0	8.0	-7.3	508	-6.4	538	268	7.8	9.6	13.10	1.11	1978	1985
550	573	5047	573	-1.5	9.0	-11.7	457	-10.9	519	266	8.4	9.9	15.81	1.09	1988	1988
500	568	5800	568	-5.5	1.2	-15.9	397	-15.8	511	266	9.6	11.1	16.40	1.23	1990	1985
450	561	6621	559	-10.3	-2.5	-21.1	343	-21.0	496	266	10.9	12.6	20.31	1.30	1990	1985
400	557	7519	555	-15.8	-6.0	-26.9	298	-26.6	487	266	12.8	14.6	21.32	1.56	1975	1985
350	550	8515	549	-22.2	-13.7	-33.0	263	-32.7	473	263	15.4	17.3	27.73	1.77	1990	1977
300	539	9633	537	-29.8	-21.1	-42.0	209	-40.2	460	260	18.4	20.4	33.02	1.86	1990	1977
250	527	10909	525	-39.1	-30.5	-52.0	131	-48.6	446	257	20.9	22.5	43.44	2.10	1990	1977
200	505	12405	505	-50.1	-40.1	-64.9	12	-54.6	421	256	21.9	23.5	55.09	2.16	1990	1986
175	480	13265	480	-56.4	-45.5	-69.9			388	256	21.1	22.7	60.79	2.07	1990	1986
150	438	14230	437	-63.4	-54.1	-72.1			357	259	19.2	21.0	65.95	2.18	1990	1979
125	407	15330	406	-70.2	-60.3	-81.1			332	263	14.4	17.0	75.04	2.22	1990	1979
100	377	16635	375	-75.4	-64.5	-89.9			314	262	6.5	10.9	98.00	2.84	1989	1979
80	332	17928	332	-75.7	-60.1	-89.0			269	213	1.5	8.1	107.66	3.00	1989	1978
70	295	18709	295	-72.5	-56.7	-85.0			228	133	2.1	7.4	118.75	3.40	1989	1978
60	253	19638	253	-67.2	-50.1	-80.0			193	106	3.1	7.1	131.26	3.95	1989	1978
50	218	20760	218	-61.0	-45.7	-77.0			169	088	5.2	7.1	155.77	3.33	1989	1974
40	176	22166	176	-56.0	-39.9	-69.0			128	093	5.1	6.9	166.88	2.97	1990	1974
30	118	24028	118	-50.9	-40.3	-60.0			78	089	5.7	7.2	211.70	3.30	1982	1973
25	90	25203	90	-48.8	-37.1	-67.1			58	074	4.5	6.5	241.15	4.15	1990	1985
20	63	26684	63	-46.3	-30.5	-57.3			41	075	6.9	8.6	246.05	5.11	1990	1983
15	25	28550	25	-44.5	-36.5	-51.9			15	080	6.2	7.2	305.02	3.47	1990	1985
10	3	31020	3	-44.6	-41.1	-47.5			2	126	10.4	10.5			1983	1985
7	1	33656	1	-42.3	-42.3	-42.3			1	133	11.0	11.0			1983	1983

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

574 571 476

5 177 1335 -60.5

355 096 1687 -77.2

# NORMALS OF RADIOSONDE DATA

42410 GUWAHATI

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	572	993	572	29.7	36.4	24.0	572	24.9	572	355	0.1	1.4	1.20	0.77	1979	1972
1000	544	-10	2	29.3	31.6	27.0	2	24.8	2	222	1.0	2.5	11.97		1982	1982
950	543	441	543	27.0	33.6	21.0	542	22.9	528	332	0.4	3.3	11.52	0.72	1979	1976
900	543	922	542	24.0	30.0	18.4	541	20.2	528	247	1.1	4.2	10.39	0.73	1975	1985
850	543	1420	542	21.2	32.6	16.0	541	17.1	528	228	2.8	5.3	10.40	0.59	1984	1977
800	543	1944	543	18.2	23.0	13.2	542	13.9	528	224	3.8	6.1	10.61	0.58	1977	1990
750	543	2492	542	15.0	20.0	11.0	540	10.7	528	227	3.7	6.3	11.05	0.54	1978	1976
700	543	3076	543	11.8	17.0	6.0	540	6.7	528	233	3.4	6.4	11.16	0.66	1975	1976
650	539	3693	539	8.7	14.0	3.0	528	2.6	506	233	3.1	6.4	12.73	0.79	1975	1971
600	537	4353	536	5.3	12.0	0.0	515	-1.2	499	234	3.0	6.4	13.16	0.97	1990	1977
550	532	5061	532	1.6	8.0	-4.9	501	-5.1	485	239	3.4	6.7	13.26	1.04	1975	1981
500	530	5823	530	-2.2	3.8	-8.0	486	-9.5	478	241	3.8	7.0	15.75	1.22	1990	1977
450	524	6656	524	-6.7	0.0	-13.1	445	-14.4	465	243	4.1	7.2	19.52	1.13	1971	1981
400	519	7567	519	-11.9	-6.0	-18.1	405	-19.9	456	246	4.3	7.3	21.49	1.19	1975	1981
350	514	8578	514	-18.3	-11.9	-27.1	366	-26.9	438	251	4.7	7.7	22.77	1.45	1986	1981
300	509	9716	509	-26.0	-17.0	-39.9	302	-34.5	429	254	5.0	8.1	26.77	1.78	1975	1981
250	502	11010	502	-36.0	-25.5	-46.1	204	-43.5	416	254	5.3	8.7	40.34	1.66	1988	1990
200	489	12522	488	-48.5	-39.0	-58.3	36	-53.6	401	254	4.9	9.0	50.19	1.89	1975	1982
175	473	13386	471	-55.8	-46.1	-68.1	5	-59.4	386	262	4.0	9.3	56.31	1.98	1990	1982
150	452	14348	449	-63.6	-53.1	-76.1			372	290	2.7	9.6	58.33	2.15	1990	1982
125	429	15441	427	-71.8	-59.0	-81.5			350	021	2.7	9.7	68.22	2.11	1974	1983
100	396	16738	396	-77.5	-66.5	-85.7			326	066	6.0	10.0	82.38	2.33	1989	1980
80	362	18016	362	-77.0	-62.3	-86.9			293	086	9.7	11.5	93.63	2.25	1989	1987
70	326	18789	326	-73.3	-56.1	-86.1			261	086	11.0	12.0	103.22	2.65	1989	1983
60	290	19711	290	-67.7	-50.1	-80.1			230	086	11.0	11.6	114.18	2.85	1989	1983
50	255	20818	255	-61.7	-44.3	-72.7			193	084	12.6	13.1	130.13	2.91	1990	1983
40	198	22222	198	-56.2	-40.3	-67.9			146	088	13.7	14.0	138.14	2.98	1986	1983
30	139	24066	139	-51.6	-33.1	-65.1			97	088	13.0	13.4	180.68	4.11	1989	1983
25	105	25221	105	-49.8	-33.7	-62.9			72	083	13.6	14.2	180.16	4.44	1986	1983
20	79	26700	79	-47.1	-37.5	-60.1			53	085	15.3	15.9	234.35	2.98	1988	1983
15	38	28670	38	-45.1	-34.9	-52.1			22	086	14.6	15.3	205.78	2.64	1989	1985
10	12	31324	12	-43.2	-37.1	-46.1			7	091	20.4	21.7			1990	1983
7	4	33625	4	-41.8	-41.1	-43.1			3	094	14.5	15.3			1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

532 528 538

388 098 1687 -78.9

# NORMALS OF RADIOSONDE DATA

42410 GUWAHATI

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	603	994	603	29.7	34.8	24.0	603	25.4	603	259	0.2	1.3	1.20	0.65	1982	1975
1000	582	-8	1	24.0	24.0	24.0	1	23.0	1	091	2.0	2.0	9.43		1978	1978
950	582	444	582	26.8	32.0	21.6	582	23.3	569	295	0.8	3.6	9.18	0.65	1973	1989
900	582	925	582	23.8	29.0	19.0	582	20.8	569	265	1.7	4.6	8.68	0.67	1973	1972
850	582	1423	582	21.0	27.0	13.0	582	18.1	569	233	3.0	5.2	8.56	0.70	1978	1974
800	582	1947	582	18.1	25.0	13.0	582	15.3	569	221	3.7	5.9	8.51	0.69	1974	1978
750	581	2495	581	15.2	27.0	9.0	581	12.1	567	214	3.4	6.1	8.76	0.72	1978	1971
700	581	3080	581	12.2	17.6	6.0	581	8.7	567	212	2.9	5.9	9.09	0.64	1987	1978
650	577	3698	577	9.1	19.6	3.2	576	4.8	536	206	2.4	5.8	9.22	0.73	1980	1985
600	575	4359	575	5.8	11.4	-0.3	571	0.8	530	202	2.0	5.8	10.00	0.83	1988	1985
550	574	5067	574	2.0	8.0	-4.1	569	-3.3	517	198	1.6	5.5	14.04	0.90	1988	1985
500	572	5831	572	-2.0	4.0	-8.1	563	-8.0	510	187	1.2	5.2	13.32	0.96	1988	1985
450	566	6663	565	-6.3	5.8	-12.1	542	-13.3	494	166	0.9	5.1	19.01	1.02	1986	1985
400	561	7577	559	-11.5	-5.9	-18.1	505	-19.1	485	117	1.2	5.2	18.79	1.11	1990	1985
350	555	8589	554	-17.9	-9.9	-25.7	461	-26.2	469	078	1.9	5.5	22.07	1.34	1990	1985
300	549	9727	548	-25.8	-18.5	-35.1	389	-34.3	465	063	3.4	6.5	28.41	1.49	1990	1985
250	535	11022	535	-36.0	-23.7	-47.1	256	-43.9	441	063	5.1	8.5	36.88	1.75	1983	1985
200	528	12533	528	-48.8	-40.0	-68.7	39	-53.5	430	064	6.9	10.6	49.18	2.11	1976	1984
175	500	13398	500	-56.3	-45.0	-66.9	2	-54.5	408	067	8.2	11.7	58.05	2.26	1974	1985
150	485	14357	485	-64.4	-53.5	-74.9			391	069	10.5	13.8	68.76	2.44	1988	1985
125	462	15447	462	-72.6	-61.9	-83.0			372	070	13.2	15.1	81.61	2.24	1990	1978
100	431	16737	431	-77.9	-68.5	-86.1			341	074	16.1	16.9	92.65	2.26	1990	1979
80	381	18023	381	-75.4	-58.7	-86.1			297	084	17.2	17.7	100.69	3.02	1990	1988
70	349	18806	348	-71.1	-54.1	-83.1			266	085	17.1	17.5	107.05	3.35	1990	1988
60	313	19733	313	-65.8	-50.7	-81.0			237	086	17.0	17.3	112.94	3.18	1990	1978
50	277	20852	277	-60.4	-46.3	-75.0			203	086	17.2	17.9	127.33	3.19	1990	1978
40	215	22259	215	-55.9	-41.3	-69.1			156	087	17.8	18.2	152.14	3.88	1982	1988
30	136	24121	136	-51.4	-34.1	-61.1			93	085	18.8	19.1	193.56	3.33	1982	1979
25	91	25295	91	-49.6	-35.9	-67.5			57	085	19.7	20.0	197.01	3.31	1990	1985
20	59	26778	59	-47.8	-34.9	-56.5			35	086	22.8	23.3	217.22	3.14	1990	1985
15	27	28688	27	-46.1	-37.1	-53.1			12	089	24.5	24.9	291.62	3.86	1990	1982
10	5	31108	5	-47.2	-43.7	-49.9			2	088	31.1	31.5			1983	1982
7	2	33360	2	-45.0	-42.9	-47.1			1	078	50.0	50.0			1984	1984

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

573 523 546

399 099 1678 -79.2



## NORMALS OF RADIOSONDE DATA

42410 GUWAHATI

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	588	994	588	29.7	35.2	23.8	588	25.5	588	219	0.1	1.4	1.10	0.56	1986	1988
<i>1000</i>	567	0	2	27.9	30.4	25.4	2	25.0	2	045	1.0	1.0	<sup>4</sup> 10.60		1987	1987
<i>950</i>	567	449	567	27.0	33.0	20.4	565	23.2	552	285	0.5	3.6	9.85	0.56	1978	1988
<i>900</i>	567	932	567	24.1	31.4	17.0	565	20.5	552	265	0.7	4.4	8.95	0.58	1987	1988
<i>850</i>	567	1431	567	21.2	29.4	14.6	565	17.7	552	200	1.4	5.0	8.88	0.55	1983	1988
<i>800</i>	567	1954	567	18.2	25.8	12.2	565	14.7	552	187	2.1	5.3	8.91	0.55	1983	1988
<i>750</i>	567	2501	567	15.2	22.2	9.8	565	11.3	552	178	2.3	5.5	8.33	0.58	1983	1988
<i>700</i>	567	3087	567	12.1	18.8	6.0	565	7.9	551	161	2.1	5.7	10.23	0.61	1983	1978
<i>650</i>	563	3703	562	8.9	16.0	3.0	560	4.0	536	148	2.0	5.9	10.13	0.76	1972	1978
<i>600</i>	560	4364	559	5.4	11.6	0.2	553	0.1	525	144	1.9	6.0	12.82	0.81	1990	1985
<i>550</i>	557	5073	556	1.7	8.0	-3.1	547	-4.0	519	137	1.8	5.6	16.88	0.86	1990	1982
<i>500</i>	556	5835	556	-2.4	3.2	-8.7	538	-8.5	515	127	1.9	5.2	16.73	0.97	1990	1979
<i>450</i>	553	6666	552	-6.8	-1.1	-13.9	523	-14.0	505	106	2.1	5.1	23.52	1.04	1990	1986
<i>400</i>	548	7578	547	-12.1	-5.3	-19.0	494	-19.9	495	093	2.3	5.4	22.13	1.24	1990	1978
<i>350</i>	542	8587	540	-18.7	-11.5	-25.5	449	-26.9	483	077	3.2	5.8	26.95	1.44	1981	1979
<i>300</i>	539	9721	538	-26.8	-18.9	-34.1	370	-34.9	479	065	4.3	6.9	34.09	1.68	1990	1979
<i>250</i>	533	11012	532	-37.0	-27.3	-45.9	226	-44.4	469	061	5.4	8.2	43.47	2.04	1989	1986
<i>200</i>	524	12516	523	-49.8	-40.9	-60.0	33	-54.8	454	062	6.5	9.9	56.99	2.57	1988	1976
<i>175</i>	511	13374	511	-57.3	-47.9	-68.0	2	-57.5	441	062	7.9	11.0	67.38	2.80	1988	1976
<i>150</i>	492	14329	491	-65.3	-55.1	-75.5			430	065	9.7	12.3	78.06	2.77	1988	1981
<i>125</i>	452	15412	450	-73.1	-63.1	-84.1			396	069	12.4	13.8	90.02	2.49	1988	1986
<i>100</i>	410	16703	410	-77.6	-67.3	-88.3			355	079	15.5	16.1	105.17	2.19	1988	1979
<i>80</i>	362	17985	362	-74.7	-60.1	-89.1			312	085	15.6	16.1	114.33	3.37	1981	1982
<i>70</i>	331	18774	331	-70.3	-55.1	-83.1			280	084	15.6	16.0	114.65	3.28	1986	1982
<i>60</i>	291	19702	291	-65.4	-51.9	-80.0			246	087	16.2	16.6	118.02	3.07	1990	1974
<i>50</i>	251	20826	251	-60.8	-49.5	-76.0			205	088	16.9	17.3	125.25	2.76	1986	1974
<i>40</i>	196	22229	196	-56.7	-41.5	-69.0			158	091	17.6	17.9	146.19	2.85	1990	1978
<i>30</i>	119	24097	119	-52.9	-43.1	-63.0			88	087	18.8	19.2	153.30	3.19	1985	1978
<i>25</i>	82	25294	82	-50.7	-40.1	-60.7			50	085	20.3	20.6	175.35	3.85	1988	1988
<i>20</i>	44	26811	44	-49.0	-41.1	-58.1			25	083	23.7	24.1	140.13	1.76	1990	1988
<i>15</i>	22	28683	22	-47.0	-40.1	-55.5			11	088	23.8	24.3	231.84	2.76	1990	1988
<i>10</i>	6	31465	6	-43.9	-38.7	-49.5			4	081	30.4	30.5			1990	1983
<i>7</i>																

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

559 528 539

394 101 1663 -78.8

## NORMALS OF RADIOSONDE DATA

42410 GUWAHATI

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	567	998	567	28.7	33.8	21.2	567	24.9	567	259	0.0	1.1	0.79	0.52	1982	1986
1000	539	33	129	27.7	32.2	20.8	129	24.0	127	279	0.1	1.3	6.52	0.76	1982	1986
950	539	482	539	25.9	31.2	18.0	539	22.3	525	262	0.6	3.5	5.63	0.53	1987	1986
900	539	963	539	23.0	28.4	16.0	539	19.6	525	255	1.9	4.5	4.88	0.59	1987	1986
850	539	1460	539	20.1	25.2	13.8	539	16.4	525	240	3.1	5.3	4.73	0.53	1987	1986
800	539	1982	538	17.1	25.0	11.2	538	13.3	525	234	3.5	5.6	4.89	0.54	1986	1986
750	539	2526	538	14.0	20.0	9.0	537	10.0	525	228	3.1	5.6	6.30	0.59	1971	1978
700	539	3110	539	10.9	17.0	5.0	539	6.0	525	228	3.0	5.6	5.75	0.68	1971	1978
650	536	3722	536	7.6	13.8	3.0	532	1.9	510	232	2.8	5.6	7.49	0.74	1990	1977
600	535	4381	534	4.1	10.6	-4.1	527	-2.1	503	238	3.0	5.8	8.09	0.87	1990	1981
550	531	5085	531	0.3	7.2	-5.9	507	-5.9	492	242	3.4	5.8	11.61	0.90	1990	1981
500	529	5844	528	-3.7	4.2	-9.0	485	-10.4	486	242	3.1	5.6	12.26	0.96	1981	1977
450	522	6670	520	-8.3	6.8	-18.1	460	-15.6	473	242	3.0	5.8	16.86	1.06	1982	1986
400	516	7577	514	-13.8	-5.9	-23.0	418	-21.5	463	243	3.0	6.1	18.24	1.17	1990	1977
350	511	8579	510	-20.4	-12.3	-28.0	364	-28.3	452	254	3.0	6.7	22.40	1.44	1990	1976
300	506	9705	506	-28.6	-20.0	-37.0	305	-36.4	444	259	3.2	7.5	29.73	1.60	1973	1976
250	498	10985	498	-38.9	-30.1	-49.7	175	-45.3	430	265	3.2	8.0	38.28	1.89	1990	1981
200	474	12477	473	-51.8	-41.1	-68.0	22	-55.2	402	279	3.2	9.0	51.81	2.24	1988	1974
175	448	13329	446	-59.1	-48.0	-72.5	2	-59.5	370	301	2.4	9.3	59.64	2.31	1975	1981
150	422	14281	422	-66.9	-55.0	-79.5			349	348	1.9	9.2	68.91	2.38	1975	1981
125	379	15363	379	-74.3	-64.1	-84.0			322	049	2.9	8.2	79.15	2.15	1990	1978
100	344	16645	344	-79.2	-67.0	-88.9			294	083	5.2	8.1	87.66	1.98	1976	1982
80	285	17918	285	-75.6	-57.0	-87.1			246	097	7.1	8.7	89.42	3.45	1976	1983
70	250	18702	250	-70.9	-52.0	-80.1			214	094	7.5	8.7	92.60	3.37	1976	1981
60	221	19627	221	-66.0	-54.9	-76.3			192	086	9.5	10.0	109.36	2.94	1988	1979
50	192	20744	192	-61.8	-47.3	-74.0			165	089	11.5	11.9	123.90	2.71	1981	1974
40	144	22138	144	-57.9	-46.7	-68.0			116	092	12.4	12.8	110.53	2.76	1989	1974
30	91	23984	91	-53.9	-39.9	-65.0			68	084	12.7	13.2	158.38	4.32	1990	1974
25	64	25161	64	-51.9	-36.5	-61.3			41	083	13.5	14.2	181.50	3.31	1990	1979
20	31	26701	31	-49.3	-42.7	-58.1			20	083	15.8	16.5	276.96	3.89	1990	1979
15	6	28660	6	-48.1	-38.5	-54.1			2	082	23.9	24.0			1990	1988
10	1	31335	1	-46.9	-46.9	-46.9									1988	1988
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
529	546	514					334	102	1650	-80.3

### NORMALS OF RADIOSONDE DATA

42410 GUWAHATI

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	552	1002	552	27.5	32.0	19.0	552	22.7	552	054	0.2	0.8	1.76	0.81	1973	1977
1000	488	73	402	27.1	32.0	19.0	402	22.3	391	050	0.3	1.0	13.14	0.95	1973	1977
950	488	520	488	24.2	31.0	16.0	488	19.4	476	057	0.8	3.3	12.67	0.85	1975	1977
900	488	996	488	21.0	32.0	14.0	488	16.1	476	227	0.7	3.7	12.33	0.83	1975	1977
850	488	1489	487	18.0	29.0	12.0	486	11.9	476	231	2.1	4.4	11.50	0.98	1975	1977
800	488	2006	487	14.7	25.0	9.0	484	7.5	475	231	3.0	5.0	11.08	0.92	1975	1971
750	488	2545	486	11.4	20.0	-1.9	471	3.6	474	236	3.4	5.2	10.42	1.07	1975	1987
700	488	3122	487	8.0	16.0	1.4	445	-1.1	474	247	3.4	5.6	10.30	1.20	1975	1987
650	486	3729	484	4.6	12.0	-3.1	380	-4.5	455	261	4.8	6.7	13.76	1.35	1975	1987
600	480	4378	479	1.2	9.0	-7.0	315	-7.5	447	264	6.9	8.4	11.32	1.30	1975	1978
550	476	5077	475	-2.4	6.0	-11.9	280	-11.1	436	263	8.8	10.2	13.11	1.49	1972	1979
500	474	5825	473	-6.7	2.0	-17.9	251	-15.3	430	261	10.5	11.8	15.44	1.59	1975	1979
450	469	6644	469	-11.5	7.8	-21.9	226	-20.1	412	260	12.5	13.8	19.67	1.83	1981	1979
400	465	7537	465	-17.2	-7.0	-27.7	206	-26.0	408	260	14.5	16.0	25.34	2.11	1975	1979
350	454	8526	454	-23.9	-15.0	-35.1	177	-32.7	390	259	16.8	18.3	32.58	2.34	1975	1979
300	445	9637	445	-31.9	-22.5	-43.5	146	-40.6	376	257	18.9	20.4	42.50	2.50	1990	1979
250	438	10900	438	-41.5	-32.3	-53.1	87	-49.4	365	257	20.4	22.2	54.33	2.52	1990	1982
200	415	12378	415	-53.3	-44.1	-69.1	3	-57.0	344	257	21.1	22.9	69.84	2.64	1988	1982
175	383	13227	383	-60.0	-50.9	-74.5			314	257	20.0	21.8	76.80	2.54	1988	1982
150	355	14168	355	-67.3	-56.3	-79.5			300	257	18.0	19.9	86.07	2.32	1989	1982
125	317	15245	316	-74.0	-60.3	-83.1			273	256	14.3	16.5	94.47	1.97	1989	1982
100	287	16532	286	-77.7	-64.9	-88.5			251	255	8.3	11.4	107.69	2.10	1989	1979
80	241	17816	240	-74.4	-57.5	-84.1			215	229	2.5	7.3	116.20	4.59	1982	1979
70	216	18597	216	-70.1	-55.5	-79.1			198	192	1.2	7.0	117.42	3.73	1987	1979
60	196	19525	196	-65.3	-52.7	-78.0			176	110	1.8	6.3	117.68	3.40	1987	1973
50	162	20654	162	-60.9	-49.1	-72.0			146	089	4.2	6.7	124.42	3.17	1987	1971
40	117	22053	117	-57.4	-47.1	-68.0			102	099	3.6	5.9	128.25	2.09	1982	1971
30	64	23869	64	-53.9	-45.1	-65.0			52	084	4.0	6.5	173.42	3.49	1988	1977
25	48	25029	48	-52.3	-45.9	-64.0			39	080	4.5	6.9	209.64	4.08	1990	1977
20	26	26511	26	-50.3	-44.1	-58.3			18	041	1.5	4.5	197.62	2.25	1990	1982
15	14	28480	14	-48.3	-41.3	-52.9			7	032	2.0	6.1			1988	1983
10	1	30880	1	-48.5	-48.5	-48.5									1983	1983
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
478	583	461	2	161	1353	-71.2	278	106	1621	-78.8

## NORMALS OF RADIOSONDE DATA

42410 GUWAHATI

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	562	1006	562	24.4	29.0	17.4	562	19.2	562	057	0.5	0.6	1.19	0.89	1976	1988
1000	505	100	503	24.2	29.0	17.0	503	18.7	497	058	1.1	1.3	10.76	1.16	1976	1988
950	505	543	505	21.1	27.6	15.2	505	15.3	499	069	2.7	3.6	9.71	1.32	1982	1988
900	505	1013	505	17.9	25.0	11.2	505	11.8	499	097	1.4	3.2	8.19	1.11	1982	1982
850	505	1500	505	14.7	22.4	6.8	503	7.4	499	180	0.9	3.8	7.78	1.34	1987	1982
800	505	2010	505	11.3	22.0	4.0	496	3.1	500	215	2.1	4.3	7.73	1.56	1976	1982
750	505	2542	505	7.7	22.2	0.8	477	-1.2	499	229	3.1	5.3	9.52	1.64	1982	1982
700	505	3111	505	4.4	14.0	-5.0	416	-6.2	497	254	4.1	6.3	11.06	1.67	1987	1977
650	499	3710	499	1.5	12.4	-6.9	334	-10.2	478	266	7.3	9.1	16.02	1.48	1982	1982
600	495	4353	494	-1.2	8.0	-10.3	243	-13.7	465	269	11.5	12.8	15.85	1.74	1989	1982
550	492	5044	491	-4.8	4.4	-14.3	195	-18.2	453	269	14.8	15.8	21.19	2.03	1990	1982
500	491	5787	491	-9.4	-0.7	-19.1	174	-22.7	453	269	17.8	19.0	23.99	2.47	1990	1982
450	489	6594	489	-14.6	-5.3	-25.9	163	-27.2	440	268	20.8	22.1	33.41	2.58	1989	1982
400	485	7476	485	-20.7	-11.5	-31.0	153	-32.2	437	268	24.1	25.8	39.08	2.19	1989	1973
350	479	8453	479	-27.2	-18.0	-38.1	138	-38.6	412	266	28.5	30.5	35.88	2.01	1975	1983
300	474	9547	473	-34.8	-27.0	-46.1	129	-45.2	403	265	33.4	35.5	45.29	1.90	1975	1983
250	465	10796	464	-43.8	-34.9	-54.0	71	-52.9	388	263	37.5	40.0	54.81	1.92	1989	1978
200	441	12262	440	-54.6	-40.1	-66.1	1	-59.0	370	261	38.6	41.3	66.13	2.22	1989	1985
175	415	13104	414	-60.6	-46.3	-72.5			357	261	36.7	39.4	73.34	2.58	1989	1985
150	392	14050	391	-66.5	-55.7	-77.1			344	262	33.0	34.9	81.23	2.68	1989	1979
125	359	15134	359	-72.1	-61.1	-84.7			321	265	27.6	29.0	87.85	2.75	1989	1979
100	322	16438	322	-75.8	-64.1	-86.9			291	266	18.6	20.2	107.25	2.53	1989	1979
80	279	17731	279	-74.9	-63.0	-84.0			250	267	10.9	12.8	114.59	2.51	1973	1973
70	256	18509	256	-71.3	-59.1	-84.0			231	266	7.0	9.6	116.45	2.35	1985	1978
60	225	19431	225	-66.1	-53.1	-80.7			200	267	4.5	8.0	117.59	2.11	1990	1979
50	180	20561	180	-61.2	-48.1	-73.0			156	260	2.7	6.9	124.40	1.97	1985	1973
40	131	21966	131	-57.5	-44.3	-69.0			109	256	1.0	5.8	131.16	2.82	1985	1973
30	79	23830	79	-54.0	-46.1	-70.0			62	241	0.2	6.7	160.31	4.42	1989	1973
25	55	24986	55	-52.7	-46.9	-67.0			42	219	0.2	7.0	184.16	5.29	1988	1973
20	38	26521	38	-50.2	-44.7	-54.3			28	336	1.7	7.2	170.88	1.81	1988	1989
15	19	28404	19	-48.6	-44.1	-53.3			15	051	3.3	8.1			1990	1989
10	1	31199	1	-47.9	-47.9	-47.9			1	071	5.0	5.0			1990	1990
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE				
N	P	ALT	N	P	ALT	T	N	P	ALT	T	
474	621	409	7	151	1393	-70.9		306	101	1641	-77.1

## NORMALS OF RADIOSONDE DATA

42410 GUWAHATI

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	542	1008	542	20.9	27.0	14.2	542	15.1	542	056	0.3	0.4	1.13	0.92	1989	1983
<i>1000</i>	484	121	484	20.6	25.2	15.0	484	14.6	482	056	1.1	1.5	9.56	0.81	1981	1977
<i>950</i>	484	557	484	17.7	23.2	11.2	484	11.3	480	065	2.0	3.4	9.91	0.77	1979	1981
<i>900</i>	484	1022	484	14.4	20.8	8.0	483	7.9	481	097	0.6	3.0	10.13	0.84	1986	1982
<i>850</i>	484	1503	484	11.1	19.0	5.0	473	2.9	483	214	1.2	3.6	10.97	0.90	1972	1989
<i>800</i>	484	2006	484	7.8	15.0	0.8	447	-0.7	480	223	2.4	4.3	11.91	1.03	1972	1989
<i>750</i>	484	2532	484	4.6	14.4	-3.1	411	-4.9	480	240	3.3	5.6	12.52	1.03	1989	1989
<i>700</i>	484	3094	483	2.0	10.6	-5.3	348	-10.0	481	268	6.3	8.5	14.28	1.13	1988	1989
<i>650</i>	477	3691	476	-0.1	8.0	-8.1	257	-13.5	467	272	11.6	13.0	16.73	1.28	1973	1989
<i>600</i>	476	4328	475	-2.7	8.0	-13.1	192	-15.5	454	272	16.4	17.3	17.10	1.58	1971	1982
<i>550</i>	474	5015	473	-6.5	3.0	-18.3	151	-19.9	448	273	20.0	20.9	20.54	1.61	1971	1982
<i>500</i>	472	5752	471	-11.3	-2.7	-23.0	144	-23.9	444	273	22.9	23.8	21.58	1.70	1989	1977
<i>450</i>	469	6551	468	-16.8	-8.0	-30.0	135	-28.7	434	272	26.2	27.4	25.06	1.82	1975	1977
<i>400</i>	468	7428	468	-23.1	-11.3	-37.9	126	-34.0	423	272	30.5	31.8	31.40	2.01	1982	1986
<i>350</i>	462	8393	462	-29.9	-18.0	-47.0	116	-39.8	399	271	35.7	37.2	38.56	2.28	1975	1974
<i>300</i>	456	9477	455	-37.4	-27.0	-49.0	98	-46.8	390	269	41.0	42.7	46.53	2.45	1975	1977
<i>250</i>	443	10715	443	-45.7	-34.7	-57.1	55	-54.2	371	265	46.3	48.3	57.61	2.28	1986	1979
<i>200</i>	421	12169	420	-55.2	-42.7	-66.3	1	-55.0	351	263	47.5	49.7	67.69	2.07	1986	1985
<i>175</i>	384	13008	383	-60.2	-46.1	-72.3			328	261	45.2	46.9	71.15	2.54	1989	1981
<i>150</i>	364	13959	364	-65.0	-52.5	-77.3			315	262	41.5	43.2	75.98	2.67	1986	1981
<i>125</i>	336	15054	336	-69.7	-59.5	-84.1			295	263	35.2	36.2	77.00	2.59	1989	1981
<i>100</i>	299	16372	298	-73.4	-61.0	-83.1			252	266	27.7	28.9	80.61	2.50	1977	1983
<i>80</i>	269	17677	269	-73.5	-59.5	-86.0			233	269	17.9	19.2	86.12	2.84	1989	1975
<i>70</i>	242	18463	242	-71.8	-59.1	-81.0			211	269	13.6	15.3	89.46	3.17	1988	1973
<i>60</i>	217	19383	217	-68.0	-54.7	-78.5			183	266	9.7	12.2	96.43	3.01	1985	1983
<i>50</i>	172	20493	172	-63.1	-50.1	-77.0			144	265	6.0	9.8	95.33	2.71	1985	1977
<i>40</i>	129	21874	129	-59.1	-46.1	-75.0			106	254	5.1	8.9	115.13	3.22	1985	1977
<i>30</i>	84	23686	84	-55.8	-46.7	-69.0			68	250	4.5	8.9	122.01	3.23	1990	1977
<i>25</i>	59	24851	59	-54.2	-45.1	-64.1			44	276	3.7	9.1	144.99	3.31	1985	1984
<i>20</i>	33	26352	33	-51.7	-43.9	-61.5			26	294	3.0	8.7	192.82	3.40	1990	1984
<i>15</i>	16	28204	16	-49.8	-42.9	-55.1			10	279	4.6	11.2			1990	1984
<i>10</i>	1	31102	1	-47.1	-47.1	-47.1			1	250	13.0	13.0			1990	1990

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
479	657	362	40	179	1294	-63.3	286	101	1639	-74.9

NORMALS OF RADIOSONDE DATA

43128 HYDERABAD

JANUARY 1972-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	557	953	557	27.4	32.8	16.2	557	10.7	557	110	2.2	2.8	1.43	0.91	1981	1986
<i>1000</i>	528	117											14.64			
<i>950</i>	495	562	488	26.7	32.0	12.2	475	10.8	482	112	2.9	3.6	20.33	0.90	1973	1986
<i>900</i>	513	1044	513	21.3	31.0	11.0	490	7.5	508	106	2.8	3.7	14.00	0.99	1986	1978
<i>850</i>	513	1534	513	16.9	24.4	8.6	485	5.6	508	107	1.9	3.5	14.23	0.98	1989	1981
<i>800</i>	513	2047	512	12.9	23.4	5.2	450	2.1	508	085	0.9	3.5	15.47	1.02	1989	1986
<i>750</i>	513	2579	512	9.9	20.4	2.0	358	-2.1	508	313	0.7	4.2	16.90	1.29	1989	1975
<i>700</i>	512	3155	512	7.3	15.4	-6.3	245	-6.4	507	289	2.7	5.6	17.40	1.31	1989	1984
<i>650</i>	511	3761	510	4.7	12.8	-4.0	141	-10.8	506	284	4.7	7.0	13.98	1.16	1989	1973
<i>600</i>	508	4410	507	1.3	9.4	-6.3	82	-14.5	504	280	6.7	8.8	20.11	1.18	1989	1982
<i>550</i>	506	5107	505	-2.8	7.8	-12.0	55	-17.0	504	279	8.1	10.3	28.74	1.17	1986	1978
<i>500</i>	502	5854	502	-7.5	3.2	-16.0	45	-19.8	500	276	10.1	12.1	23.82	1.34	1989	1978
<i>450</i>	495	6665	495	-12.6	-2.3	-24.0	31	-23.4	493	275	12.3	14.3	24.56	1.44	1986	1978
<i>400</i>	491	7557	491	-18.4	-10.3	-27.7	20	-28.1	489	273	15.0	17.0	31.57	1.61	1988	1982
<i>350</i>	487	8543	487	-24.9	-16.0	-35.3	15	-34.0	483	272	17.9	20.1	32.87	1.73	1974	1981
<i>300</i>	475	9650	475	-32.6	-23.7	-43.0	6	-38.9	473	265	20.4	22.5	42.33	1.77	1989	1976
<i>250</i>	461	10910	461	-42.2	-32.3	-53.0	1	-42.7	459	258	22.3	24.5	50.67	1.81	1980	1972
<i>200</i>	440	12389	440	-53.5	-44.1	-67.0			437	254	22.3	24.5	59.56	1.89	1983	1972
<i>175</i>	405	13241	405	-59.8	-49.5	-71.0			399	254	22.1	24.5	68.05	1.82	1983	1972
<i>150</i>	382	14190	380	-66.6	-56.1	-77.3			376	257	20.0	22.3	72.10	1.69	1983	1980
<i>125</i>	351	15273	349	-72.6	-62.1	-85.1			342	260	15.6	18.3	76.99	1.88	1983	1980
<i>100</i>	327	16562	327	-78.1	-68.7	-87.1			318	261	10.6	13.3	84.22	1.82	1983	1979
<i>80</i>	280	17842	279	-75.7	-60.3	-86.9			269	265	5.9	9.4	93.15	1.97	1982	1982
<i>70</i>	258	18643	257	-71.8	-59.1	-82.1			247	271	4.3	8.3	99.75	2.11	1980	1982
<i>60</i>	222	19555	222	-67.1	-53.9	-77.3			211	276	2.8	7.1	117.95	2.29	1986	1982
<i>50</i>	195	20666	195	-62.0	-45.9	-80.0			184	264	3.3	7.2	131.27	3.05	1986	1977
<i>40</i>	123	22069	123	-57.6	-45.7	-70.7			113	235	0.8	7.1	150.08	3.07	1986	1980
<i>30</i>	78	23908	77	-53.7	-44.7	-66.1			74	094	3.2	7.1	149.10	2.55	1981	1980
<i>25</i>	44	25078	44	-51.6	-44.1	-62.9			40	069	3.3	7.5	140.91	2.30	1988	1980
<i>20</i>	22	26651	22	-48.9	-41.5	-60.1			22	088	4.0	7.0	192.93	4.97	1987	1988
<i>15</i>	14	28544	14	-47.3	-41.3	-58.7			13	066	4.9	7.5			1987	1988
<i>10</i>	6	31243	6	-43.9	-39.7	-52.5			6	062	3.6	6.7			1987	1984
<i>7</i>	2	33193	2	-50.1	-41.1	-59.1			2	048	11.1	12.0			1987	1984

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
506	584	462					303	096	1679	-80.0

**NORMALS OF RADIOSONDE DATA**

43128 HYDERABAD

FEBRUARY 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	537	952	537	30.5	36.2	21.0	537	10.4	537	120	1.8	3.0	1.62	1.25	1985	1975
1000	525	98											15.75			
950	423	556	408	29.9	35.8	21.0	400	10.2	402	117	2.6	3.8	16.18	1.42	1985	1978
900	504	1034	504	24.6	33.2	15.0	477	7.8	500	120	2.1	4.0	15.68	1.21	1989	1978
850	504	1530	504	20.0	28.6	9.4	469	6.0	501	125	1.4	3.8	15.56	1.20	1989	1984
800	503	2047	503	15.5	26.0	6.4	462	3.9	499	158	0.7	3.9	16.75	1.19	1976	1984
750	503	2581	503	11.1	23.4	3.0	433	0.9	499	262	1.3	4.5	16.03	1.21	1989	1984
700	502	3160	501	7.4	18.4	-6.0	376	-3.7	499	279	3.1	5.8	18.78	1.27	1989	1976
650	499	3764	498	4.4	15.4	-6.3	247	-9.0	493	279	5.2	7.3	16.85	1.33	1989	1986
600	495	4413	494	1.1	11.4	-6.0	136	-12.7	490	277	7.3	9.3	21.71	1.29	1985	1978
550	491	5113	490	-2.8	5.4	-10.0	88	-16.7	486	276	9.0	10.6	29.35	1.28	1985	1978
500	486	5858	486	-7.2	4.6	-14.7	59	-21.5	481	275	11.2	12.8	26.20	1.35	1988	1980
450	481	6673	481	-12.2	-4.3	-19.9	29	-24.7	476	273	13.4	15.4	29.90	1.34	1985	1980
400	475	7563	473	-17.7	-9.5	-26.1	21	-29.1	470	273	15.9	18.0	32.35	1.37	1990	1989
350	465	8553	463	-24.0	-13.5	-33.1	14	-34.7	461	271	19.2	21.5	33.50	1.55	1990	1989
300	459	9662	459	-31.6	-21.5	-41.7	7	-43.3	455	266	21.7	24.2	41.39	1.81	1990	1982
250	449	10929	449	-41.0	-31.3	-52.1			445	262	22.2	24.8	50.09	1.98	1990	1982
200	430	12414	430	-52.4	-43.1	-71.1			425	260	22.2	25.2	64.27	2.12	1990	1989
175	401	13269	401	-58.7	-49.5	-68.7			393	261	21.0	24.0	72.90	2.36	1980	1979
150	383	14225	383	-65.6	-54.5	-75.5			379	262	19.1	22.1	80.81	2.30	1990	1979
125	348	15317	348	-71.7	-59.1	-81.9			344	266	15.7	18.1	95.50	2.93	1983	1982
100	326	16614	326	-77.4	-63.7	-86.1			320	266	11.2	13.6	109.39	2.54	1990	1986
80	282	17896	282	-74.7	-58.5	-86.1			267	266	8.4	10.6	119.19	2.41	1980	1979
70	261	18691	261	-70.8	-56.1	-84.7			244	269	6.5	9.0	141.64	2.41	1980	1979
60	233	19606	233	-66.4	-53.3	-80.1			213	268	5.2	8.3	143.91	2.59	1980	1979
50	202	20731	202	-61.1	-49.1	-72.1			185	273	3.2	7.7	165.13	2.45	1989	1983
40	136	22146	136	-57.3	-46.5	-67.9			122	229	1.1	7.3	192.13	2.08	1980	1983
30	91	24030	91	-52.6	-42.1	-62.1			79	099	1.6	7.6	205.70	1.89	1989	1983
25	64	25197	64	-50.1	-38.1	-60.1			57	116	0.6	7.9	195.25	2.43	1990	1983
20	48	26714	48	-47.0	-31.7	-58.3			42	089	1.0	8.2	291.04	3.06	1990	1987
15	26	28668	26	-43.7	-32.7	-51.5			23	283	2.6	7.4	330.51	3.91	1990	1987
10	11	31304	11	-40.8	-33.1	-48.1			9	286	1.2	8.0			1985	1984
7	4	33800	4	-39.3	-30.3	-46.1			3	318	3.5	11.3			1990	1984

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

491 586 460

299 096 1686 -79.4

## NORMALS OF RADIOSONDE DATA

43128 HYDERABAD

MARCH 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN	
SURFACE	589	950	589	34.1	39.0	19.0	589	9.8	589	120	1.5	2.8	1.36	0.92	1975	1975	
1000	577	78											15.38				
950	349	550	297	33.1	38.2	21.8	294	9.5	291	117	2.4	3.7	13.84	1.19	1983	1986	
900	562	1026	562	28.4	38.0	18.0	544	6.8	552	122	1.9	3.8	14.92	1.18	1976	1975	
850	562	1528	562	23.7	32.0	14.2	532	5.1	553	121	1.5	3.8	14.75	1.15	1976	1979	
800	562	2052	562	19.1	28.2	10.0	528	3.4	552	146	0.9	3.7	15.03	1.12	1983	1979	
750	562	2588	562	14.2	24.0	5.0	520	1.2	552	244	0.5	4.0	15.23	1.12	1987	1975	
700	562	3177	562	9.4	18.6	0.0	507	-1.7	553	285	1.6	4.8	16.26	1.06	1990	1975	
650	558	3779	557	4.9	14.8	-5.1	435	-5.6	547	296	2.8	5.9	11.44	1.14	1987	1987	
600	554	4434	553	1.1	12.0	-7.0	304	-10.8	545	293	4.4	7.1	20.20	1.21	1990	1975	
550	547	5130	546	-2.6	7.4	-11.9	175	-15.5	538	266	5.7	8.2	26.24	1.25	1990	1989	
500	541	5880	540	-7.0	2.4	-15.5	95	-19.1	534	280	7.4	9.7	24.42	1.25	1990	1979	
450	534	6693	533	-12.2	-2.5	-22.0	60	-23.9	527	278	9.3	11.5	26.54	1.48	1990	1974	
400	527	7587	527	-18.1	-6.5	-27.0	47	-28.9	518	277	11.8	14.1	33.49	1.69	1988	1977	
350	519	8572	519	-24.5	-12.5	-34.3	40	-34.0	511	274	14.9	17.5	32.59	1.83	1990	1981	
300	513	9682	512	-32.0	-20.9	-43.0	27	-39.7	506	268	18.2	20.9	45.54	1.91	1990	1977	
250	502	10950	501	-41.1	-30.9	-51.0	7	-47.2	492	263	20.3	23.2	56.59	1.90	1990	1972	
200	490	12434	490	-52.2	-42.3	-74.0				481	261	20.8	23.4	63.46	1.88	1990	1975
175	449	13286	449	-58.4	-49.1	-69.0				433	262	20.0	22.3	71.65	2.30	1990	1972
150	428	14242	428	-65.3	-54.1	-76.1				415	263	18.5	20.8	78.66	2.08	1990	1982
125	380	15334	380	-71.4	-55.3	-84.1				367	266	14.8	17.3	83.12	1.99	1989	1982
100	351	16632	351	-77.4	-67.5	-87.5				339	268	9.6	12.5	90.27	2.07	1989	1979
80	297	17913	297	-75.0	-64.9	-88.1				282	278	5.2	8.9	100.98	2.19	1990	1979
70	263	18717	263	-71.2	-59.7	-82.7				245	278	4.4	8.2	113.02	2.32	1989	1979
60	219	19627	219	-66.8	-56.1	-78.0				204	275	3.5	7.4	123.81	2.78	1983	1972
50	194	20754	194	-61.1	-48.9	-72.0				178	278	1.9	7.4	142.25	2.70	1981	1978
40	114	22159	114	-56.7	-45.1	-66.9				103	107	0.9	7.1	184.12	2.18	1990	1982
30	74	23991	74	-52.1	-42.1	-61.7				64	104	3.5	8.1	211.74	2.90	1981	1982
25	56	25157	56	-49.4	-38.7	-60.1				48	089	5.0	7.6	136.63	2.49	1982	1984
20	30	26678	30	-46.1	-36.7	-58.5				26	095	6.0	9.1	168.85	3.95	1981	1984
15	19	28563	19	-44.2	-36.1	-55.9				18	078	4.6	9.0			1983	1984
10	11	31192	11	-42.2	-37.1	-51.5				11	220	2.0	8.3			1987	1984
7	4	33526	4	-41.4	-40.1	-43.1				4	286	4.6	6.9			1985	1985

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

552 584 465

314 096 1688 -79.3



## NORMALS OF RADIOSONDE DATA

43128 HYDERABAD

APRIL 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	570	948	570	36.6	44.0	18.0	570	11.6	570	127	0.9	2.7	1.45	0.96	1975	1988
<i>1000</i>	552	49											15.69			
<i>950</i>	171	518	98	35.3	39.6	23.8	97	12.0	98	121	2.5	3.8	35.27	2.28	1990	1981
<i>900</i>	520	1006	520	31.2	39.0	22.0	499	8.5	511	113	1.1	3.6	15.50	0.81	1981	1978
<i>850</i>	520	1513	520	26.5	35.0	18.0	486	6.6	511	096	0.8	3.4	15.51	0.74	1974	1975
<i>800</i>	520	2041	519	21.7	29.2	12.0	492	4.8	510	076	0.5	3.3	15.13	0.71	1990	1976
<i>750</i>	520	2585	519	16.6	25.6	9.4	490	2.6	510	348	0.5	3.6	20.00	0.81	1990	1987
<i>700</i>	520	3175	519	11.6	20.8	3.0	489	0.2	510	326	1.0	4.1	15.82	0.94	1990	1975
<i>650</i>	518	3783	516	6.6	16.0	-3.1	468	-3.1	508	320	1.8	4.8	12.68	1.02	1978	1986
<i>600</i>	511	4440	510	2.1	11.2	-4.5	423	-8.1	504	309	2.9	5.6	18.78	1.08	1988	1984
<i>550</i>	504	5142	504	-1.9	6.2	-16.0	317	-13.1	496	298	3.7	6.1	24.88	1.05	1988	1972
<i>500</i>	499	5888	498	-6.1	2.2	-13.0	203	-17.8	493	294	4.9	7.1	22.45	1.07	1990	1972
<i>450</i>	493	6710	492	-10.9	-3.1	-20.0	148	-22.4	485	285	6.5	8.8	26.10	1.16	1990	1977
<i>400</i>	488	7604	488	-16.7	-7.5	-24.0	100	-26.9	481	278	8.3	10.7	29.74	1.27	1990	1976
<i>350</i>	484	8596	483	-23.2	-13.1	-32.1	70	-32.5	475	275	10.4	13.0	29.16	1.51	1985	1979
<i>300</i>	478	9710	477	-30.9	-21.3	-38.0	42	-38.9	470	267	12.9	15.9	42.66	1.76	1990	1972
<i>250</i>	465	10982	464	-40.3	-29.1	-50.0	5	-44.6	457	261	15.0	18.1	52.01	2.09	1988	1972
<i>200</i>	452	12470	451	-51.6	-41.3	-61.1			443	255	16.2	18.8	61.88	2.20	1985	1982
<i>175</i>	420	13323	419	-58.0	-49.0	-68.1			407	252	15.6	17.9	67.14	2.19	1978	1989
<i>150</i>	403	14279	403	-65.0	-56.0	-75.5			394	254	13.4	15.6	75.87	2.03	1978	1983
<i>125</i>	367	15369	367	-71.3	-60.5	-81.9			356	256	8.5	12.0	81.97	2.10	1990	1983
<i>100</i>	338	16670	337	-77.2	-60.3	-88.1			327	252	2.9	9.1	91.86	1.99	1979	1983
<i>80</i>	293	17955	293	-75.0	-62.1	-86.1			280	082	1.0	7.0	102.00	2.40	1983	1983
<i>70</i>	274	18754	273	-71.2	-58.1	-83.7			261	077	2.1	7.0	112.61	2.82	1980	1979
<i>60</i>	243	19664	242	-66.2	-56.1	-78.0			233	076	1.8	6.6	122.56	3.35	1986	1976
<i>50</i>	214	20779	214	-59.9	-49.5	-75.0			205	085	2.7	6.6	139.90	3.20	1979	1976
<i>40</i>	136	22187	136	-55.4	-46.1	-68.0			127	093	2.6	6.9	159.84	2.86	1979	1978
<i>30</i>	86	24058	86	-49.3	-40.0	-60.3			81	097	4.9	7.6	174.65	2.62	1978	1983
<i>25</i>	58	25239	58	-46.9	-37.0	-58.1			54	083	7.0	10.0	165.04	2.93	1978	1983
<i>20</i>	39	26756	39	-44.2	-35.3	-55.5			35	082	7.6	9.5	271.20	3.61	1987	1983
<i>15</i>	24	28650	24	-42.3	-35.1	-51.1			23	086	7.5	9.2	315.60	3.67	1986	1985
<i>10</i>	14	31447	14	-37.7	-31.7	-48.1			14	097	9.2	10.5			1986	1985
<i>7</i>	5	33899	5	-37.6	-31.1	-45.3			5	092	5.8	8.8			1984	1985

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

509 573 481

311 094 1701 -79.4

## NORMALS OF RADIOSONDE DATA

43128 HYDERABAD

MAY 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	588	945	588	37.2	43.0	21.2	588	14.2	588	306	0.5	3.2	1.95	2.10	1973	1979
<i>1000</i>	562	26											20.63			
<i>950</i>	141	488	30	33.5	40.0	24.4	30	15.6	27	104	2.5	4.2	53.61	0.69	1983	1983
<i>900</i>	535	984	534	31.9	41.8	19.2	527	10.0	528	338	1.2	4.4	19.20	1.87	1989	1979
<i>850</i>	535	1491	534	27.2	35.0	15.6	517	7.6	528	342	2.0	4.5	19.65	1.66	1980	1990
<i>800</i>	535	2021	534	22.7	34.4	13.2	515	6.0	528	343	2.5	4.6	19.03	1.50	1984	1990
<i>750</i>	535	2567	534	17.8	27.0	4.8	511	3.9	528	343	2.9	5.0	20.68	1.24	1974	1988
<i>700</i>	535	3159	535	12.7	22.2	4.0	506	1.3	528	349	3.0	5.3	19.65	1.16	1983	1976
<i>650</i>	531	3768	531	7.6	17.8	-7.0	497	-2.1	523	349	3.1	5.7	14.08	1.12	1990	1974
<i>600</i>	528	4427	528	2.9	14.8	-7.7	473	-6.5	521	344	3.0	5.9	20.75	1.03	1990	1980
<i>550</i>	524	5128	524	-1.3	8.2	-15.9	408	-10.7	517	345	3.2	6.0	28.44	1.17	1990	1983
<i>500</i>	522	5880	522	-5.4	3.2	-13.0	308	-14.8	514	348	3.1	6.4	23.78	1.22	1990	1976
<i>450</i>	506	6700	506	-9.8	9.0	-19.0	206	-19.6	496	337	2.9	7.1	26.98	1.19	1974	1975
<i>400</i>	494	7604	494	-15.1	-5.5	-23.1	139	-24.2	486	314	2.9	7.7	30.35	1.30	1989	1981
<i>350</i>	481	8602	481	-21.4	-8.1	-29.3	91	-30.3	471	278	3.2	8.3	31.93	1.39	1989	1981
<i>300</i>	471	9727	471	-29.0	-17.5	-43.0	59	-36.9	462	254	4.3	8.9	40.24	1.55	1989	1974
<i>250</i>	464	11007	464	-38.6	-28.5	-49.0	10	-43.8	454	238	5.0	9.6	49.06	1.91	1989	1974
<i>200</i>	459	12505	459	-50.6	-41.5	-64.0			446	216	5.1	10.4	63.82	2.17	1989	1977
<i>175</i>	428	13365	428	-57.5	-48.0	-68.7			414	202	5.1	10.8	72.67	2.35	1974	1982
<i>150</i>	413	14324	413	-65.2	-56.1	-75.0			396	170	4.2	10.4	84.71	2.51	1989	1977
<i>125</i>	373	15413	373	-72.3	-63.9	-84.1			355	129	5.2	10.3	90.10	2.88	1990	1987
<i>100</i>	344	16706	344	-78.6	-67.3	-89.5			328	104	8.3	10.7	107.28	2.42	1989	1982
<i>80</i>	296	17987	296	-75.7	-64.5	-87.1			284	097	9.7	10.8	125.48	2.97	1986	1983
<i>70</i>	274	18786	274	-71.1	-59.5	-86.0			262	094	9.9	10.9	145.75	3.31	1986	1978
<i>60</i>	240	19691	240	-65.9	-52.1	-82.0			229	094	9.3	10.2	146.95	2.95	1986	1978
<i>50</i>	212	20828	212	-59.9	-49.7	-79.0			198	096	8.9	10.0	154.74	2.46	1989	1978
<i>40</i>	128	22251	128	-54.8	-38.7	-68.1			119	089	9.9	10.9	142.93	1.91	1986	1983
<i>30</i>	82	24108	82	-49.8	-38.7	-62.5			76	088	11.8	12.5	188.63	2.35	1989	1983
<i>25</i>	53	25276	53	-47.1	-37.1	-59.1			50	091	11.6	12.5	215.40	2.98	1989	1983
<i>20</i>	32	26775	32	-43.3	-35.5	-54.1			31	083	14.8	15.5	233.13	2.79	1990	1983
<i>15</i>	18	28668	18	-40.4	-35.1	-48.9			18	092	17.3	17.9			1981	1983
<i>10</i>	8	31379	8	-37.3	-33.7	-41.9			8	093	13.6	14.0			1987	1987
<i>7</i>	2	33741	2	-37.4	-36.1	-38.7			2	089	11.9	12.5			1987	1987

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

521 564 492

318 096 1697 -80.7

## NORMALS OF RADIOSONDE DATA

43128 HYDERABAD

JUNE 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	570	944	570	32.4	42.0	22.0	570	19.3	570	263	4.1	5.0	1.52	1.30	1972	1975
<i>1000</i>	538	19											15.68			
<i>950</i>	82	462	2	31.4	32.6	30.2	2	20.2	2	267	4.5	4.5	57.17		1989	1985
<i>900</i>	522	964	522	28.1	39.0	18.0	517	16.6	518	268	6.0	7.1	14.52	1.28	1972	1989
<i>850</i>	522	1467	522	23.9	32.8	13.0	515	14.4	518	275	6.6	7.7	14.17	1.07	1986	1978
<i>800</i>	521	1993	520	19.8	30.0	11.0	512	12.0	517	279	6.9	8.1	13.97	0.99	1972	1978
<i>750</i>	521	2536	520	15.7	25.0	8.0	509	9.3	516	283	6.6	8.1	17.89	0.97	1972	1978
<i>700</i>	521	3124	521	11.7	21.0	0.2	503	5.5	517	289	5.6	7.7	15.59	1.00	1988	1985
<i>650</i>	514	3736	513	7.8	17.4	-5.5	486	1.4	509	293	4.6	7.3	13.02	0.99	1968	1981
<i>600</i>	508	4396	506	3.9	11.8	-4.3	482	-2.9	503	296	3.6	7.0	19.69	1.09	1980	1983
<i>550</i>	500	5107	498	0.0	6.2	-8.0	459	-7.0	492	296	3.5	6.7	28.49	1.12	1990	1973
<i>500</i>	495	5855	494	-3.9	2.0	-11.5	417	-11.5	487	298	3.0	6.0	22.65	1.12	1983	1989
<i>450</i>	487	6684	487	-8.2	-1.5	-17.1	362	-16.6	480	311	2.2	5.6	26.36	1.21	1990	1984
<i>400</i>	483	7589	483	-13.3	-6.1	-25.9	298	-21.6	476	358	1.6	5.1	30.22	1.38	1987	1984
<i>350</i>	469	8596	469	-19.7	-10.9	-29.1	229	-28.1	458	050	2.8	5.8	34.77	1.58	1989	1989
<i>300</i>	464	9726	463	-27.4	-20.1	-38.0	164	-35.6	453	070	4.9	6.9	41.89	1.78	1982	1972
<i>250</i>	458	11014	457	-37.2	-29.1	-48.0	59	-43.6	448	081	7.9	9.6	50.66	2.09	1980	1977
<i>200</i>	446	12522	446	-49.6	-40.5	-63.1			436	086	12.5	13.8	62.07	2.36	1988	1986
<i>175</i>	411	13385	411	-56.9	-47.9	-70.1			404	087	15.1	16.3	67.27	2.38	1990	1986
<i>150</i>	391	14345	390	-65.1	-55.7	-77.3			384	088	19.2	20.2	77.92	2.35	1980	1986
<i>125</i>	356	15430	356	-72.9	-60.9	-84.0			344	087	22.2	23.4	92.20	2.72	1980	1972
<i>100</i>	331	16719	331	-79.5	-66.1	-89.0			325	086	23.7	24.3	114.19	2.57	1987	1972
<i>80</i>	292	18002	292	-76.5	-64.5	-90.0			279	086	21.4	22.0	128.96	3.31	1983	1977
<i>70</i>	264	18798	264	-71.9	-59.3	-86.0			250	089	19.3	20.0	140.25	2.81	1985	1977
<i>60</i>	234	19713	234	-66.2	-55.1	-81.0			225	095	17.5	17.9	159.94	2.85	1986	1978
<i>50</i>	199	20847	199	-59.7	-47.1	-76.0			188	094	16.6	17.1	200.54	2.90	1982	1978
<i>40</i>	117	22256	117	-54.4	-41.5	-69.0			109	089	17.2	17.7	283.96	4.03	1990	1978
<i>30</i>	82	24088	82	-49.5	-39.1	-64.0			74	088	19.8	20.2	330.42	5.27	1986	1978
<i>25</i>	48	25306	48	-46.4	-38.3	-57.7			43	088	20.0	20.4	282.72	5.05	1979	1983
<i>20</i>	16	26881	16	-45.3	-36.7	-54.1			13	086	18.6	18.8			1990	1983
<i>15</i>	8	28614	8	-44.1	-35.7	-49.9			5	079	18.6	18.8			1990	1987
<i>10</i>	3	31116	3	-41.4	-37.3	-44.3			3	081	25.3	25.3			1986	1987
<i>7</i>	1	33090	1	-39.5	-39.5	-39.5			1	096	22.0	22.0			1987	1987

**FREEZING LEVEL**

N P ALT

498 550 510

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

314 097 1694 -81.9

## NORMALS OF RADIOSONDE DATA

43128 HYDERABAD

JULY 1972-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	944	589	29.2	34.8	21.4	589	20.7	589	265	4.7	5.4	1.96	0.85	1982	1987
<i>1000</i>	569	31											18.21			
<i>950</i>	91	469	4	31.5	33.2	30.4	4	18.4	4	261	5.4	5.5	59.16		1986	1989
<i>900</i>	539	968	539	25.3	32.8	17.0	534	18.4	527	269	7.1	7.8	18.50	0.76	1979	1974
<i>850</i>	539	1466	539	21.4	32.0	13.0	534	16.2	528	274	8.7	9.3	17.60	0.65	1974	1976
<i>800</i>	539	1988	539	17.8	25.4	9.0	533	13.7	527	277	9.9	10.4	18.10	0.64	1983	1976
<i>750</i>	538	2531	538	14.3	20.0	5.0	529	10.4	526	280	10.1	10.8	20.52	0.70	1975	1976
<i>700</i>	538	3115	538	10.8	17.6	3.0	529	6.4	526	281	9.4	10.2	18.98	0.77	1988	1976
<i>650</i>	531	3724	529	7.5	18.0	0.0	517	2.0	516	281	7.9	9.0	15.63	0.75	1973	1986
<i>600</i>	528	4383	524	4.1	11.2	-2.3	505	-2.1	510	282	6.3	7.9	20.16	0.82	1988	1985
<i>550</i>	527	5090	524	0.4	7.4	-6.5	494	-6.5	509	283	5.1	7.1	28.57	0.94	1988	1986
<i>500</i>	522	5845	519	-3.6	4.0	-10.7	465	-10.8	506	286	3.5	6.2	22.70	0.96	1988	1986
<i>450</i>	512	6672	510	-8.0	5.0	-17.1	436	-15.5	491	302	1.7	5.5	27.65	1.05	1976	1989
<i>400</i>	501	7582	500	-13.2	-5.7	-22.5	396	-21.0	483	046	1.4	5.5	30.40	1.24	1988	1986
<i>350</i>	491	8586	490	-19.7	-11.9	-30.1	340	-27.6	471	074	4.8	7.0	33.52	1.40	1987	1986
<i>300</i>	483	9718	483	-27.5	-19.5	-38.3	257	-35.1	466	080	8.7	9.7	39.79	1.47	1990	1985
<i>250</i>	466	11007	465	-37.3	-27.5	-46.1	107	-43.9	450	085	13.6	14.3	50.44	1.75	1990	1986
<i>200</i>	455	12512	455	-49.6	-39.5	-62.0	1	-50.3	442	085	20.3	21.0	61.13	1.87	1990	1976
<i>175</i>	425	13377	425	-56.8	-46.1	-69.0			410	084	23.7	24.2	69.83	2.01	1990	1976
<i>150</i>	410	14337	410	-64.9	-54.9	-77.0			397	083	28.3	29.0	79.43	2.07	1990	1976
<i>125</i>	363	15430	361	-72.6	-60.5	-87.1			346	083	31.8	32.5	90.85	2.53	1988	1981
<i>100</i>	335	16724	335	-78.0	-66.1	-89.0			318	085	32.5	33.0	101.84	2.51	1986	1977
<i>80</i>	281	18013	280	-72.9	-59.3	-85.0			257	087	26.9	27.5	118.15	2.94	1990	1977
<i>70</i>	258	18821	257	-68.6	-53.9	-80.0			233	088	23.3	23.9	137.45	3.34	1986	1977
<i>60</i>	222	19741	222	-64.1	-51.1	-76.0			199	092	21.7	22.4	149.65	3.90	1989	1972
<i>50</i>	192	20871	192	-58.9	-47.1	-71.0			170	094	21.0	21.7	155.01	3.20	1986	1972
<i>40</i>	110	22294	110	-54.0	-45.9	-63.0			96	092	20.3	20.7	164.98	3.04	1986	1978
<i>30</i>	67	24169	67	-49.0	-39.5	-57.5			56	089	21.9	22.5	111.86	2.36	1989	1985
<i>25</i>	39	25347	39	-47.0	-36.9	-55.3			28	091	21.8	22.3	114.47	3.28	1989	1985
<i>20</i>	26	26832	26	-44.5	-34.1	-54.5			17	085	19.4	20.2	180.28	3.71	1989	1982
<i>15</i>	15	28729	15	-41.8	-35.5	-50.3			10	083	22.9	23.2			1982	1985
<i>10</i>	7	31365	7	-38.4	-32.7	-47.7			5	094	25.0	25.8			1986	1985
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

521 544 516

318 102 1661 -80.0

## NORMALS OF RADIOSONDE DATA

43128 HYDERABAD

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	607	945	607	28.3	34.0	22.0	607	20.8	607	272	4.8	5.4	1.60	0.81	1987	1974
1000	593	34											15.34			
950	143	481	1	32.0	32.0	32.0	1	18.6	1	316	1.9	2.0	39.78		1986	1986
900	557	968	555	24.5	32.0	18.0	552	18.5	547	277	7.3	8.0	15.60	0.67	1976	1977
850	557	1465	557	20.6	27.0	15.0	553	15.8	546	281	8.9	9.5	15.97	0.61	1974	1977
800	558	1986	556	17.0	29.0	11.0	552	13.2	547	283	10.2	10.8	16.34	0.54	1974	1975
750	558	2530	556	13.8	22.2	7.6	552	10.0	546	284	10.5	11.1	22.38	0.69	1990	1986
700	558	3111	557	10.6	18.0	4.2	553	5.9	545	285	9.3	10.1	17.78	0.78	1990	1986
650	555	3724	551	7.5	16.0	1.0	539	1.6	541	287	7.7	8.7	20.09	0.80	1986	1986
600	550	4380	549	4.0	11.6	-4.5	532	-2.7	535	287	6.1	7.6	20.23	0.86	1990	1980
550	543	5089	540	0.3	7.8	-7.0	522	-7.0	530	287	5.0	6.8	30.45	0.89	1990	1975
500	537	5842	535	-3.7	4.0	-11.0	490	-11.4	524	288	3.4	5.9	23.60	1.01	1990	1975
450	530	6669	526	-8.1	6.8	-16.0	455	-16.0	518	313	1.8	5.6	29.02	1.12	1989	1975
400	527	7577	526	-13.5	-5.7	-23.0	413	-21.6	515	032	1.6	5.9	28.92	1.32	1990	1974
350	518	8581	514	-20.0	-11.3	-29.0	348	-28.1	505	073	3.7	6.4	33.65	1.45	1990	1973
300	512	9711	509	-27.9	-17.7	-36.3	246	-35.9	497	083	7.3	8.7	41.40	1.76	1990	1979
250	499	10998	496	-37.7	-27.7	-50.0	90	-44.1	483	086	12.0	12.8	49.96	2.06	1990	1974
200	486	12500	485	-50.2	-37.7	-61.3	4	-52.8	470	084	18.3	19.0	66.40	2.27	1990	1981
175	453	13360	449	-57.5	-44.5	-69.0	2	-59.8	434	082	21.2	22.1	74.11	2.37	1990	1974
150	431	14315	431	-65.7	-51.5	-76.0			412	081	24.9	25.8	84.01	2.34	1990	1975
125	384	15401	383	-73.4	-58.5	-85.1			359	081	28.7	29.7	94.69	2.47	1990	1989
100	361	16690	360	-78.2	-64.5	-89.0			331	084	29.3	29.9	105.12	2.67	1985	1977
80	303	17991	302	-72.5	-57.1	-88.0			273	087	24.1	24.4	119.86	2.93	1990	1977
70	270	18798	270	-68.5	-53.9	-80.1			242	091	21.6	22.1	124.88	2.98	1990	1989
60	231	19716	231	-64.3	-50.7	-74.1			210	089	20.7	21.0	137.23	3.06	1985	1989
50	189	20850	189	-59.6	-46.9	-70.0			167	091	20.3	20.8	157.04	3.51	1985	1977
40	89	22290	89	-55.4	-44.7	-63.7			73	091	20.5	21.0	161.85	2.91	1985	1984
30	39	24186	39	-49.8	-41.3	-57.9			27	088	19.5	20.0	205.67	3.95	1985	1982
25	29	25380	29	-47.8	-38.0	-56.9			19	086	21.7	22.1	238.35	5.08	1976	1984
20	13	26900	13	-45.9	-40.1	-55.9			7	088	24.1	24.9			1985	1984
15	11	28798	11	-44.8	-38.1	-54.3			5	094	21.1	21.4			1985	1984
10	8	31510	8	-41.5	-35.9	-52.5			3	097	25.6	26.0			1982	1984
7	3	34097	3	-38.9	-36.1	-40.5			2	106	11.8	12.0			1985	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

540 545 514

342 105 1645 -80.3

# NORMALS OF RADIOSONDE DATA

43128 HYDERABAD

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	947	600	28.9	34.0	22.0	600	20.3	600	292	1.6	3.7	1.63	0.87	1986	1971
<i>1000</i>	583	51											15.34			
<i>950</i>	238	495	41	29.5	33.4	22.2	41	19.4	39	078	1.0	3.0	44.67	1.72	1987	1986
<i>900</i>	572	985	572	24.6	32.6	18.2	565	17.1	558	303	2.7	5.2	15.54	0.81	1990	1981
<i>850</i>	572	1483	572	20.7	31.8	15.6	567	14.4	558	301	3.4	6.0	15.15	0.74	1990	1983
<i>800</i>	572	2003	572	17.1	30.0	10.6	564	11.7	558	299	3.8	6.4	16.41	0.77	1990	1986
<i>750</i>	572	2545	572	13.4	26.6	6.4	564	7.9	558	299	3.7	6.6	22.49	0.85	1990	1989
<i>700</i>	572	3126	572	10.0	21.8	3.0	560	3.6	558	300	3.2	6.2	18.11	0.85	1990	1971
<i>650</i>	569	3738	569	6.7	18.4	-5.3	544	-0.5	550	295	2.6	5.7	18.26	0.96	1990	1987
<i>600</i>	567	4391	565	3.3	13.8	-2.5	515	-4.5	541	288	1.8	5.3	19.86	0.92	1990	1979
<i>550</i>	560	5100	559	-0.4	11.8	-6.5	488	-8.8	533	275	1.1	5.0	29.98	0.94	1990	1979
<i>500</i>	551	5850	550	-4.5	5.6	-12.0	442	-13.2	527	046	0.1	4.8	23.92	1.09	1990	1973
<i>450</i>	543	6677	541	-9.1	10.0	-15.9	401	-18.1	517	082	1.0	4.7	28.45	1.21	1988	1979
<i>400</i>	539	7578	536	-14.6	-6.1	-24.1	341	-23.7	513	084	2.1	4.9	30.43	1.36	1990	1986
<i>350</i>	530	8580	528	-21.2	-11.3	-31.5	267	-29.7	498	083	3.9	5.7	34.41	1.56	1990	1986
<i>300</i>	526	9701	525	-29.2	-17.7	-39.1	180	-37.4	494	087	6.1	7.3	40.93	1.76	1990	1986
<i>250</i>	512	10980	511	-39.1	-27.3	-48.0	52	-45.9	476	091	9.2	10.0	48.60	1.83	1990	1977
<i>200</i>	496	12472	496	-51.8	-42.1	-63.0			464	094	13.6	14.5	60.49	1.98	1990	1971
<i>175</i>	460	13324	460	-59.1	-46.9	-69.0			432	092	16.3	17.2	68.53	2.09	1990	1971
<i>150</i>	436	14273	436	-67.3	-54.3	-78.0			411	092	19.4	20.3	76.39	2.10	1990	1972
<i>125</i>	397	15344	397	-74.8	-66.0	-85.0			377	091	21.4	22.3	86.15	2.39	1975	1976
<i>100</i>	368	16620	368	-79.3	-65.3	-89.1			348	089	20.4	20.9	98.82	2.48	1985	1981
<i>80</i>	309	17907	309	-73.9	-58.1	-85.5			287	089	17.1	17.6	109.64	2.97	1985	1989
<i>70</i>	276	18715	276	-69.6	-50.1	-82.0			261	093	16.4	16.9	117.25	3.06	1985	1972
<i>60</i>	216	19634	216	-65.5	-50.1	-77.0			196	096	15.4	15.8	112.71	2.54	1985	1972
<i>50</i>	188	20761	188	-60.6	-47.5	-72.0			173	096	14.7	15.2	127.85	3.57	1985	1975
<i>40</i>	101	22175	101	-56.3	-42.7	-70.0			90	092	15.9	16.4	150.99	4.27	1985	1975
<i>30</i>	49	24058	48	-51.8	-42.3	-59.9			41	092	16.3	16.8	111.03	3.01	1982	1983
<i>25</i>	29	25235	29	-50.5	-41.7	-57.5			23	088	18.2	19.0	141.21	3.52	1982	1983
<i>20</i>	21	26699	21	-46.8	-38.3	-55.1			17	087	18.2	18.6	173.22	4.24	1982	1983
<i>15</i>	11	28557	11	-47.2	-41.1	-52.5			9	085	17.6	17.9			1983	1989
<i>10</i>	2	31450	2	-43.2	-39.5	-46.9			2	084	22.9	23.0			1983	1983
<i>7</i>	2	33920	2	-42.1	-39.1	-45.1			2	074	20.9	21.0			1983	1983

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

562 555 502

340 105 1638 -81.3

# NORMALS OF RADIOSONDE DATA

43128 HYDERABAD

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	950	620	29.0	35.2	21.0	620	16.8	620	051	1.6	3.4	1.83	1.31	1986	1972
<i>1000</i>	597	78											17.68			
<i>950</i>	354	533	264	28.9	34.0	20.8	262	15.1	263	072	2.8	4.0	34.40	1.26	1986	1982
<i>900</i>	585	1012	585	24.4	32.0	17.0	576	12.8	580	046	2.6	4.9	17.91	1.27	1976	1973
<i>850</i>	585	1508	585	20.2	29.0	13.8	574	10.5	580	040	3.0	5.3	18.65	1.14	1976	1983
<i>800</i>	585	2027	585	16.3	25.2	10.0	573	8.1	580	038	3.2	5.6	19.64	0.95	1979	1974
<i>750</i>	585	2566	585	12.5	21.0	5.0	554	4.7	578	038	3.0	5.8	25.59	0.90	1989	1985
<i>700</i>	585	3147	585	9.3	18.2	1.0	502	0.7	577	035	2.1	5.6	21.47	0.87	1989	1979
<i>650</i>	578	3755	578	6.2	13.8	-6.3	449	-3.1	566	030	1.3	5.3	18.75	0.85	1988	1984
<i>600</i>	573	4410	572	3.0	9.6	-3.0	382	-6.2	560	038	0.7	5.1	22.32	0.96	1989	1972
<i>550</i>	567	5116	565	-0.6	7.2	-11.5	332	-10.3	555	042	0.4	5.0	28.71	0.98	1988	1981
<i>500</i>	564	5865	563	-4.8	3.6	-15.5	285	-14.7	553	034	0.5	5.1	25.39	1.02	1990	1980
<i>450</i>	557	6690	554	-9.5	0.0	-17.7	231	-19.0	547	069	0.5	5.3	26.10	1.11	1990	1988
<i>400</i>	550	7590	547	-15.0	-5.3	-28.5	191	-23.9	540	120	0.3	5.5	30.43	1.21	1990	1988
<i>350</i>	537	8589	534	-21.6	-10.7	-29.5	139	-30.4	529	183	0.8	5.9	31.96	1.40	1990	1988
<i>300</i>	532	9711	531	-29.6	-19.7	-37.0	86	-37.3	524	185	1.5	6.6	39.84	1.63	1989	1971
<i>250</i>	525	10987	525	-39.7	-28.1	-49.0	18	-45.0	511	176	3.1	8.3	47.38	1.82	1989	1977
<i>200</i>	508	12477	508	-52.0	-37.7	-63.0	1	-55.5	499	158	4.9	10.1	59.51	1.99	1990	1977
<i>175</i>	477	13332	477	-59.1	-45.1	-69.0			460	152	6.1	11.1	63.78	1.98	1990	1971
<i>150</i>	455	14284	455	-66.9	-51.1	-78.0			441	140	6.9	11.4	73.12	1.94	1990	1971
<i>125</i>	416	15366	416	-74.0	-60.1	-85.1			400	127	7.5	11.0	81.45	2.07	1989	1979
<i>100</i>	388	16649	387	-78.9	-62.1	-88.7			371	108	7.9	9.8	88.98	2.22	1979	1982
<i>80</i>	330	17940	330	-73.8	-59.1	-87.0			311	096	8.2	9.2	97.67	2.65	1985	1978
<i>70</i>	305	18743	305	-69.5	-58.0	-83.0			286	097	8.9	9.7	106.21	2.82	1976	1972
<i>60</i>	260	19664	260	-65.1	-55.7	-79.0			238	096	9.0	9.7	121.89	3.02	1985	1972
<i>50</i>	218	20800	218	-59.9	-49.3	-77.0			204	095	9.4	10.1	177.44	4.07	1985	1971
<i>40</i>	134	22214	134	-55.6	-45.9	-67.0			123	093	10.1	11.1	192.28	3.55	1985	1971
<i>30</i>	80	24065	80	-51.3	-40.9	-62.0			74	091	10.8	11.6	154.84	3.69	1985	1977
<i>25</i>	47	25224	47	-49.4	-37.3	-57.0			44	087	12.6	13.1	194.18	3.84	1985	1976
<i>20</i>	28	26715	28	-47.2	-39.1	-54.3			26	087	13.6	14.2	150.46	2.87	1988	1990
<i>15</i>	15	28644	15	-45.6	-36.1	-53.9			13	094	14.0	14.3			1988	1990
<i>10</i>	10	31337	10	-43.0	-37.9	-49.1			9	089	14.0	14.7			1989	1984
<i>7</i>	3	33747	3	-42.8	-39.1	-47.3			3	093	17.6	17.7			1988	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

572	558	500		1	115	1609	-77.3		371	102	1657	-80.7
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## NORMALS OF RADIOSONDE DATA

43128 HYDERABAD

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	952	600	27.3	32.4	20.0	600	13.4	600	071	2.4	3.3	1.82	0.81	1986	1972
<i>1000</i>	580	105											15.70			
<i>950</i>	474	556	454	26.9	32.0	20.4	451	12.8	444	077	3.0	3.9	21.17	0.84	1986	1979
<i>900</i>	556	1032	556	22.2	30.6	11.0	551	9.7	550	066	3.5	4.6	16.27	1.23	1990	1975
<i>850</i>	556	1524	556	18.0	28.4	10.2	547	7.7	550	062	3.5	4.8	16.52	1.31	1990	1983
<i>800</i>	557	2040	557	14.4	25.0	6.0	528	4.5	549	060	3.5	5.0	17.80	1.20	1990	1983
<i>750</i>	557	2577	556	11.7	22.8	4.2	420	1.7	549	058	3.1	5.3	20.90	0.99	1990	1983
<i>700</i>	557	3155	557	9.3	18.0	1.4	322	-1.4	548	056	2.4	5.5	18.88	0.76	1989	1988
<i>650</i>	556	3764	555	6.2	15.4	-3.0	254	-3.8	545	052	1.8	5.4	16.94	0.70	1989	1973
<i>600</i>	555	4417	555	2.9	11.6	-6.1	203	-7.5	543	042	1.2	5.7	21.17	0.79	1990	1988
<i>550</i>	552	5120	552	-1.0	8.2	-11.3	159	-11.2	538	017	1.1	5.8	23.58	0.90	1990	1988
<i>500</i>	549	5871	549	-5.4	4.0	-17.1	140	-15.6	536	336	1.5	6.3	25.44	1.03	1990	1988
<i>450</i>	541	6689	541	-10.3	-2.3	-21.1	106	-19.1	527	309	2.1	7.1	29.00	1.08	1990	1988
<i>400</i>	538	7590	538	-16.1	-6.1	-25.5	87	-25.1	524	289	3.4	7.9	31.83	1.25	1990	1988
<i>350</i>	530	8585	530	-22.9	-14.5	-31.3	64	-31.4	516	268	5.3	9.0	35.20	1.37	1989	1990
<i>300</i>	525	9701	525	-30.8	-22.1	-41.1	37	-38.1	511	255	7.1	10.2	42.21	1.60	1989	1990
<i>250</i>	517	10969	517	-40.8	-31.7	-51.1	11	-45.6	503	238	9.4	12.3	50.12	1.90	1989	1990
<i>200</i>	501	12452	501	-52.7	-41.7	-64.7			487	222	11.1	14.3	63.49	2.34	1989	1979
<i>175</i>	464	13303	463	-59.5	-49.1	-71.9			451	220	10.8	14.2	74.58	2.61	1987	1979
<i>150</i>	450	14251	449	-66.9	-54.5	-79.7			434	222	9.4	12.9	86.40	2.70	1989	1979
<i>125</i>	407	15332	406	-73.4	-61.3	-85.5			394	222	6.0	9.9	98.81	2.89	1989	1979
<i>100</i>	377	16620	375	-78.4	-68.0	-88.0			364	183	2.2	7.6	110.73	2.49	1974	1972
<i>80</i>	310	17915	310	-74.5	-59.5	-89.1			291	104	2.3	6.4	122.67	2.57	1990	1979
<i>70</i>	290	18716	290	-70.5	-55.9	-85.3			271	084	2.9	6.2	132.40	2.94	1990	1979
<i>60</i>	256	19622	255	-65.9	-49.7	-80.1			235	084	2.8	6.0	141.48	2.87	1990	1979
<i>50</i>	227	20745	227	-60.7	-45.3	-74.1			208	101	3.4	6.5	160.78	2.80	1982	1979
<i>40</i>	145	22155	145	-56.7	-45.7	-69.1			132	097	4.5	7.0	165.38	2.79	1986	1979
<i>30</i>	96	24009	96	-52.4	-41.7	-60.5			87	093	6.0	8.1	188.98	2.12	1986	1990
<i>25</i>	63	25212	63	-49.8	-36.1	-58.7			59	088	8.3	9.1	198.52	2.54	1986	1990
<i>20</i>	42	26667	42	-47.6	-40.1	-56.3			42	085	9.6	11.0	209.63	2.57	1983	1990
<i>15</i>	20	28551	20	-46.1	-39.9	-54.1			20	085	10.8	11.8			1980	1990
<i>10</i>	9	31355	9	-41.7	-36.7	-45.5			9	076	9.9	10.3			1989	1990
<i>7</i>	3	33854	3	-36.2	-35.1	-37.5			3	041	6.5	8.0			1988	1990

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

524 563 492

336 100 1663 -79.8



# NORMALS OF RADIOSONDE DATA

43128 HYDERABAD

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	619	954	619	26.5	31.2	18.2	619	10.9	619	096	2.3	2.9	1.66	0.71	1984	1988
1000	583	120											15.20			
950	507	566	502	26.0	30.8	19.0	496	11.3	490	100	3.0	3.6	18.21	0.83	1984	1988
900	558	1045	558	20.8	28.2	13.0	548	8.1	550	088	3.1	4.0	15.43	1.11	1979	1974
850	558	1534	558	16.5	26.0	7.0	535	5.8	550	080	2.8	3.9	16.42	1.41	1974	1971
800	557	2047	557	13.0	22.2	5.0	491	1.9	549	064	2.2	4.1	17.94	1.34	1989	1977
750	556	2579	555	10.6	20.2	2.0	355	-1.8	549	049	1.5	4.7	19.08	1.34	1990	1985
700	556	3158	556	8.3	18.4	-5.1	232	-5.5	548	343	0.9	5.0	21.18	1.51	1990	1988
650	550	3764	549	5.4	14.2	-5.9	160	-8.6	543	304	1.7	5.4	17.56	1.48	1989	1984
600	549	4416	549	1.9	10.6	-5.5	118	-11.7	542	289	2.6	6.2	25.58	1.46	1989	1981
550	543	5114	542	-2.2	6.2	-9.0	93	-15.4	537	279	3.6	7.1	30.65	1.36	1989	1976
500	539	5863	537	-6.8	1.0	-14.5	76	-19.0	532	275	5.1	8.4	31.63	1.29	1989	1988
450	537	6675	535	-12.0	-3.1	-20.3	60	-22.9	529	269	7.1	9.9	34.37	1.50	1989	1988
400	534	7571	532	-17.9	-7.5	-27.1	55	-27.5	528	267	9.5	12.1	41.39	1.67	1989	1988
350	525	8558	525	-24.6	-12.7	-33.9	41	-32.5	517	265	12.7	15.3	42.18	1.98	1989	1988
300	515	9665	515	-32.6	-23.1	-43.1	27	-41.1	508	258	15.7	18.5	45.58	1.70	1987	1990
250	496	10927	495	-42.3	-33.3	-50.5	4	-48.0	487	250	18.0	21.0	54.86	1.83	1984	1979
200	480	12401	479	-53.8	-42.5	-64.0	1	-54.9	469	243	19.7	22.5	66.12	2.46	1989	1977
175	445	13249	445	-60.2	-49.5	-70.0			432	244	19.9	22.6	73.97	2.59	1989	1977
150	416	14196	416	-66.9	-54.1	-77.0			405	247	18.5	20.9	84.40	2.94	1989	1971
125	373	15277	372	-72.8	-60.7	-89.1			360	252	14.1	16.4	118.55	3.44	1986	1987
100	342	16573	342	-78.1	-66.5	-89.0			329	257	7.9	11.3	136.95	3.24	1988	1971
80	295	17858	295	-75.6	-62.9	-88.3			277	258	3.1	7.7	154.19	3.03	1987	1981
70	278	18658	278	-71.8	-56.1	-84.0			263	255	1.5	6.7	162.75	3.39	1988	1971
60	231	19570	231	-67.0	-55.1	-84.0			215	244	0.8	6.2	172.15	3.51	1987	1972
50	200	20696	200	-61.7	-49.3	-75.0			191	227	0.6	6.0	133.24	3.62	1987	1971
40	133	22102	133	-57.9	-46.0	-72.0			126	251	0.7	6.1	142.75	4.06	1976	1976
30	83	23924	83	-53.7	-41.5	-64.0			79	061	0.8	6.2	165.78	3.72	1982	1971
25	67	25111	67	-50.7	-37.7	-61.1			64	048	0.5	6.6	153.39	2.57	1982	1990
20	47	26571	47	-48.0	-33.3	-56.1			46	070	2.7	7.4	191.19	3.73	1982	1990
15	26	28433	26	-45.4	-33.1	-52.7			26	089	5.2	8.9	198.71	3.30	1981	1990
10	10	31172	10	-43.3	-36.3	-48.9			9	076	5.5	15.2			1987	1990
7	1	33562	1	-43.9	-43.9	-43.9			1	360	1.0	1.0			1987	1987

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
549	577	473					317	097	1677	-79.8

# NORMALS OF RADIOSONDE DATA

43041 JAGDALPUR

JANUARY 1980-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	241	951	241	26.1	31.2	14.4	241	10.7	241	017	0.2	1.2	1.00	1.18	1989	1986
<i>1000</i>	228	112											8.12			
<i>950</i>	216	560	152	25.5	31.0	14.4	150	10.5	149	032	0.7	2.1	17.74	1.48	1989	1986
<i>900</i>	226	1037	226	21.6	27.6	12.4	217	6.7	226	358	0.7	3.1	6.81	1.15	1988	1981
<i>850</i>	226	1528	226	17.1	22.8	9.4	213	4.4	226	360	1.1	2.9	6.74	1.06	1988	1981
<i>800</i>	227	2041	227	12.9	18.2	6.4	203	2.0	227	350	1.6	3.2	7.58	1.13	1982	1980
<i>750</i>	227	2573	227	9.5	16.0	1.8	161	-0.5	227	329	2.2	4.2	17.20	1.28	1988	1980
<i>700</i>	227	3147	226	7.4	17.6	1.0	100	-4.2	227	313	3.7	6.1	10.14	1.53	1989	1981
<i>650</i>	227	3752	227	4.8	13.2	-1.5	67	-8.3	226	297	5.8	8.1	16.44	1.44	1988	1981
<i>600</i>	226	4402	226	1.8	9.0	-4.9	41	-13.2	225	294	8.7	10.4	14.94	1.27	1988	1981
<i>550</i>	226	5114	226	-2.1	4.8	-9.9	28	-14.9	224	293	10.8	12.5	19.66	1.30	1988	1980
<i>500</i>	224	5850	224	-6.6	0.0	-14.1	23	-19.4	223	290	12.7	14.5	20.40	1.32	1989	1982
<i>450</i>	222	6670	222	-11.4	-2.3	-19.7	15	-21.8	221	288	14.9	16.9	32.06	1.22	1983	1982
<i>400</i>	220	7561	219	-17.0	-9.7	-25.1	12	-28.0	218	287	17.5	19.3	30.50	1.12	1988	1982
<i>350</i>	213	8558	213	-23.3	-11.3	-31.7	8	-34.4	212	284	20.0	22.2	31.92	0.94	1982	1982
<i>300</i>	207	9666	207	-30.8	-22.7	-40.7	5	-40.0	206	280	22.2	24.3	34.84	1.06	1987	1982
<i>250</i>	199	10934	199	-40.2	-28.3	-47.9	1	-45.7	195	274	23.6	26.0	35.88	1.37	1989	1982
<i>200</i>	184	12418	184	-51.7	-42.3	-64.3			178	268	23.2	25.7	39.09	1.55	1987	1989
<i>175</i>	159	13275	159	-57.9	-49.1	-65.3			152	272	21.4	23.6	40.82	1.33	1987	1987
<i>150</i>	134	14232	134	-64.1	-53.5	-72.1			129	275	20.7	22.7	42.97	1.53	1982	1986
<i>125</i>	114	15328	114	-70.5	-62.3	-78.7			107	274	16.8	19.2	47.33	1.67	1987	1989
<i>100</i>	96	16636	96	-75.1	-67.3	-84.1			90	277	12.4	15.3	54.52	1.35	1987	1989
<i>80</i>	85	17927	85	-73.5	-64.1	-81.7			78	275	7.6	10.9	57.43	3.29	1989	1989
<i>70</i>	78	18737	78	-70.2	-59.9	-80.7			75	275	5.6	10.4	60.93	4.42	1989	1980
<i>60</i>	73	19649	73	-65.1	-54.5	-79.1			65	294	4.6	8.8	98.43	5.54	1988	1980
<i>50</i>	69	20776	69	-59.2	-50.1	-67.5			61	279	3.3	7.2	61.60	2.77	1989	1987
<i>40</i>	60	22186	60	-54.8	-45.1	-62.9			49	128	0.7	6.7	78.22	2.24	1989	1982
<i>30</i>	48	24044	48	-51.5	-42.7	-59.5			37	112	1.8	7.5	95.60	2.55	1986	1982
<i>25</i>	34	25219	34	-50.0	-41.9	-57.5			22	118	2.1	7.9	81.93	2.40	1989	1982
<i>20</i>	17	26696	17	-49.3	-44.5	-55.1			11	079	5.0	10.1			1989	1982
<i>15</i>	10	28611	10	-48.0	-40.7	-51.9			7	142	5.5	8.9			1989	1982
<i>10</i>	3	31264	3	-46.6	-45.3	-47.5			2	252	4.3	8.0			1987	1989
<i>7</i>	1	33600	1	-44.1	-44.1	-44.1			1	288	19.0	19.0			1987	1987

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

225 579 469

83 093 1702 -77.1

## NORMALS OF RADIOSONDE DATA

43041 JAGDALPUR

FEBRUARY 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	251	949	251	29.4	34.8	19.0	251	10.7	251	258	0.4	1.8	0.94	0.89	1981	1986
1000	233	93											7.98			
950	213	548	66	28.4	32.0	19.2	66	9.2	64	010	1.2	2.1	8.33	1.53	1981	1986
900	233	1027	233	24.7	35.4	18.0	224	7.3	232	284	1.4	3.7	7.61	0.64	1986	1987
850	233	1523	233	20.0	25.2	7.2	222	5.2	232	293	1.8	3.8	7.20	0.56	1986	1981
800	233	2041	233	15.3	20.8	5.8	223	3.1	232	302	2.2	3.8	6.53	0.62	1988	1981
750	233	2574	233	10.9	18.6	4.8	222	0.1	232	307	2.7	4.6	8.88	0.78	1988	1981
700	233	3152	233	6.8	13.8	1.0	191	-4.2	232	306	4.2	5.8	5.98	0.82	1988	1988
650	231	3756	230	3.7	11.4	-3.5	127	-9.0	227	302	6.3	7.8	6.90	0.91	1988	1988
600	230	4402	228	0.7	7.8	-6.1	73	-12.8	227	295	8.7	10.0	7.66	0.88	1989	1988
550	229	5111	229	-3.0	2.6	-10.3	41	-16.0	224	292	10.9	12.4	7.45	0.97	1989	1986
500	227	5845	226	-7.3	-1.1	-14.9	29	-18.8	223	290	13.3	14.8	9.39	0.98	1988	1986
450	225	6663	226	-12.4	-4.1	-21.1	20	-22.6	222	288	15.5	17.0	16.21	1.00	1990	1986
400	225	7549	225	-17.8	-8.9	-25.9	17	-28.4	220	288	19.1	20.9	14.42	0.99	1990	1980
350	223	8545	223	-24.1	-14.9	-33.5	9	-32.5	219	285	21.6	23.7	16.32	1.10	1990	1980
300	217	9648	217	-31.3	-22.1	-43.1	5	-36.9	209	283	24.1	26.7	21.23	1.21	1990	1980
250	207	10912	207	-40.7	-30.5	-53.1	1	-42.7	200	281	25.3	28.0	23.49	1.38	1981	1980
200	189	12398	189	-51.3	-39.9	-68.1			179	279	25.7	28.5	35.99	2.33	1990	1980
175	174	13255	173	-56.9	-45.5	-72.1			159	281	23.0	25.5	45.09	2.56	1990	1980
150	144	14221	143	-62.7	-50.7	-79.1			129	281	20.8	22.8	78.30	3.20	1990	1980
125	121	15325	120	-69.3	-57.9	-78.7			106	282	18.0	20.1	104.23	3.16	1990	1980
100	100	16639	100	-73.4	-61.5	-83.5			86	286	13.6	16.2	88.37	2.42	1980	1983
80	83	17932	83	-73.6	-60.3	-82.9			72	291	8.3	11.6	101.93	1.97	1980	1983
70	77	18738	77	-70.3	-58.9	-80.3			65	281	4.9	9.8	107.08	2.30	1980	1982
60	69	19648	69	-65.1	-53.9	-73.9			61	304	3.9	9.0	120.30	2.49	1980	1981
50	67	20765	67	-59.2	-48.1	-68.1			57	313	2.4	8.1	116.86	2.51	1980	1981
40	54	22186	54	-54.9	-46.1	-65.1			45	116	2.7	7.1	116.16	3.12	1989	1981
30	45	24046	45	-50.5	-40.7	-61.1			35	068	3.0	9.1	149.19	3.02	1989	1981
25	36	25230	36	-48.7	-40.7	-58.9			24	104	6.8	9.8	176.95	3.35	1986	1981
20	20	26789	20	-47.0	-39.7	-54.9			11	088	5.1	9.3			1989	1989
15	11	28727	11	-45.1	-40.9	-53.1			5	063	2.4	11.0			1989	1989
10	2	31472	2	-42.9	-41.9	-43.9			1	164	4.0	4.0			1990	1990
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

230 590 454

2 152 1382 -76.6

82 094 1703 -76.1

# NORMALS OF RADIOSONDE DATA

43041 JAGDALPUR

MARCH 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	279	947	279	32.4	37.8	18.4	279	11.6	279	256	0.8	1.9	0.82	1.29	1986	1989
<i>1000</i>	272	66											7.13			
<i>950</i>	247	529	19	29.0	33.2	18.2	18	10.2	19	040	0.6	2.2	14.40		1981	1989
<i>900</i>	272	1011	272	28.0	34.0	17.2	264	8.7	272	274	2.2	4.4	5.53	1.12	1986	1989
<i>850</i>	272	1511	272	23.3	30.0	14.8	258	6.5	272	276	2.5	4.3	5.90	1.07	1983	1981
<i>800</i>	272	2036	272	18.6	25.2	11.0	257	4.5	272	289	2.8	4.5	6.04	0.89	1990	1980
<i>750</i>	272	2570	272	13.8	22.0	6.2	259	2.4	272	298	3.2	4.8	9.70	0.88	1990	1987
<i>700</i>	272	3158	272	8.8	18.0	0.0	262	-0.6	272	306	4.0	5.7	7.54	0.89	1990	1987
<i>650</i>	272	3756	271	4.3	14.0	-2.9	235	-4.7	270	310	5.0	6.9	11.57	1.21	1990	1980
<i>600</i>	270	4413	269	0.7	10.2	-6.9	179	-9.3	264	304	5.9	8.7	11.91	1.33	1988	1987
<i>550</i>	268	5119	268	-2.6	8.0	-10.1	112	-14.3	261	297	8.6	10.1	18.37	1.57	1988	1980
<i>500</i>	268	5856	268	-6.8	2.6	-15.5	71	-18.6	259	290	10.9	12.6	17.71	1.68	1988	1980
<i>450</i>	266	6676	266	-11.5	-2.1	-22.1	49	-23.1	258	289	13.2	14.9	27.81	1.78	1988	1981
<i>400</i>	262	7563	262	-17.1	-6.3	-29.9	33	-28.5	254	288	15.9	17.9	29.26	1.86	1988	1981
<i>350</i>	257	8562	257	-23.3	-14.1	-36.9	26	-33.8	243	288	18.8	21.2	35.19	1.80	1988	1981
<i>300</i>	255	9668	255	-30.5	-21.5	-44.9	18	-40.0	236	283	21.5	23.8	44.72	1.44	1987	1981
<i>250</i>	245	10939	245	-39.4	-28.9	-54.3	3	-46.9	226	279	22.3	25.2	52.33	1.23	1990	1981
<i>200</i>	220	12435	220	-50.0	-40.5	-61.7			196	277	22.3	24.9	68.15	1.75	1990	1981
<i>175</i>	205	13297	204	-56.2	-46.9	-67.3			181	279	21.2	23.6	72.77	2.00	1988	1982
<i>150</i>	177	14260	177	-62.5	-51.3	-72.1			153	281	19.8	22.4	77.41	2.20	1990	1982
<i>125</i>	132	15348	132	-68.9	-55.5	-79.1			114	281	16.4	18.6	80.91	2.24	1990	1982
<i>100</i>	108	16649	108	-73.9	-60.1	-85.3			94	275	11.4	13.9	104.17	2.16	1990	1982
<i>80</i>	83	17923	83	-73.4	-65.9	-84.3			71	289	7.3	10.4	97.15	0.93	1981	1982
<i>70</i>	81	18729	81	-70.0	-62.5	-81.1			69	289	6.1	9.6	96.73	2.59	1982	1982
<i>60</i>	78	19646	78	-65.0	-57.1	-74.1			63	294	4.5	7.8	94.77	3.10	1981	1987
<i>50</i>	71	20732	71	-58.6	-50.7	-66.5			59	278	1.4	7.0	92.64	1.65	1981	1983
<i>40</i>	64	22205	64	-52.9	-44.5	-61.7			55	106	0.9	7.0	129.28	0.53	1983	1982
<i>30</i>	57	24081	57	-47.6	-34.5	-57.3			50	127	3.2	6.8	133.35	2.04	1983	1982
<i>25</i>	42	25261	42	-46.3	-35.9	-54.3			38	118	2.0	6.5	138.50	1.88	1988	1982
<i>20</i>	28	26756	28	-44.5	-37.7	-57.5			24	141	2.5	6.6	57.05	2.71	1981	1989
<i>15</i>	13	28670	13	-42.6	-36.5	-49.5			7	120	0.8	7.3			1989	1989
<i>10</i>	1	31468	1	-39.9	-39.9	-39.9			1	300	5.0	5.0			1990	1990
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

267 589 454

88 094 1701 -76.4

# NORMALS OF RADIOSONDE DATA

43041 JAGDALPUR

APRIL 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SOTT	YRTX	YRTN
SURFACE	300	944	300	35.0	41.0	21.0	300	13.6	300	246	0.9	2.3	0.95	1.15	1985	1988
1000	268	33											8.85			
950	266	492											25.26			
900	268	985	268	30.9	37.2	16.6	256	10.0	268	271	2.6	5.0	7.05	0.95	1990	1986
850	268	1491	268	26.3	33.4	16.6	256	7.5	268	280	3.0	4.8	6.40	0.94	1990	1986
800	268	2020	268	21.7	29.0	14.4	256	5.8	267	290	3.2	4.9	5.90	0.94	1990	1986
750	268	2558	268	16.9	24.0	10.6	258	3.7	267	303	3.3	4.9	13.25	1.01	1983	1980
700	268	3154	268	11.8	20.0	5.0	258	1.1	267	317	3.4	5.0	7.04	1.07	1983	1983
650	268	3752	267	6.6	13.4	-0.5	256	-2.3	266	323	3.7	5.6	11.79	1.16	1983	1987
600	267	4418	266	2.2	10.0	-5.7	239	-7.7	265	320	4.7	6.6	11.89	1.15	1990	1987
550	267	5125	266	-1.5	5.6	-9.5	183	-12.4	264	311	6.5	8.2	14.75	1.27	1990	1982
500	266	5869	266	-5.5	2.2	-14.9	114	-16.6	261	303	7.9	9.5	17.61	1.29	1990	1985
450	264	6697	264	-10.1	-2.1	-19.3	82	-19.7	256	296	10.0	11.5	25.77	1.20	1990	1985
400	258	7586	258	-15.8	-8.1	-24.1	68	-25.9	251	291	12.0	13.9	24.00	1.14	1989	1987
350	253	8586	253	-22.4	-13.3	-33.9	56	-31.2	242	287	14.2	16.4	25.10	1.04	1989	1987
300	246	9697	245	-30.1	-20.7	-44.5	34	-37.5	237	281	16.1	18.8	32.77	1.51	1989	1987
250	234	10971	234	-39.3	-29.9	-55.9	16	-45.1	226	274	17.8	20.6	42.69	2.17	1989	1987
200	223	12464	220	-50.4	-40.3	-65.9			213	269	18.5	20.9	59.22	2.56	1990	1981
175	209	13324	208	-56.3	-46.7	-69.7			196	273	17.0	19.1	68.16	2.54	1989	1987
150	174	14290	173	-62.6	-52.3	-75.7			168	273	14.5	16.6	70.16	2.34	1990	1987
125	145	15398	145	-68.9	-59.3	-79.5			140	273	10.0	12.8	83.83	2.52	1990	1983
100	120	16717	120	-74.3	-63.5	-83.7			115	278	4.9	9.5	85.49	2.79	1987	1983
80	107	18010	107	-73.1	-58.5	-81.9			101	340	1.7	8.1	102.61	2.97	1990	1982
70	103	18814	103	-69.9	-56.1	-80.1			96	329	0.6	7.3	100.01	2.77	1989	1982
60	96	19723	96	-64.8	-49.9	-75.1			90	030	0.6	6.5	108.77	2.88	1989	1980
50	94	20856	94	-58.0	-43.5	-76.1			88	113	0.5	6.5	120.52	2.61	1989	1985
40	88	22278	88	-52.4	-40.9	-62.3			83	110	3.1	5.8	129.98	2.65	1989	1985
30	82	24152	82	-47.3	-35.5	-61.1			76	116	4.8	6.8	169.90	2.98	1989	1985
25	66	25353	66	-45.0	-33.1	-57.1			58	113	4.4	7.4	168.09	2.92	1988	1985
20	49	26865	49	-42.4	-33.1	-55.9			44	125	3.6	7.6	227.19	2.87	1990	1989
15	27	28791	27	-40.9	-34.7	-52.5			21	091	2.8	8.9	148.82	2.12	1989	1989
10	9	31569	9	-38.3	-30.5	-48.5			8	092	5.8	8.6			1989	1989
7	3	33760	3	-40.8	-35.9	-45.5			3	100	4.1	15.7			1985	1989

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
266	569	484					112	093	1717	-76.4

## NORMALS OF RADIOSONDE DATA

43041 JAGDALPUR

MAY 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	309	941	309	34.1	42.8	21.6	309	17.2	309	223	0.8	2.3	1.73	2.16	1988	1990
<i>1000</i>	270	8											19.59			
<i>950</i>	269	470											28.53			
<i>900</i>	269	959	269	31.1	38.6	18.8	264	13.0	267	271	1.8	4.9	16.69	2.06	1988	1980
<i>850</i>	269	1466	269	26.8	33.4	15.0	263	10.3	267	304	2.1	4.8	16.06	1.82	1980	1980
<i>800</i>	269	1996	269	22.5	29.2	14.2	264	8.3	267	322	2.8	5.1	16.19	1.65	1988	1983
<i>750</i>	269	2544	269	18.0	25.6	11.2	265	6.0	267	338	3.1	5.3	17.67	1.48	1985	1980
<i>700</i>	269	3135	269	13.3	19.8	6.2	264	2.9	267	345	3.6	5.8	14.12	1.38	1988	1980
<i>650</i>	262	3745	262	8.5	14.8	1.8	258	-0.6	258	350	4.3	6.4	15.65	1.27	1987	1986
<i>600</i>	262	4407	261	3.7	9.8	-2.1	252	-4.6	256	346	4.7	6.8	14.32	1.14	1986	1986
<i>550</i>	260	5122	259	-0.4	5.8	-5.9	226	-9.4	249	334	4.6	6.9	18.23	1.26	1988	1982
<i>500</i>	259	5865	259	-4.0	2.0	-10.9	173	-13.7	249	319	4.9	7.5	16.52	1.35	1985	1987
<i>450</i>	256	6703	256	-8.0	-6.7	-14.7	132	-18.5	242	308	5.4	8.3	19.49	1.57	1986	1986
<i>400</i>	255	7596	255	-13.2	-6.3	-21.7	98	-22.6	239	294	6.0	8.7	22.81	1.70	1988	1987
<i>350</i>	254	8610	254	-19.3	-12.1	-28.9	77	-28.2	237	279	7.0	9.8	27.61	1.79	1988	1980
<i>300</i>	247	9733	247	-26.8	-17.9	-38.5	59	-34.9	231	269	8.2	10.5	35.11	1.84	1989	1982
<i>250</i>	241	11024	241	-36.3	-24.9	-50.7	30	-42.3	223	260	7.9	11.0	46.92	2.15	1989	1982
<i>200</i>	220	12534	220	-48.1	-35.1	-63.7	1	-46.9	199	246	7.4	11.7	65.78	2.33	1989	1981
<i>175</i>	207	13402	207	-55.0	-41.3	-65.1			191	237	6.6	11.4	72.84	2.25	1989	1986
<i>150</i>	185	14369	185	-62.3	-48.7	-73.9			171	238	5.5	11.1	86.57	2.41	1989	1982
<i>125</i>	146	15478	146	-69.1	-57.9	-81.1			132	193	2.0	9.1	93.69	2.23	1989	1981
<i>100</i>	118	16784	118	-74.7	-64.1	-83.9			110	117	4.9	9.3	104.85	2.05	1990	1981
<i>80</i>	100	18072	100	-73.6	-65.7	-81.3			92	097	7.4	10.6	118.41	1.72	1981	1980
<i>70</i>	94	18890	94	-69.4	-59.3	-78.5			85	101	7.6	10.1	121.53	2.73	1990	1980
<i>60</i>	80	19778	80	-62.8	-52.1	-76.5			74	111	7.9	9.5	118.96	2.74	1986	1980
<i>50</i>	75	20922	75	-56.6	-42.3	-74.5			68	111	7.1	8.9	123.49	3.81	1986	1980
<i>40</i>	67	22352	67	-52.0	-41.1	-64.3			59	098	8.6	9.5	133.53	3.86	1981	1980
<i>30</i>	53	24223	53	-47.3	-38.7	-60.7			44	100	8.7	9.7	161.61	4.68	1988	1980
<i>25</i>	37	25414	37	-45.5	-35.9	-51.5			31	097	7.2	9.6	147.04	1.73	1989	1985
<i>20</i>	26	26932	26	-42.9	-32.1	-49.5			22	095	6.8	9.2	250.96	3.03	1981	1983
<i>15</i>	14	28847	14	-40.0	-32.1	-45.5			13	077	7.2	10.8			1988	1990
<i>10</i>	4	31524	4	-39.3	-37.7	-40.7			3	100	19.1	19.3			1983	1983
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

259 554 503

105 094 1715 -76.8

## NORMALS OF RADIOSONDE DATA

43041 JAGDALPUR

JUNE 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	300	939	300	29.8	40.6	21.8	300	21.5	300	237	1.6	2.5	0.55	1.60	1986	1985
1000	239	-2											5.09			
950	239	453											25.50			
900	239	936	239	27.3	37.0	19.4	239	18.3	235	268	4.4	6.0	7.14	1.37	1986	1986
850	239	1437	239	23.6	32.6	16.6	238	15.7	235	291	4.8	6.4	8.74	1.22	1986	1986
800	239	1963	239	20.0	28.0	13.8	238	13.0	233	307	5.1	6.8	10.52	1.05	1983	1981
750	239	2517	239	16.5	23.0	10.4	238	9.6	230	320	4.9	7.2	13.33	0.80	1983	1981
700	239	3098	239	12.9	19.8	8.0	238	6.0	229	330	4.6	7.1	14.24	0.78	1985	1981
650	237	3717	237	9.1	15.8	3.8	235	2.4	223	334	4.4	7.0	14.08	0.86	1987	1981
600	236	4373	236	5.2	12.4	-0.7	233	-1.5	218	335	3.9	6.3	17.79	1.08	1989	1981
550	235	5105	234	1.5	8.8	-4.1	222	-5.0	214	327	3.8	6.2	19.02	1.14	1989	1981
500	234	5841	233	-2.2	4.4	-8.3	210	-8.8	209	328	3.1	5.9	21.92	0.98	1989	1981
450	231	6687	230	-6.1	3.2	-12.5	192	-13.4	199	341	2.4	5.8	25.31	0.84	1986	1987
400	230	7586	229	-10.9	-3.1	-15.7	177	-19.6	194	021	2.0	5.5	26.22	0.81	1989	1983
350	229	8608	229	-16.8	-9.5	-23.1	156	-26.1	187	068	2.9	5.7	30.31	0.96	1988	1983
300	226	9744	226	-24.2	-16.3	-31.9	119	-32.6	183	084	4.2	6.6	34.57	1.16	1988	1986
250	207	11046	206	-34.0	-27.1	-43.1	67	-41.7	170	094	6.8	8.7	36.83	1.06	1982	1986
200	194	12567	193	-46.5	-38.7	-56.9	2	-48.3	160	101	10.5	12.1	41.70	1.33	1988	1986
175	171	13434	171	-54.1	-46.9	-64.7			143	104	12.7	14.5	44.26	1.56	1986	1986
150	149	14406	149	-62.0	-52.1	-72.7			128	104	15.8	17.3	50.17	1.56	1985	1986
125	121	15506	121	-70.2	-61.9	-80.1			101	103	18.1	19.4	57.79	1.36	1989	1982
100	102	16808	102	-76.1	-64.7	-83.7			85	103	18.7	19.5	64.42	1.51	1989	1980
80	79	18082	79	-73.3	-59.9	-82.1			65	099	18.0	18.7	63.25	3.90	1990	1983
70	68	18896	68	-68.1	-52.9	-80.7			57	105	15.0	15.8	83.36	4.33	1990	1983
60	59	19816	59	-62.2	-50.7	-73.1			50	108	14.0	14.7	93.61	3.15	1988	1987
50	54	20973	54	-56.3	-46.3	-67.5			43	105	13.9	14.5	101.58	3.13	1989	1987
40	46	22397	46	-51.9	-43.1	-60.9			37	106	14.1	14.5	133.59	2.97	1988	1983
30	36	24291	36	-46.2	-37.1	-56.9			29	099	16.2	16.6	165.08	3.11	1988	1986
25	25	25517	25	-43.7	-34.9	-54.9			18	101	17.7	18.2	133.87	3.24	1988	1986
20	11	26971	11	-42.8	-38.1	-52.1			8	103	17.3	17.9			1985	1986
15	4	28924	4	-41.0	-35.9	-49.1			2	108	18.3	18.5			1985	1986
10	1	31300	1	-45.9	-45.9	-45.9			1	103	27.0	27.0			1986	1986
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

234 529 541

83 095 1707 -77.7

## NORMALS OF RADIOSONDE DATA

43041 JAGDALPUR

JULY 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	310	940	310	26.8	35.2	22.0	310	22.5	310	249	1.6	2.1	0.77	0.46	1982	1981
1000	276	12											6.50			
950	276	459											24.96			
900	276	943	276	23.8	29.6	18.2	276	20.0	270	271	5.2	6.3	6.75	0.52	1982	1982
850	276	1440	276	20.4	26.2	12.0	276	17.0	270	285	6.3	7.5	7.42	0.65	1990	1987
800	276	1961	276	17.4	24.4	9.4	276	14.1	265	291	5.8	8.3	7.91	0.77	1986	1987
750	276	2514	276	14.7	21.6	7.2	276	11.1	263	292	6.6	8.2	8.37	0.87	1983	1987
700	276	3090	276	11.7	19.4	4.8	276	7.6	262	293	6.0	7.9	11.10	0.93	1983	1987
650	276	3712	275	8.8	15.0	2.0	272	4.1	256	295	5.1	7.5	9.88	1.05	1983	1982
600	276	4366	275	5.5	14.0	-1.7	271	0.5	255	297	4.1	6.7	15.23	1.09	1983	1982
550	276	5098	274	2.0	9.4	-5.1	267	-3.4	253	294	3.0	6.2	15.80	1.10	1983	1982
500	273	5835	271	-1.7	4.6	-9.1	262	-7.4	248	307	1.6	5.4	20.82	1.05	1983	1982
450	267	6684	266	-5.9	0.0	-13.5	245	-12.0	236	026	1.0	5.2	25.39	1.01	1988	1982
400	266	7584	265	-10.9	-5.1	-18.9	235	-17.8	235	086	2.5	5.5	27.04	1.06	1983	1982
350	260	8607	259	-17.0	-9.7	-23.7	218	-24.9	225	096	5.0	6.6	27.72	1.11	1988	1982
300	254	9739	254	-24.5	-15.7	-29.5	183	-32.7	219	101	8.1	9.2	35.24	1.13	1989	1981
250	241	11043	241	-34.2	-26.7	-41.1	122	-41.7	202	100	11.7	12.9	41.32	1.27	1988	1981
200	230	12565	230	-46.6	-39.1	-58.1	2	-50.7	190	099	16.7	17.6	47.76	1.49	1990	1980
175	218	13435	218	-54.0	-45.7	-62.7			176	096	20.1	21.1	51.85	1.48	1990	1982
150	186	14411	186	-62.0	-53.5	-72.5			151	095	23.4	24.5	62.10	1.73	1990	1982
125	147	15513	147	-70.3	-60.3	-77.1			115	094	27.9	29.0	65.52	1.50	1990	1982
100	112	16814	112	-74.6	-62.7	-81.9			84	100	28.7	29.6	78.36	2.02	1990	1981
80	85	18102	85	-70.9	-54.3	-80.1			64	102	22.7	23.2	96.21	2.94	1990	1980
70	78	18925	78	-66.6	-57.3	-77.5			61	100	20.7	21.2	91.95	2.95	1980	1983
60	72	19851	72	-61.7	-50.1	-74.1			56	103	20.0	20.6	82.83	2.82	1980	1983
50	63	20988	63	-57.4	-49.1	-67.1			48	108	19.8	20.6	91.31	2.84	1987	1987
40	53	22413	53	-53.5	-40.5	-61.1			39	106	18.5	19.0	103.10	2.54	1987	1985
30	37	24261	37	-49.0	-41.3	-57.1			26	103	20.8	21.3	102.14	2.89	1981	1985
25	24	25401	24	-47.1	-39.1	-54.1			18	104	20.4	21.0	113.87	3.07	1981	1985
20	13	26823	13	-46.8	-42.5	-51.1			6	105	22.0	22.3			1987	1985
15	7	28744	7	-44.6	-40.5	-50.1			6	106	24.6	25.0			1981	1985
10	1	31525	1	-41.7	-41.7	-41.7			1	098	21.0	21.0			1982	1982
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

274 523 549

98 102 1668 -75.6



## NORMALS OF RADIOSONDE DATA

43041 JAGDALPUR

AUGUST 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	327	940	327	26.3	31.6	21.0	327	22.7	327	257	1.5	2.1	0.85	0.57	1986	1987
1000	278	13											5.96			
950	278	460											26.33			
900	278	943	278	23.6	31.6	17.0	277	19.9	274	277	4.8	6.1	7.33	0.69	1980	1985
850	278	1440	278	20.4	26.2	14.2	277	17.3	274	291	5.9	7.4	8.51	0.81	1987	1985
800	278	1962	278	17.4	24.8	11.4	277	14.5	271	297	5.9	7.7	8.74	0.87	1987	1985
750	278	2512	278	14.6	23.4	8.2	275	11.4	267	298	5.3	7.4	12.13	1.02	1987	1985
700	278	3090	278	11.8	19.8	5.2	273	8.1	268	298	4.4	6.9	11.35	0.95	1987	1985
650	275	3711	275	8.8	16.6	1.8	269	4.4	257	298	3.6	6.6	13.26	1.07	1983	1979
600	275	4366	274	5.8	14.0	-1.9	266	0.5	253	303	2.7	5.9	15.12	1.00	1983	1979
550	274	5094	272	2.2	10.4	-6.5	260	-3.6	247	307	1.7	5.7	15.15	1.11	1983	1979
500	272	5838	270	-1.6	6.2	-10.9	255	-7.9	238	350	0.8	5.6	18.93	1.09	1983	1979
450	272	6682	271	-5.7	1.8	-11.1	247	-13.0	236	059	1.3	5.6	20.82	1.19	1983	1979
400	270	7586	269	-10.8	-3.7	-16.5	236	-19.0	235	088	2.6	5.9	26.16	1.32	1988	1979
350	265	8605	264	-16.8	-9.5	-25.5	208	-25.3	225	093	4.9	7.4	31.56	1.32	1988	1985
300	257	9741	256	-24.4	-16.7	-32.5	168	-32.3	219	100	7.6	9.2	36.58	1.48	1988	1985
250	249	11045	249	-34.0	-23.3	-43.1	122	-41.4	206	099	10.8	12.1	44.21	1.67	1988	1985
200	237	12572	236	-46.4	-39.1	-56.1	1	-48.5	196	097	15.2	16.3	56.09	1.81	1988	1985
175	226	13447	225	-53.9	-46.9	-63.1			184	096	18.2	19.1	63.15	1.92	1988	1979
150	197	14418	197	-62.1	-53.9	-72.1			162	094	20.9	22.1	70.95	1.92	1988	1981
125	167	15525	167	-70.3	-61.9	-83.7			128	096	25.1	26.3	78.73	1.92	1988	1981
100	136	16831	136	-74.9	-64.1	-83.3			104	098	24.5	25.4	93.82	1.49	1989	1981
80	120	18135	120	-70.1	-58.3	-79.9			89	100	22.6	23.4	91.90	1.75	1986	1985
70	106	18961	106	-65.9	-53.1	-75.9			74	105	20.9	21.5	101.96	1.82	1986	1988
60	89	19882	89	-61.1	-51.1	-68.7			62	104	17.7	18.1	109.22	1.49	1989	1988
50	79	21025	79	-56.8	-46.9	-64.1			51	102	18.4	19.2	112.00	1.87	1989	1985
40	69	22451	69	-53.1	-42.3	-60.9			45	100	19.0	19.5	162.33	2.36	1989	1985
30	55	24320	55	-48.7	-36.7	-56.5			34	102	20.0	20.5	184.27	2.51	1989	1988
25	42	25497	42	-46.8	-33.3	-53.5			25	097	19.8	20.3	207.57	2.43	1989	1988
20	28	26973	28	-43.9	-34.9	-50.1			14	104	21.3	21.9	197.10	1.99	1988	1985
15	12	28956	12	-42.5	-37.1	-49.1			8	096	25.3	25.8			1988	1985
10	2	31460	2	-40.4	-37.7	-43.1			1	073	29.0	29.0			1982	1985
7	1	33763	1	-41.1	-41.1	-41.1									1985	1985

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
272	520	554					122	103	1669	-76.2

# NORMALS OF RADIOSONDE DATA

43041 JAGDALPUR

SEPTEMBER 1979-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	298	943	298	26.8	31.6	21.6	298	22.7	298	279	0.6	1.7	0.63	0.63	1986	1989
1000	266	37											7.51			
950	265	481											23.02			
900	265	968	265	24.0	28.4	18.2	263	19.6	265	312	2.2	4.6	7.87	0.60	1987	1983
850	265	1465	265	20.5	25.0	13.8	263	16.6	265	325	2.6	5.4	8.26	0.63	1987	1979
800	265	1987	265	17.3	22.0	11.2	263	13.4	265	344	2.6	5.5	7.94	0.72	1988	1979
750	265	2531	265	14.1	19.6	8.2	261	9.8	264	347	2.4	5.6	13.11	0.74	1988	1979
700	265	3113	265	10.9	17.0	5.8	259	5.9	264	339	1.8	5.4	8.75	0.74	1988	1979
650	263	3730	263	7.8	14.2	2.4	254	2.4	259	314	1.6	5.1	12.17	0.83	1988	1987
600	261	4383	261	4.6	11.4	-0.5	249	-1.4	257	302	0.9	5.0	10.32	0.83	1988	1979
550	261	5105	261	1.0	8.0	-4.7	242	-5.5	257	272	0.3	4.7	16.57	0.78	1988	1983
500	260	5848	260	-3.0	4.8	-8.9	231	-9.9	255	126	0.6	4.7	13.76	0.88	1988	1979
450	256	6689	256	-7.3	-0.9	-13.7	212	-14.7	249	109	1.4	5.0	24.92	0.96	1983	1981
400	253	7586	252	-12.5	-4.7	-18.9	186	-20.7	243	094	2.6	5.4	19.78	0.98	1988	1979
350	250	8600	249	-18.8	-10.5	-25.5	164	-27.3	240	098	4.0	6.3	26.42	1.20	1988	1985
300	246	9728	245	-26.4	-17.1	-34.1	133	-34.7	237	105	5.8	7.4	31.24	1.32	1988	1979
250	236	11023	236	-36.2	-26.3	-44.3	79	-43.5	225	109	8.1	9.4	35.18	1.54	1988	1979
200	225	12534	225	-48.7	-36.7	-56.9			212	105	11.3	12.6	44.17	1.94	1988	1987
175	208	13396	208	-56.3	-46.7	-66.1			195	104	13.3	14.6	54.74	2.20	1989	1985
150	183	14359	183	-64.3	-50.3	-76.1			168	104	15.6	17.1	62.21	2.43	1988	1985
125	143	15457	143	-72.1	-64.1	-81.1			126	102	17.5	18.6	70.48	2.57	1989	1981
100	113	16753	113	-75.7	-65.9	-86.1			102	103	18.2	19.1	74.88	1.99	1981	1980
80	85	18055	85	-70.8	-60.1	-84.1			76	105	15.0	16.0	93.35	3.44	1985	1979
70	74	18880	74	-66.4	-55.9	-80.9			66	105	14.0	14.6	106.67	3.12	1985	1979
60	66	19814	66	-61.9	-51.1	-72.3			59	105	13.8	14.2	107.57	2.65	1989	1979
50	59	20961	59	-57.8	-48.5	-67.7			51	106	14.6	15.1	118.21	2.53	1985	1982
40	52	22395	52	-54.1	-43.9	-61.7			46	106	15.2	15.6	121.38	2.84	1985	1980
30	40	24253	40	-49.8	-36.9	-62.3			36	106	16.3	17.1	127.73	3.23	1985	1987
25	33	25426	33	-48.0	-39.7	-56.5			27	097	18.0	18.5	138.63	2.72	1986	1982
20	26	26913	26	-45.8	-37.7	-54.1			21	101	19.6	20.0	148.68	3.31	1985	1982
15	17	28796	17	-44.2	-34.1	-50.9			12	097	21.1	21.7			1987	1982
10	8	31455	8	-41.9	-37.5	-49.5			6	094	20.5	21.3			1987	1979
7																

**FREEZING LEVEL**

N P ALT

261 536 530

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

101 105 1649 -77.3

# NORMALS OF RADIOSONDE DATA

43041 JAGDALPUR

OCTOBER 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	340	947	340	27.1	31.6	20.2	340	19.6	340	024	1.0	1.6	1.09	0.83	1986	1982
<i>1000</i>	302	74											12.05			
<i>950</i>	302	520	30	26.3	31.0	22.4	30	18.7	31	046	1.8	2.0	20.80	1.75	1981	1983
<i>900</i>	302	1006	302	24.1	28.6	16.4	301	13.8	302	037	2.9	4.5	12.60	0.54	1989	1979
<i>850</i>	302	1502	302	20.2	26.4	12.8	301	10.9	302	037	2.7	4.6	13.18	0.58	1989	1979
<i>800</i>	302	2021	302	16.2	23.8	9.6	295	8.3	302	043	2.5	4.8	13.97	0.71	1989	1983
<i>750</i>	302	2570	300	12.7	20.0	5.2	272	4.6	302	047	2.1	5.2	13.20	0.86	1989	1983
<i>700</i>	302	3141	302	9.8	17.0	2.4	235	1.0	301	035	1.2	5.0	16.18	1.03	1989	1979
<i>650</i>	300	3759	300	7.1	14.2	-1.9	198	-2.1	299	302	0.3	5.1	16.55	1.26	1985	1979
<i>600</i>	298	4407	298	4.1	14.4	-6.9	167	-5.8	296	257	1.0	5.3	17.93	1.19	1988	1988
<i>550</i>	298	5129	298	0.6	9.0	-7.1	143	-9.4	296	258	1.6	5.7	19.74	1.22	1987	1979
<i>500</i>	296	5868	296	-3.6	3.0	-12.1	124	-13.6	294	262	1.8	5.7	22.44	1.32	1985	1979
<i>450</i>	295	6704	295	-8.2	-2.1	-17.3	97	-17.3	293	268	2.2	5.8	30.34	1.43	1985	1979
<i>400</i>	294	7601	294	-13.6	-6.9	-23.3	76	-22.2	293	260	3.0	6.3	30.43	1.57	1988	1979
<i>350</i>	292	8610	292	-20.1	-12.5	-30.5	60	-29.4	289	258	3.9	7.1	36.44	1.87	1980	1979
<i>300</i>	288	9732	287	-28.1	-20.5	-38.7	38	-36.6	286	249	4.5	8.0	48.32	2.07	1987	1979
<i>250</i>	280	11014	279	-38.1	-25.1	-49.3	15	-44.2	277	236	5.3	9.2	63.54	2.33	1980	1979
<i>200</i>	264	12510	264	-50.8	-41.7	-69.3			257	219	6.2	10.7	78.20	2.74	1987	1982
<i>175</i>	236	13366	235	-57.7	-47.5	-70.1			226	211	6.4	11.4	89.05	2.52	1990	1979
<i>150</i>	195	14320	195	-65.3	-51.9	-76.7			187	200	5.9	11.1	96.08	2.71	1990	1981
<i>125</i>	153	15410	153	-72.4	-59.1	-84.5			143	177	4.8	9.6	107.39	2.74	1988	1979
<i>100</i>	122	16707	122	-76.8	-61.3	-87.9			112	135	4.2	8.5	105.77	2.66	1990	1979
<i>80</i>	103	18005	103	-72.1	-59.1	-81.3			97	106	6.5	8.3	80.13	2.69	1985	1979
<i>70</i>	95	18822	95	-67.6	-52.1	-77.7			91	107	7.6	8.9	92.97	3.47	1985	1983
<i>60</i>	87	19740	87	-62.7	-49.3	-73.5			84	108	7.7	8.5	98.32	4.09	1985	1983
<i>50</i>	81	20869	81	-58.1	-45.3	-72.9			79	110	8.3	9.1	107.05	2.82	1985	1979
<i>40</i>	72	22284	72	-54.6	-44.7	-70.3			70	097	9.6	10.4	122.23	2.82	1987	1979
<i>30</i>	65	24135	65	-50.5	-39.1	-66.9			62	100	10.1	11.6	151.99	3.43	1987	1979
<i>25</i>	52	25325	52	-48.1	-38.1	-63.1			45	096	13.5	13.9	174.74	3.70	1985	1979
<i>20</i>	31	26734	31	-47.6	-34.9	-58.7			25	093	13.6	14.5	219.31	4.07	1985	1979
<i>15</i>	16	28572	16	-46.5	-38.3	-55.1			12	095	14.8	15.2			1988	1979
<i>10</i>	7	31106	7	-45.8	-42.7	-52.7			4	110	23.6	24.2			1986	1979
<i>7</i>	2	33430	2	-43.1	-38.9	-47.3			2	107	25.4	26.0			1983	1983

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

297 542 523

110 101 1668 -78.0

## NORMALS OF RADIOSONDE DATA

43041 JAGDALPUR

NOVEMBER 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	300	950	300	25.5	29.6	15.0	300	14.4	300	026	1.4	1.8	1.05	0.59	1981	1985
1000	286	102											8.25			
950	285	544	128	25.4	29.8	21.0	128	13.2	128	035	2.2	2.6	15.16	0.78	1980	1983
900	285	1026	285	22.0	29.6	11.0	283	9.4	281	040	3.5	4.3	7.46	0.60	1980	1990
850	285	1519	285	17.9	28.0	12.0	283	6.6	281	040	2.9	4.1	6.99	0.92	1989	1987
800	285	2035	285	14.1	24.0	7.4	265	3.6	281	042	2.3	4.3	5.81	1.23	1987	1983
750	285	2578	285	11.5	20.8	5.0	196	1.6	281	039	1.4	4.2	6.50	1.20	1987	1981
700	285	3149	285	9.3	18.8	0.2	141	-1.3	280	343	1.1	4.7	6.76	1.10	1987	1989
650	284	3762	283	6.6	16.0	-3.5	106	-2.9	277	315	1.6	5.1	7.06	0.96	1987	1988
600	283	4411	282	3.4	11.0	-5.9	92	-6.4	274	303	2.6	5.6	9.37	0.84	1987	1989
550	283	5131	282	-0.4	6.4	-9.3	74	-10.8	273	298	3.3	6.2	11.62	0.90	1987	1989
500	282	5869	281	-4.7	2.0	-13.1	55	-14.8	271	295	4.4	7.3	14.35	1.06	1987	1982
450	276	6699	276	-9.7	-2.7	-19.5	44	-19.7	270	292	6.1	8.9	17.48	1.22	1987	1982
400	273	7592	273	-15.3	-7.9	-23.7	35	-24.5	268	287	7.9	10.4	22.16	1.26	1987	1982
350	272	8595	272	-21.9	-12.9	-29.9	26	-30.0	266	279	9.9	12.4	23.56	1.33	1987	1982
300	268	9708	268	-29.6	-21.7	-38.9	12	-38.2	263	267	12.6	14.5	33.46	1.50	1988	1980
250	260	10984	260	-39.4	-27.1	-49.1	4	-45.7	254	256	14.5	16.4	39.79	1.89	1988	1982
200	243	12475	243	-51.5	-41.3	-64.1			236	247	15.8	18.6	50.59	2.26	1988	1982
175	217	13331	217	-58.3	-50.5	-70.5			206	246	14.6	17.5	50.47	2.42	1990	1987
150	191	14288	191	-65.3	-56.1	-78.7			178	248	13.0	16.0	61.64	2.86	1988	1987
125	143	15383	143	-71.5	-61.1	-87.1			130	255	8.8	12.3	82.28	3.40	1988	1987
100	114	16680	114	-75.8	-61.1	-84.3			101	253	2.7	8.6	97.07	2.42	1988	1987
80	98	17977	98	-73.7	-63.1	-84.1			85	256	0.6	6.4	112.28	1.86	1985	1982
70	91	18793	91	-70.0	-61.1	-81.9			79	089	1.9	5.7	116.83	2.26	1985	1982
60	87	19697	87	-65.2	-54.1	-80.1			76	113	2.4	5.6	121.41	2.70	1985	1982
50	81	20834	80	-60.0	-47.1	-75.5			67	122	2.5	5.9	126.99	2.53	1985	1981
40	70	22252	70	-55.5	-44.7	-73.7			56	103	4.1	6.6	141.92	2.38	1985	1981
30	56	24122	56	-51.6	-42.5	-69.9			41	109	5.6	8.8	198.23	2.81	1985	1981
25	49	25322	49	-49.3	-42.7	-67.9			36	096	7.7	10.1	224.87	3.62	1986	1981
20	34	26857	34	-47.3	-40.1	-64.9			18	088	7.5	9.9	314.60	6.03	1988	1981
15	16	28730	16	-46.3	-39.7	-60.3			8	089	7.3	9.5			1989	1981
10	4	31401	4	-44.1	-37.5	-49.1			1	091	23.0	23.0			1990	1986
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

282 555 504

98 096 1697 -77.5

## NORMALS OF RADIOSONDE DATA

43041 JAGDALPUR

DECEMBER 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	280	951	280	24.7	29.0	16.4	280	12.6	280	026	0.7	1.2	1.55	0.57	1985	1980
<i>1000</i>	245	120											14.44			
<i>950</i>	243	565	197	24.7	28.8	20.2	197	12.2	197	030	1.3	2.0	14.53	0.71	1985	1980
<i>900</i>	244	1042	244	20.9	28.0	15.0	243	7.6	243	031	1.8	3.1	12.37	0.73	1985	1980
<i>850</i>	244	1532	244	16.7	24.6	12.8	241	5.0	243	019	1.6	2.9	11.84	0.82	1982	1983
<i>800</i>	244	2045	244	13.1	19.2	8.2	214	2.2	242	020	1.1	3.0	11.27	1.00	1987	1981
<i>750</i>	244	2587	244	10.8	17.2	3.4	152	-1.8	241	360	1.0	3.9	10.24	1.10	1987	1986
<i>700</i>	244	3157	243	8.5	15.2	1.4	97	-5.2	240	318	1.8	4.8	10.46	0.99	1987	1981
<i>650</i>	243	3768	242	5.7	13.8	-1.5	67	-7.2	238	302	3.1	5.7	11.25	0.95	1987	1986
<i>600</i>	242	4415	242	2.4	10.6	-4.1	46	-9.1	237	294	4.6	7.0	11.85	0.85	1987	1981
<i>550</i>	242	5130	242	-1.5	6.6	-7.5	35	-13.2	237	289	6.1	8.7	14.47	0.91	1987	1986
<i>500</i>	240	5866	240	-6.0	0.8	-11.5	30	-17.7	235	283	7.7	10.5	14.88	0.97	1987	1986
<i>450</i>	235	6692	235	-11.1	-2.5	-17.1	25	-22.7	230	280	9.4	12.2	19.64	1.02	1990	1988
<i>400</i>	235	7579	235	-16.9	-7.7	-24.1	21	-26.7	230	276	12.0	14.3	20.76	1.17	1987	1988
<i>350</i>	231	8578	231	-23.4	-15.1	-32.7	15	-32.7	222	276	14.9	17.0	25.07	1.37	1987	1988
<i>300</i>	223	9683	223	-31.3	-23.9	-41.9	14	-40.2	215	273	17.8	20.3	31.92	2.34	1990	1988
<i>250</i>	208	10947	208	-41.2	-31.7	-50.1	1	-45.3	201	265	20.1	22.8	38.94	2.47	1990	1987
<i>200</i>	183	12422	183	-53.0	-45.9	-62.1			176	258	21.3	24.1	58.61	2.70	1989	1981
<i>175</i>	158	13270	158	-59.3	-50.1	-71.5			150	259	21.2	23.9	71.89	3.03	1990	1981
<i>150</i>	128	14218	128	-65.1	-52.9	-73.1			120	263	19.2	21.1	89.58	3.43	1990	1988
<i>125</i>	102	15311	102	-70.0	-56.1	-77.9			92	267	17.2	18.8	102.36	3.34	1985	1982
<i>100</i>	77	16625	77	-74.8	-65.5	-82.9			71	273	9.7	12.0	128.38	3.52	1989	1988
<i>80</i>	66	17915	66	-74.3	-61.5	-83.3			58	282	4.0	8.4	143.77	3.38	1985	1982
<i>70</i>	63	18716	63	-70.4	-59.1	-79.3			56	277	3.4	7.3	156.76	4.08	1986	1980
<i>60</i>	60	19626	60	-65.6	-55.5	-76.5			53	023	0.9	7.3	158.52	4.80	1986	1987
<i>50</i>	60	20752	60	-60.1	-50.1	-72.1			53	018	0.6	6.4	167.52	4.12	1988	1987
<i>40</i>	57	22167	57	-55.3	-46.5	-64.5			50	067	1.6	6.7	171.60	3.32	1988	1987
<i>30</i>	44	23997	44	-51.7	-44.5	-58.7			35	117	1.4	7.5	190.82	3.26	1988	1988
<i>25</i>	29	25144	29	-49.9	-41.3	-55.5			21	163	0.6	7.5	183.58	2.27	1981	1982
<i>20</i>	16	26609	16	-47.8	-42.5	-53.5			10	200	1.4	8.2			1980	1982
<i>15</i>	4	28628	4	-46.3	-43.5	-49.1			3	098	8.6	11.0			1990	1983
<i>10</i>	1	31210	1	-45.3	-45.3	-45.3			1	171	4.0	4.0			1983	1983
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
241	569	483					67	094	1695	-77.3

# NORMALS OF RADIOSONDE DATA

42339 JODHPUR

JANUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	619	988	619	23.3	30.2	13.0	619	4.2	619	016	1.2	2.8	0.89	1.11	1990	1978
1000	498	118	1	12.2	12.2	12.2							6.97		1985	1985
950	491	536	489	19.2	29.0	8.0	446	1.1	489	001	1.4	3.9	14.94	0.94	1976	1974
900	491	1022	491	14.7	23.4	7.0	442	-1.2	488	353	1.2	4.0	6.78	0.82	1987	1985
850	491	1501	490	10.8	20.0	2.0	426	-3.3	490	309	1.4	4.2	7.88	0.83	1975	1985
800	491	2003	489	7.6	16.2	-0.5	385	-5.9	487	276	3.3	5.6	8.93	1.11	1987	1985
750	490	2533	489	5.0	14.4	-5.1	316	-8.4	486	272	6.2	7.8	11.85	1.28	1989	1983
700	490	3093	488	2.3	10.6	-7.1	273	-11.5	485	272	9.2	10.5	12.35	1.36	1989	1984
650	488	3690	484	-0.9	7.2	-11.7	234	-14.0	481	271	12.1	13.5	20.28	1.43	1989	1983
600	487	4323	484	-4.5	5.0	-13.7	219	-17.4	480	272	15.6	17.1	17.88	1.51	1976	1983
550	484	5012	481	-8.8	2.2	-17.5	217	-21.6	475	271	19.1	20.5	24.81	1.64	1989	1985
500	480	5736	476	-13.5	0.0	-23.0	204	-25.5	470	272	22.4	23.9	25.90	1.96	1989	1977
450	474	6533	470	-18.8	-3.7	-28.0	191	-30.0	461	271	27.1	28.7	32.92	2.24	1989	1976
400	464	7400	461	-24.6	-8.5	-36.0	191	-34.9	449	271	31.6	33.4	39.16	2.49	1989	1976
350	459	8369	457	-30.9	-15.3	-45.0	169	-40.5	441	271	37.7	39.7	48.00	2.65	1989	1973
300	452	9443	451	-38.0	-22.3	-49.0	98	-45.6	425	269	42.8	45.0	57.74	2.58	1989	1972
250	437	10677	434	-45.9	-32.9	-58.0	12	-49.8	395	268	48.2	50.9	64.36	2.51	1987	1976
200	420	12137	417	-54.2	-42.5	-70.0			362	267	48.8	51.3	79.66	2.06	1987	1975
175	393	12984	391	-58.4	-44.3	-71.0			328	267	48.1	50.1	78.53	1.94	1987	1977
150	365	13942	363	-62.6	-49.9	-77.1			294	267	45.0	46.4	77.75	2.38	1987	1989
125	325	15054	325	-66.9	-53.3	-85.1			257	268	38.8	39.8	73.67	2.59	1987	1989
100	295	16389	295	-71.0	-59.7	-89.3			227	268	31.9	32.8	82.46	2.88	1987	1989
80	251	17715	250	-71.1	-59.7	-88.1			186	269	23.2	24.1	94.07	3.31	1987	1989
70	238	18519	237	-68.9	-56.3	-80.7			170	272	18.2	19.3	105.92	3.05	1986	1989
60	202	19444	201	-65.5	-52.5	-79.0			145	274	13.6	15.4	130.11	3.04	1986	1977
50	161	20573	161	-61.5	-48.1	-76.0			109	272	9.5	12.5	129.28	3.02	1986	1974
40	126	21990	126	-57.2	-44.1	-75.0			76	275	7.3	11.0	156.26	4.01	1988	1974
30	102	23841	102	-52.7	-34.1	-65.9			54	271	7.2	10.3	178.55	5.41	1988	1985
25	74	25048	74	-50.6	-38.5	-64.9			39	269	9.9	11.9	199.03	5.64	1986	1985
20	38	26497	38	-48.8	-38.9	-63.1			19	272	13.9	14.8	259.65	5.85	1988	1985
15	19	28329	19	-47.8	-35.1	-59.9			9	275	19.4	20.1			1988	1985
10	1	31222	1	-43.7	-43.7	-43.7									1984	1984
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

484 667 350

122 211 1184 -57.4

260 100 1650 -72.5

# NORMALS OF RADIOSONDE DATA

42339 JODHPUR

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	565	986	565	26.0	34.8	15.8	565	4.7	565	305	1.0	3.1	1.18	1.83	1985	1980
1000	471	101											10.23			
950	469	522	468	21.8	30.8	11.2	410	1.3	463	296	1.5	4.4	15.47	1.53	1980	1984
900	469	1013	469	17.2	26.2	3.0	409	-1.2	465	288	1.7	4.7	9.24	1.54	1980	1975
850	469	1496	469	12.9	21.6	3.2	414	-3.3	466	275	2.0	5.1	9.49	1.57	1980	1984
800	469	2002	468	9.0	20.2	-3.0	402	-5.3	466	272	3.5	5.9	10.48	1.52	1988	1976
750	468	2530	466	5.7	17.2	-4.0	360	-7.7	462	266	6.5	8.4	13.45	1.54	1985	1974
700	469	3094	464	2.6	12.0	-6.0	316	-10.5	461	266	9.3	10.8	13.00	1.54	1976	1978
650	464	3691	462	-0.9	8.0	-11.0	295	-13.5	455	268	12.3	13.7	21.06	1.61	1976	1971
600	463	4325	461	-4.6	4.2	-15.1	264	-17.0	452	268	14.9	16.4	18.45	1.56	1988	1983
550	461	5014	460	-8.9	1.0	-20.0	250	-21.0	449	269	18.3	19.5	26.67	1.64	1988	1972
500	457	5736	455	-13.7	-3.9	-26.0	232	-25.5	441	271	21.4	22.9	25.18	1.84	1989	1978
450	454	6534	452	-19.1	-9.9	-32.0	226	-30.1	435	269	25.7	27.2	33.08	2.23	1985	1978
400	453	7398	451	-24.9	-13.1	-39.0	205	-35.4	431	271	29.9	31.8	36.79	2.28	1990	1978
350	449	8366	447	-31.2	-15.0	-46.0	189	-41.2	422	271	34.9	37.1	46.23	2.67	1972	1978
300	446	9435	446	-37.9	-20.7	-52.0	100	-45.3	414	269	40.8	43.3	53.05	3.01	1990	1978
250	433	10672	432	-45.3	-29.3	-59.0	19	-50.0	393	268	45.3	48.4	65.83	2.67	1990	1978
200	403	12142	402	-53.0	-40.5	-66.0	2	-58.2	358	267	46.8	49.4	76.39	2.28	1987	1978
175	371	12998	370	-57.1	-44.9	-70.0	1	-60.5	311	268	44.7	46.9	78.78	2.45	1990	1978
150	346	13959	344	-61.8	-49.1	-75.0			285	268	40.8	42.6	89.38	3.22	1986	1972
125	312	15074	312	-66.9	-54.1	-76.1			253	268	37.2	38.4	101.91	3.47	1984	1989
100	272	16408	272	-71.0	-56.3	-82.9			216	269	30.2	31.1	110.02	3.26	1984	1985
80	240	17729	239	-71.5	-59.0	-82.3			195	271	20.8	21.5	130.64	2.98	1978	1985
70	227	18532	227	-69.6	-57.1	-80.5			180	272	17.4	18.6	132.13	2.87	1983	1985
60	196	19461	195	-66.5	-53.1	-80.1			151	275	13.3	15.1	133.73	2.54	1983	1985
50	168	20583	168	-61.8	-48.7	-75.7			122	272	10.3	13.2	151.45	2.78	1983	1985
40	137	22005	137	-57.3	-44.1	-72.7			96	271	6.5	11.8	175.99	3.05	1983	1985
30	106	23876	106	-53.0	-41.5	-66.3			69	267	7.6	11.4	219.12	3.10	1983	1984
25	94	25046	94	-50.5	-36.1	-62.7			56	264	7.4	11.9	220.65	3.20	1983	1984
20	59	26581	59	-47.6	-37.5	-62.7			26	256	13.7	15.2	210.93	3.47	1983	1984
15	27	28501	27	-45.5	-36.3	-55.5			10	253	17.9	18.5	259.93	5.02	1986	1984
10	10	31078	10	-45.7	-30.1	-52.7			5	266	17.2	18.8			1990	1990
7	3	33694	3	-39.8	-35.3	-44.1									1986	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

463	665	352			104	225	1154	-54.4			254	099	1658	-72.7
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# NORMALS OF RADIOSONDE DATA

42339 JODHPUR

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	589	984	589	32.3	40.6	14.4	589	7.2	589	262	2.0	3.6	1.00	1.67	1984	1982
1000	563	72											8.24			
950	561	506	559	28.4	39.0	11.8	470	3.6	558	263	3.0	4.9	15.38	1.86	1977	1982
900	561	1004	560	23.5	34.0	8.8	467	0.9	557	265	3.3	5.2	7.83	1.92	1974	1982
850	561	1498	560	18.8	29.0	5.2	486	-1.2	557	264	3.5	5.3	9.08	1.92	1977	1982
800	561	2013	561	14.1	24.0	1.2	500	-3.7	556	262	3.9	5.5	10.89	1.82	1972	1982
750	561	2546	561	9.6	19.8	-3.1	491	-6.2	556	263	5.2	6.6	18.64	1.90	1988	1982
700	561	3119	561	5.4	19.0	-6.9	461	-9.3	554	265	7.1	8.4	16.94	1.91	1977	1982
650	559	3720	557	1.3	10.8	-10.1	402	-12.5	549	268	9.5	10.8	23.48	1.75	1988	1982
600	555	4360	553	-2.7	6.0	-14.0	355	-16.4	540	268	12.0	13.3	22.56	1.53	1973	1971
550	547	5052	545	-7.2	2.6	-18.0	316	-20.4	532	269	14.2	15.6	25.09	1.49	1988	1971
500	544	5781	540	-12.1	3.0	-24.0	284	-25.0	524	269	16.9	18.3	29.22	1.58	1974	1971
450	540	6582	537	-17.7	-7.3	-30.0	261	-30.2	518	271	20.0	21.5	31.46	1.66	1987	1971
400	539	7451	537	-24.0	-10.1	-36.0	237	-35.4	512	271	23.2	24.9	36.05	1.86	1990	1971
350	528	8421	523	-30.9	-15.0	-42.0	217	-41.7	494	273	26.5	28.7	39.51	2.32	1974	1978
300	515	9492	511	-38.5	-24.7	-51.0	94	-46.6	477	272	30.1	32.8	49.03	2.73	1985	1978
250	496	10724	493	-46.5	-30.3	-59.5	9	-48.0	439	271	33.4	36.5	58.10	2.81	1987	1981
200	465	12180	461	-53.7	-39.9	-66.7	1	-56.9	400	268	37.0	39.7	68.61	2.04	1987	1981
175	429	13031	425	-57.3	-44.7	-70.0	1	-55.7	364	268	36.1	38.2	77.33	1.81	1990	1974
150	398	13997	397	-61.6	-46.5	-74.0	1	-57.7	332	268	33.5	35.3	82.29	1.82	1988	1977
125	344	15111	344	-66.8	-52.3	-77.7			283	269	29.2	30.6	98.82	2.13	1990	1989
100	307	16441	307	-71.2	-55.7	-86.3			247	267	21.5	22.6	109.23	2.55	1990	1982
80	258	17764	258	-72.1	-58.1	-87.9			204	271	14.7	16.4	129.78	3.03	1987	1989
70	229	18568	229	-70.4	-53.0	-82.3			177	274	11.4	13.4	144.73	2.95	1972	1989
60	186	19500	186	-66.9	-50.5	-78.0			138	276	8.4	11.0	161.07	3.05	1986	1977
50	157	20633	157	-62.2	-46.9	-75.5			116	271	5.7	9.2	176.27	4.22	1986	1985
40	132	22021	132	-57.6	-44.1	-74.5			99	271	4.3	8.1	210.29	4.52	1986	1985
30	100	23857	100	-53.1	-37.5	-68.3			72	280	4.1	7.8	242.60	5.52	1987	1990
25	81	25046	81	-51.1	-37.7	-69.0			54	272	5.5	8.0	244.02	5.73	1986	1977
20	57	26573	57	-47.6	-36.9	-62.3			36	267	8.0	9.3	186.07	3.30	1990	1990
15	36	28461	36	-46.3	-33.3	-59.9			19	274	6.9	9.8	217.60	3.01	1990	1990
10	14	31137	14	-43.3	-34.7	-59.1			8	289	11.9	12.6			1986	1990
7	3	33506	3	-40.6	-37.5	-43.7			1	293	20.0	20.0			1984	1987

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

556 636 390

152 228 1134 -55.4

268 097 1670 -72.9



# NORMALS OF RADIOSONDE DATA

42339 JODHPUR

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	570	980	570	37.5	44.0	22.0	570	10.4	570	248	3.3	4.5	0.95	1.40	1973	1982
<i>1000</i>	525	31											7.94			
<i>950</i>	525	479	524	33.8	41.0	19.0	426	6.9	522	249	4.6	6.0	12.95	1.56	1973	1976
<i>900</i>	525	980	525	28.9	38.0	16.2	427	3.9	519	254	4.8	6.2	6.26	1.57	1973	1983
<i>850</i>	525	1483	524	24.1	33.6	13.6	444	1.6	521	254	4.9	6.4	6.07	1.49	1989	1983
<i>800</i>	524	2007	522	19.3	30.2	8.8	474	-1.0	513	256	4.7	6.0	7.05	1.54	1989	1983
<i>750</i>	524	2548	523	14.2	25.2	3.2	487	-3.6	513	259	4.9	6.2	11.30	1.51	1988	1983
<i>700</i>	524	3132	523	9.2	18.2	-1.3	487	-6.7	513	262	5.3	6.8	10.98	1.38	1988	1983
<i>650</i>	516	3737	514	4.4	14.0	-6.1	440	-10.5	501	268	6.5	8.0	20.17	1.30	1988	1983
<i>600</i>	508	4386	505	-0.2	10.6	-10.0	371	-14.7	489	271	8.5	10.0	16.35	1.32	1989	1976
<i>550</i>	505	5082	504	-4.8	5.6	-18.0	298	-19.3	488	272	10.3	11.9	20.19	1.35	1989	1978
<i>500</i>	504	5819	502	-9.9	0.0	-23.0	264	-24.2	480	273	12.6	14.0	20.96	1.34	1988	1978
<i>450</i>	501	6627	498	-15.4	-3.9	-27.0	239	-28.8	468	274	15.0	16.6	25.34	1.40	1990	1976
<i>400</i>	494	7503	490	-21.8	-11.5	-35.0	219	-33.9	459	273	17.4	19.3	27.55	1.50	1990	1976
<i>350</i>	489	8480	486	-28.9	-17.5	-44.0	189	-39.9	448	274	20.3	22.4	32.34	1.62	1990	1976
<i>300</i>	476	9560	474	-36.7	-23.5	-48.1	132	-46.7	432	273	23.9	26.4	37.23	1.80	1990	1982
<i>250</i>	467	10802	465	-44.9	-30.9	-57.9	17	-52.3	411	272	28.2	30.9	45.33	2.21	1990	1982
<i>200</i>	444	12269	441	-53.0	-37.9	-64.9	2	-56.9	377	267	30.1	32.7	55.67	2.23	1989	1983
<i>175</i>	417	13124	415	-56.9	-42.5	-71.0			346	266	29.3	31.6	61.66	1.85	1989	1972
<i>150</i>	390	14091	389	-61.3	-46.5	-72.0			319	267	26.4	28.5	70.84	1.99	1988	1977
<i>125</i>	359	15207	359	-66.3	-50.7	-82.0			282	265	22.2	23.8	75.69	2.40	1988	1974
<i>100</i>	329	16542	329	-71.1	-56.7	-84.7			253	265	15.0	17.1	93.18	2.48	1988	1981
<i>80</i>	285	17861	285	-71.6	-55.7	-89.1			208	269	8.4	11.6	112.27	2.60	1989	1981
<i>70</i>	259	18661	259	-69.7	-57.1	-89.1			190	277	4.6	9.1	121.50	3.35	1987	1981
<i>60</i>	232	19590	232	-65.7	-50.5	-83.0			163	284	1.6	8.0	128.45	4.16	1990	1978
<i>50</i>	200	20721	200	-60.3	-41.3	-78.0			130	074	0.3	7.2	136.81	4.66	1986	1978
<i>40</i>	166	22151	166	-54.7	-37.3	-73.0			102	083	0.8	6.0	163.31	3.94	1990	1976
<i>30</i>	133	24030	133	-49.1	-31.9	-66.0			73	315	1.1	6.3	214.36	4.47	1986	1976
<i>25</i>	108	25248	108	-46.4	-27.9	-64.0			51	308	0.3	6.4	302.62	5.31	1986	1976
<i>20</i>	74	26717	74	-43.9	-30.9	-58.9			32	275	3.0	7.9	323.25	4.74	1989	1982
<i>15</i>	42	28628	42	-41.6	-22.5	-53.1			16	268	7.1	8.6	262.88	5.40	1989	1990
<i>10</i>	15	31375	15	-39.7	-28.3	-49.7			7	263	7.8	10.0			1988	1982
<i>7</i>	5	33958	5	-37.9	-31.1	-45.1			2	272	27.3	31.0			1988	1984

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
505	602	435	89	205	1216	-57.1	282	094	1695	-73.1

# NORMALS OF RADIOSONDE DATA

42339 JODHPUR

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	613	976	613	39.7	46.0	20.6	610	12.8	612	237	5.0	6.0	2.10	2.19	1973	1982
1000	563	-2											13.98			
950	563	448	563	36.6	43.6	24.0	494	10.7	561	239	6.5	7.6	15.99	1.50	1989	1974
900	563	955	562	31.7	40.2	20.0	483	8.1	560	244	6.5	7.5	11.35	1.45	1989	1976
850	563	1462	563	26.9	35.4	12.4	498	5.9	557	244	6.5	7.3	9.65	1.46	1990	1988
800	563	1991	563	22.3	31.0	11.0	495	3.3	549	248	5.9	6.8	8.85	1.53	1973	1975
750	563	2540	560	17.6	26.4	7.0	482	-0.5	546	256	5.0	6.4	11.32	1.61	1990	1975
700	563	3130	558	12.7	23.8	1.0	462	-4.2	541	266	4.5	6.3	7.97	1.66	1990	1982
650	555	3742	551	7.5	20.2	-7.0	440	-7.9	527	278	4.4	6.6	16.80	1.54	1990	1973
600	550	4398	549	2.5	17.4	-7.0	393	-12.1	518	291	5.2	7.5	12.48	1.51	1990	1972
550	544	5103	543	-2.1	10.6	-12.0	317	-17.3	506	297	6.6	8.6	16.17	1.51	1990	1972
500	538	5846	536	-7.0	6.0	-16.1	233	-22.5	501	296	8.3	10.3	19.50	1.61	1990	1979
450	529	6664	528	-12.2	0.2	-21.5	202	-27.7	488	294	10.3	12.3	27.28	1.66	1990	1982
400	525	7550	525	-18.3	-5.3	-28.1	186	-33.0	481	291	12.2	14.3	28.15	1.83	1990	1990
350	513	8540	512	-25.2	-10.9	-37.5	167	-39.3	458	286	14.3	16.3	36.82	1.97	1988	1990
300	500	9639	496	-32.4	-17.3	-44.7	136	-45.7	445	280	17.1	19.3	43.76	2.16	1990	1990
250	479	10901	474	-40.9	-24.5	-54.9	48	-50.6	418	273	19.4	21.5	55.65	2.37	1990	1982
200	453	12386	452	-50.8	-34.1	-63.3	2	-54.6	389	266	20.4	22.5	68.59	2.10	1990	1990
175	433	13246	432	-56.1	-39.3	-67.0			366	264	19.7	21.9	75.32	2.01	1990	1977
150	408	14212	408	-61.8	-45.3	-75.0			341	262	17.3	19.4	82.43	2.32	1990	1977
125	366	15322	366	-67.5	-51.9	-79.0			300	259	12.3	15.2	91.54	2.66	1990	1977
100	333	16644	333	-72.6	-59.5	-87.3			266	257	6.7	11.3	99.90	3.03	1990	1988
80	290	17957	290	-72.6	-57.3	-88.0			224	189	0.3	8.6	105.16	3.43	1986	1978
70	270	18749	270	-69.9	-50.3	-85.7			204	107	3.0	8.0	111.41	4.17	1986	1988
60	245	19682	245	-64.4	-45.5	-82.5			181	099	4.7	7.3	117.71	3.49	1986	1985
50	215	20833	214	-58.2	-41.5	-78.0			153	087	5.1	6.9	142.87	3.83	1986	1978
40	181	22250	181	-52.7	-33.3	-70.0			127	086	6.5	7.7	155.65	3.33	1986	1978
30	139	24120	139	-47.6	-33.1	-64.0			95	084	6.4	7.7	178.44	4.07	1986	1978
25	109	25330	109	-45.1	-28.7	-66.0			71	082	6.1	8.0	233.22	6.48	1989	1978
20	73	26834	73	-42.5	-31.7	-53.1			41	084	4.5	7.3	204.89	3.30	1988	1990
15	42	28743	42	-40.2	-29.5	-51.1			22	073	3.7	7.9	272.12	3.54	1987	1990
10	15	31477	15	-38.6	-31.3	-48.5			5	303	3.8	6.8			1987	1990
7	2	33992	2	-38.3	-37.5	-39.1			1	285	15.0	15.0			1987	1985

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

549	572	477														
			20	200	1232	-56.8				294	095	1696	-74.3			

## NORMALS OF RADIOSONDE DATA

42339 JODHPUR

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	599	972	599	38.8	45.2	27.0	599	19.2	598	226	4.3	5.4	1.02	1.04	1979	1983
<i>1000</i>	569	-38											8.55			
<i>950</i>	564	415	563	35.8	44.2	25.0	552	16.8	561	228	5.4	6.9	11.77	0.89	1988	1989
<i>900</i>	564	916	563	30.6	38.2	18.0	556	13.8	560	233	5.5	7.1	9.98	0.92	1988	1976
<i>850</i>	564	1423	562	26.0	35.6	18.0	555	11.8	562	235	5.2	7.0	10.73	0.92	1988	1975
<i>800</i>	564	1952	562	22.0	31.2	13.0	541	9.1	559	245	3.9	6.2	11.88	0.89	1988	1976
<i>750</i>	564	2510	564	18.3	29.2	10.0	518	4.9	552	266	2.0	5.5	14.14	0.91	1988	1974
<i>700</i>	564	3094	564	14.0	26.6	5.2	498	0.1	552	319	1.4	5.5	13.65	1.02	1988	1982
<i>650</i>	560	3712	560	9.2	21.8	-1.0	480	-4.8	541	344	2.3	6.0	16.35	1.11	1988	1976
<i>600</i>	560	4370	560	4.3	17.0	-5.0	463	-9.1	534	349	3.3	6.9	15.59	1.22	1988	1976
<i>550</i>	556	5084	554	-0.3	11.6	-10.1	413	-12.9	526	344	3.6	7.2	23.33	1.42	1988	1979
<i>500</i>	544	5829	540	-4.3	6.0	-14.9	327	-16.5	508	331	3.9	7.8	19.31	1.40	1974	1981
<i>450</i>	535	6663	532	-7.9	0.0	-20.7	246	-21.2	492	322	4.2	8.3	23.09	1.34	1973	1982
<i>400</i>	529	7562	524	-12.7	-3.5	-25.5	207	-25.5	480	310	4.4	8.7	24.22	1.64	1989	1979
<i>350</i>	518	8576	512	-19.0	-10.5	-30.3	178	-31.3	463	298	4.3	9.2	29.28	1.70	1987	1979
<i>300</i>	499	9702	497	-26.8	-15.7	-39.0	157	-38.7	447	288	4.3	9.4	34.16	1.85	1989	1975
<i>250</i>	478	10995	477	-36.4	-26.5	-48.7	122	-47.1	415	275	4.2	9.9	44.55	1.96	1989	1979
<i>200</i>	458	12504	457	-48.1	-37.7	-58.0	1	-58.1	389	263	3.0	9.9	56.25	2.15	1986	1978
<i>175</i>	433	13373	433	-54.9	-44.5	-66.9			361	261	1.8	9.9	66.96	2.36	1989	1979
<i>150</i>	404	14342	404	-62.3	-50.5	-74.3			335	135	0.4	9.6	77.54	2.55	1989	1979
<i>125</i>	368	15447	367	-69.8	-56.5	-84.0			297	088	3.7	10.1	93.35	2.96	1988	1978
<i>100</i>	339	16750	338	-75.8	-63.3	-89.0			273	084	8.2	11.3	113.56	3.08	1988	1978
<i>80</i>	300	18038	299	-75.4	-58.5	-88.0			236	092	10.9	12.0	132.74	3.76	1986	1973
<i>70</i>	281	18835	281	-71.2	-53.1	-84.0			219	095	11.9	12.7	144.20	3.53	1986	1973
<i>60</i>	256	19748	256	-65.0	-47.3	-83.0			198	091	12.0	12.6	150.11	3.83	1988	1978
<i>50</i>	225	20885	225	-58.5	-40.1	-72.0			168	089	12.6	13.1	147.63	3.98	1988	1978
<i>40</i>	191	22323	191	-53.2	-38.5	-79.0			136	092	13.8	14.2	196.11	5.34	1986	1978
<i>30</i>	145	24207	145	-48.0	-36.5	-64.0			99	088	13.4	13.8	201.00	3.67	1982	1978
<i>25</i>	110	25405	110	-45.9	-35.7	-60.0			72	086	13.9	14.3	257.92	5.52	1986	1978
<i>20</i>	79	26930	79	-42.9	-31.3	-53.5			44	079	15.5	16.0	190.61	2.71	1987	1987
<i>15</i>	52	28888	52	-40.6	-29.3	-55.1			21	084	17.7	18.1	213.46	3.53	1988	1985
<i>10</i>	21	31583	21	-40.0	-32.5	-49.1			9	081	21.6	22.3	213.29	3.89	1986	1987
<i>7</i>	10	34115	10	-37.1	-28.9	-41.7			2	092	33.3	33.5			1989	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

552 550 508

315 097 1702 -77.7

# NORMALS OF RADIOSONDE DATA

42339 JODHPUR

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	972	620	34.1	42.0	23.0	620	22.3	620	224	4.0	5.0	0.74	1.49	1974	1975
<i>1000</i>	560	-37											7.42			
<i>950</i>	557	411	555	31.8	40.0	20.0	554	20.8	552	221	5.2	6.6	11.75	1.19	1974	1975
<i>900</i>	557	907	556	27.3	38.6	16.0	555	18.0	548	227	5.4	7.0	8.32	1.10	1987	1975
<i>850</i>	557	1409	555	23.2	35.2	13.0	552	16.2	547	230	4.6	6.8	9.53	1.04	1988	1975
<i>800</i>	557	1934	553	19.6	31.6	11.0	549	13.9	540	235	2.6	5.9	10.82	1.18	1988	1975
<i>750</i>	557	2490	556	16.6	27.8	9.0	545	9.2	531	319	0.9	5.2	16.63	1.20	1988	1975
<i>700</i>	557	3071	557	13.4	23.6	6.2	536	4.3	523	003	2.4	5.7	14.53	0.95	1988	1988
<i>650</i>	554	3692	554	9.7	19.2	3.8	519	-0.2	514	007	3.5	6.5	17.47	0.99	1988	1988
<i>600</i>	543	4350	540	5.6	15.0	-2.9	500	-4.8	497	009	3.6	6.5	17.97	1.20	1988	1979
<i>550</i>	540	5068	537	1.5	10.4	-6.0	486	-8.5	491	007	3.0	6.2	26.57	1.21	1990	1978
<i>500</i>	533	5818	528	-2.4	6.0	-11.0	452	-12.0	479	002	2.0	5.9	23.23	1.23	1990	1978
<i>450</i>	526	6657	521	-6.3	6.0	-15.3	388	-16.5	469	014	1.5	6.0	26.67	1.15	1989	1988
<i>400</i>	521	7562	519	-11.3	-3.1	-21.3	332	-21.4	462	040	1.5	6.1	28.56	1.24	1988	1988
<i>350</i>	510	8579	507	-17.5	-8.9	-25.0	282	-27.6	450	070	2.2	6.2	33.54	1.50	1989	1977
<i>300</i>	505	9716	504	-25.3	-15.1	-37.3	238	-34.9	438	088	3.1	6.6	39.21	1.67	1988	1988
<i>250</i>	485	11015	484	-35.2	-23.7	-48.7	170	-43.8	419	096	5.1	8.1	46.01	1.89	1988	1988
<i>200</i>	467	12532	466	-47.4	-36.1	-62.9	5	-51.8	397	101	8.0	10.4	55.89	2.21	1988	1988
<i>175</i>	436	13405	436	-54.6	-40.1	-67.5			359	099	10.4	12.8	67.05	2.56	1988	1979
<i>150</i>	419	14375	419	-62.5	-49.3	-76.1			342	095	12.6	14.9	78.79	2.73	1989	1979
<i>125</i>	396	15480	396	-70.3	-51.9	-82.1			316	088	15.5	17.0	96.91	2.96	1988	1979
<i>100</i>	358	16783	358	-76.4	-61.5	-87.0			284	085	18.4	19.0	104.94	3.14	1988	1973
<i>80</i>	314	18073	313	-74.5	-57.3	-86.0			246	088	19.1	19.5	129.64	3.32	1987	1977
<i>70</i>	287	18864	286	-70.2	-48.9	-82.0			223	089	18.2	18.7	144.53	3.67	1987	1973
<i>60</i>	257	19793	256	-64.6	-47.1	-81.0			200	088	18.2	18.7	158.31	3.71	1986	1973
<i>50</i>	227	20929	227	-58.8	-40.1	-76.0			167	089	18.2	18.5	175.93	4.05	1987	1973
<i>40</i>	191	22355	191	-53.7	-37.9	-72.0			137	088	18.1	18.4	209.72	4.38	1987	1973
<i>30</i>	142	24253	142	-48.8	-35.9	-65.0			96	088	20.8	21.1	239.38	4.97	1982	1973
<i>25</i>	116	25429	116	-46.7	-30.7	-69.5			80	086	22.0	22.3	272.31	5.15	1986	1985
<i>20</i>	79	26911	79	-44.3	-26.9	-56.9			53	084	23.0	23.5	249.34	3.97	1986	1985
<i>15</i>	37	28743	37	-43.9	-34.7	-53.9			23	085	27.1	27.4	192.74	2.04	1987	1985
<i>10</i>	9	31363	9	-42.4	-37.1	-49.9			7	089	27.8	27.9			1985	1985
<i>7</i>	2	33528	2	-44.2	-38.5	-49.9			2	088	43.3	43.5			1983	1985

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

538 531 534

325 098 1695 -78.1

# NORMALS OF RADIOSONDE DATA

42339 JODHPUR

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	974	620	32.5	41.4	24.0	620	23.2	620	223	3.0	4.2	0.92	1.62	1987	1978
<i>1000</i>	553	-19											8.77			
<i>950</i>	549	422	547	30.2	39.8	23.0	547	21.5	543	218	4.3	6.1	14.31	1.32	1987	1973
<i>900</i>	549	920	548	25.9	37.2	17.0	548	18.8	540	225	4.0	6.2	8.96	1.33	1987	1973
<i>850</i>	549	1420	547	22.1	32.8	12.0	547	16.5	541	232	2.9	6.1	10.17	1.40	1988	1976
<i>800</i>	549	1944	549	19.0	30.0	10.0	548	13.2	540	250	1.1	5.4	11.86	1.38	1988	1990
<i>750</i>	549	2499	546	16.4	26.6	8.0	538	8.4	534	011	1.6	5.5	15.29	1.10	1988	1976
<i>700</i>	549	3079	545	13.0	26.0	5.0	533	4.0	533	014	3.1	6.1	15.37	1.08	1988	1976
<i>650</i>	539	3698	537	9.3	20.4	0.0	511	-0.4	516	019	3.7	6.6	17.83	1.11	1990	1975
<i>600</i>	531	4357	528	5.3	17.6	-1.3	497	-4.8	506	022	3.6	6.6	17.35	1.27	1990	1986
<i>550</i>	523	5073	518	1.4	12.8	-5.3	464	-8.4	493	020	2.7	6.2	26.83	1.33	1987	1980
<i>500</i>	520	5824	515	-2.2	7.6	-10.0	416	-12.2	487	027	2.1	6.2	22.18	1.23	1987	1974
<i>450</i>	512	6662	508	-6.4	3.0	-18.0	363	-16.4	473	046	1.7	6.1	27.30	1.24	1975	1976
<i>400</i>	500	7570	494	-11.5	-0.7	-18.0	321	-21.9	457	065	2.2	6.2	27.92	1.27	1988	1972
<i>350</i>	486	8585	481	-17.9	-7.5	-25.0	276	-28.3	443	078	2.9	6.2	31.28	1.36	1988	1972
<i>300</i>	479	9719	474	-25.7	-13.3	-33.0	215	-35.2	434	087	3.6	6.6	35.87	1.61	1987	1972
<i>250</i>	466	11017	461	-35.6	-24.1	-44.0	138	-44.2	421	097	4.8	7.6	45.71	1.90	1987	1972
<i>200</i>	438	12531	437	-48.1	-35.3	-59.0	5	-51.9	396	100	7.6	10.1	56.44	2.22	1987	1976
<i>175</i>	417	13399	416	-55.3	-39.9	-70.0	2	-56.4	368	098	9.3	11.3	64.90	2.50	1988	1974
<i>150</i>	396	14369	396	-63.1	-48.3	-78.0	1	-61.5	350	094	11.2	13.3	77.06	2.70	1988	1976
<i>125</i>	364	15468	363	-71.0	-55.1	-80.9			322	088	13.8	15.4	91.16	2.61	1988	1979
<i>100</i>	327	16769	325	-76.2	-62.3	-84.7			285	089	16.4	17.2	102.73	2.59	1987	1982
<i>80</i>	288	18067	286	-73.4	-57.5	-84.0			250	091	17.5	18.1	110.15	3.47	1985	1977
<i>70</i>	267	18871	265	-68.8	-53.9	-86.0			230	091	16.8	17.3	121.62	3.83	1988	1977
<i>60</i>	237	19795	237	-63.7	-47.1	-78.0			198	089	16.1	16.5	122.03	3.57	1990	1978
<i>50</i>	204	20921	204	-59.3	-43.7	-74.0			172	088	17.5	17.8	136.00	3.75	1988	1977
<i>40</i>	168	22349	168	-54.4	-39.9	-63.0			134	091	17.8	18.1	158.23	3.72	1990	1972
<i>30</i>	131	24219	131	-50.1	-37.1	-62.0			103	088	19.2	19.5	169.48	3.67	1987	1972
<i>25</i>	110	25403	110	-48.1	-36.1	-60.0			80	088	20.6	21.2	200.55	3.36	1985	1972
<i>20</i>	76	26928	76	-45.8	-34.9	-53.7			50	089	23.2	23.5	219.50	2.68	1987	1990
<i>15</i>	44	28852	44	-43.7	-32.1	-57.5			28	086	23.7	24.3	272.55	4.04	1987	1980
<i>10</i>	15	31572	15	-40.9	-27.1	-47.3			8	086	35.5	36.0			1987	1983
<i>7</i>	6	34134	6	-39.0	-31.1	-45.3			2	080	51.3	51.5			1988	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
521	532	534					300	101	1673	-77.5

# NORMALS OF RADIOSONDE DATA

42339 JODHPUR

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	978	600	34.1	42.0	23.0	600	19.6	600	234	2.2	3.7	1.24	1.91	1974	1975
<i>1000</i>	563	21											9.75			
<i>950</i>	559	459	558	31.2	42.0	23.0	557	17.1	555	236	2.9	5.3	16.02	1.55	1974	1975
<i>900</i>	559	963	558	26.7	35.8	17.0	557	14.0	554	245	2.9	5.3	9.94	1.46	1987	1976
<i>850</i>	559	1464	559	22.5	33.4	16.0	556	11.9	556	257	2.5	5.1	10.77	1.27	1987	1971
<i>800</i>	559	1987	558	18.6	30.4	11.0	540	8.4	555	283	1.7	4.8	11.38	1.19	1987	1971
<i>750</i>	559	2531	557	14.8	27.0	6.8	510	4.2	554	329	1.6	4.8	13.22	1.16	1987	1986
<i>700</i>	559	3114	558	10.6	24.8	3.8	495	-0.6	553	346	2.0	5.1	12.77	1.25	1987	1979
<i>650</i>	556	3725	552	6.6	19.2	-1.3	468	-5.4	542	355	2.3	5.4	17.95	1.41	1987	1979
<i>600</i>	550	4379	545	2.7	13.0	-6.5	416	-9.0	538	345	2.3	5.6	15.05	1.60	1987	1979
<i>550</i>	545	5092	540	-0.5	8.6	-11.3	328	-12.4	533	317	2.6	5.8	24.76	1.46	1987	1979
<i>500</i>	541	5837	539	-3.9	4.2	-15.5	247	-16.2	530	297	3.2	6.4	18.78	1.37	1989	1982
<i>450</i>	535	6669	535	-8.1	2.2	-18.5	212	-20.9	524	280	3.8	7.2	27.17	1.37	1987	1982
<i>400</i>	526	7569	526	-13.6	-3.1	-22.5	190	-26.7	516	271	4.4	7.5	25.50	1.45	1987	1979
<i>350</i>	516	8579	515	-20.2	-9.7	-29.1	172	-32.6	504	260	4.9	7.7	32.11	1.70	1990	1979
<i>300</i>	502	9700	501	-28.4	-16.1	-37.5	149	-40.4	484	252	5.6	8.4	37.51	1.80	1990	1981
<i>250</i>	486	10981	485	-38.3	-22.9	-48.1	105	-48.3	464	243	6.2	9.4	47.70	2.07	1988	1979
<i>200</i>	466	12478	465	-50.5	-40.1	-60.7	3	-53.6	439	233	5.4	9.5	63.31	2.33	1987	1979
<i>175</i>	436	13337	434	-57.4	-46.1	-68.9	1	-56.7	410	221	4.3	9.1	71.45	2.38	1987	1979
<i>150</i>	412	14297	411	-64.9	-52.5	-78.5			382	196	3.2	8.6	79.43	2.41	1988	1984
<i>125</i>	385	15388	383	-71.9	-56.5	-86.0			350	138	3.1	8.3	93.10	2.28	1988	1977
<i>100</i>	342	16692	341	-75.7	-60.9	-84.5			306	100	6.0	8.9	104.35	2.19	1986	1988
<i>80</i>	306	17995	305	-72.0	-56.9	-83.3			272	099	8.0	9.2	110.24	3.53	1988	1979
<i>70</i>	284	18806	283	-67.0	-52.3	-78.3			246	096	8.7	9.7	122.46	3.51	1986	1981
<i>60</i>	262	19740	262	-61.8	-47.7	-72.3			227	091	9.4	10.0	123.67	3.75	1989	1981
<i>50</i>	229	20879	229	-57.4	-40.5	-69.5			195	095	10.3	10.6	134.06	3.79	1989	1980
<i>40</i>	189	22320	189	-53.4	-34.9	-64.1			157	091	12.0	12.4	153.94	3.33	1988	1983
<i>30</i>	135	24197	135	-49.4	-35.5	-59.7			109	091	13.0	13.3	171.71	2.20	1986	1984
<i>25</i>	105	25395	105	-47.4	-39.1	-59.1			81	086	13.5	13.7	183.09	2.64	1989	1984
<i>20</i>	76	26901	76	-45.2	-34.1	-57.7			53	085	14.0	15.1	209.18	2.66	1987	1984
<i>15</i>	36	28783	36	-43.0	-32.1	-55.7			23	084	19.4	20.0	235.17	4.10	1990	1984
<i>10</i>	8	31511	8	-41.0	-22.7	-52.7			6	098	16.6	19.7			1990	1984
<i>7</i>	3	33553	3	-44.3	-41.1	-50.1			1	176	11.0	11.0			1987	1984

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

542 560 495

2 102 1673 -75.7

323 105 1651 -76.9

## NORMALS OF RADIOSONDE DATA

42339 JODHPUR

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	619	983	619	34.3	39.8	19.0	618	12.3	619	271	0.6	2.4	1.18	1.44	1987	1975
<i>1000</i>	561	66											8.54			
<i>950</i>	560	503	559	30.5	41.4	19.0	507	8.5	555	279	1.2	4.0	19.32	1.29	1987	1975
<i>900</i>	560	1005	559	25.8	34.8	13.0	498	5.7	554	293	1.3	3.9	8.95	1.28	1986	1976
<i>850</i>	560	1504	557	21.4	31.0	11.0	510	2.9	554	304	1.7	4.0	9.47	1.31	1987	1975
<i>800</i>	559	2024	558	16.6	26.6	8.0	515	0.6	553	311	1.7	4.0	9.78	1.23	1987	1975
<i>750</i>	559	2562	557	11.9	22.0	4.0	503	-2.0	554	313	2.0	4.4	16.10	1.24	1987	1972
<i>700</i>	559	3141	554	7.6	18.0	-5.0	455	-5.9	553	311	2.2	4.8	11.62	1.40	1974	1975
<i>650</i>	555	3749	546	3.9	12.8	-5.0	367	-10.3	548	308	3.0	5.6	15.77	1.53	1988	1972
<i>600</i>	552	4392	542	0.5	9.6	-10.0	263	-14.1	540	298	4.5	6.7	14.21	1.59	1987	1972
<i>550</i>	540	5096	532	-3.2	5.6	-15.0	207	-18.7	529	292	6.2	8.5	21.11	1.79	1987	1972
<i>500</i>	527	5835	524	-7.5	1.2	-17.0	174	-22.9	516	286	8.2	10.4	17.83	1.95	1985	1972
<i>450</i>	518	6653	514	-12.5	-2.3	-22.1	152	-27.6	506	279	10.6	13.0	26.54	2.12	1988	1979
<i>400</i>	503	7538	497	-18.4	-8.3	-30.0	139	-32.5	488	275	13.4	15.7	30.50	2.46	1986	1978
<i>350</i>	495	8527	493	-25.2	-13.9	-37.0	138	-38.4	481	271	16.5	18.7	38.92	2.58	1988	1978
<i>300</i>	482	9627	479	-32.9	-20.1	-45.9	125	-44.9	466	265	19.4	21.4	51.71	2.79	1988	1979
<i>250</i>	471	10886	468	-41.9	-28.1	-56.5	34	-50.1	448	261	22.4	24.6	65.18	2.80	1988	1979
<i>200</i>	450	12362	449	-52.6	-37.7	-64.3			423	257	24.1	25.8	82.12	2.83	1988	1979
<i>175</i>	439	13213	439	-58.7	-45.1	-69.0			406	256	22.4	24.4	91.27	2.83	1988	1978
<i>150</i>	417	14168	417	-64.8	-51.5	-76.0			381	256	19.9	21.4	97.60	2.93	1988	1978
<i>125</i>	382	15265	381	-70.6	-56.5	-81.0			345	256	15.2	17.0	106.71	2.89	1988	1978
<i>100</i>	347	16579	346	-74.2	-61.9	-84.0			307	253	8.9	11.6	121.21	3.05	1987	1974
<i>80</i>	311	17881	311	-71.3	-59.3	-86.0			270	240	2.7	7.7	133.01	3.16	1985	1974
<i>70</i>	281	18691	281	-67.3	-55.5	-80.0			241	230	0.4	6.5	141.62	3.15	1985	1973
<i>60</i>	243	19627	243	-62.7	-51.1	-81.0			206	104	2.0	6.7	146.78	3.02	1985	1978
<i>50</i>	209	20773	209	-58.2	-41.9	-74.0			174	101	3.1	6.8	175.63	3.37	1990	1973
<i>40</i>	164	22206	164	-54.1	-38.3	-69.0			131	091	4.0	6.2	195.91	4.04	1990	1973
<i>30</i>	112	24101	112	-50.4	-34.1	-72.0			75	089	4.9	6.8	286.36	5.73	1990	1972
<i>25</i>	79	25296	79	-48.6	-39.9	-64.0			54	096	4.3	7.2	320.61	6.08	1986	1973
<i>20</i>	55	26852	55	-45.6	-38.3	-57.9			36	068	4.8	7.8	270.81	4.27	1988	1984
<i>15</i>	32	28771	32	-43.8	-34.7	-57.7			19	087	3.8	7.8	371.87	5.24	1988	1984
<i>10</i>	13	31371	13	-42.8	-32.1	-53.3			8	048	2.3	8.6			1987	1984
<i>7</i>	3	33936	3	-41.6	-39.7	-42.7			2	052	8.5	11.0			1986	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

538 593 450

9 165 1365 -66.1

329 103 1646 -75.3

# NORMALS OF RADIOSONDE DATA

42339 JODHPUR

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	594	987	594	29.5	36.0	18.0	594	8.3	594	022	0.8	1.8	1.02	1.14	1977	1976
1000	543	103											9.55			
950	543	532	542	25.6	36.0	16.2	510	4.2	538	360	1.1	3.3	15.02	1.16	1987	1986
900	543	1027	543	21.0	30.8	8.0	488	1.7	538	356	1.3	3.4	9.19	1.18	1987	1975
850	543	1516	542	16.6	26.8	7.8	487	-0.3	540	351	1.1	3.5	9.43	1.08	1987	1990
800	543	2028	541	12.5	22.8	3.8	460	-2.7	540	327	1.2	4.0	9.78	1.01	1989	1981
750	543	2563	540	8.8	18.8	-5.3	412	-6.1	539	302	1.6	4.7	11.24	1.16	1989	1983
700	543	3132	539	5.7	14.4	-5.0	332	-9.6	539	288	3.6	5.9	11.30	1.22	1987	1974
650	537	3738	533	2.6	12.0	-10.7	248	-12.7	529	284	6.0	7.9	16.50	1.27	1987	1990
600	532	4379	527	-0.9	9.8	-15.7	205	-16.3	523	280	8.4	10.2	13.84	1.21	1987	1990
550	525	5077	524	-5.1	5.2	-19.7	184	-20.7	516	280	10.7	12.5	18.32	1.28	1982	1990
500	519	5811	516	-9.9	0.6	-24.5	172	-24.5	508	278	13.3	15.1	18.20	1.33	1987	1990
450	516	6617	514	-15.4	1.2	-29.7	160	-29.3	505	275	16.5	18.5	22.97	1.48	1989	1990
400	513	7495	509	-21.7	-9.7	-36.7	152	-34.4	505	274	19.9	22.1	24.87	1.59	1987	1990
350	504	8473	501	-28.5	-17.5	-42.9	153	-41.0	494	272	24.1	26.4	29.06	1.74	1987	1990
300	494	9555	490	-36.2	-26.1	-48.7	117	-47.3	477	269	28.6	31.0	35.56	1.73	1986	1990
250	479	10799	477	-44.9	-30.7	-56.7	5	-53.7	458	266	32.4	35.1	45.25	1.83	1989	1990
200	451	12261	451	-54.4	-38.1	-71.5	1	-54.5	428	262	35.8	38.2	58.69	2.12	1989	1990
175	427	13104	427	-59.6	-44.1	-79.1	1	-65.5	393	261	34.1	36.2	63.59	2.37	1989	1990
150	393	14058	393	-64.5	-47.9	-82.5			353	262	31.2	33.0	67.97	2.50	1988	1990
125	356	15157	356	-69.4	-54.1	-82.5			304	263	26.0	27.7	83.59	2.82	1988	1981
100	320	16476	320	-73.3	-61.7	-85.0			266	267	18.9	20.6	94.95	2.70	1988	1973
80	279	17784	279	-72.8	-60.3	-85.5			224	267	10.8	12.5	104.80	3.05	1990	1988
70	258	18578	258	-70.4	-56.7	-84.3			207	272	6.9	10.2	117.06	3.14	1990	1988
60	230	19493	230	-66.6	-52.1	-78.9			180	279	4.5	7.8	122.92	2.77	1985	1987
50	195	20612	195	-62.2	-47.5	-78.0			154	285	1.5	6.2	128.68	3.00	1985	1972
40	157	22010	157	-57.6	-46.9	-70.0			117	282	1.1	6.3	147.12	2.74	1985	1977
30	106	23861	106	-53.4	-43.7	-64.5			72	266	0.3	6.0	171.52	2.86	1988	1983
25	67	25045	67	-51.3	-41.7	-66.7			43	308	1.1	5.8	224.92	4.20	1986	1983
20	49	26519	49	-49.5	-37.9	-68.1			26	236	0.3	6.4	274.69	5.13	1986	1983
15	16	28458	16	-48.4	-37.7	-67.1			8	295	4.4	6.5			1988	1983
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
530	614	420	24	188	1264	-61.7	298	102	1645	-74.4



## NORMALS OF RADIOSONDE DATA

42339 JODHPUR

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	989	620	24.6	31.0	6.0	620	5.8	620	028	1.2	2.1	0.97	0.84	1986	1978
<i>1000</i>	471	124											13.02			
<i>950</i>	470	544	469	20.9	28.0	11.2	431	1.9	466	012	1.5	3.8	24.99	1.50	1976	1986
<i>900</i>	470	1033	470	16.5	27.2	7.2	421	-0.6	467	012	1.4	3.8	16.28	1.75	1988	1986
<i>850</i>	470	1516	470	12.7	23.8	2.2	403	-3.1	469	335	1.1	4.0	18.86	1.92	1990	1990
<i>800</i>	470	2021	468	9.7	25.2	-0.5	340	-5.8	468	282	2.4	4.8	22.13	2.17	1990	1990
<i>750</i>	470	2555	468	6.9	20.0	-5.0	286	-8.1	467	273	4.8	6.7	25.43	2.09	1984	1976
<i>700</i>	470	3117	470	4.0	16.4	-5.1	254	-11.2	467	271	7.5	9.0	28.47	2.03	1990	1986
<i>650</i>	467	3719	465	0.7	14.2	-8.9	226	-14.3	464	271	10.1	11.6	31.89	1.89	1990	1990
<i>600</i>	466	4355	461	-3.0	9.0	-14.3	205	-17.3	459	271	13.0	14.5	32.21	1.86	1987	1990
<i>550</i>	459	5048	454	-7.3	4.8	-17.5	195	-21.4	454	271	15.6	16.9	37.71	1.83	1987	1990
<i>500</i>	457	5776	454	-12.1	0.4	-25.0	172	-25.3	450	269	18.7	20.1	39.24	1.72	1988	1975
<i>450</i>	451	6576	449	-17.5	-5.5	-27.5	163	-29.6	439	269	22.1	23.5	44.01	1.82	1988	1983
<i>400</i>	444	7446	443	-23.7	-10.1	-34.9	157	-34.9	430	268	26.2	27.7	48.53	1.80	1988	1990
<i>350</i>	438	8415	437	-30.7	-20.9	-43.5	149	-40.8	417	268	30.8	32.4	54.34	2.09	1987	1990
<i>300</i>	425	9488	424	-38.4	-27.7	-51.0	85	-46.8	397	267	35.2	37.3	60.87	2.34	1987	1974
<i>250</i>	399	10721	397	-46.9	-29.9	-59.1	4	-49.8	360	266	40.0	42.4	71.28	2.67	1987	1979
<i>200</i>	384	12171	383	-55.9	-45.0	-70.1			328	263	42.9	45.1	84.40	2.43	1972	1990
<i>175</i>	354	13015	351	-60.1	-49.3	-73.1			292	262	41.5	43.3	93.74	3.26	1986	1990
<i>150</i>	331	13973	329	-63.6	-52.0	-75.0			265	263	39.5	41.0	102.05	2.99	1974	1971
<i>125</i>	304	15082	303	-67.4	-56.5	-77.5			238	263	35.0	36.1	113.34	3.03	1986	1983
<i>100</i>	260	16417	259	-71.3	-58.5	-83.9			201	266	29.8	30.6	128.35	3.55	1986	1988
<i>80</i>	228	17744	226	-71.9	-55.9	-83.9			172	268	19.5	20.7	137.67	4.59	1989	1988
<i>70</i>	207	18541	206	-70.2	-53.5	-82.0			156	271	15.1	16.5	147.26	4.78	1989	1971
<i>60</i>	189	19458	188	-66.9	-52.7	-78.3			134	269	11.8	13.5	160.64	4.36	1989	1983
<i>50</i>	159	20574	158	-63.0	-50.7	-75.7			111	273	8.9	11.2	184.96	3.86	1988	1982
<i>40</i>	117	21963	117	-58.7	-43.9	-71.9			86	266	7.6	10.2	151.13	3.53	1990	1982
<i>30</i>	71	23829	71	-55.1	-45.5	-68.0			48	263	8.3	10.0	192.04	4.17	1988	1977
<i>25</i>	51	25009	51	-53.4	-41.5	-63.9			35	271	8.8	9.6	209.14	4.47	1985	1984
<i>20</i>	28	26481	28	-51.6	-44.9	-57.1			14	277	11.5	12.1	146.77	2.99	1982	1990
<i>15</i>	14	28398	14	-48.7	-43.9	-55.5			6	278	12.0	14.2			1986	1990
<i>10</i>	1	31405	1	-42.1	-42.1	-42.1									1986	1986

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

463	643	382														
			92	191	1254	-61.6				232	098	1666	-73.1			

# NORMALS OF RADIOSONDE DATA

43346 KARAİKAL

JANUARY 1979-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	279	1011	279	26.7	28.2	23.8	279	21.5	279	044	4.7	5.0	1.00	0.42	1988	1986
<i>1000</i>	259	100	259	25.9	27.8	22.6	259	20.5	259	042	5.5	5.8	7.17	0.37	1988	1981
<i>950</i>	259	507	259	21.9	26.6	15.2	258	15.7	259	043	6.9	7.2	6.56	0.43	1979	1980
<i>900</i>	259	1016	259	18.8	25.6	12.0	257	10.6	259	046	6.8	7.3	7.03	0.57	1983	1979
<i>850</i>	259	1505	259	16.3	23.6	10.6	241	5.5	259	049	5.7	6.8	6.85	0.63	1983	1981
<i>800</i>	259	2019	259	14.3	20.8	7.6	199	0.4	259	052	4.8	6.4	7.13	0.79	1983	1980
<i>750</i>	259	2555	258	12.5	18.4	5.8	131	-2.8	259	058	3.4	5.6	11.76	1.11	1988	1980
<i>700</i>	259	3137	259	10.2	15.2	3.6	85	-6.0	259	068	2.9	5.7	9.11	1.13	1989	1981
<i>650</i>	259	3748	259	7.0	13.8	1.4	63	-7.5	258	073	2.4	5.6	15.80	1.21	1989	1981
<i>600</i>	259	4402	259	3.4	9.0	-1.7	51	-10.0	256	072	2.3	5.9	11.40	1.13	1988	1981
<i>550</i>	258	5117	258	-0.7	4.8	-6.1	39	-11.9	254	066	2.1	6.3	22.16	1.19	1988	1979
<i>500</i>	257	5858	257	-5.1	0.0	-11.3	38	-16.0	253	049	1.7	6.9	16.21	1.22	1988	1981
<i>450</i>	255	6677	255	-9.8	-1.9	-18.7	26	-18.7	252	030	1.3	7.8	22.10	1.29	1989	1979
<i>400</i>	254	7579	254	-15.4	-7.9	-22.9	25	-25.8	251	310	0.8	8.4	22.36	1.45	1989	1979
<i>350</i>	253	8570	253	-22.2	-13.1	-30.5	23	-33.0	249	264	2.5	9.1	29.39	1.66	1988	1979
<i>300</i>	251	9692	250	-30.3	-21.1	-40.1	20	-41.0	246	241	4.7	10.2	34.32	1.88	1988	1979
<i>250</i>	248	10964	248	-40.6	-29.1	-52.7	5	-48.0	241	220	7.2	12.1	43.79	1.98	1988	1979
<i>200</i>	237	12442	237	-53.2	-40.7	-63.9			232	208	8.2	13.9	56.33	2.03	1988	1979
<i>175</i>	221	13286	221	-60.3	-51.9	-73.1			213	213	7.9	14.5	66.00	1.96	1989	1979
<i>150</i>	203	14231	203	-67.5	-59.1	-78.3			195	213	6.2	12.7	74.91	1.63	1989	1979
<i>125</i>	172	15306	171	-74.3	-64.7	-86.1			164	218	3.9	11.0	81.53	1.66	1983	1979
<i>100</i>	147	16589	147	-79.4	-69.3	-89.9			141	137	3.7	9.8	98.75	1.71	1979	1979
<i>80</i>	112	17877	112	-76.2	-68.1	-84.3			106	111	3.0	6.9	96.83	2.41	1988	1988
<i>70</i>	109	18661	109	-72.2	-62.3	-82.7			101	204	1.0	6.5	102.93	1.87	1979	1979
<i>60</i>	94	19584	94	-67.4	-57.5	-81.7			88	252	2.7	7.7	105.94	2.42	1979	1979
<i>50</i>	87	20690	87	-62.8	-53.3	-77.5			83	264	1.5	9.2	106.71	2.26	1989	1979
<i>40</i>	51	22088	51	-57.9	-49.5	-68.7			49	082	3.5	10.8	104.52	1.35	1989	1980
<i>30</i>	39	23927	39	-52.8	-42.3	-61.1			35	091	7.1	13.5	111.96	1.94	1982	1988
<i>25</i>	20	25067	20	-50.7	-44.1	-59.1			15	087	9.2	14.5			1980	1988
<i>20</i>	15	26536	15	-47.9	-41.1	-56.5			14	088	5.9	10.5			1980	1988
<i>15</i>	8	28327	8	-46.3	-41.5	-53.1			8	120	4.5	12.1			1981	1988
<i>10</i>	2	31075	2	-38.2	-38.1	-38.3			2	074	13.5	13.5			1982	1979
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

258 558 496

124 098 1673 -81.1

## NORMALS OF RADIOSONDE DATA

43346 KARAİKAL

FEBRUARY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	281	1010	281	27.9	31.8	25.2	281	22.0	281	077	3.1	4.1	0.63	0.64	1990	1979
1000	253	91	253	27.2	31.6	24.6	253	21.1	253	076	3.8	5.0	6.40	0.74	1990	1979
950	253	502	253	23.4	31.0	18.4	252	15.4	253	076	4.3	5.7	5.41	1.01	1990	1980
900	253	1012	253	21.1	27.8	14.0	237	7.7	252	064	4.2	5.9	4.24	1.01	1990	1980
850	253	1504	253	18.8	24.8	12.2	204	1.5	252	055	4.8	6.6	4.75	1.23	1983	1980
800	253	2022	253	16.1	22.2	9.4	156	-0.8	252	049	4.7	6.6	6.14	1.37	1989	1980
750	253	2556	253	13.3	19.8	6.0	115	-3.2	252	044	4.0	6.3	14.35	1.45	1989	1980
700	253	3143	253	10.4	21.8	2.0	88	-6.2	252	040	2.3	5.8	10.94	1.48	1989	1980
650	252	3748	252	7.2	14.6	0.2	61	-7.9	250	024	1.2	5.8	18.61	1.35	1989	1980
600	251	4409	251	3.7	10.8	-2.9	50	-12.0	248	027	0.7	5.8	16.18	1.36	1989	1979
550	250	5124	250	-0.4	8.2	-7.1	41	-16.3	248	349	1.2	6.0	24.82	1.56	1990	1980
500	250	5866	250	-4.8	2.8	-11.5	27	-20.7	247	323	1.5	6.4	23.35	1.56	1990	1980
450	245	6687	245	-9.5	-1.5	-15.9	18	-25.4	241	303	1.7	7.4	33.58	1.52	1989	1988
400	245	7589	245	-14.9	-7.7	-20.5	11	-28.3	241	297	3.7	9.2	31.79	1.56	1989	1981
350	242	8585	242	-21.4	-14.1	-26.7	7	-30.7	241	280	5.8	10.4	39.22	1.79	1989	1979
300	241	9709	241	-29.5	-19.5	-36.3	7	-40.5	241	259	6.9	11.4	47.48	2.04	1990	1982
250	239	10984	239	-39.7	-29.7	-47.9	2	-45.3	238	243	8.0	11.8	58.89	2.33	1990	1981
200	233	12470	233	-52.0	-39.3	-61.7			230	244	7.5	12.8	75.51	2.65	1990	1981
175	222	13319	222	-59.1	-49.7	-68.9			218	254	6.7	12.6	85.16	2.75	1990	1982
150	206	14264	206	-66.3	-56.1	-76.5			201	250	5.4	11.3	99.60	2.73	1990	1979
125	183	15349	183	-72.9	-62.7	-82.1			177	248	3.6	10.1	112.72	2.76	1990	1979
100	172	16640	172	-77.8	-68.1	-88.1			166	257	1.1	8.3	125.08	2.43	1990	1979
80	148	17928	148	-76.2	-65.5	-85.1			142	259	1.7	6.2	134.72	2.15	1989	1979
70	137	18711	137	-73.2	-59.3	-82.1			132	266	3.2	6.9	142.36	2.22	1988	1979
60	130	19618	130	-68.4	-55.1	-79.5			124	262	5.5	8.9	147.92	2.70	1983	1979
50	123	20728	123	-63.0	-50.7	-72.3			117	266	4.2	9.9	162.70	2.64	1980	1980
40	102	22135	102	-58.3	-46.7	-68.1			95	263	0.6	11.3	189.63	2.34	1990	1979
30	86	23962	86	-54.2	-43.9	-62.1			78	094	2.9	11.4	197.63	1.92	1990	1988
25	67	25111	67	-51.8	-42.7	-61.3			61	101	5.6	12.6	209.66	2.50	1981	1981
20	43	26615	43	-48.4	-40.1	-56.1			36	093	8.3	13.7	210.49	1.81	1990	1981
15	21	28484	21	-46.0	-34.3	-55.5			15	115	5.2	14.6	210.11	3.01	1990	1988
10	4	31086	4	-45.3	-40.9	-48.1			2	300	1.7	4.0			1980	1988
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

251 554 507

159 097 1683 -79.8

# NORMALS OF RADIOSONDE DATA

43346 KARAIKAL

MARCH 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	310	1008	310	29.3	32.8	24.2	310	24.0	310	113	3.4	4.5	0.71	0.45	1990	1986
1000	301	76	301	28.8	32.4	23.8	300	23.2	300	112	3.9	5.1	5.85	0.53	1990	1979
950	301	495	301	25.5	32.8	20.2	299	16.8	300	115	3.6	5.4	6.28	1.01	1983	1979
900	301	1003	301	23.4	32.0	16.8	290	8.9	299	092	2.3	4.7	5.33	1.12	1990	1979
850	301	1500	301	20.8	30.8	13.2	263	3.2	299	067	3.8	5.5	6.07	1.29	1990	1979
800	301	2021	301	17.7	28.4	10.6	233	-0.6	299	056	5.4	6.9	7.25	1.27	1990	1979
750	301	2555	301	14.1	24.8	8.0	205	-3.5	299	049	5.8	7.3	15.08	1.26	1990	1982
700	301	3146	301	10.6	20.6	3.8	169	-6.5	299	045	5.0	6.8	11.31	1.25	1990	1981
650	300	3747	300	7.1	17.2	0.6	123	-9.0	297	047	3.2	6.0	18.86	1.38	1990	1981
600	300	4413	300	3.8	14.0	-1.5	90	-11.7	298	048	1.5	5.7	17.20	1.44	1990	1980
550	298	5129	298	0.0	10.2	-6.1	71	-15.0	296	035	1.3	5.7	26.40	1.52	1990	1979
500	297	5871	297	-4.2	6.8	-10.3	52	-18.6	295	360	1.2	6.0	24.91	1.69	1990	1979
450	296	6695	296	-8.9	0.6	-16.7	37	-22.1	292	332	1.8	6.9	35.01	1.97	1990	1982
400	295	7598	295	-14.4	-5.9	-21.3	28	-27.2	291	304	2.7	8.1	36.16	1.92	1990	1982
350	291	8596	291	-21.0	-11.3	-28.3	17	-32.1	283	274	3.8	9.3	41.18	1.89	1990	1979
300	291	9722	291	-29.0	-19.7	-36.1	12	-38.6	282	261	5.0	10.6	51.21	1.94	1990	1981
250	288	11000	288	-39.0	-28.9	-47.5	3	-40.4	277	243	6.2	11.5	62.23	2.12	1990	1982
200	279	12491	279	-51.5	-43.1	-68.3			269	238	7.0	12.8	77.33	2.32	1990	1982
175	267	13338	267	-58.5	-49.1	-67.1			260	234	6.3	12.9	81.98	2.43	1988	1979
150	250	14289	250	-65.7	-56.1	-74.9			236	240	5.1	12.5	94.14	2.42	1988	1979
125	218	15376	218	-72.4	-55.1	-83.1			210	235	2.3	11.1	112.47	2.78	1988	1979
100	189	16659	189	-78.5	-68.7	-86.9			178	250	0.2	8.4	137.60	2.65	1988	1979
80	147	17945	147	-76.5	-66.1	-86.1			139	139	1.0	7.4	136.84	2.21	1986	1988
70	139	18733	139	-72.1	-57.5	-84.3			129	235	1.1	6.5	124.02	2.35	1988	1988
60	119	19650	119	-67.9	-53.9	-81.7			112	259	3.8	7.7	139.96	3.04	1990	1988
50	111	20759	111	-63.1	-53.7	-78.5			105	252	3.1	8.7	122.18	2.25	1983	1980
40	90	22156	90	-58.7	-47.7	-73.1			88	102	2.7	10.7	130.33	3.83	1988	1980
30	78	23980	78	-53.5	-42.7	-61.5			76	088	8.3	13.1	175.20	2.99	1982	1982
25	62	25175	62	-50.5	-41.5	-58.7			58	094	11.9	15.6	156.84	2.75	1988	1988
20	50	26516	50	-47.8	-40.5	-57.1			43	098	16.8	17.6	163.93	2.53	1987	1988
15	23	28506	23	-45.6	-39.3	-53.3			18	087	16.9	18.5	68.97	2.14	1981	1987
10	8	31119	8	-44.4	-37.7	-50.9			5	089	13.2	15.6			1982	1988
7	1	33220	1	-50.1	-50.1	-50.1			1	258	2.0	2.0			1988	1988

**FREEZING LEVEL**

N F ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

299 549 513

161 097 1688 -80.2

# NORMALS OF RADIOSONDE DATA

43346 KARAIKAL

APRIL 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	329	1005	329	30.9	37.4	27.0	329	26.0	329	144	4.7	5.7	0.85	0.38	1990	1982
1000	316	52	316	30.5	37.0	25.8	316	25.2	316	144	5.1	6.2	6.14	0.38	1990	1988
950	316	479	316	27.7	36.2	21.4	315	18.2	316	153	4.6	6.2	7.61	0.72	1985	1990
900	316	986	316	25.3	34.6	19.8	309	12.7	316	170	1.6	4.2	5.50	0.95	1985	1989
850	316	1485	316	22.4	31.2	16.4	285	6.7	316	064	1.5	4.3	5.66	1.08	1985	1989
800	316	2009	316	19.2	26.0	13.2	259	1.2	316	060	4.5	6.0	5.62	1.13	1985	1989
750	316	2546	316	15.5	22.0	7.0	237	-2.5	315	054	6.8	7.7	9.62	1.30	1988	1982
700	315	3140	315	11.5	18.2	4.8	212	-5.8	314	050	7.3	8.2	8.58	1.42	1990	1982
650	313	3743	313	7.7	18.4	1.4	185	-8.5	309	050	6.4	7.5	16.20	1.54	1979	1979
600	312	4408	312	4.0	15.0	-6.5	140	-11.3	308	056	4.6	6.2	15.09	1.67	1990	1979
550	312	5126	312	0.3	11.2	-7.5	118	-13.7	306	060	3.3	5.9	21.58	1.68	1990	1979
500	309	5868	309	-4.0	5.2	-12.5	94	-18.0	304	063	3.0	6.1	23.66	1.65	1990	1979
450	307	6695	307	-8.7	0.6	-16.7	75	-21.5	300	054	2.5	6.6	31.78	1.65	1990	1980
400	303	7596	303	-14.2	-4.9	-22.1	67	-25.6	296	041	1.6	7.8	34.07	1.78	1990	1980
350	301	8595	301	-20.8	-11.3	-29.5	56	-31.2	294	300	0.5	8.8	38.34	1.89	1990	1980
300	297	9722	297	-28.7	-18.7	-39.9	46	-39.5	290	248	3.3	9.5	49.19	2.02	1990	1989
250	291	11003	291	-38.6	-28.9	-48.9	16	-46.9	282	229	6.0	11.0	61.97	2.36	1990	1980
200	285	12493	285	-50.9	-40.9	-59.1			276	215	7.2	12.4	76.21	2.63	1990	1980
175	272	13348	272	-57.8	-47.9	-67.7			263	216	7.1	12.5	87.28	2.79	1990	1980
150	249	14302	249	-65.2	-53.9	-75.5			241	216	6.3	11.6	96.74	2.86	1990	1986
125	211	15391	211	-72.2	-60.7	-84.1			205	206	3.1	9.7	113.38	3.10	1990	1982
100	189	16672	189	-78.5	-68.5	-89.3			183	108	3.4	8.5	125.85	3.15	1990	1982
80	156	17955	156	-76.6	-65.7	-86.3			150	083	3.9	8.1	136.89	2.84	1990	1982
70	146	18742	146	-71.9	-56.3	-82.5			139	085	2.7	8.0	143.41	2.78	1990	1987
60	131	19657	131	-67.0	-54.5	-78.5			126	097	2.1	8.8	163.12	3.06	1989	1987
50	119	20766	119	-61.5	-48.9	-74.5			115	092	3.3	9.7	172.20	3.63	1990	1986
40	78	22208	78	-55.4	-44.7	-65.7			73	093	6.5	11.0	196.56	3.36	1989	1987
30	67	24088	67	-49.7	-35.5	-59.1			59	086	13.3	16.6	229.15	2.78	1989	1988
25	52	25285	52	-46.5	-34.1	-55.1			45	089	16.8	18.7	276.30	3.46	1989	1989
20	34	26714	34	-44.8	-37.9	-52.3			30	089	18.9	20.4	228.45	1.85	1981	1987
15	11	28654	11	-43.1	-37.1	-47.3			10	082	17.3	18.5			1989	1989
10	2	31414	2	-43.2	-41.1	-45.3			2	085	18.0	18.0			1989	1989
7	1	33500	1	-43.7	-43.7	-43.7			1	085	21.0	21.0			1989	1989

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
308	547	516					162	095	1697	-80.3

## NORMALS OF RADIOSONDE DATA

43346 KARAIKAL

MAY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	341	1003	341	32.4	38.8	24.8	341	26.6	341	176	5.3	6.7	1.24	0.62	1981	1990
1000	335	32	312	32.0	38.4	25.0	312	25.9	312	173	5.8	7.0	10.22	0.69	1986	1989
950	337	456	337	29.5	36.6	21.8	337	19.5	337	191	5.9	7.7	13.72	0.81	1985	1985
900	337	970	337	26.8	34.0	20.4	334	15.7	337	241	3.7	5.8	8.40	0.71	1985	1985
850	337	1472	337	23.5	30.4	14.4	326	11.5	336	293	3.3	5.6	7.86	0.93	1989	1982
800	337	1996	337	20.1	27.4	14.4	311	6.9	335	341	3.3	6.1	7.56	1.05	1989	1982
750	337	2535	337	16.4	23.6	9.8	303	1.9	333	017	3.8	6.5	9.51	1.22	1989	1987
700	337	3131	337	12.3	19.4	4.4	294	-2.0	332	030	4.5	7.1	8.89	1.37	1989	1987
650	336	3737	336	8.0	17.2	2.0	275	-5.5	328	032	4.7	7.4	13.56	1.51	1990	1979
600	336	4404	336	3.9	13.6	-5.7	261	-8.6	329	030	4.1	7.2	10.99	1.65	1990	1982
550	336	5122	336	0.2	9.4	-6.1	228	-11.9	326	021	2.6	6.4	23.14	1.64	1990	1981
500	335	5864	335	-3.6	4.8	-10.9	195	-15.6	327	001	1.9	6.3	19.59	1.65	1990	1985
450	329	6695	329	-7.7	8.0	-15.7	153	-19.3	319	354	1.5	6.2	27.28	1.67	1986	1985
400	325	7597	325	-13.0	-5.1	-21.1	120	-24.5	316	343	1.2	5.7	32.00	1.81	1990	1985
350	322	8599	322	-19.4	-9.1	-28.1	83	-29.8	311	314	0.7	5.7	39.46	2.06	1990	1981
300	318	9734	318	-27.3	-16.9	-37.1	68	-37.1	306	208	0.9	6.0	48.71	2.10	1990	1987
250	315	11021	315	-37.4	-27.3	-47.3	26	-45.5	303	153	1.9	6.7	58.45	2.32	1990	1982
200	311	12522	311	-49.9	-38.9	-59.1			298	129	5.1	9.4	75.83	2.59	1990	1981
175	298	13376	298	-57.3	-47.1	-66.9			286	121	7.0	11.5	82.79	2.56	1990	1981
150	283	14332	283	-65.1	-54.3	-76.1			273	112	8.5	12.8	94.37	2.67	1990	1981
125	237	15428	237	-72.5	-62.5	-82.1			225	104	9.8	13.1	103.23	2.64	1989	1979
100	215	16714	215	-78.5	-69.5	-89.7			200	097	11.3	13.4	118.46	2.54	1990	1982
80	178	17997	178	-75.1	-60.1	-87.1			165	093	9.3	10.8	126.47	2.72	1990	1985
70	165	18791	165	-70.7	-57.7	-85.5			155	087	8.1	10.0	133.92	2.78	1990	1985
60	148	19709	147	-65.6	-55.1	-81.9			135	092	7.1	9.5	143.05	2.17	1987	1985
50	129	20838	129	-60.4	-49.1	-78.1			119	085	9.3	11.2	155.40	2.54	1980	1982
40	85	22247	85	-55.3	-43.5	-68.5			76	093	11.4	13.5	161.72	3.18	1989	1982
30	64	24063	64	-50.3	-40.1	-63.1			60	091	13.9	16.0	164.54	4.27	1982	1986
25	48	25257	48	-47.9	-37.1	-60.5			42	091	17.6	19.1	184.71	3.63	1987	1986
20	32	26712	32	-44.8	-33.7	-55.3			28	087	18.7	21.0	235.01	3.41	1987	1986
15	10	28527	10	-42.9	-35.1	-48.5			9	086	15.6	20.3			1982	1986
10	5	31171	5	-42.5	-35.1	-46.5			5	084	26.3	26.8			1982	1986
7	1	33723	1	-41.9	-41.9	-41.9			1	081	28.0	28.0			1983	1983

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

337 548 514

190 100 1675 -80.3

# NORMALS OF RADIOSONDE DATA

43346 KARAIKAL

JUNE 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	329	1002	329	32.9	39.6	25.0	329	25.1	329	213	5.6	7.2	0.52	0.92	1987	1988
1000	315	25	298	32.6	39.6	25.0	298	24.7	296	213	5.8	7.3	4.61	0.95	1987	1980
950	315	449	315	29.3	38.8	23.2	312	18.5	310	224	8.4	9.9	6.75	0.92	1989	1985
900	315	965	315	25.9	37.0	17.8	313	16.1	310	252	8.7	9.4	4.67	0.86	1987	1988
850	315	1465	315	22.4	33.2	16.2	313	13.7	312	271	9.5	10.1	5.26	0.92	1987	1980
800	315	1989	315	18.7	27.4	12.2	314	11.0	312	278	10.0	10.8	6.37	0.88	1990	1985
750	315	2525	315	15.0	23.8	6.6	314	7.1	308	282	9.5	10.8	10.00	0.93	1990	1985
700	315	3119	315	11.5	19.8	3.4	309	2.5	311	284	8.2	10.1	10.52	1.16	1990	1985
650	311	3724	311	7.9	15.6	0.4	301	-1.3	301	279	6.5	8.8	17.14	1.30	1990	1985
600	311	4390	311	4.3	12.4	-3.3	289	-4.8	303	274	5.6	8.0	15.20	1.44	1990	1989
550	310	5111	310	0.4	9.0	-5.3	274	-9.1	297	275	5.0	7.4	23.59	1.50	1990	1981
500	309	5853	309	-3.6	5.0	-10.1	252	-13.7	301	273	4.5	6.9	22.52	1.64	1990	1981
450	306	6684	306	-8.0	0.8	-17.7	212	-18.2	296	272	3.6	6.2	31.19	1.77	1990	1989
400	302	7586	302	-13.3	-4.1	-20.9	175	-23.8	291	273	1.7	5.5	33.08	1.91	1990	1988
350	299	8590	299	-19.7	-9.9	-29.7	140	-30.2	283	055	0.8	5.9	38.25	1.94	1990	1988
300	294	9722	294	-27.6	-16.9	-39.5	92	-37.1	286	086	4.1	7.2	47.95	1.94	1990	1988
250	290	11007	290	-37.6	-25.9	-49.1	38	-45.3	282	088	10.4	11.9	59.23	2.30	1990	1988
200	282	12506	282	-50.0	-40.5	-62.1			272	084	18.0	19.1	76.52	2.61	1990	1981
175	272	13365	272	-57.2	-47.3	-71.1			253	082	22.5	23.4	87.51	2.85	1990	1981
150	257	14321	257	-65.1	-54.1	-79.9			239	084	26.1	26.9	99.60	3.01	1990	1981
125	208	15407	208	-72.6	-60.7	-84.7			192	087	28.3	29.0	119.75	2.92	1989	1981
100	179	16689	179	-77.0	-66.1	-85.9			166	091	23.4	24.1	134.73	2.74	1982	1987
80	138	17998	138	-72.2	-54.7	-87.1			128	088	17.2	18.1	164.26	3.12	1990	1988
70	132	18798	132	-68.7	-52.3	-81.3			122	083	14.8	15.6	168.31	3.07	1990	1988
60	116	19734	116	-64.2	-49.5	-75.9			105	085	15.3	16.1	180.90	2.79	1990	1988
50	112	20857	112	-59.9	-47.1	-70.1			101	088	14.7	15.9	188.25	3.00	1990	1985
40	83	22313	83	-54.6	-40.7	-64.9			68	097	17.0	17.9	164.35	3.04	1990	1988
30	58	24169	58	-49.2	-38.7	-60.3			47	087	18.8	19.6	176.74	3.65	1989	1985
25	39	25332	39	-47.6	-38.1	-56.3			30	085	19.6	20.4	194.41	3.35	1990	1988
20	26	26792	26	-45.0	-37.7	-52.7			21	088	20.3	21.1	266.35	3.12	1987	1983
15	16	28756	16	-43.0	-36.5	-51.3			11	088	22.6	22.8			1982	1983
10	7	31520	7	-40.1	-31.3	-49.3			4	095	24.2	25.8			1987	1983
7	1	33720	1	-40.5	-40.5	-40.5			1	095	14.0	14.0			1985	1985

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

310 544 519

162 103 1654 -78.6

# NORMALS OF RADIOSONDE DATA

43346 KARAİKAL

JULY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	336	1003	336	31.8	37.4	23.6	336	24.5	336	207	4.0	6.3	0.60	0.61	1987	1981
<i>1000</i>	323	33	316	31.5	37.2	23.4	316	24.1	316	208	4.3	6.8	4.18	0.61	1987	1981
<i>950</i>	323	459	323	28.5	35.2	22.0	323	18.5	323	228	6.4	8.4	5.27	0.95	1990	1981
<i>900</i>	323	970	323	25.2	31.6	19.6	323	16.0	323	255	7.3	8.4	5.60	0.98	1990	1979
<i>850</i>	323	1469	323	21.6	29.8	10.6	323	13.9	322	271	8.7	9.3	6.97	1.07	1989	1981
<i>800</i>	323	1992	323	17.8	27.8	12.4	323	11.4	322	276	9.4	9.9	8.55	1.06	1989	1987
<i>750</i>	323	2528	323	14.2	23.8	8.4	323	7.9	322	281	9.3	9.9	14.56	1.19	1989	1989
<i>700</i>	323	3120	323	11.0	19.8	4.2	321	3.4	323	282	8.3	9.0	12.87	1.34	1989	1989
<i>650</i>	322	3725	322	7.6	16.2	1.2	316	-0.9	320	281	7.0	8.0	17.08	1.47	1989	1989
<i>600</i>	321	4389	321	4.0	12.4	-3.5	306	-4.8	320	277	6.2	7.5	19.54	1.54	1989	1983
<i>550</i>	320	5112	320	0.4	8.6	-5.7	289	-9.0	317	275	4.9	6.6	28.60	1.65	1989	1979
<i>500</i>	318	5852	318	-3.6	5.4	-9.7	267	-14.3	315	269	3.6	6.1	28.27	1.72	1989	1979
<i>450</i>	313	6684	313	-8.1	-1.1	-15.5	225	-19.1	307	262	1.8	6.0	37.43	1.81	1980	1982
<i>400</i>	310	7586	310	-13.7	-4.3	-20.9	193	-24.7	305	135	1.3	5.9	39.86	1.88	1989	1979
<i>350</i>	308	8587	308	-20.3	-13.1	-28.3	149	-30.3	302	108	4.4	7.5	43.07	1.93	1989	1980
<i>300</i>	308	9715	308	-28.1	-21.1	-37.1	108	-37.8	301	097	8.4	10.1	54.82	1.99	1988	1981
<i>250</i>	303	10998	303	-38.0	-29.1	-48.5	40	-45.4	294	087	15.1	16.3	65.95	2.23	1990	1981
<i>200</i>	296	12497	296	-50.4	-40.5	-61.1			288	082	23.1	23.9	82.52	2.39	1990	1981
<i>175</i>	275	13354	275	-57.6	-46.7	-68.1			265	081	26.9	27.5	89.21	2.49	1990	1981
<i>150</i>	258	14307	258	-65.3	-53.5	-77.1			250	082	32.1	32.8	102.91	2.64	1990	1981
<i>125</i>	215	15397	215	-72.4	-59.1	-85.1			202	085	35.2	35.8	115.63	2.62	1983	1981
<i>100</i>	191	16688	191	-74.9	-62.1	-85.7			179	091	27.8	28.3	126.82	2.36	1988	1979
<i>80</i>	152	18018	152	-68.8	-56.1	-77.7			134	088	21.0	21.5	137.39	2.03	1990	1985
<i>70</i>	143	18835	143	-65.6	-53.1	-77.9			126	087	19.1	19.7	142.00	1.93	1990	1987
<i>60</i>	128	19779	128	-62.3	-50.3	-71.5			112	088	18.0	18.4	147.57	1.88	1990	1980
<i>50</i>	116	20919	116	-58.5	-47.3	-68.5			102	089	18.3	18.7	172.81	2.16	1990	1983
<i>40</i>	72	22378	72	-54.3	-43.1	-64.3			59	091	18.7	19.1	156.21	2.54	1990	1987
<i>30</i>	56	24234	56	-49.4	-40.1	-58.5			46	094	18.2	18.8	164.64	3.55	1990	1985
<i>25</i>	40	25419	40	-46.7	-38.1	-57.1			32	089	19.4	20.4	139.13	3.62	1987	1985
<i>20</i>	26	26950	26	-44.4	-33.5	-55.7			19	091	17.5	18.8	169.82	4.78	1987	1985
<i>15</i>	17	28903	17	-42.8	-38.5	-47.3			11	084	28.0	28.8			1982	1983
<i>10</i>	8	31489	8	-41.7	-38.1	-46.7			5	095	32.0	32.2			1986	1985
<i>7</i>	4	33813	4	-42.0	-35.9	-46.1			3	085	44.8	46.0			1983	1985

**FREEZING LEVEL**

N P ALT

319 545 518

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

180 109 1625 -77.0



# NORMALS OF RADIOSONDE DATA

43346 KARAIKAL

AUGUST 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	341	1003	341	31.5	36.8	26.0	341	24.5	341	206	3.7	5.7	0.43	0.56	1990	1986
1000	336	35	335	31.2	36.2	26.0	334	24.2	335	206	3.9	6.0	2.50	0.55	1990	1980
950	336	457	335	28.2	35.4	22.2	335	19.2	336	230	6.2	7.9	8.35	0.91	1990	1988
900	336	970	335	24.8	31.8	18.8	335	16.4	336	255	7.5	8.2	2.78	1.00	1990	1988
850	336	1469	336	21.3	27.8	16.0	334	14.1	336	268	8.9	9.5	3.93	0.91	1990	1985
800	336	1991	336	17.6	24.4	11.8	334	11.7	336	275	9.7	10.3	5.25	0.92	1989	1988
750	336	2526	336	14.0	22.2	8.2	333	8.2	336	281	9.8	10.5	10.98	1.00	1989	1980
700	336	3118	336	10.7	18.8	5.6	332	3.8	336	282	9.0	9.8	9.30	1.08	1989	1979
650	332	3724	332	7.4	13.2	2.0	324	-0.7	329	281	7.8	8.7	13.79	1.16	1987	1985
600	332	4387	332	3.8	12.4	-1.5	313	-4.4	329	275	6.7	7.8	14.32	1.30	1990	1979
550	331	5108	331	0.2	8.2	-6.1	294	-8.4	329	273	5.5	7.0	25.98	1.47	1990	1980
500	331	5850	331	-3.6	4.2	-10.5	272	-13.7	329	269	3.6	5.8	21.61	1.53	1990	1980
450	328	6680	328	-8.1	-0.7	-16.1	226	-18.7	325	258	1.9	5.6	31.42	1.73	1990	1980
400	323	7582	323	-13.6	-6.5	-22.3	186	-24.4	320	146	0.8	5.7	31.30	1.92	1990	1980
350	320	8581	320	-20.4	-10.3	-28.1	146	-30.4	317	104	3.3	6.9	38.06	2.08	1990	1980
300	313	9712	313	-28.5	-20.1	-35.9	114	-37.6	308	097	7.7	9.5	47.11	2.06	1989	1979
250	307	10993	307	-38.5	-28.3	-47.5	48	-45.9	299	091	15.2	15.9	58.47	2.31	1990	1981
200	298	12486	298	-50.9	-41.1	-62.5			289	084	23.6	24.3	73.96	2.50	1989	1981
175	274	13338	274	-58.2	-48.3	-67.9			265	083	27.4	28.1	84.35	2.59	1990	1987
150	257	14289	257	-66.0	-57.1	-76.9			243	084	31.2	32.0	92.17	2.51	1989	1981
125	203	15378	203	-73.1	-59.5	-84.1			190	086	33.3	34.1	107.04	2.53	1988	1987
100	170	16675	169	-75.5	-66.1	-85.3			158	091	27.4	28.0	122.85	2.26	1990	1987
80	136	17987	135	-68.7	-56.7	-80.7			126	089	18.6	19.3	138.05	1.82	1987	1979
70	126	18802	126	-65.3	-55.9	-74.1			114	088	17.5	18.2	144.19	2.10	1987	1982
60	112	19756	111	-62.2	-51.7	-70.1			103	091	17.5	18.3	155.94	2.06	1990	1979
50	104	20879	104	-59.0	-49.1	-70.1			96	091	18.2	18.8	160.85	1.46	1990	1981
40	77	22301	77	-54.9	-46.7	-65.1			68	093	19.2	19.6	163.82	1.12	1981	1981
30	59	24167	59	-50.2	-41.1	-57.9			52	089	17.7	18.2	180.76	2.21	1981	1987
25	40	25329	40	-48.8	-42.1	-55.1			36	094	21.8	22.4	194.41	1.72	1983	1983
20	27	26801	27	-45.8	-40.1	-54.1			22	096	19.5	20.4	178.37	2.18	1983	1983
15	15	28623	15	-43.6	-40.5	-49.5			14	092	21.0	22.5			1980	1988
10	6	31423	6	-39.8	-34.9	-44.7			6	095	26.1	26.3			1980	1983
7	1	33816	1	-41.1	-41.1	-41.1									1983	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
331	546	515					159	108	1624	-78.2

## NORMALS OF RADIOSONDE DATA

43346 KARAİKAL

SEPTEMBER 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	330	1004	330	30.4	36.0	23.8	330	25.1	329	182	3.2	4.8	0.52	0.38	1989	1986
<i>1000</i>	322	43	321	30.1	35.8	22.4	321	24.6	320	183	3.3	5.0	4.21	0.37	1989	1986
<i>950</i>	322	466	322	27.2	33.6	19.0	321	19.7	321	213	4.2	6.1	6.80	0.89	1988	1979
<i>900</i>	322	976	322	24.1	29.8	18.0	321	16.6	321	254	4.3	5.9	4.51	1.02	1980	1979
<i>850</i>	322	1474	322	20.8	26.6	14.6	321	13.3	321	274	5.0	6.4	5.44	1.03	1989	1979
<i>800</i>	322	1996	322	17.5	23.8	11.6	319	9.8	321	280	5.1	6.8	6.75	1.03	1985	1979
<i>750</i>	322	2535	322	14.2	20.6	2.4	319	6.1	318	283	4.5	6.5	15.06	1.10	1989	1982
<i>700</i>	322	3123	322	10.9	19.0	4.0	316	1.6	318	280	4.2	6.3	10.19	1.31	1988	1979
<i>650</i>	322	3730	322	7.5	13.2	1.2	302	-2.0	318	278	3.6	6.3	15.07	1.31	1990	1979
<i>600</i>	322	4393	322	4.1	10.2	-2.3	286	-5.8	318	280	2.4	5.8	15.11	1.31	1990	1982
<i>550</i>	322	5116	322	0.4	6.8	-9.1	279	-10.3	319	283	1.4	5.4	25.19	1.41	1990	1982
<i>500</i>	318	5856	318	-3.6	2.6	-10.3	238	-15.1	316	258	0.5	5.3	22.17	1.42	1990	1982
<i>450</i>	317	6689	317	-8.1	-0.9	-15.1	188	-20.0	317	116	0.7	5.3	32.90	1.43	1990	1985
<i>400</i>	312	7589	312	-13.5	-5.7	-19.7	149	-24.9	311	101	2.3	5.5	30.70	1.47	1990	1979
<i>350</i>	312	8590	312	-20.1	-11.7	-28.7	103	-30.7	310	102	4.5	6.6	36.34	1.62	1988	1985
<i>300</i>	311	9721	311	-28.0	-20.3	-35.7	82	-38.7	309	102	7.3	8.7	43.48	1.66	1990	1979
<i>250</i>	304	11005	304	-38.1	-28.9	-47.3	29	-46.9	296	094	12.2	12.9	53.02	1.90	1990	1979
<i>200</i>	303	12503	303	-50.7	-38.9	-61.9			295	088	18.4	19.1	67.11	2.16	1990	1979
<i>175</i>	287	13356	287	-58.1	-44.7	-69.1			277	086	21.9	22.6	76.33	2.27	1990	1979
<i>150</i>	277	14308	277	-66.0	-52.1	-75.5			270	087	25.2	26.2	86.16	2.34	1990	1979
<i>125</i>	247	15395	246	-73.0	-60.1	-82.3			238	089	26.2	27.1	102.64	2.40	1990	1985
<i>100</i>	227	16684	224	-75.0	-62.3	-84.9			218	092	20.9	21.5	110.65	2.21	1990	1980
<i>80</i>	184	18008	184	-69.5	-56.1	-82.7			175	088	14.8	15.4	118.81	2.14	1990	1980
<i>70</i>	170	18816	170	-66.5	-57.1	-77.1			163	087	13.2	13.8	139.71	2.08	1990	1980
<i>60</i>	158	19753	158	-63.5	-52.9	-72.7			149	088	12.7	13.3	142.93	2.14	1988	1979
<i>50</i>	148	20880	148	-60.0	-49.1	-67.5			141	092	12.4	13.3	149.26	1.79	1990	1981
<i>40</i>	121	22299	121	-55.7	-47.1	-63.7			114	097	12.7	13.9	171.42	2.08	1990	1981
<i>30</i>	103	24148	103	-51.3	-43.1	-59.9			95	094	14.3	15.6	172.39	1.96	1987	1981
<i>25</i>	77	25329	77	-49.2	-42.3	-57.1			67	087	15.9	17.7	145.17	1.86	1989	1981
<i>20</i>	56	26809	56	-47.1	-38.7	-59.1			47	089	20.7	21.9	174.97	2.46	1981	1988
<i>15</i>	27	28690	27	-44.9	-36.1	-49.9			23	092	21.6	22.4	207.46	1.80	1981	1988
<i>10</i>	6	31461	6	-41.3	-37.1	-48.1			4	083	27.8	28.0			1983	1988
<i>7</i>	1	33790	1	-46.1	-46.1	-46.1									1986	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
293	540	525					217	110	1617	-77.3

## NORMALS OF RADIOSONDE DATA

43346 KARAIKAL

OCTOBER 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	341	1006	341	29.2	34.6	23.6	341	24.6	341	106	1.4	3.9	0.85	0.57	1983	1980
<i>1000</i>	337	62	337	28.8	34.2	23.4	337	24.2	337	099	1.4	4.5	6.75	0.58	1983	1980
<i>950</i>	337	481	337	25.8	32.0	19.6	337	19.1	337	064	1.2	5.6	8.88	0.88	1989	1979
<i>900</i>	337	991	337	22.8	29.2	16.4	336	14.9	337	011	1.8	5.8	4.84	0.95	1989	1979
<i>850</i>	337	1487	337	19.7	26.6	13.2	332	11.6	337	003	2.7	6.0	5.02	1.00	1989	1979
<i>800</i>	337	2007	337	16.6	23.6	10.4	329	8.2	336	003	2.8	6.0	5.22	1.15	1989	1979
<i>750</i>	337	2545	337	13.5	20.2	7.4	327	4.4	336	358	2.5	5.8	9.82	1.17	1989	1980
<i>700</i>	337	3132	337	10.5	17.0	4.4	321	0.5	336	349	1.8	5.5	7.94	1.24	1989	1980
<i>650</i>	337	3738	337	7.1	14.4	0.0	307	-3.3	335	330	1.0	5.2	14.00	1.36	1989	1979
<i>600</i>	337	4400	337	3.7	12.0	-2.9	287	-6.8	335	026	0.2	4.7	13.21	1.50	1989	1979
<i>550</i>	334	5122	334	0.1	7.8	-7.1	259	-10.6	330	093	0.8	4.6	18.04	1.60	1990	1979
<i>500</i>	333	5861	333	-3.9	3.4	-10.3	236	-14.7	331	092	1.4	4.8	20.27	1.63	1990	1979
<i>450</i>	332	6692	332	-8.4	-1.3	-17.3	204	-19.1	327	094	2.0	5.1	29.69	1.73	1990	1979
<i>400</i>	329	7593	329	-13.8	-6.7	-21.1	158	-24.8	324	102	2.7	5.4	30.58	1.93	1990	1982
<i>350</i>	327	8593	327	-20.4	-12.5	-27.7	124	-30.8	320	103	3.5	5.8	35.57	1.94	1990	1982
<i>300</i>	326	9721	326	-28.6	-19.3	-36.5	103	-38.0	320	108	4.8	6.7	45.00	2.06	1990	1982
<i>250</i>	316	11000	316	-39.1	-27.3	-48.3	39	-46.5	309	106	7.2	9.1	56.59	2.20	1990	1979
<i>200</i>	309	12488	309	-51.9	-36.7	-61.1	5	-58.3	301	103	10.4	12.5	70.61	2.33	1990	1982
<i>175</i>	294	13337	294	-59.2	-42.9	-68.1	1	-62.1	289	103	12.8	15.0	79.08	2.33	1990	1979
<i>150</i>	273	14283	273	-67.0	-50.5	-76.1			266	103	14.5	16.6	85.51	2.08	1990	1979
<i>125</i>	231	15360	231	-74.3	-60.3	-86.7			222	102	13.9	15.4	97.52	2.46	1990	1981
<i>100</i>	205	16639	205	-77.1	-66.7	-87.5			197	095	11.5	12.6	113.00	2.46	1990	1987
<i>80</i>	164	17947	163	-72.3	-60.5	-82.1			158	094	8.7	9.7	125.26	2.95	1985	1979
<i>70</i>	154	18753	154	-68.0	-56.5	-77.5			145	092	7.5	8.6	133.78	2.67	1987	1981
<i>60</i>	139	19679	139	-64.0	-53.9	-73.7			130	095	6.8	9.1	138.95	2.58	1987	1979
<i>50</i>	128	20813	128	-59.8	-50.1	-68.1			119	093	7.4	10.0	147.27	3.14	1985	1981
<i>40</i>	97	22246	97	-55.7	-43.1	-65.9			85	096	9.1	12.5	179.01	3.17	1987	1988
<i>30</i>	67	24094	67	-51.7	-42.1	-59.5			58	091	11.4	15.0	234.04	3.55	1988	1980
<i>25</i>	46	25272	46	-49.4	-40.5	-56.9			37	091	14.5	17.3	274.72	3.03	1981	1983
<i>20</i>	24	26702	24	-48.2	-42.1	-52.7			17	091	15.4	18.4	178.62	2.16	1989	1988
<i>15</i>	10	28577	10	-45.4	-41.1	-48.1			8	094	25.5	25.9			1981	1983
<i>10</i>	2	31344	2	-44.0	-42.3	-45.7			2	086	44.9	45.0			1983	1983
<i>7</i>	1	33722	1	-43.9	-43.9	-43.9			1	080	58.0	58.0			1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

334 548 513

195 108 1620 -79.2

## NORMALS OF RADIOSONDE DATA

43346 KARAİKAL

NOVEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	335	1008	335	27.6	37.0	22.8	335	23.5	335	038	3.5	4.7	1.22	0.60	1979	1985
<i>1000</i>	327	78	327	27.1	31.2	19.0	327	22.7	326	034	4.3	5.8	9.27	0.62	1990	1990
<i>950</i>	327	493	326	23.9	33.2	16.2	325	18.0	326	032	5.6	7.6	15.20	0.77	1990	1990
<i>900</i>	327	1001	326	21.0	29.8	14.2	324	14.3	326	031	5.7	7.9	9.60	0.74	1990	1990
<i>850</i>	327	1494	327	18.3	26.6	11.2	320	10.7	326	030	5.0	7.6	10.10	0.71	1990	1990
<i>800</i>	327	2011	327	15.6	23.4	8.6	308	7.6	326	030	3.8	6.9	10.09	0.84	1990	1986
<i>750</i>	327	2550	327	13.0	20.0	5.6	284	5.1	326	039	3.0	6.4	14.11	0.75	1990	1986
<i>700</i>	327	3134	327	10.3	18.0	3.0	271	1.2	326	044	2.4	6.1	11.51	0.92	1990	1986
<i>650</i>	324	3742	324	7.2	14.8	0.4	261	-2.5	316	055	1.9	5.9	21.83	0.98	1989	1986
<i>600</i>	323	4402	323	3.7	11.8	-3.9	242	-5.6	315	067	2.2	5.9	14.85	1.13	1989	1988
<i>550</i>	320	5122	319	0.0	8.8	-6.1	237	-9.5	312	076	2.6	6.1	22.10	1.24	1987	1985
<i>500</i>	319	5862	319	-4.1	4.8	-9.5	207	-13.5	312	079	2.8	6.3	19.25	1.24	1989	1989
<i>450</i>	313	6692	313	-8.8	-1.9	-18.1	180	-18.2	301	083	3.1	6.7	28.43	1.23	1987	1983
<i>400</i>	311	7590	311	-14.1	-6.5	-20.5	160	-23.8	300	099	2.7	6.3	24.72	1.44	1989	1979
<i>350</i>	309	8588	309	-20.8	-13.1	-28.1	133	-30.1	298	114	2.8	6.9	29.00	1.60	1989	1979
<i>300</i>	305	9715	305	-28.9	-21.7	-37.5	96	-37.4	295	130	3.7	7.4	36.15	1.80	1987	1979
<i>250</i>	296	10993	296	-39.2	-30.5	-50.0	38	-46.7	289	138	5.9	9.0	46.74	2.22	1987	1978
<i>200</i>	284	12481	284	-51.8	-41.7	-64.0	4	-55.2	277	134	7.3	11.5	57.76	2.52	1989	1978
<i>175</i>	262	13333	262	-59.1	-48.9	-70.0	1	-61.9	253	132	7.5	12.5	70.73	2.67	1989	1978
<i>150</i>	245	14283	245	-66.7	-55.7	-78.1			236	132	7.0	12.4	84.21	2.68	1989	1990
<i>125</i>	211	15371	211	-73.8	-63.1	-83.5			200	123	6.3	10.8	100.35	2.57	1989	1981
<i>100</i>	188	16649	187	-78.8	-67.9	-88.5			176	104	5.9	8.2	112.79	1.81	1989	1981
<i>80</i>	160	17927	159	-75.0	-60.7	-85.1			151	084	4.2	6.8	107.84	1.63	1987	1981
<i>70</i>	148	18716	148	-71.0	-61.3	-82.1			141	094	3.3	6.4	113.84	2.13	1987	1979
<i>60</i>	137	19628	137	-66.3	-53.3	-78.5			130	117	1.9	6.3	114.21	2.39	1987	1988
<i>50</i>	123	20754	123	-61.6	-51.1	-72.5			115	119	2.4	8.7	127.34	2.40	1988	1983
<i>40</i>	84	22162	84	-57.8	-44.3	-69.1			72	125	2.8	11.3	140.54	1.82	1987	1988
<i>30</i>	60	23979	60	-53.8	-39.5	-64.5			50	092	6.3	16.4	176.60	2.47	1987	1988
<i>25</i>	47	25149	47	-51.4	-40.3	-58.1			35	088	10.6	17.6	133.56	1.61	1988	1988
<i>20</i>	27	26590	27	-49.2	-36.9	-56.7			23	105	8.9	18.3	125.05	2.09	1988	1988
<i>15</i>	12	28431	12	-48.1	-41.3	-56.3			8	076	12.4	23.5			1981	1988
<i>10</i>	2	30760	2	-50.9	-45.7	-56.1									1988	1988
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

317 551 509

172 101 1661 -80.4

## NORMALS OF RADIOSONDE DATA

43346 KARAİKAL

DECEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	342	1010	342	26.7	28.6	22.0	342	23.0	342	038	5.2	5.7	0.82	0.40	1981	1980
1000	297	96	297	26.1	30.2	22.0	297	22.2	297	034	6.7	7.2	7.64	0.47	1990	1980
950	297	508	296	22.8	35.4	17.4	296	17.8	297	038	8.1	8.7	15.55	0.68	1990	1980
900	297	1016	296	19.7	31.6	14.0	295	14.5	297	043	7.9	8.7	5.57	0.72	1990	1980
850	297	1506	297	17.0	26.8	11.8	293	10.4	297	048	6.6	7.8	5.28	0.74	1990	1987
800	297	2022	297	14.7	25.2	8.4	274	6.3	296	054	5.7	7.2	5.19	0.68	1990	1987
750	297	2557	297	12.3	25.2	6.0	254	2.2	296	061	4.8	6.5	15.79	0.87	1990	1978
700	297	3142	297	9.8	22.4	4.0	219	-1.2	296	067	4.0	6.2	7.08	1.03	1990	1978
650	297	3748	297	6.7	18.8	-0.5	187	-4.4	296	070	3.5	5.7	15.05	1.10	1990	1981
600	296	4406	296	3.2	14.4	-5.5	170	-7.8	295	068	3.1	5.6	11.59	1.04	1990	1981
550	292	5119	292	-0.5	9.8	-6.1	145	-11.3	291	073	3.2	5.9	19.54	1.16	1990	1980
500	290	5864	290	-4.8	4.0	-11.3	135	-15.3	289	076	2.8	6.0	16.78	1.16	1990	1985
450	288	6686	288	-9.5	5.4	-16.7	117	-20.0	286	071	2.1	6.5	22.66	1.21	1986	1979
400	285	7588	285	-15.0	-7.5	-21.9	95	-25.6	282	060	1.1	6.8	24.69	1.50	1987	1979
350	282	8585	282	-21.8	-13.5	-28.3	72	-30.8	277	240	1.2	7.7	28.05	1.47	1987	1985
300	277	9707	277	-29.8	-20.7	-38.5	56	-37.8	274	212	3.6	8.8	33.53	1.29	1987	1990
250	275	10980	275	-40.2	-30.1	-50.7	20	-47.5	271	200	5.9	11.2	39.09	1.11	1987	1990
200	261	12466	261	-52.6	-42.7	-64.7	4	-56.7	258	202	7.5	12.8	44.40	0.97	1987	1990
175	231	13322	231	-59.7	-50.1	-71.9	2	-61.1	229	209	7.7	13.2	43.94	0.98	1987	1990
150	212	14273	212	-66.6	-57.5	-79.9			209	221	6.9	12.4	46.43	1.27	1988	1990
125	177	15351	177	-73.4	-65.9	-86.3			173	235	5.3	9.9	51.12	1.99	1987	1990
100	156	16640	156	-78.5	-67.0	-89.7			154	163	0.9	7.4	68.79	3.40	1978	1990
80	123	17924	123	-75.6	-60.3	-86.0			119	107	1.4	6.5	87.44	4.87	1990	1978
70	116	18719	116	-70.9	-56.5	-83.0			111	128	0.6	5.8	112.17	4.58	1986	1978
60	108	19637	108	-66.4	-54.1	-80.0			103	223	1.9	6.5	122.25	4.53	1986	1978
50	99	20746	99	-61.6	-51.9	-74.0			95	246	1.5	7.8	87.56	2.92	1988	1978
40	84	22154	84	-56.8	-45.9	-64.3			76	113	1.4	11.3	85.19	2.52	1988	1981
30	63	23992	63	-52.9	-44.1	-60.1			56	091	8.3	16.2	93.46	1.76	1988	1986
25	41	25154	41	-50.9	-40.5	-57.1			40	084	10.5	17.2	155.79	2.25	1981	1986
20	33	26616	33	-48.5	-42.1	-54.3			32	093	13.8	19.0	184.33	2.95	1983	1990
15	14	28525	14	-46.3	-41.1	-53.9			12	091	18.2	19.4			1981	1986
10	4	31322	4	-43.3	-36.5	-50.5			3	096	19.4	20.0			1988	1986
7	1	33479	1	-47.9	-47.9	-47.9			1	089	24.0	24.0			1986	1986

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

295 558 500

135 097 1683 -80.6

## NORMALS OF RADIOSONDE DATA

43353 KOCHI (CHN)

JANUARY 1971-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	551	1009	551	30.1	34.0	27.0	551	21.4	311	269	2.4	2.5	0.78	0.58	1979	1971
1000	497	82	497	29.4	33.2	26.0	493	20.4					6.51	0.51	1979	1971
950	497	534	497	25.4	30.8	19.0	492	15.4					9.12	0.47	1983	1988
900	497	1008	497	22.0	29.0	16.0	490	11.6					7.44	0.54	1988	1973
850	497	1502	497	18.6	24.0	9.0	482	7.9					7.82	0.43	1983	1976
800	496	2019	495	15.5	23.0	10.8	446	3.8					8.27	0.57	1983	1979
750	494	2563	494	12.9	21.2	7.8	386	-0.5					9.24	0.84	1983	1979
700	493	3140	493	10.2	17.2	2.4	332	-4.5					9.20	0.81	1983	1982
650	488	3752	488	7.1	13.0	-4.7	294	-7.5					10.04	0.82	1983	1979
600	486	4407	486	3.5	9.0	-5.0	264	-10.1					10.91	0.74	1975	1978
550	480	5106	480	-0.4	5.0	-7.0	179	-13.0					12.57	0.82	1978	1972
500	479	5864	479	-4.6	1.0	-12.0	76	-18.5					13.64	0.96	1978	1972
450	475	6682	475	-9.5	-3.0	-16.0	45	-22.4					16.93	1.09	1978	1971
400	468	7588	468	-15.3	-8.0	-23.0	30	-27.6					19.04	1.19	1978	1971
350	451	8577	450	-22.3	-14.0	-31.0	18	-31.2					25.31	1.30	1975	1971
300	445	9700	445	-30.5	-20.9	-39.0	10	-37.5					28.80	1.39	1983	1971
250	428	10969	428	-40.6	-30.1	-50.1	2	-45.8					35.88	1.61	1983	1980
200	406	12449	406	-52.9	-40.1	-65.0							44.53	1.87	1983	1977
175	375	13295	375	-59.6	-50.0	-72.1							50.33	2.03	1974	1980
150	345	14244	345	-66.2	-56.0	-78.1							59.27	2.34	1971	1980
125	294	15329	294	-72.7	-61.0	-84.0							71.61	2.85	1976	1972
100	266	16619	266	-77.3	-63.0	-88.5							88.20	2.64	1976	1982
80	214	17889	214	-75.3	-58.0	-85.5							119.41	3.48	1978	1983
70	184	18668	184	-72.1	-58.1	-86.1							115.78	3.59	1986	1983
60	158	19583	158	-68.0	-54.1	-80.1							143.61	3.70	1986	1983
50	126	20699	126	-63.3	-45.5	-75.5							134.42	3.66	1986	1979
40	90	22103	90	-58.4	-43.0	-71.0							163.80	5.10	1978	1977
30	54	23980	54	-52.9	-43.5	-66.0							218.45	4.73	1983	1977
25	43	25172	43	-50.2	-40.1	-64.0							252.85	5.84	1983	1977
20	28	26699	28	-46.5	-36.1	-61.7							188.28	2.60	1989	1989
15	14	28701	14	-42.7	-32.1	-58.9									1989	1989
10	6	31427	6	-40.9	-38.9	-45.7									1989	1989
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

484 553 505

229 099 1670 -79.3

# NORMALS OF RADIOSONDE DATA

43353 KOCHI (CHN)

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	530	1008	530	30.5	32.8	26.0	530	22.8	312	272	2.7	3.0	1.12	0.50	1980	1972
1000	460	78	460	29.8	32.0	26.0	457	22.0					7.25	0.44	1974	1972
950	460	530	459	25.9	31.8	19.4	453	17.2					7.37	0.68	1982	1980
900	460	1006	459	23.1	30.2	14.4	453	13.3					8.39	0.71	1982	1980
850	460	1502	460	19.9	27.6	13.4	451	9.9					8.97	0.76	1982	1980
800	460	2021	460	16.5	24.4	10.0	444	5.7					9.89	0.89	1982	1971
750	460	2565	460	13.4	20.0	7.0	407	0.8					10.16	0.91	1982	1971
700	458	3144	458	10.5	20.2	4.0	335	-4.2					11.55	0.99	1982	1975
650	455	3755	455	7.3	15.6	1.0	278	-7.0					12.30	0.96	1982	1972
600	454	4412	454	3.7	10.2	-4.0	247	-9.7					13.77	0.99	1982	1972
550	447	5111	447	-0.2	10.8	-13.0	159	-12.4					16.19	0.94	1980	1975
500	445	5869	445	-4.5	1.0	-13.0	60	-18.5					18.20	1.08	1990	1975
450	440	6687	440	-9.4	-2.9	-16.0	44	-23.0					21.02	1.17	1982	1972
400	438	7593	438	-15.0	-7.9	-23.5	25	-27.0					24.25	1.24	1990	1980
350	423	8584	423	-21.9	-12.9	-30.0	16	-33.8					29.89	1.39	1989	1971
300	414	9708	414	-30.1	-19.1	-39.0	8	-40.0					33.10	1.39	1987	1971
250	390	10981	390	-39.8	-29.0	-48.5	1	-48.7					40.99	1.54	1972	1980
200	376	12465	376	-52.0	-43.9	-62.9							52.72	1.70	1989	1980
175	341	13317	341	-58.4	-49.0	-70.9							58.97	2.15	1975	1980
150	317	14271	317	-65.3	-55.0	-80.7							67.24	2.41	1973	1980
125	269	15360	269	-71.6	-58.7	-83.3							81.46	2.86	1983	1980
100	233	16652	233	-76.5	-66.0	-86.1							100.47	2.45	1974	1980
80	206	17933	206	-75.1	-60.7	-87.0							116.69	2.76	1989	1975
70	188	18713	188	-71.6	-58.9	-85.0							127.36	3.59	1983	1971
60	157	19636	157	-67.7	-52.7	-83.7							126.68	3.34	1989	1987
50	129	20750	129	-63.7	-50.7	-79.7							127.11	3.38	1989	1982
40	94	22134	94	-59.6	-48.7	-73.0							167.16	2.94	1989	1977
30	68	23972	68	-54.5	-45.9	-66.0							165.81	2.24	1986	1971
25	42	25178	42	-51.8	-43.3	-61.1							166.08	2.74	1986	1987
20	31	26657	31	-48.7	-40.3	-60.3							256.07	3.24	1989	1987
15	15	28636	15	-45.7	-38.9	-52.7									1990	1988
10	7	31437	7	-40.2	-28.9	-52.9									1989	1988
7	2	33577	2	-45.6	-38.1	-53.1									1989	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
450	553	507					213	098	1682	-78.6

## NORMALS OF RADIOSONDE DATA

43353 KOCHI (CHN)

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDT	YRTX	YRTN
<i>SURFACE</i>	581	1008	581	31.3	34.0	26.0	581	24.1	342	276	3.0	3.2	0.76	0.46	1977	1977
1000	507	69	507	30.6	33.0	26.0	504	23.5					5.19	0.36	1976	1977
950	507	524	507	26.6	34.2	20.8	503	19.5					5.62	0.59	1981	1981
900	507	1001	507	24.0	33.0	18.6	503	14.9					5.75	0.53	1981	1979
850	507	1498	507	21.2	29.8	15.0	502	11.9					6.09	0.66	1987	1979
800	505	2020	505	17.6	25.4	10.8	497	8.8					6.77	0.73	1981	1990
750	503	2566	503	13.9	21.2	7.0	485	4.5					7.38	0.83	1981	1990
700	503	3146	503	10.4	18.0	3.8	453	-1.0					8.28	0.91	1978	1990
650	500	3757	500	7.3	16.0	0.8	365	-5.4					9.33	0.85	1978	1986
600	498	4413	498	3.8	13.0	-4.3	297	-9.5					10.60	0.93	1978	1986
550	492	5112	492	-0.1	9.0	-7.1	180	-12.8					12.18	1.14	1978	1982
500	490	5871	490	-4.3	4.0	-12.0	73	-17.1					14.25	1.25	1978	1971
450	487	6690	487	-9.2	-1.0	-18.0	61	-22.1					17.53	1.46	1978	1971
400	482	7597	482	-15.0	-7.9	-30.0	40	-27.0					21.16	1.61	1990	1976
350	467	8588	467	-21.8	-15.1	-32.0	27	-32.9					27.86	1.62	1990	1971
300	455	9714	455	-29.8	-23.0	-40.9	18	-37.9					33.41	1.75	1973	1979
250	431	10988	431	-39.5	-31.0	-54.1	4	-46.2					42.35	1.95	1976	1979
200	415	12478	415	-51.6	-41.0	-61.0							51.23	1.96	1976	1971
175	373	13332	373	-58.2	-49.0	-68.5							62.83	2.13	1973	1986
150	334	14286	334	-65.0	-56.3	-76.1							73.07	2.45	1988	1986
125	283	15377	283	-71.3	-53.0	-83.1							90.63	2.97	1973	1982
100	246	16677	246	-76.5	-61.0	-89.7							117.97	2.88	1972	1982
80	202	17966	201	-75.0	-58.0	-85.0							143.97	2.85	1972	1971
70	177	18750	177	-71.9	-56.0	-84.1							156.58	2.60	1972	1987
60	154	19665	154	-67.8	-54.3	-81.0							163.62	2.66	1990	1973
50	122	20774	122	-62.9	-46.1	-83.0							161.54	4.13	1990	1977
40	90	22173	90	-58.6	-37.5	-81.0							178.06	5.41	1990	1977
30	66	24032	66	-53.2	-38.5	-78.0							202.29	6.86	1990	1977
25	49	25214	49	-50.7	-38.3	-77.0							281.53	9.97	1990	1977
20	27	26763	27	-45.0	-33.1	-51.5							169.28	2.43	1990	1989
15	12	28746	12	-44.3	-38.7	-48.9									1990	1980
10	5	31492	5	-39.6	-36.5	-43.7									1990	1990
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

496 550 511

221 097 1689 -78.6



## NORMALS OF RADIOSONDE DATA

43353 KOCHI (CHN)

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	598	1007	598	31.4	34.4	25.0	598	25.0	361	275	3.3	3.7	0.84	0.49	1983	1971
1000	522	58	522	30.8	33.4	24.0	517	24.5					5.53	0.42	1983	1974
950	522	513	522	26.5	33.0	20.8	515	21.0					7.90	0.54	1979	1982
900	522	989	522	23.6	30.4	18.0	515	17.0					4.59	0.65	1979	1979
850	522	1487	522	21.1	29.0	14.2	515	14.1					5.61	0.85	1985	1979
800	522	2010	522	18.1	25.6	12.0	512	10.9					5.90	0.98	1990	1976
750	522	2556	522	14.6	22.2	7.8	507	6.9					6.46	0.98	1985	1981
700	522	3139	522	11.0	18.0	3.0	493	2.4					7.41	0.93	1976	1979
650	514	3751	514	7.5	17.0	-4.3	450	-3.1					8.91	1.14	1975	1982
600	511	4408	511	4.0	11.0	-5.7	391	-7.8					10.34	1.14	1990	1979
550	507	5108	507	0.2	7.4	-6.9	254	-11.7					13.96	1.17	1990	1979
500	504	5868	504	-3.9	3.2	-12.0	143	-16.6					14.73	1.08	1988	1971
450	491	6690	490	-8.7	-1.1	-19.0	101	-21.4					19.60	1.22	1988	1972
400	487	7597	486	-14.4	-7.9	-22.1	79	-26.1					21.64	1.26	1990	1983
350	480	8590	480	-21.3	-12.1	-28.7	51	-31.4					29.44	1.42	1988	1983
300	469	9719	469	-29.3	-21.0	-38.7	34	-37.8					32.90	1.50	1975	1982
250	448	10997	448	-38.9	-28.0	-50.9	10	-46.5					40.12	1.67	1972	1982
200	413	12486	413	-51.1	-42.0	-66.1							51.15	2.06	1975	1983
175	365	13346	365	-57.7	-48.0	-76.5							59.69	2.45	1975	1982
150	346	14304	346	-64.6	-53.0	-77.0							72.82	2.68	1972	1972
125	309	15395	309	-71.5	-59.0	-82.0							79.77	2.68	1975	1972
100	262	16694	262	-77.4	-65.0	-87.3							93.75	2.82	1975	1979
80	217	17972	217	-75.9	-63.7	-89.9							112.48	2.66	1983	1982
70	196	18754	195	-71.9	-59.0	-85.1							98.50	2.70	1973	1980
60	162	19668	162	-67.1	-56.3	-78.9							106.70	2.70	1985	1981
50	140	20797	140	-62.1	-47.5	-76.3							125.32	3.72	1985	1981
40	114	22208	114	-56.7	-40.9	-71.7							162.89	4.94	1985	1981
30	73	24073	73	-50.2	-32.7	-65.5							195.59	4.85	1985	1982
25	58	25280	58	-47.1	-35.5	-63.1							258.48	4.37	1989	1982
20	37	26772	37	-44.2	-32.7	-60.5							336.49	6.49	1986	1982
15	21	28706	21	-42.6	-36.5	-55.9							402.82	6.04	1990	1982
10	9	31312	9	-39.7	-32.9	-48.5									1985	1982
7	3	33863	3	-36.6	-33.3	-41.3									1989	1985

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

506 546 515

231 097 1690 -79.6

## NORMALS OF RADIOSONDE DATA

43353 KOCHI (CHN)

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	609	1006	609	30.6	33.8	24.0	609	25.1	373	281	2.8	3.1	0.71	0.85	1983	1972
1000	534	56	533	30.0	32.8	24.0	532	24.7					5.78	0.75	1980	1974
950	533	509	533	25.9	31.0	19.6	532	21.3					6.67	0.61	1987	1987
900	533	985	533	22.8	30.4	16.0	532	17.5					6.75	0.79	1982	1976
850	533	1482	533	20.2	27.6	13.2	532	14.3					7.21	0.83	1985	1979
800	533	2003	533	17.4	26.0	9.2	528	11.1					7.94	0.82	1975	1979
750	532	2550	531	14.5	26.0	6.6	522	7.4					9.58	0.92	1975	1979
700	532	3132	531	11.1	17.2	4.0	519	3.3					9.77	0.93	1982	1976
650	527	3744	525	7.4	12.8	0.0	506	-1.3					11.14	1.03	1982	1976
600	525	4402	523	3.6	10.0	-4.0	478	-5.2					12.97	1.13	1972	1976
550	519	5102	518	0.0	7.2	-8.1	371	-8.7					16.35	1.10	1983	1985
500	518	5862	518	-3.8	2.0	-12.3	250	-13.8					17.55	1.09	1974	1982
450	511	6683	510	-8.2	-0.9	-18.1	196	-18.5					21.27	1.19	1983	1982
400	507	7592	507	-13.7	-6.3	-24.5	162	-23.6					23.61	1.18	1985	1982
350	493	8590	493	-20.3	-11.9	-32.1	116	-29.3					29.72	1.20	1985	1982
300	480	9722	480	-28.2	-19.0	-41.3	85	-36.5					34.00	1.41	1972	1982
250	462	11005	462	-38.0	-28.0	-52.7	30	-43.4					41.11	1.69	1972	1982
200	440	12502	440	-50.5	-39.0	-64.7							52.49	1.96	1976	1982
175	407	13361	407	-57.4	-46.0	-70.1							57.95	2.26	1972	1982
150	383	14319	383	-64.8	-52.0	-76.9							66.46	2.69	1972	1982
125	323	15407	323	-72.0	-59.0	-86.9							78.88	3.30	1972	1982
100	270	16703	270	-77.3	-66.0	-88.3							103.27	3.29	1972	1979
80	213	17977	213	-75.3	-60.1	-86.0							119.17	3.34	1986	1977
70	193	18764	193	-71.6	-56.1	-84.0							125.96	3.78	1986	1971
60	163	19683	163	-67.2	-50.7	-81.0							145.15	4.15	1989	1977
50	143	20795	143	-61.8	-44.3	-77.0							160.13	4.03	1989	1972
40	104	22178	104	-56.9	-39.3	-72.0							171.25	4.68	1981	1972
30	80	24021	80	-51.8	-40.1	-69.0							212.42	5.99	1990	1972
25	59	25209	59	-49.1	-39.1	-66.0							204.80	6.64	1981	1976
20	31	26739	31	-44.4	-34.5	-50.3							204.32	2.34	1983	1981
15	17	28684	17	-42.6	-37.3	-47.3									1985	1981
10	7	31479	7	-39.8	-36.1	-41.9									1985	1985
7	6	33992	6	-36.7	-35.1	-37.5									1985	1985

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

520 549 512

234 097 1687 -79.4

# NORMALS OF RADIOSONDE DATA

43353 KOCHI (CHN)

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	564	1007	564	28.3	33.2	22.4	564	24.5	331	273	1.9	2.2	0.65	0.81	1983	1986
1000	519	65	519	27.8	32.8	22.4	517	24.1					4.58	0.77	1983	1986
950	519	515	519	24.0	29.0	17.4	517	20.8					4.61	0.65	1983	1986
900	519	989	519	20.9	27.0	14.2	516	17.7					4.21	0.57	1971	1986
850	519	1482	519	18.2	24.0	11.6	514	14.5					4.31	0.74	1971	1986
800	517	2000	517	15.5	21.2	9.0	511	11.0					4.92	0.73	1983	1986
750	517	2542	517	12.8	19.0	6.4	507	7.4					5.06	0.84	1983	1986
700	515	3123	514	10.0	16.0	3.2	496	3.5					6.44	1.04	1973	1985
650	506	3733	505	6.8	14.0	0.0	484	-0.2					7.84	1.08	1974	1985
600	507	4389	506	3.6	10.0	-2.7	475	-3.8					10.41	1.13	1973	1979
550	505	5089	505	0.0	8.8	-11.0	404	-7.1					12.98	1.13	1988	1975
500	502	5850	501	-4.0	3.2	-10.0	299	-11.7					15.53	1.18	1988	1971
450	494	6670	493	-8.6	0.4	-16.0	267	-16.7					18.76	1.14	1980	1975
400	490	7580	489	-13.9	-6.0	-21.1	248	-22.1					22.57	1.30	1978	1981
350	476	8577	474	-20.4	-12.9	-28.0	209	-28.6					26.37	1.29	1982	1977
300	469	9709	469	-28.2	-19.0	-37.1	156	-36.5					30.69	1.34	1975	1990
250	450	10992	449	-38.0	-30.0	-49.0	46	-44.9					37.38	1.55	1975	1974
200	433	12491	432	-50.2	-40.0	-61.7							50.10	1.74	1976	1979
175	399	13350	399	-57.0	-48.0	-68.9							56.13	2.19	1975	1979
150	371	14309	371	-64.4	-54.0	-76.3							64.29	2.43	1974	1979
125	317	15401	317	-71.5	-59.0	-82.9							83.63	3.39	1975	1979
100	260	16699	260	-75.9	-64.0	-89.7							104.97	2.72	1974	1982
80	205	17987	205	-72.3	-61.3	-84.0							108.05	2.58	1982	1977
70	178	18786	178	-68.7	-55.9	-80.7							117.82	2.60	1980	1980
60	148	19708	148	-65.1	-52.5	-79.0							117.52	2.96	1990	1978
50	120	20829	120	-60.6	-45.5	-73.0							132.46	3.58	1982	1978
40	92	22222	92	-56.1	-42.1	-74.7							150.62	3.84	1981	1983
30	60	24078	60	-51.0	-36.3	-68.0							169.48	5.41	1988	1978
25	49	25272	49	-48.2	-31.1	-66.0							182.46	5.53	1988	1978
20	28	26874	28	-43.4	-31.9	-53.1							183.95	5.40	1982	1988
15	14	28862	14	-40.1	-36.3	-46.7									1989	1981
10	2	31859	2	-35.2	-34.9	-35.5									1989	1990
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

505 549 510

239 103 1657 -77.9

## NORMALS OF RADIOSONDE DATA

43353 KOCHI (CHN)

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	580	1008	580	27.8	32.4	23.0	580	24.1	342	283	2.0	2.3	0.92	0.77	1983	1971
1000	545	69	545	27.3	31.6	17.0	542	23.7					6.58	0.72	1983	1976
950	545	519	545	23.6	28.8	17.2	542	20.6					6.43	0.67	1982	1979
900	545	991	545	20.4	29.4	14.6	542	17.4					6.22	0.67	1982	1979
850	544	1484	544	17.6	22.2	12.0	541	14.3					6.44	0.72	1988	1971
800	543	2001	543	14.9	23.0	8.0	540	11.0					6.61	0.80	1989	1972
750	543	2544	543	12.3	18.0	6.0	535	7.5					7.54	0.88	1975	1977
700	542	3121	542	9.5	16.0	2.6	532	3.3					8.94	1.02	1975	1982
650	538	3732	538	6.5	18.0	-0.5	521	0.0					10.52	1.09	1975	1979
600	538	4387	538	3.2	12.0	-4.0	514	-3.5					12.30	1.13	1975	1977
550	525	5086	525	-0.3	6.0	-6.9	426	-7.0					15.90	1.11	1975	1982
500	517	5845	517	-4.3	2.0	-14.1	320	-11.9					17.28	1.23	1974	1985
450	504	6665	504	-8.9	-2.0	-18.3	282	-17.1					21.92	1.18	1974	1982
400	498	7573	498	-14.3	-6.0	-26.1	257	-23.0					24.14	1.19	1974	1982
350	482	8567	482	-21.2	-11.0	-34.9	220	-29.6					29.46	1.18	1974	1982
300	475	9694	474	-29.1	-18.0	-46.1	164	-37.5					33.01	1.43	1974	1982
250	458	10973	457	-38.8	-29.7	-55.3	38	-44.9					40.52	1.81	1989	1982
200	443	12466	441	-51.0	-41.0	-66.0							52.89	2.18	1973	1974
175	408	13322	406	-57.7	-46.0	-70.1							63.37	2.62	1976	1981
150	373	14277	373	-64.9	-52.0	-78.1							76.14	3.16	1973	1990
125	296	15376	296	-71.4	-57.0	-83.1							97.08	3.48	1976	1982
100	253	16689	252	-74.1	-62.1	-88.1							113.83	3.07	1990	1982
80	194	17993	193	-70.1	-56.0	-83.0							115.45	3.37	1975	1973
70	173	18792	172	-67.2	-53.5	-81.0							118.86	2.94	1990	1973
60	153	19733	153	-63.8	-50.5	-78.0							124.89	2.90	1989	1973
50	137	20870	137	-59.8	-45.3	-75.0							135.42	3.17	1982	1973
40	92	22272	92	-55.7	-40.1	-73.0							165.72	4.26	1981	1973
30	63	24146	63	-50.0	-32.5	-71.0							195.23	8.21	1982	1973
25	48	25348	48	-48.1	-30.1	-69.0							291.49	9.01	1982	1973
20	26	26890	26	-44.7	-35.5	-58.3							208.47	5.30	1980	1989
15	15	28772	15	-43.4	-34.3	-57.1									1981	1989
10	9	31447	9	-42.1	-37.3	-55.1									1985	1989
7	3	33716	3	-43.1	-37.9	-53.1									1985	1989

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

530 554 503

229 108 1628 -76.8

# NORMALS OF RADIOSONDE DATA

43353 KOCHI (CHN)

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	580	1008	580	27.9	31.8	23.4	580	24.1	372	287	2.2	2.5	0.76	0.64	1979	1986
1000	545	70	540	27.3	31.4	23.2	537	23.7					5.83	0.57	1981	1986
950	540	519	540	23.5	28.0	18.0	538	20.4					5.66	0.58	1978	1982
900	540	992	540	20.4	25.4	15.2	538	17.2					6.09	0.68	1983	1979
850	540	1484	540	17.6	22.0	10.4	538	14.1					6.46	0.62	1974	1982
800	540	2001	540	15.0	21.4	10.0	536	11.0					7.01	0.65	1982	1972
750	539	2544	539	12.3	18.0	6.0	533	7.2					6.65	0.67	1975	1974
700	539	3121	539	9.6	15.0	3.0	525	3.2					8.13	0.73	1975	1974
650	536	3732	536	6.7	16.8	1.0	515	-0.6					8.60	0.71	1980	1974
600	531	4387	531	3.3	10.0	-4.0	498	-4.1					9.42	0.79	1975	1974
550	527	5087	526	-0.3	6.4	-8.0	419	-7.8					11.05	0.85	1983	1974
500	520	5846	519	-4.2	2.4	-12.0	311	-12.3					12.56	0.97	1983	1974
450	510	6666	508	-8.8	-1.0	-18.0	277	-17.5					15.84	1.16	1976	1974
400	506	7572	505	-14.3	-7.5	-24.0	240	-23.0					19.80	1.30	1983	1974
350	491	8568	491	-21.2	-12.7	-32.0	196	-29.6					26.48	1.37	1983	1974
300	480	9696	480	-29.3	-19.0	-41.0	142	-37.4					30.01	1.52	1973	1974
250	466	10973	466	-39.1	-29.7	-50.0	38	-46.3					37.45	1.67	1990	1974
200	449	12466	449	-51.4	-42.0	-68.0							48.26	2.07	1975	1974
175	417	13322	417	-58.2	-47.0	-73.0							53.99	2.14	1976	1974
150	389	14276	389	-65.4	-51.0	-82.0							64.52	2.31	1971	1974
125	323	15367	323	-72.1	-57.0	-87.0							74.32	2.76	1971	1974
100	280	16673	280	-74.3	-57.0	-89.0							105.98	2.99	1971	1974
80	234	17990	234	-69.7	-59.0	-90.0							118.27	3.91	1971	1974
70	209	18787	209	-66.8	-55.1	-85.0							133.08	3.76	1985	1974
60	187	19724	187	-63.8	-49.1	-84.0							132.90	4.78	1985	1974
50	150	20867	150	-60.3	-42.5	-80.0							160.48	4.96	1985	1974
40	94	22286	94	-56.4	-46.0	-72.0							176.13	4.90	1976	1973
30	60	24149	60	-51.3	-38.7	-70.0							246.32	5.46	1989	1973
25	48	25312	48	-50.1	-37.3	-68.0							267.68	6.04	1982	1973
20	31	26849	31	-46.0	-37.7	-53.9							119.57	1.43	1989	1989
15	20	28769	20	-42.9	-34.1	-50.1									1985	1989
10	9	31405	9	-40.9	-36.7	-45.1									1989	1989
7	2	33627	2	-40.9	-40.5	-41.3									1988	1985

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

526 553 504

260 108 1626 -76.4

# NORMALS OF RADIOSONDE DATA

43353 KOCHI (CHN)

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	557	1007	557	28.7	32.0	24.0	556	24.1	346	284	2.3	2.7	0.97	0.71	1980	1972
1000	511	69	511	28.1	31.4	24.0	508	23.7					6.74	0.61	1980	1972
950	511	518	511	24.0	29.0	18.6	508	20.3					6.36	0.75	1987	1989
900	511	992	511	20.9	26.0	15.0	509	16.8					8.01	0.69	1987	1983
850	510	1485	510	18.2	23.0	12.0	508	13.7					8.73	0.70	1975	1983
800	510	2003	510	15.4	20.0	9.0	506	10.4					9.39	0.74	1972	1977
750	510	2547	510	12.7	18.2	7.0	500	7.0					9.36	0.83	1983	1983
700	510	3125	510	9.9	16.0	3.6	493	3.3					10.45	0.93	1973	1983
650	509	3736	509	6.7	12.0	-5.0	471	-0.5					10.82	1.01	1973	1972
600	507	4390	507	3.4	13.0	-4.0	459	-4.4					12.73	1.12	1975	1978
550	503	5090	503	-0.2	5.8	-7.9	381	-8.0					14.84	1.15	1987	1983
500	499	5848	499	-4.3	5.0	-12.1	301	-13.2					17.45	1.26	1981	1983
450	491	6669	491	-9.1	-0.1	-18.7	254	-18.5					21.18	1.33	1979	1983
400	488	7575	488	-14.7	-7.1	-24.0	214	-23.8					24.68	1.40	1987	1974
350	481	8569	481	-21.7	-10.7	-33.0	169	-30.2					32.02	1.67	1990	1974
300	472	9694	472	-29.8	-22.7	-42.0	110	-37.9					37.48	1.79	1982	1974
250	454	10966	453	-39.7	-31.0	-51.0	22	-46.3					46.62	2.11	1975	1971
200	427	12458	427	-52.3	-42.0	-66.0							61.01	2.46	1975	1974
175	390	13312	390	-59.1	-48.0	-72.0							66.78	2.46	1973	1976
150	354	14263	354	-66.4	-52.0	-79.0							72.36	2.34	1973	1974
125	293	15351	293	-72.7	-58.0	-84.0							86.73	2.55	1973	1974
100	242	16644	241	-75.2	-64.9	-88.0							119.17	2.56	1990	1974
80	198	17950	198	-71.3	-61.5	-84.0							123.39	2.87	1980	1972
70	174	18747	174	-68.4	-58.9	-80.0							132.08	3.67	1987	1974
60	130	19680	130	-65.3	-54.9	-77.0							114.81	3.03	1987	1978
50	102	20809	102	-61.9	-48.5	-77.0							121.43	3.25	1982	1978
40	66	22222	66	-58.2	-45.1	-69.0							186.69	4.05	1987	1971
30	36	24127	36	-52.7	-45.3	-66.0							201.68	4.34	1990	1973
25	26	25297	26	-50.2	-43.5	-59.0							231.14	4.20	1982	1978
20	20	26767	20	-47.7	-40.3	-58.0									1988	1978
15	14	28720	14	-44.2	-34.9	-55.0									1988	1978
10	3	31467	3	-41.1	-38.3	-42.9									1987	1987
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

502 552 505

235 110 1611 -77.1

# NORMALS OF RADIOSONDE DATA

43353 KOCHI (CHN)

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	586	1008	586	29.3	34.0	24.0	586	24.4	373	268	2.1	2.6	0.65	0.88	1982	1971
1000	521	71	520	28.7	33.6	24.0	517	23.9					4.90	0.80	1982	1971
950	521	522	520	24.6	30.6	18.8	515	20.4					4.58	0.71	1987	1981
900	521	996	519	21.5	28.2	14.6	514	16.9					5.67	0.84	1987	1981
850	521	1490	519	18.7	26.0	12.4	514	13.9					6.73	0.76	1987	1990
800	520	2009	518	15.7	22.2	9.2	512	10.6					7.87	0.70	1987	1990
750	519	2552	518	12.8	19.6	7.0	507	6.8					7.79	0.62	1987	1978
700	518	3130	518	9.8	16.8	3.0	500	2.6					9.10	0.70	1987	1978
650	514	3742	514	6.6	13.2	0.0	479	-1.3					8.80	0.77	1987	1978
600	511	4396	511	3.3	10.0	-4.0	451	-4.7					9.71	0.89	1987	1978
550	505	5095	505	-0.4	6.0	-8.0	362	-8.6					10.49	1.00	1973	1978
500	496	5853	496	-4.5	2.2	-12.0	270	-14.2					11.77	1.15	1987	1971
450	484	6673	483	-9.2	-3.0	-18.0	215	-19.1					15.22	1.35	1973	1974
400	479	7578	478	-14.8	-8.5	-27.1	172	-24.3					18.91	1.53	1986	1981
350	472	8572	470	-21.7	-14.7	-30.0	135	-30.2					26.24	1.55	1982	1974
300	466	9696	465	-29.9	-22.1	-40.0	92	-38.0					31.68	1.72	1988	1974
250	454	10968	452	-40.0	-32.0	-51.0	19	-45.5					39.77	1.95	1975	1974
200	437	12452	436	-52.8	-40.0	-64.0							51.67	2.26	1975	1974
175	395	13300	394	-59.8	-47.0	-70.5							58.11	2.65	1975	1987
150	365	14246	365	-67.2	-52.0	-80.3							70.01	3.04	1975	1987
125	313	15328	313	-73.7	-59.0	-84.0							86.71	3.65	1975	1978
100	276	16615	276	-77.2	-62.5	-89.0							105.04	3.26	1980	1978
80	220	17899	220	-73.4	-56.3	-88.0							129.92	3.86	1980	1974
70	200	18692	200	-69.8	-53.3	-86.0							138.42	4.72	1980	1974
60	173	19613	173	-66.6	-53.7	-90.0							150.11	4.71	1982	1974
50	135	20715	135	-63.4	-48.3	-82.0							157.95	5.05	1987	1974
40	99	22103	99	-59.0	-43.1	-72.0							210.51	5.03	1988	1973
30	57	23930	57	-54.5	-42.9	-70.0							181.89	5.26	1989	1973
25	42	25101	42	-52.2	-41.1	-69.0							214.03	6.20	1987	1973
20	17	26688	17	-45.7	-37.9	-52.1									1987	1980
15	4	28895	4	-39.8	-32.9	-49.7									1989	1988
10	1	31482	1	-42.9	-42.9	-42.9									1988	1988
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

506 554 503

248 106 1629 -78.9

## NORMALS OF RADIOSONDE DATA

43353 KOCHI (CHN)

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	567	1008	567	29.6	34.2	24.0	567	23.7	361	271	1.6	2.2	0.73	0.68	1982	1988
<i>1000</i>	512	75	512	29.0	33.0	23.8	510	23.1					6.40	0.60	1982	1988
<i>950</i>	512	526	512	24.9	32.2	15.6	509	19.5					7.89	0.67	1983	1986
<i>900</i>	512	1000	512	21.6	29.6	15.0	508	16.2					6.58	0.58	1983	1987
<i>850</i>	512	1494	512	18.5	25.4	12.8	507	13.0					6.94	0.64	1983	1985
<i>800</i>	512	2012	512	15.5	22.2	9.4	502	9.2					6.87	0.66	1979	1983
<i>750</i>	512	2556	512	12.6	18.4	2.6	480	5.5					7.34	0.66	1989	1982
<i>700</i>	512	3134	512	9.7	15.8	3.4	456	1.7					7.77	0.67	1989	1983
<i>650</i>	505	3744	505	6.6	13.2	0.6	430	-1.9					8.52	0.77	1989	1983
<i>600</i>	500	4398	500	3.2	10.0	-3.0	413	-5.6					9.62	0.88	1983	1974
<i>550</i>	497	5097	497	-0.6	6.0	-8.0	317	-9.0					11.62	1.01	1982	1974
<i>500</i>	493	5855	493	-4.9	1.8	-13.0	224	-13.2					13.71	1.17	1989	1974
<i>450</i>	486	5674	486	-9.6	-3.9	-19.0	198	-17.5					17.90	1.44	1989	1974
<i>400</i>	477	7578	477	-15.2	-8.9	-26.0	173	-23.2					21.87	1.70	1982	1974
<i>350</i>	473	8570	473	-22.1	-13.3	-34.0	142	-29.7					30.31	2.00	1979	1974
<i>300</i>	464	9694	464	-30.4	-21.0	-44.0	99	-37.7					36.61	2.20	1977	1974
<i>250</i>	445	10964	445	-40.5	-29.0	-56.0	18	-46.5					47.04	2.45	1977	1974
<i>200</i>	422	12443	421	-53.3	-42.0	-70.0							60.25	2.65	1977	1974
<i>175</i>	392	13292	392	-60.0	-49.1	-76.0							69.49	2.74	1988	1974
<i>150</i>	357	14236	357	-67.2	-57.0	-85.0							81.94	3.09	1973	1974
<i>125</i>	292	15330	292	-73.3	-61.0	-87.0							101.90	3.45	1975	1974
<i>100</i>	250	16621	250	-78.1	-62.1	-90.0							123.07	3.29	1980	1974
<i>80</i>	208	17893	208	-75.4	-60.1	-92.0							146.35	4.34	1980	1974
<i>70</i>	186	18676	186	-71.7	-58.0	-92.0							157.08	4.35	1976	1974
<i>60</i>	158	19598	158	-67.9	-57.5	-88.0							171.44	4.81	1989	1974
<i>50</i>	134	20726	134	-63.5	-54.0	-80.0							101.20	2.67	1976	1971
<i>40</i>	92	22124	92	-59.0	-51.5	-76.0							98.49	2.91	1987	1971
<i>30</i>	60	23992	60	-53.8	-43.3	-63.0							140.21	2.41	1987	1973
<i>25</i>	37	25170	37	-52.0	-42.1	-62.3							142.93	2.44	1986	1981
<i>20</i>	22	26651	22	-48.0	-34.9	-55.3							166.25	4.05	1986	1988
<i>15</i>	10	28410	10	-47.1	-38.5	-54.5									1983	1987
<i>10</i>	5	31190	5	-44.5	-39.1	-51.1									1988	1987
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

498 556 500

223 101 1657 -79.8



## NORMALS OF RADIOSONDE DATA

43353 KOCHI (CHN)

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	550	1009	550	30.1	34.2	24.0	550	22.3	341	275	1.8	2.1	0.62	0.87	1981	1972
1000	475	80	475	29.4	33.6	24.0	467	21.5					4.35	0.78	1981	1972
950	475	532	475	25.2	30.8	18.6	465	17.2					6.25	0.57	1985	1982
900	475	1006	474	21.7	28.2	16.0	463	14.1					6.44	0.58	1990	1982
850	475	1500	474	18.4	25.0	13.2	461	10.7					7.18	0.53	1982	1979
800	475	2017	474	15.3	22.8	9.0	450	6.6					7.80	0.55	1982	1976
750	474	2560	474	12.6	19.6	4.2	410	3.0					8.21	0.62	1982	1980
700	473	3138	473	9.8	16.0	0.0	377	-1.0					9.46	0.66	1971	1978
650	471	3748	471	6.6	18.8	1.0	346	-4.0					9.86	0.64	1979	1976
600	469	4403	469	3.0	9.0	-4.0	323	-7.3					11.23	0.71	1975	1978
550	466	5101	466	-0.9	12.0	-7.7	225	-11.9					13.11	0.79	1974	1982
500	461	5857	461	-5.2	2.0	-16.0	145	-16.8					14.34	0.98	1977	1974
450	459	6673	459	-10.1	-3.0	-19.0	120	-21.3					17.25	1.19	1975	1974
400	452	7576	452	-15.9	-8.0	-27.0	94	-26.4					20.94	1.48	1975	1974
350	440	8565	440	-22.9	-15.0	-34.0	61	-32.8					27.41	1.63	1975	1974
300	430	9684	429	-31.1	-23.0	-44.0	35	-39.4					33.27	1.88	1975	1974
250	419	10951	417	-41.2	-33.0	-55.0	5	-47.2					43.44	2.02	1973	1974
200	401	12428	401	-53.6	-42.1	-70.0							57.81	2.20	1986	1974
175	367	13277	366	-60.0	-46.7	-74.0							65.49	2.48	1986	1974
150	324	14222	324	-66.8	-51.9	-83.0							73.42	2.83	1986	1974
125	259	15312	259	-73.0	-56.1	-88.0							90.68	3.24	1986	1974
100	228	16594	228	-78.1	-60.7	-92.0							112.28	2.98	1986	1974
80	189	17865	188	-75.9	-60.3	-92.0							140.56	2.76	1986	1974
70	170	18646	170	-72.1	-57.9	-87.0							149.51	3.27	1986	1974
60	148	19557	148	-67.8	-54.1	-84.0							173.61	3.52	1986	1974
50	123	20674	123	-63.0	-48.5	-80.0							211.73	5.32	1986	1974
40	81	22058	81	-58.8	-45.9	-78.0							234.14	6.28	1986	1974
30	50	23918	50	-53.0	-42.3	-75.0							327.70	8.34	1980	1974
25	29	25081	29	-51.1	-42.1	-70.0							255.20	5.86	1980	1973
20	15	26636	15	-46.1	-38.1	-53.1									1980	1990
15	8	28643	8	-42.8	-38.1	-46.1									1986	1986
10	2	31316	2	-41.6	-39.5	-43.7									1988	1988
7	1	33783	1	-38.7	-38.7	-38.7									1988	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

466 561 494

197 097 1675 -80.4

## NORMALS OF RADIOSONDE DATA

42809 CALCUTTA

JANUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	1012	589	23.4	30.0	14.6	589	12.7	589	346	0.5	0.9	0.97	0.92	1972	1990
1000	582	114	582	22.5	30.0	16.0	581	11.7	579	333	1.9	3.1	7.47	0.87	1973	1981
950	582	546	582	18.7	26.6	6.0	580	7.4	579	327	2.5	3.8	15.29	0.74	1989	1974
900	582	1017	582	14.8	22.6	9.0	577	4.5	579	314	3.4	4.6	7.11	0.94	1984	1974
850	582	1499	582	12.0	20.2	4.6	544	0.5	580	307	5.6	6.6	7.13	0.99	1989	1989
800	582	2005	581	10.0	19.0	3.0	457	-3.4	580	302	7.9	8.9	7.82	1.20	1977	1978
750	582	2538	581	7.7	18.0	-1.0	374	-6.2	580	295	9.7	10.8	8.52	1.53	1990	1975
700	582	3104	582	5.1	16.0	-3.7	325	-9.6	580	290	11.8	12.8	8.91	1.77	1977	1983
650	579	3704	579	2.3	12.0	-6.5	279	-13.1	578	283	14.0	15.0	10.82	1.84	1977	1981
600	577	4349	576	-1.1	8.2	-10.0	235	-16.1	576	278	16.3	17.5	13.91	1.91	1986	1971
550	573	5040	573	-5.1	7.2	-18.7	216	-20.1	570	276	19.2	20.3	22.84	1.93	1984	1983
500	568	5781	567	-9.8	0.0	-19.3	194	-24.3	564	275	22.3	23.5	21.88	1.97	1977	1983
450	555	6584	555	-15.1	-4.0	-26.0	191	-29.1	551	272	25.5	27.0	29.87	2.09	1977	1974
400	547	7466	547	-20.8	-10.3	-32.1	186	-34.0	541	269	29.0	30.8	33.86	2.24	1990	1983
350	537	8442	536	-27.1	-16.9	-40.1	170	-39.9	514	267	33.1	35.0	40.99	2.19	1990	1983
300	521	9536	520	-34.6	-22.5	-48.7	154	-46.8	499	265	36.4	38.3	49.69	2.09	1990	1983
250	500	10786	499	-43.7	-31.1	-55.0	119	-54.1	473	260	39.4	41.3	60.84	1.91	1990	1975
200	480	12250	480	-54.4	-41.7	-66.1	5	-60.6	455	256	40.1	41.8	69.88	1.56	1990	1981
175	455	13093	455	-60.3	-47.3	-72.3			426	256	37.6	39.0	76.36	1.48	1990	1981
150	429	14037	429	-65.9	-53.9	-77.5			410	257	33.9	35.0	76.97	1.68	1990	1982
125	394	15127	394	-71.7	-60.1	-83.9			380	258	28.9	30.0	83.36	1.70	1990	1982
100	364	16425	364	-76.4	-66.0	-87.1			348	262	22.2	23.5	85.87	1.84	1976	1989
80	314	17709	314	-76.2	-62.0	-87.5			305	267	14.9	16.9	103.84	1.80	1971	1982
70	281	18489	281	-73.3	-59.1	-85.7			270	269	12.4	14.3	114.11	1.62	1990	1989
60	239	19399	239	-69.1	-57.1	-79.3			228	272	8.8	11.4	108.40	1.86	1981	1985
50	186	20494	186	-64.6	-48.1	-78.7			173	272	5.8	9.8	110.03	2.28	1981	1980
40	122	21870	122	-61.1	-47.5	-73.9			111	259	5.0	10.0	121.48	2.54	1989	1985
30	55	23648	55	-58.4	-49.9	-69.9			46	246	2.5	9.5	153.15	3.40	1989	1985
25	34	24839	34	-56.2	-46.1	-67.5			27	070	1.4	11.3	204.99	4.42	1988	1985
20	19	26279	19	-54.2	-43.1	-64.5			15	074	2.3	7.9			1980	1985
15	12	28095	12	-53.1	-42.7	-63.3			10	042	3.1	12.0			1981	1985
10	3	30454	3	-57.9	-51.5	-61.9			3	273	12.2	13.0			1990	1985

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

577	619	411		7	238	1128	-53.2		338	099	1655	-77.9
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# NORMALS OF RADIOSONDE DATA

42809 CALCUTTA

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	537	1010	537	26.6	35.0	15.8	537	14.0	537	333	0.3	1.3	1.69	0.99	1974	1983
1000	524	94	524	25.8	34.0	15.0	522	13.2	524	320	0.9	2.8	11.92	1.01	1974	1983
950	524	532	524	21.5	30.4	13.0	522	9.0	524	297	1.6	3.9	16.12	1.09	1988	1972
900	524	1007	524	17.6	28.0	9.0	519	6.5	524	288	2.9	4.5	12.36	1.07	1988	1972
850	524	1493	524	14.1	22.8	5.0	506	3.0	524	289	5.3	6.5	12.89	0.97	1988	1972
800	524	2002	524	11.1	21.0	3.4	472	-1.2	524	290	8.2	9.4	14.15	1.07	1988	1981
750	524	2534	524	8.1	19.0	-0.5	436	-5.1	524	290	10.6	11.8	13.37	1.20	1988	1981
700	524	3103	524	5.0	16.6	-3.9	382	-8.6	524	288	12.4	13.4	15.98	1.26	1988	1981
650	520	3702	519	1.7	13.0	-10.0	327	-12.3	517	283	14.2	15.1	16.85	1.38	1988	1978
600	519	4346	518	-1.6	9.0	-12.1	288	-15.8	517	279	16.5	17.4	17.00	1.42	1988	1981
550	518	5037	517	-5.7	3.6	-16.3	256	-19.9	516	276	19.1	20.2	20.27	1.42	1988	1981
500	516	5775	514	-10.2	0.2	-21.1	229	-24.3	514	274	22.1	23.2	21.88	1.65	1985	1981
450	512	6580	510	-15.3	-6.0	-26.1	212	-28.6	506	271	25.3	26.7	24.70	1.96	1977	1981
400	508	7461	506	-21.0	-10.1	-33.0	191	-33.7	503	269	28.7	30.3	29.83	2.18	1990	1975
350	493	8439	490	-27.3	-17.1	-37.9	168	-39.7	486	267	32.5	34.5	37.13	2.47	1989	1982
300	482	9531	481	-34.8	-24.5	-48.1	141	-46.1	471	265	35.9	37.9	46.10	2.48	1990	1981
250	468	10782	467	-43.6	-32.1	-57.1	104	-53.8	455	263	38.6	40.8	55.36	2.34	1988	1982
200	454	12246	453	-54.0	-45.1	-64.5	3	-60.0	434	260	39.0	41.2	67.38	2.03	1990	1982
175	426	13089	425	-59.8	-49.0	-70.0			398	259	37.9	40.0	75.21	2.16	1976	1977
150	400	14037	400	-65.6	-55.0	-77.0			375	260	34.3	36.0	86.56	2.31	1976	1977
125	378	15123	378	-71.6	-59.9	-81.1			354	262	29.5	30.9	88.97	2.30	1990	1980
100	351	16417	351	-76.4	-64.1	-87.9			327	264	22.2	23.5	92.91	2.02	1990	1985
80	300	17703	300	-76.1	-64.0	-85.9			278	268	15.8	16.9	99.59	1.95	1973	1985
70	267	18480	267	-73.3	-64.0	-85.0			241	273	12.1	14.1	108.98	1.69	1975	1977
60	228	19398	228	-69.1	-58.0	-81.1			205	271	9.6	11.5	98.09	1.99	1971	1981
50	188	20501	188	-64.1	-51.5	-76.3			160	268	6.4	10.0	91.42	2.28	1981	1985
40	122	21879	122	-61.0	-54.0	-78.1			104	263	4.2	10.1	102.21	2.56	1977	1981
30	69	23685	69	-57.0	-45.3	-64.1			55	253	1.8	9.7	115.26	2.27	1981	1981
25	39	24851	39	-55.7	-43.5	-66.7			29	264	3.9	10.5	160.68	2.81	1981	1985
20	26	26292	26	-54.1	-46.3	-66.1			19	246	1.5	13.0	263.19	5.17	1980	1985
15	4	28061	4	-55.1	-50.1	-65.7			4	237	8.5	14.5			1980	1985
10																
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

521	625	403		6	194	1294	-58.3		328	100	1645	-77.9
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## NORMALS OF RADIOSONDE DATA

42809 CALCUTTA

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	588	1007	588	30.9	38.0	18.6	588	16.8	588	193	0.8	1.9	1.00	1.36	1975	1981
1000	581	68	580	30.3	37.2	19.0	580	16.2	580	208	1.0	2.8	9.23	1.43	1986	1981
950	581	513	581	26.2	35.0	17.2	579	11.7	581	232	2.0	4.5	12.85	1.41	1989	1982
900	581	996	581	22.5	31.0	14.0	574	8.5	581	258	2.8	4.6	7.19	1.38	1973	1990
850	581	1489	581	18.6	26.6	9.0	571	5.0	581	279	4.7	5.8	6.94	1.38	1985	1978
800	582	2006	582	14.8	23.0	5.4	557	1.2	582	285	6.8	7.8	7.37	1.27	1976	1982
750	582	2544	582	10.8	19.0	1.0	525	-2.6	582	289	9.4	10.3	8.91	1.16	1989	1978
700	582	3120	582	6.9	15.4	-1.1	481	-6.4	581	290	11.3	12.3	8.96	1.16	1989	1981
650	580	3720	580	3.1	14.0	-5.1	428	-10.3	578	290	12.6	13.6	13.77	1.20	1975	1980
600	580	4368	579	-0.8	6.8	-9.1	363	-14.5	577	286	13.8	14.8	11.38	1.25	1985	1981
550	574	5062	573	-5.0	5.6	-13.5	316	-19.3	568	282	15.1	16.2	16.30	1.36	1988	1989
500	571	5802	570	-9.7	1.2	-19.3	267	-24.2	565	279	16.8	18.1	16.86	1.42	1988	1982
450	563	6609	563	-15.0	-4.5	-25.9	231	-29.2	556	275	19.5	20.9	22.08	1.55	1988	1982
400	558	7490	557	-21.1	-10.7	-33.3	218	-34.5	550	273	22.3	24.0	26.40	1.82	1990	1992
350	545	8465	544	-27.7	-16.7	-41.0	196	-40.7	531	271	25.7	27.9	33.15	2.11	1988	1978
300	527	9555	527	-34.9	-24.7	-48.1	164	-47.3	515	267	29.9	32.4	40.36	2.10	1990	1981
250	517	10806	517	-43.4	-32.0	-55.0	115	-54.6	499	262	33.6	36.2	49.52	2.06	1975	1974
200	502	12274	502	-53.3	-42.1	-65.1	1	-58.0	480	259	34.1	36.7	59.11	1.89	1989	1981
175	471	13120	471	-59.0	-47.3	-71.7			452	260	32.5	34.6	62.60	1.98	1987	1981
150	442	14069	442	-64.9	-54.1	-75.5			423	260	29.0	30.8	67.52	2.26	1989	1982
125	410	15163	409	-70.8	-56.0	-81.9			393	262	25.1	26.7	79.85	2.35	1974	1982
100	372	16467	371	-75.7	-65.3	-87.9			354	265	18.5	20.0	90.44	2.19	1983	1982
80	316	17756	316	-75.9	-62.0	-84.5			294	272	11.3	13.6	103.55	1.97	1975	1981
70	283	18528	283	-73.5	-57.0	-83.1			261	276	7.7	11.2	116.88	2.66	1977	1984
60	242	19437	242	-68.8	-53.3	-80.5			222	278	4.6	9.0	121.63	2.92	1990	1984
50	193	20534	193	-63.8	-51.1	-76.5			179	287	1.9	7.7	118.27	2.77	1990	1984
40	121	21922	121	-58.8	-48.3	-69.9			109	200	1.5	7.5	132.66	2.70	1990	1985
30	61	23740	61	-54.9	-45.3	-67.1			54	091	1.6	8.7	173.68	1.97	1983	1985
25	26	24926	26	-53.5	-43.3	-65.1			24	249	2.8	7.9	220.34	3.26	1990	1985
20	12	26284	12	-52.7	-46.3	-62.5			10	252	2.8	7.6			1981	1985
15	6	28062	6	-51.2	-43.1	-59.5			5	274	6.0	7.4			1987	1985
10	2	30379	2	-51.7	-48.3	-55.1			2	256	11.3	11.5			1984	1985
7	1	32824	1	-51.5	-51.5	-51.5									1985	1985

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

578 610 425

7 190 1293 -63.3

351 097 1671 -77.7

## NORMALS OF RADIOSONDE DATA

42809 CALCUTTA

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SOTT	YRTX	YRTN
<i>SURFACE</i>	569	1003	569	32.3	40.0	19.8	569	22.8	569	179	2.7	3.3	1.08	1.29	1972	1987
<i>1000</i>	560	32	495	31.8	39.0	19.0	495	22.0	495	179	2.9	3.6	9.46	1.39	1972	1978
<i>950</i>	560	479	560	28.2	37.0	16.0	560	17.6	560	192	5.2	6.5	15.04	1.43	1976	1978
<i>900</i>	560	967	560	25.2	33.0	13.0	558	13.0	560	222	4.1	5.7	7.59	1.55	1975	1978
<i>850</i>	560	1467	560	22.1	29.4	12.0	555	7.9	560	265	4.6	6.1	6.99	1.48	1980	1978
<i>800</i>	560	1989	560	18.4	28.2	9.6	551	3.5	560	283	6.6	7.7	7.10	1.31	1989	1982
<i>750</i>	559	2534	559	14.1	26.0	0.0	540	-0.4	559	288	8.9	9.9	8.62	1.28	1974	1976
<i>700</i>	559	3116	559	9.4	19.0	1.0	521	-3.8	559	290	10.7	11.7	9.28	1.33	1975	1987
<i>650</i>	556	3720	556	4.8	12.4	-4.9	485	-7.8	551	291	12.3	13.4	11.54	1.24	1990	1986
<i>600</i>	552	4373	551	0.6	8.4	-7.7	419	-12.4	546	290	13.1	14.2	12.88	1.26	1990	1982
<i>550</i>	547	5071	545	-3.5	5.0	-18.5	352	-17.4	540	286	13.5	14.9	19.59	1.36	1990	1986
<i>500</i>	544	5814	541	-7.9	0.6	-16.0	281	-22.1	534	283	14.5	15.9	18.85	1.30	1990	1977
<i>450</i>	539	6627	538	-13.1	-3.5	-22.0	252	-27.0	526	279	16.4	17.9	24.73	1.27	1990	1976
<i>400</i>	538	7514	535	-19.0	-8.3	-27.9	237	-32.1	522	276	18.5	20.3	26.35	1.44	1990	1982
<i>350</i>	519	8495	518	-25.7	-15.1	-39.5	222	-37.9	496	273	21.9	23.9	31.51	1.55	1990	1982
<i>300</i>	514	9598	513	-33.5	-21.7	-43.9	192	-44.5	492	271	25.3	27.7	38.43	1.82	1990	1982
<i>250</i>	495	10853	494	-42.5	-30.0	-54.5	113	-52.5	466	257	27.8	30.5	46.94	2.03	1974	1982
<i>200</i>	474	12328	473	-52.9	-41.5	-67.7	2	-60.5	449	266	28.3	30.7	60.77	2.04	1990	1982
<i>175</i>	442	13174	441	-58.7	-47.5	-70.1			416	265	25.9	28.0	65.79	2.06	1990	1982
<i>150</i>	414	14126	414	-65.0	-54.1	-76.0			390	267	23.2	24.9	75.28	2.27	1987	1977
<i>125</i>	376	15216	376	-71.4	-60.1	-82.1			352	268	18.6	20.4	89.07	2.40	1986	1981
<i>100</i>	344	16510	344	-76.9	-65.1	-86.1			328	272	11.6	13.8	101.45	2.34	1990	1981
<i>80</i>	297	17785	297	-77.0	-64.0	-86.0			282	285	5.4	9.9	116.27	2.57	1977	1977
<i>70</i>	272	18558	272	-74.2	-59.7	-85.0			255	284	2.3	8.4	120.25	2.70	1987	1978
<i>60</i>	243	19469	243	-69.1	-54.3	-81.1			223	138	0.3	7.4	108.27	2.96	1987	1984
<i>50</i>	204	20576	204	-63.1	-51.1	-79.5			183	131	1.2	6.6	124.10	3.38	1983	1984
<i>40</i>	138	21974	138	-58.1	-45.1	-75.5			121	083	2.8	6.8	146.91	3.64	1983	1984
<i>30</i>	79	23806	79	-53.2	-42.7	-70.9			69	104	2.7	7.0	165.34	3.74	1986	1984
<i>25</i>	52	24974	52	-51.2	-39.9	-69.5			47	066	2.0	7.6	206.24	3.36	1989	1984
<i>20</i>	34	26427	34	-49.5	-40.5	-66.9			26	016	2.0	8.2	259.94	3.90	1987	1984
<i>15</i>	12	28235	12	-48.8	-41.1	-63.5			10	001	0.2	5.1			1987	1984
<i>10</i>	2	30685	2	-47.3	-46.1	-48.5			2	091	4.4	4.5			1984	1984
<i>7</i>	1	32900	1	-46.9	-46.9	-46.9			1	025	6.0	6.0			1984	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

552	590	450		1	154	1381	-69.5		317	096	1678	-79.0
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## NORMALS OF RADIOSONDE DATA

42809 CALCUTTA

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	610	1000	610	32.3	40.8	21.0	610	24.6	610	174	2.6	3.3	1.53	1.44	1979	1976
<i>1000</i>	587	7	321	31.6	40.0	21.0	321	23.6	321	173	2.5	3.4	12.83	1.52	1979	1976
<i>950</i>	587	453	587	28.4	37.0	18.0	585	20.8	587	181	5.4	6.8	17.08	1.29	1979	1977
<i>900</i>	587	944	587	25.4	34.0	17.2	585	17.2	587	201	4.3	6.2	12.64	1.30	1972	1983
<i>850</i>	587	1444	587	22.7	32.0	14.0	584	12.2	587	249	3.4	6.0	12.60	1.20	1977	1990
<i>800</i>	587	1969	587	19.4	28.0	7.0	579	7.3	586	283	5.0	7.0	12.38	1.26	1988	1977
<i>750</i>	587	2516	587	15.4	23.8	6.0	574	2.9	585	294	6.7	8.4	11.58	1.19	1988	1977
<i>700</i>	586	3101	586	10.9	18.5	-5.0	568	-1.1	585	301	8.3	10.0	12.19	1.23	1988	1977
<i>650</i>	583	3710	583	6.5	15.0	-3.7	542	-5.1	580	303	9.6	11.2	12.72	1.13	1977	1981
<i>600</i>	578	4366	577	2.4	10.0	-7.0	491	-9.3	573	300	9.9	11.6	13.40	1.12	1989	1977
<i>550</i>	574	5070	571	-1.2	5.6	-12.0	415	-13.8	567	295	9.6	11.3	20.46	1.16	1988	1978
<i>500</i>	568	5820	565	-5.1	2.4	-13.0	348	-18.6	560	290	9.3	11.3	16.96	1.31	1988	1977
<i>450</i>	560	6645	556	-9.7	6.8	-19.0	293	-22.8	550	281	9.8	12.0	24.75	1.42	1985	1977
<i>400</i>	556	7543	553	-15.0	-7.1	-25.0	258	-27.4	546	273	10.6	13.0	23.97	1.52	1988	1977
<i>350</i>	550	8543	549	-21.4	-13.1	-32.3	224	-33.2	533	265	12.1	14.4	30.13	1.72	1990	1987
<i>300</i>	541	9663	541	-29.3	-21.0	-42.5	207	-39.9	527	260	13.4	15.7	36.84	1.94	1974	1987
<i>250</i>	527	10940	527	-39.0	-28.0	-49.3	150	-49.0	510	255	13.9	16.2	46.14	1.99	1974	1982
<i>200</i>	505	12434	505	-50.9	-40.7	-61.1	19	-56.4	486	250	13.3	16.0	58.94	2.06	1985	1982
<i>175</i>	462	13286	462	-57.9	-47.1	-68.3	1	-56.0	445	247	12.1	15.2	67.69	2.13	1985	1979
<i>150</i>	431	14239	431	-65.2	-54.5	-76.5			417	247	9.7	13.5	75.79	2.07	1985	1979
<i>125</i>	402	15325	402	-72.7	-59.1	-86.1			389	248	5.5	10.5	85.52	2.06	1987	1979
<i>100</i>	370	16617	370	-78.1	-70.0	-89.0			359	212	0.9	9.0	88.38	2.05	1972	1977
<i>80</i>	318	17883	318	-78.0	-60.0	-93.0			308	097	4.2	8.5	99.88	2.94	1972	1978
<i>70</i>	282	18650	282	-74.6	-59.1	-90.0			274	101	6.5	8.5	98.11	3.53	1985	1974
<i>60</i>	240	19562	240	-68.3	-56.1	-80.3			231	094	5.8	8.4	113.20	3.33	1984	1983
<i>50</i>	208	20678	208	-61.7	-48.9	-76.0			200	087	7.6	8.6	122.97	2.88	1982	1973
<i>40</i>	146	22077	146	-56.5	-42.5	-65.1			133	086	8.3	9.1	128.13	2.52	1986	1983
<i>30</i>	71	23918	71	-51.8	-45.7	-59.5			64	083	9.9	10.3	179.63	3.27	1985	1985
<i>25</i>	50	25083	50	-49.5	-41.5	-56.7			43	082	9.7	10.3	183.22	3.32	1982	1985
<i>20</i>	29	26599	29	-46.8	-37.3	-53.1			24	082	11.0	11.7	255.16	3.73	1983	1985
<i>15</i>	15	28527	15	-44.0	-36.1	-49.9			11	072	9.1	11.7			1987	1983
<i>10</i>	3	31163	3	-42.4	-39.5	-45.7			2	071	12.9	13.0			1984	1983

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

578 565 484

340 096 1685 -80.1

## NORMALS OF RADIOSONDE DATA

42809 CALCUTTA

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	996	600	30.9	42.4	23.8	600	25.8	600	163	2.1	3.0	1.12	0.98	1979	1988
1000	551	-25	62	30.1	41.0	24.0	62	25.2	62	171	2.9	3.5	10.17	1.66	1979	1976
950	551	420	551	27.7	37.8	21.8	551	23.0	549	176	4.9	6.9	16.38	0.93	1979	1984
900	551	911	551	24.6	33.0	19.0	551	20.2	549	184	4.1	7.0	11.71	0.93	1979	1984
850	551	1410	551	21.8	29.0	16.8	551	16.9	549	204	2.6	6.8	13.03	0.99	1976	1981
800	551	1935	551	18.9	28.0	13.0	551	13.2	548	244	2.0	7.0	13.74	0.92	1974	1980
750	551	2485	550	15.6	21.4	7.2	549	9.2	548	269	2.3	7.5	13.26	0.79	1990	1980
700	551	3069	550	12.2	19.5	4.0	543	5.3	548	284	2.5	8.0	16.33	0.79	1987	1980
650	551	3685	550	8.6	16.8	1.2	541	1.1	547	284	2.5	8.2	17.60	0.87	1987	1979
600	549	4345	548	5.1	12.4	-5.1	521	-2.8	543	280	2.2	7.8	18.19	0.98	1990	1984
550	549	5057	548	1.3	9.0	-6.0	506	-6.6	539	277	1.8	7.4	23.05	1.08	1975	1977
500	547	5813	545	-2.7	4.2	-9.5	491	-10.8	535	267	1.3	7.1	20.64	1.14	1988	1980
450	542	6645	539	-7.0	0.0	-15.3	462	-15.5	521	249	1.1	7.0	25.13	1.26	1988	1980
400	536	7554	536	-12.2	-3.1	-21.9	436	-21.2	516	216	0.9	6.7	26.51	1.35	1988	1980
350	527	8564	527	-18.6	-10.7	-29.1	386	-27.1	504	182	0.9	6.7	31.23	1.50	1988	1980
300	520	9697	519	-26.4	-19.0	-36.1	329	-34.7	495	140	1.3	7.1	37.41	1.65	1973	1980
250	507	10991	506	-36.4	-28.0	-45.7	228	-43.8	476	117	2.7	7.6	46.72	1.89	1973	1981
200	492	12497	492	-49.2	-40.1	-60.9	40	-54.1	462	101	4.6	8.5	59.02	2.11	1988	1981
175	463	13356	463	-56.7	-46.5	-70.1	1	-49.0	429	092	6.0	9.6	65.15	2.27	1988	1981
150	431	14309	430	-65.0	-57.1	-76.3			402	082	7.2	10.9	74.52	2.33	1988	1981
125	392	15391	391	-73.4	-65.0	-84.0			368	075	10.0	13.0	90.08	2.39	1974	1977
100	347	16673	346	-79.6	-66.0	-93.0			330	075	14.0	15.8	102.73	2.15	1974	1978
80	304	17937	303	-78.7	-62.0	-93.0			283	084	16.5	17.2	120.83	3.35	1975	1978
70	280	18703	279	-74.6	-58.3	-89.0			258	087	16.8	17.2	135.13	3.79	1987	1978
60	243	19610	242	-68.3	-49.3	-79.5			218	087	15.7	16.2	149.85	4.04	1986	1984
50	203	20710	202	-62.2	-44.5	-74.0			183	087	15.2	15.6	165.98	3.95	1986	1976
40	143	22091	143	-58.4	-38.7	-69.0			126	087	16.1	16.5	199.99	5.04	1986	1978
30	89	23924	89	-53.5	-31.3	-63.3			76	086	17.0	17.6	233.78	5.36	1986	1984
25	57	25077	57	-51.2	-37.3	-62.3			47	079	18.7	19.1	254.38	5.02	1986	1984
20	26	26484	26	-50.2	-43.1	-61.1			20	085	19.9	22.5	254.99	4.16	1985	1984
15	18	28298	18	-47.7	-39.9	-59.3			13	077	24.4	25.2			1988	1984
10	6	30881	6	-46.0	-40.5	-50.5			2	085	25.5	26.0			1983	1983
7	3	33215	3	-45.8	-43.1	-48.1			2	092	28.1	28.5			1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

545 532 531

330 097 1686 -81.3

# NORMALS OF RADIOSONDE DATA

42809 CALCUTTA

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	602	937	602	29.5	37.2	23.8	602	25.9	602	169	2.1	2.7	1.30	0.64	1982	1982
1000	591	-13	111	28.9	34.2	24.8	111	25.6	110	180	2.7	3.1	14.16	1.22	1983	1979
950	591	425	591	26.3	34.2	19.0	591	23.1	589	184	5.0	6.8	15.02	0.72	1982	1985
900	591	915	591	23.4	33.2	15.8	591	20.3	589	192	4.7	7.3	9.74	0.78	1982	1985
850	591	1413	591	20.5	31.0	12.4	591	17.3	589	195	3.8	7.1	10.40	0.84	1982	1985
800	591	1936	591	17.7	27.6	9.0	590	14.2	589	199	3.0	6.9	11.07	0.90	1990	1986
750	591	2486	591	14.8	25.0	5.6	589	10.9	589	200	2.5	6.6	13.29	0.95	1981	1985
700	591	3068	591	11.8	18.0	2.0	589	7.3	586	197	2.2	6.4	13.83	0.99	1988	1986
650	589	3685	589	8.6	17.0	-2.1	585	3.3	584	188	2.1	6.5	16.27	0.93	1974	1986
600	583	4345	583	5.3	11.2	-5.9	577	-0.5	577	164	1.7	6.3	17.71	1.02	1988	1986
550	583	5058	583	1.6	14.0	-9.5	575	-4.7	570	134	1.9	6.3	27.23	1.10	1977	1986
500	579	5816	579	-2.4	5.2	-13.3	566	-9.2	564	116	2.3	6.4	21.72	1.18	1988	1986
450	571	6648	570	-7.0	1.6	-16.0	539	-14.1	551	104	3.0	6.4	30.39	1.31	1988	1976
400	569	7558	568	-12.3	-2.5	-20.7	509	-19.7	551	096	4.2	6.9	29.68	1.44	1988	1985
350	558	8568	557	-18.7	-8.5	-27.7	466	-26.5	535	093	5.7	8.0	35.81	1.68	1988	1985
300	548	9702	546	-26.6	-16.1	-36.1	387	-34.6	523	089	7.9	9.5	41.58	1.91	1988	1985
250	535	10991	534	-36.8	-27.0	-47.3	237	-43.5	507	084	10.6	11.9	50.29	2.11	1974	1985
200	520	12495	520	-49.7	-40.1	-61.1	48	-54.6	492	076	13.7	15.1	63.74	2.35	1986	1985
175	488	13352	488	-57.3	-46.3	-68.3	1	-55.0	452	074	15.3	16.9	70.81	2.45	1988	1981
150	461	14305	459	-65.6	-52.7	-75.1			429	074	17.7	19.4	79.06	2.50	1990	1986
125	427	15387	427	-73.9	-60.7	-85.3			400	075	21.0	22.5	95.10	2.32	1988	1982
100	401	16667	401	-79.2	-65.0	-89.0			378	077	24.3	25.2	115.31	2.52	1976	1978
80	345	17933	345	-76.2	-56.0	-88.5			324	082	23.8	24.2	123.04	3.07	1976	1983
70	317	18710	314	-71.5	-54.0	-84.0			297	084	21.5	21.8	135.11	2.96	1976	1972
60	272	19627	272	-66.6	-52.0	-81.0			257	086	21.2	21.5	116.78	3.08	1976	1972
50	228	20745	228	-61.8	-50.0	-76.3			208	087	20.3	20.7	125.68	2.97	1976	1983
40	160	22122	160	-58.2	-46.5	-68.3			146	086	20.7	21.0	157.19	3.04	1989	1983
30	100	23933	100	-54.0	-41.3	-67.1			87	087	22.2	22.6	152.32	3.05	1982	1983
25	68	25090	68	-51.5	-39.9	-65.9			58	088	22.9	23.2	151.51	3.74	1989	1983
20	25	26529	25	-50.5	-35.5	-63.1			25	085	24.8	25.3	214.99	3.62	1983	1983
15	9	28387	9	-49.7	-45.3	-59.3			8	081	28.2	28.7			1987	1982
10	2	31029	2	-48.2	-47.9	-48.5			2	084	40.8	41.0			1982	1984
7	1	33440	1	-47.1	-47.1	-47.1			1	091	50.0	50.0			1984	1984

**FREEZING LEVEL**

N P ALT

582 529 535

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

380 102 1659 -80.7



# NORMALS OF RADIOSONDE DATA

42809 CALCUTTA

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	998	620	29.3	33.6	24.0	620	26.0	620	157	1.7	2.6	1.12	0.61	1981	1971
1000	605	-12	168	29.0	33.2	24.0	168	25.5	168	171	2.1	2.5	9.82	1.04	1981	1971
950	606	429	606	26.2	33.0	17.0	606	23.2	604	169	4.5	6.7	12.55	0.64	1975	1974
900	606	919	606	23.2	29.0	15.0	606	20.4	604	171	4.3	7.4	10.38	0.69	1975	1974
850	606	1416	606	20.4	28.0	8.0	606	17.5	604	169	3.8	7.5	11.08	0.73	1984	1977
800	607	1939	607	17.7	26.0	10.0	607	14.4	605	165	3.4	7.2	12.05	0.71	1973	1974
750	607	2488	607	14.9	25.0	7.0	607	11.2	603	159	2.9	6.9	13.22	0.76	1973	1974
700	607	3071	607	12.0	19.0	5.0	606	7.3	604	150	2.9	6.9	14.13	0.68	1976	1974
650	605	3685	604	8.8	15.4	0.2	604	3.3	600	137	3.0	7.0	15.99	0.66	1988	1984
600	601	4347	601	5.4	13.0	0.0	597	-0.7	596	126	3.2	7.0	17.55	0.66	1974	1974
550	599	5050	599	1.6	7.0	-3.3	591	-4.8	591	115	3.4	7.0	23.74	0.80	1989	1979
500	599	5817	599	-2.5	3.0	-8.0	589	-9.4	591	106	3.5	7.0	21.14	0.92	1975	1976
450	594	6648	593	-7.1	0.4	-15.9	574	-14.7	581	096	4.1	7.2	27.33	1.06	1989	1989
400	590	7557	588	-12.5	-5.5	-19.1	543	-20.7	579	092	4.7	7.6	27.02	1.22	1988	1985
350	573	8565	573	-19.1	-13.0	-25.9	485	-27.5	562	091	6.0	8.2	30.09	1.39	1975	1982
300	564	9697	563	-27.0	-20.0	-34.3	389	-35.0	553	091	7.4	9.0	36.12	1.59	1975	1979
250	554	10985	551	-37.3	-29.1	-47.0	234	-44.3	541	086	9.4	10.8	43.11	1.79	1987	1976
200	535	12485	531	-50.4	-42.1	-63.7	41	-55.0	519	077	11.4	12.9	54.58	2.11	1988	1982
175	508	13340	507	-58.0	-48.5	-70.0			491	074	12.6	14.4	60.75	2.36	1988	1976
150	480	14292	479	-66.3	-55.9	-76.1			466	070	14.4	16.0	71.92	2.46	1988	1979
125	434	15369	433	-74.3	-61.0	-83.5			423	071	17.6	18.7	77.64	2.09	1974	1979
100	396	16654	396	-79.0	-68.0	-89.1			388	077	21.3	22.0	85.39	2.36	1976	1979
80	340	17934	340	-74.8	-59.0	-86.1			332	084	21.0	21.5	98.06	3.08	1976	1984
70	301	18715	301	-70.7	-55.0	-83.1			287	085	19.7	20.2	102.38	3.17	1975	1988
60	253	19638	253	-66.3	-51.9	-79.9			240	086	19.0	19.6	111.37	3.45	1989	1988
50	206	20751	206	-62.4	-47.9	-77.7			197	087	19.7	20.3	121.16	3.25	1989	1980
40	144	22131	144	-58.5	-45.9	-69.0			143	087	19.8	20.4	131.41	3.31	1985	1972
30	92	23955	92	-54.9	-45.0	-65.3			83	087	21.5	22.4	137.53	3.14	1977	1988
25	62	25116	62	-53.2	-43.1	-64.0			56	088	22.8	23.1	144.27	3.12	1985	1972
20	26	26547	26	-51.4	-46.5	-59.9			24	087	25.3	25.7	200.02	3.98	1981	1988
15	14	28341	14	-50.8	-45.7	-55.9			12	087	24.2	24.6			1982	1988
10	4	30817	4	-48.8	-43.7	-53.1			3	078	33.9	34.3			1982	1984
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

599 529 536

386 104 1647 -80.2

## NORMALS OF RADIOSONDE DATA

42809 CALCUTTA

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	583	1002	583	29.1	34.4	23.6	583	25.4	583	160	1.4	2.2	0.77	0.51	1986	1986
1000	565	24	450	29.0	33.4	21.0	450	25.1	450	169	1.6	2.4	6.47	0.69	1987	1972
950	565	467	565	25.9	32.4	20.2	565	22.0	563	175	3.3	5.5	13.94	0.49	1987	1990
900	565	955	565	22.8	29.0	11.0	565	18.9	563	178	3.2	5.9	6.15	0.54	1978	1977
850	565	1452	565	19.9	26.2	13.6	565	15.3	563	177	2.7	6.0	6.17	0.63	1985	1984
800	566	1973	566	17.0	25.0	11.0	563	11.9	564	178	2.2	6.0	6.44	0.69	1987	1977
750	566	2518	566	14.0	19.4	8.0	561	8.3	564	180	2.0	6.1	7.37	0.72	1989	1977
700	566	3102	566	10.9	21.0	4.0	556	4.6	563	184	2.0	6.1	8.01	0.77	1977	1977
650	565	3713	564	7.6	13.0	1.0	550	0.4	559	180	1.9	6.0	9.98	0.80	1987	1977
600	563	4372	562	4.2	10.0	-4.0	538	-3.5	555	177	1.8	5.8	11.12	0.87	1987	1974
550	560	5080	559	0.4	10.2	-10.5	519	-7.5	553	170	1.6	5.8	13.24	0.96	1982	1989
500	556	5836	554	-3.8	2.2	-11.9	492	-11.5	548	154	1.3	5.6	15.61	1.03	1987	1989
450	553	6662	552	-8.4	6.8	-17.0	469	-16.5	546	142	1.3	5.6	21.69	1.25	1989	1972
400	548	7569	547	-13.8	-7.0	-21.3	430	-22.0	539	139	1.7	5.8	23.55	1.38	1971	1979
350	533	8571	533	-20.6	-12.3	-30.0	379	-28.5	524	133	2.1	6.2	28.54	1.53	1990	1977
300	525	9699	524	-28.7	-20.9	-37.5	324	-36.0	512	120	2.9	6.6	33.57	1.61	1990	1979
250	512	10976	512	-39.0	-28.0	-48.3	189	-45.2	498	106	3.7	7.5	42.75	1.87	1977	1979
200	492	12465	492	-52.0	-43.1	-62.1	22	-56.7	476	087	5.0	9.0	54.11	2.05	1988	1980
175	453	13315	453	-59.5	-50.9	-69.1			436	078	5.7	9.7	62.93	2.28	1988	1984
150	419	14260	419	-67.4	-58.9	-82.0			402	075	7.0	10.7	72.16	2.29	1988	1977
125	372	15333	372	-75.3	-65.9	-87.0			357	078	9.4	11.9	82.50	2.35	1985	1978
100	331	16610	331	-79.7	-67.0	-91.0			314	084	12.3	13.3	104.34	2.44	1974	1978
80	273	17881	273	-76.1	-60.0	-89.0			265	089	13.2	13.7	105.77	2.99	1971	1978
70	237	18665	237	-71.4	-56.0	-81.0			229	092	12.6	13.2	120.40	2.83	1971	1978
60	194	19587	194	-65.6	-57.9	-84.0			184	091	13.1	13.4	109.60	2.88	1984	1978
50	160	20695	160	-62.6	-54.0	-72.0			155	091	13.2	13.8	117.54	2.69	1976	1974
40	111	22070	111	-59.7	-50.5	-73.0			106	092	14.8	15.2	142.00	3.63	1987	1975
30	61	23874	61	-56.3	-49.5	-63.0			57	088	17.3	17.6	138.75	2.34	1984	1973
25	32	25018	32	-54.2	-50.3	-64.5			31	082	17.1	17.4	156.74	2.06	1982	1983
20	19	26421	19	-51.5	-44.1	-57.7			19	083	17.0	17.2			1982	1983
15	9	28252	9	-51.3	-45.3	-55.3			9	073	20.1	21.0			1982	1989
10	1	30878	1	-52.9	-52.9	-52.9			1	094	22.0	22.0			1989	1989
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

562 544 515

320 104 1644 -81.1

# NORMALS OF RADIOSONDE DATA

42809 CALCUTTA

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	1007	620	28.9	32.6	22.0	620	22.1	620	095	0.2	1.4	1.43	0.71	1981	1971
1000	602	66	593	28.5	32.0	21.0	593	22.3	591	019	0.1	2.2	12.57	0.69	1971	1973
950	602	507	602	25.1	30.8	17.8	602	18.0	600	351	0.3	4.4	18.37	0.63	1989	1980
900	602	993	602	21.7	27.8	14.4	601	14.7	600	338	0.6	4.6	12.08	0.69	1989	1985
850	602	1487	602	18.4	29.8	12.0	598	11.0	600	318	0.9	5.0	11.75	0.75	1990	1974
800	600	2004	600	15.2	24.0	8.6	587	6.5	598	295	1.3	5.3	11.67	0.89	1975	1982
750	600	2545	600	12.2	20.0	5.0	553	2.7	598	273	1.9	5.9	10.61	0.95	1975	1979
700	600	3124	597	9.2	16.2	3.0	501	-0.5	597	260	2.6	6.2	11.66	1.17	1989	1977
650	596	3734	592	6.2	14.0	-0.9	442	-3.7	594	255	3.3	6.6	12.65	1.23	1989	1980
600	598	4387	597	2.8	10.8	-5.0	387	-7.2	596	256	3.9	7.0	13.45	1.15	1987	1977
550	594	5090	594	-1.0	7.0	-10.0	346	-10.8	591	257	4.6	7.6	20.95	1.22	1975	1977
500	593	5842	593	-5.3	3.0	-14.0	305	-15.1	590	258	5.5	8.4	17.69	1.34	1975	1977
450	582	6662	582	-10.3	-1.0	-20.0	279	-19.9	578	258	6.5	9.4	24.18	1.52	1975	1973
400	571	7561	571	-16.0	-7.3	-26.0	249	-25.9	567	255	7.5	10.5	24.86	1.67	1989	1977
350	558	8554	558	-22.8	-12.3	-32.0	217	-32.3	553	254	8.8	11.7	29.24	1.90	1989	1977
300	550	9669	550	-31.1	-18.7	-40.9	184	-40.1	544	251	9.9	12.8	37.55	2.10	1989	1982
250	534	10935	534	-41.3	-28.0	-53.0	125	-49.7	527	251	10.6	13.6	48.80	2.18	1977	1977
200	522	12413	522	-53.7	-40.3	-66.0	16	-57.2	510	248	10.4	14.3	63.46	2.28	1989	1977
175	473	13255	473	-60.8	-49.9	-72.0			461	245	9.9	14.1	74.33	2.34	1989	1977
150	453	14195	453	-68.3	-54.0	-80.0			442	244	8.2	12.8	85.28	2.31	1974	1977
125	399	15262	399	-75.5	-63.5	-86.0			390	235	6.0	11.2	99.50	2.24	1986	1977
100	348	16528	348	-79.8	-71.0	-90.0			340	197	2.3	8.8	109.26	1.89	1977	1977
80	282	17805	282	-76.2	-60.0	-86.0			271	109	3.0	7.1	126.34	2.28	1977	1975
70	241	18584	241	-71.9	-60.0	-82.0			232	102	3.5	6.4	128.74	1.69	1977	1977
60	213	19496	213	-67.0	-57.9	-78.0			206	103	4.6	6.5	132.58	1.77	1981	1977
50	174	20602	174	-62.7	-54.5	-73.1			166	091	6.2	7.3	150.01	2.21	1989	1980
40	126	21978	126	-59.2	-51.0	-68.0			120	087	7.4	8.3	165.80	2.46	1973	1977
30	72	23785	72	-55.2	-44.7	-68.0			67	084	9.2	9.8	200.82	3.25	1985	1977
25	43	24917	43	-53.6	-41.9	-61.1			39	084	8.6	9.7	246.92	3.24	1987	1983
20	24	26319	24	-51.8	-43.7	-58.1			20	082	11.1	11.9	304.87	3.63	1985	1979
15	6	28083	6	-52.7	-47.1	-56.5			5	086	12.7	13.8			1985	1984
10	2	30619	2	-52.6	-50.7	-54.5			2	084	8.2	9.5			1983	1984
7	1	33153	1	-53.1	-53.1	-53.1			1	111	9.0	9.0			1984	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

596 562 491

351 104 1634 -81.2

## NORMALS OF RADIOSONDE DATA

42809 CALCUTTA

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	1010	600	26.6	32.0	18.6	600	18.6	600	360	0.5	0.9	0.97	0.78	1981	1988
<i>1000</i>	580	96	580	26.0	31.4	18.0	580	17.4	578	350	1.8	2.6	8.14	0.82	1981	1988
<i>950</i>	580	533	580	22.7	30.0	16.2	580	12.4	578	355	2.6	4.2	14.43	1.10	1979	1982
<i>900</i>	580	1013	580	18.9	26.0	12.4	579	9.7	578	353	2.7	4.2	7.83	1.23	1974	1982
<i>850</i>	580	1501	580	15.4	27.0	7.0	560	6.4	578	336	2.8	4.8	8.36	1.31	1974	1976
<i>800</i>	581	2014	581	12.7	22.4	3.8	497	2.0	578	312	3.2	5.6	8.57	1.42	1990	1981
<i>750</i>	581	2552	581	10.4	18.6	1.6	408	-2.0	578	295	4.4	6.5	8.92	1.32	1984	1983
<i>700</i>	581	3124	579	7.9	18.6	0.6	325	-5.1	577	286	5.8	7.7	10.68	1.16	1986	1981
<i>650</i>	574	3730	572	5.0	11.8	-2.5	280	-9.6	572	281	7.3	8.9	12.54	1.01	1987	1986
<i>600</i>	574	4381	571	1.5	7.6	-5.1	238	-13.2	567	279	8.8	10.3	13.44	1.06	1987	1982
<i>550</i>	568	5082	567	-2.4	8.0	-13.0	213	-17.8	561	277	10.3	11.7	18.67	1.26	1974	1972
<i>500</i>	565	5828	565	-7.1	3.2	-15.3	202	-21.4	558	275	11.8	13.3	18.64	1.42	1979	1982
<i>450</i>	560	6644	560	-12.4	-4.0	-22.0	194	-26.5	552	272	14.0	15.6	24.71	1.50	1974	1972
<i>400</i>	551	7532	551	-18.3	-10.0	-27.1	189	-31.5	543	271	16.9	18.7	27.97	1.62	1974	1982
<i>350</i>	542	8519	542	-25.1	-13.0	-35.5	169	-37.8	519	266	19.7	21.6	32.38	1.59	1973	1989
<i>300</i>	532	9621	532	-33.1	-25.0	-42.5	145	-45.2	504	262	22.7	24.7	40.04	1.56	1974	1983
<i>250</i>	516	10877	516	-42.9	-33.0	-52.3	100	-53.7	480	258	25.5	27.7	46.82	1.67	1978	1982
<i>200</i>	484	12343	482	-54.8	-44.0	-68.9			447	254	25.7	29.4	57.11	1.68	1977	1989
<i>175</i>	442	13182	439	-61.5	-51.9	-72.0			401	253	25.4	28.3	66.10	1.92	1989	1977
<i>150</i>	408	14119	407	-68.5	-56.9	-78.1			372	253	22.7	24.7	74.71	2.22	1989	1981
<i>125</i>	378	15190	377	-74.8	-64.1	-85.0			347	257	17.5	19.3	82.34	2.35	1985	1978
<i>100</i>	334	16468	334	-78.9	-70.0	-88.9			309	264	10.5	12.9	96.00	2.03	1974	1981
<i>80</i>	274	17738	274	-77.4	-60.0	-89.3			253	275	5.3	8.6	100.14	2.56	1974	1979
<i>70</i>	250	18506	250	-73.8	-56.0	-85.7			227	275	2.8	7.1	88.85	2.77	1974	1981
<i>60</i>	219	19418	219	-68.7	-53.5	-80.1			199	282	0.6	6.2	101.61	2.45	1987	1981
<i>50</i>	174	20522	172	-63.8	-49.3	-79.0			155	136	0.3	6.1	105.28	2.28	1985	1977
<i>40</i>	115	21895	115	-59.6	-51.3	-74.1			99	089	2.2	5.9	124.21	2.75	1982	1984
<i>30</i>	55	23714	55	-55.4	-48.1	-66.0			45	084	4.3	6.4	126.74	3.09	1983	1977
<i>25</i>	34	24833	34	-53.8	-45.5	-61.0			26	074	5.5	7.0	84.62	3.11	1983	1972
<i>20</i>	17	26239	17	-51.5	-47.5	-58.1			13	086	7.4	8.2			1985	1984
<i>15</i>	5	28086	5	-51.5	-45.9	-56.1			4	060	2.7	4.7			1979	1984
<i>10</i>	2	30715	2	-52.0	-50.9	-53.1			1	360	4.0	4.0			1979	1984
<i>7</i>	1	32967	1	-50.5	-50.5	-50.5									1984	1984

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
571	580	465					315	103	1635	-79.9

## NORMALS OF RADIOSONDE DATA

42809 CALCUTTA

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	588	1013	588	23.4	29.0	16.6	588	14.1	587	352	0.6	0.8	1.08	0.85	1976	1989
1000	556	116	556	22.6	28.0	16.0	556	12.9	556	347	2.5	3.3	7.80	0.78	1972	1986
950	556	550	556	19.1	26.0	7.0	555	7.7	556	340	3.3	4.2	10.70	0.79	1984	1974
900	556	1022	556	15.3	21.6	9.0	549	4.7	556	332	3.8	4.8	7.81	0.86	1990	1971
850	556	1504	556	12.8	21.2	5.0	515	0.2	556	319	4.9	6.0	8.72	0.92	1989	1971
800	556	2012	556	11.1	19.4	4.6	395	-3.6	556	306	6.0	7.4	9.39	1.07	1989	1986
750	556	2548	555	9.3	17.0	0.6	306	-6.7	553	296	7.7	9.0	12.18	1.13	1975	1986
700	556	3117	555	6.8	14.2	-1.0	258	-9.3	554	289	9.2	10.6	10.57	1.17	1987	1975
650	554	3722	554	3.9	16.8	-4.9	215	-11.9	552	284	11.1	12.4	13.35	1.12	1980	1979
600	551	4368	550	0.4	8.0	-6.5	197	-15.3	548	281	12.9	14.3	12.47	1.01	1987	1979
550	547	5065	547	-3.8	7.0	-11.9	181	-18.9	542	278	14.8	16.1	18.24	1.00	1984	1979
500	540	5807	538	-8.6	-1.7	-18.9	175	-23.1	534	275	17.2	18.7	16.46	1.18	1987	1979
450	534	6617	533	-14.0	-6.7	-23.9	165	-28.1	525	272	20.0	21.7	21.11	1.34	1990	1981
400	530	7500	529	-20.1	-10.7	-30.1	165	-32.9	519	269	23.2	25.0	23.55	1.48	1989	1979
350	514	8479	513	-27.1	-17.3	-37.1	151	-38.6	486	267	26.7	28.7	28.15	1.62	1989	1979
300	505	9573	505	-34.9	-25.1	-46.0	139	-45.9	474	265	30.7	32.9	34.88	1.69	1989	1977
250	486	10821	485	-44.4	-34.1	-54.9	106	-53.9	435	259	34.7	37.2	44.32	1.87	1989	1981
200	448	12281	447	-55.4	-44.5	-67.7	2	-61.0	394	255	36.6	39.0	52.50	1.88	1989	1988
175	406	13118	406	-61.4	-49.1	-74.3			356	254	35.3	37.8	54.74	2.04	1989	1981
150	369	14059	369	-66.9	-52.1	-82.1			336	257	31.7	33.6	55.96	2.49	1986	1981
125	328	15146	328	-72.0	-59.0	-86.1			304	258	26.2	27.7	65.33	2.18	1977	1988
100	298	16443	298	-76.5	-62.1	-86.7			276	262	19.2	20.8	92.43	2.28	1989	1981
80	239	17736	239	-76.3	-63.5	-86.3			221	267	12.6	14.5	127.46	2.39	1989	1983
70	213	18511	213	-73.4	-61.3	-84.3			196	274	10.0	11.9	125.61	2.41	1989	1983
60	169	19424	169	-69.1	-57.5	-81.0			154	272	6.0	9.3	125.28	2.77	1990	1977
50	138	20525	138	-64.3	-51.7	-80.0			123	283	3.3	7.3	131.76	2.59	1990	1977
40	67	21890	67	-60.0	-48.3	-74.0			61	278	3.3	7.6	127.76	3.02	1990	1977
30	35	23719	35	-55.3	-43.1	-68.0			31	258	1.1	6.5	201.16	5.11	1990	1977
25	20	24847	20	-54.9	-42.9	-64.0			19	250	2.0	7.1			1979	1977
20	13	26304	13	-53.7	-45.5	-61.1			10	233	0.7	5.5			1980	1983
15	9	28164	9	-51.1	-43.5	-58.5			8	113	0.7	6.6			1980	1983
10	4	30691	4	-50.5	-46.7	-56.1			2	149	9.6	11.5			1990	1983
7	1	32366	1	-53.5	-53.5	-53.5			1	141	20.0	20.0			1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

550	597	441		5	143	1428	-71.3		275	099	1654	-78.0
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# NORMALS OF RADIOSONDE DATA

42369 LUCKNOW

JANUARY 1971-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	541	1000	541	19.4	24.0	9.0	541	10.8	541	289	1.0	1.9	1.05	1.02	1972	1971
1000	519	121	274	18.8	23.8	11.0	273	10.5	275	296	0.9	1.6	8.49	0.89	1980	1983
950	515	557	514	15.9	23.8	7.6	510	5.6	510	297	2.3	4.7	9.10	0.98	1989	1983
900	515	1016	515	12.5	22.8	4.0	500	1.1	510	301	3.3	5.4	7.99	0.89	1989	1983
850	515	1494	515	10.3	22.8	2.0	456	-3.1	505	297	4.8	6.6	8.06	1.05	1989	1978
800	515	1995	514	7.9	19.0	-0.3	381	-6.0	504	290	6.1	7.6	7.94	1.16	1989	1983
750	515	2523	513	5.2	15.8	-3.7	337	-8.5	503	288	8.0	9.5	11.50	1.35	1980	1983
700	515	3085	514	2.0	10.2	-8.0	303	-11.4	503	284	10.3	11.6	10.64	1.37	1989	1978
650	515	3677	514	-1.6	6.4	-12.0	276	-15.3	503	283	12.4	13.7	12.72	1.45	1983	1978
600	514	4312	514	-5.5	3.0	-15.0	267	-19.4	500	280	15.3	16.6	15.12	1.55	1972	1978
550	511	4994	511	-9.9	-1.3	-20.0	208	-22.8	496	278	18.2	19.6	21.82	1.63	1989	1978
500	511	5719	511	-14.8	-3.3	-26.0	242	-27.1	495	277	22.2	23.6	21.62	1.96	1989	1978
450	509	6511	508	-20.1	-7.7	-31.0	196	-32.1	491	276	26.6	28.2	26.12	2.15	1989	1978
400	503	7374	502	-26.0	-12.3	-36.1	192	-37.6	485	276	32.1	33.9	33.10	2.56	1989	1985
350	496	8331	496	-32.4	-16.5	-44.3	159	-43.1	465	274	37.2	39.2	39.67	2.91	1989	1985
300	485	9401	484	-39.3	-24.5	-53.0	115	-48.9	441	273	42.3	44.6	53.91	3.25	1989	1978
250	465	10629	461	-46.9	-35.3	-61.7	55	-54.5	402	269	47.6	50.3	68.07	3.02	1987	1982
200	449	12080	449	-54.9	-40.9	-67.3	1	-56.0	365	267	49.8	52.2	80.47	2.24	1987	1982
175	410	12924	408	-59.1	-45.1	-70.1			322	266	47.5	49.8	83.14	1.97	1989	1986
150	379	13878	378	-63.4	-50.1	-74.3			292	267	44.0	45.8	89.25	1.75	1989	1982
125	346	14987	346	-68.0	-54.7	-82.0			262	266	38.7	40.3	92.11	1.64	1987	1971
100	313	16313	312	-71.5	-62.0	-82.5			231	268	29.4	31.1	101.04	1.86	1976	1982
80	262	17632	261	-71.6	-57.0	-83.3			183	269	20.1	22.0	111.48	1.96	1974	1982
70	222	18440	222	-70.3	-60.0	-83.3			152	272	13.6	16.0	113.14	1.90	1974	1982
60	182	19345	181	-67.6	-57.0	-79.1			119	274	12.0	14.6	116.21	1.94	1974	1982
50	116	20456	115	-64.1	-53.3	-73.9			71	278	8.7	12.4	124.06	2.06	1987	1982
40	52	21841	52	-61.5	-51.9	-70.0			29	277	8.6	10.4	183.20	3.48	1987	1977
30	27	23650	27	-59.9	-52.1	-72.0			13	279	11.1	13.5	176.58	4.46	1986	1977
25	19	24780	19	-58.1	-49.0	-71.0			8	281	9.7	11.9			1971	1977
20	6	26255	6	-55.4	-48.7	-60.1			3	320	2.3	5.7			1986	1985
15	3	28067	3	-56.8	-52.3	-59.5			1	315	8.0	8.0			1987	1985
10	1	31016	1	-50.7	-50.7	-50.7									1987	1987
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

515 673 341

103 220 1150 -58.5

290 102 1623 -73.2

# NORMALS OF RADIOSONDE DATA

42369 LUCKNOW

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	536	997	536	22.7	32.0	14.0	536	12.1	536	298	1.7	2.7	1.73	1.39	1974	1974
1000	521	101	100	21.4	27.0	15.4	100	10.1	100	297	1.8	2.5	12.85	1.99	1978	1983
950	511	539	509	18.9	32.2	11.2	508	6.9	509	296	3.6	5.4	12.17	1.57	1989	1983
900	511	1004	511	15.1	32.0	7.0	502	2.9	509	295	4.2	6.0	12.20	1.49	1989	1983
850	511	1485	509	12.0	27.2	2.0	476	-1.3	508	295	5.7	7.1	12.29	1.28	1989	1983
800	511	1990	511	9.2	22.2	-2.1	412	-4.7	506	292	7.4	8.7	12.77	1.38	1989	1983
750	511	2515	509	6.0	18.0	-4.1	365	-7.7	504	288	9.1	10.4	13.15	1.45	1989	1983
700	511	3082	510	2.5	14.0	-6.1	328	-10.7	500	285	10.9	12.1	14.92	1.46	1981	1981
650	509	3672	508	-1.2	10.6	-10.1	305	-14.3	498	284	12.9	14.2	19.52	1.51	1981	1981
600	508	4311	507	-5.2	5.8	-15.3	286	-18.4	500	282	15.4	16.6	18.76	1.56	1981	1981
550	503	4991	501	-9.8	1.0	-19.9	254	-22.5	494	280	18.2	19.5	21.78	1.58	1977	1982
500	503	5717	501	-14.6	-3.5	-26.3	239	-26.7	495	279	21.6	23.1	24.73	1.76	1985	1983
450	498	6510	496	-20.0	-10.0	-32.7	219	-31.7	488	277	25.3	27.0	28.33	1.98	1977	1983
400	494	7373	492	-25.9	-14.0	-39.1	209	-36.8	481	276	29.7	31.7	33.91	2.28	1972	1983
350	491	8331	490	-32.3	-18.9	-47.3	178	-42.7	468	274	34.0	36.4	42.99	2.81	1985	1980
300	487	9404	484	-39.1	-26.1	-52.3	118	-48.8	450	274	38.9	41.9	52.44	2.98	1985	1981
250	476	10633	473	-46.4	-32.5	-63.7	45	-55.3	423	272	43.7	47.0	64.40	2.85	1986	1982
200	461	12088	459	-53.9	-41.3	-71.1	2	-56.5	381	269	45.9	49.0	78.69	2.52	1987	1982
175	437	12937	436	-58.2	-44.7	-70.0			351	269	43.8	46.4	86.49	2.48	1986	1971
150	407	13899	407	-62.9	-48.1	-72.7			316	271	40.2	42.4	95.62	2.68	1987	1982
125	372	15007	372	-67.8	-50.9	-79.5			273	268	35.3	36.9	104.09	2.85	1987	1985
100	321	16333	321	-71.6	-59.3	-84.3			226	268	27.2	28.5	110.91	2.64	1986	1981
80	255	17646	255	-72.1	-60.1	-88.3			165	275	18.8	20.2	124.05	2.39	1986	1981
70	221	18449	221	-70.4	-58.1	-85.1			142	277	13.8	15.0	119.91	2.19	1986	1981
60	178	19364	178	-67.3	-55.3	-80.3			109	276	10.6	12.7	130.21	2.34	1986	1985
50	125	20472	125	-63.4	-50.1	-76.0			74	275	10.3	12.2	142.43	2.55	1986	1971
40	72	21843	72	-59.5	-45.1	-75.0			39	275	11.8	13.7	181.94	3.98	1986	1971
30	35	23698	35	-55.0	-37.7	-68.0			18	266	9.7	13.7	227.90	5.18	1986	1971
25	20	24910	20	-52.7	-33.1	-62.1			9	285	11.1	12.3			1986	1990
20	13	26330	13	-51.9	-43.5	-61.1			5	264	14.5	15.2			1987	1990
15	5	27950	5	-53.1	-50.1	-55.3			4	272	17.4	17.8			1990	1990
10	3	30502	3	-50.6	-48.1	-53.5			3	272	15.9	16.6			1990	1990
7	1	33000	1	-47.1	-47.1	-47.1			1	257	13.0	13.0			1990	1990

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

506 668 347

92 229 1123 -56.5

292 100 1639 -73.7

## NORMALS OF RADIOSONDE DATA

42369 LUCKNOW

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	994	589	29.0	39.0	14.0	589	14.3	589	299	2.4	3.3	1.05	1.57	1972	1978
1000	568	70	12	26.1	30.0	20.8	12	12.3	12	296	2.2	2.4	9.23		1972	1982
950	564	519	563	25.2	35.0	12.0	560	8.7	556	298	4.7	6.3	11.28	2.02	1972	1978
900	564	993	563	21.1	30.6	7.2	553	4.9	557	296	5.3	6.6	7.98	2.01	1987	1990
850	564	1483	561	17.0	26.2	4.4	536	1.5	559	294	6.1	7.3	8.99	1.94	1984	1990
800	564	1995	560	13.2	25.0	0.0	502	-2.0	560	293	7.2	8.3	10.95	1.98	1974	1982
750	564	2526	563	9.3	20.0	-3.1	459	-5.6	563	289	8.7	9.9	16.48	1.94	1976	1982
700	564	3102	563	5.4	15.0	-6.3	427	-9.4	563	287	10.2	11.4	16.05	1.76	1974	1990
650	564	3696	562	1.2	12.0	-9.3	382	-13.2	559	284	11.8	13.0	23.38	1.57	1976	1990
600	562	4341	562	-3.0	8.0	-12.7	341	-17.2	556	283	13.7	14.9	21.92	1.52	1976	1982
550	561	5030	560	-7.9	3.0	-19.1	302	-21.5	553	281	15.3	16.6	24.19	1.65	1976	1982
500	555	5759	552	-12.9	-3.0	-24.7	268	-26.1	546	280	17.2	18.7	28.16	1.65	1976	1982
450	550	6555	548	-18.7	-6.9	-30.9	248	-31.4	542	279	19.9	21.4	31.60	1.66	1988	1982
400	544	7423	542	-25.0	-11.5	-37.3	226	-37.2	535	277	22.9	24.7	37.19	1.79	1988	1982
350	537	8383	534	-32.0	-18.1	-46.0	187	-43.4	522	275	26.0	28.5	42.91	2.15	1988	1978
300	529	9455	523	-39.4	-22.9	-51.7	130	-49.8	508	275	29.6	32.6	48.84	2.72	1988	1981
250	518	10683	515	-46.9	-30.1	-61.1	71	-56.4	482	272	34.4	37.9	59.24	3.10	1987	1981
200	500	12139	499	-54.0	-39.5	-69.9	2	-52.5	445	269	37.0	40.2	68.91	2.38	1988	1981
175	460	12989	458	-57.8	-43.9	-71.7			391	269	36.0	38.8	77.87	2.02	1988	1987
150	421	13950	421	-62.1	-47.0	-75.5			346	271	33.7	36.0	81.50	1.88	1976	1989
125	374	15060	374	-67.1	-50.1	-80.0			298	267	28.6	30.4	91.00	2.18	1987	1978
100	329	16395	329	-71.2	-58.0	-82.3			258	271	22.1	23.6	102.82	1.95	1974	1982
80	261	17718	261	-71.8	-58.1	-84.5			203	277	14.8	16.5	108.03	2.16	1980	1982
70	229	18516	229	-69.9	-56.3	-82.1			177	279	10.8	13.7	119.50	2.33	1987	1982
60	190	19437	190	-66.8	-49.7	-78.1			139	281	8.3	12.3	135.25	2.45	1986	1982
50	142	20565	142	-62.8	-50.1	-73.0			108	290	6.2	9.6	154.59	1.96	1987	1974
40	83	21976	83	-58.5	-46.5	-70.0			59	282	4.4	7.9	167.98	3.37	1987	1974
30	44	23816	44	-53.3	-42.5	-62.0			32	314	1.5	6.6	147.00	3.33	1987	1971
25	26	25013	26	-50.3	-41.7	-58.3			18	287	4.5	5.7	121.54	3.29	1985	1985
20	16	26407	16	-49.1	-43.9	-56.1			12	278	6.2	7.5			1984	1985
15	6	28393	6	-46.2	-40.5	-51.7			4	274	7.5	9.4			1987	1984
10	2	30917	2	-45.5	-42.9	-48.1			2	100	1.0	6.0			1990	1984
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

561	636	388														
			114	237	1106	-55.0				302	098	1660	-73.3			



## NORMALS OF RADIOSONDE DATA

42369 LUCKNOW

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	568	989	568	34.8	42.0	18.0	568	15.7	568	301	2.9	4.1	0.89	2.05	1973	1989
<i>1000</i>	543	22											8.60			
<i>950</i>	539	479	536	31.4	40.0	17.4	510	11.0	533	300	5.2	6.9	8.39	1.93	1973	1983
<i>900</i>	539	964	539	27.2	36.0	15.2	502	7.0	533	295	5.8	7.2	6.43	1.67	1990	1983
<i>850</i>	539	1464	539	22.7	34.8	4.0	494	4.1	534	290	6.7	7.7	6.42	1.55	1989	1977
<i>800</i>	537	1986	536	18.2	28.0	7.0	489	1.1	531	289	7.5	8.3	7.33	1.42	1974	1981
<i>750</i>	537	2523	536	13.5	22.0	2.0	484	-2.2	532	288	8.8	9.7	13.86	1.35	1973	1981
<i>700</i>	537	3108	536	8.7	16.6	-3.3	460	-6.0	530	287	10.4	11.3	10.50	1.25	1989	1983
<i>650</i>	533	3709	532	4.2	12.0	-7.1	412	-10.2	522	286	11.7	12.7	17.65	1.14	1980	1983
<i>600</i>	532	4361	530	-0.4	6.6	-10.5	353	-15.0	518	286	12.9	14.0	13.40	1.00	1981	1982
<i>550</i>	531	5055	528	-5.1	3.0	-17.1	295	-19.7	517	286	13.9	15.0	16.46	1.02	1987	1989
<i>500</i>	527	5793	524	-10.3	-2.1	-21.5	239	-24.3	511	286	15.0	16.3	17.89	1.01	1987	1989
<i>450</i>	521	6596	518	-16.0	-6.9	-28.1	213	-29.3	505	285	16.6	18.1	18.58	1.02	1989	1989
<i>400</i>	516	7474	511	-22.5	-11.9	-36.1	191	-35.2	500	283	18.3	20.2	22.82	1.14	1989	1990
<i>350</i>	510	8443	507	-29.7	-19.5	-45.7	184	-41.6	489	281	20.7	23.0	26.03	1.24	1987	1990
<i>300</i>	502	9524	501	-37.4	-27.7	-54.1	144	-48.6	479	279	24.3	27.1	32.65	1.54	1988	1990
<i>250</i>	492	10762	490	-45.3	-33.1	-58.1	68	-54.6	462	276	28.4	31.6	41.19	2.10	1990	1983
<i>200</i>	462	12225	461	-53.1	-40.3	-65.5			422	273	30.9	34.1	52.64	1.97	1990	1990
<i>175</i>	438	13078	437	-57.4	-45.5	-69.9			391	272	30.2	32.8	58.67	1.79	1990	1981
<i>150</i>	401	14043	400	-62.1	-49.0	-73.9			351	272	27.2	29.4	66.02	1.96	1976	1981
<i>125</i>	357	15152	356	-67.3	-50.0	-78.7			306	272	21.5	23.5	78.90	2.13	1976	1981
<i>100</i>	312	16482	311	-72.0	-55.0	-86.3			265	275	15.1	17.2	89.38	2.64	1976	1981
<i>80</i>	266	17791	266	-72.9	-58.3	-84.1			223	276	7.8	11.7	100.18	2.56	1987	1981
<i>70</i>	232	18587	232	-70.9	-55.5	-84.5			188	287	4.2	9.6	103.55	2.78	1981	1984
<i>60</i>	182	19507	182	-67.2	-51.5	-81.0			144	296	3.0	8.6	120.70	3.22	1986	1978
<i>50</i>	135	20630	135	-62.0	-45.7	-76.0			103	284	1.7	7.3	105.14	3.74	1980	1978
<i>40</i>	84	22036	84	-57.0	-44.5	-72.3			59	304	1.3	6.8	139.38	4.11	1986	1982
<i>30</i>	46	23935	46	-52.0	-43.1	-70.0			28	280	5.0	7.8	170.59	5.94	1990	1976
<i>25</i>	30	25146	30	-48.8	-39.7	-71.0			18	268	6.0	7.7	246.00	7.59	1990	1976
<i>20</i>	15	26703	15	-44.5	-32.5	-57.1			5	301	3.4	6.0			1990	1984
<i>15</i>	5	28543	5	-41.7	-31.3	-51.1			2	082	3.9	5.0			1987	1984
<i>10</i>	3	30919	3	-43.8	-40.1	-47.3			2	093	3.7	5.5			1988	1984
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

531	604	430														
			45	219	1162	-56.8				289	095	1685	-74.3			

## NORMALS OF RADIOSONDE DATA

42369 LUCKNOW

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	607	985	607	37.1	43.2	24.0	607	18.5	607	314	1.5	3.2	1.95	1.76	1988	1987
1000	578	-11											17.80			
950	575	448	574	33.9	41.6	21.0	560	15.2	560	312	3.1	6.1	16.69	1.89	1988	1971
900	575	937	575	29.6	38.0	17.8	555	11.7	559	303	3.8	6.3	13.98	1.75	1978	1987
850	575	1442	574	25.3	34.0	14.6	549	8.5	560	295	5.0	6.6	12.28	1.72	1978	1987
800	575	1969	573	20.9	29.0	11.6	543	5.0	563	291	6.8	7.9	11.06	1.62	1978	1987
750	575	2513	573	16.2	24.0	5.6	540	1.0	563	291	8.7	9.6	13.96	1.56	1978	1983
700	575	3102	575	11.4	20.0	3.0	524	-3.0	561	293	10.0	11.0	9.58	1.41	1978	1980
650	570	3708	570	6.6	17.8	-5.1	488	-7.1	553	293	11.1	12.1	11.69	1.43	1989	1982
600	568	4365	568	2.0	13.8	-5.3	424	-12.1	554	293	11.8	12.8	11.59	1.41	1989	1987
550	566	5069	565	-2.4	10.2	-10.3	344	-17.2	554	294	11.8	13.0	18.12	1.46	1989	1983
500	563	5811	563	-7.2	2.0	-16.0	276	-22.0	550	292	12.1	13.3	16.62	1.52	1978	1977
450	556	6625	556	-12.4	0.2	-22.1	234	-27.3	540	290	12.8	14.3	20.08	1.62	1990	1983
400	554	7515	554	-18.4	-4.1	-29.9	204	-33.0	538	285	14.2	16.1	25.67	1.75	1990	1983
350	546	8503	546	-25.0	-11.1	-38.5	184	-39.1	526	280	16.2	18.5	27.92	1.91	1990	1983
300	537	9604	536	-32.4	-18.5	-48.0	159	-46.0	518	275	18.2	20.9	37.28	2.08	1990	1974
250	532	10868	532	-41.0	-25.1	-55.5	100	-53.2	502	267	20.5	23.3	46.27	2.29	1990	1983
200	513	12353	513	-51.0	-34.7	-66.0	3	-58.7	476	263	21.3	23.7	59.83	2.24	1990	1972
175	487	13214	487	-56.7	-45.1	-68.5			444	262	20.6	22.7	64.84	1.88	1990	1982
150	454	14177	454	-63.0	-50.7	-76.1			407	262	18.0	20.2	68.01	1.90	1990	1980
125	421	15280	421	-69.2	-54.9	-81.0			362	262	13.3	15.6	73.92	2.21	1982	1972
100	369	16593	368	-74.6	-58.1	-85.5			312	259	6.5	11.0	81.77	2.36	1986	1989
80	315	17887	315	-74.7	-53.3	-88.1			256	225	1.2	8.4	90.34	3.08	1989	1984
70	276	18676	275	-71.3	-48.1	-88.1			217	130	1.6	8.1	91.28	3.62	1989	1984
60	222	19592	221	-66.2	-44.1	-80.7			175	121	2.3	7.3	101.53	3.36	1989	1985
50	181	20709	181	-60.8	-46.5	-82.0			140	096	3.5	7.0	124.77	3.19	1990	1972
40	130	22110	130	-55.5	-40.5	-73.0			100	098	4.3	7.8	122.24	2.46	1990	1972
30	65	23984	65	-50.5	-42.5	-59.0			46	092	4.7	6.9	162.23	2.55	1989	1978
25	45	25145	45	-48.8	-41.5	-59.1			34	089	3.9	7.3	187.31	3.12	1986	1982
20	28	26680	28	-46.0	-39.9	-53.7			20	085	4.6	6.5	219.52	3.50	1987	1983
15	14	28481	14	-45.2	-39.3	-52.7			12	089	5.9	7.8			1980	1983
10	6	31017	6	-44.5	-40.7	-51.1			4	117	2.0	8.3			1984	1983
7	1	33265	1	-49.9	-49.9	-49.9									1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

565 576 469

5 208 1196 -56.6

344 096 1683 -76.5

## NORMALS OF RADIOSONDE DATA

42369 LUCKNOW

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	597	982	597	35.7	44.0	23.0	597	23.0	597	350	0.9	2.9	0.92	1.85	1972	1982
<i>1000</i>	553	-43											9.01			
<i>950</i>	551	418	550	33.0	43.0	21.2	548	20.5	535	341	1.6	5.5	13.81	1.71	1975	1982
<i>900</i>	551	903	550	29.0	37.4	19.4	547	17.2	536	327	2.0	5.7	8.36	1.46	1989	1989
<i>850</i>	551	1407	551	24.9	38.0	15.6	549	14.1	540	308	2.6	6.3	9.16	1.17	1974	1989
<i>800</i>	551	1935	550	21.1	32.4	14.6	546	11.0	538	307	3.7	7.1	10.33	0.95	1989	1983
<i>750</i>	551	2487	549	17.1	27.0	8.0	541	7.5	535	304	4.8	8.0	14.01	0.82	1989	1983
<i>700</i>	551	3073	550	13.1	21.0	6.2	536	3.2	538	303	5.6	8.6	12.40	0.79	1990	1989
<i>650</i>	551	3687	549	8.9	21.0	2.4	519	-1.5	535	304	5.9	9.0	14.40	0.97	1987	1983
<i>600</i>	550	4349	549	4.8	14.6	-2.3	489	-5.8	527	302	6.1	9.0	15.03	1.11	1990	1984
<i>550</i>	548	5065	548	0.9	11.6	-6.3	453	-9.7	523	299	5.6	8.6	25.17	1.22	1990	1979
<i>500</i>	545	5814	545	-2.9	8.0	-12.1	401	-13.7	518	291	5.3	8.4	19.10	1.23	1990	1979
<i>450</i>	541	6648	540	-7.3	4.0	-18.3	359	-18.6	510	285	5.3	8.7	26.37	1.33	1990	1979
<i>400</i>	537	7551	536	-12.3	-0.7	-23.7	299	-24.4	502	279	5.8	9.7	26.46	1.56	1990	1979
<i>350</i>	531	8561	528	-18.6	-6.3	-30.5	231	-31.0	495	273	6.1	10.2	32.49	1.67	1990	1989
<i>300</i>	520	9694	518	-25.5	-14.3	-40.1	192	-38.2	483	265	6.0	10.4	38.60	1.78	1990	1989
<i>250</i>	510	10988	509	-36.3	-24.1	-51.5	150	-47.3	459	259	5.7	10.5	48.01	2.00	1990	1989
<i>200</i>	482	12497	480	-48.5	-37.1	-64.9	22	-55.9	433	249	4.6	10.6	59.32	2.22	1990	1989
<i>175</i>	463	13361	463	-55.6	-41.9	-72.1			411	246	3.3	10.4	67.95	2.33	1990	1989
<i>150</i>	445	14325	445	-63.2	-52.9	-78.1			394	229	1.9	9.9	80.67	2.23	1990	1989
<i>125</i>	407	15425	407	-71.0	-59.3	-81.1			340	123	1.3	9.5	93.38	2.32	1989	1979
<i>100</i>	367	16721	366	-77.3	-57.7	-87.9			310	092	5.4	9.4	105.78	3.04	1990	1980
<i>80</i>	317	18003	317	-76.2	-52.1	-89.0			252	093	8.7	10.8	118.52	3.80	1990	1978
<i>70</i>	288	18796	288	-71.9	-48.9	-89.5			220	093	10.5	11.6	130.47	3.96	1990	1984
<i>60</i>	250	19712	250	-65.9	-50.1	-84.0			186	093	11.0	11.9	140.84	3.51	1990	1972
<i>50</i>	193	20839	193	-59.9	-40.1	-73.9			135	091	11.9	12.7	153.09	4.30	1990	1985
<i>40</i>	139	22238	139	-54.5	-35.9	-70.0			96	092	12.0	12.5	183.89	4.61	1990	1978
<i>30</i>	89	24076	89	-50.1	-38.5	-60.5			61	091	12.7	13.3	209.67	3.50	1986	1980
<i>25</i>	63	25241	63	-48.0	-39.9	-56.5			48	087	13.4	14.2	232.00	3.67	1989	1984
<i>20</i>	26	26758	26	-46.2	-37.5	-69.1			17	089	12.5	12.9	229.37	5.46	1990	1989
<i>15</i>	12	28672	12	-45.8	-39.1	-59.5			5	088	15.6	15.8			1984	1989
<i>10</i>	4	31356	4	-44.8	-41.5	-49.1			2	089	11.6	12.0			1989	1984
<i>7</i>	2	33720	2	-44.7	-40.7	-48.7			1	080	14.0	14.0			1988	1984

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

547 537 525

351 096 1697 -79.4

# NORMALS OF RADIOSONDE DATA

42369 LUCKNOW

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	983	620	31.4	41.0	22.6	620	25.9	620	106	0.5	2.6	1.05	1.50	1974	1985
<i>1000</i>	591	-36											8.92			
<i>950</i>	582	416	582	28.9	39.0	21.2	582	23.8	557	116	0.8	5.4	12.45	1.44	1982	1985
<i>900</i>	582	899	582	25.3	37.2	17.0	581	20.7	556	121	0.5	6.1	7.67	1.26	1982	1985
<i>850</i>	582	1399	582	22.0	35.2	14.0	582	17.7	563	173	0.2	6.8	8.11	1.02	1982	1990
<i>800</i>	582	1923	581	18.9	31.2	13.0	581	14.7	563	294	0.2	7.2	8.82	0.84	1982	1974
<i>750</i>	582	2476	579	15.9	26.6	10.6	578	11.2	554	299	0.6	7.3	13.00	0.69	1982	1980
<i>700</i>	582	3056	582	12.8	20.0	5.4	577	7.3	554	339	0.5	7.4	10.62	0.64	1982	1983
<i>650</i>	581	3675	577	9.6	16.6	2.0	574	2.9	519	040	0.6	6.9	9.81	0.89	1988	1982
<i>600</i>	578	4335	575	6.1	14.2	-1.5	562	-1.3	544	051	0.8	6.7	12.87	0.97	1987	1981
<i>550</i>	575	5057	571	2.4	11.4	-7.1	552	-5.4	540	073	1.1	6.4	23.27	1.13	1987	1984
<i>500</i>	571	5809	568	-1.5	6.2	-9.9	535	-9.7	533	089	1.4	6.4	17.02	1.17	1987	1983
<i>450</i>	567	6648	566	-6.0	2.2	-13.1	503	-14.3	527	107	1.6	6.5	22.69	1.26	1988	1985
<i>400</i>	566	7556	564	-11.2	-2.5	-18.7	465	-19.7	524	105	2.0	6.6	23.81	1.37	1987	1985
<i>350</i>	562	8572	559	-17.5	-8.7	-25.9	418	-26.3	519	102	2.9	6.9	29.04	1.59	1988	1990
<i>300</i>	555	9709	552	-25.5	-15.9	-34.5	362	-34.1	512	098	4.0	7.6	36.00	1.84	1988	1982
<i>250</i>	541	11007	539	-35.7	-24.7	-45.1	248	-43.3	460	095	5.4	8.7	48.33	2.11	1988	1985
<i>200</i>	519	12518	519	-48.5	-38.5	-59.9	32	-53.7	466	096	6.3	9.8	61.26	2.39	1987	1985
<i>175</i>	501	13384	501	-56.1	-42.1	-68.7	1	-57.0	443	092	7.2	10.9	72.57	2.62	1989	1985
<i>150</i>	466	14345	465	-64.2	-49.7	-76.1			413	088	9.0	12.3	83.92	2.67	1990	1981
<i>125</i>	422	15434	422	-72.7	-50.0	-85.9			372	087	11.9	14.6	91.12	2.41	1972	1981
<i>100</i>	371	16720	371	-78.8	-62.5	-89.5			333	087	15.2	16.4	108.14	2.56	1989	1984
<i>80</i>	312	17991	312	-75.8	-55.0	-88.9			277	091	16.6	17.5	125.15	3.49	1976	1982
<i>70</i>	278	18782	278	-71.4	-53.5	-85.1			242	092	16.9	17.9	132.41	3.89	1988	1982
<i>60</i>	241	19689	241	-65.6	-47.9	-83.0			195	089	15.8	17.4	135.96	3.57	1986	1972
<i>50</i>	197	20807	197	-60.4	-46.7	-76.0			159	092	17.3	18.0	150.98	3.73	1988	1972
<i>40</i>	135	22186	135	-56.7	-42.9	-67.9			108	094	17.5	17.9	185.72	3.70	1990	1982
<i>30</i>	90	24027	90	-52.2	-38.5	-65.1			71	093	18.1	18.6	217.71	3.57	1987	1982
<i>25</i>	60	25186	60	-50.0	-37.9	-61.3			47	094	19.1	19.7	245.55	3.91	1990	1983
<i>20</i>	31	26688	31	-47.2	-36.3	-58.9			22	097	19.9	20.3	304.42	2.72	1990	1983
<i>15</i>	22	28534	22	-45.9	-36.5	-56.1			13	094	22.8	23.1	434.30	4.78	1990	1983
<i>10</i>	6	30982	6	-46.2	-39.5	-53.3			5	086	26.5	27.2			1984	1982
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

568 519 552

1 113 1582 -82.1

348 099 1679 -80.5

# NORMALS OF RADIOSONDE DATA

42369 LUCKNOW

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	619	984	619	30.8	40.0	25.0	619	26.2	619	098	0.8	2.5	0.77	0.96	1972	1984
1000	546	-23											7.47			
950	539	428	538	28.3	37.0	22.0	538	23.9	526	098	1.7	5.4	10.79	0.82	1972	1971
900	539	911	538	24.7	35.0	18.8	538	20.8	525	103	2.0	6.1	8.14	0.70	1973	1985
850	539	1409	539	21.4	29.0	14.8	539	17.5	531	112	2.1	6.7	8.94	0.65	1986	1985
800	539	1932	539	18.4	29.2	12.0	539	14.2	531	112	2.3	7.3	10.03	0.64	1988	1985
750	539	2482	539	15.3	23.2	8.0	538	10.6	528	109	2.4	7.2	12.72	0.63	1986	1986
700	539	3063	539	12.3	19.6	5.0	535	6.4	525	103	2.3	6.9	11.82	0.69	1988	1981
650	538	3682	538	9.2	16.4	3.2	532	2.2	518	099	2.6	6.8	13.37	0.77	1988	1979
600	536	4341	535	5.7	12.8	-3.0	525	-1.9	510	101	2.7	6.5	14.17	0.76	1988	1972
550	532	5061	529	1.8	8.8	-5.3	505	-5.8	502	103	2.7	6.4	23.89	0.82	1988	1979
500	524	5811	521	-2.1	4.2	-10.1	480	-10.4	492	102	2.7	6.1	16.74	0.94	1988	1980
450	521	6650	517	-6.7	3.6	-17.1	458	-15.8	485	103	2.9	6.2	23.75	1.03	1981	1980
400	517	7554	516	-12.1	-4.9	-23.1	422	-21.4	481	102	2.7	6.0	21.02	1.26	1989	1980
350	510	8564	509	-18.6	-11.5	-27.1	365	-28.2	473	098	3.5	6.6	28.70	1.64	1988	1980
300	500	9698	498	-26.8	-17.7	-36.9	297	-35.8	455	097	4.5	7.3	32.58	1.97	1988	1981
250	498	10988	497	-37.1	-27.1	-48.7	187	-45.2	458	095	5.6	8.4	43.08	2.30	1988	1981
200	481	12491	480	-50.0	-38.1	-63.1	26	-55.4	441	092	6.6	9.7	58.82	2.63	1988	1981
175	460	13350	460	-57.5	-40.0	-72.1			420	088	7.4	10.6	70.63	3.05	1972	1981
150	441	14305	440	-65.7	-53.9	-79.1			390	086	8.6	11.6	84.24	3.23	1988	1981
125	398	15391	398	-73.9	-59.1	-86.1			355	085	11.3	13.4	101.81	2.98	1989	1981
100	348	16678	347	-78.7	-65.9	-89.5			308	089	14.6	15.7	123.28	2.38	1986	1986
80	285	17956	284	-75.0	-59.1	-86.3			249	095	15.9	16.5	135.94	2.81	1986	1982
70	251	18758	251	-70.1	-54.3	-82.0			217	092	15.3	15.9	140.90	2.93	1986	1978
60	218	19667	218	-65.1	-52.0	-80.0			187	091	16.7	17.1	151.84	2.70	1976	1973
50	171	20768	171	-60.9	-43.7	-77.0			144	093	17.3	18.2	160.57	3.03	1986	1973
40	113	22151	113	-57.0	-44.3	-72.0			92	095	19.2	19.5	155.36	2.75	1986	1973
30	74	23968	74	-52.5	-41.1	-66.0			58	095	20.5	20.9	180.52	4.17	1981	1973
25	48	25137	48	-50.8	-42.5	-64.0			37	089	19.8	20.2	203.34	4.34	1985	1973
20	20	26778	20	-47.5	-41.7	-56.1			11	098	19.7	20.1			1990	1983
15	7	28613	7	-46.6	-41.1	-51.7			4	098	14.5	14.8			1990	1989
10	2	31117	2	-48.0	-46.1	-49.9			2	098	15.8	16.5			1983	1989
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

527 525 542

334 102 1658 -80.4

## NORMALS OF RADIOSONDE DATA

42369 LUCKNOW

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	988	600	30.4	37.0	20.0	600	24.6	600	028	0.5	3.0	0.97	1.09	1974	1985
<i>1000</i>	547	14											6.94			
<i>950</i>	541	463	541	27.6	34.8	17.8	540	21.9	525	032	1.1	5.3	8.57	1.10	1979	1985
<i>900</i>	541	946	541	24.0	32.8	15.2	540	18.6	525	028	0.9	5.8	8.39	1.05	1988	1985
<i>850</i>	541	1443	540	20.6	31.0	14.0	538	15.2	533	349	1.0	6.4	9.41	0.91	1988	1981
<i>800</i>	541	1964	540	17.5	27.0	11.2	536	11.0	527	338	1.2	6.8	10.26	0.88	1972	1981
<i>750</i>	541	2505	538	14.2	21.0	7.4	527	6.9	524	336	1.4	6.7	13.83	0.91	1988	1980
<i>700</i>	541	3090	539	10.8	18.8	-2.1	517	2.6	524	332	1.4	6.6	12.25	1.03	1989	1981
<i>650</i>	541	3702	540	7.4	14.4	-5.3	505	-1.5	518	335	1.3	6.5	15.29	1.13	1988	1981
<i>600</i>	541	4359	540	4.0	13.0	-4.1	469	-5.5	518	315	0.9	5.8	15.41	1.26	1988	1985
<i>550</i>	537	5071	535	0.4	10.2	-10.1	428	-9.5	513	286	1.5	6.3	24.94	1.31	1989	1985
<i>500</i>	533	5821	532	-3.7	3.4	-13.5	384	-14.0	506	273	2.5	6.4	20.05	1.25	1988	1982
<i>450</i>	531	6651	530	-8.4	4.0	-17.5	349	-18.8	497	267	3.5	6.9	25.34	1.42	1974	1982
<i>400</i>	523	7552	522	-14.0	-5.1	-21.9	300	-24.7	487	259	4.4	7.5	28.22	1.61	1987	1982
<i>350</i>	516	8555	513	-20.7	-11.7	-30.1	269	-31.2	481	252	4.9	7.9	34.18	1.83	1987	1979
<i>300</i>	506	9680	505	-28.9	-19.1	-38.1	222	-39.1	473	247	5.3	8.6	41.45	2.10	1987	1979
<i>250</i>	499	10958	498	-39.2	-27.1	-50.1	124	-48.3	465	239	5.7	9.2	52.86	2.40	1987	1979
<i>200</i>	479	12447	479	-51.9	-38.3	-65.0	13	-56.7	438	230	5.1	9.9	68.53	2.75	1987	1978
<i>175</i>	443	13300	443	-59.1	-45.1	-72.1			405	223	4.0	9.7	77.72	2.84	1987	1981
<i>150</i>	414	14252	414	-66.9	-53.3	-80.0			373	207	3.1	9.2	89.29	2.82	1987	1978
<i>125</i>	376	15335	376	-74.1	-62.3	-87.0			331	149	2.0	8.2	110.17	2.69	1986	1978
<i>100</i>	333	16620	333	-78.4	-67.0	-90.1			293	109	4.0	7.8	129.82	2.28	1976	1982
<i>80</i>	279	17911	279	-73.6	-56.0	-86.9			240	102	6.0	7.8	128.48	3.50	1976	1983
<i>70</i>	234	18716	234	-68.9	-54.5	-84.0			204	102	6.9	8.3	137.23	4.38	1990	1978
<i>60</i>	201	19631	201	-64.0	-47.7	-77.0			168	094	8.0	9.0	138.09	3.22	1989	1972
<i>50</i>	153	20756	153	-60.3	-43.9	-74.0			126	095	9.4	10.3	143.77	3.12	1989	1973
<i>40</i>	101	22164	101	-56.6	-41.9	-66.3			83	097	10.9	11.7	170.04	4.00	1989	1983
<i>30</i>	59	24014	59	-52.9	-39.7	-64.3			43	097	12.5	13.2	223.23	3.07	1986	1983
<i>25</i>	41	25222	41	-50.5	-38.7	-61.9			29	089	13.8	14.0	255.31	4.71	1988	1983
<i>20</i>	21	26752	21	-48.1	-38.3	-58.7			16	103	13.9	14.9	278.43	4.30	1988	1983
<i>15</i>	13	28632	13	-47.3	-38.5	-54.7			8	083	16.7	16.8			1988	1983
<i>10</i>	6	31265	6	-45.7	-37.1	-54.5			5	087	17.6	18.2			1986	1983
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

538 545 514

2 154 1394 -75.0

326 104 1641 -79.8

# NORMALS OF RADIOSONDE DATA

42369 LUCKNOW

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	588	994	588	29.0	35.0	21.0	588	20.3	588	324	0.5	1.4	1.38	1.27	1974	1985
1000	540	67	8	28.7	31.0	26.0	8	17.9	7	054	0.7	1.7	13.67		1979	1972
950	535	513	535	26.0	33.2	17.4	535	15.2	532	322	1.9	4.0	11.74	1.28	1989	1990
900	535	993	535	22.1	30.0	14.4	534	11.5	530	313	2.4	4.3	12.87	1.10	1974	1985
850	535	1486	535	18.2	27.0	8.8	527	7.3	529	312	3.2	4.9	12.92	1.02	1974	1985
800	535	2002	535	14.7	24.0	5.4	495	3.2	528	312	3.9	5.9	12.68	1.22	1974	1985
750	535	2536	535	11.1	20.0	4.4	461	-1.2	528	311	4.2	6.4	15.78	1.49	1974	1989
700	535	3115	534	7.7	16.0	0.2	402	-5.2	528	309	4.5	6.7	12.36	1.70	1974	1981
650	534	3718	533	4.4	14.0	-3.9	331	-9.0	526	302	4.7	6.9	17.46	1.75	1974	1979
600	531	4369	530	0.8	11.0	-7.9	261	-12.1	523	293	6.0	8.0	14.64	1.48	1974	1979
550	526	5071	525	-3.1	7.0	-12.1	230	-16.2	520	287	7.5	9.3	18.23	1.62	1974	1979
500	524	5811	522	-7.7	3.0	-17.5	211	-20.9	519	281	9.5	11.3	19.87	1.80	1974	1979
450	519	6625	519	-12.9	-2.0	-24.3	193	-25.1	509	277	11.7	13.6	22.78	2.09	1971	1979
400	512	7513	512	-18.7	-9.3	-31.7	183	-30.7	499	272	14.2	16.2	29.64	2.26	1988	1979
350	510	8498	508	-25.4	-12.7	-39.9	169	-36.8	496	267	17.3	19.5	35.78	2.59	1986	1982
300	501	9600	500	-33.3	-21.3	-49.7	159	-43.9	487	263	19.8	22.0	48.50	2.87	1989	1982
250	490	10857	490	-42.6	-31.1	-58.7	102	-52.1	470	262	22.6	24.7	61.90	2.89	1989	1982
200	473	12331	473	-53.7	-41.1	-66.1	5	-58.2	440	259	23.3	25.5	76.48	2.86	1990	1985
175	444	13178	443	-60.2	-46.1	-72.0	1	-60.0	409	259	22.0	24.3	83.80	2.97	1989	1977
150	407	14131	407	-66.5	-49.1	-80.7			372	257	19.3	21.4	94.48	2.68	1989	1979
125	355	15217	355	-72.8	-61.1	-85.7			320	255	14.4	16.7	105.00	2.54	1986	1979
100	312	16506	312	-76.5	-63.7	-90.1			283	255	8.4	11.4	121.57	2.88	1987	1979
80	278	17801	278	-73.5	-56.0	-87.0			242	247	1.8	7.5	124.35	3.43	1972	1978
70	249	18604	249	-69.5	-53.1	-82.0			216	022	0.3	6.9	129.89	3.39	1986	1971
60	208	19520	208	-65.1	-50.5	-77.1			180	121	1.5	6.3	142.62	2.92	1986	1988
50	147	20628	146	-61.4	-47.7	-70.7			127	084	2.7	6.1	162.52	3.16	1986	1982
40	85	22016	85	-58.4	-44.1	-80.0			70	103	3.5	6.2	187.04	2.99	1986	1972
30	41	23843	41	-54.0	-38.9	-63.0			33	071	2.6	8.1	243.10	5.19	1987	1972
25	25	25000	25	-52.8	-44.1	-60.0			19	077	0.6	5.1	243.02	3.86	1983	1972
20	15	26473	15	-52.1	-46.5	-59.1			13	082	1.2	6.5			1983	1982
15	8	28310	8	-50.6	-42.9	-57.7			5	002	3.5	7.8			1986	1982
10	2	31144	2	-46.4	-41.7	-51.1			1	276	16.0	16.0			1986	1984
7	2	33484	2	-46.1	-43.1	-49.1			1	276	18.0	18.0			1986	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

527	590	452						1	154	1395	-72.3						308	104	1627	-77.8
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# NORMALS OF RADIOSONDE DATA

42369 LUCKNOW

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	554	998	554	24.5	31.0	18.4	554	14.7	554	307	0.8	1.2	1.03	0.93	1977	1989
1000	519	105	110	23.1	28.0	19.0	110	12.6	110	311	0.8	1.1	12.14	1.11	1977	1974
950	518	548	517	21.7	29.2	14.0	514	8.7	514	309	2.7	4.1	13.43	1.19	1989	1973
900	518	1016	518	17.8	25.0	9.0	508	5.3	515	306	3.1	4.3	10.19	1.29	1977	1973
850	518	1501	517	14.2	21.0	6.8	488	1.1	516	311	4.0	5.1	9.88	1.35	1977	1982
800	518	2010	518	11.3	18.4	1.0	432	-3.2	515	311	4.9	6.0	9.35	1.56	1987	1983
750	518	2539	518	8.7	17.6	-1.0	362	-7.1	513	307	5.6	6.9	10.30	1.80	1989	1972
700	518	3112	517	5.6	17.0	-4.1	303	-10.3	514	301	6.5	7.9	11.53	1.78	1984	1981
650	518	3713	517	2.2	10.8	-8.1	256	-13.7	510	296	8.0	9.3	16.90	1.83	1989	1981
600	517	4357	517	-1.4	6.2	-10.9	229	-17.2	509	292	10.1	11.4	16.73	1.79	1988	1985
550	516	5050	516	-5.8	3.6	-18.0	206	-20.7	510	288	12.2	13.5	19.72	1.78	1986	1974
500	514	5786	513	-10.7	-1.9	-23.0	200	-24.8	509	285	14.7	16.2	25.32	1.81	1988	1973
450	506	6586	506	-16.3	-6.9	-28.7	194	-29.4	503	282	18.0	19.7	29.90	1.96	1987	1982
400	498	7465	498	-22.4	-10.3	-34.9	186	-34.6	493	278	21.6	23.6	37.50	2.16	1989	1982
350	487	8435	487	-29.1	-18.1	-42.7	174	-40.6	481	275	25.7	28.1	43.37	2.35	1986	1982
300	479	9522	479	-36.6	-24.1	-51.3	153	-47.2	469	273	30.2	32.8	53.13	2.47	1986	1982
250	460	10766	460	-45.0	-33.1	-59.7	91	-54.6	436	269	34.0	36.8	65.39	2.48	1989	1982
200	431	12228	431	-54.8	-44.0	-67.5			394	266	36.4	39.3	78.23	2.61	1975	1982
175	400	13073	400	-60.0	-49.9	-71.1			350	265	35.2	37.8	84.07	2.85	1988	1982
150	368	14025	368	-65.3	-52.5	-75.9			317	265	32.6	34.8	105.91	3.30	1989	1979
125	326	15117	325	-70.6	-61.0	-84.5			278	266	26.7	28.6	115.95	3.30	1973	1979
100	289	16424	287	-74.5	-63.5	-88.9			248	271	19.4	21.5	130.40	3.35	1986	1979
80	238	17716	238	-74.4	-60.3	-87.9			195	276	10.6	13.6	132.17	3.60	1989	1981
70	213	18500	213	-71.9	-57.9	-83.1			174	282	7.5	11.3	137.71	3.16	1988	1987
60	181	19407	181	-67.9	-56.0	-80.0			155	291	3.3	9.2	170.67	2.83	1971	1976
50	136	20513	136	-63.7	-52.1	-76.1			106	285	2.5	8.8	149.11	3.29	1986	1981
40	81	21874	81	-59.9	-51.1	-71.1			58	323	1.0	8.6	180.48	3.82	1989	1981
30	30	23651	30	-56.7	-45.3	-69.0			25	033	1.9	9.4	248.11	5.30	1986	1977
25	15	24809	15	-55.5	-45.5	-65.0			13	180	2.6	11.8			1983	1977
20	8	26315	8	-53.9	-46.5	-59.5			8	293	2.8	8.1			1989	1981
15	5	28136	5	-53.9	-46.5	-57.9			2	285	2.0	2.0			1990	1981
10	3	30862	3	-53.2	-52.7	-53.7			1	025	5.0	5.0			1984	1989
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

516 621 408

11 184 1270 -65.1

265 101 1641 -76.1



# NORMALS OF RADIOSONDE DATA

42369 LUCKNOW

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	528	1000	528	20.3	26.0	11.0	528	11.8	528	294	1.1	1.6	1.97	0.91	1976	1974
1000	509	125	289	20.0	26.0	10.8	289	11.2	286	302	1.1	1.5	15.78	0.99	1982	1987
950	496	561	495	17.4	24.4	9.6	488	6.0	488	301	3.2	4.6	16.86	0.71	1982	1988
900	496	1023	496	14.0	22.0	5.8	478	1.4	483	305	3.8	5.2	15.01	0.83	1985	1985
850	496	1503	496	11.5	19.0	1.0	414	-2.7	487	307	5.0	6.5	14.89	0.99	1973	1973
800	496	2007	496	9.4	17.0	1.8	338	-5.8	483	304	6.2	7.7	14.92	1.22	1972	1982
750	496	2536	495	6.9	15.0	-1.0	282	-8.1	483	299	7.3	8.9	18.38	1.47	1972	1977
700	496	3103	496	3.8	12.4	-7.0	252	-11.3	486	294	8.8	10.3	16.00	1.57	1987	1977
650	493	3700	493	0.3	11.6	-8.0	230	-14.6	455	290	10.5	11.9	15.39	1.67	1979	1977
600	490	4338	490	-3.5	7.0	-11.3	204	-17.9	477	285	13.1	14.5	19.71	1.71	1974	1982
550	489	5026	489	-7.9	1.4	-18.3	182	-21.8	474	283	16.1	17.4	24.50	1.77	1987	1981
500	487	5755	486	-12.8	-2.5	-24.5	165	-26.1	468	281	19.3	20.6	25.55	1.92	1990	1981
450	479	6551	479	-18.4	-4.9	-28.0	152	-31.1	459	279	23.1	24.5	32.66	2.12	1987	1974
400	474	7420	474	-24.6	-15.7	-40.0	150	-36.2	455	276	27.2	28.9	35.23	2.22	1988	1974
350	466	8382	466	-31.4	-22.7	-42.7	135	-41.8	439	274	32.3	34.2	44.35	2.30	1982	1981
300	451	9456	451	-39.1	-28.0	-51.3	112	-47.9	422	272	37.5	39.5	51.97	2.52	1973	1979
250	431	10684	431	-47.4	-35.9	-60.5	49	-54.7	364	269	42.9	45.4	64.29	2.52	1990	1979
200	405	12133	405	-56.3	-40.9	-68.1			361	266	44.2	46.2	77.69	2.51	1990	1979
175	372	12971	372	-60.7	-50.3	-71.5			330	264	43.6	45.4	81.92	2.19	1986	1983
150	342	13918	342	-64.6	-52.1	-74.5			297	265	40.0	41.4	87.87	2.62	1986	1979
125	304	15020	304	-68.8	-55.3	-83.1			261	265	34.5	35.9	97.97	2.44	1986	1982
100	264	16344	263	-72.4	-60.7	-81.3			227	266	27.2	28.3	106.67	2.49	1986	1984
80	220	17653	219	-72.4	-57.3	-86.0			185	268	16.1	18.3	117.92	3.21	1986	1971
70	195	18456	194	-70.7	-55.1	-87.0			158	271	13.7	15.9	128.17	3.44	1986	1971
60	160	19370	160	-67.8	-50.7	-77.9			108	272	12.3	14.1	124.08	3.22	1988	1981
50	116	20486	116	-64.4	-51.9	-74.9			86	274	9.1	12.1	144.04	2.59	1988	1981
40	57	21866	57	-60.7	-50.1	-69.7			44	262	8.2	12.8	176.98	2.80	1988	1981
30	24	23660	24	-58.1	-49.9	-65.3			17	258	10.8	11.6	224.56	2.75	1983	1984
25	12	24803	12	-56.6	-50.1	-61.1			10	261	11.3	12.3			1983	1984
20	5	26183	5	-55.5	-51.5	-59.5			3	260	13.5	16.7			1985	1986
15	2	28115	2	-55.5	-52.5	-58.5			1	077	6.0	6.0			1983	1986
10	2	30715	2	-52.7	-48.3	-57.1			1	093	7.0	7.0			1983	1986
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
493	648	375	59	188	1248	-62.8	243	100	1639	-73.9

# NORMALS OF RADIOSONDE DATA

43285 MANGALORE

JANUARY 1975-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	403	1007	403	29.5	32.4	25.0	403	19.8	403	289	3.7	4.2	0.83	0.36	1988	1975
<i>1000</i>	380	90	380	28.9	31.8	20.0	380	19.0	369	291	5.0	5.6	6.57	0.43	1988	1976
<i>950</i>	380	536	380	24.5	29.8	16.0	378	12.9	376	311	2.9	3.9	12.13	0.68	1989	1975
<i>900</i>	380	1013	380	21.6	27.0	15.4	376	9.3	376	061	1.8	3.2	6.71	0.66	1982	1989
<i>850</i>	380	1505	380	18.1	28.0	12.2	373	6.0	376	092	4.3	5.1	7.85	0.84	1983	1980
<i>800</i>	380	2022	379	14.9	23.4	9.0	351	1.1	375	091	5.6	6.5	7.90	1.03	1980	1975
<i>750</i>	380	2562	378	12.4	19.0	5.0	232	-4.2	375	089	4.3	6.0	9.89	1.42	1989	1975
<i>700</i>	380	3141	378	10.0	17.2	1.6	118	-8.5	375	078	2.2	5.1	10.74	1.27	1989	1981
<i>650</i>	375	3753	373	6.8	14.2	-3.5	82	-12.4	369	046	1.1	5.1	11.52	1.24	1989	1981
<i>600</i>	372	4405	370	3.2	10.2	-4.3	63	-15.3	365	016	0.9	5.5	13.62	1.10	1986	1981
<i>550</i>	368	5104	367	-1.0	5.2	-9.0	60	-18.4	357	355	1.3	6.0	16.07	1.15	1986	1976
<i>500</i>	365	5859	362	-5.4	2.0	-12.1	55	-22.6	354	324	1.6	7.0	18.68	1.25	1987	1981
<i>450</i>	363	6676	360	-10.4	-2.1	-16.7	39	-27.4	350	303	3.0	8.1	22.81	1.33	1987	1982
<i>400</i>	356	7577	353	-16.0	-8.3	-24.1	32	-34.5	343	299	4.9	9.8	27.27	1.58	1987	1982
<i>350</i>	351	8566	349	-22.8	-14.7	-30.1	29	-40.2	330	288	7.0	11.4	38.60	1.73	1988	1979
<i>300</i>	345	9687	343	-30.9	-22.9	-38.5	27	-47.7	319	274	8.6	12.4	41.21	1.96	1988	1979
<i>250</i>	331	10957	329	-40.9	-31.1	-48.9	19	-54.4	299	262	9.7	13.9	52.00	1.98	1983	1979
<i>200</i>	312	12438	312	-53.0	-41.1	-61.1			278	253	9.9	15.0	66.42	2.12	1983	1989
<i>175</i>	285	13289	285	-59.9	-49.5	-69.5			242	251	9.1	14.6	73.08	2.14	1983	1986
<i>150</i>	273	14238	273	-67.0	-53.5	-81.3			226	250	7.5	14.0	81.78	2.22	1983	1986
<i>125</i>	253	15328	252	-73.6	-56.5	-88.9			201	261	4.8	11.7	92.47	2.53	1983	1986
<i>100</i>	237	16616	236	-78.6	-68.5	-89.1			187	240	1.0	9.8	106.04	2.20	1983	1986
<i>80</i>	199	17905	198	-76.7	-62.5	-87.9			141	111	1.8	8.8	119.73	2.11	1989	1982
<i>70</i>	183	18693	182	-72.6	-59.3	-84.3			121	175	0.1	7.1	133.42	2.38	1989	1986
<i>60</i>	166	19611	166	-67.6	-51.5	-79.5			104	263	2.0	6.6	138.70	2.60	1989	1986
<i>50</i>	141	20735	141	-61.9	-49.5	-73.5			80	259	2.7	7.1	140.47	4.11	1989	1986
<i>40</i>	110	22133	110	-56.9	-42.7	-68.1			61	261	1.3	9.9	181.21	3.63	1986	1986
<i>30</i>	83	23976	83	-52.4	-39.1	-63.1			39	092	1.1	12.1	155.72	2.75	1986	1982
<i>25</i>	57	25176	57	-50.2	-37.1	-60.1			24	095	4.5	12.7	234.02	3.53	1989	1986
<i>20</i>	31	26698	31	-47.0	-38.9	-57.7			12	052	2.5	11.0	173.61	2.15	1988	1986
<i>15</i>	12	28633	12	-44.8	-37.9	-54.5			1	225	9.0	9.0			1988	1986
<i>10</i>	5	31389	5	-41.6	-36.9	-48.7									1987	1986
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

368 561 494

221 094 1699 -81.0

## NORMALS OF RADIOSONDE DATA

43285 MANGALORE

FEBRUARY 1975-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	394	1006	394	29.7	32.2	27.0	394	21.2	391	292	4.3	4.8	0.65	0.40	1988	1976
1000	370	87	370	29.0	32.0	22.4	370	20.6	367	293	5.9	6.5	5.88	0.57	1975	1981
950	370	534	370	25.1	31.0	20.0	366	14.3	367	300	4.2	4.9	11.38	1.14	1977	1981
900	370	1013	369	23.1	30.4	17.4	361	9.7	367	342	1.3	3.2	6.36	1.23	1988	1979
850	370	1508	369	20.1	28.2	14.8	359	6.8	367	081	2.5	4.2	7.32	1.22	1989	1979
800	370	2028	370	16.7	24.6	11.2	347	3.2	357	091	4.8	6.2	8.66	1.33	1989	1982
750	370	2571	370	13.2	21.6	5.4	304	-1.6	366	088	5.0	6.9	12.77	1.42	1989	1982
700	369	3151	369	9.9	19.2	3.6	204	-6.7	366	075	3.2	6.4	12.85	1.33	1989	1982
650	366	3762	366	6.7	14.6	-4.9	112	-11.0	360	033	1.4	5.8	15.59	1.34	1990	1986
600	365	4414	365	3.3	10.2	-1.9	76	-13.9	358	339	1.5	5.9	18.94	1.29	1988	1981
550	363	5113	363	-0.8	6.2	-9.0	67	-18.0	353	313	2.5	6.7	22.61	1.37	1988	1975
500	359	5868	359	-5.3	2.2	-12.0	54	-22.2	347	303	3.7	7.6	25.53	1.45	1988	1978
450	357	6686	357	-10.2	-1.3	-17.0	45	-27.8	343	292	4.9	9.0	29.57	1.48	1990	1975
400	354	7587	353	-15.6	-6.3	-23.1	34	-32.6	338	289	7.0	11.2	33.81	1.64	1990	1989
350	348	8578	347	-22.3	-14.3	-31.1	28	-38.5	328	278	9.2	12.7	45.65	1.96	1990	1989
300	337	9701	337	-30.5	-22.1	-39.9	20	-45.7	316	265	11.2	14.4	48.90	2.13	1983	1989
250	321	10974	321	-40.4	-31.1	-50.3	9	-53.6	296	258	12.1	15.1	60.62	2.26	1990	1989
200	305	12457	305	-52.4	-41.9	-63.5			277	264	11.4	15.5	74.91	2.29	1989	1982
175	283	13307	282	-59.2	-48.1	-71.1			251	271	10.9	15.4	82.53	2.49	1990	1982
150	269	14258	268	-66.1	-53.9	-77.1			233	276	9.6	14.6	92.00	2.42	1990	1989
125	236	15346	236	-72.7	-61.7	-83.1			199	275	7.2	11.9	105.59	2.51	1990	1989
100	213	16640	213	-77.7	-67.1	-90.1			174	281	4.7	9.5	112.75	2.40	1990	1986
80	183	17938	183	-76.4	-64.3	-89.1			135	269	2.1	7.3	121.84	2.47	1986	1979
70	164	18729	164	-72.4	-56.1	-84.5			119	265	2.9	6.8	127.53	2.60	1983	1979
60	152	19644	151	-67.3	-50.5	-81.1			103	267	4.3	7.3	133.76	2.27	1983	1986
50	134	20768	134	-62.0	-48.1	-73.3			84	273	4.4	8.6	148.50	2.20	1983	1990
40	108	22170	108	-57.1	-42.9	-68.1			58	304	1.5	8.8	163.54	2.80	1990	1986
30	75	24034	75	-53.5	-37.3	-63.1			39	101	4.6	11.0	193.92	2.52	1990	1986
25	60	25221	60	-50.7	-42.1	-61.1			25	078	5.1	10.9	181.99	3.40	1987	1982
20	40	26701	40	-47.8	-38.5	-58.1			11	118	3.5	14.1	232.54	3.35	1989	1982
15	17	28548	17	-45.2	-35.7	-53.1			2	095	8.9	9.0			1990	1990
10	2	31318	2	-45.6	-39.1	-52.1									1987	1990
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

359 560 498

197 094 1701 -79.7

## NORMALS OF RADIOSONDE DATA

43285 MANGALORE

MARCH 1975-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	434	1005	434	30.4	33.0	23.4	434	22.4	432	292	4.6	5.1	0.89	0.48	1977	1983
<i>1000</i>	405	76	405	29.9	33.0	26.8	405	22.1	394	294	6.5	7.1	7.60	0.48	1977	1980
<i>950</i>	405	524	405	25.6	31.0	20.2	403	16.4	393	302	5.4	6.2	14.07	0.73	1989	1981
<i>900</i>	405	1004	405	24.3	31.4	18.2	397	10.0	394	324	2.7	4.0	8.70	0.82	1982	1980
<i>850</i>	405	1502	405	21.6	28.8	15.8	394	7.5	394	033	1.6	3.9	9.72	0.95	1983	1987
<i>800</i>	405	2024	405	18.2	25.2	11.8	391	5.3	394	082	3.8	5.3	10.86	1.05	1983	1987
<i>750</i>	405	2569	405	14.3	21.6	8.2	382	1.7	390	093	6.1	7.3	12.78	1.21	1988	1980
<i>700</i>	405	3151	404	10.2	17.6	3.8	347	-3.0	391	091	6.6	8.2	13.75	1.35	1983	1981
<i>650</i>	400	3762	399	6.6	14.2	1.0	253	-8.5	381	088	4.4	7.0	16.32	1.58	1990	1976
<i>600</i>	397	4416	397	3.3	11.4	-3.0	141	-13.6	377	075	2.1	5.9	20.50	1.54	1990	1976
<i>550</i>	394	5115	394	-0.7	8.0	-8.0	81	-16.6	375	026	1.6	5.9	24.11	1.54	1988	1976
<i>500</i>	388	5871	387	-5.0	3.2	-12.0	57	-21.9	370	355	2.0	6.8	27.60	1.83	1988	1976
<i>450</i>	384	6689	383	-9.9	-1.5	-18.0	43	-27.8	356	321	3.1	7.8	33.63	2.06	1988	1976
<i>400</i>	382	7593	380	-15.6	-7.9	-23.0	43	-32.5	353	296	5.1	9.6	39.73	2.10	1987	1976
<i>350</i>	370	8584	369	-22.3	-13.9	-30.0	32	-39.0	340	284	6.8	10.9	53.54	2.11	1990	1976
<i>300</i>	365	9707	363	-30.2	-22.1	-38.0	24	-46.7	339	279	8.5	12.5	56.66	2.12	1990	1977
<i>250</i>	352	10981	350	-40.0	-31.3	-48.0	10	-54.7	326	271	9.6	14.0	67.64	2.33	1990	1976
<i>200</i>	335	12458	334	-51.9	-43.3	-60.0			307	264	9.5	13.7	81.18	2.28	1989	1978
<i>175</i>	322	13321	321	-58.6	-49.1	-68.1			285	260	8.8	13.7	91.55	2.35	1990	1986
<i>150</i>	298	14274	298	-65.6	-54.3	-74.0			260	261	7.7	13.2	101.40	2.48	1990	1978
<i>125</i>	275	15369	275	-72.4	-57.5	-83.0			234	267	4.1	10.7	115.48	2.68	1983	1978
<i>100</i>	255	16661	255	-77.9	-65.9	-89.5			211	261	0.9	8.3	134.74	2.77	1990	1987
<i>80</i>	216	17959	216	-76.9	-63.1	-88.5			176	197	0.6	7.0	148.49	2.53	1983	1987
<i>70</i>	201	18747	201	-73.1	-57.5	-85.5			161	294	0.8	7.0	148.49	2.51	1983	1987
<i>60</i>	180	19662	180	-68.2	-51.7	-80.1			143	297	1.8	7.5	160.97	2.75	1986	1987
<i>50</i>	156	20798	156	-62.6	-45.7	-73.1			124	272	0.5	8.8	193.11	2.39	1983	1987
<i>40</i>	131	22196	131	-57.8	-44.7	-70.5			107	118	2.4	10.4	205.47	2.34	1983	1988
<i>30</i>	104	24038	104	-52.3	-39.3	-67.1			80	106	5.0	11.2	184.45	3.23	1983	1988
<i>25</i>	87	25215	87	-49.2	-35.9	-65.1			60	105	7.2	13.3	194.44	3.71	1990	1988
<i>20</i>	58	26687	58	-46.2	-36.7	-55.9			30	112	7.6	15.3	205.31	3.16	1990	1983
<i>15</i>	29	28577	29	-44.0	-33.3	-55.5			3	095	21.7	22.3	225.86	3.60	1990	1983
<i>10</i>	9	31233	9	-42.0	-33.1	-45.7			1	107	26.9	27.0			1987	1989
<i>7</i>	3	33582	3	-38.4	-31.9	-42.7			1	078	25.0	25.0			1987	1989

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

395 558 500

236 094 1707 -80.2

## NORMALS OF RADIOSONDE DATA

43285 MANGALORE

APRIL 1975-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	449	1004	449	31.4	34.0	21.4	449	23.6	449	291	4.6	5.2	0.86	0.31	1975	1980
<i>1000</i>	430	64	430	30.9	33.0	21.6	430	23.4	415	293	6.5	7.1	6.21	0.33	1975	1980
<i>950</i>	430	512	430	25.9	32.8	20.0	430	19.7	416	302	5.6	6.4	13.87	0.95	1990	1982
<i>900</i>	430	993	430	24.5	33.2	17.8	424	13.6	416	323	2.9	4.3	6.70	0.92	1990	1985
<i>850</i>	430	1492	430	22.6	29.8	15.6	422	9.7	416	015	2.3	3.7	7.65	0.97	1987	1986
<i>800</i>	430	2017	430	19.5	26.0	12.6	422	6.9	415	058	3.1	4.4	8.19	0.98	1987	1986
<i>750</i>	430	2564	429	15.7	23.2	8.4	419	4.0	414	080	5.2	6.2	11.01	1.12	1988	1982
<i>700</i>	430	3149	429	11.3	20.4	3.0	411	0.1	413	087	6.8	7.5	10.68	1.28	1988	1975
<i>650</i>	426	3763	426	7.1	17.8	1.0	375	-5.1	408	088	6.6	7.6	12.47	1.34	1988	1976
<i>600</i>	422	4417	422	3.5	14.0	-4.0	292	-10.3	391	089	4.5	6.1	16.44	1.53	1988	1978
<i>550</i>	416	5117	415	-0.1	9.4	-7.0	185	-15.7	388	075	2.9	5.5	19.79	1.68	1988	1976
<i>500</i>	412	5875	411	-4.3	4.4	-11.0	123	-19.6	383	055	1.7	5.6	24.42	1.65	1988	1976
<i>450</i>	407	6696	406	-9.3	-1.9	-16.1	97	-25.1	373	034	1.6	6.4	28.23	1.61	1988	1982
<i>400</i>	405	7599	405	-15.2	-7.7	-23.3	82	-29.7	367	333	1.3	7.5	35.21	1.58	1990	1982
<i>350</i>	401	8593	401	-21.9	-13.1	-32.1	56	-35.7	360	287	3.0	8.9	45.27	1.61	1990	1982
<i>300</i>	398	9717	398	-29.8	-19.7	-41.5	43	-43.9	356	268	5.4	10.7	48.42	1.77	1990	1982
<i>250</i>	393	10990	393	-39.6	-31.7	-51.5	17	-51.3	350	255	7.6	12.1	55.90	1.94	1985	1982
<i>200</i>	382	12485	381	-51.2	-43.1	-60.9			335	245	8.5	12.7	70.58	2.15	1989	1979
<i>175</i>	368	13339	367	-57.9	-49.7	-69.0			315	243	8.5	12.5	77.48	2.15	1985	1978
<i>150</i>	355	14295	355	-65.1	-55.1	-75.9			300	244	6.7	11.1	86.64	2.14	1988	1983
<i>125</i>	326	15390	326	-72.1	-61.9	-83.1			274	236	3.8	10.0	97.88	2.00	1988	1986
<i>100</i>	307	16686	304	-77.7	-67.3	-87.0			259	125	2.8	8.6	110.14	1.90	1985	1978
<i>80</i>	272	17978	269	-76.1	-60.5	-86.0			218	105	4.7	7.9	121.28	2.10	1985	1978
<i>70</i>	260	18762	260	-72.3	-57.5	-85.0			205	092	3.9	7.5	126.27	2.23	1985	1978
<i>60</i>	231	19685	231	-67.0	-50.1	-81.0			174	079	2.3	7.0	135.35	2.63	1985	1978
<i>50</i>	205	20817	205	-61.1	-46.1	-74.1			147	101	1.5	7.4	135.12	2.30	1990	1982
<i>40</i>	171	22215	171	-55.5	-43.1	-68.1			114	105	3.1	9.2	153.11	2.62	1986	1988
<i>30</i>	136	24093	136	-49.5	-37.1	-68.9			90	104	5.9	11.2	157.46	3.02	1980	1982
<i>25</i>	106	25288	106	-46.9	-35.3	-56.1			67	105	8.6	12.2	150.52	2.18	1986	1982
<i>20</i>	73	26757	73	-44.8	-35.5	-53.1			32	096	11.8	15.1	148.54	2.39	1987	1982
<i>15</i>	42	28650	42	-43.0	-36.5	-51.7			3	118	14.9	15.0	197.94	2.42	1987	1982
<i>10</i>	15	31525	15	-39.4	-33.1	-47.3									1987	1989
<i>7</i>	3	33981	3	-37.0	-29.5	-41.1									1985	1985

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

412 551 510

279 094 1708 -79.8

## NORMALS OF RADIOSONDE DATA

43285 MANGALORE

MAY 1975-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	465	1003	465	31.1	33.6	24.4	465	24.1	463	296	4.2	5.0	0.73	0.61	1987	1990
1000	444	59	433	30.7	33.0	24.2	433	23.9	429	295	5.8	6.7	6.78	0.63	1978	1990
950	445	508	445	26.2	32.2	19.8	445	20.7	441	304	5.8	6.7	9.41	0.95	1989	1981
900	445	988	445	23.7	32.2	16.6	445	16.3	441	316	4.1	5.4	5.93	1.22	1989	1981
850	445	1486	445	21.5	30.4	13.0	442	11.9	441	338	2.5	4.7	7.00	1.28	1989	1975
800	445	2010	445	19.0	29.2	12.4	439	7.5	441	006	2.2	5.0	8.15	1.17	1989	1990
750	445	2557	445	15.7	26.0	9.2	434	4.4	441	043	2.6	5.8	10.14	1.28	1989	1981
700	445	3142	445	11.8	19.0	5.0	425	0.9	441	074	3.3	6.4	10.58	1.34	1988	1981
650	439	3756	438	7.7	16.2	1.2	401	-3.1	431	081	3.9	6.7	12.00	1.44	1988	1981
600	435	4412	433	3.7	12.2	-4.0	364	-7.0	423	079	3.5	6.5	14.85	1.46	1988	1977
550	430	5113	428	0.0	9.4	-6.3	304	-11.5	415	062	2.7	6.2	17.26	1.42	1990	1981
500	429	5872	427	-4.0	5.2	-10.5	228	-15.3	410	046	2.3	6.3	21.00	1.45	1990	1981
450	427	6694	427	-8.4	4.4	-14.9	172	-19.5	404	044	2.0	6.6	25.61	1.59	1983	1981
400	422	7604	420	-13.8	-6.1	-20.1	141	-24.7	396	053	1.3	6.8	30.56	1.58	1989	1979
350	417	8603	415	-20.3	-12.3	-27.1	112	-30.9	387	055	0.1	6.7	37.92	1.67	1981	1981
300	408	9734	407	-28.2	-20.5	-37.5	85	-37.9	378	207	0.9	6.7	43.50	1.83	1988	1981
250	399	11017	398	-38.0	-30.1	-47.9	38	-47.0	364	175	2.0	7.5	52.98	2.06	1988	1980
200	385	12518	385	-50.3	-40.9	-60.3	1	-58.0	345	158	3.9	9.0	69.60	2.37	1988	1980
175	363	13375	363	-57.5	-49.1	-69.0			315	147	5.3	10.2	75.39	2.36	1988	1977
150	342	14332	342	-65.2	-55.5	-77.0			297	134	7.5	11.5	85.72	2.36	1989	1977
125	319	15422	318	-72.9	-62.1	-87.1			277	119	9.8	13.0	96.79	2.43	1985	1986
100	266	16724	265	-78.4	-68.9	-89.0			224	106	11.8	13.5	112.00	2.42	1988	1977
80	236	18002	234	-77.0	-61.5	-89.0			192	103	11.0	12.1	124.26	3.03	1990	1978
70	221	18789	220	-72.6	-53.7	-89.0			177	103	8.8	10.2	130.92	3.08	1986	1978
60	201	19707	201	-66.7	-51.1	-81.0			156	100	7.0	9.3	148.17	3.39	1986	1978
50	185	20827	185	-60.8	-45.9	-75.0			143	102	7.4	9.7	166.21	2.89	1990	1978
40	159	22241	159	-55.4	-36.1	-66.1			112	104	9.2	11.5	181.19	2.68	1990	1982
30	124	24090	124	-50.4	-37.5	-60.7			70	095	10.0	11.3	236.94	1.64	1982	1982
25	96	25296	96	-47.2	-32.9	-56.9			46	098	13.0	14.1	208.20	3.16	1982	1982
20	55	26805	55	-45.4	-37.3	-59.1			23	101	13.6	14.9	184.81	2.67	1985	1988
15	32	28720	32	-42.2	-36.3	-49.9			1	078	6.0	6.0	178.38	4.06	1989	1982
10	8	31384	8	-42.0	-36.7	-44.9									1985	1983
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

428 550 512

273 095 1702 -80.9

## NORMALS OF RADIOSONDE DATA

43285 MANGALORE

JUNE 1975-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	450	1003	450	27.8	33.0	23.0	450	24.5	447	260	3.4	4.5	0.63	0.81	1987	1975
<i>1000</i>	399	60	396	27.6	32.4	23.0	396	24.2	355	263	4.8	6.4	5.29	0.78	1987	1975
<i>950</i>	399	506	399	24.2	29.2	16.4	399	21.3	358	274	6.4	7.9	8.91	0.87	1989	1986
<i>900</i>	399	984	399	21.3	27.2	12.6	399	18.2	357	282	8.3	9.5	5.94	1.02	1989	1986
<i>850</i>	399	1478	399	18.5	25.6	9.8	398	15.0	357	284	8.9	10.1	6.73	1.05	1983	1986
<i>800</i>	399	1997	399	15.7	24.0	7.0	399	11.7	356	283	8.7	9.9	7.84	1.09	1983	1986
<i>750</i>	399	2539	398	13.0	21.6	3.8	398	7.8	356	281	8.2	9.8	9.67	1.15	1983	1986
<i>700</i>	399	3120	398	10.1	18.0	0.0	395	3.2	357	281	7.5	9.7	11.14	1.24	1983	1986
<i>650</i>	392	3732	391	6.8	13.8	-3.1	384	-0.9	342	281	5.8	9.4	13.36	1.28	1988	1986
<i>600</i>	387	4387	387	3.3	10.2	-3.7	374	-3.9	339	277	5.9	9.1	16.39	1.37	1990	1986
<i>550</i>	377	5087	377	-0.2	8.0	-6.9	355	-7.4	330	275	5.3	8.6	18.91	1.40	1978	1986
<i>500</i>	368	5848	368	-4.0	2.8	-12.0	331	-11.5	326	273	3.9	7.3	22.65	1.48	1990	1975
<i>450</i>	360	6671	359	-8.2	3.8	-16.1	303	-16.0	315	280	2.3	6.2	26.92	1.63	1981	1986
<i>400</i>	359	7580	358	-13.6	-5.5	-21.5	282	-21.3	313	024	0.0	5.6	32.49	1.78	1990	1986
<i>350</i>	347	8583	346	-19.9	-12.5	-27.9	242	-27.4	298	091	2.9	6.1	39.48	1.89	1988	1986
<i>300</i>	342	9715	342	-27.8	-20.1	-38.9	192	-35.9	292	089	5.2	7.1	48.53	2.05	1988	1981
<i>250</i>	330	11002	330	-37.7	-29.5	-48.1	108	-44.7	282	095	9.0	10.5	60.04	2.27	1990	1986
<i>200</i>	316	12509	316	-49.9	-41.1	-64.1	1	-56.0	268	096	15.4	16.5	73.77	2.45	1985	1986
<i>175</i>	294	13374	294	-57.1	-47.1	-67.1			244	097	19.3	20.3	85.27	2.65	1985	1986
<i>150</i>	282	14333	282	-65.0	-54.7	-76.3			236	100	24.6	25.5	98.75	2.80	1988	1986
<i>125</i>	271	15420	271	-72.8	-62.1	-86.1			223	101	28.8	29.6	112.27	3.02	1983	1986
<i>100</i>	246	16713	246	-77.9	-65.9	-90.1			200	099	27.7	28.4	126.05	3.26	1990	1987
<i>80</i>	209	18016	209	-74.2	-58.1	-89.5			166	097	21.7	22.4	152.26	3.41	1980	1987
<i>70</i>	197	18813	196	-69.6	-58.1	-84.1			155	098	17.1	17.8	164.79	3.43	1985	1980
<i>60</i>	182	19737	182	-64.9	-51.5	-78.5			139	099	14.5	15.5	184.85	3.34	1990	1980
<i>50</i>	155	20870	155	-59.9	-48.5	-75.3			110	105	13.8	14.6	196.50	3.10	1990	1987
<i>40</i>	133	22284	133	-54.4	-41.9	-69.1			85	104	14.2	15.2	199.92	2.94	1990	1979
<i>30</i>	104	24144	104	-49.2	-38.5	-61.9			63	095	17.2	18.1	234.18	2.76	1981	1986
<i>25</i>	82	25326	82	-46.6	-36.1	-57.9			45	099	19.1	19.9	243.71	2.91	1989	1986
<i>20</i>	44	26842	44	-45.1	-34.1	-55.9			17	100	21.1	21.4	218.09	1.93	1983	1983
<i>15</i>	26	28819	26	-42.5	-34.5	-48.1			1	100	25.9	26.0	222.21	2.76	1990	1983
<i>10</i>	9	31458	9	-40.3	-33.5	-45.1									1985	1988
<i>7</i>	4	33956	4	-40.8	-37.7	-42.9									1983	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

379 554 503

227 099 1683 -79.8

## NORMALS OF RADIOSONDE DATA

43285 MANGALORE

JULY 1975-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	465	1004	465	26.8	30.8	20.0	465	24.1	465	273	3.9	4.6	0.77	0.77	1983	1980
1000	421	67	420	26.6	30.6	17.0	419	23.9	377	277	6.0	6.9	7.12	0.75	1983	1975
950	421	511	421	23.7	29.2	17.0	420	21.2	376	286	8.1	9.0	13.37	0.80	1990	1978
900	421	989	421	20.8	27.2	13.0	420	18.3	377	294	10.3	10.9	7.96	1.01	1983	1978
850	421	1483	421	18.0	25.0	11.0	420	15.4	377	295	10.4	11.0	8.29	0.98	1989	1978
800	421	2001	421	15.2	23.2	9.6	420	12.2	376	293	10.1	10.5	9.55	0.94	1989	1985
750	421	2542	421	12.5	21.0	6.4	419	8.3	375	292	9.8	10.3	11.23	0.98	1989	1985
700	420	3122	420	9.8	18.6	3.4	416	3.4	374	290	9.1	9.7	11.89	1.00	1989	1985
650	418	3734	418	6.6	15.2	0.8	408	-0.4	368	290	7.9	8.8	12.93	1.10	1989	1982
600	413	4390	413	3.2	11.6	-2.5	393	-3.7	358	290	6.5	7.9	16.06	1.15	1990	1985
550	398	5089	398	-0.3	8.0	-7.7	371	-6.8	348	288	5.1	7.2	18.97	1.16	1990	1979
500	392	5850	391	-4.1	3.0	-11.1	360	-11.0	343	284	3.5	6.6	21.41	1.24	1990	1985
450	385	6672	384	-8.6	-1.3	-18.7	339	-15.8	333	279	1.5	5.9	25.31	1.28	1990	1981
400	377	7581	377	-13.8	-5.9	-21.0	314	-21.3	323	084	1.0	5.9	29.95	1.49	1990	1977
350	366	8584	366	-20.2	-11.7	-28.0	278	-27.9	311	093	3.6	6.3	35.58	1.68	1990	1977
300	359	9715	359	-28.1	-19.7	-38.0	229	-36.0	303	091	7.2	8.7	42.59	1.85	1990	1977
250	345	10999	345	-38.1	-30.5	-48.1	111	-44.6	288	094	12.4	13.5	51.83	2.01	1988	1987
200	333	12502	333	-50.5	-41.7	-59.0			277	096	21.3	22.0	65.54	2.22	1988	1976
175	312	13364	312	-57.6	-48.1	-67.0			254	096	26.7	27.2	74.73	2.42	1988	1977
150	294	14325	294	-65.3	-54.9	-76.0			232	096	32.5	33.0	83.09	2.47	1988	1977
125	273	15412	273	-73.0	-63.5	-84.9			207	097	36.7	37.4	97.55	2.75	1988	1979
100	243	16710	243	-76.0	-63.5	-88.9			184	100	33.7	34.4	113.70	3.28	1985	1987
80	220	18021	220	-70.3	-60.1	-88.1			161	097	23.8	24.4	126.54	5.31	1986	1987
70	210	18821	210	-66.7	-55.1	-83.5			145	097	21.0	21.6	138.67	4.38	1990	1987
60	193	19769	193	-63.1	-50.5	-79.1			122	098	18.9	19.5	157.60	3.93	1990	1987
50	167	20918	167	-59.1	-44.5	-77.1			99	104	18.9	19.7	182.63	4.03	1990	1979
40	137	22310	137	-55.3	-43.7	-70.7			53	104	17.7	18.7	192.55	3.00	1989	1987
30	94	24142	94	-50.7	-39.1	-64.9			29	102	17.5	19.1	239.36	2.84	1981	1987
25	74	25319	74	-48.9	-33.9	-61.7			22	100	20.2	20.8	199.47	2.63	1983	1987
20	53	26789	53	-46.2	-35.9	-59.7			11	098	17.0	17.9	165.88	2.31	1986	1987
15	37	28680	37	-44.8	-36.1	-57.3			2	093	29.9	30.0	219.73	2.42	1990	1987
10	18	31341	18	-43.4	-35.1	-53.9									1982	1987
7	2	33466	2	-44.7	-43.5	-45.9									1987	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
405	554	503					236	105	1648	-78.4



## NORMALS OF RADIOSONDE DATA

43285 MANGALORE

AUGUST 1975-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	464	1004	464	26.6	30.0	23.0	464	24.0	464	284	3.8	4.4	0.97	0.44	1987	1975
<i>1000</i>	438	68	437	26.3	29.8	20.0	437	23.7	401	288	5.9	6.6	7.36	0.44	1987	1975
<i>950</i>	438	512	438	23.2	29.4	17.0	438	20.9	401	294	8.2	8.8	15.06	0.73	1982	1982
<i>900</i>	438	989	438	20.5	29.0	12.4	438	18.0	401	299	10.5	11.0	7.43	0.90	1988	1982
<i>850</i>	438	1481	438	17.7	25.0	9.6	438	15.1	401	301	10.5	11.0	7.94	1.02	1988	1982
<i>800</i>	438	1999	438	15.0	21.6	6.8	437	12.0	401	299	10.1	10.7	9.06	1.15	1982	1982
<i>750</i>	438	2539	437	12.3	19.2	5.0	436	8.4	401	296	9.8	10.3	13.51	1.18	1982	1982
<i>700</i>	438	3120	437	9.6	16.6	2.8	434	4.2	401	295	9.2	9.9	12.08	1.13	1982	1980
<i>650</i>	428	3730	427	6.5	13.0	-0.3	421	-0.4	383	294	8.3	9.0	14.97	1.17	1982	1981
<i>600</i>	420	4385	418	3.2	10.8	-3.5	402	-4.1	368	294	7.0	8.1	16.63	1.23	1982	1981
<i>550</i>	409	5084	406	-0.2	10.0	-7.3	379	-7.6	361	294	5.5	7.1	23.02	1.40	1982	1981
<i>500</i>	399	5846	397	-4.0	3.2	-10.7	359	-11.7	352	292	3.6	5.9	23.63	1.52	1989	1981
<i>450</i>	392	6669	389	-8.5	-1.1	-16.1	338	-16.4	344	291	1.7	5.4	29.30	1.71	1989	1982
<i>400</i>	382	7580	380	-13.7	-6.5	-23.7	303	-21.8	333	056	0.6	5.2	32.90	1.91	1989	1982
<i>350</i>	368	8581	367	-20.2	-12.5	-29.3	259	-28.3	313	094	3.2	5.9	42.65	2.04	1983	1982
<i>300</i>	357	9714	355	-28.1	-21.1	-36.9	213	-36.4	302	098	6.4	8.1	50.46	2.27	1989	1981
<i>250</i>	349	10997	348	-38.1	-30.7	-47.1	101	-45.1	291	101	12.3	13.1	61.54	2.56	1983	1981
<i>200</i>	332	12501	331	-50.3	-42.1	-61.1			271	099	20.9	21.5	80.78	2.70	1987	1985
<i>175</i>	313	13361	313	-57.5	-48.1	-69.1			242	098	26.0	26.6	89.01	2.76	1989	1985
<i>150</i>	301	14318	300	-65.4	-54.1	-80.1			233	097	31.4	32.1	101.11	2.85	1989	1982
<i>125</i>	284	15406	284	-73.2	-60.7	-88.1			212	097	34.8	35.5	118.32	2.80	1989	1985
<i>100</i>	253	16712	252	-75.2	-60.3	-89.9			182	099	30.5	31.1	128.61	2.84	1989	1986
<i>80</i>	221	18038	220	-69.2	-57.3	-80.7			146	095	21.2	21.8	145.87	3.05	1989	1979
<i>70</i>	210	18839	210	-65.5	-54.1	-75.1			133	096	19.3	19.9	140.45	2.93	1980	1979
<i>60</i>	196	19787	196	-62.3	-50.1	-71.1			118	099	19.3	20.0	125.49	1.69	1980	1979
<i>50</i>	177	20931	177	-58.4	-43.5	-67.1			101	100	19.2	19.6	134.55	1.82	1989	1981
<i>40</i>	148	22368	148	-53.9	-40.1	-64.1			71	104	19.7	20.1	142.08	1.98	1989	1979
<i>30</i>	108	24250	108	-48.7	-37.5	-57.7			38	101	18.0	18.7	207.75	3.48	1989	1979
<i>25</i>	74	25440	74	-47.2	-36.5	-56.7			16	089	15.7	17.2	226.05	3.51	1989	1979
<i>20</i>	46	26913	46	-46.1	-37.5	-52.3			6	093	10.3	11.5	112.15	2.02	1983	1989
<i>15</i>	26	28829	26	-44.0	-36.1	-51.7			1	093	19.0	19.0	223.94	3.62	1987	1989
<i>10</i>	9	31479	9	-41.8	-32.1	-46.5									1987	1982
<i>7</i>	1	33578	1	-42.3	-42.3	-42.3									1987	1987

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

412 553 504

253 107 1634 -78.2

## NORMALS OF RADIOSONDE DATA

43285 MANGALORE

SEPTEMBER 1975-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	450	1004	450	27.6	31.0	23.0	450	23.9	450	283	3.1	4.0	1.03	0.41	1977	1975
<i>1000</i>	408	69	406	27.3	29.4	23.0	406	23.5	386	287	4.5	5.7	9.30	0.41	1985	1975
<i>950</i>	408	515	408	24.0	30.0	18.0	408	20.4	387	299	5.6	6.8	10.57	0.74	1985	1975
<i>900</i>	408	992	408	21.3	29.6	16.0	407	17.1	387	306	6.2	7.5	9.50	0.79	1982	1981
<i>850</i>	408	1486	407	18.5	25.2	13.4	407	14.2	387	307	5.2	6.8	9.95	0.92	1979	1988
<i>800</i>	408	2004	408	15.7	25.4	10.2	408	10.6	386	305	4.3	6.2	10.26	1.02	1989	1981
<i>750</i>	408	2546	408	13.0	21.0	8.0	404	6.9	385	296	3.6	5.9	11.95	1.04	1980	1981
<i>700</i>	408	3127	407	10.1	19.0	2.0	396	2.6	386	294	3.4	5.9	12.38	1.14	1976	1978
<i>650</i>	408	3738	407	7.0	15.4	0.2	382	-1.6	380	295	3.2	5.8	14.92	1.20	1988	1981
<i>600</i>	404	4395	403	3.8	12.0	-3.0	360	-5.2	365	292	2.5	5.7	16.22	1.31	1988	1978
<i>550</i>	402	5095	400	0.3	8.0	-6.5	332	-8.5	364	295	1.6	5.2	20.12	1.26	1988	1982
<i>500</i>	392	5857	390	-3.7	3.0	-10.7	313	-13.1	354	008	0.1	5.0	22.07	1.41	1987	1982
<i>450</i>	386	6680	386	-8.4	-1.1	-16.0	291	-17.9	346	104	1.6	5.1	27.60	1.57	1989	1978
<i>400</i>	379	7589	379	-13.8	-6.1	-21.1	261	-23.7	337	099	3.3	5.7	31.67	1.78	1980	1982
<i>350</i>	368	8589	368	-20.4	-12.5	-29.0	208	-29.7	319	098	5.2	6.6	42.29	2.08	1983	1976
<i>300</i>	351	9722	351	-28.4	-20.1	-37.1	146	-37.6	301	101	8.1	8.8	47.20	2.25	1983	1982
<i>250</i>	339	11006	339	-38.4	-28.3	-48.7	52	-46.2	291	102	11.6	12.4	58.28	2.48	1990	1981
<i>200</i>	323	12508	323	-50.8	-40.7	-61.0	2	-57.0	276	101	17.4	18.0	74.86	2.63	1989	1977
<i>175</i>	306	13366	306	-58.1	-47.5	-68.1			254	101	21.1	21.7	84.85	2.55	1989	1982
<i>150</i>	292	14320	292	-65.8	-54.1	-76.5			241	102	25.4	26.0	95.52	2.50	1989	1986
<i>125</i>	266	15415	266	-73.1	-60.5	-82.5			213	102	27.6	28.2	110.74	2.41	1989	1985
<i>100</i>	247	16714	246	-75.6	-63.1	-86.0			189	102	22.5	23.2	128.66	2.79	1985	1975
<i>80</i>	226	18023	225	-70.6	-59.1	-85.9			159	095	17.0	17.7	136.19	2.52	1985	1980
<i>70</i>	213	18826	213	-67.3	-55.5	-80.5			146	094	16.2	16.9	142.07	2.49	1980	1980
<i>60</i>	194	19776	194	-63.2	-51.9	-77.3			113	100	16.5	17.1	147.50	2.44	1980	1979
<i>50</i>	165	20914	165	-59.1	-48.3	-70.1			98	105	15.0	15.7	166.49	2.46	1980	1988
<i>40</i>	143	22338	143	-54.9	-45.1	-65.1			64	104	14.4	15.1	172.43	2.21	1980	1988
<i>30</i>	99	24217	99	-50.3	-39.1	-63.9			33	096	15.1	16.6	182.61	4.45	1989	1979
<i>25</i>	79	25384	79	-48.4	-31.1	-62.3			16	106	15.3	16.1	202.20	4.32	1985	1980
<i>20</i>	56	26835	56	-46.2	-35.1	-61.1			5	099	16.6	17.8	176.04	1.48	1983	1980
<i>15</i>	23	28791	23	-44.2	-39.1	-53.1			1	108	10.0	10.0	201.80	2.89	1987	1988
<i>10</i>	8	31591	8	-41.2	-35.9	-45.1									1987	1982
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

402 547 514

247 105 1643 -78.0

# NORMALS OF RADIOSONDE DATA

43285 MANGALORE

OCTOBER 1975-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	465	1005	465	28.7	32.4	23.4	465	23.9	464	280	2.7	3.8	0.82	0.47	1979	1986
1000	432	73	430	28.3	32.0	23.4	429	23.6	418	285	4.0	5.4	6.10	0.46	1979	1980
950	432	521	432	24.9	32.2	18.8	431	19.8	420	299	3.6	5.1	7.00	0.82	1990	1983
900	432	999	432	22.2	29.8	14.0	431	16.2	420	328	2.1	4.5	7.51	1.04	1990	1980
850	432	1494	432	19.4	27.4	12.2	431	13.1	420	032	1.6	4.8	8.51	1.16	1990	1982
800	432	2014	432	16.3	24.4	9.0	430	9.9	420	072	2.5	5.4	9.98	1.25	1990	1982
750	432	2555	432	13.0	21.2	5.0	422	6.3	419	080	3.0	5.9	12.20	1.24	1990	1982
700	432	3136	432	9.9	18.0	2.4	404	1.7	420	073	2.2	5.7	13.37	1.31	1990	1980
650	430	3747	430	6.8	14.8	-0.5	372	-2.5	416	067	1.4	5.3	15.90	1.37	1990	1980
600	426	4403	426	3.4	12.0	-3.0	337	-6.3	411	076	1.3	5.2	18.12	1.39	1989	1975
550	418	5103	418	-0.1	7.4	-7.0	295	-9.9	399	086	1.3	5.1	22.26	1.43	1990	1975
500	415	5863	414	-4.2	3.0	-12.3	272	-14.4	396	092	1.8	5.1	24.43	1.54	1988	1980
450	409	6685	408	-8.8	-1.3	-18.9	232	-19.0	384	097	2.6	5.4	29.45	1.75	1988	1980
400	405	7594	404	-14.2	-5.9	-24.0	200	-23.9	377	099	3.1	5.6	34.71	1.84	1988	1977
350	395	8593	394	-20.8	-11.9	-30.0	157	-29.5	360	110	3.3	5.7	44.90	1.94	1986	1977
300	385	9722	384	-28.9	-19.1	-37.5	106	-36.7	345	114	3.9	6.6	50.51	2.06	1990	1979
250	371	11000	370	-39.1	-29.5	-49.1	37	-45.2	327	120	5.5	8.5	61.12	2.28	1983	1982
200	348	12493	348	-51.7	-42.1	-63.7			301	121	8.3	11.2	78.70	2.65	1983	1980
175	326	13341	326	-59.3	-50.1	-71.9			280	119	10.7	13.4	86.41	2.76	1983	1980
150	309	14292	309	-67.1	-56.5	-82.1			265	119	12.4	14.7	99.06	2.93	1989	1985
125	284	15376	284	-74.2	-64.1	-87.3			240	116	13.3	15.4	114.39	3.01	1983	1985
100	259	16671	259	-78.2	-67.5	-92.1			220	106	11.0	12.7	141.37	3.65	1989	1979
80	234	17962	234	-74.0	-59.9	-88.3			186	102	10.4	11.4	156.99	3.48	1990	1980
70	216	18762	215	-69.3	-55.1	-80.1			164	106	8.8	9.9	166.33	3.01	1990	1980
60	195	19698	195	-65.0	-52.1	-75.3			145	106	8.0	9.3	180.65	3.21	1990	1980
50	173	20827	173	-60.6	-49.1	-73.9			119	109	7.8	9.3	190.87	3.13	1990	1980
40	146	22232	146	-56.5	-43.9	-70.1			91	105	8.3	10.6	191.34	2.97	1990	1980
30	110	24071	110	-52.3	-39.1	-61.1			59	103	10.9	12.4	224.21	3.74	1986	1983
25	87	25262	87	-49.8	-34.5	-58.7			40	095	15.6	17.2	235.61	4.10	1986	1983
20	57	26749	57	-47.8	-32.1	-56.1			19	095	18.5	19.4	289.32	5.91	1986	1983
15	35	28626	35	-45.9	-37.5	-52.3			5	110	11.9	13.4	242.12	4.15	1985	1983
10	12	31235	12	-42.8	-36.9	-47.7									1983	1980
7	1	33322	1	-42.5	-42.5	-42.5									1983	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
421	551	509					246	100	1670	-80.0

## NORMALS OF RADIOSONDE DATA

43285 MANGALORE

NOVEMBER 1975-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	450	1005	450	29.2	32.8	23.0	450	22.4	449	281	2.3	3.6	0.86	0.53	1990	1977
<i>1000</i>	393	76	393	28.9	32.4	23.6	393	21.9	374	283	3.4	5.1	6.82	0.57	1990	1985
<i>950</i>	394	525	394	25.4	32.4	19.8	394	17.1	376	309	1.9	4.6	7.51	0.99	1989	1981
<i>900</i>	394	1002	394	22.5	30.0	16.8	393	13.9	376	065	1.6	4.2	8.25	1.08	1989	1986
<i>850</i>	394	1498	394	19.3	27.2	13.2	390	10.8	376	088	3.6	5.4	9.26	1.14	1989	1986
<i>800</i>	394	2017	393	16.0	24.4	9.6	383	7.3	376	093	4.8	6.5	10.41	1.23	1990	1986
<i>750</i>	394	2559	394	13.0	21.8	5.6	336	4.0	376	097	4.5	6.5	12.73	1.17	1990	1986
<i>700</i>	394	3139	394	10.2	19.0	1.6	295	0.8	376	095	3.3	5.8	13.64	1.19	1987	1986
<i>650</i>	389	3751	389	7.1	15.4	-0.7	258	-2.3	368	094	3.1	5.6	15.55	1.24	1990	1986
<i>600</i>	384	4408	384	3.7	11.8	-3.5	220	-5.1	358	089	3.2	5.7	17.71	1.34	1990	1981
<i>550</i>	378	5108	378	-0.1	8.8	-8.9	196	-8.6	354	088	3.7	6.2	21.10	1.38	1987	1981
<i>500</i>	372	5868	372	-4.2	5.0	-10.5	172	-12.6	348	091	3.8	6.7	24.62	1.43	1987	1981
<i>450</i>	364	6688	364	-9.0	-0.9	-15.3	156	-17.7	337	091	4.0	7.2	30.99	1.64	1990	1986
<i>400</i>	358	7596	357	-14.5	-6.9	-22.5	132	-23.1	332	094	3.5	7.2	36.13	1.81	1990	1986
<i>350</i>	349	8592	349	-21.3	-12.5	-28.9	108	-30.0	319	108	2.4	6.8	45.58	1.90	1989	1986
<i>300</i>	346	9718	346	-29.6	-21.1	-37.0	75	-37.6	313	156	2.3	7.2	51.85	2.01	1990	1976
<i>250</i>	333	10992	333	-40.0	-31.1	-47.9	17	-44.2	301	172	4.3	8.7	63.70	2.18	1988	1985
<i>200</i>	312	12478	312	-52.6	-42.5	-64.1			281	170	7.0	11.5	79.03	2.35	1986	1985
<i>175</i>	295	13328	295	-59.7	-49.1	-70.1			262	165	7.7	12.6	90.03	2.55	1986	1985
<i>150</i>	278	14278	278	-67.2	-57.1	-79.5			244	162	7.4	12.4	104.31	2.77	1986	1985
<i>125</i>	257	15358	256	-74.4	-64.5	-88.5			213	152	6.0	11.3	111.61	2.79	1988	1985
<i>100</i>	232	16645	232	-79.6	-70.1	-89.9			190	114	4.6	8.3	122.83	2.40	1989	1986
<i>80</i>	202	17931	202	-76.0	-63.3	-88.1			153	100	5.2	7.8	139.17	2.79	1989	1980
<i>70</i>	190	18724	190	-71.3	-59.1	-85.9			140	107	4.2	6.9	146.71	2.62	1985	1980
<i>60</i>	166	19652	165	-66.3	-55.3	-82.3			116	099	2.3	6.4	152.72	2.48	1989	1980
<i>50</i>	147	20787	147	-61.4	-50.5	-78.5			98	114	3.5	8.0	163.53	3.46	1989	1980
<i>40</i>	116	22204	116	-56.4	-47.1	-73.9			62	113	4.5	9.9	213.05	3.79	1982	1980
<i>30</i>	88	24076	88	-51.7	-41.1	-69.1			37	105	8.6	14.5	190.57	2.96	1988	1980
<i>25</i>	68	25285	68	-49.5	-37.5	-65.5			22	112	10.4	16.2	199.57	3.58	1988	1980
<i>20</i>	44	26790	44	-46.7	-38.1	-56.5			7	105	13.4	14.0	169.68	1.70	1981	1983
<i>15</i>	19	28625	19	-45.5	-36.1	-52.7									1989	1983
<i>10</i>	5	31222	5	-45.4	-39.7	-49.9									1988	1989
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

379 551 510

213 098 1678 -81.1

# NORMALS OF RADIOSONDE DATA

43285 MANGALORE

DECEMBER 1975-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	442	1006	442	29.7	34.4	21.8	442	20.5	442	290	2.8	3.5	0.77	0.60	1990	1986
<i>1000</i>	393	87	393	29.3	31.8	22.4	393	19.8	386	294	4.0	4.9	7.12	0.59	1981	1986
<i>950</i>	393	536	393	25.4	32.2	18.8	391	14.2	386	336	2.2	3.9	7.79	0.66	1990	1980
<i>900</i>	393	1013	393	22.2	30.8	15.2	388	11.3	386	072	3.0	4.2	8.83	0.70	1990	1980
<i>850</i>	393	1507	393	18.8	26.6	11.6	387	8.3	386	092	5.3	6.0	9.84	0.81	1987	1980
<i>800</i>	393	2025	393	15.5	25.6	7.6	346	4.4	386	093	6.1	6.9	11.30	0.97	1987	1980
<i>750</i>	393	2567	393	13.0	23.8	5.2	267	0.0	386	092	4.7	6.2	12.57	1.10	1987	1980
<i>700</i>	393	3146	393	10.3	19.8	3.0	198	-4.3	384	083	3.2	5.3	13.99	1.19	1987	1980
<i>650</i>	390	3759	390	7.1	15.4	-1.0	154	-7.5	377	077	2.4	5.2	15.97	1.22	1987	1978
<i>600</i>	388	4412	388	3.6	11.8	-4.3	122	-10.2	371	079	2.1	5.4	18.67	1.24	1987	1980
<i>550</i>	385	5112	385	-0.4	8.6	-7.0	98	-14.0	365	077	1.7	5.8	21.61	1.41	1987	1977
<i>500</i>	381	5869	381	-4.8	4.0	-11.3	65	-17.5	360	068	1.0	6.4	25.52	1.48	1987	1981
<i>450</i>	377	6689	377	-9.7	0.0	-16.1	57	-22.2	354	358	0.7	6.9	29.34	1.53	1987	1980
<i>400</i>	373	7592	373	-15.5	-6.1	-23.0	56	-27.2	347	286	2.1	7.9	35.01	1.55	1987	1976
<i>350</i>	362	8586	362	-22.2	-13.9	-29.1	34	-33.2	330	274	4.2	9.6	43.43	1.56	1987	1980
<i>300</i>	351	9707	351	-30.5	-22.1	-36.7	20	-39.9	319	258	6.9	11.6	46.22	1.56	1987	1985
<i>250</i>	337	10977	337	-40.8	-31.7	-47.9	3	-48.4	296	242	9.2	13.8	54.12	1.82	1987	1985
<i>200</i>	328	12458	328	-53.2	-43.1	-62.1			283	238	10.7	15.2	63.29	2.13	1990	1979
<i>175</i>	315	13302	315	-60.3	-50.7	-69.1			256	241	11.0	15.1	62.24	1.68	1987	1979
<i>150</i>	299	14249	299	-67.1	-56.7	-76.1			240	248	10.7	14.0	70.79	1.87	1987	1979
<i>125</i>	277	15335	277	-73.3	-62.1	-87.1			205	259	8.9	12.3	80.98	2.17	1988	1985
<i>100</i>	259	16618	259	-78.8	-66.5	-90.1			185	252	3.1	8.8	97.52	2.26	1988	1985
<i>80</i>	233	17898	233	-77.0	-64.1	-90.1			157	119	2.0	7.4	115.01	2.38	1988	1985
<i>70</i>	217	18685	217	-72.5	-58.1	-85.9			142	114	3.1	6.8	125.77	2.55	1988	1979
<i>60</i>	191	19607	191	-67.1	-51.7	-80.1			120	156	0.9	6.0	137.89	2.86	1990	1987
<i>50</i>	168	20732	168	-62.0	-48.3	-76.9			101	196	1.1	6.6	169.03	3.35	1988	1987
<i>40</i>	137	22159	137	-56.7	-42.1	-69.7			76	264	0.2	9.3	204.95	2.83	1990	1987
<i>30</i>	95	23990	95	-53.2	-41.1	-62.5			48	001	0.6	14.9	223.05	3.04	1987	1985
<i>25</i>	76	25162	76	-51.0	-41.3	-59.1			37	011	0.9	17.1	251.53	2.98	1988	1980
<i>20</i>	47	26599	47	-49.3	-41.1	-57.5			21	272	5.4	16.8	376.74	3.64	1987	1987
<i>15</i>	24	28495	24	-46.2	-37.9	-54.9			1	098	20.0	20.0	292.87	3.92	1987	1982
<i>10</i>	4	31041	4	-44.8	-41.1	-49.5									1987	1982
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
386	555	504								
							241	095	1699	-81.0

## NORMALS OF RADIOSONDE DATA

43185 MACHILIPATNAM

JANUARY 1983-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	155	1012	155	26.5	30.0	18.2	155	19.0	155	118	3.0	3.5	0.77	0.82	1983	1986
<i>1000</i>	152	112	152	25.4	29.6	17.6	152	18.0	152	119	3.8	4.4	7.01	0.68	1983	1986
<i>950</i>	152	545	152	21.3	28.2	14.4	151	14.3	152	103	3.9	4.9	15.80	0.47	1983	1986
<i>900</i>	152	1026	152	18.3	25.2	11.6	151	9.3	152	069	3.7	4.8	7.94	0.58	1983	1986
<i>850</i>	152	1514	152	15.5	22.6	9.0	138	4.0	152	049	3.8	5.1	8.10	0.62	1983	1986
<i>800</i>	152	2028	152	13.6	21.0	6.4	100	-0.7	152	039	3.5	5.6	8.14	0.52	1989	1986
<i>750</i>	152	2569	152	11.9	21.2	4.0	61	-3.4	151	025	2.6	5.6	6.31	0.57	1983	1989
<i>700</i>	152	3144	152	9.8	19.0	2.0	31	-5.9	151	004	2.2	5.9	6.66	0.71	1983	1989
<i>650</i>	150	3751	150	6.9	14.4	-0.7	18	-7.5	149	316	2.3	6.1	6.57	0.61	1983	1989
<i>600</i>	149	4409	149	3.5	9.0	-3.5	13	-10.8	148	292	3.5	6.9	5.46	0.65	1989	1989
<i>550</i>	147	5114	147	-0.5	4.8	-7.5	14	-12.6	145	289	4.0	7.5	9.20	0.74	1988	1986
<i>500</i>	146	5864	146	-4.9	0.2	-12.1	14	-14.6	142	283	5.1	7.8	2.90	0.71	1983	1986
<i>450</i>	144	6687	144	-9.8	-4.1	-17.3	11	-19.2	137	284	6.4	9.5	8.47	0.56	1987	1983
<i>400</i>	142	7588	142	-15.0	-8.5	-23.1	4	-26.5	135	281	7.5	10.4	6.72	0.61	1987	1983
<i>350</i>	136	8586	136	-21.3	-13.5	-27.5	1	-40.1	126	282	9.7	12.5	4.54	0.67	1987	1983
<i>300</i>	131	9711	131	-28.9	-20.1	-36.5			119	276	10.9	13.3	7.95	0.71	1988	1988
<i>250</i>	119	10991	119	-38.5	-27.5	-45.1			109	257	12.9	15.8	13.61	0.93	1987	1987
<i>200</i>	104	12490	104	-50.1	-36.5	-58.7			93	242	13.7	16.6	22.23	1.06	1987	1988
<i>175</i>	89	13358	89	-55.5	-40.5	-69.7			82	241	15.0	17.7	28.23	1.06	1987	1988
<i>150</i>	78	14329	78	-63.2	-46.7	-71.5			70	243	13.0	16.1	26.48	1.15	1987	1987
<i>125</i>	54	15424	54	-70.0	-54.1	-80.1			47	242	10.0	13.9	61.97	1.53	1987	1987
<i>100</i>	43	16722	43	-76.6	-70.1	-88.5			37	211	4.7	10.9	121.82	2.58	1989	1989
<i>80</i>	36	18009	36	-73.8	-59.9	-83.7			29	221	2.6	9.0	130.28	1.19	1989	1988
<i>70</i>	34	18808	34	-70.4	-60.9	-80.1			28	264	4.0	8.5	139.09	0.98	1988	1988
<i>60</i>	32	19722	32	-65.3	-55.7	-76.1			26	285	3.4	7.6	124.45	2.06	1988	1988
<i>50</i>	31	20837	31	-60.4	-51.1	-71.7			19	287	4.3	7.9	101.63	3.26	1989	1988
<i>40</i>	22	22229	22	-55.6	-48.1	-66.5			10	276	1.7	8.3	90.54	3.97	1989	1988
<i>30</i>	17	24080	17	-50.9	-45.7	-58.7			9	256	0.7	9.2			1989	1986
<i>25</i>	11	25316	11	-48.5	-43.5	-58.1			6	216	0.7	13.8			1988	1986
<i>20</i>	7	26723	7	-47.9	-43.1	-57.1			4	131	5.1	16.5			1989	1986
<i>15</i>	5	28596	5	-47.0	-39.7	-53.9			1	324	23.0	23.0			1989	1986
<i>10</i>	2	31302	2	-45.4	-44.3	-46.5			1	278	9.0	9.0			1986	1988
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
148	555	504					39	095	1702	-78.2

# NORMALS OF RADIOSONDE DATA

43185 MACHILIPATNAM

FEBRUARY 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	168	1011	168	27.8	31.0	25.6	168	21.1	168	147	3.4	4.0	1.29	0.84	1989	1990
1000	163	99	163	26.8	30.4	21.2	163	20.0	163	147	4.1	4.7	8.00	0.92	1983	1987
950	163	531	163	23.4	30.0	17.6	162	14.5	163	151	3.5	4.8	17.66	0.88	1987	1987
900	163	1020	163	21.0	27.6	13.8	153	8.3	163	135	1.9	4.7	6.08	1.05	1990	1987
850	163	1512	163	18.4	25.8	10.0	144	4.3	163	079	1.3	5.4	5.18	1.35	1990	1987
800	163	2029	163	15.3	22.2	7.4	126	1.9	162	017	1.7	5.6	4.06	1.49	1990	1987
750	163	2570	163	12.2	19.0	4.0	105	-1.8	162	347	2.5	6.2	7.20	1.29	1990	1983
700	163	3146	163	9.2	15.4	3.0	89	-7.0	161	315	3.2	6.4	4.76	1.16	1990	1987
650	162	3754	162	6.2	12.0	-1.3	61	-10.4	160	293	4.7	7.2	9.81	1.30	1990	1987
600	158	4410	158	2.8	8.8	-2.9	33	-12.8	156	285	6.0	8.3	8.08	1.24	1989	1987
550	157	5117	157	-1.0	7.8	-6.3	20	-15.0	155	280	8.1	10.1	17.39	1.09	1988	1986
500	155	5863	155	-5.4	2.2	-12.5	10	-20.1	153	278	9.2	11.2	12.86	0.78	1990	1986
450	153	6687	153	-10.2	-1.1	-18.3	10	-23.7	148	278	10.8	12.9	23.04	0.76	1990	1986
400	152	7582	152	-15.6	-3.9	-26.5	7	-26.2	146	279	13.5	15.8	18.01	1.03	1990	1983
350	148	8578	148	-21.6	-10.3	-29.5	4	-31.7	138	276	17.0	19.3	19.09	0.62	1990	1988
300	142	9704	142	-28.7	-19.1	-38.5	2	-37.0	129	267	18.3	20.1	18.81	0.61	1990	1988
250	130	10986	130	-38.3	-30.1	-49.3			108	265	20.0	22.8	20.92	1.03	1989	1989
200	113	12497	113	-49.0	-38.9	-56.9			87	267	17.2	20.2	21.54	1.46	1990	1989
175	101	13364	101	-55.3	-43.5	-63.7			74	271	16.3	19.9	28.73	1.69	1990	1986
150	87	14330	87	-61.9	-48.1	-72.1			65	262	14.4	18.4	37.09	1.93	1990	1983
125	61	15438	61	-68.8	-54.9	-81.1			40	258	9.6	14.6	42.42	2.60	1990	1983
100	53	16759	53	-74.9	-62.1	-84.9			35	257	4.1	10.1	53.68	2.10	1990	1989
80	47	18066	47	-72.8	-58.9	-80.3			31	305	2.4	8.7	83.57	1.95	1989	1983
70	44	18859	44	-68.3	-55.1	-76.7			31	252	2.9	8.5	96.05	1.86	1989	1989
60	41	19785	41	-63.6	-51.1	-74.3			26	261	3.2	7.3	97.63	2.26	1983	1989
50	39	20905	39	-58.8	-45.7	-72.1			25	258	3.7	8.3	113.56	2.73	1989	1989
40	29	22363	29	-55.1	-41.5	-66.9			16	188	2.6	8.5	147.00	2.78	1989	1989
30	24	24223	24	-51.9	-46.1	-59.3			13	111	3.1	8.8	151.39	1.58	1990	1989
25	22	25400	22	-49.5	-44.1	-54.5			10	098	6.0	8.7	170.66	1.23	1990	1989
20	16	26851	16	-47.1	-40.3	-50.1			4	123	3.6	7.3			1990	1986
15	10	28790	10	-43.1	-36.1	-47.3			2	329	0.3	11.0			1990	1988
10	3	31408	3	-43.8	-42.1	-45.3									1989	1988
7	2	33698	2	-42.3	-41.5	-43.1									1988	1988

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

158 563 492

48 095 1711 -77.4

## NORMALS OF RADIOSONDE DATA

43185 MACHILIPATNAM

MARCH 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	186	1008	186	29.2	35.0	25.0	186	22.6	186	163	3.7	4.3	0.82	0.89	1983	1989
<i>1000</i>	181	80	181	28.4	34.0	24.0	181	22.2	181	163	4.3	5.1	5.76	0.87	1983	1989
<i>950</i>	181	517	181	25.3	31.2	17.6	179	16.3	181	175	4.0	5.1	11.68	0.86	1986	1989
<i>900</i>	181	1006	181	23.9	31.0	16.0	172	8.4	181	175	2.2	4.7	5.24	0.99	1986	1989
<i>850</i>	181	1504	181	21.3	28.2	14.0	163	4.6	181	134	0.8	4.7	6.18	1.30	1986	1989
<i>800</i>	181	2026	181	18.0	25.0	11.0	159	1.9	181	034	1.7	5.3	7.82	1.43	1990	1987
<i>750</i>	181	2572	181	14.0	21.8	6.8	152	-0.4	181	010	2.8	6.1	7.74	1.40	1988	1987
<i>700</i>	181	3151	181	9.8	18.0	2.6	139	-3.6	181	351	3.4	6.8	10.92	1.34	1990	1987
<i>650</i>	180	3757	180	6.3	15.4	-0.3	119	-8.7	180	321	3.7	7.0	12.51	1.28	1990	1989
<i>600</i>	178	4414	178	3.2	12.2	-5.1	68	-12.9	177	305	4.7	7.4	15.35	1.36	1990	1989
<i>550</i>	177	5121	177	-0.6	8.2	-9.3	36	-15.0	176	291	5.8	8.5	17.07	1.31	1988	1989
<i>500</i>	177	5869	177	-4.8	4.2	-13.5	18	-15.9	175	287	7.3	9.8	19.77	1.32	1986	1989
<i>450</i>	175	5693	175	-9.5	-1.1	-18.1	17	-19.9	172	280	9.4	11.6	20.29	1.34	1990	1987
<i>400</i>	173	7593	173	-14.8	-5.3	-22.9	9	-22.7	168	276	11.2	13.5	27.18	1.39	1990	1987
<i>350</i>	171	8592	171	-21.1	-9.3	-29.3	8	-26.5	165	276	13.3	15.8	34.29	1.31	1990	1983
<i>300</i>	167	9715	167	-28.9	-18.1	-38.9	4	-38.5	160	271	14.6	17.5	39.18	1.09	1990	1989
<i>250</i>	155	10998	155	-37.9	-25.7	-49.9	1	-40.9	142	265	15.1	19.0	45.77	1.40	1988	1983
<i>200</i>	138	12503	138	-49.0	-40.1	-61.1			124	263	15.6	19.0	47.54	1.77	1990	1983
<i>175</i>	113	13373	113	-55.3	-46.3	-65.3			97	263	14.8	18.2	49.39	1.64	1990	1983
<i>150</i>	91	14343	91	-62.0	-53.9	-73.9			76	260	13.8	19.2	58.44	1.83	1990	1983
<i>125</i>	55	15456	55	-69.0	-58.7	-82.1			45	266	11.2	18.0	77.56	2.85	1990	1983
<i>100</i>	39	16789	39	-74.4	-66.1	-82.1			31	291	4.2	12.1	108.26	2.70	1990	1988
<i>80</i>	37	18094	37	-73.4	-64.1	-80.9			25	309	2.9	7.3	136.53	2.58	1990	1986
<i>70</i>	35	18907	35	-69.5	-60.7	-78.7			22	313	2.1	5.9	145.53	2.88	1986	1988
<i>60</i>	33	19835	33	-64.6	-56.3	-74.5			18	043	0.7	5.7	139.76	3.74	1986	1988
<i>50</i>	32	20955	32	-59.5	-48.1	-71.1			18	073	2.3	10.2	150.66	4.30	1989	1988
<i>40</i>	25	22392	25	-55.5	-46.7	-63.5			16	098	4.4	10.5	143.66	2.01	1990	1988
<i>30</i>	22	24243	22	-51.0	-44.5	-58.3			13	170	1.3	5.7	165.13	1.78	1990	1986
<i>25</i>	19	25382	19	-48.1	-41.9	-55.1			11	260	1.1	4.7			1986	1988
<i>20</i>	16	26884	16	-45.7	-36.3	-52.5			7	190	5.7	7.0			1986	1988
<i>15</i>	11	28724	11	-44.8	-40.9	-48.7			6	261	6.8	8.3			1988	1988
<i>10</i>	7	31380	7	-42.2	-37.1	-46.1			4	142	1.0	9.2			1988	1988
<i>7</i>	5	33741	5	-41.9	-39.9	-44.7			3	006	7.5	8.3			1989	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
178	558	502					36	094	1719	-77.0



# NORMALS OF RADIOSONDE DATA

43185 MACHILIPATNAM

APRIL 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	209	1005	209	31.1	35.0	26.6	209	24.3	209	174	4.9	5.3	1.07	0.44	1983	1990
1000	200	53	196	30.4	34.8	24.2	196	24.0	196	172	5.2	5.6	10.16	0.44	1990	1987
950	200	495	200	27.3	36.0	19.6	200	18.2	200	184	4.8	5.5	16.78	0.87	1985	1989
900	200	987	200	26.2	34.8	15.0	197	9.4	200	205	2.7	4.4	9.04	0.90	1985	1989
850	200	1488	200	23.8	32.4	13.2	191	4.9	199	208	1.0	4.0	8.32	0.67	1985	1989
800	200	2014	200	20.6	28.6	11.0	178	2.9	199	033	0.9	4.5	7.83	0.71	1986	1989
750	200	2564	200	16.5	25.2	7.8	174	0.3	200	030	2.6	5.1	7.65	0.80	1983	1989
700	200	3149	200	11.9	19.0	1.8	168	-3.0	199	025	3.2	6.0	8.20	0.98	1990	1985
650	199	3762	199	7.5	16.0	-7.1	159	-7.2	198	019	3.3	6.2	9.75	1.25	1990	1985
600	195	4418	195	3.8	12.8	-4.1	124	-11.4	194	001	2.8	6.3	10.43	1.23	1990	1989
550	193	5127	193	0.2	9.0	-8.9	89	-14.8	190	320	3.6	6.5	14.64	1.21	1990	1989
500	193	5877	193	-4.0	5.8	-13.9	63	-18.1	190	298	4.3	7.0	16.20	1.23	1987	1989
450	191	6703	191	-8.9	2.2	-17.9	46	-20.6	188	287	5.3	7.9	24.36	1.30	1987	1989
400	187	7606	187	-14.6	-2.1	-22.9	38	-24.4	184	283	6.3	9.5	24.63	1.25	1987	1989
350	183	8602	183	-21.3	-7.3	-30.1	29	-29.6	176	281	8.5	11.7	30.63	1.40	1987	1983
300	176	9729	176	-28.8	-13.1	-38.3	16	-36.3	170	271	10.4	14.0	35.27	1.64	1987	1988
250	158	11010	158	-37.9	-25.5	-48.1	4	-44.0	151	261	12.1	16.2	40.47	1.79	1985	1983
200	146	12517	146	-49.1	-36.1	-62.1			133	254	13.6	17.2	52.98	1.87	1987	1986
175	131	13381	131	-55.5	-46.1	-64.5			111	252	13.4	16.6	61.57	2.12	1990	1983
150	109	14351	109	-62.2	-52.1	-71.9			90	251	11.0	13.7	71.86	1.88	1988	1983
125	75	15472	75	-68.0	-55.1	-81.1			55	255	7.9	11.4	90.71	2.76	1990	1985
100	58	16804	58	-73.6	-59.9	-81.3			40	279	3.8	10.3	97.18	3.28	1990	1985
80	44	18142	44	-72.1	-61.1	-84.1			30	024	1.2	9.6	85.09	4.54	1990	1990
70	39	18956	39	-68.1	-57.9	-79.3			24	072	5.2	8.0	87.82	5.00	1990	1985
60	37	19882	37	-63.6	-52.9	-74.9			22	076	3.9	7.2	95.81	4.82	1990	1988
50	34	21027	34	-58.1	-49.1	-71.5			22	095	3.7	10.5	112.98	5.14	1983	1988
40	28	22440	28	-53.1	-43.1	-64.3			17	101	5.9	8.8	159.95	4.01	1988	1988
30	25	24311	25	-47.1	-37.1	-56.7			15	109	3.7	6.6	176.12	4.65	1990	1985
25	22	25538	22	-43.4	-32.9	-53.9			9	048	2.4	5.8	203.42	5.08	1990	1985
20	17	27067	17	-40.7	-26.1	-50.7			7	035	1.3	6.1			1990	1987
15	14	28987	14	-39.7	-34.3	-48.5			4	295	5.8	6.5			1990	1987
10	6	31663	6	-37.9	-33.1	-45.3									1989	1987
7	3	34147	3	-36.5	-35.1	-38.3									1989	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

194 547 515

47 093 1727 -74.6

# NORMALS OF RADIOSONDE DATA

43185 MACHILIPATNAM

MAY 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	216	1001	216	33.2	43.0	24.6	216	24.4	216	176	4.1	5.9	1.85	1.01	1986	1990
1000	194	22	146	31.9	38.2	24.6	146	24.7	140	171	5.2	6.2	17.37	0.30	1985	1990
950	199	471	199	30.3	38.6	23.6	198	20.5	198	188	3.7	6.3	20.92	1.15	1989	1987
900	199	963	199	28.3	37.0	16.8	198	14.8	198	268	2.4	5.2	15.01	1.01	1986	1989
850	199	1467	199	25.5	37.0	18.0	194	10.8	197	313	3.5	5.6	14.34	1.11	1989	1989
800	199	1997	199	22.0	30.8	15.0	191	6.4	195	338	4.0	6.0	14.12	1.17	1986	1990
750	199	2550	199	18.0	26.8	11.2	188	2.5	195	357	3.8	6.0	12.52	1.28	1986	1987
700	199	3138	199	13.5	23.0	6.2	182	-1.1	194	011	4.0	6.2	13.17	1.24	1990	1988
650	193	3753	193	8.8	15.4	1.8	172	-4.4	186	021	4.4	6.7	12.22	1.37	1983	1987
600	192	4413	192	4.3	14.8	-6.3	161	-7.6	185	018	4.1	6.8	13.48	1.09	1988	1988
550	191	5123	191	0.5	8.0	-6.3	145	-11.8	182	004	3.6	6.8	14.20	1.25	1988	1986
500	191	5877	191	-3.3	4.8	-10.1	121	-15.6	183	344	3.4	6.8	15.06	1.44	1990	1989
450	188	6704	188	-7.6	-0.3	-15.1	88	-20.1	180	327	3.6	7.0	16.84	1.69	1990	1985
400	186	7617	186	-12.6	-5.5	-19.3	62	-24.1	180	315	3.3	6.9	22.80	1.78	1988	1985
350	178	8622	178	-18.8	-10.7	-27.7	43	-30.0	172	285	3.2	7.4	27.21	1.70	1990	1985
300	171	9761	171	-26.2	-18.1	-33.5	30	-37.2	161	260	3.3	7.8	31.18	1.50	1990	1986
250	162	11055	162	-35.6	-28.1	-44.7	6	-45.3	149	238	4.1	8.8	40.16	1.76	1990	1985
200	147	12574	147	-47.2	-38.7	-55.9			138	210	4.9	10.3	49.06	1.88	1988	1986
175	136	13441	136	-54.3	-47.1	-63.1			124	201	4.2	11.6	52.47	1.84	1983	1986
150	119	14414	119	-61.5	-53.9	-71.3			107	173	4.2	11.1	56.22	1.44	1988	1986
125	92	15532	92	-68.0	-57.1	-77.5			82	130	5.0	10.8	67.69	2.35	1990	1987
100	83	16861	83	-74.4	-61.9	-85.1			76	107	8.3	11.8	98.24	4.77	1986	1985
80	69	18154	69	-73.8	-53.5	-86.9			58	097	10.1	11.6	87.69	2.89	1986	1988
70	67	18962	67	-69.8	-57.1	-81.3			55	098	9.7	10.5	103.66	2.28	1986	1988
60	62	19869	62	-64.3	-52.7	-75.9			49	094	7.7	8.6	99.65	2.23	1986	1987
50	58	21015	58	-58.4	-46.1	-68.5			45	095	8.9	10.1	54.82	2.59	1986	1988
40	46	22424	46	-53.7	-42.7	-64.1			33	096	10.2	10.7	65.38	2.10	1986	1988
30	39	24265	39	-48.5	-36.9	-56.7			28	086	14.3	14.9	78.76	1.35	1986	1987
25	32	25455	32	-45.5	-38.1	-54.1			21	086	13.7	14.2	113.90	1.39	1988	1987
20	26	26970	26	-43.6	-34.9	-51.7			17	085	14.6	15.3	140.79	1.68	1988	1988
15	22	28900	21	-41.4	-34.5	-50.1			8	088	14.5	15.1	134.99	1.52	1989	1988
10	15	31636	15	-39.4	-33.9	-48.1			1	102	11.0	11.0			1987	1988
7	3	33904	3	-40.1	-36.1	-43.1									1988	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
189	542	523					71	092	1744	-77.5

## NORMALS OF RADIOSONDE DATA

43185 MACHILIPATNAM

JUNE 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	210	999	210	33.9	42.0	24.0	210	22.8	210	249	3.9	6.3	1.00	1.20	1983	1990
<i>1000</i>	170	6	84	32.8	39.0	24.0	84	23.2	78	245	3.3	5.8	7.09	0.50	1983	1990
<i>950</i>	191	452	191	30.1	39.0	21.4	191	19.9	191	259	5.7	8.1	15.91	0.78	1990	1983
<i>900</i>	191	945	191	27.0	36.2	19.6	191	17.4	191	278	7.4	8.6	5.18	0.77	1983	1983
<i>850</i>	191	1448	191	23.5	31.2	16.0	190	15.4	191	285	8.2	9.2	5.17	0.78	1988	1985
<i>800</i>	191	1974	191	19.8	28.2	11.6	191	12.8	190	293	8.5	9.7	6.12	0.91	1983	1985
<i>750</i>	191	2525	191	16.1	23.6	9.0	191	8.7	188	293	7.8	9.5	8.42	1.05	1983	1983
<i>700</i>	191	3110	191	12.6	19.0	5.0	189	4.7	188	293	7.1	9.3	8.01	1.36	1988	1985
<i>650</i>	187	3724	187	8.9	15.2	2.4	181	1.2	184	294	5.7	8.6	10.95	1.61	1988	1985
<i>600</i>	184	4388	184	5.2	12.2	-1.1	179	-3.0	181	293	5.0	8.0	10.97	1.67	1990	1983
<i>550</i>	184	5099	184	1.5	9.0	-5.7	176	-7.1	182	293	4.4	7.4	18.02	1.81	1990	1983
<i>500</i>	181	5856	181	-2.5	4.0	-10.5	166	-11.3	178	300	4.0	7.0	18.88	1.89	1990	1983
<i>450</i>	179	6688	179	-6.8	-0.3	-17.1	145	-15.6	174	313	3.2	6.6	27.03	1.90	1990	1983
<i>400</i>	174	7603	174	-11.5	-3.3	-23.1	122	-21.3	170	335	2.1	6.0	28.59	1.85	1990	1983
<i>350</i>	168	8611	168	-17.8	-10.9	-31.7	96	-27.7	164	035	2.5	6.3	32.68	1.66	1987	1983
<i>300</i>	164	9756	164	-25.3	-17.7	-41.1	63	-34.0	158	068	4.3	7.6	41.07	1.66	1990	1983
<i>250</i>	153	11060	153	-34.6	-26.3	-50.9	28	-42.2	147	080	7.9	9.5	47.86	1.91	1990	1933
<i>200</i>	142	12585	142	-46.6	-37.5	-62.1	5	-49.4	134	085	11.7	13.1	60.53	2.55	1990	1983
<i>175</i>	129	13454	129	-53.8	-42.9	-68.7			121	087	13.4	15.0	68.89	2.41	1987	1983
<i>150</i>	109	14430	109	-61.7	-48.3	-74.1			96	087	16.6	18.2	82.95	2.47	1987	1986
<i>125</i>	71	15535	71	-69.3	-59.7	-83.1			63	089	23.2	24.7	108.97	2.89	1990	1986
<i>100</i>	53	16840	53	-75.9	-65.1	-84.3			46	087	24.9	25.9	135.29	3.05	1990	1983
<i>80</i>	37	18138	37	-72.4	-62.3	-81.5			32	084	22.2	22.8	177.88	3.68	1990	1983
<i>70</i>	34	18951	34	-68.3	-58.5	-76.3			28	089	20.3	21.0	187.94	3.74	1990	1988
<i>60</i>	33	19884	33	-63.4	-52.9	-74.1			25	092	15.8	16.5	196.65	3.91	1990	1988
<i>50</i>	29	21026	29	-58.3	-45.7	-71.1			19	089	13.9	14.9	227.79	3.60	1990	1988
<i>40</i>	21	22458	21	-53.6	-42.7	-65.1			12	089	16.6	17.3	242.38	5.14	1990	1988
<i>30</i>	20	24342	20	-47.8	-38.7	-58.7			11	083	12.3	12.6			1990	1988
<i>25</i>	14	25446	14	-45.8	-39.1	-56.9			7	084	14.3	15.4			1985	1988
<i>20</i>	11	26982	11	-44.6	-36.3	-55.1			4	076	17.5	19.5			1985	1988
<i>15</i>	6	28954	6	-41.6	-31.9	-52.9			2	071	11.9	12.5			1985	1988
<i>10</i>	1	31194	1	-41.3	-41.3	-41.3			1	091	14.0	14.0			1985	1985

7

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
181	531	536					43	097	1706	-77.1

## NORMALS OF RADIOSONDE DATA

43185 MACHILIPATNAM

JULY 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	217	1001	217	30.9	38.6	24.6	217	23.7	217	256	3.2	5.0	0.65	0.89	1986	1983
1000	200	20	165	30.7	38.6	24.0	165	23.5	165	254	2.9	4.9	4.57	1.04	1986	1983
950	200	467	200	27.7	36.0	18.2	200	21.1	198	272	5.6	7.3	14.23	1.09	1986	1983
900	200	955	200	24.6	32.8	16.4	200	18.9	198	284	7.8	8.9	5.52	1.06	1986	1983
850	200	1454	200	21.3	29.0	14.8	200	16.7	198	288	9.3	10.1	6.20	1.06	1986	1988
800	200	1976	200	18.1	25.0	10.8	200	13.7	198	287	10.3	11.0	6.91	1.19	1990	1988
750	200	2523	200	14.9	22.4	8.4	200	10.2	198	283	10.5	11.3	7.44	1.33	1989	1988
700	200	3107	200	11.6	19.8	4.0	200	5.6	198	280	9.7	10.6	9.26	1.52	1989	1983
650	198	3720	198	8.5	16.8	1.2	198	1.3	195	277	8.7	9.9	12.40	1.55	1990	1985
600	196	4383	196	5.3	13.4	-2.1	192	-2.5	191	279	7.5	9.1	12.91	1.61	1990	1985
550	193	5093	193	1.8	11.0	-5.9	184	-6.3	186	279	6.1	8.3	18.64	1.65	1990	1985
500	193	5852	193	-2.1	6.2	-10.5	180	-11.0	186	280	4.8	7.6	19.58	1.57	1990	1985
450	191	6685	191	-6.4	4.2	-17.7	163	-14.9	183	287	3.0	6.5	28.83	1.75	1988	1986
400	190	7600	190	-11.6	-4.7	-18.7	150	-19.9	180	360	0.4	6.5	28.26	1.38	1986	1989
350	188	8607	188	-17.8	-11.9	-24.9	130	-26.5	176	075	3.6	7.4	30.90	1.43	1983	1986
300	188	9754	188	-25.5	-18.5	-37.1	101	-34.3	176	083	8.0	9.7	37.16	1.43	1986	1986
250	185	11053	185	-35.0	-28.5	-42.3	39	-43.2	170	084	11.8	12.9	44.43	1.70	1988	1983
200	173	12574	173	-47.0	-39.1	-57.1			157	085	18.1	19.0	50.67	2.09	1990	1986
175	164	13446	164	-54.2	-45.5	-65.3			144	083	22.0	22.6	60.67	2.32	1988	1985
150	141	14431	141	-61.4	-52.5	-73.3			122	083	26.4	27.5	67.44	2.27	1988	1986
125	110	15546	110	-68.6	-56.1	-78.1			93	082	30.6	31.3	77.75	2.58	1989	1986
100	82	16869	82	-73.5	-61.9	-85.9			67	086	33.3	34.2	96.02	2.82	1990	1989
80	64	18177	64	-69.3	-56.9	-79.1			53	087	25.8	26.2	105.65	3.12	1989	1988
70	60	19005	60	-65.0	-55.9	-74.9			47	085	21.3	21.9	118.69	2.84	1990	1988
60	55	19937	55	-60.6	-52.3	-71.9			41	089	19.1	19.4	115.08	2.78	1986	1988
50	49	21046	49	-56.3	-47.1	-66.7			35	091	17.9	18.5	134.44	3.44	1988	1988
40	29	22436	29	-52.7	-42.9	-62.3			22	095	19.8	20.2	127.78	3.45	1986	1987
30	23	24294	23	-48.5	-37.9	-57.7			18	094	19.7	20.4	149.79	3.70	1989	1987
25	16	25499	16	-47.1	-37.1	-54.5			9	094	19.6	19.8			1990	1987
20	13	26917	13	-46.8	-36.1	-52.3			7	092	20.1	20.4			1987	1988
15	11	28822	11	-44.2	-34.1	-50.1			3	052	12.8	14.7			1987	1988
10	8	31359	8	-43.4	-40.3	-47.5			1	042	2.0	2.0			1987	1988
7	5	33725	5	-41.6	-37.9	-45.1			1	068	4.0	4.0			1987	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
194	527	545					74	103	1678	-74.9

# NORMALS OF RADIOSONDE DATA

43185 MACHILIPATNAM

AUGUST 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	217	1001	217	30.6	35.6	24.0	217	23.4	217	273	3.8	5.1	0.38	0.50	1986	1986
1000	185	20	150	30.5	34.8	24.4	150	24.2	148	279	3.6	5.0	6.32	0.84	1990	1987
950	196	461	196	26.8	32.6	19.8	196	20.9	196	280	6.3	7.6	14.08	0.98	1983	1987
900	196	950	196	23.6	29.6	16.0	195	18.6	196	284	8.5	9.5	3.78	1.06	1990	1986
850	196	1448	196	20.4	27.0	12.0	195	15.8	196	288	10.1	10.8	5.67	1.07	1990	1986
800	196	1971	196	17.3	25.0	8.2	195	12.7	195	288	10.6	11.3	5.74	1.06	1990	1986
750	196	2520	196	14.3	22.8	4.2	195	9.3	193	288	10.1	10.8	7.41	1.26	1990	1986
700	196	3099	196	11.3	19.0	4.0	195	5.2	192	286	9.3	10.0	9.50	1.18	1990	1986
650	196	3716	196	8.3	15.6	0.6	195	0.8	192	283	8.2	9.2	11.21	1.15	1990	1986
600	192	4375	192	5.2	12.6	-3.7	188	-2.8	185	282	6.7	8.6	12.85	1.17	1990	1986
550	190	5087	190	1.6	9.2	-6.9	181	-6.6	185	281	5.7	7.7	16.13	1.30	1990	1986
500	190	5845	190	-2.2	3.8	-9.9	174	-11.1	185	275	4.3	7.1	18.17	1.34	1990	1986
450	186	6677	186	-6.6	0.6	-15.5	154	-15.6	178	280	2.3	6.2	23.44	1.28	1990	1990
400	185	7590	185	-11.7	-3.1	-20.7	140	-20.9	178	341	0.4	6.1	26.46	1.38	1990	1987
350	181	8599	181	-18.0	-9.5	-28.5	121	-27.9	176	084	2.6	6.6	32.83	1.47	1990	1987
300	176	9744	176	-25.4	-16.9	-38.9	84	-34.9	172	087	6.9	8.8	37.31	1.60	1990	1987
250	168	11045	168	-34.9	-24.9	-50.9	25	-42.2	160	086	11.9	13.0	45.43	1.96	1990	1987
200	154	12564	154	-47.2	-36.1	-65.7	1	-45.1	146	087	17.4	18.3	61.95	2.72	1990	1987
175	142	13434	142	-54.4	-41.9	-71.3			133	085	20.5	21.4	72.58	3.03	1990	1987
150	125	14417	125	-61.8	-50.3	-76.3			115	082	23.9	24.7	87.94	3.69	1990	1987
125	91	15529	90	-69.1	-55.1	-86.1			78	081	27.2	28.0	122.53	4.12	1990	1986
100	72	16841	72	-73.8	-55.1	-83.9			59	086	30.0	30.6	146.20	3.88	1990	1986
80	62	18166	62	-69.2	-53.9	-79.1			49	087	24.6	25.1	194.45	3.44	1990	1988
70	61	18987	61	-65.8	-53.1	-73.1			50	087	20.9	21.2	186.16	3.11	1990	1988
60	56	19895	56	-62.4	-51.9	-69.1			44	092	20.3	21.0	180.32	3.55	1990	1988
50	53	21035	53	-58.1	-46.3	-64.7			39	094	18.9	19.3	154.79	2.76	1990	1988
40	47	22440	47	-54.3	-48.5	-60.9			33	094	18.4	18.8	188.15	1.83	1990	1988
30	40	24314	40	-49.6	-43.7	-57.1			23	094	19.9	20.7	208.98	1.36	1989	1988
25	38	25512	38	-46.7	-40.7	-54.1			16	088	19.1	19.7	210.28	1.65	1986	1988
20	27	27041	27	-44.3	-38.5	-48.9			10	095	18.8	19.2	225.82	1.96	1989	1988
15	12	29056	12	-41.1	-35.3	-46.5			1	106	11.0	11.0			1989	1988
10	5	31682	5	-41.4	-37.3	-43.9									1986	1988
7	2	34040	2	-40.3	-39.5	-41.1									1988	1987

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

189 527 545

65 105 1658 -75.4

- NORMALS OF RADIOSONDE DATA

43185 MACHILIPATNAM

SEPTEMBER 1982-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	214	1003	214	30.3	39.8	24.6	214	22.8	214	238	1.9	3.9	1.17	1.22	1982	1985
<i>1000</i>	201	36	193	30.0	35.0	24.4	193	24.6	193	234	1.7	4.1	9.02	0.69	1987	1985
<i>950</i>	201	480	201	26.7	33.8	20.4	201	21.9	201	265	2.8	5.7	15.18	0.75	1990	1989
<i>900</i>	201	968	201	23.9	29.4	17.8	201	18.7	200	291	4.2	6.5	7.86	1.12	1985	1989
<i>850</i>	201	1466	201	21.0	28.2	15.2	201	14.9	200	304	4.6	6.8	7.32	1.33	1985	1987
<i>800</i>	201	1989	201	18.0	24.6	11.0	200	11.3	200	306	4.8	7.1	7.01	1.53	1990	1983
<i>750</i>	201	2534	201	14.9	22.0	8.0	198	7.7	198	303	4.3	7.2	9.65	1.58	1988	1987
<i>700</i>	201	3120	201	11.7	19.2	5.2	196	4.0	198	296	3.7	6.6	9.41	1.72	1988	1987
<i>650</i>	198	3734	198	8.4	15.4	1.8	191	0.2	195	289	3.3	6.4	12.74	1.87	1988	1986
<i>600</i>	195	4394	195	5.1	12.0	-1.7	185	-3.5	192	274	2.7	5.8	15.43	1.97	1988	1985
<i>550</i>	194	5103	194	1.5	7.8	-6.3	178	-7.5	191	262	1.5	5.4	19.29	1.93	1986	1985
<i>500</i>	193	5864	193	-2.4	4.2	-8.3	172	-11.9	192	256	0.9	5.4	25.07	1.93	1987	1985
<i>450</i>	192	6695	192	-6.7	8.6	-12.9	158	-16.8	189	095	0.6	5.4	33.05	2.09	1987	1988
<i>400</i>	190	7606	190	-12.0	-4.5	-18.7	130	-22.0	184	078	2.2	5.6	37.84	2.31	1990	1982
<i>350</i>	188	8611	188	-18.3	-10.5	-27.5	98	-28.1	178	088	3.8	6.2	42.23	2.46	1990	1986
<i>300</i>	183	9755	183	-26.0	-17.5	-34.9	58	-35.5	172	092	6.4	7.8	57.51	2.39	1990	1985
<i>250</i>	168	11052	168	-35.6	-26.5	-48.1	20	-43.6	157	092	9.7	10.7	72.70	2.73	1990	1985
<i>200</i>	151	12573	151	-47.7	-38.1	-63.7	1	-53.3	142	089	14.0	15.1	94.91	3.62	1990	1985
<i>175</i>	131	13452	131	-54.5	-43.1	-68.3			117	087	17.2	18.0	110.42	3.82	1990	1985
<i>150</i>	111	14432	111	-61.8	-48.1	-72.1			98	087	19.1	19.9	129.45	3.77	1990	1983
<i>125</i>	75	15548	75	-68.8	-54.1	-80.1			64	088	23.6	24.3	179.89	3.89	1990	1982
<i>100</i>	64	16867	64	-73.8	-60.5	-82.5			55	089	23.7	24.3	176.90	3.14	1990	1988
<i>80</i>	51	18196	51	-69.5	-58.1	-79.5			39	089	18.5	18.9	193.69	3.45	1988	1986
<i>70</i>	48	19000	48	-66.1	-54.7	-77.3			37	091	15.9	16.4	196.98	3.28	1988	1987
<i>60</i>	44	19931	44	-62.4	-51.7	-70.9			34	096	13.6	14.0	210.18	3.28	1988	1987
<i>50</i>	41	21051	41	-57.7	-48.9	-66.1			31	095	14.0	14.5	213.82	2.87	1990	1988
<i>40</i>	34	22493	34	-53.4	-44.5	-61.3			25	099	11.7	14.0	246.55	2.99	1990	1988
<i>30</i>	33	24368	33	-48.6	-39.3	-57.7			19	099	13.5	14.1	268.22	2.34	1990	1988
<i>25</i>	25	25569	25	-46.4	-35.7	-56.1			9	086	15.1	15.2	318.25	2.16	1990	1988
<i>20</i>	18	27091	18	-44.0	-38.5	-53.9			8	087	16.3	18.3			1988	1988
<i>15</i>	8	29007	8	-43.4	-37.9	-51.1			2	086	21.0	21.0			1990	1988
<i>10</i>	7	31757	7	-41.6	-35.1	-47.9			2	091	14.9	15.0			1990	1988
<i>7</i>	3	33797	3	-43.2	-40.1	-45.5									1988	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
194	532	539	1	115	1601	-67.5	60	103	1670	-75.6

# NORMALS OF RADIOSONDE DATA

43185 MACHILIPATNAM

OCTOBER 1982-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	248	1007	248	29.2	33.0	23.6	248	23.5	248	123	0.9	3.4	0.79	0.76	1982	1987
<i>1000</i>	221	65	217	28.9	32.0	23.2	217	23.1	217	129	1.2	3.6	9.57	0.70	1982	1987
<i>950</i>	221	505	221	25.3	33.2	20.2	221	19.5	221	086	0.8	5.0	14.16	0.98	1988	1987
<i>900</i>	221	993	221	22.5	30.4	16.8	220	16.2	221	023	1.9	5.9	8.85	1.03	1989	1987
<i>850</i>	221	1489	221	19.4	28.0	12.6	218	12.4	221	017	3.1	6.9	9.73	1.09	1989	1985
<i>800</i>	221	2008	221	16.3	24.8	8.0	214	8.1	221	020	3.6	7.1	10.19	1.19	1989	1985
<i>750</i>	221	2552	221	13.3	21.8	6.8	208	4.4	221	016	3.0	6.7	10.97	1.14	1989	1983
<i>700</i>	221	3133	221	10.3	18.6	3.4	191	1.0	221	011	1.8	6.0	12.37	1.09	1989	1983
<i>650</i>	217	3744	216	7.2	17.0	-2.7	171	-2.3	215	336	0.7	5.4	15.02	1.19	1986	1982
<i>600</i>	217	4402	217	4.1	12.8	-2.1	160	-5.7	214	251	0.6	5.3	13.64	1.26	1989	1982
<i>550</i>	217	5108	217	0.5	9.2	-7.1	149	-9.8	214	239	0.7	5.1	18.25	1.28	1989	1982
<i>500</i>	214	5866	214	-3.5	5.0	-13.1	130	-13.9	211	192	0.5	5.2	17.28	1.43	1989	1982
<i>450</i>	213	6693	213	-8.1	0.4	-18.1	111	-18.4	211	184	0.6	5.2	25.32	1.55	1989	1982
<i>400</i>	210	7601	210	-13.3	-4.9	-23.5	85	-24.0	206	150	0.6	5.2	24.49	1.59	1989	1982
<i>350</i>	206	8601	206	-19.7	-11.1	-29.9	62	-29.2	200	136	1.2	5.5	27.66	1.63	1989	1982
<i>300</i>	199	9738	199	-27.6	-18.7	-38.1	35	-35.7	193	143	1.7	6.3	36.27	1.76	1989	1982
<i>250</i>	187	11019	187	-37.7	-27.7	-49.1	7	-43.2	182	139	2.6	7.4	44.23	2.14	1989	1982
<i>200</i>	174	12518	174	-50.2	-37.1	-61.1			167	128	4.7	9.3	56.12	2.59	1990	1982
<i>175</i>	142	13378	142	-57.3	-45.1	-71.5			136	128	5.1	9.9	65.71	2.84	1989	1982
<i>150</i>	126	14340	126	-64.9	-50.7	-76.9			120	127	6.6	10.8	84.90	2.98	1989	1982
<i>125</i>	97	15429	97	-72.5	-60.1	-87.1			93	122	8.6	11.3	101.88	2.82	1990	1987
<i>100</i>	83	16738	83	-76.2	-67.9	-85.9			76	111	10.4	11.9	127.90	1.65	1987	1982
<i>80</i>	70	18029	70	-71.1	-61.3	-83.1			63	100	9.7	10.8	135.63	2.91	1989	1982
<i>70</i>	69	18839	69	-67.0	-55.9	-78.5			60	103	9.1	9.7	144.28	2.97	1989	1982
<i>60</i>	64	19781	64	-63.0	-53.1	-74.5			52	095	10.0	10.3	147.92	3.08	1988	1982
<i>50</i>	62	20926	62	-57.7	-46.5	-70.5			51	099	10.4	11.1	158.82	3.39	1987	1982
<i>40</i>	41	22304	41	-54.3	-43.9	-64.9			34	105	9.7	11.0	203.83	2.57	1988	1982
<i>30</i>	26	24179	26	-50.8	-41.9	-58.9			20	093	9.6	12.8	196.73	2.33	1988	1987
<i>25</i>	19	25339	19	-49.6	-42.1	-55.5			13	094	13.7	14.4			1988	1987
<i>20</i>	14	26777	14	-46.8	-38.5	-51.9			8	076	12.1	13.8			1988	1988
<i>15</i>	7	28810	7	-44.8	-38.1	-49.5									1988	1988
<i>10</i>	5	31432	5	-43.7	-38.1	-46.1									1988	1988
<i>7</i>	3	33963	3	-41.5	-36.9	-44.5									1988	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

215	543	523						1	110	1638	-76.1						80	103	1658	-78.6
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# NORMALS OF RADIOSONDE DATA

43185 MACHILIPATNAM

NOVEMBER 1982-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	240	1010	240	27.7	31.6	21.6	240	20.9	240	088	2.6	4.2	1.00	0.29	1990	1987
<i>1000</i>	215	91	215	27.2	31.4	21.6	215	20.3	215	089	3.0	4.7	10.91	0.48	1990	1987
<i>950</i>	215	528	215	23.7	30.8	14.8	214	16.0	215	069	3.9	5.7	11.91	0.78	1989	1989
<i>900</i>	215	1012	215	20.3	27.2	11.2	214	12.5	215	049	4.4	6.3	9.19	1.12	1990	1989
<i>850</i>	215	1504	215	17.1	24.0	8.6	205	9.3	215	040	4.8	7.0	8.62	1.44	1989	1989
<i>800</i>	215	2019	215	14.5	24.0	5.4	191	5.3	215	044	4.5	6.7	8.43	1.69	1990	1988
<i>750</i>	215	2562	214	12.3	22.8	4.6	162	1.9	214	045	3.3	6.1	9.58	1.74	1990	1989
<i>700</i>	215	3139	215	9.7	19.2	2.6	135	-0.7	213	051	2.4	5.6	10.53	1.77	1990	1989
<i>650</i>	214	3750	213	6.7	15.6	-3.1	120	-4.2	211	056	1.3	5.2	15.24	1.69	1990	1988
<i>600</i>	213	4404	213	3.5	11.8	-3.5	105	-6.7	211	038	1.2	4.9	16.39	1.45	1990	1989
<i>550</i>	211	5109	211	-0.2	8.2	-7.7	97	-10.9	208	360	0.9	5.3	20.20	1.61	1990	1989
<i>500</i>	210	5863	210	-4.5	5.0	-12.5	80	-14.4	206	335	1.3	6.1	23.14	1.91	1990	1989
<i>450</i>	207	6687	207	-9.2	0.4	-17.3	64	-18.3	201	323	2.2	6.8	30.45	2.04	1990	1989
<i>400</i>	204	7589	204	-14.7	-4.9	-22.1	53	-23.7	198	298	2.8	7.3	34.63	2.15	1990	1983
<i>350</i>	201	8585	201	-21.2	-9.9	-29.3	39	-30.0	191	271	3.8	8.0	43.58	2.21	1990	1983
<i>300</i>	194	9712	194	-28.9	-19.1	-37.9	21	-38.5	184	257	5.9	9.4	47.62	2.19	1990	1983
<i>250</i>	189	10989	189	-39.0	-28.7	-47.7	7	-45.3	181	234	8.4	11.5	60.52	2.57	1987	1983
<i>200</i>	169	12485	169	-51.0	-40.9	-60.1			160	217	9.8	13.3	73.53	2.84	1987	1982
<i>175</i>	142	13350	142	-57.8	-47.1	-72.1			134	217	9.8	13.6	90.90	3.09	1987	1982
<i>150</i>	115	14324	115	-64.6	-53.5	-77.9			109	215	9.1	13.3	105.84	3.56	1987	1988
<i>125</i>	84	15451	84	-71.1	-59.3	-83.3			75	202	6.5	11.7	136.90	4.08	1986	1987
<i>100</i>	66	16753	66	-77.0	-66.3	-85.7			58	171	2.8	8.5	169.87	4.07	1987	1988
<i>80</i>	55	18066	55	-72.8	-60.9	-79.9			45	086	5.4	7.8	190.95	3.19	1989	1983
<i>70</i>	50	18886	50	-69.0	-55.7	-79.9			39	095	4.5	6.1	184.82	3.13	1989	1988
<i>60</i>	47	19796	47	-65.3	-52.1	-75.1			35	112	3.1	5.7	225.15	3.39	1987	1988
<i>50</i>	43	20907	43	-60.3	-48.1	-69.9			33	110	3.1	6.3	269.52	3.44	1989	1988
<i>40</i>	36	22322	36	-56.6	-46.1	-64.5			28	108	1.8	9.6	287.37	3.80	1985	1983
<i>30</i>	25	24143	25	-52.4	-45.9	-61.1			18	097	6.2	13.8	368.66	3.49	1988	1983
<i>25</i>	20	25335	20	-50.3	-44.1	-59.1			13	079	11.9	15.1			1988	1983
<i>20</i>	14	26837	14	-47.9	-41.7	-56.9			10	098	13.2	16.9			1988	1983
<i>15</i>	8	28620	8	-47.2	-40.5	-53.9			5	111	9.1	19.4			1988	1983
<i>10</i>	6	31313	6	-45.5	-39.5	-49.3			1	060	13.0	13.0			1988	1983
<i>7</i>	4	33812	4	-42.5	-38.9	-47.5									1988	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
209	552	509					58	099	1686	-78.2



# NORMALS OF RADIOSONDE DATA

43185 MACHILIPATNAM

DECEMBER 1982-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	215	1012	215	26.5	28.6	20.6	215	20.1	215	094	3.7	4.3	0.65	0.46	1982	1985
1000	168	116	168	25.6	28.0	20.0	168	19.1	168	097	4.4	5.0	6.04	0.43	1987	1985
950	168	554	168	22.0	26.8	16.8	167	15.5	168	080	5.1	5.8	12.99	0.70	1987	1988
900	168	1031	168	18.8	24.6	13.0	167	11.8	168	065	5.2	6.1	7.76	0.43	1988	1988
850	168	1520	168	16.0	23.4	9.6	161	6.4	168	061	4.6	6.2	7.36	0.87	1988	1987
800	168	2034	168	13.9	22.0	7.2	135	2.1	167	060	3.8	5.9	7.56	1.41	1988	1983
750	168	2574	168	11.7	20.6	5.2	103	-1.6	167	059	2.6	5.3	8.58	1.25	1988	1985
700	168	3152	168	9.3	19.4	4.0	76	-4.3	167	056	2.0	5.5	9.29	1.71	1988	1985
650	165	3759	165	6.2	13.0	-4.3	55	-7.6	161	031	1.4	5.6	13.86	1.60	1985	1985
600	164	4415	164	2.8	9.0	-1.9	43	-9.2	158	352	0.9	5.7	15.19	0.91	1986	1988
550	164	5118	164	-1.1	6.0	-6.7	36	-13.4	158	301	1.8	6.3	15.56	0.80	1986	1988
500	164	5869	164	-5.3	2.6	-12.3	36	-17.1	160	290	2.3	6.9	17.72	0.94	1988	1988
450	163	6688	163	-10.4	-1.3	-18.3	32	-22.9	159	286	3.9	8.1	19.72	1.02	1988	1988
400	162	7586	162	-16.1	-7.1	-25.1	27	-27.4	157	276	5.7	9.8	19.21	1.18	1985	1988
350	162	8579	162	-22.8	-13.5	-32.5	15	-32.3	155	273	7.9	11.4	25.81	1.18	1985	1988
300	156	9695	156	-30.7	-21.5	-40.3	8	-41.1	144	268	10.1	14.0	27.88	1.38	1982	1988
250	151	10966	150	-40.6	-31.1	-52.3			136	254	13.2	16.8	35.34	1.55	1982	1988
200	127	12456	127	-52.6	-45.1	-66.1			110	246	14.4	18.2	43.99	1.52	1988	1986
175	107	13307	107	-58.8	-52.1	-68.9			90	250	14.3	18.5	45.58	1.51	1988	1987
150	83	14259	83	-65.7	-58.7	-77.3			71	248	13.7	16.6	51.63	1.81	1986	1987
125	52	15354	52	-71.5	-61.7	-79.1			48	249	12.1	14.1	65.96	2.23	1987	1982
100	42	16657	42	-76.6	-67.3	-88.1			40	241	6.3	10.0	71.56	2.75	1986	1988
80	33	17949	33	-73.3	-64.1	-81.1			26	191	3.1	6.5	80.26	3.00	1988	1982
70	32	18758	32	-68.9	-59.1	-78.1			25	230	2.5	6.4	88.04	3.27	1988	1987
60	29	19682	29	-64.8	-54.1	-74.1			22	134	1.4	7.3	24.43	2.99	1988	1987
50	25	20818	25	-59.6	-48.1	-70.1			18	310	2.7	7.0	19.60	3.20	1988	1987
40	21	22234	21	-56.1	-44.9	-65.3			14	281	5.4	9.0	35.08	3.58	1988	1987
30	14	24135	14	-52.5	-39.5	-60.5			9	265	7.7	11.2			1988	1987
25	11	25343	11	-50.1	-38.3	-58.7			6	252	3.8	11.7			1988	1987
20	7	26748	7	-49.0	-41.1	-56.1			3	012	2.8	16.0			1988	1987
15	5	28684	5	-46.7	-39.5	-52.5			1	301	17.0	17.0			1988	1987
10	3	31525	3	-40.0	-37.1	-44.1			1	291	11.0	11.0			1988	1982
7	1	34210	1	-35.1	-35.1	-35.1									1988	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

165 561 493

38 100 1669 -78.7

## NORMALS OF RADIOSONDE DATA

42314 MOHANBARI (DBH)

JANUARY 1979-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	339	1002	339	18.3	29.8	8.2	339	12.2	339	043	0.4	0.5	1.24	1.43	1987	1985
1000	266	121	194	18.7	23.2	12.6	192	11.4	190	041	0.4	0.5	8.35	1.04	1982	1983
950	266	535	266	16.7	22.8	11.0	263	7.1	256	053	1.4	2.4	11.62	1.15	1987	1986
900	266	1019	266	13.5	21.0	6.6	257	3.3	256	078	1.1	2.2	9.23	1.15	1987	1986
850	266	1497	265	10.3	18.4	3.0	248	-0.6	257	162	0.5	2.4	9.47	1.14	1987	1986
800	266	1999	264	6.8	16.4	-0.1	238	-4.6	256	202	2.0	3.4	11.39	1.22	1987	1986
750	266	2519	265	3.0	10.4	-3.7	214	-7.3	256	206	3.4	4.8	8.61	1.03	1981	1983
700	266	3081	266	-0.8	8.8	-6.9	201	-10.9	257	215	3.9	5.7	14.42	0.99	1982	1983
650	265	3663	264	-4.4	9.2	-10.7	179	-14.2	227	233	4.6	6.9	18.34	1.21	1982	1983
600	257	4298	256	-7.4	4.8	-15.7	144	-17.9	200	251	8.5	10.6	19.76	1.28	1988	1983
550	254	4987	252	-10.3	1.4	-18.5	96	-22.1	167	257	13.3	14.6	21.49	1.48	1988	1983
500	250	5702	247	-14.0	-2.1	-23.9	55	-27.0	160	262	16.9	18.1	25.56	1.60	1989	1983
450	249	6499	247	-19.1	-5.9	-29.9	31	-31.4	128	266	20.4	21.7	26.20	1.67	1989	1983
400	240	7365	240	-24.7	-11.9	-35.9	20	-36.2	101	266	25.6	27.1	29.42	1.88	1989	1983
350	233	8332	231	-31.0	-17.9	-42.7	10	-41.5	82	268	32.4	34.4	35.45	2.12	1989	1983
300	219	9407	216	-37.4	-24.9	-50.1	5	-43.2	70	266	43.9	46.2	39.32	2.47	1989	1983
250	198	10645	195	-44.7	-34.3	-57.7			57	261	51.9	54.6	55.43	2.89	1989	1982
200	180	12117	178	-52.9	-44.3	-65.1			49	255	53.5	56.1	68.02	2.57	1981	1986
175	155	12973	153	-57.3	-48.9	-67.1			47	259	52.1	54.1	58.05	2.15	1987	1981
150	129	13923	128	-61.8	-51.7	-73.9			37	258	45.0	46.3	52.61	2.92	1988	1986
125	112	15036	111	-66.5	-56.3	-79.5			31	260	36.4	37.8	75.19	3.47	1987	1981
100	96	16372	96	-70.2	-61.3	-81.9			27	263	28.9	30.0	81.37	2.65	1983	1982
80	76	17697	75	-70.4	-61.5	-79.9			23	259	13.8	16.3	82.92	2.40	1983	1982
70	71	18496	70	-68.1	-54.9	-83.3			21	253	9.6	12.3	75.09	3.97	1983	1986
60	64	19425	63	-64.0	-54.1	-73.1			19	256	6.5	9.6	65.96	3.84	1983	1986
50	53	20569	52	-59.6	-50.9	-68.3			13	277	4.3	6.9	57.60	3.36	1983	1987
40	43	21987	43	-56.1	-49.9	-65.7			6	269	2.9	6.1	62.25	1.79	1981	1980
30	29	23833	29	-53.2	-47.9	-58.9			2	092	6.5	6.5	78.65	1.33	1981	1983
25	17	25056	17	-51.3	-46.9	-54.3			1	060	7.0	7.0			1981	1982
20	7	26579	7	-50.0	-47.9	-52.5			1	064	11.0	11.0			1987	1986
15	1	28595	1	-46.1	-46.1	-46.1									1986	1986
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
264	707	300	29	237	1098	-53.1	86	103	1626	-71.6

## NORMALS OF RADIOSONDE DATA

42314 MOHANBARI (DBH)

FEBRUARY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	327	999	327	20.4	27.8	12.8	327	12.9	327	044	1.1	1.2	1.04	1.14	1979	1982
<i>1000</i>	260	101	87	19.8	24.2	13.8	86	12.0	83	043	0.9	1.0	11.05	1.05	1981	1983
<i>950</i>	260	519	260	17.8	24.2	10.8	259	7.9	249	060	2.5	3.5	16.28	0.95	1986	1982
<i>900</i>	260	1002	260	14.4	20.4	7.0	257	5.1	249	097	1.4	2.8	11.97	0.98	1986	1981
<i>850</i>	260	1483	260	11.0	18.4	3.8	255	1.7	249	213	2.4	3.6	12.70	1.09	1990	1981
<i>800</i>	260	1986	260	7.3	15.8	0.4	248	-1.5	249	222	4.7	5.5	13.69	1.23	1990	1981
<i>750</i>	260	2509	260	3.5	12.8	-5.1	241	-5.1	248	222	6.6	7.4	11.98	1.35	1990	1980
<i>700</i>	260	3071	259	-0.2	7.8	-9.7	228	-8.3	248	225	7.5	8.6	16.70	1.46	1990	1981
<i>650</i>	259	3654	257	-4.1	3.8	-12.7	211	-11.7	223	234	7.8	9.0	21.54	1.57	1988	1981
<i>600</i>	257	4289	255	-7.4	2.6	-16.7	185	-15.1	203	248	10.2	11.4	21.83	1.72	1987	1981
<i>550</i>	253	4979	251	-10.4	1.8	-21.9	139	-19.4	180	254	15.8	16.7	33.13	1.83	1985	1981
<i>500</i>	242	5695	239	-14.1	-1.1	-25.1	95	-24.8	157	259	20.1	21.1	30.92	1.82	1985	1982
<i>450</i>	235	6492	233	-19.1	-4.5	-30.5	63	-29.8	124	265	21.8	22.7	38.39	1.85	1985	1982
<i>400</i>	230	7358	228	-25.0	-9.9	-35.7	41	-34.8	106	269	25.3	26.5	37.90	2.13	1985	1982
<i>350</i>	220	8321	216	-31.6	-15.9	-42.9	24	-41.2	81	269	29.6	31.2	44.07	2.72	1985	1982
<i>300</i>	208	9391	207	-38.3	-22.9	-50.9	3	-47.7	61	268	36.9	38.5	48.87	3.22	1985	1981
<i>250</i>	177	10627	177	-44.8	-31.5	-57.3			45	268	46.9	47.9	60.23	3.16	1985	1981
<i>200</i>	160	12092	160	-52.2	-41.9	-62.1			36	271	50.6	52.1	78.86	2.25	1985	1982
<i>175</i>	141	12950	141	-56.2	-49.1	-67.5			29	269	48.4	49.6	79.10	1.74	1985	1986
<i>150</i>	126	13916	126	-61.0	-52.5	-69.9			28	269	44.2	44.8	107.09	1.72	1985	1981
<i>125</i>	112	15031	112	-65.9	-54.9	-76.9			24	273	37.0	37.9	126.88	2.09	1986	1987
<i>100</i>	99	16364	99	-69.5	-58.3	-80.3			19	267	20.4	22.0	112.28	2.04	1982	1987
<i>80</i>	89	17678	89	-69.6	-53.7	-79.3			18	263	14.8	17.1	87.02	3.03	1982	1985
<i>70</i>	82	18473	82	-67.2	-49.5	-77.9			17	259	9.1	11.2	75.27	3.56	1980	1981
<i>60</i>	74	19414	74	-63.2	-51.1	-73.9			14	224	2.3	8.4	65.89	2.98	1980	1979
<i>50</i>	68	20547	68	-58.9	-48.1	-71.7			13	156	3.3	10.4	78.60	2.74	1982	1987
<i>40</i>	57	21958	57	-55.5	-43.5	-65.1			8	134	7.3	10.8	98.73	2.94	1980	1982
<i>30</i>	32	23816	32	-52.1	-41.5	-62.9			3	102	4.3	8.6	95.01	2.31	1980	1982
<i>25</i>	18	24997	18	-50.0	-43.9	-61.9			2	060	4.5	6.5			1981	1982
<i>20</i>	7	26421	7	-48.5	-37.7	-60.3									1987	1982
<i>15</i>	2	28152	2	-51.9	-44.9	-58.9									1986	1982
<i>10</i>	1	31330	1	-41.1	-41.1	-41.1									1986	1986
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

259	701	305		35	240	1092	-54.0		89	098	1650	-71.6
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## NORMALS OF RADIOSONDE DATA

42314 MOHANBARI (DBH)

MARCH 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	358	996	358	23.2	29.4	16.4	358	15.1	355	048	2.0	2.3	1.71	0.71	1982	1980
<i>1000</i>	300	79	45	22.2	29.2	16.6	45	13.4	43	042	1.0	1.5	14.04	1.55	1990	1988
<i>950</i>	298	501	298	20.7	29.4	13.0	297	11.0	291	058	3.2	4.4	13.07	0.65	1982	1981
<i>900</i>	298	991	298	17.5	25.0	9.8	297	7.9	291	089	1.8	3.8	12.20	0.60	1982	1987
<i>850</i>	298	1476	298	14.1	21.4	7.0	296	4.8	291	222	2.4	4.0	12.09	0.62	1982	1982
<i>800</i>	298	1986	298	10.4	17.4	2.8	294	1.6	291	228	6.0	6.9	11.28	0.64	1982	1982
<i>750</i>	298	2513	298	6.6	13.0	-1.7	293	-1.8	290	230	8.6	9.2	12.52	0.65	1982	1982
<i>700</i>	298	3083	297	2.6	8.8	-5.3	289	-5.1	293	232	9.8	10.5	10.37	0.73	1982	1982
<i>650</i>	297	3670	295	-1.3	6.0	-9.7	279	-8.8	261	237	10.8	11.8	11.54	0.70	1982	1982
<i>600</i>	293	4314	292	-5.1	2.2	-11.9	253	-12.6	226	244	12.3	13.2	11.59	0.74	1980	1982
<i>550</i>	290	5012	289	-8.7	1.4	-16.3	201	-16.3	203	253	14.8	15.8	21.47	0.86	1987	1981
<i>500</i>	288	5729	288	-12.5	-2.9	-21.1	156	-21.8	192	257	17.5	18.5	14.59	0.91	1987	1986
<i>450</i>	286	6531	285	-17.5	-8.1	-27.1	120	-28.2	169	265	19.6	20.7	18.73	1.10	1989	1986
<i>400</i>	285	7400	285	-23.7	-12.7	-34.7	82	-33.4	150	269	22.7	24.1	17.66	1.21	1989	1986
<i>350</i>	279	8366	278	-30.7	-19.1	-39.9	64	-40.3	125	269	26.3	28.1	18.55	1.41	1980	1980
<i>300</i>	269	9443	268	-38.0	-25.5	-48.1	12	-45.1	102	266	31.3	33.8	25.16	1.81	1980	1981
<i>250</i>	249	10679	244	-45.5	-33.1	-56.7			86	262	37.1	39.1	36.33	2.56	1980	1981
<i>200</i>	207	12139	204	-53.0	-39.5	-63.9			68	261	41.6	43.5	49.65	3.24	1980	1981
<i>175</i>	193	12993	191	-56.7	-42.5	-71.1			61	263	40.5	42.6	63.13	3.89	1990	1986
<i>150</i>	177	13960	177	-61.0	-48.3	-73.7			50	263	35.8	37.6	68.57	4.23	1990	1986
<i>125</i>	160	15083	160	-65.8	-54.3	-77.5			42	266	30.2	32.1	86.10	3.66	1990	1986
<i>100</i>	138	16430	138	-69.2	-57.1	-80.1			36	265	22.2	23.4	97.13	2.84	1990	1986
<i>80</i>	123	17762	123	-69.2	-59.3	-77.1			33	256	14.0	16.4	130.23	3.50	1983	1988
<i>70</i>	113	18560	113	-66.9	-55.9	-75.7			27	246	7.8	11.2	142.71	2.75	1982	1985
<i>60</i>	103	19499	103	-63.4	-52.7	-72.1			23	238	3.5	7.8	151.56	3.45	1981	1988
<i>50</i>	93	20632	93	-59.6	-48.9	-71.3			21	202	1.2	7.6	158.97	3.68	1981	1982
<i>40</i>	74	22040	74	-55.8	-43.3	-68.3			16	050	1.8	6.2	162.51	4.53	1981	1980
<i>30</i>	31	23849	31	-52.7	-45.7	-58.1			4	119	7.9	11.5	165.73	3.09	1983	1980
<i>25</i>	18	25058	18	-50.2	-45.3	-56.7			1	062	22.0	22.0			1987	1980
<i>20</i>	6	26493	6	-50.4	-46.9	-54.1			1	082	7.0	7.0			1986	1985
<i>15</i>	5	28363	5	-47.5	-41.9	-52.5									1986	1987
<i>10</i>																
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

292 666 347

73 224 1142 -55.5

125 103 1632 -71.1

# NORMALS OF RADIOSONDE DATA

42314 MOHANBARI (DBH)

APRIL 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	342	993	342	24.9	34.8	17.4	342	18.8	342	049	1.9	2.2	1.15	1.24	1979	1982
<i>1000</i>	325	55	1	23.4	23.4	23.4	1	20.0	1	000	0.0	0.0	10.17		1981	1981
<i>950</i>	312	479	311	22.7	31.6	14.6	311	15.4	293	060	3.9	5.2	11.10	1.16	1979	1983
<i>900</i>	312	973	312	19.8	29.6	11.8	312	12.6	295	082	2.3	4.2	10.58	1.09	1989	1983
<i>850</i>	312	1463	312	16.7	25.4	9.4	311	9.6	300	209	2.3	4.6	10.76	1.02	1989	1981
<i>800</i>	312	1979	312	13.4	21.2	5.8	311	6.3	298	225	6.1	7.2	10.78	1.00	1989	1983
<i>750</i>	312	2510	312	9.8	16.6	2.0	308	3.0	300	230	8.8	9.7	9.38	1.06	1984	1983
<i>700</i>	312	3089	312	6.0	12.8	-0.7	303	-0.8	298	235	10.3	11.3	12.54	1.13	1979	1983
<i>650</i>	309	3687	308	2.0	9.6	-5.1	293	-4.6	251	239	10.2	11.1	16.68	1.08	1979	1982
<i>600</i>	304	4336	301	-1.7	5.0	-9.9	270	-8.0	203	245	9.7	10.9	15.68	1.05	1989	1983
<i>550</i>	302	5041	299	-5.4	3.4	-14.5	246	-13.0	183	251	10.7	12.3	21.40	1.03	1989	1983
<i>500</i>	295	5769	293	-9.4	-1.1	-18.9	200	-18.5	162	256	11.1	12.8	19.08	1.17	1989	1983
<i>450</i>	292	6578	291	-14.4	-5.3	-23.5	156	-24.4	140	264	12.5	14.4	25.62	1.20	1980	1983
<i>400</i>	287	7462	286	-20.6	-10.5	-29.7	121	-29.2	121	265	15.2	17.1	26.58	1.41	1989	1983
<i>350</i>	282	8443	280	-27.4	-16.9	-36.9	107	-35.5	106	273	19.1	20.8	31.08	1.81	1989	1986
<i>300</i>	268	9532	267	-35.0	-22.9	-45.3	66	-42.3	92	269	24.8	27.3	41.57	2.68	1984	1983
<i>250</i>	247	10780	246	-43.8	-32.5	-56.7	6	-43.4	81	264	30.8	33.0	53.10	3.25	1984	1983
<i>200</i>	218	12256	218	-52.4	-40.7	-62.9			71	263	34.7	36.5	84.28	2.91	1984	1982
<i>175</i>	193	13112	193	-56.9	-46.7	-66.7			65	264	33.3	34.5	92.90	2.03	1984	1982
<i>150</i>	174	14075	174	-61.7	-52.5	-71.9			58	265	31.3	32.5	106.73	1.40	1983	1987
<i>125</i>	146	15178	146	-67.0	-58.5	-74.1			54	271	26.6	27.6	109.67	1.73	1987	1987
<i>100</i>	132	16504	129	-71.5	-62.1	-79.1			51	268	17.0	18.4	113.67	1.96	1983	1988
<i>80</i>	114	17815	114	-71.8	-59.9	-80.3			37	264	6.4	12.0	115.47	2.47	1987	1985
<i>70</i>	97	18604	96	-69.7	-57.1	-80.1			37	291	3.7	8.5	83.26	2.91	1987	1982
<i>60</i>	78	19531	78	-65.5	-53.5	-78.1			24	034	0.3	6.9	82.06	3.22	1987	1982
<i>50</i>	65	20665	65	-60.5	-52.1	-73.3			21	116	2.1	7.6	106.54	3.36	1982	1982
<i>40</i>	53	22062	53	-55.7	-47.9	-66.1			13	086	4.0	9.4	144.50	3.63	1982	1982
<i>30</i>	29	23946	29	-50.7	-42.1	-60.5			7	069	2.3	5.3	95.76	1.66	1981	1982
<i>25</i>	20	25099	20	-49.0	-42.5	-56.3			4	007	2.6	4.8			1984	1982
<i>20</i>	9	26633	9	-48.0	-45.1	-52.1									1986	1987
<i>15</i>	4	28649	4	-44.8	-40.5	-49.1									1984	1985
<i>10</i>	2	31249	2	-43.6	-42.1	-45.1									1984	1985
<i>7</i>	1	33440	1	-45.3	-45.3	-45.3									1985	1985

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE				
N	P	ALT	N	P	ALT	T	N	P	ALT	T	
299	621	404	34	205	1205	-57.3		119	100	1654	-73.0

## NORMALS OF RADIOSONDE DATA

42314 MOHANBARI (DBH)

MAY 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	393	991	393	27.8	34.4	19.8	393	21.7	393	049	0.8	1.3	1.21	0.84	1979	1987
1000	372	30											10.57			
950	370	460	369	25.5	32.0	16.2	369	19.3	341	070	1.1	3.5	12.97	0.86	1986	1987
900	370	958	368	22.4	28.6	12.6	368	15.1	352	144	0.9	3.2	10.14	0.89	1989	1983
850	370	1454	370	19.4	25.6	10.0	368	12.9	352	216	2.5	4.0	9.45	0.89	1989	1983
800	370	1974	370	16.2	23.0	7.2	368	9.1	349	223	4.6	5.5	8.48	0.79	1982	1983
750	370	2512	370	12.8	20.8	5.4	367	5.8	349	226	5.4	6.4	11.29	0.78	1982	1983
700	370	3098	370	9.2	16.4	3.0	366	2.3	350	231	5.5	6.7	8.68	0.85	1985	1983
650	363	3704	362	5.6	19.0	-1.3	353	-1.1	305	233	4.6	6.0	13.03	1.06	1978	1983
600	361	4358	359	1.9	10.6	-5.3	336	-4.7	274	245	4.4	6.4	11.21	0.91	1989	1985
550	358	5071	356	-1.7	6.0	-8.3	315	-9.2	267	253	6.1	8.2	20.06	0.87	1978	1990
500	353	5810	351	-5.6	2.0	-12.7	285	-14.2	246	256	7.7	9.8	14.99	0.90	1989	1983
450	348	6633	344	-10.2	-1.9	-17.5	230	-19.7	227	259	9.3	11.3	20.67	0.95	1989	1982
400	344	7532	340	-15.7	-6.3	-24.5	190	-25.7	215	262	11.5	13.4	17.21	1.05	1989	1982
350	335	8530	331	-22.3	-13.1	-31.3	138	-32.3	184	264	15.2	17.5	19.75	1.08	1986	1979
300	324	9644	322	-29.9	-21.1	-41.3	78	-38.2	162	264	19.8	21.8	24.78	1.31	1983	1987
250	304	10921	304	-39.2	-30.7	-52.3	30	-44.4	140	265	23.1	24.7	38.48	1.63	1985	1987
200	271	12414	269	-50.3	-41.1	-62.5			120	262	25.1	26.5	49.20	1.96	1988	1990
175	242	13275	241	-56.4	-46.9	-67.9			102	264	24.5	25.9	55.69	1.85	1988	1981
150	223	14231	222	-62.8	-52.3	-73.9			95	267	20.7	22.3	70.26	2.04	1988	1990
125	194	15330	194	-68.9	-57.7	-81.0			82	276	16.0	17.7	60.47	2.42	1983	1978
100	165	16641	164	-73.7	-63.1	-86.5			73	266	8.3	12.7	74.05	3.04	1983	1979
80	136	17944	134	-73.2	-62.5	-85.9			52	252	2.3	7.6	107.01	2.97	1987	1979
70	124	18735	123	-70.3	-56.5	-80.5			47	127	2.0	6.7	112.04	4.03	1987	1979
60	105	19651	104	-65.2	-50.9	-76.5			31	078	3.2	6.3	118.28	3.53	1987	1988
50	87	20773	87	-59.3	-48.1	-73.3			22	092	5.2	6.8	110.15	2.76	1987	1988
40	65	22157	65	-55.2	-48.3	-66.7			17	081	5.9	7.6	133.37	3.55	1984	1987
30	38	24015	37	-52.0	-45.3	-61.7			6	079	9.2	10.5	154.31	2.80	1985	1985
25	27	25201	27	-48.8	-43.3	-59.5			4	077	10.7	11.0	123.59	2.91	1984	1985
20	16	26716	16	-46.4	-36.9	-57.1									1984	1985
15	9	28532	9	-45.9	-36.7	-54.1									1986	1985
10	2	30991	2	-47.3	-44.5	-50.1									1984	1985
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

359	573	475		10	184	1277	-62.6		147	099	1673	-74.9
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## NORMALS OF RADIOSONDE DATA

42314 MOHANBARI (DBH)

JUNE 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	372	987	372	29.6	35.4	22.4	372	24.5	372	049	1.0	1.6	1.27	0.95	1984	1983
<b>1000</b>	337	-10											10.84			
<b>950</b>	336	422	336	27.6	34.4	15.2	335	22.3	320	076	1.4	3.4	11.83	0.98	1979	1989
<b>900</b>	336	926	336	24.8	32.4	17.6	336	19.4	319	146	1.1	3.3	10.66	0.93	1984	1982
<b>850</b>	336	1427	336	21.8	28.8	14.4	336	16.1	320	210	2.3	4.0	11.05	0.81	1984	1980
<b>800</b>	336	1953	335	18.7	25.2	11.8	335	13.2	321	211	3.4	5.0	10.87	0.73	1984	1983
<b>750</b>	336	2504	334	15.6	24.0	7.8	334	10.4	320	210	4.1	5.4	11.41	0.72	1978	1983
<b>700</b>	336	3088	334	12.3	21.0	4.6	332	7.1	322	211	4.4	5.8	12.54	0.72	1978	1983
<b>650</b>	334	3705	329	9.0	16.8	0.8	326	3.5	291	212	4.0	5.6	15.09	0.71	1990	1983
<b>600</b>	330	4366	327	5.6	12.2	-2.7	323	-0.7	269	221	4.0	6.0	14.51	0.77	1990	1983
<b>550</b>	328	5095	325	2.0	9.2	-4.9	314	-5.0	256	230	4.1	6.5	27.11	0.89	1990	1983
<b>500</b>	327	5839	324	-2.0	4.2	-10.7	299	-9.8	246	239	4.9	7.1	18.59	0.89	1990	1980
<b>450</b>	319	6677	318	-6.3	3.4	-15.1	273	-15.0	213	247	5.2	7.5	27.85	0.96	1989	1980
<b>400</b>	311	7586	310	-11.5	-4.3	-21.5	233	-20.6	190	250	6.1	8.4	26.51	0.93	1990	1988
<b>350</b>	295	8601	292	-17.7	-9.1	-27.9	175	-26.7	147	251	6.8	9.0	28.23	1.05	1990	1988
<b>300</b>	285	9734	282	-25.5	-14.7	-33.9	121	-34.4	143	256	7.6	10.0	30.67	1.11	1990	1980
<b>250</b>	270	11027	270	-35.5	-28.1	-45.0	60	-43.5	132	260	8.9	11.2	31.54	1.18	1986	1978
<b>200</b>	249	12539	249	-48.2	-39.1	-58.9	1	-42.5	117	274	9.5	12.4	39.30	1.58	1988	1981
<b>175</b>	230	13403	229	-55.8	-45.3	-65.7			104	284	9.1	12.6	42.96	1.59	1989	1982
<b>150</b>	200	14367	199	-63.4	-54.3	-73.7			99	302	7.4	11.9	54.92	1.81	1986	1982
<b>125</b>	174	15464	174	-71.2	-62.7	-83.1			89	328	5.3	9.7	70.33	2.11	1989	1982
<b>100</b>	152	16769	151	-76.1	-66.1	-83.3			76	055	4.6	9.5	77.14	2.04	1988	1980
<b>80</b>	117	18071	116	-74.3	-65.1	-82.0			59	080	8.0	10.1	96.77	2.65	1986	1978
<b>70</b>	109	18861	109	-69.9	-59.5	-80.0			54	087	8.9	10.3	125.61	3.80	1986	1978
<b>60</b>	95	19787	95	-64.4	-52.7	-75.3			49	075	11.2	12.4	117.90	3.41	1981	1980
<b>50</b>	81	20918	81	-58.8	-43.7	-69.9			40	085	12.9	14.0	118.66	3.43	1981	1980
<b>40</b>	64	22335	64	-53.8	-41.5	-64.3			32	085	12.8	13.8	143.32	4.08	1986	1960
<b>30</b>	38	24184	38	-50.5	-39.7	-59.1			15	081	14.6	14.8	171.62	4.48	1986	1980
<b>25</b>	28	25337	28	-48.8	-40.9	-54.5			10	079	19.1	19.5	177.52	4.53	1990	1980
<b>20</b>	21	26767	21	-46.3	-39.9	-52.3			7	077	18.6	19.3	134.58	2.13	1985	1980
<b>15</b>	8	28581	8	-45.4	-38.5	-48.7									1980	1980
<b>10</b>	4	31466	4	-43.8	-38.7	-47.1									1980	1983
<b>7</b>	2	33990	2	-41.2	-40.1	-42.3									1980	1985

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

324 524 548

1 127 1549 -70.9

140 102 1668 -77.2

## NORMALS OF RADIOSONDE DATA

42314 MOHANBARI (DBH)

JULY 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	403	987	403	29.0	35.4	22.6	403	25.0	403	049	1.2	1.7	0.96	0.54	1980	1987
<b>1000</b>	346	-1											6.72			
<b>950</b>	342	430	342	27.0	34.6	20.0	342	22.9	320	081	1.6	3.4	10.86	0.78	1979	1985
<b>900</b>	342	933	342	24.3	30.8	18.8	342	20.1	318	195	1.9	3.8	5.55	0.85	1989	1985
<b>850</b>	342	1433	342	21.5	28.6	15.6	342	17.3	320	223	4.3	5.4	6.09	0.83	1990	1985
<b>800</b>	342	1958	342	18.7	26.6	12.2	342	14.5	320	223	5.6	6.6	6.49	0.81	1990	1985
<b>750</b>	342	2511	342	15.7	23.4	10.2	342	11.7	315	223	5.8	6.7	10.08	0.74	1988	1985
<b>700</b>	342	3094	339	12.6	19.6	6.8	339	8.6	315	226	5.3	6.5	8.71	0.70	1990	1983
<b>650</b>	336	3715	332	9.6	16.8	4.2	332	5.0	265	225	4.0	5.6	13.10	0.66	1990	1983
<b>600</b>	336	4377	332	6.3	13.4	1.6	331	1.2	250	224	3.5	5.5	11.63	0.68	1990	1990
<b>550</b>	335	5107	333	2.7	9.8	-3.9	328	-2.9	231	229	3.2	5.7	21.55	0.80	1990	1981
<b>500</b>	331	5854	330	-1.2	4.8	-7.3	321	-7.5	225	234	2.6	5.7	14.83	0.66	1989	1983
<b>450</b>	326	6695	323	-5.5	5.0	-12.1	307	-12.9	203	241	1.8	5.3	23.00	0.74	1981	1983
<b>400</b>	324	7606	320	-10.6	-4.7	-16.3	267	-18.5	184	276	1.2	5.1	19.87	0.86	1983	1983
<b>350</b>	317	8626	311	-16.8	-10.1	-24.1	228	-25.8	161	334	1.7	5.7	21.78	1.03	1989	1990
<b>300</b>	306	9764	299	-24.5	-17.3	-32.9	151	-33.8	149	360	2.5	7.1	25.59	1.18	1989	1990
<b>250</b>	292	11067	291	-34.6	-26.1	-46.5	63	-42.2	136	015	3.7	8.9	30.57	1.42	1983	1985
<b>200</b>	264	12587	263	-47.3	-39.1	-57.1			121	033	4.8	10.4	39.35	1.56	1984	1981
<b>175</b>	241	13457	240	-54.8	-45.3	-67.1			106	040	5.9	11.6	54.91	1.66	1984	1981
<b>150</b>	208	14424	207	-62.9	-52.9	-74.1			102	042	7.3	12.3	59.54	1.81	1984	1981
<b>125</b>	173	15520	172	-70.9	-61.5	-78.9			86	050	9.0	11.6	78.23	1.80	1984	1981
<b>100</b>	148	16814	147	-76.4	-66.7	-85.0			75	063	11.2	12.8	65.60	1.81	1980	1978
<b>80</b>	131	18104	128	-73.9	-57.9	-84.1			64	080	13.7	14.9	75.85	2.97	1980	1979
<b>70</b>	121	18897	119	-69.1	-57.1	-79.3			59	078	14.9	15.3	102.34	3.73	1980	1983
<b>60</b>	108	19829	108	-64.0	-50.9	-76.9			50	082	16.2	16.4	108.09	3.56	1981	1983
<b>50</b>	88	20964	88	-59.4	-47.9	-68.5			43	087	16.6	17.4	131.51	3.61	1986	1983
<b>40</b>	73	22367	72	-55.6	-42.9	-64.5			36	086	18.6	18.8	156.34	3.94	1981	1980
<b>30</b>	47	24212	46	-51.5	-43.9	-58.9			21	084	19.9	20.1	194.92	3.37	1986	1980
<b>25</b>	33	25336	33	-50.0	-43.1	-60.5			18	080	21.9	22.3	203.64	2.00	1979	1980
<b>20</b>	15	26906	15	-47.2	-41.9	-51.5			4	095	21.6	22.0			1980	1983
<b>15</b>	9	28766	9	-44.5	-39.1	-49.3			2	078	25.4	25.5			1980	1983
<b>10</b>	6	31395	6	-43.4	-37.5	-46.5			1	076	27.0	27.0			1982	1983
<b>7</b>	2	33813	2	-41.9	-40.3	-43.5									1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

331 515 562

144 101 1675 -77.5



## NORMALS OF RADIOSONDE DATA

42314 MOHANBARI (DBH)

AUGUST 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	403	987	403	30.0	35.4	23.0	403	25.3	403	047	0.6	1.1	1.18	0.80	1988	1987
<i>1000</i>	355	-1											12.11			
<i>950</i>	354	431	354	27.8	34.8	21.6	354	22.9	337	065	0.8	3.0	9.16	0.79	1979	1987
<i>900</i>	354	934	354	25.1	32.2	19.2	353	19.5	336	176	0.8	3.2	9.91	0.85	1979	1988
<i>850</i>	354	1436	354	22.4	29.2	16.6	354	16.2	338	216	2.3	4.1	9.80	0.93	1979	1988
<i>800</i>	354	1962	354	19.4	27.6	12.8	354	13.4	337	215	3.3	4.5	10.22	0.83	1983	1990
<i>750</i>	354	2515	353	16.3	23.6	10.6	351	10.3	333	211	3.6	4.9	12.52	0.86	1984	1983
<i>700</i>	354	3100	353	13.1	19.4	6.6	350	6.8	336	212	3.1	4.9	11.91	0.83	1989	1983
<i>650</i>	351	3717	349	9.7	16.4	3.8	345	3.2	298	204	2.3	4.6	14.85	0.83	1989	1983
<i>600</i>	351	4382	349	6.3	12.8	0.6	341	-0.7	282	197	1.8	5.0	14.22	0.83	1989	1983
<i>550</i>	347	5114	346	2.6	10.8	-3.9	331	-4.6	264	189	1.1	4.9	22.28	0.80	1980	1985
<i>500</i>	343	5859	340	-1.4	5.2	-6.3	317	-8.9	241	161	0.9	4.9	17.76	0.84	1989	1990
<i>450</i>	338	6699	333	-5.7	2.0	-11.9	293	-13.9	208	159	0.7	4.7	25.45	0.84	1989	1990
<i>400</i>	333	7608	330	-10.8	-2.7	-17.9	261	-20.1	174	118	0.8	4.6	22.58	0.81	1989	1990
<i>350</i>	326	8628	324	-17.1	-11.1	-24.0	200	-26.8	145	042	1.4	5.0	24.36	0.83	1988	1978
<i>300</i>	316	9764	314	-25.0	-18.9	-33.1	130	-34.5	122	040	2.7	5.9	31.59	1.08	1983	1990
<i>250</i>	300	11061	299	-35.1	-25.9	-44.5	42	-42.6	102	023	3.1	7.0	36.09	1.54	1989	1985
<i>200</i>	271	12577	270	-48.0	-39.1	-59.9			91	025	4.8	8.5	49.73	1.94	1990	1981
<i>175</i>	238	13443	236	-55.5	-44.9	-67.5			80	037	5.7	10.2	58.93	2.11	1988	1981
<i>150</i>	222	14409	222	-63.4	-54.7	-76.1			74	046	6.9	9.9	75.52	2.20	1988	1981
<i>125</i>	194	15504	194	-71.0	-55.1	-84.5			66	059	8.6	11.4	83.90	2.66	1982	1981
<i>100</i>	168	16805	168	-75.3	-64.5	-85.0			60	074	11.8	12.8	97.38	2.32	1990	1978
<i>80</i>	144	18115	143	-71.1	-55.9	-82.1			42	082	13.8	14.3	109.24	2.80	1990	1979
<i>70</i>	124	18921	123	-66.3	-52.1	-78.7			32	078	14.4	14.9	112.03	3.34	1986	1988
<i>60</i>	101	19853	101	-62.5	-51.5	-79.0			25	081	16.3	16.7	108.50	3.09	1981	1978
<i>50</i>	81	21001	81	-57.9	-49.1	-68.5			19	087	16.8	17.0	131.45	2.65	1986	1981
<i>40</i>	69	22405	69	-54.5	-43.5	-61.9			10	084	20.2	20.5	175.56	3.08	1986	1981
<i>30</i>	42	24254	42	-51.1	-38.5	-57.5			8	083	22.7	22.8	215.66	2.43	1981	1987
<i>25</i>	33	25431	33	-49.1	-43.1	-54.9			6	080	22.2	22.6	220.68	2.17	1979	1984
<i>20</i>	15	26985	15	-47.4	-38.7	-53.5									1983	1984
<i>15</i>	7	28912	7	-45.5	-41.3	-51.7									1986	1984
<i>10</i>	3	31643	3	-44.4	-41.9	-49.3									1984	1984
<i>7</i>	1	33638	1	-47.1	-47.1	-47.1									1984	1984

**FREEZING LEVEL**  
N P ALT

**1ST TROPOPAUSE**  
N P ALT T

**2ND TROPOPAUSE**  
N P ALT T

340 516 561

160 105 1650 -76.3

## NORMALS OF RADIOSONDE DATA

42314 MOHANBARI (DBH)

SEPTEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	390	992	390	27.9	35.2	22.2	390	24.4	390	048	0.7	1.1	0.73	0.36	1990	1980
<i>1000</i>	367	37	1	22.6	22.6	22.6	1	20.8	1	045	1.0	1.0	5.50		1987	1987
<i>950</i>	367	461	366	25.9	33.2	19.2	366	21.4	341	078	1.3	3.1	10.21	0.37	1989	1983
<i>900</i>	367	967	367	23.2	30.8	15.4	367	18.0	339	151	0.9	3.1	4.52	0.50	1989	1990
<i>850</i>	367	1465	366	20.4	27.8	13.0	366	14.7	340	211	2.4	3.9	3.76	0.50	1989	1990
<i>800</i>	367	1987	367	17.4	25.0	10.4	366	12.0	339	217	3.6	4.7	3.69	0.51	1982	1990
<i>750</i>	367	2529	367	14.2	21.2	7.4	364	8.9	338	217	4.6	5.6	6.42	0.64	1989	1983
<i>700</i>	367	3117	367	10.9	17.2	3.6	364	5.6	341	223	4.9	6.0	4.74	0.72	1989	1983
<i>650</i>	364	3724	363	7.5	14.0	1.0	357	2.0	272	224	4.3	5.8	8.32	0.74	1990	1990
<i>600</i>	354	4388	353	4.1	10.2	-2.9	344	-1.7	248	235	4.7	6.4	8.63	0.73	1990	1990
<i>550</i>	348	5109	347	0.4	7.8	-7.1	333	-5.8	227	242	5.3	7.2	14.10	0.70	1986	1930
<i>500</i>	339	5853	336	-3.4	3.6	-11.0	307	-10.3	210	249	5.6	7.2	13.52	0.81	1990	1978
<i>450</i>	331	6685	326	-7.7	0.0	-16.7	280	-15.7	179	253	5.9	7.3	20.68	0.90	1990	1981
<i>400</i>	327	7589	325	-13.1	-3.5	-23.5	236	-21.4	158	256	6.4	8.0	19.05	1.00	1990	1981
<i>350</i>	321	8596	319	-19.7	-9.7	-29.1	186	-28.5	133	263	7.8	9.6	19.26	1.10	1990	1981
<i>300</i>	310	9725	309	-27.6	-17.5	-37.1	119	-36.0	118	265	9.1	11.0	29.68	1.29	1990	1981
<i>250</i>	292	11011	291	-37.9	-27.9	-48.5	31	-44.8	101	272	9.9	12.5	38.65	1.65	1984	1981
<i>200</i>	265	12506	264	-50.8	-41.9	-59.9			88	279	10.6	13.8	51.64	1.98	1990	1985
<i>175</i>	234	13362	234	-58.1	-48.9	-65.9			79	290	10.0	13.6	57.64	2.00	1984	1985
<i>150</i>	210	14313	210	-65.7	-55.9	-74.5			79	292	7.9	11.8	62.46	2.15	1984	1981
<i>125</i>	178	15403	177	-72.8	-63.9	-80.9			65	287	5.3	9.8	78.64	2.21	1984	1987
<i>100</i>	146	16691	146	-76.2	-63.9	-87.7			53	263	1.1	7.2	93.61	2.00	1986	1979
<i>80</i>	127	17992	126	-71.3	-55.5	-81.9			42	124	2.6	6.1	118.59	3.15	1981	1981
<i>70</i>	115	18797	115	-66.1	-48.1	-77.1			36	077	4.6	6.4	106.01	2.67	1985	1981
<i>60</i>	104	19733	104	-61.6	-45.1	-71.1			33	086	7.6	8.2	79.47	2.27	1985	1981
<i>50</i>	89	20864	89	-57.8	-45.1	-65.5			29	084	10.0	10.3	62.17	2.26	1981	1981
<i>40</i>	70	22288	70	-54.5	-46.1	-62.3			22	088	11.5	11.8	84.91	2.52	1981	1979
<i>30</i>	49	24153	49	-50.9	-40.7	-57.5			14	075	11.6	12.0	136.35	3.17	1983	1983
<i>25</i>	37	25294	37	-49.8	-42.1	-56.3			10	081	13.8	14.1	172.88	3.91	1986	1983
<i>20</i>	27	26763	27	-48.1	-41.7	-53.5			8	078	13.5	13.6	232.17	3.70	1982	1981
<i>15</i>	13	28545	13	-47.3	-35.1	-51.9			3	083	16.5	17.0			1990	1983
<i>10</i>	3	31241	3	-46.3	-43.9	-48.9									1983	1984
<i>7</i>	3	33623	3	-45.0	-42.7	-46.9									1983	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

345 544 519

143 107 1635 -77.1

## NORMALS OF RADIOSONDE DATA

42314 MOHANBARI (DBH)

OCTOBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	403	996	403	26.1	32.2	20.2	403	22.4	403	046	0.4	0.5	1.21	0.81	1983	1980
1000	354	75	13	25.3	27.4	22.0	13	20.8	13	005	0.1	0.2	10.95		1979	1982
950	353	495	353	24.2	33.2	18.6	353	17.9	331	055	1.3	2.5	8.61	0.92	1984	1980
900	353	999	353	21.5	30.8	15.0	352	13.1	331	089	0.9	2.5	8.82	1.07	1984	1982
850	353	1493	352	18.5	28.2	10.4	348	8.6	332	192	1.0	3.0	7.65	1.10	1984	1988
800	353	2011	352	15.2	28.4	7.4	342	5.3	331	206	2.7	3.8	6.28	1.25	1983	1986
750	353	2545	350	11.7	21.4	4.8	334	1.8	327	209	3.8	4.9	7.46	1.25	1984	1986
700	353	3129	351	7.9	16.2	0.2	329	-1.9	331	219	4.0	5.3	6.24	1.29	1983	1982
650	350	3728	349	4.1	12.8	-3.1	310	-5.4	268	233	3.9	5.5	10.10	1.30	1985	1986
600	344	4383	342	0.4	9.4	-6.1	279	-8.4	231	249	5.3	6.8	9.43	1.33	1985	1982
550	338	5099	337	-2.9	6.6	-10.3	222	-11.9	190	255	8.1	9.7	13.88	1.44	1989	1982
500	334	5828	334	-6.5	3.6	-15.1	171	-15.9	172	256	10.7	11.9	15.62	1.74	1989	1982
450	330	6650	330	-11.2	0.6	-19.3	135	-19.7	143	259	12.6	13.8	25.72	1.74	1989	1981
400	319	7539	316	-16.9	-3.3	-25.3	100	-24.8	132	261	16.6	17.8	27.36	1.85	1989	1979
350	310	8532	307	-23.5	-13.1	-32.5	68	-30.1	108	262	20.4	21.8	31.85	1.89	1983	1979
300	299	9640	297	-31.3	-20.9	-41.3	38	-38.1	98	262	23.1	24.7	40.68	2.02	1989	1979
250	270	10909	270	-40.9	-29.5	-50.7	9	-43.9	91	262	25.9	27.5	53.63	2.31	1989	1979
200	239	12381	239	-52.8	-43.5	-63.9			78	264	27.6	29.5	62.37	2.07	1988	1982
175	210	13227	210	-59.6	-50.5	-71.1			75	262	25.7	27.5	70.59	1.96	1987	1982
150	188	14171	188	-66.6	-57.5	-76.7			70	263	23.1	25.0	96.82	2.39	1979	1982
125	161	15251	161	-73.2	-60.9	-81.1			64	260	16.6	18.8	82.21	1.75	1979	1981
100	134	16545	134	-75.7	-63.5	-86.0			55	261	10.6	13.5	102.46	2.20	1987	1978
80	107	17840	107	-71.6	-61.3	-81.9			43	241	4.7	8.3	95.58	2.68	1982	1981
70	97	18637	97	-67.2	-57.9	-81.9			36	253	2.1	6.3	100.19	2.80	1981	1979
60	91	19566	91	-63.7	-53.1	-74.7			28	095	1.1	6.0	104.36	2.64	1981	1979
50	82	20689	82	-59.4	-48.9	-69.9			27	102	2.8	6.7	128.40	2.63	1981	1981
40	64	22108	64	-55.6	-48.1	-64.9			23	105	2.6	5.4	144.48	2.31	1983	1979
30	45	23951	45	-52.0	-42.5	-60.3			18	084	5.0	6.8	197.54	2.83	1985	1979
25	30	25135	30	-50.1	-40.3	-58.1			14	099	5.9	7.5	222.74	3.39	1985	1979
20	21	26578	21	-49.3	-42.9	-56.1			12	107	3.2	5.6	232.65	2.73	1984	1979
15	7	28319	7	-49.5	-45.1	-54.3			5	104	2.4	7.2			1985	1979
10																
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

344	592	449			1	150	1388	-68.3			132	109	1607	-76.7
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## NORMALS OF RADIOSONDE DATA

42314 MOHANBARI (DBH)

NOVEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	390	1000	390	22.0	27.0	16.0	390	18.0	390	046	0.3	0.3	1.04	1.02	1979	1978
<i>1000</i>	314	105	120	21.8	25.8	16.0	120	17.5	111	043	0.4	0.4	10.76	1.25	1990	1978
<i>950</i>	312	521	310	21.0	27.2	13.8	310	11.7	285	049	2.0	2.6	7.72	1.28	1981	1982
<i>900</i>	312	1015	312	18.2	27.8	9.8	311	6.6	283	062	1.5	2.5	8.33	1.64	1983	1982
<i>850</i>	312	1503	311	15.1	22.4	5.0	305	2.6	287	146	0.8	2.5	8.04	1.12	1985	1982
<i>800</i>	312	2014	311	11.6	19.0	1.2	289	-0.4	288	192	2.4	3.5	8.73	1.18	1985	1982
<i>750</i>	312	2544	311	7.8	16.0	-2.9	272	-3.9	290	203	3.8	4.8	8.40	1.13	1987	1982
<i>700</i>	312	3115	310	4.0	12.8	-6.9	252	-7.6	290	212	3.8	5.4	11.62	1.20	1987	1982
<i>650</i>	310	3710	307	0.3	9.2	-11.1	223	-10.7	220	234	3.2	5.5	15.51	1.24	1990	1982
<i>600</i>	309	4354	306	-3.0	5.8	-14.7	177	-14.2	200	249	6.3	8.3	16.47	1.17	1990	1982
<i>550</i>	303	5059	303	-6.1	3.2	-18.9	131	-18.3	172	256	11.2	12.7	25.16	1.26	1979	1982
<i>500</i>	302	5780	301	-10.0	0.2	-24.1	92	-23.0	145	261	15.2	16.5	22.66	1.41	1987	1982
<i>450</i>	299	6592	298	-15.1	-4.9	-29.5	68	-27.6	109	263	18.8	20.2	36.53	1.93	1987	1982
<i>400</i>	288	7469	287	-20.9	-10.7	-33.5	42	-31.1	95	268	24.7	26.2	30.66	1.91	1990	1986
<i>350</i>	275	8448	275	-27.4	-17.3	-41.1	26	-37.8	82	267	29.3	31.1	42.31	2.15	1981	1986
<i>300</i>	257	9540	255	-34.3	-24.7	-46.7	9	-43.0	71	267	36.6	38.8	48.47	2.23	1984	1982
<i>250</i>	230	10789	229	-42.8	-31.5	-52.7			61	268	43.4	45.8	54.59	2.08	1988	1985
<i>200</i>	195	12264	194	-53.1	-42.1	-63.7			51	267	43.0	46.3	57.07	2.04	1989	1981
<i>175</i>	166	13108	165	-59.5	-48.3	-70.9			43	268	41.9	44.6	59.35	1.99	1984	1981
<i>150</i>	140	14059	139	-65.7	-55.3	-76.7			36	268	36.3	38.6	60.72	2.28	1982	1981
<i>125</i>	109	15145	109	-70.4	-61.1	-83.7			27	269	30.3	31.3	56.40	1.96	1982	1981
<i>100</i>	91	16462	91	-73.5	-62.7	-85.1			27	272	20.7	22.0	97.41	4.18	1982	1981
<i>80</i>	76	17758	76	-71.5	-59.9	-81.5			20	278	11.2	14.0	82.38	4.03	1980	1987
<i>70</i>	66	18557	66	-68.6	-56.1	-83.9			16	285	8.8	10.7	94.31	4.74	1980	1987
<i>60</i>	55	19487	55	-64.5	-51.9	-74.5			12	252	4.0	9.2	120.90	4.52	1980	1979
<i>50</i>	43	20609	43	-59.9	-50.5	-69.9			5	253	7.3	8.6	148.01	4.27	1980	1979
<i>40</i>	33	22032	33	-55.4	-49.9	-63.3			4	240	1.9	6.5	178.94	2.90	1981	1982
<i>30</i>	26	23859	26	-52.1	-46.5	-59.3			3	230	6.6	12.3	192.21	2.43	1980	1979
<i>25</i>	15	25034	15	-50.9	-45.9	-56.7			3	264	6.4	11.7			1984	1982
<i>20</i>	6	26276	6	-53.7	-50.1	-56.7			1	060	12.0	12.0			1983	1982
<i>15</i>	4	28126	4	-52.9	-49.9	-55.5			1	042	9.0	9.0			1979	1979
<i>10</i>	1	30331	1	-54.3	-54.3	-54.3									1979	1979
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

308 642 380

6 218 1183 -58.0

85 106 1612 -74.3

## NORMALS OF RADIOSONDE DATA

42314 MOHANBARI (DBH)

DECEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	372	1001	372	18.6	24.0	11.6	372	14.1	372	044	0.2	0.3	2.15	1.34	1981	1986
1000	277	127	215	19.0	23.8	12.0	215	13.3	208	038	0.3	0.4	16.24	0.76	1981	1986
950	276	541	276	17.6	23.0	9.6	275	7.8	258	044	1.8	2.4	14.17	1.06	1990	1979
900	276	1027	276	14.8	20.0	6.8	269	3.3	258	047	1.8	2.7	8.58	1.09	1978	1979
850	276	1508	276	11.9	18.0	4.6	250	-0.5	257	135	0.6	2.6	8.46	1.17	1978	1982
800	276	2012	275	8.5	15.2	1.2	227	-2.9	257	196	2.2	3.6	9.06	1.22	1990	1979
750	276	2537	276	4.9	13.0	-1.9	210	-5.8	258	206	2.8	4.5	10.18	1.16	1978	1979
700	276	3102	276	1.3	9.0	-5.5	186	-9.2	258	220	2.7	5.1	11.90	1.19	1978	1979
650	269	3691	269	-2.1	6.2	-8.9	160	-12.5	213	248	3.0	6.0	19.65	1.38	1985	1979
600	268	4329	267	-5.0	6.4	-12.7	121	-15.7	191	264	6.6	9.4	17.04	1.36	1982	1979
550	265	5025	264	-8.2	2.0	-17.1	90	-19.9	168	267	11.4	13.8	18.45	1.84	1980	1981
500	265	5745	264	-12.4	0.8	-22.3	58	-24.0	156	268	16.9	18.5	23.97	1.98	1980	1988
450	256	6541	254	-17.7	-5.7	-28.1	45	-29.4	134	271	20.4	22.5	30.66	1.79	1980	1979
400	245	7417	243	-23.8	-12.5	-35.1	23	-33.5	124	272	26.2	28.2	30.18	1.79	1980	1979
350	233	8379	232	-30.5	-19.9	-40.5	20	-37.0	113	271	33.2	35.3	38.50	1.98	1980	1979
300	217	9457	216	-37.8	-27.5	-48.5	5	-40.9	106	268	39.6	41.7	38.26	2.23	1980	1979
250	195	10691	194	-46.0	-35.3	-57.5	1	-50.1	93	262	45.0	47.5	43.90	2.13	1980	1979
200	172	12152	172	-54.8	-42.3	-66.1			76	262	48.4	50.1	53.32	1.44	1980	1981
175	155	13001	155	-59.2	-46.1	-70.7			68	263	47.6	49.2	61.19	2.13	1980	1981
150	135	13961	135	-62.6	-53.1	-71.5			58	263	43.9	45.1	76.29	2.78	1986	1985
125	111	15071	111	-67.0	-56.5	-76.3			49	266	35.7	36.7	81.31	1.99	1979	1979
100	92	16408	92	-71.1	-62.1	-80.9			43	271	27.9	28.8	133.68	4.00	1979	1987
80	73	17736	73	-71.4	-60.3	-80.7			37	275	20.4	21.4	142.02	3.25	1979	1980
70	66	18532	66	-68.4	-57.5	-77.0			31	266	12.6	14.4	147.16	3.56	1981	1978
60	57	19467	57	-64.8	-57.5	-73.5			29	271	8.5	9.9	147.71	3.68	1981	1982
50	54	20592	54	-59.8	-51.9	-72.1			25	283	5.3	7.5	146.03	3.93	1980	1981
40	42	22012	42	-55.3	-47.5	-65.1			18	262	7.6	9.8	58.58	3.98	1980	1981
30	17	23905	17	-50.0	-45.9	-58.1			7	273	5.7	8.6			1980	1986
25	10	25114	10	-49.0	-45.5	-59.3			1	116	14.0	14.0			1980	1986
20	4	26529	4	-52.5	-47.9	-60.9			1	250	24.0	24.0			1985	1986
15	1	28107	1	-62.9	-62.9	-62.9									1986	1986
10	1	30600	1	-63.1	-63.1	-63.1									1986	1986
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
273	679	335	28	210	1193	-57.2	82	103	1628	-72.3

# NORMALS OF RADIOSONDE DATA

43369 MINICOY

JANUARY 1971-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	527	1010	527	28.5	30.6	24.0	527	22.2	527	019	2.2	2.6	0.77	0.54	1988	1989
1000	473	89	472	27.7	30.0	24.0	472	21.7	472	021	2.9	3.5	7.60	0.56	1979	1989
950	473	522	471	23.4	28.4	18.2	471	18.7	471	029	4.0	4.6	19.99	0.62	1989	1988
900	473	1010	473	20.0	29.0	15.0	469	14.5	471	049	3.8	4.5	6.88	0.76	1989	1972
850	473	1501	473	17.2	25.0	13.0	465	8.5	472	065	3.2	4.5	6.66	0.85	1989	1972
800	473	2017	472	14.9	23.0	8.8	429	2.6	472	073	2.4	4.5	6.60	0.88	1989	1982
750	473	2551	473	12.8	20.8	6.0	348	-1.8	472	073	1.9	4.9	12.19	0.97	1989	1978
700	473	3137	473	10.1	18.4	3.8	284	-5.1	472	075	2.3	5.4	7.64	0.98	1989	1988
650	471	3750	470	6.7	12.8	-6.0	235	-8.3	464	078	3.2	5.8	12.76	0.80	1989	1973
600	465	4401	464	3.1	9.0	-4.0	195	-10.8	449	078	3.9	6.2	10.30	0.85	1989	1978
550	459	5102	458	-0.8	5.8	-7.0	153	-13.7	440	079	4.6	7.1	14.29	0.95	1989	1976
500	456	5856	456	-5.2	2.4	-17.0	112	-17.1	435	077	4.9	7.9	14.72	1.05	1989	1978
450	448	6673	448	-9.8	9.0	-16.0	90	-22.1	423	074	4.5	8.2	20.10	1.20	1981	1974
400	441	7577	441	-15.6	-6.1	-23.0	68	-27.5	415	061	3.4	8.6	22.79	1.47	1989	1974
350	427	8568	427	-22.5	-11.1	-30.0	39	-33.2	400	060	1.6	8.4	31.63	1.75	1989	1971
300	417	9687	415	-31.0	-20.0	-42.0	18	-38.1	389	171	1.1	8.6	36.65	1.89	1971	1971
250	401	10952	400	-41.4	-30.9	-53.0	4	-48.4	378	181	3.8	10.6	47.10	2.00	1989	1971
200	372	12429	370	-53.7	-43.9	-67.0			351	179	4.9	12.7	62.01	2.08	1989	1978
175	330	13271	328	-60.6	-50.9	-71.0			313	189	4.6	13.0	67.70	1.94	1989	1978
150	295	14206	295	-67.9	-57.0	-80.0			281	187	3.7	12.9	72.01	2.05	1971	1971
125	263	15279	262	-74.7	-60.0	-88.0			253	173	3.4	12.6	88.75	2.79	1971	1971
100	222	16558	221	-79.9	-68.0	-90.0			214	119	4.2	10.9	117.35	3.04	1971	1978
80	170	17825	168	-77.2	-60.0	-90.0			153	101	2.6	8.6	133.12	3.84	1971	1978
70	142	18600	140	-73.6	-58.0	-87.0			130	100	2.2	9.5	158.96	4.35	1976	1978
60	114	19506	113	-69.9	-60.0	-82.0			102	114	1.6	10.5	155.29	3.80	1972	1971
50	97	20608	96	-65.9	-55.7	-76.0			84	095	1.1	13.6	177.73	4.17	1981	1978
40	62	21990	61	-61.4	-52.7	-71.0			55	055	1.4	15.4	203.89	3.84	1983	1971
30	36	23818	35	-55.2	-48.5	-67.0			33	200	0.4	14.4	269.89	5.18	1983	1971
25	22	25049	22	-52.0	-42.5	-58.7			21	020	1.3	13.7	250.58	5.21	1989	1983
20	17	25513	17	-48.4	-39.7	-54.1			17	264	3.7	11.5			1987	1983
15	7	28483	7	-46.4	-39.5	-50.5			7	035	6.5	21.1			1987	1980
10	3	31000	3	-43.2	-40.9	-46.1			3	255	12.6	12.6			1983	1983
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
461	559	497					202	098	1665	-82.1

# NORMALS OF RADIOSONDE DATA

43369 MINICOY

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	507	1010	507	29.1	31.0	26.0	507	22.7	507	009	2.3	2.7	0.91	0.52	1975	1977
1000	433	87	433	28.2	30.6	25.0	433	22.2	433	009	3.2	3.7	6.69	0.54	1988	1981
950	433	523	433	23.7	29.0	17.0	433	19.2	433	018	3.9	4.6	16.01	0.56	1977	1972
900	433	1009	432	20.5	26.8	15.0	426	14.5	433	051	3.3	4.3	7.63	0.60	1988	1972
850	433	1501	432	18.1	28.0	13.0	413	8.9	433	076	3.8	4.9	8.08	0.78	1977	1972
800	433	2019	432	15.6	22.4	7.0	392	2.6	433	078	3.5	5.3	8.76	1.04	1990	1971
750	433	2554	431	13.2	21.0	8.0	312	-2.3	433	076	2.9	5.4	14.29	1.15	1990	1975
700	433	3141	431	10.3	17.4	4.0	250	-6.1	433	078	2.5	5.6	10.99	1.08	1990	1978
650	429	3755	428	7.0	14.6	-4.0	208	-9.7	427	074	2.5	5.8	15.85	1.16	1990	1977
600	423	4406	421	3.4	10.4	-4.0	169	-12.7	417	075	2.4	6.1	13.81	1.09	1988	1978
550	419	5108	419	-0.5	5.8	-7.0	135	-14.8	410	072	2.5	6.8	17.82	1.22	1988	1978
500	418	5863	418	-4.9	2.0	-13.0	107	-19.4	409	075	2.3	7.3	18.79	1.16	1988	1978
450	413	6680	413	-9.7	-3.1	-18.0	68	-22.9	401	063	1.9	7.7	24.90	1.21	1988	1978
400	407	7585	406	-15.2	-7.1	-24.0	45	-28.2	394	045	1.4	8.6	26.46	1.38	1987	1978
350	398	8577	396	-22.1	-13.7	-30.0	27	-33.2	380	261	0.5	8.9	31.86	1.67	1987	1975
300	385	9698	381	-30.4	-21.7	-38.0	11	-41.8	369	198	2.4	9.4	40.07	1.93	1988	1977
250	373	10969	371	-40.4	-29.9	-48.0	1	-49.0	356	182	3.8	10.7	51.26	2.25	1987	1978
200	356	12454	356	-52.5	-41.3	-62.5			332	178	4.0	11.9	69.43	2.58	1988	1979
175	317	13300	317	-59.6	-48.0	-70.1			296	172	3.7	12.4	81.78	2.72	1971	1979
150	283	14241	283	-66.8	-53.0	-78.5			269	157	3.6	13.0	94.07	2.61	1971	1979
125	246	15311	246	-73.9	-62.1	-85.1			231	130	2.0	11.3	96.71	2.84	1988	1979
100	210	16593	210	-78.6	-68.9	-90.0			193	104	2.8	9.1	114.22	2.74	1990	1978
80	166	17866	166	-76.6	-62.3	-88.0			147	118	2.3	8.9	126.26	3.09	1990	1978
70	146	18650	146	-73.1	-61.5	-84.0			128	165	0.6	8.6	147.25	3.85	1988	1971
60	117	19571	116	-68.9	-56.1	-82.0			99	043	0.5	11.4	152.41	3.49	1983	1971
50	94	20681	93	-65.1	-51.9	-80.0			79	085	2.6	13.6	154.15	3.57	1983	1971
40	58	22090	58	-59.6	-49.1	-80.0			49	096	5.9	13.4	172.87	4.75	1989	1973
30	36	23970	36	-53.6	-42.1	-72.0			28	099	8.2	15.1	259.25	6.63	1990	1971
25	26	25156	26	-50.6	-40.9	-71.0			24	093	6.2	14.3	338.92	9.68	1989	1971
20	19	26661	19	-47.3	-40.5	-55.3			17	263	6.3	13.1			1990	1990
15	15	28627	15	-44.6	-37.3	-52.1			14	271	7.6	13.5			1990	1990
10	9	31356	9	-42.5	-34.7	-47.5			9	330	5.9	13.8			1990	1990
7	3	33873	3	-40.9	-37.1	-44.5			3	278	12.2	16.6			1990	1990

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

420 556 502

188 099 1666 -80.8

# NORMALS OF RADIOSONDE DATA

43369 MINICOY

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	558	1009	558	30.0	33.0	25.0	558	23.3	558	351	1.9	2.4	0.62	0.52	1971	1977
<i>1000</i>	441	80	441	29.3	32.0	19.0	441	22.9	441	354	2.4	3.2	6.44	0.55	1971	1977
<i>950</i>	441	513	441	24.8	30.0	15.0	441	20.3	441	002	3.0	4.1	17.47	0.72	1978	1978
<i>900</i>	441	1006	441	21.7	29.0	17.0	438	15.6	441	045	2.7	4.1	6.05	0.78	1978	1974
<i>850</i>	441	1500	441	19.1	29.0	13.0	436	9.9	441	076	4.2	5.5	6.71	0.92	1978	1971
<i>800</i>	441	2020	441	16.5	26.0	9.0	422	3.9	440	078	5.8	7.1	7.67	0.96	1978	1978
<i>750</i>	441	2554	440	13.4	22.6	6.0	381	-0.6	440	076	6.0	7.5	14.28	1.03	1990	1978
<i>700</i>	441	3143	441	10.1	18.0	3.0	333	-4.3	441	074	4.6	6.5	10.87	1.20	1990	1978
<i>650</i>	439	3756	439	6.8	15.0	1.0	273	-7.8	438	077	3.4	5.8	12.84	1.23	1990	1978
<i>600</i>	436	4409	436	3.3	11.0	-2.3	216	-11.0	436	077	3.1	5.6	15.63	1.33	1990	1979
<i>550</i>	433	5108	431	-0.6	7.0	-8.0	163	-14.7	432	075	3.3	6.2	19.44	1.34	1990	1972
<i>500</i>	430	5865	428	-4.8	3.2	-14.1	125	-17.8	427	066	3.1	6.4	21.91	1.46	1989	1980
<i>450</i>	424	6683	423	-9.6	-1.7	-17.0	102	-22.3	420	054	2.5	6.9	30.05	1.56	1990	1972
<i>400</i>	417	7589	416	-15.3	-7.1	-24.0	74	-27.4	414	044	1.4	7.8	31.86	1.78	1990	1972
<i>350</i>	409	8579	408	-22.2	-13.1	-31.0	48	-33.3	404	340	0.7	8.8	40.77	1.96	1990	1972
<i>300</i>	397	9703	396	-30.3	-19.9	-38.0	31	-41.1	394	266	1.8	9.5	48.25	2.22	1990	1971
<i>250</i>	380	10974	380	-40.4	-29.1	-50.0	4	-45.8	376	240	3.1	10.3	60.50	2.46	1980	1977
<i>200</i>	360	12459	360	-52.6	-42.1	-65.9			355	223	3.3	11.6	76.57	2.70	1990	1982
<i>175</i>	324	13309	324	-59.4	-49.1	-71.0			314	217	3.4	12.3	89.10	2.93	1989	1978
<i>150</i>	298	14257	298	-66.3	-56.9	-81.0			290	215	3.3	12.3	106.21	2.96	1989	1978
<i>125</i>	264	15338	264	-73.4	-63.1	-86.0			252	187	1.6	11.0	128.37	3.30	1990	1977
<i>100</i>	232	16622	232	-78.4	-64.1	-90.0			223	103	2.7	9.1	140.97	2.63	1990	1978
<i>80</i>	185	17907	185	-76.8	-57.9	-88.0			174	093	3.3	8.9	156.44	2.85	1980	1971
<i>70</i>	157	18696	157	-73.5	-60.1	-86.0			144	088	2.4	9.1	175.36	2.71	1989	1978
<i>60</i>	127	19623	127	-68.7	-54.5	-80.0			116	109	0.9	10.3	218.67	3.64	1989	1971
<i>50</i>	107	20748	107	-64.6	-53.5	-74.0			98	056	2.2	15.4	185.74	2.84	1989	1971
<i>40</i>	84	22156	84	-58.9	-46.7	-69.5			74	074	3.5	14.0	211.25	3.87	1989	1979
<i>30</i>	58	24040	58	-53.3	-37.1	-69.0			52	104	3.3	12.1	276.25	5.47	1989	1971
<i>25</i>	51	25211	51	-50.6	-37.3	-61.0			46	115	3.9	15.3	276.80	4.38	1989	1971
<i>20</i>	36	26759	36	-46.6	-33.1	-56.9			33	117	5.4	17.3	294.55	5.74	1989	1982
<i>15</i>	28	28654	28	-43.5	-32.5	-57.3			25	115	5.4	21.3	363.42	7.68	1990	1982
<i>10</i>	17	31323	17	-39.7	-25.1	-52.1			14	183	2.9	20.3			1989	1982
<i>7</i>	4	34105	4	-32.7	-32.1	-33.3			4	275	9.6	11.7			1990	1990

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
434	556	502					209	096	1685	-80.9



# NORMALS OF RADIOSONDE DATA

43369 MINICOY

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	569	1007	569	30.7	34.0	24.6	569	24.3	569	317	2.3	2.9	0.65	0.59	1990	1988
<i>1000</i>	493	69	493	30.1	34.0	24.8	492	24.1	493	317	2.8	3.6	5.34	0.56	1990	1988
<i>950</i>	493	506	493	25.8	33.2	21.0	492	21.3	493	324	3.2	4.4	16.14	0.62	1990	1978
<i>900</i>	493	997	493	22.6	31.4	17.2	490	17.3	493	337	1.9	4.2	5.17	0.66	1990	1982
<i>850</i>	493	1493	492	20.2	32.4	14.0	489	12.2	493	044	2.0	4.5	5.78	0.81	1990	1978
<i>800</i>	493	2015	492	17.6	30.2	11.0	488	7.6	493	069	4.0	5.5	6.77	0.92	1990	1978
<i>750</i>	493	2554	492	14.4	27.0	6.8	473	2.7	493	073	6.1	7.2	10.12	0.90	1990	1979
<i>700</i>	493	3142	492	10.9	22.0	4.0	456	-1.7	493	076	6.9	7.9	9.32	1.00	1990	1978
<i>650</i>	484	3760	481	7.1	17.0	-1.0	423	-5.7	480	074	5.9	7.2	9.81	1.07	1990	1978
<i>600</i>	477	4410	472	3.5	11.0	-3.0	367	-8.7	474	076	4.8	6.6	13.26	1.16	1990	1978
<i>550</i>	474	5113	470	-0.2	7.0	-7.0	306	-12.5	470	080	4.1	6.4	16.86	1.23	1990	1978
<i>500</i>	467	5869	466	-4.3	4.0	-13.0	257	-16.3	465	081	3.7	6.6	19.03	1.26	1974	1978
<i>450</i>	464	6692	462	-9.0	-0.3	-20.0	205	-20.6	462	079	3.4	7.1	23.91	1.54	1988	1978
<i>400</i>	455	7596	454	-14.6	-4.1	-24.0	158	-25.7	453	082	2.2	7.6	29.75	1.71	1990	1978
<i>350</i>	449	8591	449	-21.4	-8.9	-32.0	131	-31.7	446	109	0.7	8.0	37.58	2.00	1990	1975
<i>300</i>	442	9716	441	-29.5	-15.1	-40.0	99	-38.4	439	207	1.3	8.6	46.53	2.28	1990	1978
<i>250</i>	414	10991	414	-39.6	-29.1	-50.0	31	-46.2	406	205	3.6	9.6	58.37	2.43	1990	1971
<i>200</i>	371	12483	369	-51.7	-42.1	-64.0			360	196	4.6	11.2	73.01	2.66	1985	1978
<i>175</i>	332	13333	329	-58.7	-48.9	-71.0			317	190	4.3	11.3	83.83	2.67	1981	1978
<i>150</i>	296	14282	291	-66.2	-56.5	-78.0			281	176	3.6	11.0	97.86	2.73	1990	1978
<i>125</i>	251	15358	249	-73.8	-62.5	-87.0			237	129	3.7	9.4	117.03	3.13	1989	1978
<i>100</i>	216	16633	216	-80.0	-67.7	-92.0			202	106	6.3	9.8	131.00	3.40	1989	1978
<i>80</i>	169	17913	168	-76.6	-60.5	-90.0			152	114	3.5	9.1	153.01	2.72	1989	1978
<i>70</i>	142	18701	141	-72.2	-56.9	-84.0			131	185	0.9	9.8	176.20	2.54	1989	1975
<i>60</i>	121	19612	121	-67.7	-51.5	-81.0			113	308	2.3	10.5	193.97	3.64	1989	1971
<i>50</i>	94	20740	94	-62.9	-45.3	-74.0			85	271	2.8	11.8	209.47	3.76	1989	1978
<i>40</i>	60	22178	60	-57.4	-41.9	-69.0			49	021	0.8	13.7	243.60	3.99	1989	1978
<i>30</i>	40	24134	40	-49.9	-35.1	-59.1			35	109	6.3	16.3	348.53	5.48	1989	1979
<i>25</i>	29	25356	29	-47.2	-36.9	-57.0			26	133	7.2	17.6	244.27	5.07	1989	1972
<i>20</i>	21	26844	21	-44.3	-31.9	-53.7			19	115	7.7	16.2	217.06	4.21	1989	1988
<i>15</i>	12	28707	12	-43.8	-34.1	-51.7			11	070	2.3	12.2			1990	1988
<i>10</i>	10	31504	10	-38.7	-28.9	-48.9			9	133	10.1	18.8			1990	1988
<i>7</i>	5	33952	5	-37.5	-26.1	-46.7			4	114	2.3	14.5			1990	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
473	553	508					193	098	1672	-81.7

# NORMALS OF RADIOSONDE DATA

43369 MINICOY

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	1007	589	30.1	34.4	24.0	589	24.7	589	291	3.9	4.6	0.76	0.87	1990	1974
<i>1000</i>	496	65	495	29.7	41.0	23.0	493	24.4	496	293	4.7	5.5	6.38	0.77	1973	1974
<i>950</i>	496	504	495	25.8	32.4	20.8	493	21.9	496	298	5.8	6.9	14.69	0.63	1985	1985
<i>900</i>	496	994	495	22.5	30.4	18.0	492	18.2	496	299	5.7	6.8	6.91	0.80	1985	1975
<i>850</i>	496	1489	495	19.7	27.0	14.0	490	13.9	496	302	4.3	6.0	7.46	0.95	1985	1976
<i>800</i>	496	2010	496	17.1	26.0	11.6	492	9.7	496	313	2.6	5.7	8.32	0.97	1978	1981
<i>750</i>	496	2546	495	14.1	22.8	8.0	486	5.6	495	358	1.7	6.1	13.56	1.12	1990	1978
<i>700</i>	496	3137	492	10.7	19.0	5.0	472	1.2	493	036	1.8	6.9	10.44	1.19	1985	1978
<i>650</i>	489	3750	485	6.9	15.4	-6.0	451	-2.9	485	046	2.0	7.3	13.97	1.26	1985	1976
<i>600</i>	484	4405	480	3.3	11.6	-4.1	417	-6.4	481	034	1.5	7.2	14.61	1.25	1985	1985
<i>550</i>	480	5105	478	-0.4	8.2	-6.1	365	-9.9	477	005	0.9	6.6	18.96	1.37	1985	1979
<i>500</i>	474	5863	474	-4.4	5.2	-12.0	323	-13.9	472	349	0.8	6.5	19.87	1.45	1985	1975
<i>450</i>	468	6685	467	-8.9	-0.9	-16.0	285	-18.3	463	012	0.5	6.3	24.34	1.38	1990	1971
<i>400</i>	459	7590	458	-14.4	-7.3	-21.3	249	-23.3	455	034	0.2	6.2	27.38	1.45	1990	1979
<i>350</i>	452	8588	449	-21.0	-13.1	-29.5	206	-29.3	448	114	0.6	5.9	33.61	1.64	1989	1979
<i>300</i>	433	9715	433	-29.0	-19.3	-36.7	167	-36.8	430	117	1.2	6.1	40.19	1.97	1989	1979
<i>250</i>	417	10994	415	-39.1	-28.1	-47.0	39	-44.0	412	123	2.7	7.5	51.16	2.19	1985	1978
<i>200</i>	393	12485	392	-51.5	-40.5	-60.0			389	112	5.7	9.9	67.14	2.35	1985	1978
<i>175</i>	360	13335	360	-58.8	-47.9	-67.0			353	109	7.8	11.5	77.74	2.60	1985	1971
<i>150</i>	324	14285	324	-66.7	-56.3	-77.1			316	105	10.5	14.0	93.58	2.73	1990	1982
<i>125</i>	272	15356	272	-74.4	-63.5	-84.0			269	102	12.9	15.4	109.61	2.77	1990	1971
<i>100</i>	231	16632	231	-79.9	-61.9	-90.1			220	100	12.4	14.6	121.02	3.58	1989	1979
<i>80</i>	170	17912	169	-77.6	-55.1	-91.0			161	097	10.1	13.2	161.38	2.99	1989	1978
<i>70</i>	146	18707	146	-72.9	-53.1	-90.0			137	104	6.5	11.3	166.90	3.02	1989	1971
<i>60</i>	118	19614	118	-67.9	-50.1	-85.0			110	085	3.5	9.9	173.58	4.04	1989	1971
<i>50</i>	101	20727	101	-62.3	-42.7	-76.0			91	107	3.6	10.6	183.85	4.13	1990	1971
<i>40</i>	56	22123	56	-58.4	-46.5	-70.0			48	049	1.3	9.2	217.96	4.23	1990	1978
<i>30</i>	39	24029	39	-52.1	-41.7	-63.1			34	086	3.8	10.5	167.15	4.28	1990	1988
<i>25</i>	35	25217	35	-49.5	-38.5	-61.3			30	097	7.6	11.8	169.75	3.01	1990	1988
<i>20</i>	27	26725	27	-47.1	-34.9	-59.1			22	096	9.0	13.7	181.87	3.87	1990	1988
<i>15</i>	22	28592	22	-45.5	-35.1	-56.7			17	100	17.2	20.4	207.78	3.58	1990	1988
<i>10</i>	17	31212	17	-43.8	-36.7	-52.9			13	106	25.6	29.0			1983	1988
<i>7</i>	12	33499	12	-43.0	-34.1	-49.7			9	109	32.2	33.4			1988	1988

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

478 556 502

206 097 1682 -82.2

# NORMALS OF RADIOSONDE DATA

43369 MINICOY

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	570	1008	570	28.8	32.2	24.0	570	24.7	570	274	6.7	7.2	0.76	0.56	1983	1971
<i>1000</i>	469	69	469	28.3	31.6	23.6	469	24.4	468	275	7.9	8.5	4.96	0.65	1983	1985
<i>950</i>	469	502	469	24.8	30.6	19.6	469	21.6	468	279	10.2	10.7	15.67	0.60	1983	1986
<i>900</i>	469	995	469	21.8	29.4	17.0	469	18.1	468	285	12.2	12.8	4.50	0.68	1988	1971
<i>850</i>	469	1490	469	18.8	26.6	14.0	469	14.0	468	288	12.4	13.0	4.88	0.79	1988	1971
<i>800</i>	469	2009	467	15.9	23.8	11.0	467	9.6	467	288	11.8	12.4	4.97	0.92	1988	1971
<i>750</i>	469	2540	466	12.9	19.8	7.0	463	4.9	467	286	10.6	11.5	13.79	0.98	1988	1971
<i>700</i>	469	3132	467	9.8	16.0	5.0	455	0.2	468	284	9.9	11.0	8.15	1.11	1983	1971
<i>650</i>	466	3741	464	6.4	12.6	-5.7	441	-3.8	462	282	9.3	10.5	11.17	1.22	1983	1985
<i>600</i>	464	4395	462	2.7	8.2	-2.5	431	-7.0	458	282	8.5	10.2	13.36	1.20	1990	1985
<i>550</i>	461	5094	461	-1.0	7.2	-10.7	385	-10.6	455	280	7.8	9.6	18.37	1.30	1990	1985
<i>500</i>	459	5851	458	-5.0	4.0	-15.7	360	-14.1	454	275	6.3	8.7	19.52	1.43	1978	1982
<i>450</i>	457	6671	456	-9.6	9.0	-17.1	343	-17.9	450	271	4.6	7.8	26.98	1.59	1986	1985
<i>400</i>	451	7576	450	-15.0	-6.1	-24.1	329	-23.0	445	245	1.6	7.1	28.74	1.61	1990	1985
<i>350</i>	444	8572	441	-21.7	-13.5	-29.0	303	-29.1	436	097	2.7	7.5	34.37	1.77	1990	1977
<i>300</i>	437	9695	435	-29.7	-21.3	-38.0	246	-36.7	429	085	6.8	9.7	44.18	2.09	1990	1977
<i>250</i>	425	10970	421	-39.8	-30.3	-49.0	65	-44.5	415	086	11.4	13.3	55.58	2.39	1990	1977
<i>200</i>	401	12459	398	-52.1	-40.5	-63.0			387	086	18.9	20.4	70.25	2.59	1990	1977
<i>175</i>	362	13310	361	-59.2	-47.1	-70.0			351	087	24.6	25.8	81.11	2.73	1990	1977
<i>150</i>	328	14258	327	-66.8	-53.3	-79.0			312	089	30.4	31.5	96.52	2.89	1990	1978
<i>125</i>	282	15340	281	-74.0	-62.1	-85.0			265	094	33.4	34.4	118.29	3.24	1983	1978
<i>100</i>	235	16624	235	-78.2	-66.0	-90.0			221	097	26.2	27.3	138.51	2.96	1973	1971
<i>80</i>	176	17912	176	-74.2	-61.7	-85.5			164	098	15.7	17.7	150.19	2.73	1983	1982
<i>70</i>	149	18723	149	-69.9	-55.3	-82.1			140	094	13.3	15.3	173.11	3.22	1985	1982
<i>60</i>	124	19659	124	-66.2	-52.1	-75.5			116	091	10.2	13.0	181.10	2.80	1985	1985
<i>50</i>	104	20764	104	-62.8	-48.9	-72.3			93	097	10.8	14.8	179.83	2.78	1990	1988
<i>40</i>	67	22190	67	-58.8	-42.5	-67.0			63	101	11.1	13.7	197.42	2.75	1990	1971
<i>30</i>	46	24062	46	-53.1	-38.3	-65.3			41	104	12.4	15.7	275.70	4.19	1990	1986
<i>25</i>	41	25256	41	-50.8	-35.7	-64.3			39	105	17.2	19.7	269.30	5.20	1990	1988
<i>20</i>	32	26787	32	-48.6	-37.3	-60.9			31	113	17.9	21.7	197.65	4.93	1989	1988
<i>15</i>	29	28678	29	-46.3	-35.1	-57.7			28	107	24.3	26.0	253.11	5.12	1989	1988
<i>10</i>	25	31354	25	-43.4	-32.3	-53.1			24	109	35.5	36.2	313.60	5.45	1987	1988
<i>7</i>	18	33633	18	-42.5	-34.1	-49.1			18	106	41.9	42.7			1989	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

450 562 492

215 103 1646 -80.2

# NORMALS OF RADIOSONDE DATA

43369 MINICOY

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	588	1008	588	28.6	32.0	24.0	588	24.3	588	282	6.4	6.9	0.79	0.66	1988	1971
1000	491	73	491	28.0	31.2	20.0	490	24.0	491	284	7.4	8.0	6.43	0.51	1988	1971
950	491	508	490	24.3	33.0	19.2	490	20.9	490	288	9.7	10.4	17.64	0.62	1972	1985
900	491	998	490	21.0	30.2	14.0	490	17.3	490	293	12.0	12.7	5.94	0.72	1989	1971
850	491	1491	491	18.2	26.8	12.4	491	13.3	490	296	12.6	13.2	6.16	0.74	1989	1990
800	491	2010	491	15.2	23.2	9.0	490	8.7	490	296	12.4	12.9	6.81	0.76	1989	1972
750	491	2542	490	12.4	20.4	8.0	484	4.0	490	293	11.2	11.8	13.60	0.86	1989	1972
700	491	3130	489	9.3	18.0	4.0	476	-0.5	490	290	9.6	10.3	9.31	0.98	1989	1978
650	488	3738	485	5.8	16.0	-1.7	468	-4.1	485	290	8.0	8.9	12.90	0.99	1989	1981
600	484	4393	480	2.3	13.6	-3.1	449	-7.3	481	287	6.7	8.2	17.67	1.01	1989	1980
550	477	5091	474	-1.3	9.2	-8.0	429	-10.8	475	282	5.4	7.4	20.46	1.15	1989	1978
500	475	5846	474	-5.4	4.2	-12.1	399	-15.0	472	276	4.0	7.0	18.83	1.32	1979	1985
450	470	6664	470	-10.1	8.6	-16.3	385	-19.2	465	255	1.6	6.4	26.21	1.46	1989	1990
400	466	7566	466	-15.8	-7.1	-23.3	366	-24.3	461	122	1.4	6.8	27.24	1.44	1980	1990
350	462	8558	462	-22.6	-14.1	-31.7	339	-30.6	453	101	6.1	8.8	31.18	1.53	1980	1990
300	454	9678	453	-30.6	-20.9	-42.0	280	-38.5	443	094	9.6	11.4	40.36	1.93	1989	1977
250	438	10949	435	-40.6	-30.3	-52.1	59	-45.1	427	093	15.4	16.7	51.43	2.21	1983	1990
200	410	12429	406	-53.0	-42.3	-67.0			398	088	23.8	24.9	68.95	2.39	1983	1976
175	349	13279	345	-60.0	-49.1	-70.5			340	089	29.5	30.2	78.73	2.54	1983	1979
150	316	14223	316	-67.6	-55.9	-78.0			306	089	35.2	35.9	91.91	2.74	1990	1978
125	278	15302	278	-74.6	-62.1	-88.0			269	094	37.9	38.8	106.48	3.03	1990	1978
100	236	16588	236	-76.4	-56.7	-90.0			227	098	27.3	28.3	126.50	3.11	1990	1978
80	188	17889	188	-71.8	-60.5	-86.0			176	099	17.9	19.2	146.69	3.04	1990	1978
70	169	18689	169	-68.8	-57.5	-82.0			158	098	15.5	17.0	162.00	2.73	1990	1972
60	144	19620	144	-65.8	-52.3	-80.0			132	094	15.3	16.6	161.77	3.05	1990	1972
50	111	20753	111	-62.4	-48.1	-75.1			100	092	14.1	16.2	193.50	3.42	1990	1987
40	66	22170	66	-59.7	-44.5	-74.1			60	100	15.7	17.9	214.12	4.91	1990	1980
30	38	24112	38	-55.2	-42.3	-76.1			34	099	16.7	18.5	263.27	6.85	1990	1980
25	30	25255	30	-52.2	-42.5	-63.3			27	099	15.8	19.1	242.95	4.55	1987	1987
20	23	26782	23	-49.3	-40.1	-60.7			20	107	20.3	22.8	144.94	4.03	1987	1988
15	20	28644	20	-47.4	-35.3	-58.7			17	103	35.4	36.6			1987	1988
10	17	31280	17	-45.6	-35.9	-55.7			15	102	49.1	49.5			1989	1988
7	13	33633	13	-44.4	-37.3	-52.9			11	100	51.6	51.9			1987	1988

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

478 567 484

237 108 1616 -79.1

# NORMALS OF RADIOSONDE DATA

43369 MINICOY

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	1008	589	28.4	31.2	24.0	589	24.1	589	288	5.8	6.5	0.65	0.63	1988	1971
1000	517	75	517	27.9	31.0	23.0	517	23.9	516	290	6.9	7.5	5.99	0.68	1988	1975
950	517	507	516	24.2	30.2	20.0	516	20.8	516	294	9.0	9.6	16.77	0.61	1988	1971
900	517	999	517	21.0	29.6	17.0	516	17.1	516	297	10.9	11.5	6.39	0.74	1987	1971
850	517	1493	517	18.1	28.6	13.0	516	13.3	516	299	11.4	11.8	7.00	0.72	1988	1976
800	517	2011	517	15.3	24.8	11.0	514	9.3	515	297	10.7	11.1	7.80	0.78	1988	1971
750	517	2543	517	12.5	21.4	8.0	513	4.7	515	293	9.8	10.3	13.71	0.80	1987	1971
700	517	3132	517	9.4	19.2	3.6	510	-0.2	515	290	8.9	9.6	10.08	0.92	1987	1986
650	512	3742	512	6.1	14.0	0.0	490	-4.2	505	287	8.0	8.7	12.16	0.97	1988	1976
600	507	4396	506	2.6	10.0	-4.0	469	-7.9	498	285	6.6	8.0	14.03	1.01	1988	1973
550	500	5095	498	-1.1	10.4	-7.0	443	-11.5	490	284	5.3	6.9	19.82	1.13	1982	1977
500	495	5851	493	-5.2	2.0	-11.0	393	-15.3	484	280	3.7	6.1	19.00	1.22	1986	1977
450	490	6669	490	-9.9	-1.7	-17.0	374	-19.5	474	273	1.3	5.9	25.94	1.32	1986	1977
400	485	7573	485	-15.4	-7.1	-23.0	341	-24.7	469	097	2.0	6.1	26.86	1.49	1986	1977
350	478	8566	477	-22.1	-11.3	-30.0	288	-31.2	461	096	6.2	8.2	34.67	1.79	1990	1978
300	468	9688	467	-30.3	-19.5	-38.0	212	-38.6	450	099	9.7	11.0	41.51	1.98	1990	1978
250	452	10959	452	-40.4	-29.7	-48.0	35	-45.1	427	098	15.1	16.3	55.89	2.25	1990	1972
200	432	12444	432	-52.6	-42.1	-61.0	1	-57.7	404	093	24.2	25.1	72.72	2.42	1987	1978
175	385	13288	385	-59.8	-48.7	-69.0			351	091	30.2	31.0	83.73	2.75	1990	1977
150	330	14234	330	-67.1	-55.3	-77.0			305	091	35.0	35.6	100.57	2.96	1990	1978
125	265	15301	264	-74.3	-60.5	-87.0			246	093	34.2	35.2	120.50	3.22	1990	1978
100	218	16594	217	-75.7	-64.0	-85.9			205	096	23.5	24.4	140.61	2.65	1973	1982
80	160	17890	160	-70.7	-56.1	-80.0			151	095	14.5	15.5	149.85	2.44	1989	1972
70	147	18696	147	-67.9	-53.3	-77.0			136	095	15.0	15.8	165.22	2.49	1989	1972
60	119	19629	119	-65.5	-50.1	-75.0			105	094	14.0	15.3	170.04	2.91	1989	1972
50	91	20771	91	-62.3	-46.7	-75.0			83	093	14.7	16.1	194.43	3.36	1989	1972
40	50	22205	50	-58.4	-43.7	-73.0			46	099	14.7	18.4	223.10	3.40	1989	1972
30	28	24168	28	-53.2	-39.7	-60.0			23	096	13.2	15.2	242.12	4.06	1989	1971
25	16	25447	16	-49.7	-41.5	-57.9			13	081	13.0	17.3			1990	1989
20	13	26984	13	-45.7	-38.5	-55.1			10	096	15.9	18.5			1990	1989
15	5	28666	5	-47.7	-43.7	-51.7			3	107	15.0	15.7			1990	1989
10	4	31307	4	-43.0	-38.5	-46.9			2	113	25.4	25.5			1990	1989
7	2	33583	2	-42.6	-42.5	-42.7			1	099	39.0	39.0			1988	1989

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

504 563 490

213 109 1607 -78.4

NORMALS OF RADIOSONDE DATA

43369 MINICOY

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	P/H	N	T	TX	TN	N	TD	N	DDD	VF	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	540	1008	540	28.2	31.6	22.4	540	23.9	539	297	4.6	5.1	0.91	0.59	1987	1990
1000	507	77	507	27.8	31.0	23.0	506	23.6	506	297	5.8	6.4	6.84	0.55	1987	1981
950	507	512	507	23.9	29.8	18.0	505	20.6	506	301	7.0	7.6	18.04	0.69	1988	1990
900	507	1000	507	20.8	30.6	12.2	506	17.1	506	302	7.8	8.3	7.27	0.75	1988	1990
850	507	1493	507	18.1	28.0	10.0	506	13.3	506	300	7.7	8.2	7.77	0.76	1988	1990
800	507	2011	507	15.2	25.4	7.0	506	8.9	506	296	7.2	7.8	8.75	0.78	1988	1990
750	507	2545	506	12.4	22.8	4.6	499	4.6	505	293	6.7	7.4	13.42	0.82	1988	1990
700	507	3132	506	9.4	19.6	2.0	488	0.4	505	290	6.3	7.2	10.38	0.89	1988	1972
650	500	3742	498	6.2	14.4	-5.0	466	-3.7	497	288	5.7	7.0	14.66	1.08	1988	1976
600	496	4396	495	2.8	10.4	-4.0	449	-7.0	492	291	4.3	6.3	13.58	1.08	1989	1972
550	492	5095	492	-0.9	6.0	-6.0	428	-10.3	487	295	3.0	5.6	18.07	1.12	1990	1972
500	489	5852	489	-5.1	1.8	-10.0	366	-14.3	482	314	1.2	5.1	18.03	1.17	1989	1972
450	485	6669	484	-9.8	-2.9	-15.3	338	-19.4	474	084	0.6	5.3	24.83	1.32	1989	1982
400	480	7576	479	-15.3	-6.9	-22.0	294	-24.8	470	091	3.1	6.0	24.56	1.42	1990	1977
350	471	8566	469	-22.1	-14.1	-29.0	241	-31.3	456	097	5.4	7.2	33.23	1.64	1989	1977
300	459	9691	455	-30.4	-20.5	-39.0	177	-39.2	443	103	8.4	9.6	37.97	1.85	1989	1977
250	437	10961	434	-40.7	-31.3	-48.0	20	-46.8	417	102	13.2	14.2	48.08	2.00	1990	1971
200	417	12441	417	-53.1	-43.5	-62.0			391	096	20.2	21.0	60.12	2.08	1989	1977
175	383	13285	382	-60.2	-50.3	-68.0			357	096	24.1	24.9	70.28	2.30	1989	1971
150	338	14226	336	-67.7	-56.9	-76.5			319	096	26.9	27.8	78.78	2.46	1989	1982
125	272	15296	271	-74.3	-63.1	-85.0			254	098	26.0	27.1	91.68	2.83	1990	1978
100	232	16588	232	-75.4	-63.1	-86.0			216	100	17.5	18.6	106.04	2.78	1980	1977
80	178	17892	178	-70.9	-57.3	-81.0			162	093	11.7	13.2	112.70	2.55	1980	1972
70	157	18696	157	-68.0	-53.1	-80.0			145	094	9.8	11.6	126.08	2.68	1980	1972
60	130	19629	130	-65.4	-53.7	-75.0			116	094	9.8	11.8	121.17	2.76	1980	1972
50	97	20759	97	-61.9	-52.9	-71.0			86	097	10.3	12.8	142.38	2.51	1983	1972
40	67	22166	67	-58.7	-48.0	-73.0			54	094	9.7	12.6	163.81	3.19	1977	1978
30	34	24102	34	-53.1	-44.1	-64.0			25	084	10.8	14.5	217.12	4.12	1980	1973
25	20	25334	20	-50.4	-43.5	-63.0			15	103	10.2	15.3			1980	1973
20	14	26925	14	-46.8	-42.5	-58.1			10	107	8.6	12.5			1980	1990
15	8	28864	8	-43.9	-39.7	-48.9			6	096	20.2	22.3			1980	1983
10	5	31549	5	-41.5	-39.1	-43.5			3	087	22.0	27.0			1987	1983
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
468	562	492					206	112	1595	-77.4

# NORMALS OF RADIOSONDE DATA

43369 MINICOY

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	589	1009	589	28.4	30.8	23.6	589	23.9	589	291	2.7	3.6	0.76	0.81	1982	1981
1000	531	78	528	27.8	30.2	23.6	528	23.5	528	292	3.4	4.4	4.64	0.72	1979	1989
950	528	510	528	24.0	29.0	15.4	528	20.5	528	298	4.1	5.6	18.33	0.65	1989	1987
900	528	1001	528	21.0	27.2	13.8	528	16.8	528	298	3.9	5.7	5.27	0.77	1989	1987
850	528	1495	528	18.4	27.0	11.6	528	12.7	527	298	3.2	5.6	6.05	0.79	1973	1987
800	528	2013	527	15.7	28.0	10.2	523	8.8	527	297	2.7	5.7	7.08	0.84	1977	1987
750	528	2547	525	12.8	23.0	2.2	516	4.4	526	298	2.6	5.8	11.26	0.81	1990	1989
700	528	3135	526	9.8	22.0	4.0	504	0.4	527	297	2.5	5.8	9.54	0.84	1990	1972
650	524	3749	523	6.4	18.0	0.0	479	-3.5	523	298	2.0	6.0	10.91	0.87	1990	1982
600	518	4402	518	2.9	13.2	-3.3	455	-6.8	516	309	1.1	5.6	11.80	0.94	1990	1986
550	515	5102	513	-0.9	9.4	-6.7	429	-10.4	513	352	0.2	5.2	15.73	0.96	1990	1990
500	510	5857	509	-5.0	5.6	-11.1	388	-14.7	507	078	1.0	5.2	16.47	1.08	1990	1989
450	503	6676	503	-9.7	1.0	-16.5	348	-19.6	500	088	1.9	5.3	22.62	1.13	1990	1981
400	495	7580	493	-15.2	-5.1	-21.0	301	-25.0	490	092	2.9	5.6	21.70	1.30	1990	1977
350	484	8574	483	-22.0	-12.1	-30.0	231	-31.2	475	100	4.1	6.2	29.89	1.53	1989	1977
300	467	9696	465	-30.2	-22.1	-40.0	153	-38.4	455	106	5.7	7.6	33.05	1.67	1990	1977
250	445	10967	444	-40.5	-31.9	-51.0	23	-46.5	428	107	9.1	10.6	41.30	1.77	1989	1976
200	408	12451	408	-52.9	-43.5	-64.0			391	102	13.1	14.7	52.53	1.82	1990	1976
175	363	13297	363	-60.1	-50.1	-72.0			346	103	15.1	16.9	63.45	2.07	1990	1976
150	325	14235	325	-67.6	-57.1	-81.0			309	103	16.8	18.7	74.03	2.27	1990	1977
125	272	15314	272	-74.4	-65.5	-85.0			261	105	15.5	17.3	85.29	2.31	1980	1977
100	226	16597	225	-78.4	-63.7	-88.0			216	099	10.0	12.3	102.24	2.97	1986	1972
80	178	17886	178	-74.0	-55.7	-90.0			165	096	7.2	9.4	111.82	3.18	1990	1977
70	146	18688	146	-70.7	-54.1	-82.0			136	105	6.3	9.4	128.24	3.59	1990	1976
60	123	19605	123	-66.8	-50.5	-78.0			113	100	5.7	9.5	124.91	3.17	1990	1972
50	94	20728	93	-63.5	-47.5	-76.0			86	102	7.2	10.7	141.85	3.20	1990	1977
40	64	22143	64	-59.4	-47.7	-70.0			61	093	8.2	11.8	153.07	3.02	1986	1971
30	40	24027	40	-54.1	-42.1	-68.0			35	094	13.8	16.9	195.47	4.95	1988	1973
25	30	25207	30	-51.2	-38.3	-60.0			25	094	16.3	20.5	188.83	4.13	1988	1971
20	19	26756	19	-47.3	-37.5	-53.1			16	087	20.9	25.5			1983	1983
15	11	28632	11	-44.0	-38.1	-49.3			9	105	19.1	22.1			1989	1987
10	6	31364	6	-42.0	-38.5	-45.7			4	101	21.1	21.5			1987	1987
7	2	33842	2	-41.1	-40.1	-42.1			2	101	35.4	35.5			1989	1989
<b>FREEZING LEVEL</b>	<b>N</b>	<b>P</b>	<b>ALT</b>	<b>1ST TROPOPAUSE</b>				<b>2ND TROPOPAUSE</b>								
				<b>N</b>	<b>P</b>	<b>ALT</b>	<b>T</b>	<b>N</b>	<b>P</b>	<b>ALT</b>	<b>T</b>					
	513	561	494	1	157	1372	-78.0	220	105	1638	-80.0					

# NORMALS OF RADIOSONDE DATA

43369 MINICOY

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	568	1009	568	28.2	31.0	24.0	568	23.4	568	313	1.1	2.6	0.76	0.70	1980	1976
1000	483	80	482	27.7	30.4	23.8	482	22.9	482	326	1.4	3.3	6.39	0.75	1979	1985
950	483	513	482	24.0	29.2	18.0	482	20.2	482	338	1.8	4.5	19.31	0.69	1987	1971
900	483	1003	483	20.9	27.4	15.0	482	16.4	482	354	1.5	4.7	6.35	0.85	1988	1971
850	483	1497	483	18.0	26.0	12.0	483	12.0	482	001	1.1	4.8	6.61	0.91	1988	1971
800	484	2014	484	15.3	22.4	10.0	478	7.7	483	345	0.9	4.9	7.25	0.85	1988	1971
750	484	2548	483	12.6	20.0	7.0	451	3.4	483	323	0.9	5.1	12.99	0.89	1988	1971
700	484	3135	483	9.7	17.8	3.0	416	-0.3	482	331	0.9	5.4	9.81	0.91	1988	1971
650	477	3747	477	6.6	15.8	0.0	383	-4.0	474	360	0.8	5.5	13.48	0.95	1988	1977
600	475	4400	475	3.0	11.0	-3.1	357	-7.1	465	059	1.3	5.6	13.49	1.13	1988	1989
550	470	5100	470	-0.9	8.0	-8.1	329	-10.8	459	070	2.1	5.7	18.57	1.18	1988	1989
500	469	5856	467	-5.1	4.4	-13.0	288	-14.9	459	074	2.7	5.9	18.57	1.27	1981	1978
450	460	6674	459	-9.9	8.4	-16.0	253	-19.7	447	076	3.5	6.4	24.22	1.52	1980	1971
400	452	7579	452	-15.6	-7.7	-23.0	206	-25.6	440	083	3.9	6.7	27.52	1.59	1990	1978
350	437	8571	436	-22.5	-13.7	-33.0	154	-31.8	423	091	3.6	6.7	32.91	1.90	1990	1978
300	428	9691	427	-30.7	-21.5	-40.0	115	-39.5	413	109	3.7	7.1	43.12	2.16	1990	1978
250	411	10962	410	-40.8	-29.5	-50.0	17	-47.6	394	126	5.3	9.0	54.52	2.53	1985	1971
200	378	12444	377	-53.1	-41.5	-65.0			357	130	7.1	12.0	73.34	2.87	1980	1977
175	338	13284	337	-60.2	-49.5	-74.0			316	132	7.3	13.0	82.11	3.02	1980	1977
150	312	14227	312	-67.5	-54.5	-82.0			290	131	5.9	11.9	95.28	3.05	1990	1977
125	274	15299	274	-75.1	-60.5	-90.0			251	118	4.9	9.8	111.23	3.21	1990	1977
100	231	16575	230	-80.2	-61.0	-91.0			209	101	6.1	8.8	139.03	3.12	1977	1977
80	186	17839	186	-76.5	-63.5	-90.0			167	103	4.5	7.7	158.27	2.85	1990	1977
70	169	18634	169	-71.8	-59.7	-83.0			149	103	2.9	7.2	163.60	2.82	1990	1977
60	146	19555	146	-67.3	-53.7	-79.3			124	114	2.1	9.0	166.74	3.23	1990	1981
50	112	20682	112	-62.9	-54.1	-74.9			93	101	1.6	9.6	180.20	2.55	1990	1981
40	77	22085	77	-59.2	-50.5	-69.9			61	127	1.9	11.5	183.34	2.32	1990	1981
30	52	23962	52	-54.7	-42.7	-68.3			40	093	3.4	15.2	191.10	3.63	1983	1981
25	33	25131	33	-52.5	-42.7	-59.0			24	094	13.3	17.2	221.16	3.18	1983	1978
20	22	26647	22	-48.6	-38.9	-55.9			15	105	19.3	25.9	198.66	1.96	1990	1990
15	15	28581	15	-45.3	-33.3	-52.3			10	110	19.4	27.4			1990	1990
10	12	31233	12	-41.8	-31.5	-49.1			9	103	17.8	29.9			1988	1985
7	4	33412	4	-41.5	-40.1	-43.7			1	185	19.0	19.0			1988	1989

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
468	561	495					207	099	1661	-82.3



## NORMALS OF RADIOSONDE DATA

43369 MINICOY

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	541	1009	541	28.5	34.4	24.0	540	23.0	541	035	1.6	2.4	0.67	0.67	1990	1971
1000	461	86	461	27.9	30.8	23.0	460	22.6	461	037	2.4	3.4	4.59	0.64	1981	1971
950	461	521	461	24.0	29.8	19.0	459	19.9	461	042	3.5	4.6	20.20	0.70	1990	1975
900	461	1009	460	20.9	30.4	15.0	458	15.9	461	059	3.4	4.7	5.15	0.86	1990	1975
850	461	1502	460	18.1	27.4	11.0	457	11.2	461	073	3.2	4.8	6.00	0.88	1990	1975
800	461	2020	459	15.4	24.8	8.0	443	7.0	461	076	2.7	4.9	7.10	0.87	1990	1972
750	461	2554	460	12.7	22.0	6.8	427	2.5	460	079	2.8	5.1	11.60	0.89	1990	1987
700	461	3141	460	9.8	19.0	2.6	389	-1.1	459	081	3.2	5.4	9.79	0.95	1990	1981
650	455	3754	454	6.5	16.0	-3.5	351	-5.1	450	081	3.7	5.8	11.66	1.00	1990	1979
600	449	4405	449	2.9	10.0	-3.5	320	-8.7	445	083	4.3	6.3	13.57	1.07	1990	1979
550	447	5104	447	-1.1	5.4	-7.0	293	-12.3	441	085	4.7	6.7	15.49	1.15	1990	1977
500	444	5861	444	-5.4	0.6	-12.0	254	-16.3	438	085	5.2	7.3	20.51	1.19	1990	1977
450	434	6676	434	-10.3	-3.7	-18.0	218	-20.9	428	085	5.0	7.6	22.76	1.31	1988	1977
400	425	7580	423	-15.8	-8.1	-24.0	166	-26.0	418	082	4.5	8.0	25.21	1.32	1988	1977
350	397	8571	394	-22.6	-12.5	-30.1	122	-32.1	390	099	3.6	8.1	31.51	1.50	1988	1982
300	388	9689	387	-30.9	-19.1	-40.1	80	-39.9	378	144	3.4	7.9	37.36	1.71	1988	1982
250	370	10956	368	-41.3	-27.1	-51.7	12	-47.6	353	166	5.6	9.6	46.43	1.88	1988	1982
200	348	12432	345	-53.4	-36.7	-65.3			326	172	6.2	12.1	58.57	2.09	1988	1982
175	313	13275	312	-60.5	-50.7	-71.9			291	181	5.5	12.4	68.60	2.07	1990	1982
150	276	14214	275	-67.6	-57.7	-78.0			256	192	4.8	12.4	78.70	2.28	1990	1978
125	244	15285	244	-74.5	-64.5	-84.0			225	213	2.5	10.4	97.79	2.53	1990	1976
100	211	16566	211	-80.2	-71.5	-88.9			195	113	2.9	9.7	118.47	2.56	1990	1982
80	161	17827	161	-78.2	-62.1	-91.0			135	115	4.8	9.1	127.81	3.30	1986	1977
70	144	18606	144	-74.1	-57.9	-90.0			122	115	3.0	8.9	146.69	3.32	1986	1977
60	113	19518	113	-69.6	-54.7	-87.0			95	069	1.4	9.8	145.48	3.70	1986	1977
50	85	20626	85	-65.2	-55.5	-81.0			71	129	0.9	11.6	181.35	4.05	1983	1977
40	52	22018	52	-61.7	-51.1	-73.0			41	223	0.3	13.0	216.44	4.44	1979	1977
30	32	23856	32	-57.8	-50.1	-67.0			26	301	1.9	15.5	283.83	4.11	1990	1973
25	24	25062	24	-53.9	-46.9	-64.0			16	052	3.4	18.1	366.41	4.29	1990	1973
20	16	26689	16	-49.7	-43.5	-57.1			10	352	2.2	15.3			1986	1985
15	12	28693	12	-46.5	-39.5	-54.7			5	092	11.1	15.2			1990	1985
10	8	31454	8	-41.4	-32.1	-51.5			4	091	23.4	24.5			1990	1985
7	2	33438	2	-44.6	-40.1	-49.1			2	088	31.7	32.5			1986	1985

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
445	563	491					192	096	1677	-82.6

## NORMALS OF RADIOSONDE DATA

43003 SANTACRUZ (BMB)

JANUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	1010	589	27.7	33.0	22.0	589	15.4	589	317	3.3	3.6	0.95	0.97	1986	1973
<i>1000</i>	551	99	550	27.1	32.2	20.0	548	14.5	550	319	4.4	4.8	7.01	0.92	1986	1973
<i>950</i>	551	521	549	24.2	32.0	16.0	542	8.8	549	310	2.8	4.4	13.17	1.02	1974	1971
<i>900</i>	551	1018	550	21.0	31.0	11.0	532	5.6	551	288	0.6	3.7	7.92	1.03	1974	1974
<i>850</i>	551	1509	550	17.4	28.0	10.0	517	2.9	550	169	1.2	4.5	8.56	1.11	1974	1971
<i>800</i>	550	2023	548	14.1	26.0	6.6	465	-0.4	549	176	1.9	5.4	9.79	1.23	1974	1986
<i>750</i>	550	2565	547	11.1	21.0	2.8	363	-4.5	550	222	1.9	6.0	10.39	1.32	1974	1986
<i>700</i>	550	3136	549	8.3	16.0	1.2	265	-8.5	549	263	3.3	6.7	12.34	1.20	1974	1986
<i>650</i>	548	3748	544	5.2	12.0	-5.0	211	-11.0	546	271	5.3	8.2	18.40	1.15	1974	1976
<i>600</i>	546	4393	542	1.7	9.0	-8.1	195	-14.2	545	269	7.8	10.1	15.98	1.17	1975	1982
<i>550</i>	543	5100	541	-2.5	5.0	-13.1	187	-18.0	542	268	9.9	12.1	18.41	1.35	1975	1982
<i>500</i>	540	5839	538	-7.2	1.0	-16.7	172	-22.0	539	268	12.5	14.6	20.25	1.50	1975	1982
<i>450</i>	536	6652	534	-12.5	-4.0	-21.1	162	-26.7	535	265	15.2	17.5	25.75	1.67	1975	1982
<i>400</i>	532	7542	530	-18.3	-9.0	-27.9	156	-31.6	532	265	18.0	20.2	30.78	1.87	1973	1982
<i>350</i>	524	8531	521	-25.0	-15.0	-34.9	153	-37.2	522	263	21.0	23.3	34.37	2.03	1975	1982
<i>300</i>	513	9633	512	-32.7	-22.3	-44.7	147	-44.2	511	259	23.8	26.2	45.11	2.03	1990	1988
<i>250</i>	499	10894	498	-42.2	-31.5	-56.7	135	-52.6	495	256	25.3	27.9	54.58	1.98	1990	1988
<i>200</i>	481	12367	480	-53.5	-43.0	-68.1	5	-59.0	476	254	25.5	27.9	65.05	1.98	1977	1988
<i>175</i>	442	13214	441	-59.6	-48.5	-73.1			437	252	25.0	27.1	71.29	2.09	1983	1988
<i>150</i>	423	14162	422	-65.7	-55.5	-80.9			419	253	23.3	25.3	79.61	2.37	1987	1988
<i>125</i>	389	15252	389	-71.3	-60.1	-84.1			385	256	19.8	21.8	87.46	2.83	1982	1988
<i>100</i>	347	16548	347	-76.0	-65.5	-89.1			340	259	14.6	16.4	102.15	3.19	1982	1988
<i>80</i>	296	17837	296	-75.9	-64.1	-87.9			293	256	8.9	11.2	112.60	2.82	1986	1988
<i>70</i>	272	18614	272	-72.9	-61.7	-85.7			266	258	6.4	9.2	121.50	2.87	1986	1988
<i>60</i>	223	19526	223	-68.8	-58.1	-83.5			215	264	4.6	8.1	124.95	3.05	1981	1988
<i>50</i>	180	20623	180	-63.8	-50.3	-80.9			177	258	2.0	7.1	150.87	3.50	1986	1988
<i>40</i>	107	22033	107	-59.1	-48.0	-67.7			104	250	2.5	6.9	142.84	3.36	1978	1988
<i>30</i>	66	23831	66	-55.3	-42.5	-66.1			62	290	1.3	7.4	180.62	4.81	1990	1982
<i>25</i>	40	24983	40	-53.8	-44.0	-61.5			37	026	0.5	7.9	220.46	4.04	1976	1985
<i>20</i>	29	26454	29	-51.5	-42.5	-60.5			26	129	1.2	8.9	242.09	3.35	1984	1985
<i>15</i>	13	28332	13	-49.7	-41.5	-57.1			11	188	4.0	10.3			1987	1985
<i>10</i>	5	30926	5	-48.5	-43.3	-51.1			5	232	9.2	12.6			1987	1985
<i>7</i>	2	33020	2	-48.4	-47.7	-49.1			2	233	8.2	13.0			1984	1985

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

541 578 470

2 218 1176 -54.5

316 096 1677 -77.8

# NORMALS OF RADIOSONDE DATA

43003 SANTACRUZ (BMB)

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	537	1009	537	28.4	34.0	22.0	537	15.4	537	318	3.8	4.2	1.26	0.90	1972	1972
1000	508	89	507	27.9	33.6	15.8	504	14.4	505	321	5.1	5.6	9.90	0.86	1985	1984
950	508	512	507	25.2	35.0	16.0	483	7.8	505	313	4.2	5.4	14.89	1.37	1974	1972
900	508	1012	507	22.3	29.8	12.0	454	3.4	505	301	1.8	4.5	10.67	1.56	1987	1972
850	508	1505	505	19.1	26.4	10.0	416	1.0	505	234	1.2	4.7	11.97	1.43	1980	1983
800	508	2022	507	15.4	21.6	7.0	386	-1.1	505	211	2.3	5.6	13.60	1.32	1980	1972
750	508	2561	508	11.6	17.4	3.8	359	-4.2	504	220	3.1	6.4	15.26	1.15	1985	1981
700	508	3136	506	8.1	16.0	1.0	289	-7.7	505	246	3.8	7.0	16.22	1.21	1985	1978
650	506	3747	500	4.8	11.8	-2.9	233	-12.0	499	265	5.6	8.3	22.45	1.39	1985	1982
600	500	4390	494	1.2	8.0	-6.0	194	-15.5	494	269	8.1	10.2	19.97	1.35	1976	1978
550	499	5095	495	-3.1	4.0	-14.0	181	-18.9	491	268	10.7	12.6	19.06	1.37	1976	1974
500	497	5833	493	-7.8	-0.7	-16.0	165	-23.4	492	268	13.0	15.0	23.92	1.39	1984	1973
450	494	6645	492	-13.0	-4.9	-24.0	159	-27.6	488	267	15.8	18.1	25.47	1.58	1985	1973
400	489	7535	487	-18.8	-9.1	-28.5	147	-32.5	486	265	18.8	20.8	30.49	1.85	1985	1982
350	479	8521	478	-25.4	-17.0	-40.0	127	-38.3	476	264	21.8	24.0	33.16	1.90	1972	1977
300	469	9623	467	-33.1	-23.5	-46.5	122	-45.1	467	261	24.8	27.0	42.82	1.86	1990	1986
250	458	10880	456	-42.3	-33.5	-53.1	112	-53.3	455	258	26.1	28.4	51.63	1.91	1986	1982
200	445	12353	443	-53.2	-41.7	-65.9	7	-58.1	442	258	26.1	28.8	64.33	2.13	1986	1984
175	410	13200	408	-59.4	-49.3	-71.9			403	257	25.1	27.6	69.88	2.23	1987	1988
150	391	14152	389	-65.7	-55.3	-78.1			387	258	23.3	25.5	78.29	2.45	1987	1980
125	363	15241	360	-71.6	-58.0	-81.1			359	259	19.3	21.3	89.72	2.71	1977	1980
100	334	16538	334	-76.5	-65.0	-88.9			328	259	14.4	16.0	106.58	3.03	1975	1988
80	281	17820	281	-76.7	-65.1	-88.3			274	260	9.8	11.7	120.53	2.96	1984	1988
70	252	18592	252	-73.7	-61.3	-86.1			242	264	7.7	10.2	130.59	3.09	1984	1988
60	216	19495	216	-69.7	-56.7	-82.7			209	263	5.6	8.6	136.77	3.03	1984	1988
50	174	20604	174	-64.5	-51.7	-78.3			165	262	4.1	7.9	148.11	3.48	1984	1988
40	107	22001	106	-60.3	-44.0	-72.7			105	244	2.9	8.0	169.76	4.17	1977	1988
30	58	23800	57	-56.3	-43.9	-66.0			55	200	1.6	7.8	191.99	4.06	1990	1973
25	30	24886	29	-55.8	-49.5	-62.1			29	246	5.3	7.8	173.23	3.29	1980	1985
20	21	26286	21	-52.9	-41.3	-58.5			17	261	5.0	8.3	83.27	1.90	1985	1987
15	9	28087	9	-52.1	-48.1	-57.3			8	190	0.8	8.6			1980	1985
10	7	30740	7	-49.9	-47.1	-54.3			7	241	4.0	10.1			1987	1985

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
493	586	458					299	097	1674	-78.6

## NORMALS OF RADIOSONDE DATA

43003 SANTACRUZ (BMB)

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	588	1007	588	30.2	37.6	23.8	587	18.4	588	314	4.2	4.5	0.86	0.95	1981	1982
1000	550	77	549	29.7	37.0	21.2	545	17.4	550	318	5.0	5.4	7.15	1.06	1982	1982
950	550	504	550	27.4	35.8	17.4	508	10.0	550	314	5.4	6.3	10.28	1.68	1985	1990
900	550	1006	548	25.4	36.0	15.2	467	4.8	549	315	3.3	5.0	6.62	1.78	1976	1990
850	550	1504	549	22.2	32.0	13.2	447	2.0	550	304	1.9	4.9	7.78	1.56	1976	1982
800	550	2026	550	18.4	28.0	10.0	433	-0.2	549	247	1.6	5.5	9.19	1.34	1976	1971
750	550	2566	548	14.3	22.0	6.0	423	-2.4	548	215	2.4	6.0	10.47	1.24	1976	1982
700	550	3151	546	9.6	17.4	0.8	413	-4.9	545	209	3.0	6.5	12.82	1.04	1990	1986
650	545	3759	540	5.3	17.0	-4.1	359	-8.3	541	231	3.0	6.9	19.99	1.10	1975	1982
600	542	4408	535	1.3	9.0	-9.3	288	-13.7	537	260	4.2	7.7	15.29	1.19	1980	1982
550	540	5110	538	-2.7	7.0	-15.1	228	-18.4	536	269	6.2	9.1	12.65	1.21	1990	1982
500	535	5853	533	-7.3	2.2	-15.9	194	-23.0	531	268	8.3	10.9	19.35	1.39	1990	1981
450	531	6665	529	-12.6	-1.9	-21.9	171	-27.5	529	267	10.8	13.2	19.11	1.55	1983	1981
400	528	7556	525	-18.8	-5.9	-28.1	151	-33.0	526	269	13.5	16.1	25.59	1.71	1990	1981
350	520	8541	515	-25.5	-14.7	-34.9	147	-39.0	518	268	16.8	19.3	28.78	1.89	1990	1981
300	507	9641	503	-33.1	-23.5	-44.1	134	-45.6	504	264	20.4	23.4	36.60	1.92	1990	1981
250	491	10899	490	-42.0	-28.1	-54.3	123	-53.2	486	260	22.6	25.7	44.28	1.76	1983	1981
200	467	12374	467	-52.5	-42.3	-69.7	15	-59.5	461	256	23.1	25.9	53.22	1.78	1990	1981
175	425	13223	425	-58.3	-48.9	-72.1			419	256	22.6	24.8	59.34	1.98	1987	1981
150	399	14179	399	-64.4	-53.9	-78.1			390	257	20.6	22.6	68.11	2.28	1987	1986
125	365	15270	365	-70.6	-59.0	-84.5			359	256	17.5	19.3	79.19	2.47	1977	1981
100	348	16572	348	-75.6	-63.0	-86.0			340	256	12.0	14.5	91.21	2.72	1977	1978
80	281	17858	281	-76.1	-64.0	-86.3			271	262	6.9	10.2	106.72	2.45	1976	1988
70	249	18630	249	-73.7	-60.0	-84.3			236	266	4.3	8.3	110.73	2.71	1976	1982
60	210	19551	210	-69.4	-57.3	-82.1			199	274	3.0	7.4	106.79	3.15	1988	1988
50	154	20645	154	-64.6	-52.0	-77.5			146	271	0.8	6.8	126.24	4.10	1977	1988
40	89	22029	89	-59.6	-45.0	-72.0			85	053	1.9	7.1	149.54	4.39	1977	1973
30	45	23812	45	-55.8	-40.0	-67.0			42	095	2.6	7.6	213.50	6.19	1977	1973
25	29	24888	29	-54.8	-43.5	-65.0			27	059	2.6	7.8	222.44	3.25	1980	1973
20	21	26328	21	-51.3	-40.3	-60.5			19	078	2.5	7.4	72.42	1.48	1985	1985
15	7	28087	7	-51.0	-44.9	-55.7			7	285	2.3	5.4			1980	1985
10	3	30604	3	-50.6	-49.1	-53.3			1	279	8.0	8.0			1982	1985
7	1	32913	1	-52.1	-52.1	-52.1			1	248	15.0	15.0			1985	1985

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
532	582	466	1	184	1292	-57.0	307	095	1686	-77.6

## NORMALS OF RADIOSONDE DATA

43003 SANTACRUZ (BMB)

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	570	1005	570	31.2	37.2	26.0	570	22.0	570	304	4.2	4.6	0.97	0.66	1984	1972
<i>1000</i>	554	58	554	30.7	37.2	24.0	552	21.3	552	306	4.6	5.1	7.24	0.67	1984	1976
<i>950</i>	554	489	553	28.0	35.6	21.0	543	13.4	552	308	5.8	6.7	11.61	0.80	1984	1986
<i>900</i>	554	989	551	26.5	35.0	17.0	519	5.6	552	316	4.1	5.5	6.17	1.24	1975	1972
<i>850</i>	554	1490	552	23.8	33.0	14.4	483	2.3	551	319	3.0	5.2	5.86	1.28	1975	1986
<i>800</i>	554	2015	553	20.2	29.0	11.0	464	0.3	552	295	2.3	5.6	7.03	1.26	1975	1986
<i>750</i>	554	2558	551	16.0	24.0	9.0	459	-1.5	550	240	2.0	5.9	10.48	1.31	1975	1983
<i>700</i>	553	3147	548	11.5	21.0	3.8	448	-3.3	550	201	2.8	6.2	9.97	1.34	1989	1983
<i>650</i>	548	3757	543	6.8	18.4	-1.9	423	-6.1	545	197	2.8	6.2	16.27	1.40	1987	1983
<i>600</i>	543	4411	537	2.3	9.6	-6.1	359	-11.1	538	225	1.9	6.1	15.46	1.44	1990	1996
<i>550</i>	542	5118	533	-1.7	6.0	-11.1	262	-17.2	537	269	2.6	6.7	19.37	1.54	1975	1983
<i>500</i>	537	5861	531	-6.3	1.0	-16.9	206	-22.9	531	274	4.4	8.1	22.08	1.50	1975	1983
<i>450</i>	531	6677	523	-11.5	-0.5	-22.5	186	-27.5	526	271	6.7	9.9	26.35	1.54	1987	1983
<i>400</i>	526	7571	516	-17.7	-8.9	-29.5	178	-32.6	518	267	9.4	12.4	31.28	1.60	1990	1987
<i>350</i>	517	8539	509	-24.7	-15.5	-34.9	169	-38.6	512	264	12.1	15.2	38.27	1.81	1990	1982
<i>300</i>	509	9663	502	-32.6	-23.5	-44.9	159	-45.8	503	261	14.9	18.2	45.84	1.95	1990	1982
<i>250</i>	497	10923	494	-41.9	-31.7	-52.1	121	-53.5	489	256	17.3	20.8	55.26	2.12	1990	1982
<i>200</i>	480	12402	479	-52.4	-41.1	-62.5	5	-58.6	470	252	18.1	21.3	69.20	2.19	1990	1982
<i>175</i>	451	13258	450	-57.9	-47.3	-67.7			442	250	17.1	20.0	73.14	1.98	1990	1989
<i>150</i>	428	14216	427	-64.1	-52.0	-74.5			421	251	15.3	17.9	80.95	1.99	1978	1980
<i>125</i>	390	15311	389	-70.3	-60.0	-81.5			384	256	10.8	13.9	88.99	1.90	1975	1981
<i>100</i>	366	16616	366	-75.9	-65.0	-87.1			360	248	5.6	10.1	100.92	2.09	1976	1989
<i>80</i>	305	17902	305	-76.3	-62.0	-89.1			290	215	0.8	7.6	110.77	2.51	1976	1988
<i>70</i>	268	18672	268	-73.6	-56.1	-85.1			258	078	1.4	6.8	119.17	2.60	1989	1988
<i>60</i>	225	19578	225	-68.7	-53.9	-81.0			216	081	2.3	6.6	127.84	2.91	1987	1978
<i>50</i>	171	20683	171	-62.8	-43.7	-76.0			165	087	2.7	6.1	139.33	3.33	1987	1978
<i>40</i>	110	22078	110	-57.4	-47.0	-69.0			102	091	3.9	6.4	195.59	3.71	1976	1978
<i>30</i>	65	23907	65	-52.2	-40.0	-61.0			61	084	4.4	7.0	222.77	3.84	1976	1978
<i>25</i>	40	25078	40	-49.2	-35.9	-57.7			35	085	4.5	6.7	219.61	3.98	1984	1985
<i>20</i>	19	26478	19	-47.3	-37.5	-53.9			14	094	5.0	6.7			1990	1985
<i>15</i>	6	28468	6	-45.6	-37.3	-51.7			6	093	6.7	8.3			1990	1983
<i>10</i>	3	30923	3	-45.2	-42.3	-46.9			2	115	7.0	7.0			1989	1983
<i>7</i>	1	33490	1	-43.9	-43.9	-43.9			1	117	7.0	7.0			1984	1984

FREEZING LEVEL

N P ALT

539 571 481

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

312 094 1699 -77.9

NORMALS OF RADIOSONDE DATA

43003 SANTACRUZ (BMB)

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	617	1004	617	31.8	38.0	25.4	617	24.0	617	289	4.0	4.6	0.95	0.42	1987	1990
1000	583	47	570	31.3	38.0	26.0	570	23.8	569	289	4.4	5.0	9.10	0.41	1987	1971
950	583	478	581	27.1	37.2	20.8	580	19.6	581	284	5.5	6.5	14.32	1.13	1987	1987
900	583	977	579	25.5	32.6	16.0	567	11.2	581	296	4.4	5.9	9.37	0.98	1987	1975
850	583	1477	581	23.6	30.0	15.0	530	5.9	582	313	3.7	5.8	9.61	0.81	1978	1985
800	583	2002	582	20.7	29.2	11.4	511	2.2	580	316	3.2	5.9	9.82	0.85	1987	1987
750	583	2548	581	17.0	23.4	8.6	497	-0.6	580	302	2.1	5.8	9.07	0.97	1989	1987
700	583	3138	580	12.7	20.0	5.2	477	-2.8	579	262	1.2	5.6	9.65	0.99	1976	1981
650	580	3752	573	8.2	16.0	1.2	447	-5.4	575	202	0.9	5.6	14.84	1.00	1981	1982
600	574	4409	567	3.7	12.0	-4.1	396	-9.5	569	136	0.1	5.4	10.20	0.97	1981	1982
550	567	5116	561	-0.3	8.2	-9.1	294	-15.0	561	012	1.3	5.8	11.77	1.11	1981	1982
500	560	5866	554	-4.5	4.2	-13.9	214	-19.8	553	358	2.0	6.5	13.75	1.09	1989	1982
450	552	6687	547	-9.4	9.4	-19.7	170	-24.9	543	337	2.5	7.6	16.28	1.14	1987	1982
400	548	7590	546	-15.2	-7.1	-25.9	159	-30.2	539	309	2.8	8.5	20.10	1.51	1990	1982
350	541	8585	538	-21.9	-11.0	-33.3	151	-36.0	535	286	4.1	9.2	25.10	1.69	1978	1982
300	534	9706	532	-29.7	-19.9	-41.5	146	-43.4	527	262	5.6	9.8	32.65	1.84	1990	1982
250	517	10982	516	-39.3	-28.5	-51.1	128	-51.2	513	252	6.3	10.5	43.83	1.95	1990	1982
200	507	12473	505	-50.7	-38.9	-63.1	16	-58.3	503	236	6.7	10.7	56.15	1.91	1990	1982
175	474	13332	472	-57.2	-46.5	-65.3			467	226	6.0	10.8	65.35	1.95	1990	1981
150	449	14290	449	-64.2	-54.0	-73.0			444	212	4.0	10.0	73.97	2.05	1975	1973
125	409	15383	409	-71.2	-60.0	-81.1			402	156	3.4	9.7	84.82	2.40	1976	1979
100	381	16682	381	-77.2	-65.5	-89.7			374	105	6.2	10.2	95.89	2.29	1984	1979
80	306	17961	306	-76.7	-62.5	-90.0			301	089	8.5	10.6	108.90	2.28	1989	1978
70	271	18737	271	-73.2	-55.3	-86.1			268	088	8.8	10.5	116.18	2.32	1989	1988
60	221	19640	221	-67.6	-50.9	-82.7			217	088	8.7	9.6	121.99	2.40	1989	1988
50	177	20751	177	-62.1	-47.9	-78.0			170	089	8.6	9.5	110.63	2.21	1981	1978
40	100	22151	100	-57.2	-45.1	-72.0			91	083	10.3	11.1	203.43	2.72	1990	1978
30	54	24000	54	-51.2	-37.5	-66.0			51	086	8.9	9.6	179.95	3.94	1990	1978
25	34	25151	34	-49.5	-33.0	-61.0			30	079	11.2	12.2	278.65	6.86	1977	1978
20	19	26611	19	-47.7	-41.9	-57.5			17	082	9.6	10.2			1985	1983
15	12	28541	12	-44.2	-36.7	-49.9			12	068	11.3	12.3			1983	1983
10	4	31477	4	-41.8	-36.9	-46.1			4	085	17.4	17.8			1984	1983
7	4	33879	4	-38.0	-33.5	-43.1			2	091	21.4	21.5			1984	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
556	554	506					321	095	1693	-78.9

NORMALS OF RADIOSONDE DATA

43003 SANTACRUZ (BMB)

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	599	1001	599	30.2	33.8	23.2	599	25.2	599	230	3.7	4.6	0.84	0.66	1979	1982
1000	570	23	409	30.3	33.6	23.2	409	24.9	407	254	4.1	4.8	7.04	0.73	1979	1982
950	570	450	570	25.9	34.4	20.8	569	22.2	568	243	6.9	8.1	12.95	0.90	1990	1986
900	570	950	570	22.8	31.2	16.8	569	18.6	568	242	7.4	8.8	7.16	1.00	1990	1981
850	570	1445	569	20.2	28.6	14.0	566	14.7	568	241	6.6	8.6	7.78	1.00	1990	1971
800	570	1966	569	17.6	26.0	12.0	564	11.0	567	241	5.5	8.0	8.63	1.00	1990	1971
750	570	2513	567	14.8	23.4	8.4	555	6.4	565	245	4.4	7.8	10.98	0.90	1990	1986
700	570	3095	565	11.8	20.8	6.6	548	2.0	565	253	3.4	7.7	10.87	0.82	1990	1979
650	566	3711	564	8.2	19.6	2.8	536	-1.3	559	262	2.5	7.5	16.55	0.92	1990	1982
600	562	4366	560	4.3	11.8	-3.5	521	-4.6	557	265	1.7	7.1	13.13	1.05	1990	1981
550	556	5079	554	0.3	8.0	-6.5	490	-7.9	550	265	0.8	6.6	18.20	1.17	1990	1982
500	552	5828	550	-3.3	4.8	-10.0	449	-11.9	547	207	0.5	6.0	16.70	1.30	1990	1972
450	547	6659	546	-7.5	0.6	-16.1	409	-16.4	540	108	0.7	5.9	20.12	1.29	1990	1988
400	544	7566	543	-12.5	-4.1	-20.3	368	-22.0	538	099	1.6	6.1	23.75	1.41	1990	1979
350	539	8573	538	-19.0	-10.5	-27.5	340	-28.4	530	084	3.2	6.4	30.46	1.66	1990	1979
300	531	9706	530	-26.9	-17.5	-35.9	291	-36.8	524	085	4.8	7.5	35.59	1.77	1990	1979
250	516	10997	516	-36.8	-26.9	-48.0	199	-45.6	510	083	7.7	10.0	44.74	1.93	1990	1974
200	502	12502	501	-49.1	-37.9	-59.9	49	-55.8	495	085	11.4	13.7	54.08	2.03	1990	1988
175	468	13363	468	-56.3	-47.1	-67.5	6	-60.3	461	087	14.0	16.3	56.42	2.02	1984	1988
150	439	14324	438	-64.0	-44.0	-75.3			435	086	16.9	19.0	65.69	2.31	1976	1982
125	393	15416	392	-71.8	-59.5	-84.1			385	087	20.6	22.2	76.46	2.52	1990	1988
100	354	16706	354	-78.4	-60.3	-89.1			352	084	22.7	23.7	85.41	2.34	1988	1980
80	290	17983	289	-77.0	-61.7	-87.9			288	083	21.6	22.3	101.85	2.27	1989	1989
70	266	18759	266	-72.9	-57.9	-84.1			260	085	20.0	20.7	103.47	2.33	1989	1980
60	227	19675	227	-67.4	-53.5	-79.0			217	087	16.9	17.6	110.41	2.46	1989	1978
50	171	20784	171	-61.6	-47.1	-70.7			167	085	15.2	15.8	128.20	2.99	1990	1981
40	100	22164	100	-58.0	-44.5	-67.7			99	083	16.3	16.9	183.73	3.25	1989	1984
30	64	23989	64	-53.0	-40.3	-64.0			62	080	17.2	17.6	217.72	4.59	1984	1972
25	47	25130	47	-50.5	-35.1	-62.0			42	078	17.5	18.7	170.97	4.50	1984	1972
20	29	26544	29	-48.8	-35.7	-57.9			28	074	18.0	18.7	125.15	3.02	1988	1984
15	19	28395	19	-46.1	-40.3	-54.9			15	072	23.0	23.7			1984	1989
10	4	31104	4	-44.0	-42.9	-45.3			4	068	29.3	30.3			1986	1983
7	1	33589	1	-37.5	-37.5	-37.5									1988	1988

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

552 544 517

310 096 1691 -80.0

## NORMALS OF RADIOSONDE DATA

43003 SANTACRUZ (BMB)

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	1002	620	28.4	31.6	24.0	620	25.1	620	255	4.1	4.6	1.00	0.39	1987	1971
<i>1000</i>	578	27	461	28.4	31.0	19.8	461	24.7	455	256	4.3	4.8	9.47	0.33	1974	1983
<i>950</i>	578	452	578	24.7	30.0	18.6	578	21.8	570	249	8.8	9.6	14.91	0.83	1976	1979
<i>900</i>	578	950	578	21.6	27.2	16.0	578	18.7	570	251	10.2	11.0	9.44	0.92	1990	1989
<i>850</i>	578	1443	577	18.6	25.2	13.6	577	15.6	572	250	10.0	10.8	9.94	0.96	1989	1984
<i>800</i>	578	1962	577	15.8	23.2	11.0	577	12.6	567	248	9.4	10.2	10.51	0.96	1989	1984
<i>750</i>	578	2509	574	13.1	21.0	8.0	574	9.0	562	250	8.7	9.6	12.63	0.89	1989	1971
<i>700</i>	578	3084	574	10.8	17.6	5.6	569	3.7	562	259	7.9	9.2	11.38	0.65	1989	1986
<i>650</i>	574	3702	570	7.7	16.4	-2.3	561	-0.7	557	267	6.6	8.4	12.22	0.72	1982	1986
<i>600</i>	573	4354	569	4.1	15.0	-5.9	554	-4.3	554	274	5.0	7.5	13.44	0.80	1976	1980
<i>550</i>	569	5068	568	0.3	7.0	-6.7	547	-7.5	549	276	3.5	6.7	20.36	0.89	1975	1981
<i>500</i>	567	5816	565	-3.4	3.0	-12.1	527	-11.3	546	274	1.6	5.7	15.89	1.05	1975	1981
<i>450</i>	558	6649	554	-7.7	2.4	-17.9	495	-15.8	537	097	0.3	5.3	21.43	1.12	1989	1981
<i>400</i>	548	7553	544	-12.9	-5.9	-24.1	464	-21.6	530	082	2.6	5.6	20.48	1.18	1988	1981
<i>350</i>	538	8562	534	-19.2	-11.1	-30.7	418	-28.4	517	076	5.5	7.1	25.55	1.35	1988	1981
<i>300</i>	528	9693	527	-27.2	-18.1	-36.3	354	-36.1	507	076	9.0	9.9	31.68	1.52	1990	1987
<i>250</i>	513	10982	512	-37.1	-27.5	-46.7	221	-45.1	491	078	13.7	14.4	40.35	1.82	1990	1979
<i>200</i>	490	12485	490	-49.4	-38.7	-60.5	56	-54.7	473	081	20.3	21.1	57.49	2.17	1990	1981
<i>175</i>	461	13342	461	-56.8	-45.1	-69.1	3	-57.7	445	081	24.3	25.2	64.44	1.92	1988	1981
<i>150</i>	443	14300	442	-64.6	-51.9	-79.3			430	080	28.0	29.1	72.77	2.12	1988	1981
<i>125</i>	399	15391	398	-72.2	-60.1	-83.1			386	082	31.6	32.6	85.70	2.17	1988	1979
<i>100</i>	366	16692	366	-77.2	-64.0	-89.3			352	081	32.3	33.2	96.45	2.79	1976	1979
<i>80</i>	308	17984	307	-74.4	-58.0	-87.7			292	081	28.1	28.8	110.83	3.97	1976	1987
<i>70</i>	267	18773	265	-70.4	-53.3	-84.3			257	082	24.9	25.5	118.07	4.13	1990	1987
<i>60</i>	224	19696	223	-65.9	-50.9	-76.0			212	084	23.0	23.9	133.48	4.11	1990	1972
<i>50</i>	166	20816	166	-61.3	-49.9	-72.0			160	084	21.6	22.5	144.39	3.48	1985	1972
<i>40</i>	96	22205	96	-57.1	-40.3	-68.0			92	080	22.0	22.7	181.40	4.60	1990	1972
<i>30</i>	54	24043	54	-52.6	-40.3	-61.3			54	082	23.0	23.4	127.65	2.90	1985	1984
<i>25</i>	38	25186	38	-51.2	-38.9	-59.5			37	081	24.6	25.1	105.15	2.63	1985	1984
<i>20</i>	23	26702	23	-48.3	-39.7	-57.1			19	081	27.1	27.8	94.77	1.35	1984	1984
<i>15</i>	11	28573	11	-47.2	-39.7	-54.5			10	085	22.2	22.4			1988	1984
<i>10</i>	4	31222	4	-44.7	-39.1	-50.9			4	089	32.8	33.5			1988	1984
<i>7</i>	3	33675	3	-42.3	-38.7	-48.5			2	107	28.8	32.0			1988	1984

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

564 544 514

345 101 1663 -78.4



# NORMALS OF RADIOSONDE DATA

43003 SANTACRUZ (BMB)

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	615	1002	615	27.8	31.6	23.0	615	24.4	615	267	3.8	4.1	0.92	0.46	1987	1971
1000	582	35	503	27.6	31.2	22.6	503	24.1	502	267	4.1	4.4	6.36	0.48	1987	1989
950	582	458	582	24.0	29.4	19.0	582	21.0	581	261	8.4	9.0	12.59	0.92	1985	1973
900	582	956	581	20.9	27.8	15.0	581	17.8	581	260	9.7	10.4	6.26	1.07	1988	1973
850	582	1448	580	17.9	26.2	11.6	579	15.0	581	258	9.3	10.0	6.31	1.11	1988	1986
800	582	1965	581	15.2	23.6	9.8	580	12.2	578	255	8.7	9.5	7.59	1.17	1988	1986
750	582	2509	577	12.6	19.8	6.8	574	8.7	573	257	8.3	9.1	9.99	1.13	1979	1981
700	582	3085	580	10.3	18.0	4.0	576	3.2	572	265	7.6	8.9	9.51	0.97	1988	1973
650	579	3701	577	7.3	19.0	0.4	563	-1.3	567	273	6.5	8.2	11.05	1.08	1976	1980
600	577	4353	575	3.9	12.0	-4.0	553	-4.6	563	277	5.1	7.2	12.56	1.16	1988	1972
550	572	5065	568	0.1	6.6	-8.5	529	-7.7	558	281	3.4	6.2	16.16	1.19	1990	1980
500	568	5815	566	-3.6	7.2	-10.9	507	-11.8	555	289	1.9	5.5	17.19	1.30	1988	1985
450	563	6644	561	-7.7	-0.3	-15.1	481	-16.6	551	001	0.8	5.0	20.76	1.35	1984	1987
400	557	7550	553	-12.9	-5.3	-20.3	459	-22.2	548	060	2.2	5.2	23.81	1.43	1990	1987
350	534	8557	530	-19.5	-10.1	-28.1	397	-28.6	525	073	4.7	6.5	29.54	1.59	1989	1981
300	522	9689	521	-27.3	-16.7	-36.1	324	-36.5	512	076	7.9	9.0	36.63	1.84	1990	1982
250	506	10977	505	-37.2	-25.3	-46.1	219	-46.1	497	080	12.1	12.9	45.95	2.10	1990	1982
200	476	12482	475	-49.4	-39.1	-59.1	36	-55.8	469	082	18.3	19.1	61.48	2.49	1988	1981
175	447	13339	445	-56.8	-45.9	-67.1	1	-60.0	439	082	22.0	22.8	67.26	2.51	1990	1981
150	422	14300	420	-64.6	-53.1	-75.3			414	081	25.7	26.6	77.11	2.62	1990	1981
125	387	15387	385	-72.4	-60.1	-82.7			379	082	28.4	29.2	93.85	2.82	1990	1981
100	352	16684	352	-77.1	-65.0	-88.5			343	082	26.4	29.1	101.16	2.63	1976	1979
80	290	17972	288	-74.0	-58.0	-84.9			283	082	25.1	25.8	123.81	3.00	1976	1987
70	256	18758	256	-69.8	-52.0	-84.9			250	084	23.5	24.1	127.47	3.50	1976	1987
60	212	19683	212	-65.4	-46.0	-78.0			199	086	21.8	22.7	130.24	3.62	1976	1972
50	154	20799	154	-61.8	-47.0	-76.0			146	089	21.6	22.1	146.19	3.47	1976	1972
40	99	22157	99	-58.2	-38.0	-67.0			92	085	21.5	22.2	185.50	4.56	1976	1972
30	49	23977	48	-54.9	-36.9	-63.0			48	086	21.9	22.4	234.54	5.04	1990	1972
25	30	25096	30	-54.1	-41.1	-60.1			29	083	25.2	25.6	189.33	3.15	1988	1987
20	14	26544	14	-51.2	-36.5	-58.1			14	083	29.1	29.7			1988	1988
15	8	28376	8	-51.6	-44.9	-56.1			8	082	34.5	35.7			1983	1987
10	6	31000	6	-47.7	-38.7	-52.7			6	080	36.2	36.8			1983	1987
7	1	33233	1	-47.1	-47.1	-47.1			1	062	43.0	43.0			1987	1987

**FREEZING LEVEL**

**1ST TROPOPAUSE**

**2ND TROPOPAUSE**

N P ALT

N P ALT T

N P ALT T

572 547 510

333 103 1651 -78.5

## NORMALS OF RADIOSONDE DATA

43003 SANTACRUZ (BMB)

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	593	1005	593	28.8	33.0	23.6	593	24.3	593	284	3.0	3.6	1.40	0.70	1972	1979
1000	573	53	549	28.5	33.0	17.0	549	23.9	548	286	3.3	4.0	10.56	0.83	1972	1975
950	573	480	573	24.8	31.0	17.0	573	20.5	571	281	4.9	6.3	13.54	0.98	1977	1974
900	573	976	572	21.8	28.6	16.0	572	17.1	571	275	4.0	5.7	11.32	1.07	1987	1973
850	573	1470	572	18.8	25.2	13.0	572	13.9	571	262	3.0	5.4	11.86	0.90	1986	1973
800	573	1988	572	15.8	23.4	10.8	571	10.5	571	253	2.2	5.3	12.41	0.88	1990	1983
750	573	2530	572	12.9	20.2	7.6	567	6.2	570	254	1.9	5.4	10.84	0.73	1990	1983
700	573	3109	572	9.9	17.6	4.8	564	1.6	569	259	1.7	5.3	13.02	0.72	1990	1987
650	568	3723	566	6.8	15.8	1.8	540	-1.9	564	254	1.3	5.2	14.29	0.80	1990	1987
600	561	4375	555	3.6	11.0	-2.7	490	-5.6	558	240	0.9	4.8	13.81	0.83	1975	1984
550	555	5087	549	0.2	8.0	-8.1	443	-9.3	551	220	0.4	4.9	17.89	0.93	1975	1982
500	551	5835	548	-3.7	4.0	-10.1	421	-13.8	544	107	0.4	4.8	16.68	0.95	1975	1982
450	543	6664	543	-8.3	-1.0	-15.9	389	-18.5	539	088	1.3	5.0	19.50	0.99	1975	1989
400	535	7567	534	-13.9	-6.1	-21.7	366	-24.1	531	082	2.6	5.2	21.15	1.08	1988	1987
350	529	8571	523	-20.6	-12.5	-30.1	321	-30.8	524	084	4.2	6.0	22.77	1.17	1990	1987
300	527	9694	520	-28.7	-19.3	-40.1	272	-38.8	520	084	5.9	7.3	28.84	1.26	1990	1988
250	514	10974	511	-38.8	-29.3	-51.1	180	-47.7	506	085	8.4	9.7	35.41	1.45	1990	1987
200	505	12468	504	-51.2	-40.3	-61.5	18	-55.0	499	088	12.2	13.5	44.44	1.77	1988	1981
175	478	13323	477	-58.3	-47.7	-68.3	1	-59.0	469	091	14.9	16.3	51.47	1.93	1990	1981
150	452	14276	452	-66.0	-55.1	-76.1			442	092	17.1	18.6	61.64	1.96	1990	1981
125	408	15363	408	-73.3	-60.9	-85.5			395	089	19.1	20.4	71.98	2.11	1990	1981
100	364	16650	364	-77.7	-64.0	-88.0			353	085	19.0	19.9	83.32	2.28	1976	1978
80	304	17946	304	-73.5	-58.0	-86.1			295	086	17.1	17.7	93.66	3.10	1976	1988
70	262	18741	262	-69.4	-53.0	-83.9			256	086	16.1	16.6	103.91	2.89	1976	1981
60	223	19666	223	-65.0	-48.0	-80.1			215	089	14.6	15.2	116.54	2.93	1976	1981
50	179	20799	179	-60.4	-48.7	-75.3			172	088	14.3	15.0	126.70	2.85	1985	1981
40	111	22181	111	-57.0	-42.1	-70.1			106	086	16.5	17.0	161.02	3.65	1989	1981
30	65	23997	65	-53.6	-43.0	-65.1			57	080	17.3	18.0	168.09	2.84	1977	1981
25	41	25166	41	-51.9	-40.3	-66.1			34	083	18.6	19.0	185.34	3.77	1990	1981
20	16	26616	16	-48.9	-37.5	-60.5			14	078	20.2	20.7			1990	1981
15	9	28597	9	-44.7	-32.7	-50.1			8	076	18.4	18.9			1990	1987
10	1	30802	1	-44.1	-44.1	-44.1			1	067	17.0	17.0			1987	1987

7

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
552	548	510					345	103	1646	-78.9

## NORMALS OF RADIOSONDE DATA

43003 SANTACRUZ (BMB)

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
	SURFACE	620	1006	620	30.7	35.0	24.0	620	22.8	620	309	2.7	3.4	1.00	0.88	1982
1000	609	69	603	30.3	34.4	23.2	603	22.2	601	313	3.1	3.9	8.42	0.90	1982	1990
950	609	498	608	27.1	35.6	21.0	607	16.3	607	322	3.5	5.2	15.02	1.21	1988	1971
900	609	998	608	24.0	33.0	18.0	601	12.2	607	002	2.1	4.5	10.29	1.27	1988	1971
850	609	1495	607	20.6	29.6	14.6	597	8.5	606	043	2.5	4.8	11.20	1.17	1988	1981
800	609	2015	606	16.8	28.8	8.0	594	5.2	604	062	3.1	5.6	12.73	1.05	1986	1981
750	609	2558	603	12.9	23.0	3.0	563	2.1	604	068	3.3	6.1	13.89	0.92	1988	1981
700	609	3136	600	9.3	19.4	0.0	516	-2.2	603	064	3.0	5.9	14.28	1.00	1988	1981
650	603	3748	600	6.4	15.8	-3.5	420	-5.7	596	053	2.3	5.6	16.19	1.22	1988	1985
600	601	4398	596	3.4	12.6	-7.5	344	-9.4	594	035	1.7	5.2	15.18	1.46	1988	1980
550	597	5110	594	0.0	9.4	-6.9	275	-12.6	591	019	1.5	5.3	17.58	1.43	1988	1979
500	591	5857	588	-4.2	4.8	-13.1	242	-16.7	587	359	1.4	5.6	19.54	1.48	1988	1987
450	584	6683	580	-9.1	3.4	-17.0	214	-22.2	581	338	1.5	6.1	22.88	1.62	1988	1976
400	578	7583	574	-14.9	-2.9	-22.7	196	-27.1	575	312	1.6	6.4	26.72	1.74	1990	1980
350	565	8581	563	-22.0	-8.1	-31.0	178	-33.7	561	275	2.1	6.8	31.00	2.01	1990	1973
300	561	9698	561	-30.2	-12.7	-39.9	166	-41.2	557	245	3.1	7.7	41.84	2.21	1990	1982
250	545	10969	545	-40.3	-21.7	-51.1	128	-50.0	540	222	4.4	9.0	51.97	2.37	1990	1982
200	524	12452	522	-52.3	-41.5	-65.1	30	-66.7	516	200	5.6	11.1	66.07	2.44	1989	1987
175	488	13302	486	-59.2	-48.1	-74.1	3	-64.2	477	187	5.8	11.7	75.03	2.54	1990	1987
150	468	14252	467	-66.5	-54.9	-79.0			459	173	5.5	11.7	86.41	2.65	1990	1978
125	414	15330	414	-73.5	-62.1	-85.9			403	147	4.5	10.5	98.63	2.68	1983	1980
100	367	16615	367	-78.4	-65.0	-92.1			353	111	6.1	9.5	112.98	2.44	1976	1980
80	292	17888	292	-74.9	-56.0	-88.0			278	091	6.6	8.4	127.16	2.54	1976	1978
70	260	18671	260	-70.5	-50.0	-85.0			247	086	6.8	8.0	134.97	2.64	1977	1978
60	211	19595	211	-66.0	-46.0	-79.0			197	092	7.5	8.5	136.93	2.71	1977	1978
50	163	20707	163	-61.6	-47.0	-74.0			149	093	8.1	8.9	147.85	2.42	1973	1978
40	97	22100	97	-56.0	-44.0	-67.0			85	089	10.6	11.3	151.38	2.85	1976	1978
30	52	23965	52	-53.6	-37.0	-64.0			45	084	10.3	11.0	185.48	3.83	1976	1972
25	26	25047	26	-53.3	-36.7	-60.9			24	083	12.6	13.4	186.31	3.90	1990	1984
20	11	26547	11	-53.0	-45.1	-68.9			8	088	13.5	14.4			1981	1983
15	5	28423	5	-50.5	-41.7	-56.1			5	079	11.5	12.0			1981	1984
10	1	30878	1	-49.5	-49.5	-49.5			1	080	9.0	9.0			1988	1988
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
592	553	507					334	102	1651	-79.8

### NORMALS OF RADIOSONDE DATA

43003 SANTACRUZ (BMB)

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	600	1008	600	30.3	36.0	23.0	600	19.0	600	320	2.5	3.2	1.12	0.68	1976	1977
1000	561	85	561	29.8	35.0	18.0	560	18.0	560	325	3.4	4.2	9.23	0.70	1976	1974
950	561	514	561	26.5	32.0	17.0	559	12.3	560	341	2.8	4.6	14.55	0.86	1976	1985
900	561	1013	560	23.0	29.0	14.8	553	9.0	560	036	2.1	4.3	9.11	0.95	1976	1981
850	561	1507	558	19.1	25.8	10.2	547	6.3	559	073	2.9	4.8	9.15	1.03	1990	1981
800	561	2024	558	15.3	22.0	9.0	526	2.9	559	084	3.3	5.6	8.85	1.13	1976	1983
750	561	2567	554	12.4	20.0	5.4	446	-0.9	558	078	2.9	5.8	8.61	1.21	1973	1980
700	561	3142	554	9.7	17.0	2.4	367	-4.9	558	069	2.0	5.6	10.81	1.32	1975	1983
650	554	3758	549	6.7	13.0	-2.1	287	-7.8	549	046	1.2	5.7	15.63	1.20	1973	1983
600	553	4406	552	3.4	10.0	-4.5	242	-10.8	549	344	1.0	6.2	14.59	1.05	1975	1982
550	553	5119	550	-0.6	6.0	-8.5	221	-14.3	547	305	1.7	6.7	14.30	1.15	1975	1987
500	549	5862	546	-5.2	1.8	-12.9	207	-18.9	546	288	2.9	7.6	19.76	1.25	1990	1982
450	540	6684	538	-10.5	-3.9	-17.7	193	-24.1	535	277	4.6	8.7	22.05	1.31	1989	1982
400	536	7579	533	-16.7	-9.0	-23.9	178	-29.7	532	271	6.4	10.1	26.65	1.57	1976	1983
350	523	8572	519	-23.9	-15.0	-32.5	166	-36.1	517	264	8.7	12.0	33.42	1.73	1976	1983
300	511	9679	507	-32.1	-23.0	-42.1	148	-43.7	505	255	11.3	14.1	39.75	1.94	1976	1983
250	497	10940	494	-41.9	-31.3	-52.9	120	-52.1	488	243	13.7	16.5	50.94	2.20	1989	1983
200	482	12414	480	-53.5	-40.7	-65.1	21	-58.6	473	235	15.2	17.9	63.54	2.64	1989	1979
175	446	13260	445	-60.0	-46.9	-71.1			436	235	14.8	17.5	71.77	2.75	1989	1979
150	424	14206	422	-66.7	-54.1	-79.3			415	236	12.8	15.3	82.28	2.83	1989	1979
125	383	15286	382	-72.9	-61.9	-86.0			369	240	9.4	12.2	93.21	2.95	1989	1978
100	353	16573	353	-77.5	-66.5	-94.0			343	234	3.8	8.8	107.56	2.91	1989	1978
80	277	17855	277	-76.3	-62.9	-92.0			265	124	1.8	6.6	119.62	2.97	1981	1978
70	257	18634	257	-72.9	-60.3	-90.0			242	098	2.3	6.1	129.66	2.96	1985	1978
60	214	19549	214	-68.3	-53.5	-82.0			199	084	2.4	5.5	139.04	3.11	1989	1978
50	176	20648	176	-63.0	-50.0	-75.0			161	086	2.9	5.9	154.58	2.92	1976	1977
40	103	22030	103	-58.5	-45.0	-70.0			92	087	3.5	6.1	169.39	2.31	1976	1977
30	49	23801	49	-54.9	-46.0	-62.0			44	084	5.1	6.8	160.57	3.12	1977	1978
25	26	24920	26	-53.5	-45.0	-60.0			25	097	4.8	6.9	162.56	3.74	1973	1978
20	17	26445	17	-50.9	-41.7	-59.1			17	086	5.4	7.0			1990	1984
15	11	28318	11	-48.9	-39.1	-57.5			9	104	4.8	6.9			1990	1984
10	2	30771	2	-50.2	-45.7	-54.7			1	206	5.0	5.0			1990	1984
7	1	32813	1	-52.9	-52.9	-52.9			1	204	5.0	5.0			1984	1984

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
546	557	500					302	099	1664	-79.0

## NORMALS OF RADIOSONDE DATA

43003 SANTACRUZ (BMB)

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	1010	589	28.8	33.4	21.6	589	17.0	589	319	2.8	3.2	0.83	0.62	1989	1986
<i>1000</i>	545	100	545	28.3	36.0	21.6	543	15.8	544	323	3.9	4.5	6.73	0.47	1976	1986
<i>950</i>	545	524	544	25.0	30.4	17.0	538	10.1	544	335	2.8	4.3	14.31	0.72	1982	1976
<i>900</i>	545	1022	544	21.6	27.0	10.0	531	7.2	544	039	1.5	3.9	6.54	0.87	1986	1982
<i>850</i>	545	1514	542	17.8	23.8	8.0	518	4.5	544	084	2.0	4.6	6.60	0.85	1984	1980
<i>800</i>	545	2029	537	14.4	24.0	7.4	464	0.9	543	099	2.2	5.2	6.66	1.09	1972	1980
<i>750</i>	545	2572	536	11.8	18.0	2.4	347	-3.3	543	100	1.0	5.4	7.65	1.13	1973	1988
<i>700</i>	545	3144	539	9.3	15.0	1.2	259	-7.5	541	280	0.9	5.7	9.36	1.01	1971	1981
<i>650</i>	543	3759	540	6.2	13.0	-4.3	224	-10.1	540	272	2.5	6.3	12.20	0.94	1971	1980
<i>600</i>	538	4406	532	2.5	10.0	-3.9	198	-12.8	533	268	4.4	7.6	12.85	0.93	1971	1986
<i>550</i>	533	5111	531	-1.8	5.0	-8.9	185	-16.2	530	264	6.2	9.0	10.40	1.01	1989	1986
<i>500</i>	534	5855	532	-6.7	1.0	-14.9	176	-20.4	532	262	8.3	10.9	17.26	1.13	1989	1980
<i>450</i>	527	6669	523	-12.2	-2.9	-21.3	179	-25.1	525	261	10.6	13.0	18.34	1.31	1984	1980
<i>400</i>	523	7560	518	-18.3	-9.9	-28.9	172	-30.3	520	261	13.1	15.4	25.49	1.64	1989	1980
<i>350</i>	515	8546	511	-25.3	-15.7	-37.3	163	-36.6	511	258	16.4	18.7	28.77	1.74	1989	1980
<i>300</i>	507	9648	501	-33.3	-22.9	-46.9	158	-43.7	504	255	19.4	22.2	37.80	1.77	1989	1980
<i>250</i>	490	10903	487	-43.0	-32.9	-53.5	126	-51.9	487	250	22.5	25.7	45.16	1.78	1989	1979
<i>200</i>	465	12372	462	-54.4	-44.7	-64.1	13	-58.0	458	246	23.6	25.9	56.63	1.99	1989	1979
<i>175</i>	421	13218	420	-60.6	-50.7	-70.1			415	246	23.3	26.1	64.17	2.10	1989	1980
<i>150</i>	393	14165	392	-66.4	-53.9	-75.9			383	248	21.3	23.6	75.14	2.27	1988	1987
<i>125</i>	342	15256	342	-71.0	-59.5	-84.0			336	251	17.2	19.1	81.42	2.47	1988	1977
<i>100</i>	318	16560	318	-75.7	-64.7	-87.5			313	253	11.2	13.4	92.13	2.41	1990	1987
<i>80</i>	254	17854	254	-75.9	-64.0	-89.5			247	257	4.6	8.5	107.95	2.97	1976	1987
<i>70</i>	209	18626	209	-73.1	-60.3	-89.5			198	246	2.6	7.0	114.22	3.18	1990	1987
<i>60</i>	179	19530	179	-68.8	-54.9	-84.5			169	259	1.0	5.9	138.88	3.53	1990	1987
<i>50</i>	146	20621	146	-63.9	-50.3	-80.3			136	253	1.5	5.7	170.59	3.66	1989	1987
<i>40</i>	88	21996	88	-59.2	-45.7	-75.3			85	354	0.2	5.6	203.25	4.47	1989	1987
<i>30</i>	42	23769	42	-55.3	-42.3	-68.7			41	203	0.4	6.6	222.03	5.50	1985	1987
<i>25</i>	20	24909	20	-53.7	-46.0	-64.9			20	061	2.0	7.3			1973	1987
<i>20</i>	8	26417	8	-50.9	-43.1	-55.9			8	081	4.0	7.1			1990	1984
<i>15</i>	6	28420	6	-47.6	-40.5	-53.3			6	248	3.2	10.8			1990	1984
<i>10</i>	1	31382	1	-41.9	-41.9	-41.9			1	099	5.0	5.0			1990	1990
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

529 571 431

6 123 1544 -72.6

262 096 1683 -77.6

# NORMALS OF RADIOSONDE DATA

42867 NAGPUR

JANUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i><b>SURFACE</b></i>	617	977	617	26.6	33.0	15.4	617	10.8	617	105	0.3	1.4	0.89	1.34	1990	1981
1000	546	111											6.77			
950	546	532	546	24.7	30.2	15.6	542	8.9	545	113	0.8	3.5	11.90	1.22	1990	1986
900	546	1032	546	20.5	29.0	11.4	538	6.3	545	231	0.5	3.5	6.23	1.16	1989	1986
850	546	1522	546	16.3	25.2	9.0	531	3.8	546	268	2.1	4.4	7.31	1.07	1989	1978
800	546	2034	546	12.5	23.8	4.0	506	0.6	544	280	3.7	5.5	7.93	1.10	1989	1983
750	546	2563	545	9.4	20.0	3.2	465	-3.8	542	282	5.5	7.2	14.75	1.40	1990	1982
700	545	3140	544	6.5	17.4	-4.5	391	-8.3	542	281	7.3	8.9	11.39	1.69	1990	1983
650	542	3747	541	3.5	13.6	-5.1	328	-13.2	533	278	9.2	10.7	19.02	1.75	1990	1982
600	541	4391	540	0.3	10.2	-8.0	277	-17.9	530	276	11.7	13.0	17.04	1.69	1989	1978
550	535	5092	533	-3.7	5.4	-12.7	236	-22.0	524	275	13.9	15.3	19.87	1.70	1989	1981
500	533	5831	532	-8.4	0.6	-19.0	218	-26.2	522	274	16.6	18.1	25.46	1.85	1990	1978
450	528	6638	528	-13.5	-1.9	-23.7	201	-30.5	515	273	19.7	21.2	33.50	2.14	1989	1983
400	524	7527	524	-19.4	-8.5	-31.9	191	-35.4	512	272	23.1	24.7	37.88	2.29	1989	1982
350	511	8509	511	-25.7	-14.7	-41.1	184	-41.0	493	272	26.2	27.9	43.87	2.26	1989	1982
300	505	9611	505	-33.2	-22.1	-51.9	171	-47.4	485	268	29.9	31.7	54.10	2.30	1988	1982
250	485	10869	484	-42.4	-31.3	-59.1	97	-54.6	462	265	31.5	33.7	62.88	2.13	1988	1982
200	457	12343	457	-53.1	-43.5	-65.5	2	-59.0	435	261	31.6	33.4	72.48	1.82	1988	1982
175	421	13190	421	-59.0	-50.0	-72.3			395	259	31.1	32.8	80.38	1.97	1976	1980
150	381	14143	381	-64.8	-52.0	-78.1			359	259	28.7	30.2	88.05	2.35	1976	1982
125	349	15245	349	-70.4	-55.0	-86.1			325	261	24.6	26.1	104.34	2.17	1976	1982
100	314	16553	314	-75.0	-64.0	-88.5			292	262	18.5	20.0	102.69	2.06	1976	1982
80	273	17850	273	-75.4	-62.0	-87.3			257	267	12.0	13.4	129.77	1.89	1976	1988
70	248	18635	247	-73.0	-60.1	-82.9			233	273	7.9	10.7	148.22	2.05	1990	1988
60	225	19545	224	-68.7	-55.9	-81.3			205	277	5.3	9.3	133.58	2.37	1990	1982
50	174	20639	172	-64.2	-52.9	-74.0			158	276	4.2	8.1	139.11	2.86	1990	1972
40	122	22020	122	-59.7	-49.1	-71.0			109	275	2.3	7.0	185.22	2.64	1990	1978
30	72	23864	72	-55.6	-46.5	-67.0			63	267	1.3	6.2	187.61	3.62	1989	1978
25	49	25027	49	-53.7	-45.5	-64.0			45	252	2.8	6.9	186.31	4.14	1989	1978
20	23	26549	23	-50.8	-43.5	-57.1			21	216	3.5	5.3	191.07	1.49	1989	1990
15	10	28532	10	-48.3	-42.1	-51.9			9	239	2.0	5.3			1989	1987
10	2	31227	2	-47.4	-45.9	-48.9			2	203	4.7	6.5			1990	1989

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

540	600	440	1	177	1290	-64.0	278	098	1671	-76.8
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# NORMALS OF RADIOSONDE DATA

42867 NAGPUR

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	562	975	562	29.7	36.6	18.0	562	9.6	562	320	0.2	1.9	1.64	1.51	1980	1974
1000	511	90											11.90			
950	511	521	511	27.9	35.6	16.0	504	8.1	511	259	0.5	4.2	18.41	1.37	1980	1975
900	511	1022	511	23.6	35.0	11.0	496	5.9	511	258	1.3	4.1	11.37	1.48	1974	1978
850	511	1516	511	19.1	28.2	10.2	489	3.8	511	259	2.4	4.6	11.46	1.37	1980	1983
800	511	2033	511	14.6	24.0	5.2	480	1.6	511	265	3.7	5.5	12.33	1.22	1988	1983
750	511	2559	511	10.3	20.0	2.0	469	-1.5	511	271	5.6	7.2	14.49	1.17	1988	1983
700	511	3143	511	6.5	16.0	-1.1	441	-5.8	509	273	7.7	9.3	13.95	1.16	1985	1986
650	506	3744	505	3.2	13.0	-6.0	371	-10.7	500	276	9.6	11.1	17.92	1.28	1985	1973
600	503	4392	502	-0.1	8.6	-9.9	303	-15.8	493	276	12.1	13.6	16.01	1.40	1985	1982
550	498	5092	497	-4.2	4.0	-12.9	259	-20.5	485	276	14.3	15.8	17.96	1.46	1972	1987
500	495	5828	495	-8.8	-0.9	-16.9	232	-25.3	481	274	16.9	18.3	20.95	1.59	1988	1986
450	492	6637	491	-13.9	-4.0	-28.1	215	-30.0	472	274	19.8	21.4	24.93	1.66	1976	1980
400	487	7523	486	-19.6	-8.7	-30.0	194	-34.9	467	273	23.0	24.8	29.22	1.93	1990	1978
350	479	8505	479	-25.9	-13.9	-36.0	180	-40.3	452	272	26.7	28.7	34.41	2.02	1985	1978
300	470	9605	470	-33.4	-23.3	-43.0	160	-46.9	441	269	29.9	32.2	41.85	2.01	1987	1978
250	452	10862	452	-42.3	-31.1	-54.5	93	-54.5	419	266	32.0	34.6	50.44	2.04	1987	1982
200	425	12338	425	-52.6	-42.5	-62.5	2	-58.5	393	264	31.9	34.4	60.36	2.18	1990	1985
175	388	13190	388	-58.3	-45.9	-70.1			356	264	31.1	33.2	66.46	2.46	1990	1985
150	348	14145	348	-64.4	-51.7	-79.1			324	266	28.7	30.5	76.81	3.14	1986	1985
125	311	15241	311	-70.4	-59.1	-86.5			289	266	25.3	26.9	124.92	4.47	1990	1985
100	283	16545	283	-75.3	-61.0	-87.9			260	265	19.0	20.2	141.77	3.77	1976	1985
80	244	17828	244	-75.8	-67.7	-88.5			226	266	14.0	15.0	154.12	1.68	1990	1990
70	219	18606	219	-73.3	-60.5	-82.7			196	271	10.6	11.8	141.17	1.52	1990	1989
60	183	19511	183	-69.2	-54.5	-84.0			160	269	7.7	9.8	158.71	1.53	1983	1978
50	146	20613	146	-64.4	-54.1	-76.1			129	269	5.9	8.7	117.32	1.77	1981	1987
40	101	22006	101	-59.6	-48.9	-71.1			86	262	4.5	8.2	123.92	2.91	1987	1987
30	65	23838	65	-56.2	-46.9	-71.0			54	254	1.9	6.7	133.24	3.54	1981	1978
25	41	25043	41	-54.0	-45.5	-63.1			32	291	1.7	7.1	114.27	3.56	1988	1987
20	22	26482	22	-51.5	-39.3	-62.3			18	240	2.8	8.1	134.80	4.94	1988	1987
15	15	28307	15	-49.5	-41.5	-61.1			13	282	7.2	8.8			1990	1987
10	5	30916	5	-48.6	-40.9	-59.7			4	290	9.7	11.0			1987	1987
7	1	32522	1	-58.7	-58.7	-58.7									1987	1987

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

496 604 434

249 096 1682 -77.2

**NORMALS OF RADIOSONDE DATA**

42867 NAGPUR

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	619	973	619	34.6	41.0	19.0	619	7.7	619	284	0.5	2.0	0.77	1.53	1972	1971
1000	577	64											8.15			
950	577	502	577	32.6	38.0	20.0	548	7.2	576	283	1.5	4.5	15.23	1.55	1972	1971
900	577	1010	577	28.2	35.0	16.0	545	5.2	576	274	1.9	4.4	6.21	1.63	1977	1986
850	577	1512	577	23.6	30.2	13.0	546	3.3	576	267	2.5	4.5	6.51	1.54	1984	1978
800	577	2036	577	18.8	28.0	9.0	547	1.4	575	265	3.4	5.0	7.93	1.47	1984	1971
750	577	2561	576	13.8	21.2	5.0	551	-1.0	575	272	4.5	6.0	16.06	1.39	1988	1971
700	577	3159	576	8.9	17.8	0.6	544	-3.8	576	275	5.9	7.4	11.01	1.30	1985	1987
650	572	3757	570	4.2	15.0	-3.3	506	-7.2	567	279	7.6	9.1	19.76	1.24	1971	1987
600	570	4413	568	0.0	9.2	-6.9	445	-12.1	561	280	8.8	10.4	15.72	1.24	1988	1981
550	565	5110	563	-4.0	5.2	-13.3	355	-18.0	548	280	10.7	12.2	15.03	1.34	1988	1987
500	559	5851	557	-8.5	2.8	-19.0	290	-23.8	543	278	12.7	14.3	20.35	1.46	1988	1978
450	551	6661	550	-13.6	-2.5	-24.0	231	-29.1	530	276	15.0	16.9	22.01	1.65	1990	1978
400	546	7546	544	-19.7	-7.9	-29.0	211	-34.5	521	275	17.4	19.4	28.10	1.89	1990	1978
350	532	8528	532	-26.4	-14.3	-35.0	183	-40.7	505	274	20.6	22.9	32.46	2.04	1990	1976
300	523	9626	523	-33.7	-21.5	-43.3	160	-47.5	493	272	24.2	26.8	38.94	2.17	1987	1987
250	501	10884	501	-42.0	-28.5	-52.3	89	-54.4	462	266	26.9	29.7	46.59	2.07	1987	1981
200	466	12366	465	-51.9	-38.3	-64.5			425	263	28.1	30.8	58.90	2.32	1987	1983
175	434	13222	433	-57.5	-44.7	-72.0			390	262	26.9	29.1	67.78	2.49	1987	1978
150	395	14178	395	-63.3	-53.1	-74.3			361	264	24.8	26.8	76.26	2.55	1987	1982
125	353	15279	353	-69.2	-58.9	-81.1			315	265	20.2	22.1	88.39	2.99	1990	1982
100	307	16592	307	-74.4	-64.0	-88.1			265	266	15.0	16.9	102.03	2.96	1975	1982
80	258	17882	258	-75.5	-64.1	-86.5			214	273	8.5	11.3	115.20	2.55	1987	1982
70	229	18667	229	-73.2	-60.1	-82.7			187	281	5.2	8.8	117.21	2.73	1987	1983
60	191	19582	191	-69.0	-57.0	-79.0			151	283	3.1	7.8	114.25	2.45	1977	1971
50	153	20683	153	-63.5	-51.1	-75.0			114	292	0.8	6.8	109.54	2.37	1990	1971
40	112	22081	112	-58.2	-45.1	-66.0			79	118	0.6	5.2	120.13	2.41	1987	1971
30	72	23928	72	-53.3	-39.3	-62.5			48	115	2.3	6.6	160.00	3.69	1987	1987
25	56	25096	56	-51.4	-40.0	-60.0			37	108	1.8	6.0	215.28	4.16	1977	1971
20	27	26555	27	-48.9	-40.5	-56.1			14	078	0.4	5.4	211.58	2.19	1987	1987
15	8	28536	8	-46.5	-36.9	-55.1			4	050	2.7	5.0			1987	1987
10	3	31165	3	-47.4	-41.5	-53.1			1	224	8.0	8.0			1987	1987
7	2	33715	2	-46.0	-39.1	-52.9									1987	1987

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

568 599 443

264 094 1701 -76.8



# NORMALS OF RADIOSONDE DATA

42867 NAGPUR

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SOTT	YRTX	YRTN
SURFACE	599	969	599	39.0	45.0	22.0	599	8.6	599	282	1.2	2.5	0.87	1.06	1973	1976
1000	561	24											8.47			
950	561	474	561	37.1	43.0	23.0	521	8.2	561	281	2.8	5.0	14.62	1.10	1973	1976
900	561	983	561	32.7	40.0	21.8	515	5.9	561	279	3.1	4.9	7.20	1.11	1980	1988
850	561	1492	561	27.9	35.8	14.0	521	4.0	561	280	3.5	4.9	6.09	1.12	1983	1984
800	561	2024	561	23.0	30.8	11.0	532	2.4	561	280	3.8	5.1	6.49	1.11	1983	1988
750	561	2554	561	17.9	26.0	6.4	543	0.6	560	280	4.2	5.5	14.14	1.14	1975	1988
700	560	3164	560	12.4	22.2	2.4	546	-1.5	558	281	4.7	5.8	9.07	1.21	1990	1988
650	556	3763	556	6.9	18.2	-6.0	539	-4.1	550	284	5.6	6.8	16.05	1.16	1990	1974
600	550	4429	550	1.6	11.0	-6.1	515	-7.9	542	285	7.1	8.4	12.74	1.17	1990	1988
550	547	5129	547	-3.0	7.8	-9.5	444	-13.5	532	287	8.1	9.6	21.74	1.34	1990	1988
500	543	5874	543	-7.3	5.6	-15.3	353	-20.3	523	285	9.3	11.0	19.42	1.41	1990	1985
450	538	6688	536	-12.2	0.6	-22.3	274	-26.0	515	281	11.1	12.9	26.19	1.58	1990	1982
400	531	7578	531	-18.1	-3.9	-26.1	225	-31.8	504	277	13.8	15.8	28.26	1.62	1990	1982
350	517	8565	517	-24.9	-10.5	-34.1	204	-37.6	483	274	16.7	18.9	35.90	1.76	1990	1988
300	500	9669	500	-32.4	-18.9	-42.5	174	-44.8	466	271	19.8	22.4	40.23	1.93	1990	1982
250	481	10933	481	-41.2	-29.5	-54.5	103	-52.8	445	266	22.4	25.5	49.73	2.25	1990	1988
200	448	12420	448	-51.3	-41.3	-66.9	1	-59.0	413	263	23.2	26.3	60.78	2.09	1990	1988
175	418	13277	418	-57.0	-45.5	-68.0			382	263	22.6	25.0	66.82	2.05	1990	1978
150	381	14236	381	-62.9	-50.1	-72.1			347	264	19.9	22.0	74.56	2.27	1990	1982
125	325	15337	325	-69.3	-59.5	-81.0			298	264	15.3	17.6	87.73	2.46	1988	1978
100	295	16644	295	-74.6	-64.0	-87.9			265	266	8.6	12.0	109.28	2.75	1976	1982
80	249	17937	249	-75.8	-57.9	-86.0			226	289	3.0	8.5	127.30	2.57	1982	1971
70	221	18715	221	-73.8	-61.0	-82.0			196	320	0.8	7.2	120.80	2.19	1977	1971
60	187	19619	187	-69.1	-49.9	-80.0			161	049	1.9	6.8	145.09	2.76	1989	1978
50	143	20705	143	-63.9	-49.5	-74.0			121	076	2.5	6.5	150.06	3.29	1984	1976
40	99	22102	99	-58.3	-46.1	-67.1			78	084	2.8	5.9	163.58	3.70	1990	1985
30	47	23952	47	-53.7	-42.5	-61.3			36	092	3.1	5.3	195.85	3.63	1990	1985
25	35	25164	35	-50.4	-40.5	-60.3			23	089	2.6	4.8	196.94	3.71	1990	1983
20	20	26616	20	-48.0	-37.5	-59.7			14	105	4.3	7.3			1990	1983
15	11	28579	11	-45.2	-34.1	-58.7			9	034	1.6	4.3			1990	1983
10	4	31142	4	-45.8	-39.1	-51.1			1	323	4.0	4.0			1988	1983
7	1	33284	1	-43.5	-43.5	-43.5									1983	1983

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

550 581 468

248 093 1709 -77.1

NORMALS OF RADIOSONDE DATA

42867 NAGPUR

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	619	966	619	40.1	46.4	22.0	619	10.4	618	318	1.5	3.2	1.57	2.16	1988	1986
1000	577	-4											16.04			
950	577	446	577	38.5	45.0	21.4	559	10.0	575	308	3.2	5.9	18.65	2.16	1973	1982
900	577	959	577	34.1	42.0	21.0	556	8.2	575	306	3.2	5.5	12.42	1.87	1973	1990
850	577	1471	577	29.4	37.0	18.6	554	6.5	575	306	3.5	5.4	10.80	1.75	1978	1990
800	575	2006	575	24.6	32.0	14.0	554	4.9	573	306	3.8	5.4	9.26	1.65	1988	1982
750	574	2538	574	19.5	28.4	10.6	555	3.2	572	306	4.0	5.5	14.05	1.60	1988	1982
700	574	3152	574	14.1	24.4	6.0	563	1.2	570	307	4.2	5.7	9.41	1.54	1988	1983
650	568	3757	568	8.5	19.6	1.2	551	-1.3	557	305	4.5	6.1	16.95	1.42	1988	1982
600	565	4425	564	3.1	14.4	-5.1	541	-5.0	549	304	4.9	6.7	11.99	1.18	1988	1982
550	560	5129	560	-1.6	9.0	-9.1	502	-9.9	531	306	5.3	7.2	19.01	1.19	1988	1982
500	555	5876	555	-5.7	2.0	-13.1	419	-15.9	524	306	5.8	8.0	14.32	1.41	1975	1982
450	547	6700	547	-10.1	-1.5	-20.0	324	-21.8	509	301	6.4	9.1	20.53	1.52	1990	1978
400	540	7595	540	-15.3	-6.5	-25.1	261	-27.4	499	290	7.4	10.5	21.52	1.92	1990	1982
350	529	8592	529	-21.6	-12.7	-32.0	213	-34.2	476	278	8.5	11.8	29.89	2.21	1989	1978
300	519	9714	519	-29.2	-18.9	-41.1	179	-41.4	468	266	10.2	13.0	36.89	2.51	1990	1982
250	504	10993	504	-38.3	-28.1	-49.1	116	-49.8	449	256	11.1	13.8	49.68	2.50	1990	1982
200	474	12491	474	-49.6	-40.0	-60.1	6	-57.5	423	247	10.6	13.6	63.75	2.48	1975	1981
175	436	13359	436	-56.0	-46.0	-66.1			386	244	8.8	12.3	71.20	2.51	1975	1979
150	398	14322	398	-63.2	-52.0	-74.1			354	237	6.8	11.3	80.48	2.53	1975	1979
125	360	15420	360	-70.4	-58.0	-85.0			317	213	4.1	10.0	93.03	2.76	1974	1978
100	303	16722	303	-76.4	-65.5	-89.0			271	128	3.6	9.0	108.23	3.17	1990	1978
80	259	18013	259	-77.0	-65.7	-90.0			228	096	7.0	9.3	120.20	3.38	1986	1978
70	230	18801	230	-73.7	-61.0	-85.1			198	094	8.3	10.0	126.03	3.33	1977	1985
60	191	19713	191	-68.3	-54.7	-80.1			160	092	8.3	9.4	127.06	3.51	1990	1985
50	145	20832	145	-62.1	-48.7	-74.0			125	093	8.0	9.1	161.67	2.94	1988	1978
40	90	22254	90	-55.8	-45.1	-69.0			71	096	9.2	9.8	189.98	2.75	1988	1978
30	59	24110	59	-51.2	-36.7	-61.1			46	085	9.3	10.4	246.22	4.49	1985	1979
25	35	25292	35	-48.9	-40.0	-58.9			27	091	9.4	10.4	276.27	4.83	1975	1985
20	14	26742	14	-46.2	-37.3	-56.1			9	084	7.1	9.4			1990	1985
15	7	28500	7	-44.7	-36.7	-52.1			6	070	6.9	9.5			1988	1985
10	3	31430	3	-37.7	-33.9	-42.5			3	124	7.8	10.0			1988	1983
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

559 565 490

261 094 1710 -78.5

## NORMALS OF RADIOSONDE DATA

42867 NAGPUR

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	600	964	600	34.1	45.0	23.0	600	18.9	600	283	1.9	3.6	0.77	1.89	1978	1974
1000	574	-19											7.12			
950	574	421	573	33.1	44.0	21.8	570	18.2	569	279	4.0	6.5	17.35	1.73	1975	1979
900	574	929	573	29.5	41.0	18.0	568	16.0	569	283	4.5	6.6	6.73	1.58	1981	1979
850	574	1435	573	25.4	36.8	13.0	570	13.8	570	289	4.7	6.7	7.51	1.39	1988	1976
800	574	1964	573	21.4	36.2	13.0	568	11.7	563	297	4.4	6.6	8.26	1.26	1988	1979
750	574	2508	574	17.1	27.0	8.6	567	9.3	554	304	4.1	6.7	12.80	1.09	1988	1979
700	574	3102	574	12.9	20.6	6.0	566	6.0	550	310	3.7	6.6	9.92	0.86	1981	1974
650	566	3721	565	8.7	19.0	2.0	555	2.2	529	316	3.5	6.5	14.70	0.71	1975	1974
600	562	4377	560	4.6	13.0	-3.1	549	-1.7	522	318	3.3	6.4	10.78	0.85	1990	1979
550	555	5097	553	0.5	9.2	-7.9	531	-5.8	509	317	2.9	6.0	16.11	1.09	1990	1979
500	550	5840	548	-3.4	6.2	-11.9	506	-10.4	497	314	2.5	5.8	11.24	1.22	1990	1979
450	546	6680	543	-7.3	1.8	-19.3	437	-15.5	486	314	1.8	5.9	14.36	1.29	1990	1979
400	538	7578	537	-12.2	-3.5	-26.5	387	-21.6	475	345	1.1	6.0	17.27	1.37	1990	1983
350	525	8589	524	-18.3	-10.1	-27.5	330	-28.0	460	054	1.4	6.2	20.82	1.41	1983	1979
300	513	9724	512	-26.1	-15.9	-36.5	279	-35.5	448	078	2.7	6.8	26.20	1.52	1990	1982
250	500	11018	500	-35.8	-27.3	-48.1	205	-45.0	432	088	4.8	8.0	34.40	1.77	1990	1982
200	477	12531	477	-48.1	-39.9	-59.1	30	-53.2	416	092	7.8	10.9	42.39	2.12	1988	1982
175	444	13398	444	-55.2	-45.1	-66.1	4	-55.8	385	092	9.9	13.0	51.06	2.39	1988	1979
150	404	14359	404	-63.3	-50.1	-73.9			358	091	12.4	15.0	60.41	2.54	1988	1979
125	359	15458	359	-71.6	-56.0	-81.9			318	086	15.4	17.4	74.25	2.77	1975	1985
100	306	16739	306	-78.8	-65.0	-90.1			278	084	18.8	19.8	93.85	2.99	1975	1979
80	266	18006	266	-78.9	-66.1	-89.9			243	088	19.0	19.7	109.48	2.61	1983	1979
70	236	18784	236	-74.9	-62.0	-89.7			211	088	18.2	18.8	119.14	2.85	1978	1979
60	201	19680	201	-68.7	-57.0	-84.3			176	092	16.3	16.9	132.26	3.11	1972	1980
50	158	20796	158	-62.2	-51.9	-76.0			138	089	15.4	16.0	135.56	3.19	1990	1978
40	100	22184	100	-57.2	-47.1	-69.1			83	085	15.5	15.8	174.57	3.97	1989	1982
30	48	24068	48	-52.1	-43.9	-63.0			39	085	15.8	16.2	184.57	3.49	1990	1978
25	29	25278	29	-48.4	-41.0	-57.5			22	081	17.0	17.5	200.96	3.85	1976	1988
20	10	26788	10	-46.5	-40.5	-53.9			6	083	15.8	16.3			1989	1988
15	7	28703	7	-44.2	-38.5	-50.1			3	086	24.5	25.0			1990	1988
10	2	31150	2	-42.5	-41.1	-43.9									1987	1988
7	1	34035	1	-39.9	-39.9	-39.9									1987	1987

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
552	542	521					266	095	1705	-80.9

## NORMALS OF RADIOSONDE DATA

42867 NAGPUR

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	617	965	617	29.4	37.0	21.8	617	23.0	616	265	2.4	3.2	1.02	0.87	1976	1981
1000	595	-4											8.28			
950	595	427	595	28.4	36.2	21.4	592	22.2	582	267	5.4	6.7	16.30	0.80	1982	1981
900	595	930	594	25.1	33.0	19.0	592	19.6	582	272	6.3	7.5	8.85	0.74	1982	1973
850	595	1430	594	21.6	28.6	12.0	591	16.9	582	280	6.8	8.3	9.55	0.71	1986	1982
800	595	1953	594	18.2	28.4	12.2	592	14.4	578	281	7.0	8.6	10.38	0.75	1985	1983
750	595	2499	595	14.8	20.4	8.6	592	11.3	574	283	6.7	8.5	11.97	0.73	1990	1983
700	595	3082	595	11.6	18.0	4.2	592	7.7	563	283	5.9	7.9	10.89	0.75	1990	1983
650	590	3702	590	8.4	15.0	0.0	586	3.6	541	288	5.0	7.3	10.71	0.85	1990	1983
600	587	4356	587	5.0	12.0	-3.5	575	-0.3	524	293	3.9	6.8	13.50	0.93	1990	1983
550	581	5079	580	1.5	13.8	-7.7	565	-4.1	513	298	2.6	6.1	21.32	1.00	1983	1982
500	577	5824	576	-2.3	8.0	-10.5	549	-8.6	506	318	1.3	5.6	15.40	1.12	1971	1985
450	569	6660	567	-6.6	5.4	-16.3	528	-13.9	497	049	1.0	5.2	19.48	1.23	1989	1985
400	564	7566	562	-11.8	-4.5	-22.0	505	-20.1	490	075	2.8	5.7	20.45	1.38	1988	1978
350	556	8577	555	-18.2	-10.5	-27.5	456	-27.1	477	083	5.2	7.0	28.61	1.65	1988	1985
300	543	9713	542	-26.0	-18.7	-38.0	374	-34.9	457	087	8.1	9.0	33.34	1.86	1988	1978
250	527	11009	525	-35.8	-27.1	-48.0	243	-43.9	441	087	11.6	12.5	42.35	2.05	1988	1978
200	496	12524	494	-48.1	-38.9	-60.1	36	-54.4	416	085	16.5	17.3	55.43	2.28	1988	1986
175	450	13389	448	-55.4	-45.5	-69.1	4	-57.8	378	083	19.5	20.5	63.80	2.38	1988	1979
150	426	14354	424	-63.6	-53.9	-74.1			358	082	22.2	23.2	73.36	2.43	1988	1982
125	366	15450	365	-72.0	-57.3	-85.1			308	082	25.3	26.2	82.81	2.54	1988	1979
100	307	16747	306	-77.8	-68.0	-89.1			266	082	28.5	29.2	104.18	2.52	1976	1979
80	257	18035	257	-75.5	-58.0	-85.0			226	085	25.8	26.5	116.73	3.37	1976	1977
70	233	18830	233	-71.2	-56.0	-85.0			198	088	23.4	23.7	118.22	3.48	1976	1972
60	201	19736	201	-65.6	-46.0	-78.3			170	089	21.0	21.5	133.36	3.97	1977	1985
50	149	20866	148	-60.6	-47.5	-75.0			120	089	21.0	21.4	153.56	4.65	1981	1977
40	96	22270	96	-56.7	-40.9	-68.0			72	085	20.9	21.4	158.41	5.55	1981	1978
30	44	24116	44	-52.4	-42.5	-65.5			30	089	23.9	24.2	164.28	2.66	1989	1980
25	21	25348	21	-49.8	-43.1	-67.5			12	091	24.3	24.6	184.43	4.43	1987	1988
20	8	26782	8	-46.7	-43.5	-52.1			3	094	22.4	22.7			1989	1986
15	3	28858	3	-46.4	-42.1	-50.1									1987	1986
10	3	31571	3	-42.5	-34.1	-47.7									1987	1986
7	1	33739	1	-45.5	-45.5	-45.5									1986	1986

**FREEZING LEVEL**

N P ALT

579 530 537

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

277 099 1682 -79.3

NORMALS OF RADIOSONDE DATA

42867 NAGPUR

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	589	966	589	28.4	34.4	22.8	589	23.1	589	273	2.2	2.9	1.00	0.56	1987	1979
1000	579	2											7.66			
950	579	433	579	27.3	38.8	21.4	578	22.3	570	275	5.6	7.0	14.04	0.49	1980	1985
900	579	934	579	24.1	30.0	17.8	578	19.7	570	283	6.4	7.9	7.54	0.60	1981	1985
850	579	1432	579	20.8	26.4	14.0	577	17.1	570	290	6.8	8.5	7.59	0.70	1986	1982
800	579	1954	579	17.6	26.4	10.2	576	14.4	565	292	6.4	8.4	8.40	0.85	1988	1982
750	579	2500	578	14.4	25.0	8.4	575	11.2	555	292	5.7	7.9	12.77	0.84	1976	1979
700	578	3083	578	11.4	19.0	-11.0	576	7.5	542	294	4.7	7.2	10.02	0.86	1987	1974
650	573	3705	573	8.4	19.0	-4.3	567	3.4	521	300	3.9	6.8	10.60	0.89	1975	1981
600	570	4356	570	5.1	14.0	-1.7	563	-0.7	516	306	2.9	6.2	12.97	0.90	1974	1979
550	562	5078	562	1.5	7.8	-4.7	550	-4.7	496	314	1.8	5.9	20.72	0.93	1990	1982
500	560	5825	560	-2.4	4.6	-9.5	538	-9.1	486	004	1.2	5.7	16.72	1.01	1986	1982
450	551	6663	551	-6.8	8.8	-14.1	519	-14.2	472	056	1.8	5.8	20.55	1.10	1981	1979
400	548	7567	547	-12.1	-4.5	-20.7	489	-20.4	467	075	3.7	6.6	21.04	1.28	1988	1979
350	542	8577	540	-18.5	-9.5	-27.7	441	-27.7	458	080	5.6	7.7	26.39	1.38	1988	1979
300	535	9711	533	-26.3	-17.5	-35.1	367	-35.5	448	083	8.0	9.3	32.34	1.66	1988	1979
250	525	11004	522	-36.2	-27.7	-45.7	258	-44.4	438	084	11.2	12.1	39.50	1.96	1990	1979
200	501	12511	499	-48.7	-38.3	-59.9	35	-54.5	415	082	15.1	16.1	50.92	2.22	1988	1979
175	471	13374	469	-56.2	-45.3	-66.1	2	-57.0	387	080	17.5	18.8	57.88	2.27	1988	1979
150	432	14334	429	-64.4	-52.1	-74.5			363	079	19.9	21.4	65.24	2.40	1988	1980
125	384	15421	383	-73.0	-54.9	-84.5			332	080	22.6	23.9	74.27	2.34	1987	1986
100	331	16711	330	-78.2	-60.1	-88.9			285	082	25.9	26.8	87.19	2.80	1981	1985
80	256	17996	255	-75.1	-60.0	-88.1			228	087	22.9	23.3	102.65	3.40	1976	1983
70	227	18791	226	-70.5	-56.0	-84.0			205	089	21.3	21.6	111.20	3.46	1976	1978
60	197	19699	197	-65.3	-50.0	-81.0			176	089	19.7	20.1	125.69	3.25	1976	1978
50	147	20818	147	-61.2	-50.1	-73.0			131	089	19.3	19.7	142.99	3.18	1986	1978
40	93	22211	93	-57.8	-48.5	-69.7			82	092	20.7	21.1	155.98	3.04	1989	1986
30	52	24079	52	-53.1	-43.1	-60.1			46	091	22.1	22.6	166.79	3.24	1989	1983
25	40	25242	40	-50.8	-41.0	-58.0			31	087	23.0	23.3	188.66	3.26	1977	1973
20	12	26764	12	-48.2	-39.1	-54.5			8	085	26.7	27.0			1989	1983
15	5	28352	5	-52.2	-50.7	-54.1			4	089	28.9	29.2			1983	1983
10	2	31193	2	-47.3	-46.3	-48.3			2	094	32.4	32.5			1983	1986
7	1	33410	1	-48.1	-48.1	-48.1			1	103	20.0	20.0			1986	1986

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
563	530	535					284	103	1658	-79.5

## NORMALS OF RADIOSONDE DATA

42867 NAGPUR

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	570	969	570	29.3	36.4	21.6	570	22.1	570	308	1.0	2.5	0.73	1.04	1987	1986
1000	553	30											6.52			
950	553	465	553	28.1	35.0	17.6	551	20.9	550	303	2.8	5.6	15.79	0.96	1982	1983
900	553	964	553	25.0	31.0	19.0	549	18.1	550	312	3.3	5.9	7.60	0.66	1974	1990
850	553	1463	553	21.4	26.8	16.0	548	15.4	550	318	3.7	6.2	8.29	0.52	1981	1978
800	552	1985	552	17.8	27.0	12.0	547	12.3	548	323	3.7	6.5	8.46	0.60	1982	1978
750	552	2525	552	14.3	22.2	8.0	546	8.4	545	326	3.6	6.4	10.13	0.69	1988	1978
700	552	3114	551	10.8	18.6	5.0	544	4.3	541	324	3.4	6.1	8.59	0.81	1988	1971
650	545	3731	544	7.4	15.0	2.0	531	0.4	522	319	3.0	5.9	10.51	0.96	1988	1971
600	544	4383	543	4.2	11.8	-2.3	512	-3.4	510	308	2.3	5.7	9.51	1.09	1988	1979
550	536	5097	535	0.8	8.8	-6.3	478	-7.3	492	296	1.5	5.4	15.16	1.13	1988	1979
500	529	5847	527	-3.2	5.2	-11.1	444	-12.1	481	309	0.5	5.2	14.70	1.13	1987	1979
450	519	6681	517	-7.7	3.8	-15.5	410	-16.9	463	087	0.5	5.1	17.19	1.21	1987	1979
400	509	7585	506	-13.1	-4.3	-21.1	373	-22.8	452	094	1.5	5.3	20.06	1.31	1987	1979
350	497	8590	494	-19.8	-12.1	-26.0	333	-29.8	440	097	2.6	5.7	23.64	1.41	1982	1977
300	493	9718	491	-27.8	-19.5	-37.1	291	-37.6	431	098	3.8	6.3	28.65	1.50	1988	1982
250	478	11004	476	-37.7	-27.5	-46.1	187	-46.7	412	097	6.0	8.0	35.78	1.61	1988	1982
200	462	12504	461	-50.3	-40.7	-64.5	23	-55.9	399	097	9.2	11.1	44.79	1.73	1988	1986
175	433	13362	431	-57.5	-49.3	-67.9	2	-61.8	367	096	10.9	12.6	48.61	1.88	1987	1982
150	393	14316	392	-65.6	-56.0	-74.1			338	094	12.8	14.7	57.42	2.01	1977	1979
125	363	15400	363	-73.6	-62.0	-85.1			313	092	14.4	15.9	67.92	1.91	1978	1982
100	334	16684	334	-78.7	-64.7	-89.3			288	089	15.9	16.7	78.10	2.31	1986	1981
80	280	17962	280	-75.0	-56.1	-87.5			243	091	15.4	15.8	94.36	3.46	1986	1979
70	245	18758	245	-70.4	-51.9	-83.5			211	095	14.5	14.8	104.23	3.36	1987	1979
60	220	19676	220	-65.4	-50.3	-80.0			179	093	13.6	14.1	112.09	3.18	1990	1978
50	164	20803	164	-61.1	-45.9	-76.0			132	091	14.4	14.8	122.42	3.09	1990	1978
40	107	22230	107	-57.1	-40.9	-67.7			78	091	14.5	15.0	177.06	3.76	1990	1982
30	75	24083	75	-52.8	-41.7	-60.1			50	087	15.2	15.7	212.31	3.92	1987	1988
25	52	25305	52	-49.8	-36.9	-58.0			30	084	15.7	16.4	274.24	4.51	1990	1977
20	27	26916	27	-46.5	-39.9	-56.1			14	082	15.7	16.2	220.09	3.91	1987	1988
15	17	28821	17	-44.4	-37.5	-54.7			7	082	21.4	22.0			1987	1988
10	7	31502	7	-41.4	-34.5	-48.3			4	085	23.8	24.3			1987	1988
7	2	33804	2	-44.1	-41.1	-47.1									1987	1988

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

538 541 522

305 101 1668 -80.0

# NORMALS OF RADIOSONDE DATA

42867 NAGPUR

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	973	589	29.7	36.0	20.6	589	17.3	589	036	1.2	1.9	1.50	1.30	1986	1990
<i>1000</i>	536	72											13.75			
<i>950</i>	536	500	536	28.0	34.0	18.0	535	15.5	534	037	2.4	4.4	19.59	1.37	1976	1981
<i>900</i>	536	1005	536	24.4	32.0	15.6	534	12.3	534	036	2.7	4.5	13.54	1.35	1982	1990
<i>850</i>	536	1502	536	20.4	29.2	12.0	533	9.8	534	026	3.0	4.8	13.88	1.31	1989	1976
<i>800</i>	536	2022	536	16.2	22.6	10.0	529	6.6	534	016	3.4	5.5	14.18	1.22	1988	1985
<i>750</i>	536	2553	536	12.2	19.6	3.8	513	3.0	532	009	3.5	6.1	14.13	1.31	1988	1981
<i>700</i>	536	3141	536	8.7	17.0	1.6	475	-1.2	533	001	3.1	6.1	14.90	1.29	1988	1988
<i>650</i>	535	3752	535	5.8	15.2	-4.9	413	-5.1	520	341	2.3	5.8	13.34	1.19	1988	1987
<i>600</i>	532	4402	532	2.9	11.6	-6.5	338	-8.6	511	309	2.1	5.7	15.14	1.32	1988	1979
<i>550</i>	531	5110	531	-0.5	11.0	-9.1	296	-12.2	505	287	2.3	6.2	22.08	1.40	1972	1982
<i>500</i>	528	5859	527	-4.6	2.8	-12.9	269	-16.4	499	278	3.0	6.7	19.78	1.45	1988	1979
<i>450</i>	525	6680	523	-9.5	-1.9	-18.1	239	-21.6	490	276	3.9	7.4	29.12	1.63	1990	1985
<i>400</i>	521	7581	515	-15.3	-6.5	-22.7	222	-27.5	483	267	5.0	8.3	28.21	1.96	1990	1979
<i>350</i>	515	8576	511	-22.0	-12.1	-31.3	206	-33.9	475	259	6.3	9.5	36.29	2.12	1988	1982
<i>300</i>	501	9694	498	-30.0	-20.9	-39.1	177	-41.4	463	252	7.8	10.7	44.20	2.23	1990	1982
<i>250</i>	484	10968	484	-39.9	-29.9	-49.3	117	-49.6	447	246	8.8	12.1	54.33	2.35	1990	1982
<i>200</i>	463	12455	463	-51.8	-42.3	-64.0	12	-55.2	428	232	8.8	13.1	70.64	2.38	1988	1977
<i>175</i>	438	13310	438	-58.7	-48.7	-70.0	1	-57.0	403	225	8.5	13.0	79.12	2.37	1988	1977
<i>150</i>	416	14259	415	-66.1	-56.7	-77.5			382	217	7.4	12.4	89.59	2.30	1990	1988
<i>125</i>	381	15340	380	-73.5	-60.7	-85.9			348	204	5.4	10.9	97.87	1.97	1988	1988
<i>100</i>	343	16633	342	-78.0	-64.3	-90.1			311	158	3.2	8.6	120.95	2.49	1989	1979
<i>80</i>	298	17918	298	-75.2	-58.9	-89.9			264	104	4.9	7.7	131.17	2.62	1989	1979
<i>70</i>	264	18717	264	-70.7	-55.1	-90.0			228	096	5.4	7.0	121.13	2.93	1981	1978
<i>60</i>	218	19632	218	-66.4	-53.0	-81.0			187	094	6.3	7.6	131.84	2.60	1973	1978
<i>50</i>	175	20758	175	-62.1	-42.1	-83.5			140	095	6.4	8.0	146.27	2.87	1986	1983
<i>40</i>	107	22164	107	-57.8	-44.1	-70.0			83	091	8.0	8.8	175.07	3.28	1990	1978
<i>30</i>	66	24004	66	-53.6	-41.9	-65.0			42	095	8.6	9.5	219.38	3.43	1990	1977
<i>25</i>	48	25215	48	-51.2	-38.9	-63.0			29	094	9.0	9.6	244.28	3.86	1990	1977
<i>20</i>	30	26746	30	-48.3	-36.9	-52.5			18	076	9.5	10.1	142.77	1.69	1990	1990
<i>15</i>	18	28669	18	-46.0	-38.1	-51.5			8	083	6.6	9.4			1990	1990
<i>10</i>	5	31336	5	-43.7	-37.7	-48.9			3	059	12.3	14.3			1990	1988
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
532	558	500								
							319	101	1661	-79.4

# NORMALS OF RADIOSONDE DATA

42867 NAGPUR

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	977	600	27.0	33.0	19.0	600	13.1	600	047	1.3	1.8	1.16	1.15	1976	1978
<i>1000</i>	546	103											9.75			
<i>950</i>	546	524	546	25.4	32.0	17.0	546	11.3	546	055	3.1	4.2	16.23	1.23	1976	1974
<i>900</i>	546	1027	546	21.7	29.0	10.0	545	8.5	546	045	2.9	4.1	7.69	1.28	1976	1988
<i>850</i>	546	1519	546	17.6	27.8	10.0	539	5.6	546	030	2.7	4.5	8.01	1.29	1990	1982
<i>800</i>	546	2033	546	14.0	25.0	7.8	514	1.8	545	015	2.9	5.1	8.49	1.16	1990	1984
<i>750</i>	546	2567	546	11.2	21.2	3.0	448	-2.3	545	357	2.7	5.5	13.75	1.14	1990	1984
<i>700</i>	546	3147	546	8.6	17.2	1.2	380	-6.4	544	334	2.6	5.9	9.28	1.17	1990	1988
<i>650</i>	543	3758	543	5.7	14.4	-5.3	320	-10.0	537	308	3.0	6.3	16.48	1.15	1990	1981
<i>600</i>	540	4406	539	2.3	10.6	-4.5	282	-13.5	533	298	4.2	7.2	12.40	1.10	1987	1982
<i>550</i>	536	5113	534	-1.6	7.8	-10.5	258	-17.9	524	289	5.4	8.2	16.31	1.20	1990	1982
<i>500</i>	532	5856	531	-6.2	3.2	-13.5	237	-21.9	522	285	7.2	9.7	17.95	1.49	1990	1982
<i>450</i>	524	6674	523	-11.5	-2.9	-19.5	222	-26.8	508	281	9.3	11.7	25.45	1.65	1990	1982
<i>400</i>	519	7566	519	-17.5	-8.1	-26.1	210	-32.0	501	276	11.2	13.7	27.43	1.85	1990	1982
<i>350</i>	507	8553	507	-24.3	-15.1	-34.0	190	-38.3	485	269	13.8	15.9	36.27	1.93	1990	1978
<i>300</i>	497	9660	495	-32.3	-21.9	-44.0	159	-45.1	474	263	16.6	18.6	41.43	2.00	1990	1978
<i>250</i>	476	10922	474	-41.7	-31.0	-55.0	81	-52.7	450	255	19.4	21.2	50.90	2.24	1972	1978
<i>200</i>	455	12400	454	-53.3	-42.7	-69.5	3	-55.0	423	248	20.5	22.5	63.65	2.46	1989	1982
<i>175</i>	432	13245	431	-59.9	-49.1	-72.3			396	246	19.3	21.2	72.02	2.56	1990	1982
<i>150</i>	397	14191	397	-66.7	-55.9	-80.1			365	247	17.4	19.3	83.78	2.84	1989	1981
<i>125</i>	351	15275	351	-73.1	-61.1	-88.9			320	252	13.2	14.9	97.63	3.37	1986	1979
<i>100</i>	312	16563	312	-77.7	-65.1	-89.9			283	253	8.1	10.6	119.19	3.05	1989	1979
<i>80</i>	273	17843	273	-77.0	-61.1	-89.9			240	272	2.1	7.2	136.95	2.31	1989	1979
<i>70</i>	251	18630	251	-73.7	-56.9	-86.9			220	305	1.2	5.9	135.95	2.10	1990	1979
<i>60</i>	221	19534	221	-68.9	-53.7	-80.3			188	347	0.6	5.5	137.90	2.25	1990	1985
<i>50</i>	171	20648	171	-64.1	-50.9	-76.0			141	079	0.8	5.3	147.80	2.34	1989	1978
<i>40</i>	115	22038	115	-60.1	-48.9	-69.5			84	102	1.1	5.5	168.53	3.23	1990	1985
<i>30</i>	62	23834	62	-56.1	-43.5	-63.1			37	168	0.3	7.9	191.11	2.12	1990	1985
<i>25</i>	38	25019	38	-53.2	-41.3	-59.9			22	045	1.3	8.0	135.03	1.84	1987	1987
<i>20</i>	22	26506	22	-50.7	-42.1	-56.9			12	086	2.3	6.0	157.04	1.09	1987	1988
<i>15</i>	13	28408	13	-47.8	-43.9	-52.1			5	192	1.3	4.6			1989	1990
<i>10</i>	5	31097	5	-46.1	-38.9	-49.1			1	083	3.0	3.0			1990	1989
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

540 570 482

289 098 1672 -79.2



## NORMALS OF RADIOSONDE DATA

42867 NAGPUR

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	591	978	591	25.3	31.0	17.0	591	11.2	591	061	0.8	1.3	1.05	1.26	1972	1980
1000	525	120											7.85			
950	525	538	524	23.5	33.4	15.0	522	9.2	523	069	2.0	3.5	16.18	1.11	1986	1982
900	525	1037	524	19.6	29.2	11.0	521	6.4	524	042	1.4	3.4	6.22	1.22	1986	1979
850	525	1525	524	15.7	26.0	7.0	517	3.2	524	342	1.4	4.0	7.73	1.14	1990	1983
800	525	2037	525	12.6	24.8	4.4	480	-1.0	523	319	2.3	4.7	7.98	0.91	1990	1990
750	525	2572	525	10.1	20.8	3.0	409	-5.3	523	306	3.5	5.8	12.88	1.14	1990	1977
700	525	3146	524	7.6	18.4	1.0	319	-9.1	523	292	4.5	6.8	9.01	1.31	1990	1981
650	522	3756	520	4.7	16.8	-5.9	265	-12.6	515	283	6.1	8.1	15.88	1.25	1990	1982
600	521	4400	520	1.3	13.6	-8.1	235	-16.0	513	278	8.4	10.3	12.08	1.03	1990	1981
550	520	5103	519	-2.8	9.8	-9.9	213	-19.4	509	277	10.2	11.9	16.64	0.95	1990	1986
500	519	5844	517	-7.6	4.4	-15.3	189	-23.5	507	275	12.3	14.0	15.31	1.03	1990	1981
450	515	6652	512	-12.9	-1.1	-22.5	180	-28.3	503	274	14.9	16.6	24.85	1.11	1983	1988
400	505	7544	503	-19.2	-10.3	-32.9	175	-33.1	492	273	17.6	19.4	21.28	1.32	1990	1979
350	498	8525	495	-26.0	-17.1	-37.7	170	-39.0	483	271	21.2	23.1	29.29	1.42	1990	1988
300	490	9626	490	-33.9	-23.1	-46.1	155	-45.6	473	268	24.1	26.3	30.78	1.60	1990	1988
250	471	10878	469	-43.3	-32.1	-57.7	91	-53.5	447	261	27.9	30.6	37.10	1.63	1990	1988
200	448	12347	447	-54.4	-42.9	-70.0	3	-57.8	422	257	29.3	31.8	46.20	1.72	1990	1976
175	412	13193	410	-60.1	-51.3	-72.1			384	256	29.0	31.4	48.77	1.82	1986	1985
150	373	14142	373	-65.7	-56.1	-78.1			345	257	27.1	28.8	58.32	2.08	1986	1985
125	328	15235	328	-70.6	-61.7	-86.1			302	258	22.8	24.1	66.13	2.53	1983	1985
100	285	16539	285	-75.1	-65.1	-87.5			262	261	16.9	18.3	78.12	2.72	1986	1985
80	252	17828	252	-75.6	-56.7	-86.1			229	268	9.0	11.3	97.05	2.49	1988	1985
70	232	18604	232	-73.7	-53.9	-84.9			210	269	6.4	8.6	99.85	3.29	1988	1984
60	207	19509	207	-69.9	-53.9	-81.3			182	267	4.9	7.4	109.98	3.47	1988	1987
50	161	20590	161	-65.1	-51.0	-77.7			143	271	3.2	6.7	141.62	3.19	1977	1987
40	103	21953	103	-60.9	-50.1	-71.1			86	262	2.5	6.9	140.38	3.36	1986	1990
30	43	23755	43	-57.8	-48.9	-69.0			36	246	1.9	7.0	191.60	4.05	1986	1977
25	23	24869	23	-57.0	-47.5	-66.0			19	226	2.1	8.2	237.71	4.51	1986	1977
20	14	26322	14	-54.9	-45.9	-62.7			9	242	5.1	8.8			1986	1990
15	9	28250	9	-52.1	-46.1	-61.7			7	248	7.1	12.0			1986	1990
10	4	31212	4	-49.3	-43.5	-50.5			3	259	0.9	9.7			1990	1990
7	1	33320	1	-47.1	-47.1	-47.1									1983	1983

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

520 584 461

9 149 1433 -68.5

255 096 1685 -77.0

NORMALS OF RADIOSONDE DATA

42182 NEW DELHI

JANUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	620	983	620	18.2	24.8	10.0	620	6.6	620	305	2.5	3.8	1.05	0.86	1990	1971
1000	617	124											7.50			
950	616	561	614	15.5	22.4	7.0	611	4.0	612	301	3.9	5.8	7.74	1.01	1990	1971
900	616	1018	615	12.0	21.2	4.0	585	-0.1	612	308	3.2	5.3	8.50	1.15	1990	1971
850	616	1495	616	9.3	19.2	0.0	474	-3.5	613	297	3.6	5.6	9.44	1.50	1989	1971
800	616	1994	614	6.6	17.8	-4.9	383	-5.5	612	286	4.3	6.3	11.27	1.58	1990	1983
750	616	2521	614	3.8	15.0	-7.1	323	-8.2	611	277	5.7	7.4	13.27	1.66	1990	1983
700	616	3079	613	0.6	11.8	-10.0	269	-10.9	611	275	7.4	9.0	15.92	1.64	1990	1974
650	614	3669	611	-2.9	7.2	-13.9	241	-14.1	610	273	9.7	11.3	18.71	1.70	1990	1984
600	612	4299	610	-6.8	2.8	-17.5	238	-17.9	608	273	12.6	14.2	21.73	1.65	1990	1984
550	612	4972	610	-11.3	13.8	-22.0	206	-21.7	609	273	15.8	17.2	25.64	1.73	1986	1973
500	611	5698	610	-16.2	-5.3	-25.1	186	-25.0	609	273	19.1	20.6	29.32	1.76	1989	1983
450	609	6481	606	-21.7	-8.7	-32.7	168	-30.7	605	273	23.5	25.2	34.69	1.91	1989	1983
400	606	7342	602	-27.7	-12.1	-39.0	154	-36.1	601	272	28.4	30.0	38.96	2.02	1989	1978
350	606	8289	601	-34.2	-18.1	-46.0	110	-41.7	601	271	33.5	35.4	45.79	2.23	1989	1978
300	605	9354	603	-41.0	-25.3	-53.5	33	-46.3	600	271	40.1	42.3	53.72	2.58	1989	1982
250	602	10575	600	-48.0	-27.5	-61.3	7	-58.4	584	268	47.0	49.3	64.08	2.77	1990	1982
200	592	12024	590	-54.8	-41.7	-70.1	1	-66.3	553	267	50.2	52.2	77.43	2.33	1990	1990
175	562	12874	560	-58.1	-47.1	-76.1			512	267	48.9	50.5	82.62	1.69	1988	1979
150	536	13838	535	-61.8	-49.9	-72.1			479	267	45.4	46.7	86.41	1.27	1987	1984
125	510	14956	509	-65.8	-56.0	-76.9			435	267	40.0	41.1	89.68	1.29	1974	1990
100	465	16300	464	-69.2	-59.7	-80.3			383	267	31.7	32.5	87.62	1.29	1987	1990
80	389	17629	388	-69.2	-59.0	-81.1			325	268	22.2	23.0	88.22	1.44	1977	1990
70	349	18425	348	-68.2	-58.0	-80.1			285	269	17.0	18.2	89.42	1.73	1977	1990
60	320	19357	320	-65.8	-55.5	-76.7			254	269	12.5	14.4	94.23	2.23	1981	1985
50	267	20472	267	-62.8	-48.5	-75.5			204	272	9.5	12.4	99.45	3.12	1990	1989
40	215	21868	215	-59.2	-41.7	-74.1			159	268	7.7	11.2	126.21	3.37	1990	1989
30	161	23698	161	-55.2	-38.7	-69.5			110	267	8.5	11.9	152.87	3.68	1990	1989
25	130	24874	130	-53.1	-36.1	-66.0			88	264	8.4	12.0	188.77	4.11	1990	1971
20	84	26305	84	-51.3	-40.1	-62.1			46	266	11.3	15.4	222.77	4.51	1981	1985
15	34	28211	34	-49.4	-37.3	-63.3			18	263	15.2	19.1	276.82	5.40	1988	1985
10	10	30821	10	-47.6	-40.7	-53.1			4	273	22.4	22.8			1988	1985
7	5	33119	5	-47.7	-43.7	-48.9			1	290	15.0	15.0			1988	1984

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
615	692	318	286	223	1139	-57.1	394	104	1615	-70.8

## NORMALS OF RADIOSONDE DATA

42182 NEW DELHI

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	565	981	565	21.1	31.0	13.0	565	6.8	565	302	2.6	4.3	1.52	1.45	1989	1974
1000	563	105											11.79			
950	563	545	563	18.3	29.0	9.0	560	4.5	563	300	4.1	6.2	11.16	1.57	1989	1974
900	563	1007	563	14.3	26.0	4.0	550	1.1	563	301	3.5	5.8	10.91	1.54	1989	1974
850	563	1486	563	10.9	23.0	-2.0	484	-2.5	563	291	4.0	6.3	11.38	1.53	1989	1974
800	563	1989	563	7.9	20.0	-7.0	390	-4.8	562	283	5.1	7.2	12.22	1.39	1976	1974
750	563	2518	560	4.6	16.8	-8.0	348	-7.8	561	279	6.5	8.3	13.14	1.38	1989	1974
700	563	3077	559	1.2	14.4	-9.0	302	-10.4	561	276	8.5	10.2	14.91	1.40	1989	1972
650	563	3668	562	-2.5	11.6	-13.0	262	-13.8	563	274	10.7	12.2	16.44	1.53	1989	1972
600	563	4301	561	-6.5	6.0	-18.0	229	-17.4	562	274	13.5	14.9	19.09	1.57	1989	1972
550	563	4974	560	-10.9	0.2	-22.0	200	-21.2	562	275	16.4	17.8	22.11	1.65	1989	1972
500	563	5700	561	-15.9	-3.7	-27.0	186	-26.0	563	274	19.5	21.1	25.31	1.70	1989	1972
450	563	6485	563	-21.4	-8.9	-34.0	164	-30.2	562	273	23.0	24.7	29.44	1.82	1989	1978
400	561	7345	560	-27.5	-14.3	-38.0	155	-35.7	559	272	27.4	29.1	34.32	1.98	1985	1978
350	559	8294	558	-34.0	-18.0	-46.0	117	-41.8	552	272	32.6	34.7	40.61	2.43	1972	1978
300	558	9360	556	-40.7	-24.0	-55.0	17	-46.3	543	271	38.7	41.0	49.01	2.94	1972	1978
250	558	10583	557	-47.3	-34.1	-60.0	2	-54.7	536	269	45.7	48.5	59.07	2.74	1985	1978
200	551	12040	550	-53.5	-38.5	-66.5			514	268	49.1	51.6	70.65	1.69	1990	1979
175	534	12896	534	-56.7	-42.1	-70.3			471	268	47.9	49.9	75.10	1.51	1990	1982
150	505	13864	505	-60.8	-47.1	-73.0			443	268	45.5	47.0	75.47	1.82	1990	1974
125	475	14985	475	-65.3	-53.1	-78.1			406	268	39.3	40.6	79.21	2.07	1990	1985
100	444	16329	443	-69.0	-58.1	-81.3			365	268	30.7	31.6	86.74	1.95	1990	1985
80	370	17669	370	-69.3	-54.3	-86.1			293	271	21.4	22.4	93.33	2.16	1990	1982
70	335	18467	335	-68.2	-54.1	-79.5			274	271	16.3	17.5	91.91	2.28	1990	1985
60	309	19399	309	-65.7	-51.5	-77.7			243	272	11.9	13.5	88.40	2.28	1990	1985
50	267	20524	267	-61.8	-48.3	-74.1			201	269	9.2	10.8	93.76	2.58	1990	1985
40	213	21931	213	-57.9	-45.9	-69.5			155	268	7.6	9.7	95.81	2.29	1983	1981
30	169	23773	169	-54.1	-39.7	-68.7			114	266	7.9	10.8	110.56	2.02	1989	1990
25	136	24953	136	-52.1	-38.3	-67.9			86	261	7.0	10.5	136.64	2.22	1989	1990
20	86	26401	86	-49.8	-39.1	-67.3			44	263	8.5	12.9	165.78	2.90	1987	1990
15	34	28309	34	-47.5	-37.5	-54.9			16	271	11.7	15.0	145.26	1.78	1990	1987
10	10	30896	10	-45.3	-39.3	-50.1			2	269	11.2	11.5			1988	1988
7	3	33221	3	-46.4	-45.7	-47.5			1	271	18.0	18.0			1988	1987

**FREEZING LEVEL**

N P ALT

562 685 327

**1ST TROPOPAUSE**

N P ALT T

300 232 1115 -54.8

**2ND TROPOPAUSE**

N P ALT T

379 101 1638 -70.7

# NORMALS OF RADIOSONDE DATA

42182 NEW DELHI

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	978	620	27.1	37.0	16.0	619	8.3	620	311	3.1	4.5	0.92	1.98	1972	1982
<i>1000</i>	617	76											8.32			
<i>950</i>	617	526	616	24.5	34.0	11.8	605	6.5	616	305	4.8	7.0	7.21	1.89	1971	1979
<i>900</i>	617	997	617	20.2	29.0	6.0	603	3.4	616	306	4.0	6.4	7.44	1.84	1971	1979
<i>850</i>	617	1486	617	16.1	25.0	1.0	568	0.4	616	293	4.9	6.9	8.58	1.86	1971	1979
<i>800</i>	617	1997	616	12.2	23.0	-2.7	509	-2.5	616	286	6.1	7.8	10.28	1.79	1974	1979
<i>750</i>	617	2533	617	8.2	16.0	-5.7	455	-5.4	616	281	7.3	9.0	12.73	1.72	1974	1979
<i>700</i>	617	3099	616	4.1	12.0	-7.5	414	-8.4	616	277	8.6	10.5	15.35	1.68	1974	1979
<i>650</i>	617	3697	616	0.1	9.0	-11.7	365	-11.8	615	276	10.4	11.9	18.84	1.62	1988	1982
<i>600</i>	615	4333	615	-4.2	4.6	-14.9	318	-15.7	614	275	12.3	13.8	21.75	1.65	1990	1982
<i>550</i>	615	5013	615	-8.8	-0.3	-19.0	269	-19.2	613	275	14.6	16.1	25.31	1.62	1990	1971
<i>500</i>	614	5746	612	-13.8	-4.9	-24.0	224	-23.8	612	275	17.0	18.6	28.72	1.57	1989	1971
<i>450</i>	614	6537	611	-19.5	-9.0	-30.0	193	-28.3	612	275	19.3	21.6	33.03	1.53	1977	1971
<i>400</i>	613	7403	611	-25.8	-14.5	-36.1	184	-34.3	611	274	23.0	24.9	37.39	1.50	1988	1982
<i>350</i>	612	8357	610	-32.8	-18.1	-45.0	152	-40.8	606	274	26.7	28.7	41.65	1.64	1990	1972
<i>300</i>	610	9428	608	-40.3	-23.1	-50.1	40	-46.6	593	274	31.1	33.8	46.36	1.99	1990	1980
<i>250</i>	608	10651	606	-48.0	-32.3	-62.0	4	-51.3	580	273	36.1	39.1	52.36	2.42	1990	1972
<i>200</i>	605	12102	599	-53.9	-41.1	-67.9	1	-64.3	563	269	40.0	42.6	59.57	2.22	1987	1981
<i>175</i>	588	12955	585	-56.8	-45.9	-68.0			535	269	40.2	42.4	63.92	1.54	1989	1974
<i>150</i>	567	13927	564	-60.4	-48.5	-71.9			510	269	37.4	39.1	66.71	1.50	1989	1982
<i>125</i>	529	15050	528	-64.8	-50.1	-74.5			462	268	32.4	34.0	75.08	1.59	1990	1982
<i>100</i>	490	16402	490	-68.9	-52.9	-80.1			414	269	25.1	26.3	79.46	1.44	1990	1982
<i>80</i>	403	17732	401	-70.1	-56.5	-80.5			344	272	17.5	18.6	88.60	1.70	1990	1988
<i>70</i>	376	18531	375	-69.0	-56.0	-79.3			320	276	12.2	13.7	90.25	1.84	1977	1988
<i>60</i>	334	19462	333	-66.2	-52.5	-79.7			279	276	8.3	10.4	100.99	2.21	1990	1989
<i>50</i>	292	20574	292	-62.8	-49.7	-75.5			234	276	4.8	8.2	101.74	2.39	1990	1989
<i>40</i>	247	21964	247	-58.4	-46.5	-72.5			192	268	3.9	7.4	116.69	2.58	1989	1989
<i>30</i>	186	23795	186	-53.7	-37.5	-68.5			138	265	4.4	8.7	126.97	2.21	1989	1989
<i>25</i>	147	24965	147	-51.4	-40.0	-65.0			99	266	5.8	9.0	134.30	2.66	1978	1978
<i>20</i>	92	26414	92	-49.2	-37.3	-58.3			56	277	9.0	12.3	168.46	3.09	1987	1988
<i>15</i>	49	28308	49	-47.4	-35.3	-54.3			26	272	11.8	13.4	196.55	3.31	1987	1984
<i>10</i>	13	30992	13	-43.8	-33.9	-51.7			10	268	17.5	19.8			1989	1985
<i>7</i>	3	33048	3	-47.0	-45.3	-46.3			2	252	24.3	24.5			1988	1986

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
616	649	372	351	225	1138	-56.0	426	099	1653	-70.8

NORMALS OF RADIOSONDE DATA

42182 NEW DELHI

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	600	973	600	34.3	42.0	20.0	598	8.1	600	306	3.5	4.8	0.84	1.61	1973	1983
1000	594	25											8.04			
950	593	487	591	32.0	39.8	15.0	516	7.1	592	300	5.9	7.5	6.97	1.61	1989	1983
900	593	969	592	27.3	40.0	15.6	513	4.9	591	305	5.2	6.8	6.66	1.56	1989	1983
850	593	1470	592	22.6	34.6	11.6	536	2.6	591	299	5.4	6.9	7.36	1.56	1989	1990
800	593	1992	592	17.8	28.4	7.8	549	0.4	590	293	5.9	7.3	8.69	1.51	1989	1983
750	593	2538	593	13.0	23.6	3.8	541	-2.1	591	289	6.7	8.0	10.92	1.41	1989	1983
700	593	3113	593	8.2	18.0	-2.1	516	-5.2	593	285	7.9	9.3	13.26	1.34	1989	1982
650	593	3719	592	3.5	11.6	-6.0	448	-8.8	592	283	9.0	10.6	14.92	1.24	1989	1972
600	591	4364	589	-1.1	8.0	-11.0	374	-12.6	589	282	10.5	12.1	17.41	1.19	1990	1972
550	589	5052	586	-5.8	3.0	-16.0	288	-17.4	586	282	11.8	13.4	20.24	1.13	1990	1972
500	588	5793	587	-10.8	-0.7	-20.0	207	-22.0	586	282	13.3	14.8	22.48	1.09	1990	1972
450	587	6593	587	-16.5	-9.9	-29.0	173	-27.1	584	281	15.0	16.6	25.03	1.20	1990	1972
400	588	7470	585	-22.9	-13.0	-33.0	145	-32.2	584	279	17.2	19.0	27.98	1.18	1974	1972
350	588	8435	585	-30.2	-20.0	-40.0	117	-38.5	584	278	20.1	22.1	31.29	1.29	1974	1972
300	586	9516	584	-38.0	-27.1	-46.7	56	-43.9	580	277	23.7	26.1	35.44	1.50	1984	1982
250	583	10749	581	-46.2	-34.3	-57.0	9	-51.4	575	275	27.9	30.5	42.30	1.96	1984	1978
200	572	12210	570	-53.2	-39.1	-66.0	1	-57.5	560	273	31.7	34.4	53.36	2.20	1990	1978
175	548	13066	545	-56.5	-44.1	-71.5			524	273	31.8	34.3	58.69	1.66	1990	1989
150	523	14036	523	-60.6	-46.5	-73.1			494	271	29.3	31.3	61.96	1.66	1990	1983
125	489	15159	488	-65.6	-52.1	-74.0			447	272	24.6	26.2	62.50	1.79	1988	1978
100	451	16498	451	-70.3	-57.5	-80.0			407	273	17.5	18.9	71.56	2.03	1990	1978
80	384	17818	384	-71.4	-59.1	-81.0			343	276	9.4	12.1	79.68	2.07	1987	1974
70	346	18608	346	-70.0	-56.5	-82.0			307	284	5.4	9.6	83.86	2.34	1989	1974
60	300	19540	300	-66.7	-51.7	-77.1			260	285	2.6	7.8	89.46	2.46	1981	1988
50	260	20662	260	-62.1	-47.1	-72.5			223	292	1.5	7.0	99.86	2.47	1989	1988
40	214	22066	214	-56.9	-40.9	-70.9			179	282	1.0	6.4	119.25	2.83	1987	1988
30	176	23905	176	-51.5	-38.3	-65.1			133	276	2.5	6.9	147.60	3.15	1989	1982
25	138	25103	138	-48.7	-38.5	-63.9			103	273	3.3	6.9	174.73	2.43	1989	1982
20	91	26565	91	-46.1	-36.9	-62.5			63	271	5.1	8.1	156.44	1.87	1989	1982
15	44	28463	44	-43.8	-37.5	-60.9			26	273	7.7	10.4	254.35	3.43	1985	1982
10	12	31105	12	-42.8	-36.5	-58.7			7	272	7.9	12.4			1984	1982
7	1	33022	1	-44.1	-44.1	-44.1			1	256	30.0	30.0			1984	1984

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
590	612	421	235	217	1169	-55.7	395	097	1677	-72.3

### NORMALS OF RADIOSONDE DATA

42182 NEW DELHI

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/h	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	969	620	37.1	44.6	23.0	620	11.8	620	301	3.0	5.0	1.86	2.30	1988	1982
<i>1000</i>	611	-12											18.09			
<i>950</i>	609	454	608	35.2	43.0	21.8	519	11.4	605	297	5.2	7.5	16.04	2.29	1988	1982
<i>900</i>	609	942	609	30.7	39.0	17.6	498	9.1	605	304	4.6	6.8	12.95	2.26	1984	1987
<i>850</i>	609	1449	609	26.1	34.8	14.0	525	6.6	607	297	5.0	6.7	10.03	2.25	1984	1987
<i>800</i>	609	1977	609	21.4	30.2	10.2	551	4.0	606	292	5.8	7.1	8.11	2.12	1984	1987
<i>750</i>	609	2530	608	16.5	25.2	5.2	553	1.2	606	289	6.8	7.9	8.22	1.99	1984	1987
<i>700</i>	609	3113	606	11.4	19.8	0.8	554	-2.1	605	288	8.2	9.2	9.24	1.84	1990	1987
<i>650</i>	608	3725	605	6.3	16.0	-3.5	540	-6.1	604	289	9.1	10.4	12.17	1.65	1978	1982
<i>600</i>	606	4376	601	1.3	10.2	-9.3	492	-11.1	602	292	10.0	11.5	15.07	1.67	1990	1982
<i>550</i>	606	5070	602	-3.5	5.8	-14.5	352	-15.3	603	293	10.9	12.4	18.88	1.75	1990	1982
<i>500</i>	604	5817	601	-8.2	0.2	-18.1	240	-19.8	600	293	11.7	13.2	22.81	1.75	1990	1979
<i>450</i>	603	6625	598	-13.5	-4.5	-23.7	156	-24.1	597	291	12.8	14.6	27.63	1.85	1990	1987
<i>400</i>	604	7513	602	-19.4	-8.0	-30.9	114	-28.4	600	287	14.5	16.5	33.41	2.02	1976	1987
<i>350</i>	602	8492	602	-26.2	-13.3	-38.9	101	-35.1	600	283	16.7	18.9	40.96	2.23	1984	1987
<i>300</i>	602	9592	602	-33.6	-20.9	-46.9	66	-42.1	599	278	19.4	22.0	50.32	2.29	1990	1987
<i>250</i>	595	10850	590	-41.7	-29.7	-56.5	13	-47.0	590	273	22.4	24.9	61.95	2.59	1990	1982
<i>200</i>	585	12334	583	-50.8	-40.7	-54.5	1	-68.3	572	268	23.8	26.0	75.73	2.43	1990	1990
<i>175</i>	565	13195	563	-55.8	-46.9	-67.3	1	-53.5	547	267	23.4	25.3	82.36	2.11	1990	1987
<i>150</i>	546	14166	544	-61.3	-52.1	-73.7			527	267	20.8	22.6	87.71	1.84	1987	1987
<i>125</i>	519	15278	518	-67.2	-55.9	-79.9			490	266	16.7	18.5	94.07	1.96	1987	1979
<i>100</i>	489	16605	489	-72.3	-60.1	-83.0			455	266	10.3	12.9	96.69	2.01	1982	1978
<i>80</i>	413	17910	413	-72.9	-56.0	-83.3			386	256	3.3	8.2	97.43	1.89	1973	1981
<i>70</i>	384	18700	382	-70.5	-55.9	-81.0			352	186	0.9	7.0	97.67	1.97	1990	1978
<i>60</i>	341	19625	341	-65.7	-54.0	-78.0			309	108	2.5	6.7	105.65	2.05	1972	1973
<i>50</i>	306	20749	306	-60.2	-48.9	-77.0			271	088	3.0	6.5	121.92	1.93	1990	1973
<i>40</i>	247	22165	247	-55.0	-43.1	-74.0			219	087	3.5	6.7	128.80	2.42	1990	1973
<i>30</i>	189	24025	189	-50.2	-39.1	-71.0			158	093	3.3	6.7	166.34	2.84	1986	1973
<i>25</i>	160	25226	160	-47.8	-35.1	-69.0			128	075	2.5	6.6	202.91	5.57	1986	1973
<i>20</i>	107	26739	107	-45.2	-35.5	-67.3			82	072	2.2	6.8	176.25	1.93	1986	1989
<i>15</i>	60	28692	60	-42.6	-32.9	-50.9			40	014	1.7	7.2	188.07	1.77	1986	1985
<i>10</i>	15	31384	15	-42.4	-35.1	-49.3			9	018	2.2	7.8			1984	1985
<i>7</i>	6	33672	6	-42.2	-38.5	-45.7			4	300	8.1	10.3			1986	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
602	584	459	81	199	1233	-57.8	428	696	1689	-74.3

## NORMALS OF RADIOSONDE DATA

42182 NEW DELHI

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	600	965	600	36.7	45.0	26.0	600	18.0	600	296	2.1	4.8	1.10	1.12	1972	1971
1000	587	-50											10.47			
950	587	416	582	35.3	44.0	23.0	567	17.0	584	294	3.3	6.6	9.99	1.17	1972	1980
900	587	907	584	30.9	40.4	21.0	567	14.5	584	307	3.0	6.2	9.68	1.08	1981	1976
850	587	1415	586	26.5	35.4	16.0	570	12.5	586	302	3.7	6.2	9.51	1.03	1981	1974
800	587	1945	585	22.2	30.8	14.0	574	9.9	587	301	4.7	6.6	9.78	0.95	1984	1974
750	587	2500	585	17.8	26.2	10.0	575	6.9	587	300	5.8	7.4	10.91	0.85	1988	1974
700	587	3088	582	13.3	23.0	6.0	555	2.8	586	302	6.7	8.3	11.60	0.86	1988	1974
650	586	3706	582	8.8	19.0	2.0	530	-2.3	581	306	7.4	9.0	13.14	1.01	1988	1974
600	586	4364	583	4.3	14.0	-4.1	496	-7.1	580	310	7.7	9.5	13.89	1.26	1988	1979
550	585	5066	580	-0.1	8.4	-8.9	430	-11.1	579	308	7.5	9.6	16.34	1.50	1988	1981
500	585	5824	584	-4.1	5.0	-14.3	329	-14.2	579	302	7.0	9.5	18.69	1.58	1975	1981
450	584	6647	584	-7.9	2.0	-20.9	219	-17.8	579	293	7.3	10.1	22.30	1.59	1982	1981
400	583	7556	582	-12.9	-5.0	-27.9	163	-23.1	578	286	8.4	11.5	25.94	1.66	1975	1981
350	579	8562	577	-19.0	-11.1	-32.5	110	-29.2	572	280	9.5	12.8	31.75	1.76	1990	1979
300	574	9697	570	-26.5	-17.9	-40.7	78	-35.2	565	274	10.3	13.6	37.98	1.82	1990	1979
250	571	10990	570	-36.0	-26.7	-49.1	47	-42.2	562	267	10.2	13.7	46.62	1.86	1990	1979
200	566	12503	565	-47.6	-38.3	-58.7	2	-55.6	555	263	9.2	13.2	56.72	1.90	1990	1985
175	549	13373	548	-54.4	-44.5	-63.9			533	264	8.5	12.7	62.12	1.98	1990	1986
150	527	14343	527	-61.7	-51.5	-71.7			513	261	6.2	11.7	68.78	2.10	1990	1979
125	496	15451	495	-69.1	-55.7	-80.9			481	263	3.5	9.9	79.94	2.30	1988	1979
100	470	16765	470	-75.5	-63.5	-87.0			443	096	1.3	8.5	92.82	2.42	1987	1978
80	404	18050	404	-75.7	-56.7	-88.1			381	104	6.0	8.8	103.83	2.78	1990	1979
70	368	18827	368	-72.2	-52.1	-83.5			348	096	7.8	9.5	107.73	2.54	1990	1985
60	335	19746	335	-66.3	-46.3	-80.0			317	092	9.4	10.3	117.95	2.46	1990	1978
50	305	20866	305	-60.6	-47.5	-76.0			288	089	10.9	11.3	129.17	2.80	1990	1978
40	252	22270	252	-55.6	-41.9	-66.0			231	094	11.6	12.1	156.39	2.66	1990	1978
30	190	24127	190	-50.7	-38.0	-61.1			175	089	12.4	12.9	165.89	2.21	1976	1985
25	149	25325	149	-48.4	-35.5	-57.9			129	085	12.4	13.0	191.37	2.40	1986	1981
20	96	26814	96	-46.5	-31.7	-57.5			83	084	13.4	13.8	227.07	3.11	1986	1985
15	57	28694	57	-44.9	-33.1	-53.9			45	085	14.1	14.6	262.14	2.97	1990	1985
10	22	31306	22	-43.8	-33.3	-50.7			20	085	17.2	17.9	358.93	4.24	1990	1985
7	7	33612	7	-42.8	-38.7	-45.1			5	083	19.8	20.2			1983	1983

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

580	547	511														
			5	159	1502	-59.1					415	094	1715	-77.7		

## NORMALS OF RADIOSONDE DATA

42182 NEW DELHI

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	619	966	619	32.2	42.0	24.0	619	23.8	619	284	0.4	3.8	0.87	1.63	1974	1975
1000	614	-42											7.81			
950	613	418	611	31.0	41.0	23.0	610	22.8	611	279	1.1	5.7	9.48	1.50	1974	1975
900	613	903	610	27.3	38.2	18.8	609	20.2	609	307	0.5	5.6	8.07	1.29	1987	1986
850	613	1407	612	23.6	32.0	16.6	611	17.6	612	301	1.1	5.9	8.44	0.99	1974	1986
800	613	1935	612	20.0	30.0	14.0	611	14.7	613	295	1.5	6.3	8.83	0.80	1973	1986
750	613	2487	609	16.6	24.2	11.0	607	11.4	612	304	1.9	6.5	10.13	0.70	1982	1986
700	613	3074	608	13.3	20.2	8.0	603	7.2	610	315	2.2	6.4	9.76	0.78	1989	1985
650	612	3654	608	9.8	16.6	4.6	597	2.4	608	327	2.4	6.5	11.21	0.84	1989	1982
600	612	4356	611	6.2	16.0	-5.7	594	-2.3	611	331	2.2	6.5	11.44	1.02	1973	1982
550	612	5064	608	2.4	10.2	-5.1	563	-6.1	608	326	1.9	6.4	13.68	1.09	1990	1982
500	610	5831	606	-1.5	5.8	-8.7	509	-9.8	606	308	1.5	6.3	15.55	1.04	1990	1982
450	607	6662	603	-5.7	3.6	-14.5	465	-14.7	605	275	1.2	6.4	18.96	1.14	1987	1982
400	607	7580	602	-10.6	-2.1	-18.3	410	-19.9	603	249	1.1	6.7	21.79	1.20	1989	1985
350	603	8594	597	-16.8	-9.7	-25.3	337	-25.8	596	223	1.2	7.0	27.16	1.35	1990	1982
300	601	9739	599	-24.6	-15.7	-35.1	268	-33.0	596	195	1.2	7.3	31.00	1.49	1990	1986
250	596	11043	595	-34.2	-24.9	-45.5	179	-41.8	594	169	1.9	7.7	38.59	1.67	1990	1982
200	587	12566	585	-46.5	-35.9	-58.1	10	-51.4	584	148	2.7	8.6	47.39	1.75	1990	1982
175	572	13440	570	-53.8	-41.7	-66.1	3	-54.8	558	129	3.5	9.1	53.43	1.85	1990	1985
150	549	14411	547	-61.9	-51.3	-73.3			538	111	4.2	9.7	59.99	1.93	1990	1985
125	508	15516	508	-70.1	-59.3	-81.1			497	092	7.0	10.8	70.30	1.95	1990	1979
100	469	16824	469	-76.4	-66.3	-88.3			453	086	10.7	12.7	80.78	1.79	1989	1988
80	399	18104	399	-75.8	-61.0	-87.5			377	092	13.8	14.6	86.70	2.38	1976	1987
70	365	18883	365	-71.4	-55.7	-83.0			346	089	14.3	15.0	90.65	2.53	1989	1978
60	322	19807	322	-65.6	-52.9	-76.1			304	087	14.9	15.3	93.74	2.28	1982	1986
50	287	20936	287	-60.5	-46.3	-74.5			266	089	15.7	16.3	104.61	2.17	1989	1990
40	229	22341	229	-55.7	-46.0	-64.1			212	091	16.7	17.1	119.31	1.94	1976	1984
30	176	24200	176	-51.1	-42.0	-59.3			153	089	17.7	18.2	132.68	1.73	1976	1984
25	139	25400	139	-48.8	-36.3	-57.1			119	088	18.9	19.6	143.36	1.78	1986	1983
20	98	26889	98	-46.7	-37.1	-56.3			79	086	19.7	20.1	174.90	1.90	1988	1985
15	60	28790	60	-44.2	-37.1	-51.5			42	088	23.1	23.8	184.63	2.37	1989	1985
10	25	31485	25	-42.6	-35.7	-47.5			14	087	24.5	24.8	280.17	3.36	1988	1983
7	5	33912	5	-43.5	-40.9	-45.1			2	096	22.3	24.0			1986	1983

**FREEZING LEVEL**  
N P ALT

**1ST TROPOPAUSE**  
N P ALT T

**2ND TROPOPAUSE**  
N P ALT T

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608	519	553																	
						1	116	1591	-76.0							421	097	1704	-78.3

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# NORMALS OF RADIOSONDE DATA

42182 NEW DELHI

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	620	967	620	31.1	40.4	23.6	620	24.2	620	297	0.5	3.5	0.92	1.37	1987	1988
1000	615	-24											11.09			
950	615	434	613	29.8	39.2	23.0	612	23.2	614	293	1.0	5.4	8.29	1.26	1987	1971
900	615	917	614	26.2	36.2	18.2	613	20.6	614	020	0.4	5.2	7.70	0.95	1984	1986
850	615	1420	615	22.7	30.8	15.8	611	17.9	614	037	0.4	5.8	8.03	0.72	1987	1986
800	615	1947	615	19.4	26.4	12.0	612	14.7	613	007	0.6	6.1	8.90	0.71	1989	1973
750	615	2497	614	16.2	23.4	10.0	611	10.6	612	002	1.0	6.3	11.16	0.75	1990	1973
700	615	3084	614	13.0	20.2	7.0	604	6.6	612	004	1.6	6.3	11.15	0.79	1984	1973
650	613	3704	611	9.7	15.0	3.6	594	2.3	610	015	1.7	6.1	12.97	0.87	1984	1979
600	612	4366	610	6.2	12.4	-0.5	578	-1.7	610	022	1.6	5.7	14.18	1.05	1990	1587
550	612	5074	608	2.5	9.8	-7.1	551	-5.5	609	026	1.2	5.5	16.75	1.06	1990	1979
500	612	5841	608	-1.3	5.0	-9.1	507	-9.6	608	040	0.6	5.6	18.67	0.95	1990	1980
450	612	6673	608	-5.7	5.0	-13.3	464	-14.1	606	038	0.3	5.7	21.74	1.04	1988	1988
400	609	7590	604	-11.1	-4.9	-20.7	418	-19.7	603	118	0.1	5.9	24.04	1.17	1990	1988
350	608	8602	605	-17.5	-10.7	-28.1	360	-26.3	603	157	0.7	6.2	28.65	1.42	1986	1988
300	605	9743	602	-25.4	-18.1	-37.1	272	-33.6	599	146	1.2	6.7	34.02	1.62	1990	1986
250	600	11041	599	-35.4	-26.9	-48.5	189	-42.5	598	145	1.9	7.2	42.21	1.86	1990	1986
200	595	12557	593	-47.7	-33.9	-62.1	8	-50.5	592	124	2.7	8.2	54.76	2.36	1990	1986
175	569	13424	567	-55.0	-37.3	-70.1	3	-60.3	564	116	3.4	8.6	63.32	2.53	1990	1986
150	555	14391	553	-63.0	-42.1	-78.5	1	-57.3	544	100	4.9	9.3	72.18	2.58	1990	1986
125	519	15491	519	-71.0	-49.1	-83.5			508	093	7.3	10.2	85.57	2.50	1990	1979
100	481	16794	481	-76.7	-59.7	-87.3			470	093	10.5	12.1	98.16	1.99	1990	1988
80	417	18078	417	-74.5	-59.7	-85.0			403	096	12.6	13.6	103.13	2.76	1990	1973
70	376	18864	376	-70.0	-54.0	-81.5			362	091	12.9	13.8	104.83	3.26	1976	1985
60	328	19794	328	-64.9	-52.7	-77.5			309	088	13.8	14.5	109.61	3.07	1990	1984
50	299	20919	299	-59.8	-47.3	-76.1			278	091	15.4	16.0	111.62	2.74	1990	1985
40	232	22327	232	-55.4	-42.5	-65.0			209	093	15.7	16.6	121.94	2.78	1990	1973
30	167	24196	167	-51.3	-39.0	-63.0			146	091	16.3	17.0	138.80	2.12	1977	1978
25	137	25393	137	-49.2	-38.9	-60.0			108	088	17.9	18.7	163.95	2.39	1990	1978
20	88	26896	88	-46.3	-34.9	-56.9			65	086	20.1	20.9	148.61	2.32	1990	1984
15	41	28775	41	-45.1	-37.1	-52.7			31	089	20.4	22.2	127.44	2.12	1990	1988
10	16	31435	16	-43.8	-38.9	-49.9			10	088	29.6	30.8			1987	1988
7	4	33830	4	-42.7	-37.3	-46.5			3	077	29.8	31.0			1987	1988

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

607 517 556

7 116 1598 -76.3

436 100 1679 -78.1

## NORMALS OF RADIOSONDE DATA

42182 NEW DELHI

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	600	972	600	31.5	37.4	22.0	600	20.1	600	310	1.9	4.1	0.95	1.51	1979	1972
1000	594	14											6.84			
950	594	474	592	29.8	36.0	20.6	592	19.0	591	308	3.3	6.3	6.76	1.32	1974	1986
900	594	956	592	26.0	33.4	19.6	590	16.6	591	325	2.9	5.9	7.26	1.00	1982	1981
850	594	1457	594	22.0	28.0	16.4	592	14.1	592	315	3.1	6.1	7.29	0.85	1987	1981
800	594	1982	594	18.1	26.0	12.4	589	10.3	590	311	3.6	6.6	7.54	0.89	1988	1981
750	594	2530	592	14.5	20.8	9.4	571	5.3	590	312	4.0	6.7	8.26	1.01	1990	1981
700	594	3111	593	10.7	18.6	4.0	543	0.3	591	316	4.2	6.9	7.77	1.14	1990	1974
650	594	3724	591	6.9	14.0	-5.1	498	-3.7	589	317	3.8	6.6	9.10	1.30	1977	1986
600	585	4379	579	3.3	11.4	-7.3	431	-7.2	578	312	3.5	6.4	10.81	1.47	1990	1986
550	584	5080	582	-0.1	7.8	-9.5	331	-9.9	579	300	3.6	6.6	13.45	1.47	1986	1982
500	583	5839	582	-3.8	3.4	-14.3	247	-13.3	580	285	4.3	7.2	16.69	1.41	1989	1982
450	580	6663	579	-8.3	-1.7	-19.9	192	-18.3	578	274	5.8	8.3	20.95	1.51	1989	1982
400	587	7570	586	-13.6	-6.7	-23.9	147	-23.0	584	265	7.2	9.4	24.25	1.58	1990	1979
350	586	8572	585	-20.2	-12.3	-30.9	105	-28.9	581	259	8.7	10.8	30.26	1.64	1987	1979
300	583	9700	581	-28.2	-19.3	-37.3	78	-35.9	578	255	10.1	12.0	37.27	1.67	1987	1979
250	578	10984	576	-38.0	-26.7	-46.3	45	-44.3	572	252	10.8	13.0	46.28	1.82	1990	1979
200	576	12483	574	-50.0	-37.3	-59.3	8	-53.1	570	250	10.6	13.2	55.89	2.00	1990	1990
175	550	13344	547	-56.9	-42.7	-68.0	6	-60.1	540	248	9.5	12.7	64.76	2.09	1990	1976
150	528	14305	526	-64.4	-49.9	-77.0	2	-67.4	521	248	7.6	11.2	73.56	2.13	1990	1976
125	486	15400	485	-71.6	-57.1	-81.3			472	242	4.4	9.2	85.81	2.16	1990	1981
100	455	16694	455	-76.2	-65.0	-85.1			433	168	1.3	7.2	99.51	2.08	1976	1981
80	396	17981	396	-73.1	-56.1	-89.0			368	107	4.1	7.0	106.57	2.58	1988	1978
70	370	18774	370	-68.3	-51.1	-82.0			341	100	5.4	7.4	107.52	2.84	1988	1978
60	336	19710	336	-63.1	-46.1	-75.5			304	095	6.7	7.9	113.12	2.70	1988	1990
50	292	20848	292	-58.7	-40.9	-73.1			261	092	8.5	9.2	124.25	2.74	1988	1990
40	229	22265	229	-55.1	-41.1	-68.9			201	092	10.0	10.6	135.03	2.55	1990	1990
30	160	24131	160	-51.1	-36.9	-64.9			140	093	10.9	11.5	156.22	2.25	1989	1990
25	126	25326	126	-49.6	-38.1	-62.9			106	088	11.4	12.2	176.15	2.33	1987	1990
20	85	26800	85	-47.4	-37.7	-61.1			68	084	13.1	13.5	248.17	2.76	1987	1990
15	54	28712	54	-45.7	-37.7	-56.3			42	081	14.8	15.2	315.54	2.68	1989	1988
10	20	31297	20	-44.7	-39.5	-53.5			12	082	17.9	18.5			1988	1988
7	8	33695	8	-43.8	-36.5	-51.5			6	070	22.0	22.8			1988	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
589	553	505	2	129	1511	-78.1	422	101	1664	-77.7

### NORMALS OF RADIOSONDE DATA

42182 NEW DELHI

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	977	620	30.0	36.0	19.0	620	12.1	620	316	2.4	3.6	1.12	1.01	1987	1971
<i>1000</i>	616	66											9.30			
<i>950</i>	616	521	614	27.9	34.0	17.0	597	10.5	614	317	4.2	5.7	9.53	0.82	1989	1975
<i>900</i>	616	999	615	23.8	30.8	14.0	595	8.1	613	321	3.7	5.3	9.82	0.76	1989	1975
<i>850</i>	616	1495	616	19.5	27.0	12.0	603	5.6	614	312	4.0	5.5	10.11	0.74	1989	1975
<i>800</i>	616	2013	615	15.4	26.4	7.4	571	1.9	614	306	4.8	6.0	10.49	0.78	1990	1987
<i>750</i>	616	2554	614	11.4	18.8	2.8	494	-2.6	614	304	5.3	6.6	10.67	1.03	1983	1984
<i>700</i>	616	3128	615	7.4	14.8	0.0	408	-6.3	614	304	5.5	7.1	10.74	1.25	1983	1980
<i>650</i>	616	3733	614	3.5	12.0	-4.5	318	-9.6	612	301	5.8	7.4	10.92	1.33	1984	1984
<i>600</i>	615	4377	615	-0.2	8.0	-8.7	225	-13.3	610	296	6.6	8.2	12.27	1.46	1975	1980
<i>550</i>	613	5068	611	-4.2	10.2	-12.5	122	-15.6	609	289	7.9	9.5	13.84	1.58	1988	1979
<i>500</i>	612	5814	611	-8.7	0.0	-17.3	77	-20.3	610	283	9.9	11.6	16.12	1.59	1971	1980
<i>450</i>	610	6622	609	-13.7	-3.3	-23.9	62	-23.5	607	278	12.7	14.5	20.00	1.79	1990	1982
<i>400</i>	609	7510	607	-19.7	-8.3	-32.1	47	-28.2	605	274	15.9	18.0	24.17	2.14	1990	1982
<i>350</i>	608	8489	607	-26.3	-15.1	-40.5	31	-33.7	605	271	19.5	21.6	30.88	2.29	1988	1982
<i>300</i>	607	9589	605	-33.7	-22.3	-46.1	16	-40.0	604	265	23.1	25.2	39.82	2.46	1988	1979
<i>250</i>	602	10845	600	-42.3	-30.7	-55.1	4	-48.0	600	262	26.6	28.7	52.03	2.44	1988	1979
<i>200</i>	597	12322	595	-52.4	-40.5	-64.3			589	260	28.9	30.7	63.87	2.16	1989	1979
<i>175</i>	576	13173	574	-58.0	-46.3	-70.1			557	260	27.8	29.4	70.07	1.94	1988	1988
<i>150</i>	552	14131	551	-64.0	-50.3	-76.7			536	260	25.2	26.7	76.56	1.79	1989	1988
<i>125</i>	506	15234	505	-69.7	-54.1	-82.5			487	259	20.7	22.1	79.99	1.87	1989	1988
<i>100</i>	467	16547	467	-73.6	-57.7	-85.0			440	259	13.2	14.9	84.87	2.43	1989	1978
<i>80</i>	395	17850	394	-71.6	-58.1	-85.1			366	260	6.0	8.5	94.24	2.94	1986	1984
<i>70</i>	377	18643	377	-68.0	-54.1	-80.5			347	260	3.1	6.9	98.35	2.43	1986	1983
<i>60</i>	346	19575	346	-63.7	-50.1	-76.0			319	242	0.5	6.1	100.42	2.05	1986	1975
<i>50</i>	313	20704	313	-59.6	-46.9	-73.1			281	092	1.3	5.3	107.20	2.28	1986	1990
<i>40</i>	242	22112	242	-56.1	-42.9	-67.5			212	097	2.3	5.5	118.31	2.34	1986	1990
<i>30</i>	172	23959	172	-52.0	-39.9	-62.9			150	093	2.5	5.8	138.91	2.40	1980	1990
<i>25</i>	133	25135	133	-50.2	-43.5	-60.5			118	087	2.4	6.3	136.43	2.43	1983	1990
<i>20</i>	79	26562	79	-48.5	-40.9	-58.9			66	071	1.9	6.6	132.20	2.92	1983	1984
<i>15</i>	38	28448	38	-47.2	-39.5	-57.1			29	065	2.6	7.8	168.43	3.22	1990	1990
<i>10</i>	7	31195	7	-45.3	-40.7	-50.1			4	022	7.0	8.3			1986	1989
<i>7</i>	1	33289	1	-48.3	-48.3	-48.3			1	012	7.0	7.0			1989	1989

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

612	602	436	14	188	1272	-61.2	430	104	1635	-74.8
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### NORMALS OF RADIOSONDE DATA

42182 NEW DELHI

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	600	981	600	24.7	31.0	17.0	600	7.5	600	312	2.7	3.4	0.89	0.75	1974	1978
1000	594	106											8.35			
950	592	552	587	22.5	29.0	14.0	570	5.6	590	308	4.2	5.4	8.26	0.70	1974	1972
900	592	1021	590	18.4	25.8	11.0	571	3.1	589	315	3.7	5.0	8.31	0.75	1989	1978
850	592	1507	592	14.7	22.0	6.0	524	-0.2	590	310	4.2	5.3	8.13	0.83	1974	1978
800	592	2017	592	11.4	20.0	2.0	402	-3.5	590	307	4.7	6.0	8.28	0.80	1978	1978
750	592	2552	591	8.2	19.0	-1.7	310	-6.2	590	304	5.2	6.7	8.92	1.01	1978	1981
700	592	3118	591	4.8	15.0	-6.1	241	-9.7	589	299	6.1	7.5	10.03	1.15	1978	1981
650	592	3718	587	1.4	12.0	-11.7	170	-12.9	587	294	7.3	8.8	11.99	1.36	1978	1988
600	590	4358	587	-2.4	7.0	-15.7	116	-15.4	586	289	9.2	10.6	13.99	1.38	1978	1988
550	590	5043	586	-6.7	2.0	-18.0	87	-19.0	585	285	11.6	13.0	17.04	1.42	1978	1972
500	590	5781	586	-11.6	-2.1	-21.5	67	-22.8	585	282	14.8	16.2	19.98	1.40	1989	1980
450	590	6579	586	-17.2	-8.1	-26.9	68	-26.9	586	279	18.2	19.9	24.16	1.53	1986	1980
400	589	7454	587	-23.5	-12.1	-33.0	58	-31.1	587	277	22.4	24.3	28.29	1.63	1986	1974
350	588	8417	588	-30.4	-17.9	-41.1	50	-37.0	582	274	26.7	28.8	33.44	1.74	1986	1981
300	584	9498	583	-37.8	-25.9	-48.7	25	-42.3	572	273	31.5	33.8	40.56	1.85	1986	1981
250	578	10733	575	-46.0	-35.5	-59.9	2	-53.7	560	269	36.8	39.3	48.12	1.72	1986	1981
200	568	12190	566	-54.8	-41.3	-66.1			536	266	39.8	42.0	55.02	1.88	1989	1981
175	537	13037	536	-59.3	-44.1	-70.1			497	265	38.7	40.6	59.99	2.44	1989	1979
150	505	13994	503	-63.6	-48.3	-78.5			462	265	36.3	37.9	65.79	2.92	1989	1990
125	449	15101	449	-68.2	-54.5	-85.9			398	267	31.4	32.6	80.57	3.15	1988	1981
100	419	16428	419	-71.6	-57.7	-86.7			363	269	22.1	23.5	101.54	3.02	1989	1981
80	363	17748	363	-71.1	-56.3	-84.1			309	271	13.1	15.1	128.14	2.86	1989	1981
70	339	18544	339	-69.1	-55.1	-79.7			285	273	9.6	11.4	135.94	2.84	1989	1979
60	310	19474	310	-65.9	-54.5	-76.1			253	278	6.7	9.0	147.30	2.88	1989	1979
50	270	20593	270	-61.7	-50.5	-76.5			218	280	4.5	8.2	157.02	3.02	1990	1984
40	199	22001	199	-57.5	-46.5	-73.0			157	267	4.0	7.8	177.59	3.04	1988	1977
30	143	23857	143	-52.9	-41.3	-68.0			105	262	4.5	8.7	237.73	3.27	1988	1977
25	104	25054	104	-51.0	-38.5	-66.0			80	263	4.8	8.8	234.58	4.60	1988	1977
20	63	26489	63	-49.5	-42.1	-60.3			44	258	3.5	9.8	250.85	3.26	1988	1984
15	30	28434	30	-47.0	-41.9	-58.1			16	282	8.9	11.7	229.57	3.23	1986	1984
10	9	31073	9	-45.4	-39.5	-57.5			3	291	23.1	24.7			1986	1984
7	3	33523	3	-43.1	-39.9	-48.3			2	293	27.6	30.0			1987	1987

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
588	631	396	88	192	1251	-59.7	388	104	1626	-72.9

# NORMALS OF RADIOSONDE DATA

42182 NEW DELHI

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	983	620	19.3	25.0	8.0	620	6.4	620	304	2.7	3.5	1.24	0.91	1977	1973
1000	613	129											9.04			
950	612	568	611	17.0	23.2	8.0	602	4.1	611	302	4.1	5.6	8.58	0.87	1982	1973
900	612	1027	611	13.6	22.0	5.8	576	0.1	611	311	3.6	5.4	7.94	0.89	1977	1986
850	612	1506	611	11.0	18.8	4.0	452	-3.7	612	306	3.9	5.8	7.92	1.11	1986	1974
800	612	2010	612	8.6	16.0	0.0	363	-6.5	612	297	4.5	6.3	8.48	1.39	1987	1974
750	612	2540	610	5.9	13.4	-3.0	289	-8.9	612	289	5.2	7.1	9.81	1.56	1987	1977
700	612	3102	610	2.7	11.2	-6.9	234	-11.4	612	284	6.5	8.3	12.17	1.59	1987	1983
650	612	3697	611	-0.7	7.4	-10.5	197	-14.2	611	278	8.6	10.3	15.49	1.68	1988	1983
600	610	4332	608	-4.7	4.2	-14.7	178	-18.3	608	276	11.0	12.5	18.56	1.64	1985	1983
550	610	5011	609	-9.2	0.0	-18.3	155	-22.3	608	275	13.9	15.4	22.41	1.54	1971	1986
500	610	5742	609	-14.2	-5.1	-24.1	150	-26.3	607	273	17.4	18.9	26.17	1.49	1987	1983
450	607	6533	607	-19.6	-9.9	-29.3	129	-30.4	606	272	21.2	22.9	30.00	1.45	1987	1979
400	604	7398	603	-26.0	-14.0	-39.0	113	-35.1	603	271	25.2	26.9	35.17	1.46	1975	1973
350	602	8352	599	-32.8	-21.0	-44.1	106	-41.6	599	271	29.9	31.7	39.79	1.45	1975	1979
300	595	9422	593	-40.3	-26.5	-50.3	39	-46.5	588	268	35.6	37.6	46.24	1.69	1989	1979
250	592	10644	590	-48.3	-36.5	-61.3	7	-55.4	574	267	42.0	44.4	53.00	1.83	1987	1979
200	585	12088	583	-56.2	-45.1	-69.9			554	265	45.9	48.0	59.38	1.54	1987	1983
175	554	12931	553	-59.6	-49.1	-70.5			515	265	44.6	46.4	60.10	1.29	1986	1981
150	535	13889	533	-62.8	-52.7	-74.0			480	265	41.5	43.1	61.11	1.43	1986	1978
125	492	15004	491	-66.0	-54.9	-76.3			423	265	36.7	38.1	64.56	1.47	1988	1982
100	452	16346	451	-69.3	-57.3	-80.0			373	266	29.8	30.7	62.74	1.98	1988	1975
80	390	17673	390	-69.3	-57.3	-80.9			314	267	20.7	21.5	63.52	2.30	1986	1980
70	357	18474	357	-68.2	-55.1	-80.0			282	268	16.0	17.0	68.84	2.61	1989	1975
60	310	19407	310	-65.9	-52.9	-77.7			231	272	11.7	12.8	70.43	2.70	1989	1984
50	263	20526	263	-62.7	-50.7	-74.3			196	271	9.2	11.0	77.85	2.90	1990	1987
40	216	21906	216	-58.9	-46.5	-71.1			155	272	7.4	9.8	88.43	3.05	1985	1983
30	162	23739	162	-54.9	-43.5	-67.0			113	267	7.3	10.0	113.22	3.36	1985	1973
25	119	24923	119	-53.0	-40.1	-62.3			84	265	7.7	10.5	145.02	3.24	1985	1983
20	65	26366	65	-51.5	-39.3	-59.3			40	269	9.8	12.7	145.18	2.68	1980	1983
15	33	28270	33	-49.6	-44.5	-54.7			19	275	11.9	16.2	179.44	2.25	1979	1983
10	11	30999	11	-46.7	-43.1	-49.9			5	265	20.2	24.6			1985	1983
7	2	33172	2	-46.5	-43.3	-49.7			1	262	22.0	22.0			1990	1983

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

608	662	355	255	195	1229	-60.8	389	104	1620	-70.6
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## NORMALS OF RADIOSONDE DATA

42101 PATIALA

JANUARY 1978-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	341	986	341	17.4	22.4	10.0	341	9.4	341	317	1.2	2.1	1.41	1.03	1980	1978
<i>1000</i>	306	127											8.16			
<i>950</i>	301	562	301	14.8	21.6	9.2	299	4.3	299	318	2.8	4.8	8.17	1.06	1988	1986
<i>900</i>	301	1019	301	11.7	23.0	3.8	279	-1.5	299	310	2.9	5.7	9.42	1.44	1988	1983
<i>850</i>	301	1495	301	8.8	21.8	1.0	231	-5.2	299	304	1.9	5.7	10.77	1.61	1988	1983
<i>800</i>	301	1994	301	6.0	20.2	-2.1	192	-7.4	299	275	1.3	5.6	12.07	1.69	1988	1983
<i>750</i>	301	2519	300	3.0	18.4	-5.1	168	-10.3	299	255	1.4	5.4	14.58	1.82	1988	1981
<i>700</i>	301	3075	301	-0.4	15.0	-9.1	150	-12.9	299	249	2.6	6.1	16.68	1.91	1988	1981
<i>650</i>	297	3565	297	-4.0	11.2	-14.1	125	-15.0	296	259	4.5	7.3	19.78	1.89	1988	1981
<i>600</i>	297	4292	297	-8.0	6.4	-16.7	112	-18.7	294	263	6.5	9.2	23.37	1.93	1988	1981
<i>550</i>	297	4961	297	-12.4	1.2	-21.7	98	-22.8	294	265	9.8	12.2	28.58	1.90	1988	1980
<i>500</i>	297	5685	297	-17.2	-3.3	-26.0	80	-26.5	293	269	14.0	16.1	31.76	2.10	1988	1978
<i>450</i>	294	6468	294	-22.5	-9.5	-31.9	76	-31.4	290	271	18.0	20.1	37.39	2.45	1989	1979
<i>400</i>	290	7325	290	-28.3	-12.7	-39.3	71	-36.7	285	271	23.0	25.1	45.19	2.94	1989	1979
<i>350</i>	287	8272	286	-34.8	-17.3	-46.0	48	-42.0	279	271	27.8	30.1	54.98	3.27	1989	1978
<i>300</i>	282	9334	282	-41.8	-25.5	-53.0	8	-46.3	263	272	32.3	35.1	67.58	3.50	1989	1978
<i>250</i>	272	10551	270	-48.5	-31.7	-61.3			236	271	39.2	41.8	82.71	3.24	1989	1981
<i>200</i>	254	12005	253	-53.2	-43.1	-67.5			178	271	42.0	44.1	93.31	2.38	1981	1982
<i>175</i>	237	12860	237	-55.7	-44.7	-71.5			146	271	40.4	42.3	99.49	2.20	1981	1979
<i>150</i>	202	13825	202	-58.0	-46.7	-70.7			106	271	38.5	40.1	107.68	2.30	1987	1979
<i>125</i>	167	14957	167	-61.3	-48.1	-75.0			85	269	32.7	34.3	111.28	2.76	1987	1978
<i>100</i>	138	16325	138	-64.1	-49.5	-79.0			59	266	25.8	27.2	134.40	3.25	1987	1978
<i>80</i>	110	17706	110	-63.7	-52.7	-74.5			45	272	17.5	18.9	163.75	3.60	1987	1989
<i>70</i>	95	18536	95	-62.2	-52.5	-74.7			38	269	15.8	17.5	180.24	4.11	1983	1988
<i>60</i>	86	19499	86	-60.1	-51.5	-70.5			35	271	11.5	14.5	186.65	3.85	1986	1988
<i>50</i>	79	20650	79	-57.2	-49.7	-67.5			29	281	7.7	11.3	202.68	3.48	1986	1988
<i>40</i>	69	22081	69	-53.2	-37.9	-62.9			20	276	3.3	12.2	160.56	2.58	1986	1988
<i>30</i>	46	23960	46	-50.4	-43.7	-60.5			13	278	4.9	13.9	146.68	3.65	1983	1987
<i>25</i>	32	25132	32	-49.4	-42.1	-60.1			8	268	5.8	13.5	159.14	4.23	1979	1987
<i>20</i>	18	26570	18	-48.1	-39.7	-59.7			4	261	10.7	12.0			1988	1987
<i>15</i>	12	28489	12	-47.7	-40.3	-59.1			4	266	12.0	13.0			1988	1987
<i>10</i>	4	31223	4	-48.7	-40.9	-58.7			1	255	15.0	15.0			1988	1987
<i>7</i>	1	33682	1	-58.5	-58.5	-58.5									1987	1987

FREEZING LEVEL

1ST TROPOPAUSE

2ND TROPOPAUSE

N P ALT

N P ALT T

N P ALT T

301 706 305

116 229 1116 -55.7

95 101 1643 -65.4

NORMALS OF RADIOSONDE DATA

42101 PATIALA

FEBRUARY 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	338	984	338	19.6	26.6	11.0	338	10.2	338	317	1.3	2.6	1.29	1.44	1980	1978
<i>1000</i>	294	109											11.48			
<i>950</i>	292	547	291	16.8	24.4	9.0	289	5.6	289	319	3.1	5.6	11.41	1.39	1989	1978
<i>900</i>	292	1006	292	13.2	22.4	5.0	277	0.5	289	308	3.2	6.5	11.61	1.65	1989	1978
<i>850</i>	292	1485	292	10.1	21.0	2.0	244	-3.8	289	303	2.5	6.4	12.15	1.70	1988	1978
<i>800</i>	292	1987	291	6.9	18.6	-2.9	217	-6.3	289	282	2.2	6.2	13.76	1.73	1988	1983
<i>750</i>	292	2513	291	3.5	15.4	-7.0	194	-8.7	288	266	2.5	6.3	15.87	1.66	1988	1978
<i>700</i>	292	3070	292	-0.2	12.0	-9.9	173	-10.7	287	263	3.3	7.0	17.62	1.65	1988	1982
<i>650</i>	288	3660	288	-4.0	8.0	-14.5	153	-14.1	282	265	5.0	7.9	19.89	1.77	1988	1983
<i>600</i>	284	4287	282	-8.1	1.0	-18.7	140	-17.6	275	271	7.8	10.3	22.69	1.79	1987	1983
<i>550</i>	283	4957	281	-12.5	-0.9	-24.1	128	-20.9	275	272	10.7	13.0	27.50	1.77	1980	1983
<i>500</i>	281	5679	280	-17.4	-8.1	-28.1	117	-25.8	271	273	13.6	16.0	30.52	1.93	1989	1982
<i>450</i>	277	6460	275	-22.8	-12.3	-34.1	97	-30.5	265	274	17.2	19.5	35.77	2.08	1988	1982
<i>400</i>	277	7315	277	-28.8	-16.7	-39.1	83	-36.2	266	273	21.5	24.0	41.99	2.32	1988	1982
<i>350</i>	276	8259	276	-35.5	-21.3	-46.9	49	-40.7	259	273	26.0	28.7	49.18	2.63	1988	1979
<i>300</i>	264	9318	264	-43.0	-25.1	-52.7	10	-45.8	240	274	32.0	34.9	57.84	2.82	1990	1982
<i>250</i>	258	10530	257	-49.4	-31.9	-63.0	1	-48.1	213	272	37.3	40.0	70.47	3.12	1990	1978
<i>200</i>	241	11977	241	-53.0	-39.5	-64.1			142	267	40.1	42.9	83.97	2.51	1989	1981
<i>175</i>	212	12830	212	-54.9	-42.9	-68.1			104	271	37.9	40.4	89.54	2.19	1986	1979
<i>150</i>	179	13812	179	-57.4	-48.9	-71.1			74	268	35.7	38.6	100.77	1.87	1986	1982
<i>125</i>	149	14946	149	-60.5	-52.5	-71.0			53	264	30.8	32.0	107.76	1.89	1989	1978
<i>100</i>	133	16320	133	-63.3	-55.1	-75.0			48	266	24.1	25.1	108.58	2.31	1982	1978
<i>80</i>	115	17698	115	-63.7	-52.1	-76.1			44	267	17.8	19.0	112.08	2.79	1982	1979
<i>70</i>	109	18520	109	-63.1	-47.9	-76.0			42	265	14.3	15.8	118.23	3.15	1982	1978
<i>60</i>	97	19474	97	-61.2	-52.3	-76.0			39	269	11.7	13.5	125.71	3.22	1986	1978
<i>50</i>	91	20615	91	-58.4	-47.9	-72.0			35	277	7.4	9.9	142.24	2.97	1986	1978
<i>40</i>	78	22054	78	-54.3	-40.5	-66.0			29	279	5.1	8.0	169.68	4.26	1986	1978
<i>30</i>	63	23907	63	-50.7	-43.3	-65.0			24	261	4.2	8.7	230.53	4.75	1988	1978
<i>25</i>	46	25067	46	-49.6	-40.7	-61.5			16	273	5.1	9.9	245.63	3.84	1986	1989
<i>20</i>	28	26536	28	-48.2	-41.7	-60.1			8	287	10.2	12.5	181.28	1.88	1989	1989
<i>15</i>	12	28432	12	-47.9	-42.1	-56.5			4	274	10.2	11.3			1982	1989
<i>10</i>	3	31056	3	-47.5	-44.3	-50.1			1	283	22.0	22.0			1983	1986

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
289	701	307	125	237	1098	-54.3	107	097	1665	-65.3

## NORMALS OF RADIOSONDE DATA

42101 PATIALA

MARCH 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	372	981	372	24.2	32.0	12.8	372	13.1	372	315	1.3	2.7	1.44	1.66	1984	1982
<i>1000</i>	332	80											10.24			
<i>950</i>	332	525	332	21.2	29.2	11.4	331	8.8	330	321	2.7	5.9	9.45	1.35	1990	1982
<i>900</i>	332	991	332	17.2	25.6	8.8	322	4.4	330	306	2.9	6.8	8.27	1.28	1987	1980
<i>850</i>	332	1477	332	13.7	23.4	1.4	298	0.3	330	298	2.9	6.5	9.50	1.35	1990	1979
<i>800</i>	332	1985	332	10.1	20.0	1.6	270	-3.5	330	286	2.9	6.5	10.56	1.37	1990	1982
<i>750</i>	332	2518	332	6.4	17.0	-2.1	249	-6.5	330	273	3.4	7.0	12.21	1.49	1990	1980
<i>700</i>	332	3080	332	2.4	12.8	-6.9	228	-9.4	328	267	4.6	7.8	14.12	1.59	1990	1980
<i>650</i>	328	3674	328	-1.6	9.8	-11.7	200	-12.9	324	268	6.1	8.8	17.70	1.64	1990	1980
<i>600</i>	326	4308	326	-5.9	6.6	-16.5	181	-16.2	318	271	8.6	11.0	19.45	1.67	1990	1980
<i>550</i>	326	4983	325	-10.4	1.2	-20.5	157	-20.0	319	271	10.6	12.8	23.35	1.74	1990	1980
<i>500</i>	326	5712	326	-15.3	-4.1	-26.7	144	-24.3	318	272	13.2	15.3	26.34	1.90	1990	1980
<i>450</i>	323	6500	321	-20.7	-10.9	-33.3	132	-28.8	308	273	16.5	18.6	32.79	2.11	1990	1980
<i>400</i>	321	7362	318	-26.8	-17.7	-39.7	118	-34.9	306	274	20.1	22.3	37.74	2.22	1990	1980
<i>350</i>	317	8312	316	-33.6	-21.1	-46.5	79	-40.2	292	274	24.0	26.5	48.78	2.46	1988	1980
<i>300</i>	310	9378	308	-40.9	-26.1	-52.3	24	-45.1	265	275	28.2	31.3	55.56	2.60	1988	1980
<i>250</i>	294	10595	293	-48.0	-27.5	-60.0	3	-45.1	219	274	32.9	36.2	69.51	3.61	1990	1978
<i>200</i>	271	12038	270	-53.4	-39.9	-67.0			163	271	36.0	38.8	80.62	3.10	1990	1978
<i>175</i>	237	12891	237	-55.2	-43.9	-69.5			130	272	36.4	38.6	85.28	2.71	1983	1987
<i>150</i>	198	13866	198	-57.8	-46.7	-70.1			102	273	33.6	35.6	98.34	3.28	1983	1982
<i>125</i>	160	14997	160	-60.9	-49.7	-73.3			77	271	31.3	32.9	146.91	3.49	1989	1982
<i>100</i>	137	16370	137	-63.6	-51.1	-78.0			66	275	21.6	23.6	176.69	3.75	1990	1978
<i>80</i>	102	17732	102	-64.6	-56.9	-80.0			47	269	14.2	15.3	133.32	2.69	1983	1978
<i>70</i>	91	18556	91	-63.6	-55.1	-79.0			43	273	10.2	12.3	140.00	2.42	1983	1978
<i>60</i>	85	19510	85	-61.5	-50.5	-76.0			37	274	7.3	9.0	148.80	2.73	1988	1978
<i>50</i>	76	20639	76	-57.9	-45.9	-72.0			35	280	6.2	8.5	172.93	3.20	1981	1978
<i>40</i>	61	22082	61	-54.2	-37.9	-66.0			29	271	3.1	8.2	160.62	3.48	1987	1978
<i>30</i>	48	23965	48	-49.8	-41.1	-62.0			23	307	1.5	10.7	239.51	4.76	1983	1978
<i>25</i>	41	25160	41	-47.9	-40.1	-59.0			18	315	3.1	10.4	261.42	4.60	1981	1978
<i>20</i>	24	26661	24	-44.6	-38.5	-51.7			8	297	8.4	8.7	107.52	3.41	1981	1989
<i>15</i>	13	28672	13	-41.5	-33.5	-51.7			5	291	10.1	10.4			1987	1989
<i>10</i>	1	31899	1	-36.9	-36.9	-36.9									1983	1983
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

330	670	344	133	237	1106	-54.5	104	101	1655	-65.4
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NORMALS OF RADIOSONDE DATA

42101 PATIALA

APRIL 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	389	976	389	33.2	41.6	16.0	389	13.2	389	317	1.9	3.0	0.96	2.15	1979	1983
1000	342	28											7.76			
950	341	488	341	30.6	39.6	17.6	322	9.7	339	322	3.9	5.7	7.09	1.85	1988	1983
900	341	969	341	25.9	38.6	14.2	305	6.3	339	312	4.7	6.8	8.75	2.00	1990	1983
850	341	1468	341	21.5	34.9	10.4	290	3.3	339	306	4.8	6.7	10.71	2.01	1990	1982
800	341	1989	341	17.2	29.4	6.2	291	0.0	339	302	5.1	6.8	13.85	1.94	1990	1982
750	341	2533	341	12.8	25.6	1.4	273	-3.3	337	301	5.4	7.3	16.79	1.89	1990	1982
700	341	3109	341	8.2	17.0	-2.9	260	-7.0	337	299	6.2	8.1	20.16	1.80	1990	1982
650	339	3714	338	3.6	13.0	-7.7	220	-10.6	333	296	6.9	8.9	22.24	1.67	1990	1982
600	337	4360	337	-0.9	7.8	-12.5	186	-14.3	330	291	8.3	10.3	26.35	1.66	1990	1982
550	335	5048	335	-5.7	3.0	-16.7	148	-17.9	328	288	9.5	11.5	30.69	1.66	1990	1982
500	334	5789	334	-10.8	-1.1	-22.3	111	-22.2	320	287	11.2	13.3	34.68	1.68	1981	1982
450	333	6590	333	-16.4	-8.5	-29.9	88	-27.8	314	284	13.0	15.2	38.80	1.83	1982	1982
400	328	7469	327	-22.5	-14.3	-36.5	66	-31.6	308	285	15.7	17.9	45.36	1.99	1982	1982
350	323	8434	322	-29.5	-18.9	-44.3	51	-37.8	296	282	19.0	21.2	53.82	2.32	1985	1982
300	318	9521	317	-37.1	-25.1	-53.1	26	-44.3	287	281	23.6	26.1	60.71	2.76	1989	1982
250	302	10761	301	-45.2	-30.9	-58.3			253	279	26.9	29.4	73.94	3.23	1990	1982
200	285	12223	285	-52.0	-35.7	-66.3			218	277	29.4	31.6	95.64	3.47	1990	1982
175	254	13085	254	-54.2	-38.7	-71.7			180	276	28.5	30.6	110.81	3.53	1990	1982
150	221	14062	221	-57.0	-41.5	-68.3			156	277	26.8	28.7	130.04	3.38	1990	1981
125	185	15208	185	-61.1	-49.1	-74.9			129	279	22.4	24.6	145.97	3.57	1990	1979
100	155	16570	155	-65.7	-54.3	-83.5			109	281	16.5	19.0	173.33	3.47	1990	1979
80	121	17929	121	-66.4	-57.3	-80.5			87	279	10.0	13.7	177.65	3.03	1990	1979
70	107	18744	107	-65.3	-54.5	-76.9			73	282	5.7	10.5	175.00	2.76	1989	1979
60	94	19692	94	-62.8	-53.3	-74.1			67	274	3.8	9.7	177.46	2.99	1986	1988
50	85	20844	85	-59.0	-49.1	-69.1			60	273	2.0	8.9	163.05	3.62	1983	1988
40	79	22265	79	-54.3	-42.9	-64.0			55	280	3.1	9.4	174.50	3.65	1989	1978
30	68	24154	68	-49.0	-37.5	-60.0			43	262	3.3	9.2	202.11	3.85	1989	1978
25	54	25378	54	-46.5	-34.5	-58.0			28	275	4.6	8.2	228.24	4.44	1989	1978
20	41	26870	41	-43.2	-35.1	-51.3			14	267	8.2	10.2	137.85	2.33	1989	1985
15	21	28791	21	-41.4	-34.1	-48.1			2	345	8.3	9.0	235.96	3.78	1980	1988
10	6	31775	6	-38.0	-32.7	-44.3									1988	1985
7	4	34233	4	-36.7	-30.9	-40.1									1983	1985

FREEZING LEVEL

1ST TROPOPAUSE

2ND TROPOPAUSE

N	P	ALT	N	P	ALT	T	N	P	ALT	T
340	610	422	76	215	1182	-55.8	117	096	1692	-67.6

NORMALS OF RADIOSONDE DATA

42101 PATIALA

MAY 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN	
<i>SURFACE</i>	403	972	403	37.3	45.4	21.6	403	14.5	403	316	1.3	2.7	2.59	2.68	1988	1987	
<i>1000</i>	356	-7												21.07			
<i>950</i>	355	454	355	34.6	43.4	20.4	339	12.3	354	321	2.3	5.1	18.80	2.79	1988	1987	
<i>900</i>	355	942	355	29.9	43.0	16.0	312	9.5	353	306	3.1	6.3	14.60	2.71	1990	1982	
<i>850</i>	355	1448	355	25.4	39.2	12.2	308	7.1	353	297	3.6	6.4	11.68	2.67	1990	1982	
<i>800</i>	355	1976	355	20.8	35.4	9.0	311	4.4	352	296	4.4	6.3	9.19	2.65	1990	1982	
<i>750</i>	355	2528	355	16.2	32.8	5.2	318	1.1	350	294	5.2	6.9	11.39	2.57	1990	1982	
<i>700</i>	355	3111	355	11.5	29.8	1.2	304	-2.5	350	296	6.1	8.1	12.25	2.51	1990	1982	
<i>650</i>	354	3724	354	6.5	21.2	-6.9	296	-6.8	348	296	7.0	8.9	17.30	2.44	1990	1981	
<i>600</i>	353	4376	353	1.6	18.6	-7.9	270	-11.3	345	294	8.3	10.3	22.10	2.37	1990	1979	
<i>550</i>	352	5070	351	-3.2	13.4	-15.1	220	-16.2	343	294	9.1	11.2	29.33	2.37	1990	1979	
<i>500</i>	349	5819	349	-8.2	7.0	-23.3	154	-20.6	339	293	10.1	12.0	33.73	2.40	1990	1979	
<i>450</i>	348	6629	348	-13.4	0.0	-31.1	96	-24.1	335	291	11.5	13.6	42.46	2.57	1990	1979	
<i>400</i>	343	7517	343	-19.3	-2.5	-29.7	70	-29.2	323	289	13.7	16.0	49.07	2.72	1990	1982	
<i>350</i>	338	8498	338	-25.6	-7.1	-37.9	55	-35.9	313	287	16.3	18.8	60.92	3.24	1990	1979	
<i>300</i>	334	9602	334	-32.8	-10.1	-47.7	34	-43.3	303	282	18.7	22.1	74.62	3.64	1990	1979	
<i>250</i>	321	10864	320	-40.8	-20.3	-55.3			280	280	21.9	25.3	93.01	3.77	1990	1979	
<i>200</i>	313	12354	313	-49.4	-33.1	-62.7			249	275	23.4	26.1	113.90	3.49	1990	1982	
<i>175</i>	297	13220	296	-53.5	-39.9	-67.1			224	276	23.1	25.4	128.22	2.99	1990	1987	
<i>150</i>	273	14203	272	-57.7	-46.7	-70.7			203	273	21.5	23.9	140.78	2.71	1990	1987	
<i>125</i>	236	15335	236	-62.7	-49.1	-76.1			175	269	17.5	19.6	150.08	3.10	1990	1979	
<i>100</i>	195	16687	195	-67.6	-54.7	-81.0			143	264	10.7	14.2	159.66	3.68	1987	1978	
<i>80</i>	168	18024	168	-67.9	-56.1	-84.0			126	258	5.4	10.6	175.34	3.65	1983	1978	
<i>70</i>	160	18828	160	-65.9	-52.3	-82.0			117	247	2.9	9.1	180.76	3.58	1983	1978	
<i>60</i>	142	19781	142	-61.9	-45.7	-85.0			106	217	1.2	8.1	198.20	3.83	1983	1978	
<i>50</i>	130	20940	130	-56.7	-42.3	-76.1			97	113	0.7	7.0	213.48	2.97	1983	1982	
<i>40</i>	120	22378	120	-51.9	-35.9	-68.7			88	115	1.8	7.2	226.04	2.59	1986	1982	
<i>30</i>	97	24267	97	-47.1	-37.1	-59.9			67	110	1.5	7.1	259.69	1.79	1981	1990	
<i>25</i>	86	25483	86	-44.5	-33.5	-56.5			53	063	1.2	6.8	228.17	2.62	1981	1982	
<i>20</i>	56	26980	56	-43.1	-33.7	-54.7			32	046	1.1	6.8	215.49	2.88	1988	1982	
<i>15</i>	30	28910	30	-41.2	-32.7	-52.1			15	306	3.1	7.8	274.81	3.25	1983	1982	
<i>10</i>	9	31516	9	-41.5	-35.1	-48.5			5	022	4.9	7.6			1985	1982	
<i>7</i>	4	34120	4	-38.3	-34.5	-41.9			2	341	8.9	11.0			1985	1983	
<hr/>																	
FREEZING LEVEL			1ST TROPOPAUSE							2ND TROPOPAUSE							
N	P	ALT	N	P	ALT	T		N	P	ALT	T						
353	582	462						45	198	1235	-56.5						

# NORMALS OF RADIOSONDE DATA

42101 PATIALA

JUNE 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	388	968	388	37.4	44.4	23.8	387	19.5	388	319	1.0	2.8	1.36	1.00	1987	1987
1000	322	-49											9.31			
950	322	416	321	35.5	43.6	22.4	307	17.5	321	329	1.4	5.0	8.83	1.11	1986	1987
900	322	906	321	30.9	40.0	20.6	302	14.3	321	304	2.2	5.6	8.43	1.18	1978	1987
850	322	1415	322	26.6	38.4	18.2	305	11.7	321	295	3.0	5.6	8.75	1.20	1990	1982
800	322	1946	321	22.5	32.0	13.0	306	8.6	320	299	4.5	6.1	9.37	1.32	1990	1982
750	322	2502	322	18.3	27.8	8.2	298	5.3	321	305	5.7	7.0	11.44	1.38	1990	1982
700	322	3090	322	13.8	24.0	2.8	275	1.1	320	310	6.7	8.0	13.64	1.61	1978	1982
650	321	3709	321	9.2	18.0	-3.1	253	-3.7	318	314	7.4	8.9	16.86	1.74	1978	1989
600	316	4367	315	4.5	12.6	-7.3	218	-8.5	310	315	7.8	9.4	20.93	1.96	1987	1989
550	313	5067	312	-0.2	10.8	-9.9	180	-12.8	306	312	7.8	9.5	26.56	2.20	1990	1982
500	308	5824	308	-4.6	4.2	-14.9	133	-16.1	299	304	7.9	9.8	31.09	2.18	1981	1982
450	302	6647	300	-8.9	1.0	-21.5	85	-18.9	293	296	8.9	11.0	37.53	2.09	1989	1981
400	300	7551	300	-13.7	-2.9	-29.0	56	-23.7	290	287	11.2	13.7	43.36	2.48	1990	1978
350	296	8556	296	-19.1	-8.1	-32.5	38	-28.6	281	284	13.1	16.1	53.49	2.71	1990	1983
300	288	9691	287	-26.0	-13.3	-40.3	17	-34.6	270	280	15.2	18.3	62.51	2.77	1990	1983
250	279	10983	279	-34.9	-24.5	-48.1	11	-39.5	252	276	15.5	18.6	73.71	2.75	1990	1983
200	260	12510	260	-45.9	-34.3	-57.3			224	268	14.8	18.1	90.66	2.70	1990	1983
175	241	13387	241	-52.4	-41.5	-64.9			205	269	14.1	17.1	97.13	2.62	1990	1981
150	222	14366	222	-59.0	-48.7	-71.0			187	272	12.7	16.0	110.88	2.57	1990	1978
125	188	15471	188	-66.2	-53.7	-78.7			161	271	10.0	13.8	130.33	2.52	1989	1982
100	150	16802	149	-71.4	-58.7	-80.5			128	276	4.0	9.9	165.05	2.73	1989	1979
80	122	18125	121	-70.4	-56.1	-84.1			105	131	2.0	8.0	174.30	3.08	1982	1979
70	114	18924	114	-66.8	-50.1	-80.0			98	107	4.1	8.1	178.66	4.06	1982	1978
60	102	19878	102	-61.8	-48.1	-79.0			89	091	6.1	8.8	194.48	4.45	1982	1978
50	93	21027	93	-56.4	-44.1	-74.0			79	091	7.9	10.0	169.44	4.12	1989	1978
40	81	22483	81	-50.3	-37.5	-60.3			66	093	8.8	10.3	193.44	4.31	1989	1988
30	63	24356	63	-45.8	-35.3	-55.3			51	094	8.7	9.7	211.53	3.61	1982	1985
25	53	25572	53	-43.8	-32.3	-52.3			40	086	9.4	10.3	229.31	3.18	1982	1988
20	35	27075	35	-41.6	-28.9	-49.9			26	096	9.3	10.3	183.84	2.09	1982	1986
15	17	29028	17	-41.2	-35.3	-48.1			10	088	9.8	10.5			1982	1986
10	7	31874	7	-36.6	-30.3	-42.9			5	105	9.0	13.4			1983	1988
7	2	34260	2	-35.4	-34.1	-36.7			1	260	7.0	7.0			1983	1985

### FREEZING LEVEL

N P ALT

### 1ST TROPOPAUSE

N P ALT T

### 2ND TROPOPAUSE

N P ALT T

310 549 508

1 168 1324 -56.5

131 099 1702 -73.0

# NORMALS OF RADIOSONDE DATA

42101 PATIALA

JULY 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	402	969	402	32.4	42.2	24.0	402	25.2	402	113	0.2	1.8	0.73	1.69	1987	1988
1000	347	-41											9.96			
950	347	419	347	31.3	41.0	23.2	347	23.9	341	097	0.7	4.0	10.88	1.64	1987	1986
900	347	904	347	27.8	38.0	20.8	347	20.9	341	159	0.4	4.5	9.39	1.44	1987	1985
850	347	1410	347	24.3	34.2	17.2	346	18.1	342	239	0.6	5.1	9.07	1.21	1987	1985
800	347	1939	346	21.0	29.8	14.2	345	14.3	339	269	0.7	5.5	9.25	1.12	1982	1981
750	347	2494	346	17.7	26.6	11.2	341	10.6	338	305	0.9	5.9	10.72	1.01	1990	1979
700	347	3081	347	14.3	22.6	7.8	336	6.6	339	316	1.7	6.2	12.39	1.04	1990	1979
650	342	3703	342	10.5	19.2	4.0	327	1.9	329	318	2.0	6.2	14.42	1.10	1990	1982
600	340	4366	339	6.8	15.8	-1.9	313	-2.4	325	313	2.1	6.3	15.95	1.27	1990	1981
550	338	5076	337	3.0	12.6	-5.1	294	-6.8	321	310	2.1	6.2	17.85	1.39	1990	1982
500	337	5843	337	-1.0	7.6	-10.7	268	-10.1	318	291	2.2	6.4	21.80	1.51	1990	1982
450	327	6678	327	-5.1	8.4	-15.1	226	-14.2	304	268	3.1	6.7	24.13	1.57	1981	1982
400	320	7398	320	-9.8	-0.7	-22.0	183	-19.4	297	264	4.2	8.0	29.81	1.81	1981	1978
350	316	8618	316	-15.7	-7.1	-25.0	136	-24.9	290	261	4.9	8.4	35.66	1.79	1988	1978
300	306	9766	306	-23.1	-13.3	-35.0	108	-32.4	278	252	5.6	9.4	43.59	1.95	1988	1978
250	297	11078	297	-32.3	-23.9	-47.0	68	-40.0	269	240	5.6	9.9	53.51	2.03	1988	1978
200	287	12613	286	-44.3	-34.9	-62.0	9	-47.4	253	236	5.0	9.9	67.12	2.20	1990	1978
175	245	13502	244	-51.3	-41.7	-71.0	1	-47.7	218	233	4.5	10.0	76.19	2.24	1990	1978
150	215	14484	214	-58.8	-48.5	-77.0			192	217	3.1	10.1	86.81	2.41	1990	1978
125	171	15614	170	-65.9	-54.3	-79.0			157	158	1.2	9.9	133.70	2.77	1982	1978
100	128	16933	128	-71.9	-59.3	-81.5			123	093	4.8	9.9	117.39	3.04	1989	1979
80	103	18257	103	-71.2	-50.9	-82.7			98	092	8.0	10.9	122.98	5.47	1989	1983
70	93	19052	93	-67.3	-44.7	-80.5			89	087	9.2	10.7	130.23	6.44	1989	1983
60	87	19996	87	-62.5	-46.5	-76.1			84	087	11.5	12.4	139.16	4.91	1990	1988
50	80	21152	80	-56.9	-41.9	-69.5			76	089	12.7	13.6	129.09	2.15	1990	1982
40	64	22599	64	-51.6	-42.3	-60.0			59	089	13.3	14.0	118.98	1.47	1983	1978
30	58	24476	58	-47.0	-38.5	-54.1			51	087	13.6	14.1	126.56	1.74	1990	1983
25	48	25672	48	-45.0	-39.3	-51.3			41	088	13.6	14.2	145.27	2.46	1990	1983
20	37	27168	37	-42.8	-36.1	-48.7			29	084	15.6	15.8	172.62	1.70	1983	1983
15	22	29054	22	-41.2	-35.9	-46.1			14	087	15.5	15.7	227.45	2.16	1985	1983
10	7	31704	7	-40.9	-35.1	-43.9			6	087	15.7	16.1			1983	1983
7	6	34154	6	-38.1	-32.7	-41.9			6	087	19.4	19.8			1983	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE				
N	P	ALT	N	P	ALT	T	N	P	ALT	T	
334	513	561	1	162	1355	-75.0		102	097	1717	-73.9

## NORMALS OF RADIOSONDE DATA

42101 PATIALA

AUGUST 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	402	970	402	31.5	38.6	23.0	402	26.0	402	315	0.1	1.5	1.00	0.94	1987	1989
<i>1000</i>	355	-25											8.97			
<i>950</i>	353	433	353	30.1	37.0	22.0	353	24.4	350	006	0.7	3.4	10.44	0.81	1987	1978
<i>900</i>	353	918	353	26.7	35.0	19.2	353	21.4	350	301	0.8	3.9	9.58	0.81	1990	1985
<i>850</i>	353	1421	353	23.5	32.8	15.8	353	18.1	350	299	1.1	4.6	11.00	0.92	1990	1982
<i>800</i>	353	1950	353	20.4	32.2	10.6	353	14.3	349	315	1.8	5.1	12.10	1.00	1981	1982
<i>750</i>	353	2503	352	17.2	28.2	9.6	349	10.2	347	316	2.0	5.2	14.81	1.10	1990	1982
<i>700</i>	353	3091	353	14.0	24.4	7.8	347	6.0	349	323	1.9	5.3	16.32	1.20	1990	1985
<i>650</i>	350	3712	350	10.5	20.4	3.2	338	2.1	344	320	1.6	5.3	20.20	1.31	1990	1979
<i>600</i>	347	4376	347	6.8	17.8	-0.5	322	-2.4	339	308	1.4	5.2	22.99	1.39	1990	1979
<i>550</i>	346	5087	346	3.1	13.2	-5.7	300	-6.6	339	299	1.1	5.3	27.03	1.40	1988	1979
<i>500</i>	343	5855	343	-0.9	9.4	-8.7	267	-11.3	336	272	1.7	5.6	30.97	1.43	1988	1983
<i>450</i>	341	6690	340	-5.1	8.4	-13.3	212	-15.5	333	265	2.8	6.4	35.67	1.50	1981	1983
<i>400</i>	339	7608	338	-10.3	-0.5	-18.9	174	-20.8	329	262	3.7	7.1	40.00	1.64	1988	1983
<i>350</i>	332	8625	331	-16.3	-5.9	-24.9	131	-25.9	320	258	4.3	7.8	45.44	1.67	1988	1980
<i>300</i>	323	9771	322	-23.7	-11.9	-33.3	95	-32.3	309	249	4.6	8.3	53.07	1.97	1988	1981
<i>250</i>	313	11079	313	-33.0	-20.1	-43.3	58	-40.0	297	242	4.9	8.6	63.20	2.31	1988	1981
<i>200</i>	295	12610	295	-45.2	-31.3	-57.5	8	-47.9	279	239	4.4	8.9	79.58	2.68	1988	1986
<i>175</i>	275	13486	275	-52.4	-39.1	-62.5			255	231	3.8	8.9	91.70	2.79	1988	1979
<i>150</i>	239	14472	239	-59.9	-46.9	-74.0			223	223	2.4	8.4	103.92	2.86	1988	1978
<i>125</i>	192	15604	192	-67.1	-54.9	-77.9			174	140	1.5	7.6	112.44	2.90	1988	1985
<i>100</i>	156	16940	155	-71.7	-51.9	-82.7			146	103	4.2	7.7	120.15	2.54	1989	1985
<i>80</i>	131	18249	130	-69.5	-51.3	-81.0			125	098	7.0	9.3	120.57	3.38	1981	1978
<i>70</i>	124	19052	124	-65.8	-46.3	-79.1			116	099	7.7	9.3	125.55	3.87	1981	1985
<i>60</i>	107	20004	107	-61.0	-42.9	-76.0			102	093	8.9	10.4	122.86	3.91	1981	1978
<i>50</i>	96	21164	96	-55.9	-41.1	-72.0			91	094	10.1	12.0	131.80	3.29	1981	1978
<i>40</i>	83	22615	83	-51.5	-38.3	-65.1			75	094	11.2	13.2	152.00	2.80	1985	1990
<i>30</i>	65	24499	65	-47.8	-36.5	-69.9			51	100	12.9	14.4	170.64	2.70	1985	1990
<i>25</i>	49	25728	49	-46.1	-37.7	-56.1			37	088	13.1	14.2	180.84	2.48	1985	1990
<i>20</i>	40	27239	40	-44.1	-34.5	-51.5			23	085	14.7	16.3	162.38	1.86	1990	1985
<i>15</i>	30	29170	30	-41.9	-33.3	-48.9			5	080	16.5	17.4	165.89	1.69	1990	1985
<i>10</i>	12	31897	12	-39.7	-33.9	-48.3			1	106	15.0	15.0			1990	1985
<i>7</i>	1	34285	1	-40.7	-40.7	-40.7									1988	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
342	510	567					137	101	1691	-73.3

NORMALS OF RADIOSONDE DATA

42101 PATIALA

SEPTEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	390	975	390	31.2	36.2	20.0	390	23.6	388	315	1.3	2.0	1.00	1.29	1987	1986
<i>1000</i>	341	11											8.26			
<i>950</i>	340	471	340	29.6	35.2	20.8	340	21.4	331	319	2.5	4.0	7.94	1.06	1986	1986
<i>900</i>	340	953	340	25.9	34.0	18.8	339	17.6	331	310	3.3	5.0	7.59	0.90	1986	1989
<i>850</i>	340	1455	340	22.4	29.4	16.0	336	13.4	331	310	3.9	5.5	7.53	1.02	1986	1986
<i>800</i>	340	1980	340	19.1	26.2	12.0	331	7.8	328	312	4.0	5.7	7.38	1.14	1983	1981
<i>750</i>	340	2530	340	15.4	23.6	8.2	315	3.1	326	314	4.1	5.8	8.98	1.28	1983	1981
<i>700</i>	340	3113	340	11.6	20.0	3.6	298	-0.8	327	316	4.1	6.0	9.62	1.51	1983	1990
<i>650</i>	337	3728	337	7.5	15.2	-1.7	276	-4.9	320	314	3.6	6.0	12.72	1.66	1983	1981
<i>600</i>	333	4384	333	3.5	11.2	-5.7	243	-8.3	315	306	3.1	6.2	15.95	1.68	1990	1981
<i>550</i>	330	5084	330	-0.3	7.2	-11.1	190	-11.6	311	295	2.9	6.1	20.26	1.72	1990	1980
<i>500</i>	327	5843	327	-4.0	3.8	-12.9	129	-15.3	309	283	4.2	6.9	25.04	1.81	1990	1982
<i>450</i>	326	6667	326	-8.4	0.6	-18.3	78	-17.9	308	276	5.8	8.4	30.26	1.79	1990	1987
<i>400</i>	324	7575	324	-13.6	-3.5	-28.7	58	-21.8	306	273	8.0	10.3	35.49	1.94	1989	1979
<i>350</i>	317	8578	316	-19.8	-10.1	-37.1	37	-28.8	299	268	10.3	12.0	42.28	2.13	1988	1979
<i>300</i>	308	9708	307	-27.1	-16.1	-40.3	21	-33.6	286	264	12.4	13.8	51.87	2.17	1989	1979
<i>250</i>	297	11000	297	-36.1	-24.1	-51.3	9	-43.4	273	262	12.9	14.4	61.68	2.22	1988	1979
<i>200</i>	281	12509	281	-47.9	-38.9	-64.7			250	260	13.1	14.7	76.12	2.29	1988	1979
<i>175</i>	245	13382	245	-54.6	-45.3	-66.3			215	259	12.6	14.1	80.67	2.28	1979	1982
<i>150</i>	204	14343	204	-61.7	-50.1	-74.1			176	261	11.5	13.2	94.41	2.42	1979	1981
<i>125</i>	153	15452	153	-68.1	-55.7	-78.1			128	256	8.9	11.1	110.80	2.39	1981	1981
<i>100</i>	120	16762	120	-72.6	-61.3	-81.5			105	249	5.2	8.0	128.22	2.45	1989	1980
<i>80</i>	94	18060	94	-69.3	-51.9	-79.7			85	205	2.4	6.7	151.80	3.51	1981	1987
<i>70</i>	89	18866	89	-65.2	-49.9	-75.0			81	160	1.1	6.1	163.38	3.53	1981	1978
<i>60</i>	79	19815	79	-60.8	-47.1	-70.0			72	112	2.0	6.4	169.28	2.86	1981	1978
<i>50</i>	73	20968	73	-55.5	-42.3	-64.9			67	106	4.5	7.2	173.21	2.63	1981	1990
<i>40</i>	62	22393	62	-51.8	-44.7	-59.1			57	094	5.0	6.8	207.63	2.26	1985	1990
<i>30</i>	55	24283	55	-48.0	-40.1	-55.1			46	098	5.8	7.9	233.75	2.27	1982	1983
<i>25</i>	37	25495	37	-46.4	-39.7	-53.5			32	087	5.9	8.7	209.56	2.60	1989	1983
<i>20</i>	22	26969	22	-44.9	-38.9	-51.7			19	070	9.1	10.3	207.11	2.17	1990	1983
<i>15</i>	10	28808	10	-44.8	-37.3	-49.3			9	061	5.7	11.8			1990	1983
<i>10</i>	3	31277	3	-45.4	-44.1	-46.1			3	070	9.1	9.3			1983	1983

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

330 551 508

2 159 1376 -66.5

109 106 1648 -73.5

## NORMALS OF RADIOSONDE DATA

42101 PATIALA

OCTOBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	403	980	403	29.3	34.2	16.4	403	16.9	403	317	1.0	1.6	1.11	0.94	1987	1989
1000	348	66											9.32			
950	348	521	348	26.8	35.6	18.6	343	12.7	345	328	2.6	3.9	9.31	0.80	1989	1985
900	348	998	348	22.7	30.8	12.6	339	8.9	345	315	3.4	4.9	10.06	0.85	1990	1987
850	348	1492	348	18.8	28.8	10.2	332	4.7	344	312	4.1	5.4	10.29	1.01	1989	1981
800	348	2009	348	15.2	24.8	4.6	288	-0.5	344	311	4.3	5.7	10.35	1.13	1990	1981
750	348	2551	347	11.5	21.4	3.8	237	-4.9	345	308	4.0	5.7	10.81	1.29	1990	1982
700	348	3124	347	7.5	17.2	-1.1	190	-8.2	345	307	3.8	6.1	12.86	1.50	1990	1981
650	345	3730	345	3.4	12.6	-5.1	154	-11.7	342	308	3.8	6.0	15.73	1.52	1990	1980
600	345	4373	344	-0.8	9.6	-9.1	124	-15.3	342	299	4.8	6.6	18.11	1.54	1989	1983
550	343	5064	343	-5.3	5.4	-15.1	89	-19.5	340	294	5.8	7.5	20.52	1.63	1989	1983
500	341	5805	340	-9.9	2.0	-19.7	47	-22.4	338	289	7.8	9.4	25.73	1.46	1990	1983
450	338	6609	337	-15.0	-1.5	-25.1	30	-26.8	332	284	10.7	12.5	29.61	1.44	1990	1983
400	337	7492	336	-20.6	-4.5	-30.9	23	-32.7	330	281	14.5	16.1	32.54	1.60	1990	1979
350	335	8467	335	-27.1	-12.1	-36.7	17	-36.5	324	278	17.6	19.7	37.12	1.78	1990	1979
300	331	9565	330	-34.0	-21.3	-44.1	8	-42.0	319	276	22.0	24.1	44.97	2.23	1990	1980
250	328	10822	327	-41.9	-30.5	-52.9			306	271	25.7	27.7	55.25	2.69	1989	1979
200	313	12307	313	-50.6	-38.3	-61.1			275	266	28.4	30.0	67.69	2.73	1989	1979
175	280	13167	280	-55.6	-42.5	-73.7			237	265	27.3	29.0	80.35	2.93	1988	1979
150	225	14140	225	-60.6	-47.3	-73.0			185	262	24.5	25.8	95.02	2.93	1988	1978
125	170	15252	170	-65.4	-52.3	-77.0			138	263	20.6	21.8	117.84	3.27	1988	1978
100	129	16582	128	-67.9	-55.1	-76.0			111	261	14.5	16.0	134.23	3.05	1980	1978
80	100	17905	99	-66.3	-51.5	-75.5			92	255	8.9	11.0	127.90	3.73	1989	1980
70	94	18716	93	-63.4	-48.3	-72.1			89	263	7.3	10.0	154.48	3.59	1989	1982
60	87	19666	87	-59.8	-44.9	-74.1			81	271	4.8	8.6	163.36	3.71	1989	1980
50	85	20813	85	-56.1	-40.7	-73.1			78	294	2.0	8.0	179.90	3.37	1989	1980
40	79	22255	78	-52.2	-37.3	-71.3			72	276	0.7	6.8	212.69	4.14	1989	1980
30	66	24101	66	-49.1	-37.3	-67.5			57	236	0.5	8.8	191.52	3.83	1985	1980
25	48	25255	48	-48.5	-40.5	-65.1			43	294	1.4	7.9	278.81	3.88	1982	1980
20	31	26666	31	-46.9	-40.7	-61.9			27	286	1.3	8.1	74.52	2.12	1983	1980
15	11	28567	11	-45.9	-37.1	-57.3			10	279	8.2	11.0			1981	1980
10	3	31190	3	-45.3	-44.5	-46.5			3	268	9.8	10.0			1982	1980
7	1	33840	1	-42.7	-42.7	-42.7			1	271	15.0	15.0			1983	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE				
N	P	ALT	N	P	ALT	T	N	P	ALT	T	
345	608	428	19	186	1266	-60.2		106	110	1617	-69.3

### NORMALS OF RADIOSONDE DATA

42101 PATIALA

NOVEMBER 1977-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	401	984	401	24.2	31.4	16.0	401	12.1	401	321	1.2	1.5	1.00	1.47	1989	1977
1000	342	103											7.20			
950	340	550	340	21.8	32.2	7.0	334	7.4	340	326	3.4	4.1	7.62	1.41	1990	1978
900	340	1018	340	17.8	31.6	8.2	319	3.1	339	318	4.2	5.2	8.14	1.59	1990	1988
850	340	1503	340	14.3	27.2	2.2	295	-1.9	339	315	3.7	5.2	8.88	1.77	1990	1988
800	340	2013	340	11.1	25.8	0.2	236	-6.1	339	313	3.5	5.4	10.26	1.75	1990	1988
750	340	2547	340	7.8	21.2	-4.3	169	-8.5	338	311	3.2	5.6	13.26	1.73	1990	1988
700	340	3113	340	4.2	16.4	-5.9	143	-11.2	338	302	3.3	5.9	16.26	1.77	1990	1988
650	337	3712	337	0.5	12.2	-10.3	113	-14.5	335	293	4.1	6.5	19.81	1.78	1990	1981
600	336	4350	336	-3.5	9.6	-14.5	93	-17.0	334	289	5.7	7.8	23.35	1.87	1990	1981
550	333	5033	333	-7.9	5.6	-19.1	77	-21.0	331	285	8.1	10.0	28.02	1.89	1990	1981
500	332	5768	332	-12.7	1.0	-22.9	53	-24.6	328	282	11.3	12.9	32.66	1.85	1990	1983
450	325	6564	324	-18.0	-5.9	-28.1	45	-29.9	320	279	15.2	16.8	38.23	1.81	1990	1981
400	323	7435	322	-24.0	-13.9	-35.3	40	-34.8	313	278	19.5	21.4	43.16	1.71	1980	1981
350	318	8398	317	-30.7	-19.7	-42.5	30	-40.1	300	277	23.6	25.5	49.10	1.62	1990	1981
300	315	9477	315	-38.2	-22.7	-51.1	9	-44.9	288	276	29.0	31.3	53.56	1.63	1980	1981
250	304	10712	304	-46.0	-33.5	-55.9	1	-46.5	253	273	32.7	35.1	58.54	1.80	1990	1983
200	286	12174	285	-53.8	-41.9	-64.7			199	271	35.5	37.4	65.97	2.00	1980	1982
175	248	13028	247	-57.3	-44.3	-65.1			153	269	33.6	35.1	74.02	2.47	1988	1982
150	190	13994	189	-60.6	-48.3	-72.1			118	269	31.4	32.5	96.15	2.95	1988	1982
125	147	15108	147	-64.3	-53.5	-77.0			89	269	27.3	28.4	108.85	2.92	1988	1978
100	125	16445	125	-66.8	-56.9	-78.0			75	274	20.0	21.0	119.24	3.43	1988	1978
80	110	17785	110	-66.9	-54.3	-78.0			68	274	11.8	13.3	149.85	4.19	1989	1977
70	104	18591	104	-65.3	-52.9	-81.0			63	278	9.1	11.3	156.36	4.54	1989	1977
60	92	19539	92	-63.3	-48.1	-79.0			56	281	6.0	8.9	161.82	4.33	1981	1977
50	89	20671	89	-59.8	-44.3	-71.0			54	289	4.5	7.7	190.00	3.47	1981	1977
40	76	22052	76	-55.9	-44.9	-65.9			48	290	2.2	7.6	173.99	4.54	1989	1980
30	66	23879	66	-51.6	-44.1	-61.9			41	278	4.9	9.4	116.86	2.86	1982	1980
25	49	25064	49	-49.4	-42.1	-58.9			32	266	4.9	9.9	136.05	3.15	1988	1980
20	31	26583	31	-47.3	-39.1	-56.7			18	264	10.2	12.7	97.13	1.33	1983	1980
15	14	28403	14	-46.6	-36.1	-53.1			8	276	8.8	9.9			1980	1980
10	3	31187	3	-44.2	-40.5	-47.7			2	280	16.8	17.0			1980	1988

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

338 644 330

40 204 1197 -58.0

103 105 1630 -68.5



# NORMALS OF RADIOSONDE DATA

42101 PATIALA

DECEMBER 1977-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	373	987	373	19.3	25.6	10.4	373	9.7	373	315	1.2	1.7	1.66	1.02	1987	1990
<i>1000</i>	335	130											17.47			
<i>950</i>	335	569	335	16.8	24.0	8.8	335	4.7	334	320	3.2	4.5	18.18	1.31	1990	1986
<i>900</i>	335	1029	335	13.5	25.8	5.4	315	-0.6	334	314	3.5	5.4	19.04	1.76	1990	1985
<i>850</i>	335	1508	335	10.9	23.4	-0.3	244	-4.6	334	316	2.6	5.3	20.79	2.15	1990	1979
<i>800</i>	335	2013	335	8.3	19.6	-1.7	195	-7.8	334	303	2.2	5.5	15.11	2.42	1990	1981
<i>750</i>	335	2542	335	5.4	15.2	-3.0	161	-10.2	333	288	2.1	5.7	27.21	2.68	1990	1977
<i>700</i>	335	3103	334	2.1	14.0	-8.0	140	-12.7	334	279	2.6	6.2	32.21	2.68	1978	1977
<i>650</i>	331	3697	330	-1.6	8.2	-11.0	123	-15.8	328	271	4.2	7.1	36.44	2.67	1987	1977
<i>600</i>	329	4330	328	-5.7	4.2	-17.0	111	-18.4	326	272	6.4	8.7	40.57	2.51	1988	1977
<i>550</i>	326	5007	326	-10.1	0.2	-22.0	107	-21.5	321	269	8.7	10.9	46.81	2.44	1985	1977
<i>500</i>	322	5736	322	-15.0	-4.1	-28.0	97	-25.7	317	271	12.1	14.1	52.23	2.39	1985	1977
<i>450</i>	318	6525	318	-20.5	-9.3	-35.0	95	-31.0	311	269	16.0	18.0	58.57	2.35	1985	1977
<i>400</i>	315	7388	315	-26.6	-15.1	-37.3	86	-35.6	305	271	20.0	22.2	64.39	2.29	1987	1981
<i>350</i>	309	8340	309	-33.5	-20.5	-44.0	60	-40.7	291	269	23.9	26.2	70.99	2.18	1987	1978
<i>300</i>	305	9407	305	-41.2	-26.7	-51.9	14	-45.3	274	268	28.5	30.8	79.18	2.05	1987	1981
<i>250</i>	296	10625	295	-49.0	-37.7	-59.1	1	-43.5	251	268	34.8	37.4	87.67	1.99	1987	1980
<i>200</i>	269	12072	268	-55.5	-45.9	-69.0			188	266	36.7	39.2	97.17	1.67	1987	1978
<i>175</i>	233	12918	233	-57.9	-48.3	-68.0			148	266	37.4	39.7	96.47	1.53	1988	1977
<i>150</i>	204	13877	204	-60.5	-50.1	-75.0			110	266	33.0	34.4	93.88	1.81	1980	1978
<i>125</i>	164	15002	164	-63.0	-49.1	-78.0			82	268	27.5	28.9	90.07	1.84	1980	1977
<i>100</i>	143	16359	143	-65.7	-55.9	-76.5			71	267	24.2	25.4	91.94	2.52	1986	1987
<i>80</i>	118	17727	118	-65.9	-55.7	-76.1			59	271	18.5	19.8	95.34	2.79	1988	1980
<i>70</i>	108	18543	108	-65.0	-55.7	-77.0			53	272	16.1	17.4	104.66	3.31	1988	1978
<i>60</i>	95	19487	95	-62.9	-53.0	-77.1			47	267	12.6	13.9	99.15	2.74	1978	1987
<i>50</i>	82	20628	82	-59.8	-49.1	-73.1			38	273	8.8	11.7	83.05	2.97	1985	1987
<i>40</i>	68	22036	68	-56.1	-44.9	-67.5			33	277	5.8	10.8	98.82	3.85	1983	1987
<i>30</i>	51	23899	51	-51.9	-43.3	-62.1			26	269	7.9	11.7	130.06	3.88	1983	1987
<i>25</i>	35	25070	35	-50.2	-40.7	-58.5			12	031	3.5	10.5	164.03	3.83	1988	1987
<i>20</i>	18	26548	18	-47.8	-39.9	-57.3			7	280	7.9	9.9			1980	1987
<i>15</i>	8	28445	8	-46.5	-34.3	-52.9			4	283	13.2	17.8			1980	1988
<i>10</i>	3	31064	3	-45.7	-39.1	-50.7									1982	1990
<i>7</i>	1	33408	1	-46.1	-46.1	-46.1									1988	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
331	672	344	100	208	1191	-57.3	103	101	1649	-67.4

# NORMALS OF RADIOSONDE DATA

42492 PATNA

JANUARY 1986-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	155	1009	155	20.2	25.2	11.2	155	12.5	155	291	1.0	1.4	0.89	0.63	1990	1990
1000	117	133	117	19.7	24.6	13.8	117	9.6	115	299	1.7	2.3	7.18	0.45	1987	1987
950	117	551	117	16.7	21.8	10.0	116	3.8	115	297	3.4	4.4	24.69	0.45	1987	1989
900	117	1031	117	13.6	17.6	5.4	104	-0.3	115	297	4.9	5.9	7.30	0.41	1987	1989
850	117	1513	117	11.8	17.0	2.0	77	-4.3	115	301	5.7	7.1	8.62	0.71	1989	1989
800	117	2020	117	10.1	16.8	1.0	51	-6.8	115	301	8.2	9.5	6.75	0.74	1987	1989
750	117	2556	117	7.9	17.6	-1.1	34	-9.7	115	300	10.9	11.9	9.79	0.68	1988	1989
700	117	3119	117	5.2	14.4	-1.3	23	-10.5	115	300	13.2	13.9	7.76	0.55	1988	1986
650	116	3720	116	1.9	11.2	-5.3	20	-13.1	114	298	14.8	15.5	7.89	0.83	1988	1986
600	116	4363	116	-1.7	7.6	-9.1	14	-13.7	112	293	17.9	18.9	7.65	0.85	1988	1986
550	116	5059	116	-5.7	4.0	-12.7	14	-18.1	108	290	21.0	22.2	9.57	1.05	1987	1986
500	115	5792	115	-10.0	-0.5	-17.9	16	-22.6	103	287	25.5	26.9	11.09	1.20	1987	1986
450	115	6609	115	-14.9	-3.9	-24.1	13	-27.6	95	285	30.1	31.7	19.26	1.46	1989	1988
400	114	7481	114	-20.4	-8.1	-29.1	10	-33.1	88	283	35.8	37.7	18.35	1.84	1989	1989
350	111	8460	111	-26.4	-15.9	-35.7	6	-41.3	72	281	41.1	43.0	19.81	1.59	1989	1987
300	109	9563	109	-33.0	-24.5	-41.5	2	-46.4	49	277	45.4	47.9	33.37	1.55	1989	1988
250	109	10823	109	-41.3	-32.9	-49.7			33	275	43.9	46.2	42.08	1.74	1987	1988
200	106	12309	106	-51.4	-40.1	-58.5			13	277	35.8	37.7	52.86	1.91	1987	1989
175	103	13166	103	-56.9	-45.5	-64.7			8	272	35.7	37.4	60.46	1.58	1987	1988
150	100	14133	100	-62.5	-52.1	-71.1			4	273	32.8	33.8	65.03	1.33	1988	1986
125	91	15249	91	-68.0	-60.1	-76.1			3	281	29.5	29.7	69.44	0.93	1988	1989
100	86	16575	86	-72.5	-64.1	-81.1			1	283	29.0	29.0	74.94	0.71	1986	1989
80	81	17889	81	-72.3	-63.1	-81.7							75.01	1.54	1986	1988
70	79	18682	79	-69.3	-58.1	-78.3							75.98	2.38	1986	1988
60	75	19614	75	-64.6	-52.1	-79.9							85.79	2.76	1986	1986
50	74	20739	74	-59.2	-49.9	-69.5							92.32	2.70	1989	1988
40	55	22161	55	-54.5	-46.5	-65.5							118.45	2.26	1989	1988
30	40	24010	40	-50.9	-43.1	-59.1							125.08	1.36	1989	1986
25	27	25169	27	-50.1	-43.1	-56.9							139.81	2.53	1989	1987
20	15	26672	15	-48.5	-44.3	-56.1									1986	1986
15	6	28423	6	-48.5	-45.7	-55.9									1989	1986
10	1	31201	1	-45.5	-45.5	-45.5									1989	1989

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
116	623	408	3	183	1284	-59.6	83	098	1669	-74.3

**NORMALS OF RADIOSONDE DATA**

42492 PATNA

FEBRUARY 1986-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
	<i><b>SURFACE</b></i>	141	1008	141	23.8	30.0	15.0	141	13.5	141	289	1.3	2.2	1.10	1.08	1989
1000	137	115	135	23.4	29.8	14.8	134	11.9	135	293	1.8	2.9	8.93	1.25	1989	1986
950	134	544	134	20.0	26.4	14.0	131	5.2	134	298	3.5	5.1	19.57	1.11	1989	1989
900	134	1023	134	16.6	23.8	10.4	130	2.1	134	292	5.3	6.8	9.58	0.90	1986	1989
850	134	1508	134	13.8	22.0	6.4	108	-0.7	134	293	7.4	8.3	10.22	0.57	1989	1989
800	134	2017	134	11.0	19.8	2.2	88	-4.8	134	294	9.7	10.6	10.42	0.78	1989	1989
750	134	2551	134	8.2	16.4	-1.9	68	-7.0	134	294	11.7	12.6	12.37	0.94	1989	1989
700	134	3120	134	4.9	13.2	-4.1	61	-9.7	134	293	13.0	13.9	12.64	0.76	1990	1989
650	133	3719	133	1.3	9.4	-6.3	48	-12.2	133	294	14.5	15.2	14.66	0.81	1990	1990
600	132	4360	132	-2.4	5.0	-8.3	41	-15.8	129	291	17.1	18.0	13.88	1.11	1989	1986
550	132	5054	132	-6.5	3.0	-13.9	27	-17.3	129	291	20.3	21.1	20.44	1.37	1988	1986
500	132	5784	132	-11.3	-2.9	-19.5	24	-20.7	128	288	24.3	25.5	18.90	1.29	1989	1986
450	132	6591	132	-16.4	-7.3	-23.7	28	-27.4	124	286	29.3	30.5	24.85	1.24	1988	1986
400	130	7461	129	-22.0	-10.1	-29.1	20	-32.7	115	284	34.0	35.7	30.95	1.41	1990	1990
350	130	8432	129	-27.9	-15.1	-37.5	14	-38.5	98	280	37.4	39.9	38.63	1.99	1989	1988
300	128	9525	128	-34.8	-22.9	-44.1	4	-43.3	74	279	40.9	43.2	44.52	1.92	1989	1988
250	125	10780	125	-42.3	-32.1	-51.9			42	275	41.3	43.6	53.88	1.89	1989	1987
200	123	12267	123	-50.2	-40.1	-61.1			13	276	43.0	46.4	63.44	2.25	1990	1988
175	122	13131	122	-54.6	-42.5	-64.7			7	272	34.3	35.9	66.90	2.21	1990	1988
150	122	14105	122	-59.7	-49.5	-71.1			2	269	22.5	24.0	71.63	2.02	1990	1988
125	118	15230	118	-65.1	-56.3	-73.5			2	279	22.8	23.5	73.41	1.56	1990	1988
100	112	16576	112	-69.8	-60.1	-77.1			1	281	27.0	27.0	78.94	1.67	1989	1989
80	104	17899	104	-70.9	-58.9	-79.1							81.72	1.88	1988	1988
70	98	18693	98	-69.2	-58.1	-78.9							81.39	1.97	1988	1988
60	95	19621	95	-64.8	-54.1	-77.3							85.99	1.81	1989	1988
50	85	20759	85	-59.9	-51.1	-73.3							83.90	1.43	1989	1988
40	79	22163	79	-55.7	-45.5	-69.5							90.33	1.00	1988	1988
30	61	24021	61	-52.0	-42.5	-61.1							92.84	1.33	1987	1988
25	40	25184	40	-51.0	-43.5	-59.3							99.09	2.16	1986	1987
20	21	26675	21	-48.8	-41.3	-54.7							162.17	1.60	1987	1988
15	8	28591	8	-45.5	-42.1	-52.5									1989	1989
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE				
N	P	ALT	N	P	ALT	T	N	P	ALT	T	
132	631	396	23	218	1171	-54.0		104	095	1688	-72.3

# NORMALS OF RADIOSONDE DATA

42492 PATNA

MARCH 1986-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	155	1003	155	28.8	37.0	18.0	155	14.7	155	297	1.8	3.2	1.41	0.75	1986	1988
1000	135	83	117	28.0	35.4	19.6	116	13.5	116	309	1.6	3.1	12.82	0.72	1987	1989
950	135	520	135	25.1	32.0	18.4	126	6.7	133	303	3.8	5.7	13.02	1.05	1989	1990
900	135	1007	135	21.4	28.2	14.8	125	4.2	133	296	5.5	7.1	10.55	1.15	1987	1990
850	135	1497	135	17.6	25.2	11.6	119	2.2	133	290	6.8	8.2	10.10	1.19	1990	1990
800	135	2012	135	13.9	21.2	7.4	108	-1.4	133	290	9.1	9.9	9.63	1.17	1989	1990
750	135	2546	135	10.4	17.8	3.4	93	-4.7	133	292	11.4	12.2	9.08	1.25	1987	1988
700	135	3122	135	6.6	14.4	0.4	79	-8.7	133	294	13.2	13.9	11.18	1.42	1987	1988
650	134	3722	134	3.0	10.8	-4.5	61	-11.6	132	294	14.6	15.3	10.93	1.32	1987	1988
600	134	4370	134	-0.6	7.2	-9.3	46	-14.7	130	293	15.5	16.4	14.99	1.35	1989	1988
550	134	5066	134	-4.9	3.2	-12.7	27	-19.3	126	293	16.8	17.6	21.74	1.36	1987	1988
500	132	5804	132	-9.7	-0.9	-17.5	18	-22.4	122	290	18.5	19.8	21.53	1.39	1987	1986
450	131	6613	131	-14.9	-7.5	-21.7	22	-26.1	119	289	21.9	23.4	26.13	1.38	1988	1986
400	129	7494	129	-20.7	-10.9	-28.5	20	-30.2	115	287	25.0	27.1	28.09	1.19	1990	1990
350	128	8468	128	-27.0	-13.9	-34.5	15	-36.3	96	288	26.9	30.2	31.26	1.31	1990	1987
300	125	9567	125	-33.6	-22.1	-44.1	9	-43.2	79	286	32.7	36.4	35.11	0.96	1990	1987
250	124	10827	124	-41.5	-29.9	-51.5			65	285	34.2	38.8	32.36	0.73	1987	1987
200	120	12311	120	-49.6	-39.1	-61.7			46	282	35.9	38.0	37.56	1.22	1990	1987
175	117	13178	117	-53.9	-44.9	-66.7			33	286	31.9	33.9	39.43	1.81	1990	1987
150	112	14161	112	-58.8	-50.3	-70.9			24	284	28.6	29.6	52.02	2.17	1990	1986
125	110	15290	110	-64.1	-52.5	-78.3			14	278	23.4	25.6	62.99	2.33	1990	1986
100	100	16634	100	-69.0	-55.1	-79.7			9	289	16.5	22.0	67.71	1.61	1990	1990
80	90	17962	90	-70.1	-60.7	-82.1			7	284	8.9	12.7	65.78	1.58	1987	1987
70	89	18758	89	-68.3	-55.7	-80.7			7	265	9.0	13.0	67.17	2.35	1990	1987
60	83	19690	83	-64.7	-54.7	-74.1			5	281	8.3	15.8	61.70	1.94	1989	1987
50	77	20812	77	-59.9	-46.7	-67.9			3	287	15.9	23.0	59.83	1.53	1989	1989
40	67	22229	67	-55.3	-43.1	-63.3			2	216	10.7	13.0	68.11	1.14	1989	1987
30	50	24085	50	-50.3	-41.5	-59.7							83.84	1.24	1989	1987
25	44	25289	44	-48.2	-41.9	-57.5							97.19	1.47	1987	1987
20	28	26768	28	-46.1	-42.1	-55.3							77.99	1.59	1987	1987
15	4	28640	4	-44.5	-40.5	-51.7									1988	1987
10	2	31422	2	-45.7	-43.1	-48.3									1988	1987
7	1	33930	1	-41.7	-41.7	-41.7									1988	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

134 609 427

26 220 1166 -53.1

91 097 1689 -71.0

## NORMALS OF RADIOSONDE DATA

42492 PATNA

APRIL 1985-90

1200 UTC

<b>LEVEL</b>	<b>N</b>	<b>p/H</b>	<b>N</b>	<b>T</b>	<b>TX</b>	<b>TN</b>	<b>N</b>	<b>TD</b>	<b>N</b>	<b>DDD</b>	<b>VR</b>	<b>VM</b>	<b>SDHP</b>	<b>SDTT</b>	<b>YRTX</b>	<b>YRTN</b>
<b>(HPA)</b>																
<i>SURFACE</i>	168	998	168	34.6	40.0	26.0	168	14.7	168	313	1.5	4.5	1.41	1.29	1985	1987
<i>1000</i>	151	34	36	32.4	37.0	27.2	34	13.9	37	009	0.8	5.1	12.07	1.56	1987	1987
<i>950</i>	151	487	151	31.1	40.8	21.4	125	9.8	150	308	4.1	8.2	20.60	1.49	1989	1987
<i>900</i>	151	975	151	27.4	35.2	19.4	122	6.3	150	294	5.8	8.9	10.31	1.25	1989	1988
<i>850</i>	151	1477	151	23.5	33.2	15.2	123	3.7	150	284	7.9	9.2	9.26	1.13	1985	1990
<i>800</i>	151	2001	151	19.5	28.4	10.8	123	0.0	149	285	10.1	10.8	8.41	1.00	1990	1990
<i>750</i>	151	2540	151	15.1	24.0	6.4	119	-3.3	147	286	11.5	12.4	14.90	1.17	1990	1990
<i>700</i>	151	3131	151	10.9	19.8	1.8	102	-6.4	150	289	13.1	14.0	6.62	1.09	1989	1990
<i>650</i>	147	3727	147	6.5	15.6	-3.3	80	-9.7	135	291	14.7	15.6	16.70	1.23	1990	1986
<i>600</i>	147	4394	147	2.1	10.2	-5.5	62	-13.0	125	292	15.2	16.1	7.76	1.21	1990	1990
<i>550</i>	145	5095	145	-2.5	5.0	-11.3	42	-17.1	119	291	17.1	18.1	8.97	1.18	1990	1990
<i>500</i>	145	5839	145	-7.3	-0.3	-15.5	28	-20.4	114	292	17.1	18.4	11.02	1.21	1990	1990
<i>450</i>	143	6658	143	-12.4	-4.3	-20.5	24	-22.7	94	291	18.5	19.8	17.25	1.25	1990	1990
<i>400</i>	140	7543	140	-18.4	-8.7	-25.9	16	-28.6	87	290	20.9	22.4	19.24	1.50	1990	1990
<i>350</i>	138	8526	138	-24.8	-16.5	-34.1	9	-35.4	57	292	23.5	25.3	22.36	1.84	1990	1990
<i>300</i>	137	9634	137	-32.2	-22.5	-42.1	5	-41.8	47	294	24.5	27.2	35.51	2.49	1990	1987
<i>250</i>	131	10901	131	-40.5	-30.5	-51.5			31	291	23.5	26.6	50.62	3.07	1985	1987
<i>200</i>	129	12395	129	-49.3	-39.1	-60.5			18	289	21.6	26.2	72.52	2.38	1987	1986
<i>175</i>	126	13264	126	-54.1	-44.7	-64.1			13	293	20.4	24.1	80.60	1.88	1987	1986
<i>150</i>	120	14241	120	-59.4	-50.1	-71.1			9	315	17.0	21.4	88.38	1.87	1989	1986
<i>125</i>	110	15364	110	-65.7	-56.1	-77.1			6	325	16.4	18.6	97.45	1.81	1990	1986
<i>100</i>	101	16694	101	-71.0	-60.5	-80.5			4	301	10.7	18.0	109.68	2.18	1988	1989
<i>80</i>	94	18015	94	-71.4	-57.7	-82.1			3	321	2.5	10.0	121.43	2.94	1990	1989
<i>70</i>	92	18808	92	-69.3	-53.1	-81.1			3	294	1.9	12.0	129.48	2.80	1986	1989
<i>60</i>	88	19745	88	-64.4	-52.3	-72.5			2	082	7.9	9.0	127.65	2.16	1986	1988
<i>50</i>	84	20882	84	-58.0	-46.7	-68.1			2	082	8.7	9.5	127.09	1.72	1988	1988
<i>40</i>	79	22296	79	-52.5	-44.1	-59.7			2	081	7.0	8.5	132.64	2.03	1986	1987
<i>30</i>	71	24172	71	-47.8	-35.7	-63.5			2	124	11.3	11.5	149.14	2.08	1986	1985
<i>25</i>	56	25377	56	-45.6	-39.1	-53.1			2	073	2.5	7.0	133.31	2.08	1989	1987
<i>20</i>	38	26896	38	-43.3	-33.3	-51.3			1	087	8.9	9.0	98.88	2.61	1988	1986
<i>15</i>	11	28758	11	-43.2	-38.9	-50.3									1989	1986
<i>10</i>	3	31536	3	-39.0	-34.5	-41.3									1985	1985
<i>7</i>	1	33950	1	-37.5	-37.5	-37.5									1985	1985

<b>FREEZING LEVEL</b>			<b>1ST TROPOPAUSE</b>				<b>2ND TROPOPAUSE</b>			
<b>N</b>	<b>P</b>	<b>ALT</b>	<b>N</b>	<b>P</b>	<b>ALT</b>	<b>T</b>	<b>N</b>	<b>P</b>	<b>ALT</b>	<b>T</b>
146	576	471	11	201	1236	-53.7	95	094	1710	-73.2

## NORMALS OF RADIOSONDE DATA

42492 PATNA

MAY 1985-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	186	995	186	34.8	42.4	24.4	186	19.6	186	064	2.3	4.1	1.83	1.22	1987	1989
1000	177	13	19	33.2	39.8	24.8	19	16.7	20	023	2.2	4.0	14.62		1987	1987
950	177	463	177	31.0	38.2	21.6	169	14.5	174	052	3.0	6.3	23.37	0.75	1987	1989
900	177	956	177	27.5	35.0	18.0	168	11.5	174	020	1.2	6.4	15.77	0.59	1985	1989
850	177	1460	177	24.2	29.6	14.6	164	8.0	174	290	3.5	6.8	15.03	0.47	1987	1987
800	177	1985	177	20.7	25.0	11.8	158	4.4	174	289	6.9	8.7	15.99	0.62	1989	1987
750	177	2531	176	16.6	21.6	8.6	142	1.0	174	293	9.0	10.3	19.88	0.88	1988	1987
700	177	3123	176	12.7	18.6	3.8	138	-2.9	174	295	10.5	11.9	12.81	1.27	1990	1987
650	177	3729	176	8.4	19.2	0.8	123	-7.0	169	297	12.2	13.2	21.00	1.50	1988	1987
600	175	4395	174	4.1	10.4	-5.9	98	-9.8	167	297	12.0	13.2	13.10	1.55	1989	1987
550	175	5110	174	0.0	7.0	-5.7	80	-13.5	162	298	12.2	13.4	18.30	1.64	1990	1985
500	174	5853	173	-4.3	4.8	-12.3	55	-17.4	159	295	12.3	13.8	17.60	2.01	1990	1986
450	174	6687	174	-8.9	0.0	-18.1	38	-21.5	152	292	13.0	14.6	25.82	2.27	1990	1986
400	173	7581	173	-14.2	-3.9	-23.5	28	-25.9	151	284	14.6	16.3	31.36	2.36	1988	1986
350	168	8588	168	-20.1	-9.7	-30.1	17	-33.8	129	276	16.1	18.3	30.58	2.56	1990	1987
300	165	9714	165	-27.0	-16.7	-39.7	7	-40.0	120	271	18.7	21.0	49.11	2.85	1988	1987
250	163	11007	163	-35.8	-24.7	-49.7	3	-48.1	94	266	20.4	22.4	60.72	2.93	1989	1987
200	162	12523	162	-46.6	-38.1	-56.1			77	264	18.7	21.0	74.79	2.13	1988	1990
175	155	13400	155	-52.9	-44.1	-62.3			60	263	14.5	17.5	84.17	1.40	1985	1986
150	150	14374	150	-59.6	-51.5	-71.1			50	266	10.2	14.5	86.71	1.39	1985	1986
125	143	15499	143	-56.5	-58.1	-78.1			46	266	6.8	12.0	87.34	1.46	1985	1986
100	133	16833	133	-72.2	-61.5	-82.5			40	218	2.4	10.1	99.24	1.19	1988	1986
80	123	18144	123	-71.8	-57.7	-82.1			30	124	5.1	8.0	97.14	1.48	1987	1985
70	122	18940	122	-68.2	-53.1	-79.3			29	105	7.7	9.2	91.38	1.20	1986	1989
60	118	19878	118	-62.5	-50.7	-77.1			24	099	10.3	11.4	90.07	1.43	1986	1989
50	116	21014	116	-56.5	-40.1	-68.7			24	104	9.8	10.9	87.39	1.38	1985	1990
40	111	22448	111	-51.4	-40.1	-63.3			21	104	9.7	10.3	94.04	1.00	1986	1990
30	94	24323	94	-46.6	-35.7	-56.1			15	087	9.6	10.6	95.72	1.31	1989	1990
25	74	25512	74	-44.5	-36.1	-54.3			8	108	8.1	8.3	116.78	2.18	1987	1990
20	47	26990	47	-42.7	-30.7	-52.1			7	095	7.5	8.4	150.58	2.43	1988	1990
15	18	28910	18	-42.1	-36.3	-49.5									1987	1990
10	8	31583	8	-40.5	-37.5	-44.5									1988	1990
7	1	33943	1	-40.1	-40.1	-40.1									1986	1986

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
174	548	514	3	260	1059	-42.7	126	096	1710	-73.8

## NORMALS OF RADIOSONDE DATA

42492 PATNA

JUNE 1985-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	180	992	180	33.9	40.6	23.6	180	24.4	180	076	2.9	4.0	1.22	1.17	1986	1988
1000	134	-19											15.08			
950	135	437	135	30.6	41.0	21.6	129	21.0	118	072	3.9	6.3	18.58	1.78	1985	1988
900	135	925	135	27.5	37.6	18.0	128	18.2	118	081	2.8	6.9	10.12	1.75	1985	1988
850	135	1429	135	24.2	33.0	16.0	130	15.1	118	019	0.5	6.7	8.06	1.42	1985	1988
800	135	1955	135	20.9	27.8	13.4	133	11.8	118	302	1.9	7.4	7.85	1.27	1985	1988
750	135	2512	135	17.4	23.2	10.0	135	8.3	118	297	3.1	8.3	9.90	1.32	1985	1988
700	135	3096	135	14.0	19.0	7.0	131	4.8	118	312	3.9	9.0	7.76	1.25	1985	1989
650	132	3716	132	10.5	17.0	3.2	119	1.1	103	313	4.9	9.6	15.60	1.27	1985	1989
600	132	4382	132	7.1	14.8	0.0	112	-3.3	95	312	4.4	8.9	8.07	1.33	1985	1989
550	132	5111	132	3.7	10.6	-4.1	104	-7.1	91	308	4.4	8.2	20.29	1.51	1985	1988
500	131	5862	131	-0.2	5.4	-8.7	88	-11.3	89	305	4.1	8.4	14.16	1.31	1985	1987
450	131	6715	131	-4.3	3.0	-14.7	79	-15.1	81	295	4.1	8.5	29.08	1.24	1988	1987
400	130	7621	130	-9.4	-3.1	-20.7	57	-18.9	78	276	4.0	8.5	19.04	1.34	1985	1987
350	126	8640	126	-15.3	-7.5	-21.3	40	-25.8	66	256	3.8	8.8	22.85	1.12	1988	1986
300	122	9791	122	-23.0	-15.7	-30.3	23	-33.1	60	233	2.5	8.2	27.70	1.18	1988	1986
250	119	11104	119	-32.4	-24.7	-43.1	12	-42.0	50	192	2.9	9.0	34.11	1.68	1985	1986
200	113	12637	113	-44.7	-34.5	-55.1	2	-50.0	40	157	4.5	11.4	43.30	1.98	1990	1986
175	108	13520	108	-52.3	-44.3	-64.1			33	162	4.3	11.7	51.41	1.85	1985	1986
150	103	14500	103	-60.3	-49.9	-70.1			30	142	5.6	12.3	57.57	2.09	1985	1986
125	96	15613	96	-68.4	-58.3	-78.1			28	132	7.0	13.1	67.84	2.31	1985	1986
100	88	16934	88	-74.7	-65.5	-86.9			26	107	9.1	13.5	72.12	2.57	1985	1987
80	80	18238	80	-73.1	-55.9	-83.7			21	103	12.3	15.2	91.64	3.25	1990	1987
70	75	19026	75	-68.5	-50.1	-78.3			22	107	13.5	15.4	100.67	3.01	1990	1987
60	73	19969	73	-62.3	-46.1	-74.1			18	100	13.2	14.7	113.95	2.14	1990	1986
50	69	21086	69	-56.1	-43.1	-66.1			16	098	15.2	15.8	104.21	2.26	1989	1986
40	59	22511	59	-52.3	-38.5	-61.7			11	103	17.9	18.2	117.55	2.88	1990	1987
30	48	24380	48	-47.2	-38.9	-55.3			4	087	16.1	16.3	144.72	2.04	1986	1986
25	39	25571	39	-45.1	-36.5	-53.3			3	096	17.0	17.0	154.00	1.70	1986	1986
20	26	27079	26	-43.2	-37.1	-50.9							178.13	2.74	1988	1987
15	11	29001	11	-40.7	-32.7	-46.3									1988	1986
10	3	31507	3	-41.5	-41.1	-42.3									1986	1985
7	1	33933	1	-39.5	-39.5	-39.5									1986	1986

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

132 503 581

80 098 1705 -75.9

**NORMALS OF RADIOSONDE DATA**

42492 PATNA

JULY 1985-90

1200 UTC

<b>LEVEL (HPA)</b>	<b>N</b>	<b>p/H</b>	<b>N</b>	<b>T</b>	<b>TX</b>	<b>TN</b>	<b>N</b>	<b>TD</b>	<b>N</b>	<b>DDD</b>	<b>VR</b>	<b>VM</b>	<b>SDHP</b>	<b>SDTT</b>	<b>YRTX</b>	<b>YRTN</b>
<b>SURFACE</b>	185	993	185	29.7	34.2	24.4	185	26.1	185	088	1.5	2.6	1.00	0.58	1986	1986
<b>1000</b>	141	-7											8.96			
<b>950</b>	141	439	141	27.7	32.0	22.6	141	24.0	127	097	2.0	5.0	13.87	0.46	1985	1989
<b>900</b>	141	929	141	25.1	30.4	21.0	141	21.6	127	122	1.7	6.2	6.90	0.41	1989	1985
<b>850</b>	141	1430	141	22.4	28.0	14.6	141	19.0	127	160	1.0	6.7	5.67	0.43	1989	1989
<b>800</b>	141	1955	141	19.7	25.4	15.2	141	15.9	128	201	0.9	6.7	5.54	0.46	1989	1985
<b>750</b>	141	2511	141	17.1	24.0	11.2	141	12.7	128	217	0.8	6.7	4.20	0.69	1988	1990
<b>700</b>	141	3095	141	14.4	22.2	9.0	141	9.1	128	208	0.7	6.7	4.64	0.80	1989	1989
<b>650</b>	140	3722	140	11.5	18.4	5.4	138	5.1	120	161	0.8	6.8	6.62	0.79	1989	1989
<b>600</b>	140	4385	140	8.2	14.4	2.0	137	1.7	115	130	0.7	6.5	4.64	0.69	1989	1989
<b>550</b>	138	5120	138	4.6	10.8	-1.9	135	-2.4	112	138	1.0	6.5	14.48	0.81	1989	1989
<b>500</b>	138	5870	138	0.8	7.0	-6.3	130	-7.0	109	128	1.4	6.4	9.05	0.97	1989	1985
<b>450</b>	136	6722	136	-3.4	3.8	-10.7	121	-12.2	102	117	2.2	6.7	17.98	1.05	1989	1989
<b>400</b>	134	7635	134	-8.1	-1.3	-16.3	111	-17.5	99	118	3.6	7.1	16.71	1.15	1989	1989
<b>350</b>	132	8652	132	-14.2	-8.1	-23.5	94	-23.6	90	112	5.3	7.7	24.64	1.18	1988	1989
<b>300</b>	127	9817	127	-21.7	-15.5	-28.1	70	-31.2	84	105	7.4	9.5	26.95	1.22	1989	1985
<b>250</b>	119	11136	119	-31.4	-24.5	-38.7	39	-40.0	73	103	10.2	12.2	37.86	1.66	1989	1985
<b>200</b>	115	12678	115	-44.1	-37.5	-59.1	2	-50.5	69	104	11.9	13.9	51.65	2.18	1990	1985
<b>175</b>	112	13559	112	-51.8	-44.9	-60.1			65	101	13.7	15.7	48.63	1.73	1990	1987
<b>150</b>	106	14540	106	-60.3	-52.1	-68.3			61	099	15.3	16.9	53.06	1.74	1988	1990
<b>125</b>	102	15652	102	-68.8	-60.3	-76.3			57	096	16.4	18.0	57.78	1.27	1989	1987
<b>100</b>	95	16967	95	-74.9	-64.9	-86.7			55	096	20.3	20.9	65.05	1.54	1989	1987
<b>80</b>	87	18274	87	-72.4	-57.1	-81.5			42	104	20.1	20.7	79.82	2.40	1990	1986
<b>70</b>	82	19067	82	-67.4	-53.1	-78.1			38	102	19.4	19.8	72.90	2.09	1990	1987
<b>60</b>	74	20004	74	-61.6	-46.7	-72.1			30	103	18.6	19.1	75.42	1.45	1990	1989
<b>50</b>	69	21145	69	-56.2	-44.1	-64.5			28	102	18.6	18.8	76.97	1.60	1986	1987
<b>40</b>	62	22556	62	-52.3	-44.1	-62.3			19	100	19.0	19.4	99.91	2.67	1988	1987
<b>30</b>	48	24423	48	-48.2	-39.9	-56.5			12	098	22.0	22.2	119.08	1.71	1989	1987
<b>25</b>	40	25610	39	-46.0	-36.1	-54.9			10	102	23.9	24.7	123.64	1.71	1990	1987
<b>20</b>	17	27083	17	-45.3	-39.9	-53.7									1989	1987
<b>15</b>	7	28939	7	-45.1	-41.1	-48.5									1986	1987
<b>10</b>	1	31777	1	-42.5	-42.5	-42.5									1988	1988

<b>FREEZING LEVEL</b>			<b>1ST TROPOPAUSE</b>				<b>2ND TROPOPAUSE</b>			
<b>N</b>	<b>P</b>	<b>ALT</b>	<b>N</b>	<b>P</b>	<b>ALT</b>	<b>T</b>	<b>N</b>	<b>P</b>	<b>ALT</b>	<b>T</b>
136	489	604	1	164	1381	-62.7	92	099	1704	-76.1



## NORMALS OF RADIOSONDE DATA

42492 PATNA

AUGUST 1985-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	186	994	186	30.4	35.0	24.0	186	25.9	186	093	1.8	2.9	1.00	0.55	1986	1987
1000	169	4											8.46			
950	169	444	169	28.0	36.4	22.2	169	23.0	155	102	2.5	5.9	11.41	0.70	1985	1987
900	169	938	169	25.0	30.0	19.6	168	20.5	155	118	2.8	7.3	8.28	0.66	1986	1987
850	169	1439	169	22.2	26.6	16.8	168	17.6	155	138	2.6	7.6	9.20	0.62	1985	1987
800	169	1964	169	19.4	24.2	13.8	169	14.2	155	143	2.5	7.8	8.93	0.66	1988	1987
750	169	2523	169	16.7	26.6	12.8	169	10.8	155	139	2.6	7.8	9.51	0.66	1988	1989
700	169	3101	169	13.9	22.0	9.8	167	7.0	155	128	2.3	7.6	9.19	0.56	1988	1989
650	166	3726	166	10.9	18.2	6.0	164	2.2	145	126	2.9	7.4	11.98	0.50	1988	1986
600	165	4386	165	7.7	15.4	2.6	157	-1.2	139	121	3.1	6.9	10.95	0.44	1988	1985
550	163	5120	163	3.9	11.2	-4.5	152	-5.3	127	124	3.1	7.0	17.99	0.47	1988	1989
500	162	5870	162	0.1	7.0	-3.9	143	-9.7	125	124	2.7	7.1	12.56	0.43	1988	1987
450	159	6721	159	-4.2	2.4	-9.9	130	-14.6	114	113	3.2	6.6	18.38	0.45	1989	1985
400	157	7628	157	-9.3	-2.9	-16.1	111	-19.5	110	110	3.6	6.7	11.94	0.47	1988	1985
350	154	8646	154	-15.6	-9.3	-23.9	88	-25.7	96	106	4.6	6.9	10.36	0.55	1988	1985
300	151	9798	151	-23.4	-15.1	-33.1	50	-32.3	90	103	6.2	8.5	12.18	0.83	1988	1985
250	147	11112	147	-33.1	-26.3	-44.1	31	-41.6	81	102	8.2	9.9	14.40	1.31	1988	1985
200	143	12642	143	-45.8	-36.9	-58.5	5	-48.4	78	100	10.7	12.1	27.63	1.72	1985	1985
175	139	13517	139	-53.6	-43.5	-68.1			73	100	11.5	13.1	29.96	1.69	1985	1985
150	136	14488	136	-62.0	-50.5	-77.1			71	099	13.1	14.6	37.68	1.77	1985	1985
125	123	15591	123	-70.4	-58.1	-84.1			66	101	15.1	16.4	48.87	1.85	1985	1985
100	116	16899	116	-75.3	-66.1	-81.7			61	101	17.2	17.9	55.55	0.95	1986	1988
80	110	18208	110	-71.6	-58.1	-85.3			55	102	17.2	17.6	54.81	2.70	1986	1988
70	105	19005	105	-66.6	-54.1	-82.7			51	101	17.4	17.9	55.53	3.23	1986	1988
60	98	19944	98	-62.1	-51.1	-74.5			48	100	18.5	19.0	52.96	2.67	1989	1985
50	92	21086	92	-57.4	-47.1	-71.9			42	102	19.3	19.6	56.53	2.32	1986	1985
40	78	22502	78	-54.2	-41.1	-70.1			31	102	19.0	19.3	66.61	2.29	1989	1985
30	50	24311	50	-50.7	-38.9	-64.3			18	100	20.0	20.5	95.03	2.28	1989	1985
25	38	25478	38	-49.7	-43.5	-61.7			9	104	21.3	21.8	110.67	1.93	1986	1985
20	27	26993	27	-46.7	-40.5	-58.3							87.19	3.93	1990	1985
15	9	29035	9	-42.5	-36.7	-49.5									1985	1988
10	2	31623	2	-45.1	-41.9	-48.3									1986	1988
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

161 498 587

117 101 1682 -76.8

### NORMALS OF RADIOSONDE DATA

42492 PATNA

SEPTEMBER 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	187	998	187	29.4	33.0	20.4	187	25.7	187	093	1.4	2.5	0.76	0.86	1988	1990
1000	170	35	38	28.9	37.0	22.4	38	25.3	37	091	1.7	2.3	4.16	1.93	1987	1986
950	170	472	170	26.9	32.4	21.8	169	22.2	156	107	2.2	5.3	16.97	0.85	1983	1986
900	170	966	170	24.1	28.8	19.0	170	19.0	156	130	2.2	6.4	3.34	0.91	1988	1985
850	170	1464	170	21.2	26.0	15.0	170	15.1	156	153	1.8	6.5	3.63	0.93	1988	1985
800	170	1988	170	18.4	28.4	10.2	169	11.8	156	174	1.6	6.6	4.24	1.11	1986	1985
750	170	2540	170	15.4	20.0	8.8	168	8.3	156	189	1.5	6.8	8.61	1.07	1988	1985
700	170	3120	170	12.4	18.2	6.0	163	4.5	156	192	1.1	6.6	5.13	1.33	1990	1986
650	167	3741	167	9.4	15.4	3.8	155	0.4	141	206	0.8	6.1	10.95	1.46	1990	1983
600	167	4400	167	6.1	12.4	-0.5	150	-3.3	135	190	0.5	6.0	12.39	1.41	1988	1986
550	164	5127	164	2.5	10.0	-4.1	137	-6.7	126	234	1.1	5.9	21.10	1.47	1988	1986
500	164	5874	164	-1.6	5.2	-8.3	130	-11.0	124	253	2.4	6.2	18.07	1.50	1988	1985
450	161	6720	160	-6.0	0.0	-14.1	106	-15.1	119	253	2.7	6.3	25.12	1.26	1990	1986
400	160	7622	159	-11.1	-4.1	-21.1	92	-20.7	116	257	3.9	6.9	25.91	1.45	1988	1986
350	157	8630	157	-17.4	-10.1	-28.1	75	-27.6	108	248	4.4	7.9	31.75	1.67	1988	1986
300	154	9777	154	-25.2	-19.1	-36.5	48	-33.6	102	236	4.6	8.5	43.06	1.70	1988	1986
250	146	11080	146	-35.1	-28.5	-46.7	22	-42.4	94	235	4.1	9.8	56.21	2.22	1988	1986
200	142	12597	142	-47.9	-39.1	-56.9	1	-53.5	87	217	3.4	9.6	71.14	2.65	1990	1986
175	137	13468	137	-55.5	-45.5	-65.1			81	209	3.6	10.1	83.23	2.78	1990	1986
150	135	14434	135	-63.7	-53.7	-72.5			79	183	2.9	10.0	94.25	2.64	1990	1986
125	118	15532	118	-71.8	-62.5	-84.1			71	145	2.9	9.3	105.35	2.57	1989	1985
100	110	16832	110	-75.9	-66.1	-86.1			68	118	6.5	9.4	111.38	1.32	1986	1985
80	91	18147	91	-71.1	-53.3	-83.9			58	106	11.0	11.7	119.61	1.99	1987	1988
70	84	18948	84	-65.8	-52.3	-75.1			51	103	10.3	11.4	113.67	1.57	1987	1988
60	77	19888	77	-60.9	-50.1	-70.5			44	097	11.2	11.7	108.33	1.68	1989	1990
50	77	21034	77	-56.2	-47.3	-67.3			44	099	13.5	13.8	105.81	1.76	1986	1987
40	62	22476	62	-52.8	-43.3	-61.3			37	107	14.3	14.6	98.73	1.77	1990	1988
30	48	24338	48	-49.0	-42.1	-58.1			28	101	14.8	15.1	124.69	2.05	1985	1987
25	31	25515	31	-47.3	-41.1	-54.3			16	098	16.0	16.3	165.10	2.05	1988	1988
20	17	27032	17	-44.3	-34.9	-49.5			8	102	15.7	16.0			1990	1988
15	6	28961	6	-43.0	-38.9	-45.7									1990	1988
10																
7																

**FREEZING LEVEL**

**1ST TROPOPAUSE**

**2ND TROPOPAUSE**

N	P	ALT	N	P	ALT	T	N	P	ALT	T
164	519	556					107	106	1656	-77.3

**NORMALS OF RADIOSONDE DATA**

42492 PATNA

OCTOBER 1983-90

1200 UTC

<i>LEVEL</i> <i>(HPA)</i>	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	217	1003	217	28.1	32.8	22.4	217	22.3	217	360	0.1	1.5	1.41	0.54	1987	1985
<i>1000</i>	200	81	174	27.8	32.4	22.6	173	21.0	171	320	0.2	1.7	9.92	0.59	1987	1990
<i>950</i>	200	514	200	24.8	30.2	13.4	198	14.6	191	304	0.8	3.5	19.35	0.58	1983	1990
<i>900</i>	200	1007	200	21.7	29.8	13.0	198	11.2	190	312	1.2	4.2	9.47	0.82	1983	1985
<i>850</i>	200	1500	200	18.5	24.8	12.0	193	7.4	191	306	1.4	4.5	8.88	0.78	1990	1983
<i>800</i>	200	2019	200	15.6	22.0	7.2	175	3.1	190	300	1.8	5.3	8.07	0.70	1989	1983
<i>750</i>	200	2561	200	12.7	23.4	5.6	149	-0.3	191	300	1.7	5.9	15.72	0.85	1987	1985
<i>700</i>	200	3140	200	9.8	18.0	-1.1	120	-3.0	191	302	2.5	6.3	10.24	1.15	1987	1985
<i>650</i>	200	3750	200	6.6	13.2	-3.9	93	-5.2	181	296	3.6	7.0	15.82	1.12	1989	1985
<i>600</i>	198	4403	198	3.0	10.0	-6.3	72	-7.8	174	288	5.4	8.1	14.43	0.97	1989	1983
<i>550</i>	197	5122	197	-0.9	6.0	-9.9	65	-10.4	167	282	7.4	9.5	22.41	1.02	1989	1985
<i>500</i>	194	5859	194	-5.2	2.0	-14.1	52	-12.7	160	278	10.1	11.7	18.67	0.96	1989	1985
<i>450</i>	192	6694	192	-9.8	-1.9	-18.1	43	-18.0	147	272	12.4	13.8	28.89	1.12	1990	1985
<i>400</i>	188	7583	188	-15.2	-7.1	-23.9	26	-22.9	142	268	15.7	16.9	23.72	1.36	1988	1987
<i>350</i>	185	8584	185	-21.3	-11.5	-31.1	21	-30.0	118	265	17.3	19.5	24.61	1.83	1989	1985
<i>300</i>	181	9706	181	-28.8	-20.3	-38.5	13	-37.5	107	261	19.7	21.6	38.15	2.19	1988	1985
<i>250</i>	175	10989	175	-38.2	-27.9	-48.7	2	-44.9	89	253	19.6	21.2	50.31	2.69	1988	1987
<i>200</i>	169	12486	169	-50.2	-39.1	-62.7			74	252	18.6	20.2	68.00	2.94	1988	1987
<i>175</i>	160	13348	160	-56.9	-46.1	-69.3			68	248	16.6	18.0	80.52	2.92	1988	1987
<i>150</i>	154	14307	154	-63.9	-55.1	-79.3			65	246	14.4	15.6	91.17	2.94	1988	1985
<i>125</i>	143	15405	143	-70.8	-61.5	-84.1			60	240	9.7	11.7	109.61	2.59	1983	1985
<i>100</i>	130	16721	130	-74.1	-66.9	-85.5			53	212	5.4	8.6	119.36	1.88	1989	1983
<i>80</i>	118	18042	118	-69.5	-55.5	-83.9			46	176	3.4	7.2	120.52	2.53	1985	1988
<i>70</i>	113	18850	113	-65.0	-51.5	-80.1			43	142	4.0	7.6	118.04	2.84	1985	1988
<i>60</i>	105	19798	105	-60.6	-50.1	-75.5			42	126	5.4	7.0	120.44	2.45	1985	1988
<i>50</i>	100	20949	100	-56.3	-46.1	-68.3			41	112	7.3	8.5	116.27	2.14	1985	1988
<i>40</i>	92	22379	92	-52.1	-40.9	-66.1			37	100	8.1	9.2	120.75	2.54	1985	1988
<i>30</i>	70	24280	70	-48.8	-42.1	-62.9			33	098	7.4	8.3	112.54	2.18	1985	1988
<i>25</i>	55	25484	55	-47.2	-41.1	-60.1			28	097	7.7	8.8	121.62	2.12	1989	1988
<i>20</i>	41	26991	41	-45.3	-38.1	-56.3			18	089	7.1	8.9	133.42	1.72	1989	1988
<i>15</i>	19	28889	19	-44.6	-38.7	-53.3			2	109	9.7	10.0			1990	1988
<i>10</i>	2	31588	2	-46.6	-45.1	-48.1									1988	1989

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
196	559	497					130	106	1642	-75.6

# NORMALS OF RADIOSONDE DATA

42492 PATNA

NOVEMBER 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	210	1007	210	24.9	29.0	19.0	209	17.2	210	298	0.2	0.5	1.13	0.48	1987	1989
<i>1000</i>	186	118	186	25.1	29.4	19.4	185	15.3	184	329	0.7	1.2	7.72	0.51	1990	1989
<i>950</i>	186	542	186	23.0	30.0	16.6	178	8.2	181	320	1.9	3.3	17.08	0.91	1990	1990
<i>900</i>	186	1035	186	19.2	27.2	12.0	177	5.4	181	308	2.3	4.0	7.80	1.09	1990	1989
<i>850</i>	186	1524	186	15.7	24.2	7.6	166	2.7	181	297	2.7	4.6	8.28	1.20	1990	1986
<i>800</i>	186	2036	186	13.4	22.0	6.2	125	-2.4	181	298	3.2	5.5	9.64	1.27	1990	1983
<i>750</i>	186	2575	186	11.3	19.8	2.2	66	-5.5	179	295	4.2	6.7	12.92	1.49	1990	1983
<i>700</i>	186	3149	186	8.6	16.8	1.8	39	-8.3	177	295	5.8	8.1	12.04	1.44	1990	1983
<i>650</i>	185	3755	185	5.5	13.2	-1.1	24	-11.1	161	294	6.9	8.7	17.79	1.36	1987	1989
<i>600</i>	185	4409	184	2.0	9.8	-10.3	18	-12.6	148	289	10.0	11.4	15.40	1.44	1987	1983
<i>550</i>	185	5115	184	-2.1	6.8	-9.9	16	-16.0	142	288	11.8	13.2	20.70	1.42	1987	1983
<i>500</i>	184	5856	183	-7.1	2.0	-14.3	11	-17.5	134	283	13.4	15.1	22.06	1.52	1987	1983
<i>450</i>	179	6682	178	-12.2	-3.7	-19.9	10	-24.7	110	282	16.8	18.2	27.95	1.47	1987	1986
<i>400</i>	178	7565	178	-18.1	-8.5	-26.3	7	-32.3	107	280	20.9	22.5	33.30	1.54	1987	1986
<i>350</i>	174	8549	174	-24.7	-15.1	-32.7	3	-35.7	88	275	26.0	27.7	33.10	1.27	1987	1986
<i>300</i>	168	9656	168	-31.9	-23.1	-40.7	4	-42.8	79	268	32.4	34.1	43.02	1.09	1986	1986
<i>250</i>	163	10921	163	-40.6	-31.3	-50.5	1	-49.3	62	259	37.1	38.5	47.11	1.58	1988	1986
<i>200</i>	158	12408	158	-50.8	-41.1	-59.7			49	259	33.8	35.1	52.13	2.28	1989	1987
<i>175</i>	149	13269	149	-56.6	-46.1	-66.1			40	262	29.8	31.0	61.94	2.55	1989	1985
<i>150</i>	143	14233	143	-62.3	-50.1	-74.3			39	263	24.6	25.4	68.58	2.63	1989	1987
<i>125</i>	127	15341	127	-67.5	-52.7	-80.1			37	265	16.0	17.1	77.76	2.75	1986	1985
<i>100</i>	116	16672	116	-71.7	-59.1	-82.1			31	262	9.6	11.6	84.02	2.31	1989	1985
<i>80</i>	100	17980	100	-70.6	-61.3	-80.3			26	212	3.0	6.3	84.72	1.50	1989	1986
<i>70</i>	94	18780	94	-67.2	-56.1	-77.1			24	192	2.5	6.8	86.22	1.59	1988	1988
<i>60</i>	91	19713	91	-62.6	-52.1	-74.1			24	155	2.3	6.5	81.19	1.75	1988	1988
<i>50</i>	85	20843	85	-57.5	-46.1	-70.5			24	123	2.9	7.2	77.01	1.94	1985	1987
<i>40</i>	79	22258	79	-52.8	-40.1	-65.7			22	109	7.4	9.4	82.69	2.37	1985	1988
<i>30</i>	62	24123	62	-49.7	-40.1	-60.1			17	103	9.5	10.5	88.58	2.32	1985	1988
<i>25</i>	48	25308	48	-48.1	-39.1	-58.9			10	116	8.6	10.2	93.29	3.06	1985	1990
<i>20</i>	33	26773	33	-46.3	-39.1	-54.1			6	117	11.9	12.3	96.41	2.62	1988	1988
<i>15</i>	10	28630	10	-44.9	-40.1	-51.1									1983	1986
<i>10</i>	1	30820	1	-46.5	-46.5	-46.5									1988	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
185	576	474	3	210	1188	-55.9	111	102	1661	-73.1

NORMALS OF RADIOSONDE DATA

42492 PATNA

DECEMBER 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
	<i>SURFACE</i>	217	1010	217	20.8	27.0	11.0	217	14.3	217	308	0.5	1.2	1.25	1.15	1990
<i>1000</i>	147	139	147	21.4	26.4	14.2	147	12.1	142	317	1.0	2.2	15.06	0.90	1988	1986
<i>950</i>	147	559	147	18.9	25.0	13.4	145	6.4	141	306	2.0	3.9	24.61	1.54	1985	1987
<i>900</i>	147	1044	147	15.5	26.0	10.0	138	2.6	141	297	2.9	4.8	17.35	1.84	1990	1987
<i>850</i>	147	1527	147	13.2	26.6	7.2	115	-2.3	142	292	3.6	5.5	20.48	1.88	1990	1986
<i>800</i>	147	2036	147	11.2	26.8	5.4	76	-5.2	141	289	4.5	6.6	21.95	1.74	1990	1983
<i>750</i>	147	2571	147	9.0	25.0	-1.5	49	-7.8	140	294	6.0	8.0	18.60	3.69	1990	1986
<i>700</i>	147	3140	147	6.6	20.4	-2.3	35	-9.5	141	295	7.9	9.4	25.33	1.43	1990	1986
<i>650</i>	147	3742	147	3.6	14.6	-5.7	31	-13.5	138	293	10.1	11.3	30.32	3.69	1990	1986
<i>600</i>	145	4392	145	-0.2	9.0	-9.7	22	-16.2	136	291	12.1	13.4	27.31	1.41	1990	1986
<i>550</i>	143	5087	143	-4.7	4.8	-14.1	18	-19.6	132	287	14.1	15.6	27.16	1.36	1987	1986
<i>500</i>	141	5825	141	-9.7	0.4	-17.9	16	-23.3	130	286	16.8	18.9	30.18	1.15	1990	1986
<i>450</i>	141	6636	141	-15.1	-5.5	-23.1	18	-27.1	123	281	21.5	23.0	37.98	1.46	1990	1985
<i>400</i>	138	7512	138	-21.3	-12.1	-30.1	16	-33.1	112	282	25.1	27.0	40.11	1.35	1990	1988
<i>350</i>	135	8482	135	-28.3	-19.1	-35.9	8	-37.3	101	279	28.9	31.0	38.97	1.48	1987	1988
<i>300</i>	130	9573	130	-36.1	-24.5	-44.3	6	-44.9	87	277	32.9	36.1	53.18	1.62	1987	1985
<i>250</i>	127	10818	127	-45.0	-34.1	-52.7			60	274	34.2	37.2	60.10	2.25	1990	1985
<i>200</i>	122	12282	122	-54.0	-46.1	-64.1			39	274	32.4	35.1	75.88	2.99	1988	1985
<i>175</i>	118	13135	118	-58.1	-49.3	-67.1			29	273	28.4	31.4	87.41	3.17	1986	1988
<i>150</i>	111	14099	111	-62.6	-53.3	-74.1			21	275	25.9	26.7	103.46	3.81	1986	1988
<i>125</i>	100	15203	100	-67.2	-56.9	-81.7			15	266	19.7	21.0	117.48	4.44	1989	1988
<i>100</i>	92	16529	92	-71.4	-59.9	-80.1			15	267	13.2	15.6	139.37	4.84	1986	1985
<i>80</i>	87	17845	87	-70.0	-58.7	-81.5			13	271	8.8	12.1	161.49	4.09	1986	1987
<i>70</i>	83	18647	83	-66.8	-55.9	-79.9			12	242	4.1	9.8	171.13	4.69	1986	1987
<i>60</i>	78	19588	78	-62.5	-52.7	-75.5			11	238	5.4	8.4	179.05	4.04	1986	1987
<i>50</i>	71	20732	71	-57.8	-50.9	-69.5			10	231	4.5	8.5	182.53	3.42	1988	1987
<i>40</i>	63	22149	63	-53.4	-44.1	-60.7			8	116	4.7	9.6	74.39	2.33	1985	1990
<i>30</i>	39	24019	39	-50.2	-41.1	-56.1			6	117	7.6	11.8	97.63	2.57	1988	1985
<i>25</i>	21	25198	21	-48.8	-42.7	-54.5			6	116	10.6	12.6	141.26	2.68	1988	1985
<i>20</i>	10	26719	10	-47.8	-41.1	-52.5			2	117	21.9	22.0			1988	1985
<i>15</i>	4	28554	4	-45.8	-45.1	-47.1									1988	1990
<i>10</i>	3	31284	3	-44.7	-41.5	-48.1									1988	1985
<i>7</i>																

FREEZING LEVEL

1ST TROPOPAUSE

2ND TROPOPAUSE

N P ALT

N P ALT T

N P ALT T

145 606 433

20 207 1200 -56.8

88 102 1647 -72.8

NORMALS OF RADIOSONDE DATA

42779 PENDRA

JANUARY 1980-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	213	943	213	21.9	27.6	13.8	213	9.1	212	338	0.2	1.0	1.00	1.00	1980	1986
1000	190	122											10.16			
950	182	534											15.28			
900	182	1034	182	18.7	27.2	12.2	179	5.3	175	332	1.4	4.4	7.52	1.08	1980	1986
850	182	1520	182	14.9	24.0	9.2	174	2.0	175	293	2.8	4.7	6.02	0.95	1980	1986
800	182	2030	182	11.4	20.0	7.0	161	-0.5	175	289	4.4	5.8	5.53	0.81	1980	1987
750	182	2557	180	8.3	17.4	2.4	124	-2.9	175	287	6.8	8.2	5.78	0.78	1988	1986
700	182	3132	180	5.6	17.0	-2.7	93	-5.8	174	284	9.4	10.8	3.09	1.09	1988	1988
650	179	3720	179	2.8	15.2	-5.1	69	-9.6	168	282	11.2	12.5	11.45	1.30	1988	1983
600	177	4379	176	-0.4	11.0	-7.9	51	-14.4	165	277	13.5	14.9	6.96	1.37	1988	1987
550	176	5078	175	-4.0	6.6	-10.5	33	-18.0	159	275	16.8	18.3	11.39	1.55	1987	1982
500	173	5817	171	-8.4	0.0	-17.3	25	-22.5	153	274	20.2	21.7	12.99	1.66	1988	1987
450	168	6621	166	-13.5	-4.5	-23.3	16	-26.4	141	273	23.1	24.9	21.25	1.89	1988	1980
400	162	7513	160	-19.3	-9.9	-30.9	15	-33.6	133	273	27.4	29.4	22.51	2.07	1989	1980
350	159	8491	158	-25.4	-13.9	-39.1	9	-37.8	130	275	32.3	34.4	27.47	2.03	1986	1980
300	149	9600	149	-32.4	-22.3	-47.1	3	-44.9	119	274	34.9	37.2	42.28	2.08	1986	1980
250	141	10868	141	-41.1	-32.1	-50.9			106	265	35.8	38.2	48.30	1.83	1989	1982
200	121	12353	121	-51.3	-43.1	-60.5			82	261	36.0	38.3	55.78	1.85	1989	1986
175	106	13211	106	-56.6	-50.1	-65.5			69	261	33.5	36.1	59.62	1.35	1982	1988
150	84	14170	84	-62.1	-55.1	-70.3			53	261	34.1	36.3	85.08	1.59	1983	1986
125	72	15288	72	-67.4	-54.7	-76.1			42	264	29.3	30.8	89.99	1.31	1983	1986
100	60	16599	60	-71.9	-61.5	-79.1			36	264	27.1	30.4	89.90	1.92	1983	1986
80	52	17924	52	-72.1	-64.7	-84.5			33	273	15.2	18.1	91.78	1.21	1983	1983
70	47	18730	47	-69.7	-62.3	-80.7			30	273	13.5	17.8	99.20	1.76	1983	1983
60	44	19646	44	-65.5	-56.7	-73.5			22	284	10.7	15.5	96.54	2.92	1989	1982
50	41	20754	41	-59.7	-50.1	-67.9			19	281	7.1	12.5	128.29	2.61	1988	1982
40	34	22167	34	-55.5	-44.9	-62.5			16	276	5.3	13.6	127.44	2.79	1988	1982
30	23	24064	23	-51.4	-44.3	-58.3			10	275	1.6	7.6	119.72	2.36	1988	1983
25	18	25215	18	-50.1	-42.7	-56.3			9	088	1.7	6.0			1988	1983
20	15	26701	15	-48.8	-43.5	-53.5			7	082	4.4	6.7			1989	1983
15	6	28603	6	-46.7	-43.1	-51.5			4	233	1.6	7.7			1989	1986
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
178	610	426					50	099	1672	-73.4

# NORMALS OF RADIOSONDE DATA

42779 PENDRA

FEBRUARY 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i><b>SURFACE</b></i>	220	942	220	24.5	33.0	14.8	219	8.8	220	321	0.4	1.3	1.06	1.69	1989	1983
<i>1000</i>	205	101											11.36			
<i>950</i>	205	521											13.91			
<i>900</i>	205	1022	205	21.2	32.0	13.0	197	5.4	197	315	1.9	5.3	8.91	1.72	1989	1983
<i>850</i>	205	1512	205	17.2	26.6	9.2	195	2.8	197	284	3.1	5.1	9.71	1.74	1989	1983
<i>800</i>	205	2026	205	13.2	22.2	5.6	189	1.1	196	271	4.9	6.1	9.87	1.60	1983	1983
<i>750</i>	205	2552	203	9.4	23.0	1.2	183	-1.5	192	271	7.2	8.5	14.36	1.63	1990	1983
<i>700</i>	205	3133	203	5.8	20.4	-0.7	168	-5.9	192	274	9.5	10.7	13.62	1.52	1990	1986
<i>650</i>	202	3717	200	2.1	11.6	-4.7	133	-9.6	187	278	11.4	12.9	20.28	1.59	1990	1988
<i>600</i>	201	4377	200	-1.2	8.2	-7.7	104	-14.0	186	280	14.7	16.1	18.11	1.52	1989	1982
<i>550</i>	199	5075	198	-5.0	3.8	-13.7	73	-18.7	183	277	17.7	19.3	26.52	1.56	1989	1982
<i>500</i>	197	5810	197	-9.4	-0.3	-17.9	53	-23.0	183	274	20.3	22.0	25.50	1.81	1989	1987
<i>450</i>	195	6615	195	-14.4	-3.7	-22.7	40	-28.2	175	273	23.6	25.1	37.85	1.98	1989	1987
<i>400</i>	192	7498	191	-20.1	-4.9	-27.9	30	-33.0	170	273	26.8	28.7	35.26	2.12	1990	1980
<i>350</i>	185	8482	184	-26.1	-11.1	-35.7	18	-38.0	162	273	30.5	32.8	45.32	2.11	1990	1986
<i>300</i>	178	9581	178	-32.4	-18.5	-42.9	8	-43.0	151	271	34.1	36.3	54.92	2.65	1990	1982
<i>250</i>	163	10841	163	-40.7	-24.9	-54.3	1	-50.1	125	268	38.3	41.4	69.25	3.07	1990	1982
<i>200</i>	141	12329	141	-50.6	-39.9	-61.1			98	266	38.7	41.1	85.86	3.26	1990	1982
<i>175</i>	118	13187	118	-55.8	-43.5	-65.9			76	272	38.3	41.3	91.48	3.69	1990	1982
<i>150</i>	94	14176	94	-60.5	-47.5	-69.9			60	272	34.5	37.3	117.54	4.26	1990	1988
<i>125</i>	67	15307	67	-66.0	-56.3	-77.5			43	269	31.4	34.6	119.01	3.39	1983	1988
<i>100</i>	52	16639	52	-70.6	-54.1	-84.1			32	271	27.0	33.0	136.27	2.53	1983	1982
<i>80</i>	42	17997	41	-69.7	-59.5	-79.5			22	271	26.4	28.1	135.26	1.64	1982	1988
<i>70</i>	40	18824	39	-66.9	-53.5	-77.1			20	269	22.7	26.7	134.38	3.55	1989	1988
<i>60</i>	38	19768	38	-62.2	-51.1	-74.5			18	278	12.6	19.8	118.33	2.75	1989	1988
<i>50</i>	36	20905	36	-57.9	-48.5	-67.9			17	271	11.7	19.3	115.45	2.81	1989	1988
<i>40</i>	29	22331	29	-53.5	-46.3	-62.1			13	267	8.7	18.2	166.64	2.60	1989	1988
<i>30</i>	21	24219	21	-50.3	-45.3	-55.5			8	264	4.3	12.4	168.66	2.19	1983	1988
<i>25</i>	18	25413	18	-48.4	-44.1	-53.1			7	288	9.3	19.7			1989	1988
<i>20</i>	13	26905	13	-46.9	-41.1	-52.1			5	055	3.8	14.6			1989	1988
<i>15</i>	10	28788	10	-45.7	-40.9	-51.1			4	078	7.2	23.3			1983	1988
<i>10</i>	5	31476	5	-43.3	-37.9	-49.1			2	274	24.2	25.0			1983	1988
<i>7</i>	3	33693	3	-44.0	-41.7	-48.1			2	306	16.5	16.5			1986	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
200	618	414	1	113	1390	-65.9	39	094	1708	-72.4

**NORMALS OF RADIOSONDE DATA**

42779 PENDRA

MARCH 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	278	939	278	28.9	35.6	17.0	278	8.3	278	321	0.9	2.1	0.58	0.92	1986	1981
1000	253	69											6.47			
950	252	499											5.57			
900	252	1004	251	25.7	37.4	13.6	244	5.1	246	317	3.1	5.9	4.98	0.98	1990	1986
850	252	1503	251	21.7	37.8	8.0	239	3.0	246	298	4.3	6.2	5.21	0.99	1990	1986
800	252	2024	252	17.2	31.4	7.4	237	1.4	247	285	5.0	6.6	5.81	1.13	1990	1986
750	252	2552	252	12.5	26.2	3.2	237	-1.0	247	276	6.5	7.7	14.75	1.17	1990	1986
700	252	3142	252	7.8	20.2	-1.9	218	-3.6	246	273	8.4	9.8	9.63	1.11	1990	1990
650	247	3727	247	3.4	13.2	-4.7	189	-6.5	242	275	11.1	12.5	18.50	1.21	1990	1989
600	244	4392	243	-0.4	10.2	-10.1	158	-11.2	240	277	13.3	14.7	13.77	1.31	1988	1989
550	244	5087	243	-4.2	6.0	-15.5	117	-16.3	238	277	15.5	17.0	19.32	1.48	1988	1989
500	244	5828	243	-8.6	4.6	-19.7	81	-20.8	235	277	17.2	19.0	20.21	1.87	1988	1989
450	240	6634	238	-13.6	0.4	-23.9	64	-25.4	229	275	20.5	22.4	30.90	2.17	1988	1987
400	238	7524	237	-19.2	-6.9	-33.1	48	-30.9	224	275	23.1	25.3	33.99	2.58	1988	1987
350	234	8511	233	-25.3	-11.7	-37.1	31	-36.4	208	275	26.3	28.9	39.75	2.62	1990	1987
300	228	9613	228	-32.1	-16.9	-44.9	14	-43.1	192	273	30.1	33.3	54.24	2.65	1990	1989
250	216	10877	215	-40.3	-24.9	-51.3	8	-51.1	165	272	33.8	37.5	65.10	2.30	1990	1981
200	185	12366	184	-49.9	-38.3	-60.5			126	275	34.5	38.0	77.26	2.37	1990	1983
175	160	13215	160	-55.5	-41.5	-71.1			102	276	35.0	38.1	83.65	2.73	1990	1983
150	133	14168	133	-60.9	-45.5	-74.3			81	279	35.3	37.7	85.62	2.98	1990	1983
125	108	15267	107	-66.9	-57.1	-77.1			64	277	30.1	32.1	93.64	3.01	1980	1982
100	91	16603	91	-69.8	-61.3	-79.1			53	278	23.7	26.1	100.16	1.94	1980	1983
80	74	17935	74	-69.1	-53.5	-77.3			35	271	18.2	21.9	115.58	1.53	1986	1981
70	69	18756	69	-66.7	-49.9	-75.1			29	267	13.0	21.0	155.48	2.30	1986	1983
60	64	19674	64	-62.5	-47.5	-74.5			22	261	7.2	17.2	130.22	4.20	1986	1983
50	60	20802	60	-57.3	-44.1	-75.5			15	280	3.1	12.2	90.75	6.83	1986	1980
40	54	22232	54	-52.3	-41.1	-64.1			10	077	5.2	15.6	63.42	3.20	1986	1987
30	46	24116	46	-47.6	-37.7	-58.9			8	279	9.4	14.4	70.06	2.87	1981	1987
25	36	25287	36	-45.7	-38.1	-56.1			8	283	9.6	13.3	129.53	3.48	1986	1987
20	17	26792	17	-43.7	-37.1	-52.5			5	285	13.8	15.2			1986	1989
15	13	28750	13	-40.8	-34.7	-49.5			4	277	17.5	20.0			1990	1989
10	7	31585	7	-39.0	-32.1	-44.7			3	262	28.6	30.7			1986	1989
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

244 603 435

75 103 1643 -72.1



NORMALS OF RADIOSONDE DATA

42779 PENDRA

APRIL 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	265	936	265	34.4	40.6	20.4	265	7.1	265	323	1.2	2.4	1.14	1.90	1980	1986
1000	208	27											11.47			
950	208	462											13.48			
900	208	977	208	31.2	37.8	18.8	202	4.2	207	316	3.7	6.4	8.06	2.16	1980	1983
850	208	1483	208	26.7	34.8	16.0	201	1.4	207	305	4.7	6.7	6.83	2.10	1988	1988
800	208	2014	207	22.1	30.0	12.4	200	0.0	207	296	5.0	6.6	7.48	1.98	1988	1988
750	208	2548	207	17.1	25.6	8.4	201	-1.4	207	287	6.0	7.2	14.09	1.89	1989	1988
700	208	3150	208	11.7	20.8	3.8	202	-3.2	207	281	7.0	8.3	12.82	1.82	1989	1988
650	206	3733	205	6.4	17.0	-1.5	190	-5.1	204	276	8.2	9.4	23.52	1.72	1988	1988
600	200	4411	200	1.2	9.2	-5.7	176	-8.4	198	275	9.7	10.9	18.14	1.47	1982	1982
550	198	5103	198	-3.4	4.6	-10.1	140	-12.2	197	277	11.8	13.0	27.29	1.58	1982	1982
500	191	5852	191	-7.8	1.8	-14.5	103	-18.4	186	280	13.9	15.3	21.37	2.12	1981	1982
450	189	6658	188	-12.3	-2.3	-19.3	69	-23.7	181	280	16.4	17.8	31.57	1.79	1985	1982
400	186	7556	184	-18.1	-8.9	-26.1	48	-28.2	176	276	19.1	21.0	31.88	2.00	1989	1986
350	182	8544	181	-24.5	-14.5	-33.7	34	-34.2	165	275	21.4	23.7	38.03	2.09	1989	1986
300	178	9649	177	-31.8	-20.1	-42.5	19	-40.8	153	273	25.1	28.3	44.68	2.55	1983	1986
250	167	10913	165	-40.5	-27.9	-50.1	6	-45.8	128	265	28.3	32.5	57.23	2.76	1989	1988
200	139	12387	139	-50.5	-41.5	-59.5			102	262	29.8	32.7	78.06	2.05	1987	1987
175	118	13249	118	-55.2	-47.1	-63.3			79	263	29.3	32.5	76.70	1.07	1987	1987
150	97	14221	97	-60.4	-49.9	-67.9			65	262	26.9	29.4	77.05	1.20	1988	1983
125	68	15340	68	-65.8	-57.1	-72.1			39	272	22.6	26.0	99.73	1.86	1988	1986
100	50	16665	50	-71.1	-60.9	-78.1			26	280	17.3	22.4	109.89	2.13	1987	1982
80	40	17963	40	-71.8	-60.5	-80.1			14	036	2.6	17.0	103.92	2.36	1987	1981
70	39	18773	39	-69.0	-60.1	-78.5			13	047	5.7	13.2	115.11	2.37	1982	1982
60	36	19683	36	-64.1	-51.1	-75.1			10	301	4.2	14.0	107.84	2.87	1986	1988
50	33	20824	33	-56.6	-44.5	-65.5			9	360	2.2	9.2	116.72	2.57	1986	1982
40	29	22274	29	-51.3	-40.7	-60.5			7	248	3.4	11.9	103.21	3.13	1986	1982
30	25	24167	25	-46.4	-35.1	-54.5			7	117	4.1	9.1	149.98	3.54	1986	1980
25	18	25307	18	-44.5	-35.1	-51.1			5	104	6.6	7.4			1989	1987
20	14	26849	14	-41.8	-34.3	-47.1			5	075	8.0	8.6			1987	1987
15	5	28815	5	-38.9	-35.1	-41.3			2	087	7.8	8.0			1982	1989
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
172	588	458					40	096	1698	-73.3

NORMALS OF RADIOSONDE DATA

42779 PENDRA

MAY 1980-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	296	933	296	35.2	42.6	17.0	296	11.6	296	335	0.9	1.9	1.73	2.57	1989	1987
1000	241	2											19.73			
950	241	441											17.21			
900	241	956	241	32.1	41.2	17.6	238	9.1	236	323	3.0	5.9	13.96	2.23	1988	1987
850	241	1465	241	28.0	38.8	15.2	237	6.4	236	319	4.0	6.1	11.50	2.07	1988	1987
800	241	1997	241	23.5	34.6	11.4	237	4.4	236	314	4.7	6.5	10.27	1.94	1988	1987
750	241	2532	241	18.8	30.4	7.2	235	3.0	235	311	5.1	6.9	9.23	2.02	1988	1987
700	241	3139	240	13.7	25.0	3.0	234	1.3	231	305	5.5	7.4	10.21	2.10	1988	1987
650	236	3728	235	8.3	19.6	-1.5	230	-1.7	221	297	6.1	8.2	17.94	2.08	1988	1987
600	234	4411	234	3.1	14.0	-4.9	223	-5.0	215	294	7.3	9.1	14.70	1.85	1990	1986
550	233	5111	233	-1.4	8.6	-12.1	201	-9.2	203	290	8.3	9.8	20.48	1.90	1990	1990
500	230	5863	230	-5.5	4.4	-18.7	162	-13.9	199	288	9.3	11.0	22.34	1.85	1990	1990
450	225	6680	225	-9.4	0.8	-23.5	121	-18.9	191	284	10.6	12.8	31.45	2.07	1990	1990
400	221	7586	221	-14.4	-3.3	-25.5	69	-22.8	185	277	11.8	14.1	34.14	2.35	1990	1990
350	214	8587	214	-20.3	-7.9	-29.5	48	-28.6	176	269	13.8	15.9	39.10	2.52	1990	1987
300	202	9717	201	-27.3	-15.5	-37.9	32	-36.5	162	259	16.0	18.0	56.98	2.53	1990	1985
250	188	11007	188	-36.1	-25.1	-47.5	9	-42.0	143	254	18.8	20.7	70.67	2.49	1990	1985
200	162	12521	162	-46.9	-38.9	-59.1			124	247	20.4	22.2	77.53	2.00	1990	1990
175	139	13386	139	-53.0	-43.5	-65.5			103	248	19.4	22.0	81.95	1.86	1987	1987
150	113	14377	113	-59.0	-48.1	-71.9			83	246	17.9	20.8	87.96	2.18	1987	1986
125	82	15497	82	-64.9	-53.5	-78.7			60	251	13.1	16.8	118.72	2.94	1987	1986
100	63	16833	63	-70.7	-61.3	-82.1			43	243	5.8	13.6	129.72	2.79	1983	1986
80	49	18134	49	-71.6	-61.9	-82.1			28	151	2.6	9.5	137.25	2.96	1987	1986
70	42	18918	42	-68.7	-58.9	-76.3			21	105	6.0	9.0	167.10	3.25	1982	1986
60	37	19866	37	-64.1	-53.3	-71.3			20	106	8.5	9.7	127.08	4.54	1982	1982
50	36	20996	36	-57.7	-48.1	-71.1			19	100	8.7	10.2	152.95	5.60	1987	1982
40	34	22409	34	-52.6	-45.1	-69.1			17	089	8.7	9.2	116.25	4.63	1987	1982
30	30	24318	30	-46.6	-39.1	-60.1			14	094	8.4	9.5	107.16	4.52	1982	1983
25	23	25499	23	-44.4	-38.1	-58.3			13	097	8.1	9.8	114.26	4.36	1987	1983
20	18	27021	18	-41.5	-35.1	-51.1			11	075	5.4	9.3			1987	1990
15	11	29026	11	-39.1	-33.5	-49.1			8	079	7.5	13.3			1989	1990
10	7	31740	7	-37.7	-34.9	-46.5			3	050	15.5	18.6			1989	1990
7	1	34218	1	-33.1	-33.1	-33.1			1	030	40.0	40.0			1989	1989

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

233 564 491

46 094 1716 -73.2

NORMALS OF RADIOSONDE DATA

42779 PENDRA

JUNE 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	274	930	274	31.2	40.6	22.0	274	19.0	274	321	0.6	2.1	1.04	1.95	1987	1987
1000	222	-24											8.39			
950	222	410											10.02			
900	222	919	222	28.8	38.2	20.0	222	17.0	185	320	2.7	5.7	10.01	1.95	1990	1987
850	222	1425	222	25.3	34.4	15.2	222	14.1	184	318	4.0	6.3	11.81	1.76	1990	1986
800	222	1953	222	21.5	30.2	13.0	222	12.0	185	326	4.8	6.7	13.30	1.60	1983	1986
750	222	2501	220	17.4	26.0	8.8	219	9.5	181	331	5.2	7.2	11.67	1.51	1983	1989
700	222	3093	220	13.3	22.4	6.0	217	6.6	179	329	5.1	7.3	16.12	1.39	1988	1989
650	217	3696	215	9.1	19.0	1.6	211	2.6	158	325	5.4	7.5	15.40	1.43	1988	1982
600	215	4370	213	5.1	15.2	-2.9	205	-1.0	151	319	5.2	7.4	19.60	1.71	1988	1987
550	209	5091	206	1.4	12.0	-7.9	185	-4.8	144	312	4.5	7.3	23.55	1.77	1989	1987
500	205	5839	204	-2.3	8.8	-13.9	175	-8.8	137	307	3.9	6.8	23.35	1.72	1989	1988
450	201	6675	200	-5.7	7.8	-14.7	152	-14.0	125	304	2.5	6.9	31.67	1.59	1989	1982
400	195	7582	195	-10.8	-1.5	-19.5	122	-18.9	119	296	2.7	6.7	26.95	1.53	1989	1982
350	189	8600	189	-16.6	-7.7	-26.5	98	-24.2	108	283	1.7	6.8	34.82	1.59	1990	1987
300	176	9745	176	-24.0	-12.7	-34.9	68	-30.9	100	165	0.5	7.4	42.51	1.65	1990	1987
250	164	11052	164	-33.6	-25.1	-46.9	39	-39.4	91	138	2.4	8.8	50.28	1.78	1990	1989
200	139	12576	139	-45.9	-38.5	-60.3	5	-50.4	72	131	6.3	10.8	57.77	2.00	1988	1989
175	120	13451	120	-53.2	-45.3	-67.1			66	116	7.6	12.1	65.99	2.17	1989	1987
150	97	14435	97	-60.8	-52.1	-72.1			54	108	10.2	13.4	77.77	2.79	1989	1982
125	63	15543	63	-69.0	-61.1	-81.1			36	096	10.4	12.2	108.31	2.73	1989	1986
100	41	16845	41	-75.0	-69.5	-82.9			29	089	15.0	16.6	105.08	2.64	1988	1982
80	34	18133	34	-72.9	-59.9	-83.5			27	092	17.7	18.4	124.75	3.93	1990	1982
70	33	18948	33	-67.6	-53.9	-76.5			27	096	16.7	17.6	140.54	3.94	1990	1982
60	32	19868	32	-60.7	-49.3	-70.1			26	096	17.2	18.4	142.20	2.90	1982	1981
50	28	21004	28	-55.5	-46.5	-63.7			23	089	17.9	18.5	151.86	1.54	1982	1981
40	23	22464	23	-52.0	-46.1	-59.3			18	089	15.0	15.9	167.65	2.87	1982	1982
30	15	24320	15	-47.6	-42.5	-51.1			13	092	19.5	20.4			1989	1988
25	13	25534	13	-45.1	-39.1	-49.1			11	076	18.2	18.9			1989	1988
20	6	27116	6	-41.9	-36.1	-45.1			4	074	22.7	23.8			1989	1986
15	3	28895	3	-41.5	-40.5	-42.3			1	050	17.0	17.0			1982	1988
10	1	31876	1	-36.1	-36.1	-36.1									1982	1982

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

207 531 538

38 098 1695 -76.6

### NORMALS OF RADIOSONDE DATA

42779 PENDRA

JULY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	300	931	300	27.1	36.0	21.4	300	23.0	300	236	0.6	1.5	0.95	1.01	1982	1985
1000	269	-10											15.46			
950	269	410											11.01			
900	269	923	269	25.1	33.2	15.2	269	20.8	220	259	2.0	4.8	7.50	1.05	1982	1989
850	269	1423	269	21.9	29.0	12.8	269	17.8	220	283	2.7	5.8	14.84	0.94	1982	1989
800	269	1947	269	18.8	28.2	11.0	269	15.1	221	298	3.0	6.4	15.40	1.02	1987	1990
750	269	2499	269	15.6	23.2	6.6	266	11.9	214	298	2.6	6.3	7.47	1.06	1980	1990
700	269	3080	269	12.5	19.6	3.0	265	8.9	213	301	2.2	6.2	16.82	1.19	1980	1990
650	264	3691	264	9.4	16.0	0.2	259	5.0	193	294	2.0	6.2	21.81	1.18	1980	1990
600	260	4360	259	6.2	13.2	-2.7	257	1.0	175	302	1.6	5.6	20.61	1.41	1988	1982
550	257	5089	256	2.7	8.2	-7.9	251	-3.1	165	002	0.6	5.5	20.01	1.19	1982	1982
500	253	5834	253	-1.0	5.2	-11.7	243	-7.3	154	060	0.7	5.2	24.02	1.31	1982	1982
450	247	6673	246	-5.2	1.8	-12.9	226	-12.1	142	084	1.9	5.3	29.35	1.62	1982	1982
400	244	7586	242	-10.1	-2.7	-18.3	206	-17.6	137	087	3.3	6.0	31.71	1.61	1982	1985
350	237	8604	236	-16.2	-7.9	-24.9	175	-23.8	129	089	5.4	7.1	34.11	1.72	1982	1985
300	228	9751	227	-23.6	-14.1	-32.5	139	-31.5	119	092	8.2	9.2	45.88	1.81	1988	1985
250	201	11058	201	-33.0	-23.9	-41.3	63	-40.0	105	092	12.6	13.4	53.57	1.90	1988	1985
200	166	12587	166	-45.4	-39.1	-56.5	10	-50.4	96	088	16.2	17.4	64.54	2.20	1988	1982
175	156	13469	156	-52.8	-46.1	-65.3	4	-53.2	93	087	17.4	18.8	70.73	2.22	1986	1983
150	134	14438	134	-61.0	-54.1	-76.7			84	084	20.6	21.8	77.57	2.50	1988	1983
125	99	15550	99	-69.4	-60.1	-80.5			60	086	21.9	24.0	93.36	3.06	1980	1987
100	66	16871	66	-75.0	-67.1	-83.9			43	086	22.8	23.8	134.80	3.35	1989	1980
80	45	18180	45	-71.6	-62.9	-82.1			34	089	22.0	22.5	143.81	3.87	1983	1982
70	40	18979	40	-67.0	-57.1	-76.1			31	091	21.6	22.3	157.03	3.47	1986	1982
60	37	19892	37	-60.7	-52.5	-71.3			28	092	18.7	19.3	121.13	3.25	1982	1988
50	35	21051	35	-55.4	-45.7	-65.5			26	089	19.3	19.7	122.42	2.85	1982	1987
40	25	22509	25	-50.4	-43.1	-57.9			18	093	20.8	23.4	118.62	3.80	1986	1988
30	21	24416	21	-45.6	-39.1	-51.9			14	091	19.6	20.3	139.43	3.60	1986	1982
25	15	25582	15	-44.4	-38.5	-49.1			11	088	22.1	22.9			1982	1988
20	9	27188	9	-42.0	-37.7	-46.1			6	094	26.1	27.0			1989	1988
15	6	29118	6	-40.5	-35.5	-42.5			3	077	23.0	23.3			1989	1982
10	3	31840	3	-41.7	-37.3	-47.5			2	082	30.3	30.5			1988	1982

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

254 514 563

48 104 1667 -76.8

### NORMALS OF RADIOSONDE DATA

42779 PENDRA

AUGUST 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	336	931	336	26.7	32.4	22.2	336	23.1	336	295	0.4	1.6	0.90	0.69	1988	1979
1000	298	-6											8.75			
950	298	415											11.75			
900	298	925	298	24.7	32.0	17.2	298	21.4	217	274	1.1	5.2	9.63	0.85	1989	1985
850	298	1424	298	21.5	28.8	11.4	298	18.5	220	310	1.3	6.1	9.34	1.03	1989	1985
800	298	1946	298	18.4	26.8	8.8	297	15.5	219	321	1.5	6.4	9.62	1.20	1990	1985
750	298	2498	298	15.5	23.6	6.2	297	12.5	212	348	1.2	6.1	7.66	1.17	1989	1985
700	298	3079	298	12.6	21.8	3.4	298	8.8	209	358	1.1	6.4	11.67	1.26	1990	1987
650	293	3692	292	9.6	17.4	0.2	292	4.7	195	053	1.0	6.4	14.72	1.27	1989	1987
600	291	4358	290	6.5	15.4	-3.7	288	0.5	179	064	1.4	6.2	16.12	1.40	1989	1987
550	282	5084	280	3.0	11.4	-7.1	274	-3.8	165	085	2.3	6.2	20.26	1.36	1989	1987
500	275	5835	272	-0.7	6.6	-10.3	257	-8.1	157	096	2.7	6.2	22.97	1.40	1989	1987
450	269	6672	266	-5.0	5.4	-14.5	235	-12.4	149	086	3.7	6.8	27.24	1.61	1980	1987
400	263	7588	260	-10.0	-1.9	-20.1	215	-18.4	142	083	4.5	6.6	30.79	1.39	1990	1987
350	252	8605	252	-16.0	-3.9	-25.7	177	-24.6	129	084	6.0	7.7	37.20	1.68	1990	1987
300	235	9756	235	-23.4	-15.3	-32.5	118	-31.4	123	085	7.4	8.5	43.44	1.80	1989	1985
250	218	11064	218	-32.9	-25.7	-42.1	60	-39.7	105	091	9.9	10.9	52.04	1.96	1989	1985
200	189	12598	189	-45.2	-37.9	-55.9	9	-48.7	90	084	12.6	13.9	70.04	2.24	1988	1985
175	168	13482	168	-52.3	-44.1	-61.9	6	-55.6	85	077	13.4	15.0	74.69	2.41	1988	1979
150	144	14454	144	-60.5	-51.1	-70.9			72	073	14.8	17.1	83.30	2.80	1989	1979
125	98	15559	98	-68.9	-57.1	-78.5			51	073	18.3	19.3	113.09	3.38	1990	1979
100	73	16877	73	-73.6	-57.1	-83.5			40	081	24.3	25.3	123.69	3.35	1980	1981
80	52	18193	52	-70.4	-59.3	-82.3			30	085	21.3	21.8	137.51	3.54	1981	1979
70	39	18988	39	-65.2	-51.1	-76.1			23	087	20.7	21.2	145.60	3.93	1981	1979
60	33	19928	33	-59.6	-50.9	-69.1			19	089	20.1	20.6	177.57	3.80	1981	1982
50	30	21082	30	-55.1	-45.5	-64.1			17	087	14.4	15.3	189.02	3.80	1981	1982
40	23	22514	23	-51.9	-42.5	-59.1			14	087	17.6	18.9	226.14	2.41	1981	1982
30	14	24440	14	-46.7	-39.1	-52.9			11	091	21.7	22.8			1981	1982
25	11	25563	11	-45.2	-37.9	-51.3			10	088	20.5	22.0			1982	1982
20	8	27020	8	-45.8	-42.1	-49.5			8	088	21.1	21.6			1982	1982
15	4	29025	4	-43.5	-39.7	-47.5			4	078	31.2	31.5			1983	1983
10	1	31630	1	-42.5	-42.5	-42.5			1	089	27.9	28.0			1982	1982
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
274	509	568					52	104	1660	-75.8

NORMALS OF RADIOSONDE DATA

42779 PENDRA

SEPTEMBER 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	296	935	296	26.7	31.6	21.4	296	22.0	296	002	0.3	1.2	0.90	0.61	1979	1986
1000	272	28											7.85			
950	271	451											18.25			
900	271	959	271	24.5	31.0	14.0	270	19.7	234	345	1.8	4.6	8.16	0.59	1988	1988
850	271	1457	271	21.1	29.4	11.8	270	16.5	235	337	2.4	5.3	8.61	1.02	1990	1987
800	271	1979	271	17.8	26.4	9.2	268	13.1	235	339	2.6	5.6	8.97	1.25	1986	1988
750	271	2525	270	14.5	23.2	4.4	264	9.2	233	338	2.4	5.5	11.43	1.44	1990	1987
700	271	3107	270	11.3	19.8	1.8	260	5.4	233	331	2.0	5.5	11.01	1.60	1990	1987
650	266	3714	265	8.0	17.2	-0.7	254	1.6	218	302	1.5	5.3	19.78	1.72	1990	1987
600	265	4377	264	4.9	13.2	-5.5	242	-1.5	210	286	1.3	5.3	16.49	1.61	1990	1982
550	263	5100	263	1.5	9.4	-7.3	228	-5.3	205	263	1.3	5.6	25.07	1.63	1990	1987
500	261	5845	261	-2.3	5.4	-12.9	216	-9.8	201	257	0.9	5.5	24.59	1.55	1990	1986
450	257	6677	257	-6.6	1.0	-14.1	199	-14.7	193	210	0.7	5.3	36.61	1.52	1988	1982
400	250	7588	250	-11.9	-3.5	-20.3	173	-20.6	186	175	0.6	5.4	34.81	1.53	1988	1982
350	245	8597	245	-18.1	-8.9	-24.9	137	-26.9	179	128	1.2	5.8	43.22	1.61	1988	1985
300	238	9736	238	-25.7	-15.3	-34.5	95	-34.0	170	124	1.7	6.4	47.90	1.71	1989	1988
250	220	11038	220	-35.2	-27.3	-47.1	35	-41.4	158	112	3.2	7.3	55.88	1.82	1986	1988
200	194	12548	194	-47.9	-38.5	-60.3	3	-53.6	142	117	4.7	9.1	71.89	2.46	1989	1988
175	170	13420	170	-55.0	-45.1	-66.1			120	107	6.1	10.7	82.44	2.63	1989	1979
150	137	14393	137	-62.5	-51.5	-74.5			95	099	7.3	11.4	94.15	2.99	1988	1979
125	98	15504	98	-70.1	-60.1	-81.1			72	097	9.1	11.6	116.35	3.45	1988	1979
100	63	16785	63	-76.0	-67.1	-84.9			53	091	11.1	12.5	116.27	2.20	1988	1980
80	53	18086	52	-71.6	-62.5	-83.7			46	087	10.8	12.0	136.44	4.01	1988	1980
70	47	18887	46	-66.5	-56.3	-79.1			40	097	10.3	11.3	103.79	4.14	1980	1980
60	45	19812	45	-61.7	-50.1	-70.5			40	092	10.4	11.0	112.44	2.61	1980	1980
50	38	20963	38	-57.3	-44.7	-64.3			33	086	12.0	12.7	165.98	2.47	1982	1982
40	33	22388	33	-52.6	-42.5	-59.1			30	086	11.5	12.8	183.18	3.01	1982	1988
30	27	24264	27	-48.5	-36.9	-56.5			25	081	14.1	14.6	145.73	3.49	1982	1981
25	20	25466	20	-46.8	-35.1	-54.7			19	082	18.5	19.1			1982	1981
20	15	27010	15	-44.9	-35.7	-51.7			15	078	18.5	20.0			1982	1983
15	10	28870	10	-43.9	-38.5	-46.7			9	080	15.7	16.6			1981	1987
10	5	31597	5	-42.3	-39.3	-44.5			4	071	20.5	21.3			1982	1988
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
260	530	540					56	103	1662	-77.3

## NORMALS OF RADIOSONDE DATA

42779 PENDRA

OCTOBER 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	326	940	326	26.2	30.6	20.0	326	16.8	326	002	0.5	0.9	1.09	1.03	1979	1980
1000	298	77											8.42			
950	298	498											11.29			
900	298	1003	298	23.7	33.4	14.6	294	12.9	283	357	2.8	4.7	8.94	1.12	1989	1983
850	298	1499	298	20.0	29.4	13.8	292	9.7	284	356	3.5	5.2	8.96	1.29	1989	1985
800	298	2019	298	15.9	26.6	7.0	289	6.6	282	349	3.5	5.6	8.94	1.43	1989	1980
750	298	2554	298	12.3	23.8	5.0	274	2.2	281	344	3.8	6.2	10.30	1.42	1989	1985
700	298	3137	298	9.2	19.6	2.0	219	-0.3	281	326	3.6	6.2	10.65	1.28	1989	1985
650	296	3737	296	6.3	17.4	-5.3	179	-3.4	271	306	3.8	6.4	13.21	1.54	1989	1980
600	293	4399	292	3.5	15.0	-3.1	139	-5.3	261	286	4.2	6.8	12.70	1.70	1989	1980
550	290	5113	289	0.1	11.8	-7.3	118	-9.2	255	279	5.4	7.8	16.80	1.60	1989	1980
500	289	5858	287	-4.0	8.0	-12.1	92	-12.8	251	274	6.6	8.8	18.10	1.72	1989	1979
450	286	6685	283	-8.7	6.0	-18.1	77	-18.6	242	269	7.6	9.5	24.92	1.84	1983	1980
400	279	7587	279	-14.1	-3.5	-24.7	63	-23.2	228	266	8.8	11.0	28.15	1.90	1990	1979
350	273	8589	273	-20.5	-6.9	-32.5	45	-29.0	223	256	10.1	12.4	38.27	2.11	1989	1979
300	261	9715	260	-28.1	-17.9	-40.3	30	-36.3	208	251	12.0	14.1	46.35	2.31	1990	1979
250	247	11000	246	-37.8	-26.5	-52.9	5	-43.5	194	245	13.3	15.8	60.45	2.64	1990	1981
200	209	12493	209	-49.8	-38.7	-60.1			161	239	14.2	16.9	70.31	2.55	1989	1981
175	183	13351	183	-56.8	-46.9	-68.7			148	234	13.6	16.8	80.80	2.87	1988	1981
150	144	14313	144	-63.9	-53.9	-75.9			125	228	11.4	14.2	85.01	3.05	1989	1981
125	102	15403	102	-71.1	-61.9	-82.1			89	219	8.3	11.7	91.52	3.18	1988	1981
100	79	16692	79	-74.8	-63.1	-84.7			65	182	2.3	8.0	108.69	1.83	1980	1981
80	65	17999	65	-71.5	-59.9	-83.9			50	103	4.0	6.7	82.86	2.09	1988	1980
70	61	18804	61	-67.1	-57.1	-80.7			46	087	6.0	7.5	97.94	2.21	1988	1980
60	56	19731	56	-62.6	-52.5	-73.7			38	087	7.5	8.1	78.14	1.70	1981	1980
50	47	20879	47	-58.3	-48.1	-66.1			35	088	8.3	9.1	77.56	1.57	1988	1982
40	40	22307	40	-54.1	-43.7	-62.1			29	082	8.8	9.7	71.39	1.64	1988	1982
30	25	24161	25	-50.5	-36.9	-57.9			19	076	8.3	10.4	73.99	1.90	1988	1982
25	19	25334	19	-48.7	-39.7	-55.5			15	078	10.2	10.9			1980	1988
20	14	26792	14	-46.7	-40.1	-52.9			11	074	8.7	9.6			1982	1988
15	5	28692	5	-46.6	-41.9	-49.5			5	058	9.7	11.2			1982	1988
10	3	31405	3	-42.8	-40.9	-44.9			3	069	11.5	12.0			1988	1988
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

291 549 5'2

71 107 1632 -75.6

## NORMALS OF RADIOSONDE DATA

42779 PENDRA

NOVEMBER 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	318	943	318	23.8	29.4	15.2	318	11.9	318	002	0.3	0.6	1.00	1.40	1979	1980
1000	288	109											9.37			
950	288	528											14.32			
900	288	1027	288	21.1	28.8	13.0	282	8.1	284	001	2.6	4.3	8.80	1.28	1989	1986
850	288	1518	288	17.4	25.8	10.2	280	5.0	284	354	3.1	4.5	9.54	1.35	1989	1982
800	288	2033	288	13.7	22.6	7.0	249	2.4	283	343	3.3	4.7	10.42	1.37	1989	1982
750	288	2567	288	10.7	19.6	1.8	198	-1.7	283	325	3.6	5.2	17.90	1.33	1981	1985
700	288	3145	288	8.3	16.6	-0.3	137	-3.9	282	307	4.2	6.0	13.47	1.10	1988	1982
650	288	3747	288	5.6	13.0	-5.1	102	-6.9	279	292	5.5	7.3	20.01	1.06	1987	1980
600	285	4403	285	2.4	10.2	-5.5	76	-10.1	272	283	7.0	8.5	16.95	1.20	1987	1989
550	280	5113	280	-1.3	6.0	-8.5	69	-14.6	260	282	8.8	10.3	26.17	1.36	1987	1989
500	279	5855	279	-5.9	2.4	-13.3	51	-17.6	255	279	10.6	12.2	22.88	1.50	1990	1982
450	278	6669	278	-10.7	9.8	-18.9	43	-20.2	248	276	13.3	14.9	31.43	1.65	1986	1988
400	273	7568	273	-16.7	-6.9	-27.9	38	-24.6	243	274	16.3	17.9	33.07	1.65	1990	1988
350	267	8563	267	-23.2	-12.9	-31.9	32	-31.0	233	268	19.0	20.9	36.31	1.55	1990	1980
300	262	9673	262	-30.6	-18.7	-40.5	20	-37.0	227	265	22.9	24.7	44.67	1.53	1989	1981
250	247	10944	247	-39.8	-27.1	-48.1	7	-41.6	211	258	26.1	27.9	56.25	1.98	1989	1982
200	227	12439	226	-51.0	-40.1	-59.7	1	-55.1	189	253	26.3	28.7	73.34	2.62	1989	1982
175	196	13301	196	-57.2	-45.1	-67.5			162	255	25.5	28.0	82.87	3.06	1989	1982
150	162	14259	162	-63.6	-50.1	-75.5			138	257	22.8	25.0	97.86	3.61	1988	1982
125	123	15355	123	-70.4	-55.1	-81.1			104	262	17.8	19.9	103.73	2.87	1988	1980
100	93	16648	93	-74.3	-60.9	-86.1			77	269	11.4	14.8	140.73	2.66	1982	1982
80	79	17954	79	-73.2	-64.1	-86.1			55	269	3.8	11.4	141.39	3.66	1982	1982
70	73	18758	73	-69.9	-55.3	-82.1			42	265	1.8	8.5	156.78	4.22	1982	1982
60	66	19674	66	-65.0	-53.9	-76.9			39	262	1.9	8.5	166.26	4.16	1982	1988
50	62	20807	62	-59.7	-49.1	-74.3			33	186	0.9	8.7	169.18	3.16	1988	1988
40	56	22208	56	-55.8	-39.9	-68.9			26	070	1.8	8.0	177.14	2.55	1987	1988
30	51	24043	51	-52.1	-36.1	-61.1			24	160	3.0	8.8	211.69	3.01	1987	1988
25	39	25245	39	-50.5	-34.1	-59.1			20	180	1.0	9.4	217.18	3.82	1987	1988
20	24	26769	24	-48.8	-31.1	-57.9			14	148	2.9	10.2	242.61	4.28	1987	1988
15	13	28634	13	-48.6	-40.1	-56.1			8	138	2.6	10.5			1988	1988
10	12	31381	12	-45.2	-39.1	-51.5			7	137	5.4	12.6			1988	1989
7	3	33771	3	-43.5	-37.9	-46.5			2	082	22.9	23.5			1990	1988

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

282 568 483

86 104 1651 -75.2



## NORMALS OF RADIOSONDE DATA

42779 PENDRA

DECEMBER 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	286	945	286	21.1	25.0	13.8	286	9.2	286	003	0.3	0.8	1.13	1.26	1982	1986
<i>1000</i>	228	131											15.28			
<i>950</i>	228	546											20.78			
<i>900</i>	228	1040	228	18.3	25.6	11.6	224	5.4	218	344	2.0	4.4	16.92	1.81	1990	1986
<i>850</i>	228	1527	228	14.8	25.0	8.2	210	2.5	218	323	2.6	4.4	19.52	2.00	1990	1986
<i>800</i>	228	2037	228	11.9	23.4	4.2	174	-0.8	218	307	3.7	5.1	22.36	1.89	1990	1983
<i>750</i>	228	2571	228	9.6	21.0	2.2	129	-4.0	216	302	5.2	6.7	31.53	2.03	1986	1979
<i>700</i>	228	3143	228	7.2	19.2	-5.1	82	-7.5	215	293	6.5	7.9	23.64	2.28	1990	1979
<i>650</i>	226	3740	225	4.4	15.4	-6.1	67	-10.6	212	286	7.7	9.3	35.91	1.91	1990	1986
<i>600</i>	224	4396	224	1.1	12.0	-9.3	47	-12.4	208	279	9.2	10.8	26.61	1.63	1988	1986
<i>550</i>	223	5099	223	-3.0	8.4	-14.3	45	-15.5	204	279	11.6	13.1	37.90	1.64	1988	1986
<i>500</i>	222	5838	222	-7.7	2.4	-21.7	39	-19.3	202	277	14.1	15.5	33.02	1.73	1988	1986
<i>450</i>	220	6646	220	-12.8	-3.1	-25.7	30	-23.0	196	273	16.9	18.5	56.65	1.87	1988	1986
<i>400</i>	218	7540	218	-18.7	-8.9	-32.3	25	-27.8	192	271	19.7	21.4	40.47	2.11	1986	1986
<i>350</i>	208	8524	208	-25.5	-14.7	-34.1	18	-33.2	180	267	24.2	26.1	61.16	2.08	1990	1981
<i>300</i>	197	9627	197	-33.0	-22.9	-41.1	10	-38.8	169	267	28.0	30.5	55.41	2.19	1990	1983
<i>250</i>	184	10886	184	-42.3	-32.3	-50.9	5	-47.6	143	263	30.5	33.7	64.76	2.06	1990	1985
<i>200</i>	156	12362	155	-52.9	-43.9	-61.1			121	256	32.7	36.2	70.93	2.39	1982	1985
<i>175</i>	137	13217	136	-58.4	-50.1	-66.5			108	257	30.8	33.6	88.98	2.60	1988	1981
<i>150</i>	114	14165	113	-63.5	-54.3	-72.5			93	259	30.6	33.5	98.61	2.99	1982	1981
<i>125</i>	94	15263	94	-68.7	-58.1	-77.1			78	261	26.5	28.5	146.49	3.41	1988	1981
<i>100</i>	74	16592	74	-72.2	-62.1	-78.7			58	263	19.6	21.9	105.97	3.29	1988	1987
<i>80</i>	62	17924	62	-71.8	-60.3	-79.1			46	262	15.3	18.4	118.99	3.36	1988	1981
<i>70</i>	61	18734	61	-69.3	-54.5	-77.7			40	264	14.3	17.3	129.88	3.46	1988	1982
<i>60</i>	58	19651	58	-65.5	-51.3	-74.5			36	277	9.0	15.2	131.48	3.45	1988	1982
<i>50</i>	49	20782	49	-60.7	-49.3	-72.5			28	271	5.8	12.6	147.49	5.05	1988	1987
<i>40</i>	39	22221	39	-55.7	-45.9	-68.3			25	019	1.7	14.3	160.99	5.09	1988	1987
<i>30</i>	32	24065	32	-51.8	-40.7	-63.5			19	098	6.0	13.2	191.41	5.62	1988	1987
<i>25</i>	27	25244	27	-49.8	-37.1	-60.1			16	123	5.7	14.0	200.86	5.46	1988	1987
<i>20</i>	16	26671	16	-47.7	-41.5	-56.5			9	219	7.6	14.2			1988	1987
<i>15</i>	6	28904	6	-42.6	-40.5	-46.1			4	299	7.9	16.2			1988	1988
<i>10</i>	1	31407	1	-41.1	-41.1	-41.1			1	056	24.0	24.0			1988	1988
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
226	589	454	1	178	1298	-65.3	69	099	1669	-73.4

## NORMALS OF RADIOSONDE DATA

43333 PORT BLAIR

JANUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	1002	620	26.1	28.0	22.0	620	20.9	620	049	2.2	2.5	0.81	0.46	1972	1978
<i>1000</i>	524	95	473	25.9	28.0	22.0	473	20.7	473	050	2.3	2.6	7.46	0.48	1987	1978
<i>950</i>	524	540	524	22.3	27.2	17.0	523	17.5	523	053	5.2	5.7	12.10	0.74	1987	1977
<i>900</i>	524	1013	524	19.0	25.8	12.0	520	13.5	524	067	4.6	5.5	8.16	1.01	1985	1977
<i>850</i>	524	1502	524	16.4	23.8	11.0	511	8.2	524	082	3.8	5.1	8.81	1.15	1980	1972
<i>800</i>	524	2017	523	14.1	26.0	8.0	436	3.4	523	089	3.1	4.8	9.77	1.18	1978	1972
<i>750</i>	524	2558	523	12.1	18.0	4.8	331	-1.6	523	086	2.3	4.5	12.08	1.08	1973	1981
<i>700</i>	524	3133	524	9.4	15.8	3.0	250	-5.6	524	083	1.8	4.4	11.94	1.10	1986	1974
<i>650</i>	516	3746	516	6.2	13.0	-4.7	182	-8.1	516	083	1.8	4.7	15.06	1.25	1976	1981
<i>600</i>	507	4396	506	2.7	9.0	-6.0	147	-11.6	507	082	1.8	5.1	13.82	1.26	1974	1974
<i>550</i>	506	5095	505	-1.2	4.0	-9.0	111	-14.2	506	081	1.7	5.5	20.91	1.27	1973	1978
<i>500</i>	500	5849	499	-5.6	-0.5	-12.0	89	-18.6	500	070	1.4	6.1	20.58	1.31	1986	1978
<i>450</i>	487	6668	487	-10.5	-5.7	-19.0	72	-22.5	487	088	0.9	7.1	25.42	1.30	1987	1976
<i>400</i>	477	7567	477	-16.1	-8.7	-22.9	43	-26.4	477	179	0.4	7.5	28.29	1.43	1987	1979
<i>350</i>	465	8560	464	-23.1	-15.5	-29.3	35	-33.0	462	241	1.5	7.9	34.17	1.53	1989	1979
<i>300</i>	451	9674	451	-31.5	-23.5	-38.0	24	-40.3	449	234	3.3	8.6	39.32	1.77	1989	1977
<i>250</i>	431	10938	431	-41.8	-31.9	-49.1	2	-47.0	430	225	5.2	10.0	48.37	2.04	1987	1979
<i>200</i>	399	12409	399	-54.5	-43.1	-64.1			399	215	7.0	11.8	62.21	2.39	1989	1979
<i>175</i>	348	13251	348	-61.5	-50.5	-70.7			347	208	7.4	12.5	71.03	2.39	1989	1983
<i>150</i>	309	14190	309	-68.9	-53.1	-78.7			308	198	7.7	13.3	79.05	2.57	1990	1982
<i>125</i>	260	15263	260	-76.2	-65.5	-86.1			259	180	5.9	12.7	98.13	3.06	1986	1979
<i>100</i>	221	16535	221	-81.0	-66.3	-92.1			221	139	4.0	10.2	111.22	3.98	1989	1980
<i>80</i>	161	17795	161	-78.4	-62.7	-92.0			158	118	3.4	7.5	125.92	5.28	1986	1978
<i>70</i>	126	18573	126	-73.6	-59.1	-89.0			126	135	1.3	6.7	141.65	4.91	1986	1978
<i>60</i>	104	19500	104	-68.8	-55.3	-80.0			102	183	0.7	6.8	154.44	4.08	1989	1978
<i>50</i>	81	20621	81	-64.4	-52.3	-79.0			80	126	2.1	9.3	176.89	5.55	1986	1978
<i>40</i>	50	22027	50	-59.9	-44.1	-69.0			50	098	4.5	11.0	225.51	5.52	1986	1978
<i>30</i>	25	23863	25	-55.8	-43.1	-63.5			25	083	7.6	15.2	265.00	3.99	1989	1985
<i>25</i>	18	25079	18	-53.1	-45.7	-63.1			18	106	3.9	11.3			1989	1985
<i>20</i>	10	26577	10	-51.6	-47.1	-60.7			10	116	3.9	11.0			1985	1985
<i>15</i>	4	28530	4	-48.1	-43.1	-56.9			4	126	10.4	17.8			1987	1985
<i>10</i>	2	31349	2	-42.5	-41.5	-43.5			2	246	4.7	14.0			1987	1990
<i>7</i>	1	33631	1	-40.9	-40.9	-40.9			1	121	8.0	8.0			1987	1987

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

504 564 489

214 102 1649 -82.7

# NORMALS OF RADIOSONDE DATA

43333 PORT BLAIR

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	565	1001	565	27.0	29.4	23.0	565	21.3	565	046	1.3	1.5	1.30	0.42	1990	1984
1000	480	90	400	26.8	29.0	22.6	399	21.2	400	048	1.3	1.5	10.89	0.48	1973	1986
950	480	535	480	23.0	29.4	15.0	479	17.2	480	050	4.1	4.7	14.18	0.91	1983	1975
900	480	1010	479	19.9	29.0	13.4	477	12.0	480	060	3.4	4.5	12.17	0.83	1975	1986
850	480	1501	480	17.2	23.0	9.0	463	7.0	480	081	3.1	4.5	12.45	0.75	1983	1986
800	480	2016	480	14.5	21.2	7.4	408	2.6	480	091	3.0	4.6	12.65	0.79	1983	1986
750	480	2557	479	11.9	18.8	0.0	333	-1.8	480	094	2.2	4.5	14.16	0.86	1983	1976
700	480	3132	478	9.3	19.0	3.0	249	-5.2	479	089	1.4	4.5	13.34	0.91	1977	1977
650	477	3746	475	6.1	13.0	-1.0	202	-8.3	476	072	0.9	4.6	18.05	0.94	1978	1977
600	474	4394	472	2.6	9.4	-5.0	160	-10.9	473	072	0.7	5.0	14.02	1.06	1985	1977
550	470	5094	468	-1.3	5.4	-8.1	124	-14.3	469	040	0.6	5.8	19.57	1.07	1990	1986
500	465	5846	463	-5.7	0.8	-11.9	94	-18.0	465	074	0.4	6.3	18.01	1.21	1989	1986
450	457	6666	455	-10.4	-4.1	-17.3	78	-22.8	457	271	0.2	7.1	23.30	1.27	1989	1982
400	453	7565	450	-16.2	-7.9	-22.9	55	-28.5	450	264	0.9	8.2	25.25	1.32	1989	1986
350	438	8556	436	-23.1	-15.5	-29.5	41	-33.2	436	257	2.2	9.1	30.32	1.39	1985	1983
300	426	9670	425	-31.5	-23.0	-38.9	35	-39.4	424	231	3.5	9.6	36.00	1.66	1972	1982
250	408	10935	408	-41.8	-32.3	-50.3	8	-45.0	407	226	5.3	10.3	45.42	1.93	1989	1982
200	392	12409	391	-54.3	-43.5	-63.3			391	212	6.5	11.9	57.48	2.07	1989	1982
175	363	13251	362	-61.3	-49.3	-70.5			360	206	7.0	12.7	66.36	2.35	1989	1982
150	339	14189	339	-68.5	-55.7	-79.0			338	198	6.7	13.0	76.30	2.52	1989	1977
125	293	15261	293	-75.6	-63.9	-87.0			292	180	4.5	11.3	88.10	2.53	1989	1978
100	259	16538	259	-80.3	-67.5	-89.3			257	154	2.3	9.4	101.38	2.38	1989	1979
80	203	17806	203	-77.7	-60.7	-88.0			201	183	1.9	8.0	116.31	2.80	1989	1978
70	172	18588	172	-73.6	-60.1	-84.3			170	234	2.5	7.6	121.28	2.50	1989	1983
60	147	19511	147	-68.7	-54.5	-82.0			146	259	1.8	8.3	131.77	2.50	1983	1973
50	124	20627	124	-63.7	-51.1	-77.0			124	235	0.9	10.1	146.01	3.04	1983	1973
40	82	22039	82	-59.3	-48.1	-69.0			82	102	0.3	11.3	178.85	2.84	1989	1973
30	51	23901	51	-53.2	-40.3	-63.0			51	082	2.9	10.9	219.99	3.70	1990	1973
25	37	25095	37	-51.8	-38.1	-60.0			37	075	3.7	10.6	231.84	3.07	1989	1973
20	27	26576	27	-49.4	-38.3	-56.1			27	092	7.4	13.6	106.04	2.46	1990	1988
15	13	28509	13	-47.0	-38.5	-52.7			13	087	7.0	13.9			1989	1990
10	3	31386	3	-43.1	-36.3	-49.9			3	044	7.7	21.0			1989	1990
7	1	33287	1	-41.7	-41.7	-41.7			1	246	11.0	11.0			1990	1990

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

466 566 486

1 148 1430 -69.0

238 100 1656 -82.0

NORMALS OF RADIOSONDE DATA

43333 PORT BLAIR

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	620	1001	620	28.0	30.8	22.2	620	22.2	620	055	0.6	0.8	0.92	0.34	1979	1989
1000	581	84	399	27.8	30.8	12.8	399	22.1	399	061	0.7	0.9	6.30	0.44	1979	1990
950	581	531	581	24.3	33.0	19.0	580	18.7	579	056	2.5	3.5	8.52	0.53	1986	1978
900	581	1008	580	21.3	32.0	16.2	578	14.1	579	052	2.5	3.6	5.74	0.62	1986	1985
850	581	1501	581	18.6	29.0	13.4	570	8.5	579	069	2.9	4.4	5.54	0.68	1986	1985
800	581	2019	581	15.7	24.2	10.8	543	3.3	581	080	3.3	4.9	6.28	0.67	1986	1985
750	581	2561	581	12.6	20.8	6.0	486	-1.0	581	082	3.2	5.1	7.49	0.76	1989	1974
700	581	3139	581	9.5	19.0	5.0	401	-5.2	581	083	2.5	5.0	7.82	0.83	1973	1976
650	577	3752	576	6.2	13.0	-3.0	307	-8.4	574	076	1.9	4.7	10.83	0.77	1989	1978
600	570	4401	569	2.7	9.4	-3.0	233	-11.3	568	070	1.5	4.9	10.82	0.84	1989	1976
550	568	5101	567	-1.1	5.2	-6.0	191	-14.6	567	080	1.1	5.1	14.60	0.91	1990	1975
500	565	5855	565	-5.4	1.6	-12.0	159	-18.5	565	096	0.5	5.6	15.06	0.99	1989	1973
450	557	6674	556	-10.1	-3.5	-16.5	120	-22.9	557	250	0.5	6.1	19.84	1.13	1989	1981
400	551	7576	551	-15.7	-8.9	-23.0	88	-28.1	550	241	1.9	6.8	21.87	1.24	1990	1973
350	537	8570	537	-22.6	-15.5	-29.7	69	-33.3	536	241	3.5	8.0	27.98	1.44	1988	1981
300	525	9687	525	-30.8	-22.1	-38.5	47	-39.9	524	238	5.6	9.2	33.82	1.69	1989	1987
250	510	10955	510	-41.1	-30.3	-49.0	9	-46.3	508	231	7.2	10.4	42.20	1.95	1989	1978
200	490	12433	490	-53.4	-42.5	-62.0			488	223	8.2	11.9	54.87	2.13	1989	1978
175	449	13276	449	-60.7	-49.5	-70.0			448	220	8.3	12.5	61.98	2.34	1989	1978
150	419	14219	419	-68.0	-55.3	-80.0			417	212	6.7	12.2	73.82	2.52	1989	1978
125	370	15292	370	-75.1	-59.9	-89.0			369	201	4.4	10.8	86.20	2.89	1989	1978
100	327	16565	327	-80.5	-69.9	-92.0			327	152	1.8	8.5	97.70	2.76	1990	1978
80	246	17829	246	-78.1	-61.9	-90.5			243	114	1.6	7.6	121.39	3.45	1990	1979
70	221	18599	221	-74.0	-58.1	-88.5			217	159	0.7	7.1	135.20	4.24	1990	1979
60	182	19516	182	-69.2	-54.3	-85.7			180	232	1.0	8.8	151.97	3.69	1990	1989
50	143	20633	143	-64.6	-48.9	-77.7			143	351	0.2	10.1	170.59	3.26	1989	1979
40	97	22047	97	-59.9	-45.5	-68.9			95	095	1.8	11.3	162.88	2.60	1989	1988
30	68	23885	68	-54.3	-45.1	-65.9			67	101	2.8	10.8	201.32	3.25	1989	1988
25	42	25088	42	-51.4	-42.7	-62.5			41	100	3.8	11.2	166.75	2.83	1986	1988
20	20	26547	20	-49.3	-43.1	-59.5			20	104	1.6	11.0			1989	1988
15	11	28439	11	-48.0	-43.7	-58.5			11	276	8.5	11.9			1990	1988
10	4	31373	4	-40.1	-38.1	-44.3			4	273	18.4	18.5			1990	1990
7	1	33684	1	-39.1	-39.1	-39.1			1	268	34.0	34.0			1990	1990

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

568 563 491

302 100 1659 -82.3

# NORMALS OF RADIOSONDE DATA

43333 PORT BLAIR

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	999	600	29.0	31.0	23.0	600	23.4	600	180	0.1	0.9	0.71	0.59	1971	1972
1000	528	68	137	28.9	31.0	23.0	137	23.4	134	200	0.1	0.8	5.79	0.59	1973	1972
950	528	519	528	25.3	30.4	21.0	528	20.8	528	087	0.7	3.2	7.82	0.65	1987	1972
900	528	996	527	22.1	28.6	17.6	525	17.2	527	052	0.8	3.0	6.10	0.70	1987	1985
850	528	1491	526	19.3	25.4	13.0	523	11.7	527	077	1.8	3.5	6.37	0.73	1987	1974
800	528	2010	527	16.4	23.0	11.0	512	6.9	527	082	2.6	4.2	6.74	0.82	1987	1982
750	528	2555	528	13.3	19.2	7.2	494	2.6	525	084	3.0	4.7	8.12	0.84	1987	1983
700	528	3134	528	10.0	16.4	5.0	456	-1.7	525	081	2.7	4.7	8.34	0.90	1989	1979
650	522	3747	522	6.5	12.4	-5.0	409	-5.5	521	082	2.2	4.4	11.65	0.95	1990	1976
600	514	4399	514	3.0	10.4	-3.3	354	-9.0	512	084	1.8	4.7	12.24	1.01	1990	1986
550	504	5099	504	-0.7	6.4	-6.9	296	-12.7	503	084	1.5	4.8	14.89	0.98	1990	1979
500	497	5855	497	-4.9	2.8	-9.9	243	-16.7	496	083	1.6	5.3	16.79	1.07	1990	1988
450	485	6675	485	-9.7	-3.5	-15.5	206	-21.0	481	089	1.2	5.5	20.33	1.11	1990	1989
400	478	7578	478	-15.2	-9.1	-20.1	169	-25.9	477	101	0.7	6.1	23.65	1.11	1989	1984
350	467	8575	467	-22.0	-15.1	-29.0	131	-31.9	466	235	0.8	6.6	28.94	1.34	1989	1975
300	455	9694	455	-30.1	-23.3	-39.0	92	-38.7	453	240	2.4	7.3	34.26	1.61	1989	1978
250	429	10966	429	-40.3	-32.1	-48.0	27	-45.9	426	227	4.2	8.0	43.10	1.86	1985	1978
200	411	12450	410	-52.7	-44.3	-61.7			410	214	5.3	9.0	56.33	2.16	1990	1979
175	381	13300	381	-59.9	-51.7	-72.1			380	210	5.1	9.2	65.02	2.42	1990	1979
150	355	14245	355	-67.5	-57.7	-78.7			355	198	4.0	9.0	75.20	2.57	1990	1979
125	306	15323	306	-74.9	-64.7	-85.7			305	166	2.1	8.1	91.98	2.52	1990	1979
100	266	16595	266	-80.9	-71.3	-91.0			264	105	3.6	7.9	111.41	2.55	1989	1978
80	194	17873	194	-78.7	-66.0	-90.5			193	101	4.8	8.2	130.61	2.66	1971	1979
70	168	18650	168	-74.3	-62.0	-85.7			167	105	4.1	7.8	124.72	2.31	1971	1985
60	145	19562	145	-69.0	-57.7	-80.3			145	111	2.0	7.8	133.86	2.73	1986	1985
50	126	20678	126	-63.6	-52.1	-76.3			125	111	2.2	9.1	152.23	3.18	1989	1985
40	87	22091	87	-59.2	-48.3	-70.0			84	092	3.6	9.6	139.53	3.32	1985	1976
30	50	23953	50	-53.1	-42.1	-67.1			49	093	6.4	11.0	157.27	3.23	1989	1985
25	36	25142	36	-50.4	-39.5	-65.9			36	096	7.4	12.3	223.68	5.32	1986	1985
20	22	26568	22	-48.2	-39.5	-63.7			22	097	10.0	14.0	262.22	4.96	1989	1985
15	13	28606	13	-43.9	-36.9	-55.1			13	095	7.2	13.4			1989	1985
10	7	31290	7	-41.0	-33.3	-52.9			7	092	8.1	16.0			1989	1985
7	1	32867	1	-51.1	-51.1	-51.1			1	012	15.0	15.0			1985	1985

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

507 559 496

239 098 1671 -82.6

### NORMALS OF RADIOSONDE DATA

43333 PORT BLAIR

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	619	997	619	27.9	31.6	22.0	619	24.1	619	231	2.0	2.6	0.92	0.55	1980	1973
1000	577	54	39	28.0	30.8	23.0	39	23.7	39	257	1.2	1.9	8.81	1.32	1980	1972
950	577	504	577	24.9	29.4	19.2	577	21.6	577	240	4.4	6.2	8.56	0.43	1986	1990
900	577	981	577	21.9	27.4	16.4	575	18.4	577	246	4.7	6.8	9.15	0.57	1990	1990
850	577	1476	577	19.1	25.4	14.0	576	14.9	577	247	4.1	6.4	9.42	0.64	1990	1976
800	577	1996	577	16.2	24.2	10.0	575	11.2	577	248	3.4	6.2	9.71	0.70	1988	1982
750	577	2539	577	13.2	22.2	6.8	575	7.0	577	250	2.9	6.2	10.07	0.80	1988	1982
700	577	3120	577	10.1	19.8	1.0	572	2.8	577	250	2.7	6.3	10.35	0.91	1988	1977
650	571	3734	571	6.7	16.0	0.2	559	-1.0	570	255	2.4	6.2	11.57	0.98	1988	1979
600	566	4387	565	3.1	11.2	-2.7	540	-5.1	565	249	2.4	6.1	13.13	1.07	1988	1979
550	553	5089	551	-0.6	7.8	-11.1	508	-8.8	552	238	2.3	6.2	16.25	1.16	1988	1980
500	545	5846	543	-4.6	4.6	-9.3	472	-12.7	544	222	1.6	6.0	18.06	1.24	1988	1979
450	535	6667	534	-9.0	0.2	-16.1	443	-17.1	533	205	1.6	6.0	20.69	1.37	1988	1985
400	520	7575	520	-14.3	-5.9	-21.1	413	-22.6	518	171	1.4	6.0	27.10	1.56	1988	1979
350	509	8575	507	-21.0	-13.1	-29.9	361	-28.9	506	142	1.9	5.9	33.27	1.71	1985	1979
300	495	9699	493	-29.0	-20.1	-39.3	294	-36.8	490	121	2.8	6.4	40.89	1.93	1988	1979
250	480	10978	479	-39.2	-28.1	-49.9	125	-44.9	480	113	4.3	7.7	53.98	2.21	1990	1979
200	454	12467	454	-52.1	-39.3	-62.5			454	100	6.2	9.8	68.62	2.29	1990	1979
175	396	13318	395	-59.6	-48.1	-67.9			393	096	7.7	11.1	76.87	2.37	1990	1982
150	346	14262	345	-67.5	-54.3	-77.5			343	096	9.9	12.7	83.41	2.48	1985	1982
125	300	15334	299	-75.4	-64.9	-87.1			297	096	12.1	14.1	92.65	2.53	1990	1982
100	251	16614	250	-80.9	-70.1	-93.0			249	094	12.7	14.4	102.86	2.64	1990	1978
80	178	17880	178	-78.5	-59.1	-88.0			177	089	10.2	12.3	126.38	2.60	1990	1978
70	141	18645	141	-74.3	-55.7	-87.9			140	093	8.5	11.2	141.66	2.93	1990	1987
60	117	19561	117	-68.4	-47.3	-80.9			116	094	6.7	10.0	152.32	3.09	1990	1988
50	93	20679	93	-63.6	-46.7	-77.0			92	091	8.0	11.0	163.97	3.84	1990	1973
40	59	22071	59	-58.6	-46.5	-73.0			59	089	9.8	12.7	209.89	3.36	1982	1972
30	35	23932	35	-52.4	-40.1	-67.0			35	087	12.2	14.7	258.44	7.12	1986	1972
25	24	25143	24	-49.2	-40.3	-56.0			24	084	17.8	18.9	261.79	3.12	1989	1977
20	15	26567	15	-46.1	-39.1	-52.7			15	094	17.2	17.9			1987	1989
15	7	28574	7	-42.6	-37.7	-47.1			7	092	14.2	15.3			1987	1983
10	2	31583	2	-37.9	-35.9	-39.9			2	161	8.0	20.5			1987	1990
7	1	34200	1	-37.7	-37.7	-37.7			1	272	7.0	7.0			1990	1990

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

554 558 498

223 099 1668 -82.6

### NORMALS OF RADIOSONDE DATA

43333 PORT BLAIR

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	997	600	27.3	29.8	22.6	600	24.3	600	228	5.1	5.3	0.74	0.46	1983	1984
1000	558	49	16	27.2	29.4	24.6	16	24.0	16	218	3.6	3.9	5.60		1983	1983
950	558	498	558	24.4	29.2	19.0	558	21.8	555	236	9.5	10.0	5.97	0.51	1990	1985
900	558	974	558	21.4	28.0	15.8	558	18.6	555	243	10.9	11.5	6.55	0.68	1985	1985
850	558	1469	558	18.6	24.0	12.2	558	15.0	555	247	10.3	11.0	7.27	0.74	1990	1985
800	558	1988	558	15.9	23.0	10.2	558	11.4	555	250	9.4	10.2	8.16	0.77	1974	1985
750	558	2532	558	13.0	19.4	7.4	558	7.6	556	252	8.5	9.5	9.79	0.82	1990	1985
700	558	3112	558	9.8	16.6	2.4	557	3.5	556	253	7.9	9.1	10.61	0.85	1990	1988
650	547	3726	545	6.5	13.0	1.0	541	-0.6	543	252	7.2	8.6	12.69	0.94	1990	1978
600	536	4379	535	3.0	9.8	-2.3	527	-4.4	532	250	6.4	8.3	14.54	1.04	1987	1981
550	527	5080	525	-0.8	6.4	-6.0	509	-8.5	523	246	5.7	7.9	17.75	1.09	1990	1977
500	519	5837	515	-4.9	1.6	-10.9	491	-12.7	513	242	4.7	7.6	19.22	1.17	1985	1984
450	507	6659	503	-9.4	-3.1	-17.1	472	-17.1	502	232	3.0	7.0	22.28	1.26	1990	1985
400	500	7563	497	-14.7	-7.1	-20.9	453	-22.3	497	201	1.5	6.4	26.08	1.34	1990	1979
350	484	8564	480	-21.3	-14.7	-27.5	417	-28.8	480	110	2.7	7.0	30.09	1.40	1990	1984
300	468	9685	465	-29.4	-21.0	-36.0	353	-36.8	465	082	6.3	9.0	35.79	1.69	1973	1977
250	440	10963	439	-39.6	-31.3	-46.1	116	-45.6	439	072	11.0	12.7	44.48	1.81	1990	1984
200	417	12449	417	-52.5	-42.1	-60.0			415	070	16.3	17.6	55.33	1.95	1985	1977
175	361	13297	361	-60.0	-50.5	-69.0			356	070	18.7	19.9	60.40	2.03	1990	1977
150	301	14242	301	-68.1	-58.9	-79.9			298	073	22.8	23.9	63.43	2.07	1990	1982
125	228	15313	228	-76.2	-64.7	-87.1			227	079	26.2	27.4	75.42	2.44	1989	1982
100	182	16581	182	-80.0	-69.1	-92.0			180	083	26.6	27.5	79.01	2.98	1989	1977
80	122	17855	122	-76.4	-59.7	-86.1			118	084	19.6	20.8	97.53	3.94	1988	1979
70	101	18638	101	-72.3	-57.9	-83.0			98	089	15.2	16.3	107.35	4.03	1988	1977
60	82	19567	82	-67.8	-56.5	-79.0			81	092	13.9	15.4	125.44	4.01	1989	1972
50	70	20694	70	-63.7	-51.3	-74.0			69	092	12.8	14.7	152.81	4.08	1988	1978
40	52	22115	52	-57.8	-47.5	-67.0			52	092	14.5	15.6	189.51	3.57	1988	1977
30	34	24005	34	-52.8	-42.5	-65.1			33	093	19.5	20.0	267.55	4.70	1989	1988
25	26	25222	26	-50.4	-39.7	-63.9			26	091	23.0	23.5	291.89	3.50	1989	1988
20	23	26706	23	-47.7	-37.9	-62.5			23	091	26.4	27.0	284.38	3.74	1988	1988
15	21	28619	21	-44.9	-34.1	-60.7			21	094	29.6	29.9	307.35	4.98	1988	1988
10	13	31357	13	-43.1	-35.9	-58.1			13	088	34.6	34.7			1986	1988
7	10	33706	10	-42.0	-34.5	-56.1			9	089	46.8	47.0			1988	1988

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
529	560	494					180	107	1624	-81.7

NORMALS OF RADIOSONDE DATA

43333 PORT BLAIR

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	619	997	619	27.0	29.4	22.0	619	24.0	619	227	4.1	4.3	0.74	0.52	1986	1976
1000	575	54	24	26.2	29.0	22.0	24	23.9	24	229	3.0	3.2	6.92	1.14	1973	1976
950	575	501	575	24.1	29.0	19.0	575	21.6	574	235	8.7	9.2	8.09	0.39	1972	1976
900	575	979	575	21.3	27.8	14.4	575	18.3	574	243	9.7	10.4	7.70	0.50	1985	1981
850	575	1473	573	18.5	24.4	13.0	573	14.7	574	246	9.0	9.8	8.37	0.59	1985	1978
800	575	1991	573	15.7	20.8	11.0	573	11.0	573	249	8.1	9.1	8.73	0.68	1985	1976
750	575	2535	575	12.8	19.0	7.0	573	7.2	572	251	7.2	8.3	9.97	0.76	1989	1976
700	575	3114	575	9.7	16.4	4.0	572	3.2	575	253	6.5	7.8	10.72	0.81	1986	1976
650	561	3727	561	6.3	12.6	0.4	553	-0.8	561	254	5.7	7.3	12.38	0.86	1985	1986
600	552	4379	552	2.7	9.2	-3.0	534	-4.3	551	251	4.8	6.9	14.30	0.86	1985	1976
550	543	5080	542	-1.0	5.4	-6.0	519	-8.2	542	247	4.0	6.7	16.64	1.01	1990	1976
500	535	5836	535	-5.0	0.4	-11.9	512	-12.7	535	238	2.8	6.5	19.40	1.06	1985	1986
450	520	6658	519	-9.6	-1.1	-15.1	488	-17.2	519	212	1.6	6.2	22.69	1.16	1990	1990
400	509	7561	506	-15.0	-5.7	-19.7	459	-22.2	508	130	1.6	6.2	26.45	1.20	1989	1979
350	497	8559	497	-21.6	-13.1	-27.0	420	-28.7	496	091	4.5	7.2	30.63	1.30	1989	1977
300	483	9682	481	-29.6	-22.5	-37.0	354	-36.4	481	074	8.2	10.0	36.75	1.51	1988	1977
250	465	10956	464	-39.8	-31.5	-47.1	103	-45.8	463	070	12.6	14.0	43.19	1.63	1988	1979
200	435	12442	435	-52.8	-43.1	-60.9			433	071	17.9	19.0	52.90	1.84	1989	1979
175	367	13289	367	-60.2	-50.1	-69.5			363	071	20.3	21.5	61.53	2.05	1989	1979
150	312	14232	312	-68.1	-57.1	-78.1			310	074	24.4	25.5	73.38	2.19	1987	1979
125	237	15303	237	-75.9	-61.9	-85.1			232	079	29.4	30.3	87.15	2.45	1987	1979
100	187	16584	187	-78.7	-64.7	-89.0			186	082	27.3	28.2	91.27	2.78	1985	1977
80	127	17877	127	-72.8	-62.5	-81.0			126	088	21.2	21.8	117.76	3.21	1989	1977
70	105	18678	105	-69.6	-59.1	-80.0			105	091	19.2	19.7	127.51	3.62	1989	1977
60	89	19606	89	-66.0	-54.3	-79.0			88	093	17.9	18.7	137.98	3.77	1989	1977
50	69	20748	69	-62.0	-51.3	-74.0			68	093	17.2	17.9	134.62	3.03	1982	1977
40	48	22176	48	-57.5	-47.7	-65.5			48	094	16.6	17.8	156.06	2.79	1982	1987
30	36	24059	36	-53.2	-44.7	-60.3			35	091	21.9	22.4	209.75	4.19	1988	1988
25	28	25264	28	-50.0	-40.7	-58.0			28	088	24.7	25.5	243.57	3.73	1989	1977
20	19	26699	19	-47.9	-36.9	-53.3			19	091	23.2	24.4			1989	1987
15	12	28545	12	-47.4	-44.1	-53.1			12	096	30.6	31.9			1988	1987
10	7	31357	7	-43.2	-39.5	-46.9			7	088	27.4	28.0			1982	1988
7	2	33790	2	-40.6	-39.9	-41.3			2	087	53.4	53.5			1988	1988

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

545 563 489

181 108 1613 -80.7



NORMALS OF RADIOSONDE DATA

43333 PORT BLAIR

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	620	997	620	26.8	29.0	22.0	620	24.0	620	229	4.6	4.8	0.71	0.41	1987	1971
1000	557	54	25	26.7	28.6	24.0	25	23.4	25	228	3.8	3.9	6.17	0.98	1987	1987
950	557	502	557	24.0	29.0	18.8	557	21.5	555	238	9.5	9.9	8.70	0.51	1977	1985
900	557	979	557	21.1	28.0	16.4	557	18.2	555	244	10.7	11.3	6.98	0.63	1977	1985
850	557	1473	557	18.3	25.0	13.4	557	14.8	556	251	9.9	10.7	7.47	0.72	1977	1985
800	557	1992	557	15.5	22.2	9.8	557	11.2	556	254	9.2	10.0	8.20	0.79	1981	1985
750	557	2535	557	12.5	19.0	6.4	557	7.4	555	257	8.3	9.2	8.80	0.80	1977	1985
700	557	3114	557	9.3	15.4	3.8	556	3.3	554	258	7.6	8.8	10.51	0.88	1986	1984
650	539	3726	539	6.0	12.0	1.0	538	-1.3	534	257	6.7	8.1	12.41	0.88	1988	1978
600	526	4378	525	2.5	8.0	-2.0	515	-5.1	521	257	5.7	7.5	13.58	0.97	1989	1976
550	516	5078	513	-1.2	4.2	-7.1	497	-8.9	512	253	4.7	7.0	16.71	1.09	1987	1981
500	506	5834	502	-5.2	-0.3	-11.0	482	-13.1	500	252	3.4	6.8	18.77	1.10	1987	1978
450	494	6655	490	-9.8	-3.9	-17.0	466	-17.5	490	249	1.7	6.3	22.51	1.15	1986	1974
400	484	7558	484	-15.1	-8.0	-22.9	441	-22.2	480	125	0.9	6.2	25.50	1.29	1972	1981
350	471	8556	470	-21.7	-14.5	-30.3	411	-28.5	465	093	4.0	7.2	30.34	1.44	1986	1981
300	455	9677	454	-29.8	-22.0	-37.0	353	-36.8	450	078	8.4	10.4	36.44	1.60	1971	1977
250	433	10951	431	-40.1	-28.9	-47.5	106	-45.7	428	072	13.4	14.7	44.09	1.83	1986	1982
200	411	12434	410	-53.0	-43.7	-63.0			407	070	18.5	19.6	55.71	2.10	1988	1978
175	345	13281	344	-60.5	-50.5	-73.0			340	072	21.5	22.5	60.97	2.29	1988	1978
150	302	14224	301	-68.5	-58.5	-80.0			298	076	24.5	25.7	69.79	2.36	1988	1978
125	234	15295	233	-76.2	-65.9	-87.0			229	080	27.9	29.2	87.93	2.40	1988	1978
100	180	16576	179	-78.3	-68.3	-95.0			177	083	26.3	27.2	98.31	3.32	1985	1978
80	136	17860	136	-73.0	-61.1	-89.0			132	085	18.7	19.9	109.24	3.45	1988	1978
70	111	18643	111	-69.5	-59.1	-83.0			108	091	17.2	18.2	124.89	3.82	1989	1977
60	85	19583	85	-66.3	-56.7	-77.0			83	091	16.5	17.4	129.54	3.28	1989	1977
50	66	20699	66	-63.0	-52.9	-73.0			66	093	17.8	18.5	146.12	2.92	1988	1977
40	47	22100	47	-59.5	-53.3	-66.0			47	087	17.1	17.9	173.41	3.02	1988	1977
30	24	23952	24	-56.2	-43.7	-68.3			24	087	19.4	19.9	255.98	6.36	1988	1986
25	16	25121	16	-54.4	-41.5	-64.5			16	084	23.5	25.6			1989	1986
20	10	26628	10	-51.7	-37.5	-57.1			10	092	24.4	24.9			1989	1984
15	6	28404	6	-52.1	-46.9	-56.5			6	093	31.5	32.3			1988	1988
10	4	31078	4	-49.7	-45.9	-52.1			4	087	41.4	41.7			1988	1988
7	3	33474	3	-47.0	-45.1	-48.1			3	087	57.5	57.6			1988	1988

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

520 565 485

184 110 1607 -81.1

NORMALS OF RADIOSONDE DATA

43333 PORT BLAIR

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	600	998	600	26.4	30.0	23.0	600	23.8	600	238	2.7	3.0	0.63	0.32	1973	1972
1000	523	63	85	26.2	28.6	22.8	85	23.5	85	233	1.4	1.7	4.98	0.89	1988	1990
950	523	511	523	23.7	28.0	19.0	523	21.0	522	244	6.1	7.2	5.92	0.48	1973	1978
900	523	986	523	21.0	27.0	17.0	523	17.8	523	248	6.2	7.7	5.89	0.66	1973	1978
850	523	1480	523	18.2	23.0	13.0	523	14.3	522	251	5.6	7.2	6.30	0.68	1986	1978
800	523	1998	523	15.4	21.0	11.0	523	10.9	522	250	4.9	6.7	7.15	0.71	1986	1976
750	522	2541	522	12.4	19.2	8.0	520	7.1	521	250	4.2	6.4	9.11	0.86	1986	1976
700	522	3120	522	9.3	16.2	4.0	520	3.2	521	251	3.4	6.2	9.14	0.93	1986	1976
650	516	3731	516	6.0	14.6	-2.1	510	-0.7	513	248	2.5	5.9	12.63	1.05	1989	1979
600	505	4384	502	2.5	9.6	-2.5	492	-4.3	499	240	1.6	5.6	13.03	1.04	1986	1981
550	492	5083	490	-1.2	5.8	-6.0	476	-8.1	490	215	0.8	5.6	16.80	1.15	1986	1976
500	486	5840	484	-5.3	2.2	-10.5	471	-12.4	483	136	0.9	5.6	19.17	1.29	1986	1983
450	477	6659	476	-9.8	7.0	-16.0	452	-17.2	474	107	2.0	5.9	23.47	1.48	1987	1978
400	470	7563	468	-15.2	-5.9	-21.1	417	-22.8	468	097	3.4	6.2	28.18	1.50	1986	1981
350	456	8560	456	-22.0	-11.5	-28.3	363	-29.8	455	093	5.5	7.3	33.75	1.67	1989	1985
300	443	9680	443	-30.2	-21.0	-38.0	272	-37.9	441	087	7.8	9.2	40.47	1.85	1971	1976
250	424	10952	423	-40.5	-28.9	-49.0	61	-45.8	423	083	10.6	11.9	51.16	2.03	1988	1978
200	398	12434	396	-53.5	-43.5	-62.3			395	082	14.2	15.5	62.67	2.09	1989	1985
175	332	13279	331	-61.1	-50.7	-70.9			330	082	16.9	18.2	70.01	2.32	1988	1979
150	285	14218	285	-69.1	-58.7	-80.3			284	083	19.4	20.7	84.07	2.55	1988	1979
125	227	15281	226	-76.8	-66.1	-87.1			226	085	22.1	23.1	105.15	2.83	1988	1979
100	180	16556	180	-79.4	-65.5	-95.0			177	087	21.0	21.8	123.46	3.72	1989	1978
80	109	17856	109	-73.8	-63.1	-86.0			108	091	15.2	15.8	135.84	4.50	1989	1978
70	95	18650	95	-70.2	-60.1	-81.1			93	093	13.0	13.7	146.08	4.57	1989	1979
60	70	19583	70	-67.0	-57.7	-77.0			70	096	12.2	13.3	170.53	4.47	1989	1978
50	54	20701	54	-63.6	-51.5	-77.0			52	093	12.0	13.1	197.64	4.46	1989	1978
40	34	22118	34	-59.1	-51.3	-69.0			30	096	13.4	14.8	251.68	4.25	1989	1978
30	18	24011	18	-54.0	-45.5	-62.0			16	098	13.3	14.9			1989	1978
25	11	25332	10	-49.0	-42.9	-56.3			11	096	15.5	16.6			1989	1988
20	9	26845	9	-45.2	-38.7	-53.3			9	084	18.9	21.3			1989	1988
15	3	28806	3	-47.5	-45.7	-49.5			3	085	33.1	33.3			1988	1988
10	3	31503	3	-44.0	-41.9	-45.9			3	093	33.6	33.6			1988	1988
7	3	33928	3	-40.3	-38.5	-43.5			3	087	48.9	49.0			1988	1988

FREEZING LEVEL

N P ALT

496 565 486

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

178 110 1604 -81.5

# NORMALS OF RADIOSONDE DATA

43333 PORT BLAIR

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	618	999	618	26.5	29.0	23.0	618	23.6	618	216	0.7	1.7	1.18	0.48	1972	1973
<i>1000</i>	564	73	220	26.6	29.0	22.8	220	23.4	218	159	0.3	1.3	8.53	0.52	1972	1983
<i>950</i>	564	520	564	23.7	28.4	20.0	564	20.7	563	219	1.5	5.3	7.86	0.45	1986	1975
<i>900</i>	564	996	564	20.7	27.2	13.2	563	17.5	563	221	1.5	5.8	8.85	0.61	1986	1980
<i>850</i>	564	1489	563	17.9	25.8	13.8	563	14.0	562	211	1.4	5.8	9.02	0.72	1986	1981
<i>800</i>	564	2007	563	15.1	23.6	10.0	562	10.6	562	197	1.1	5.7	9.53	0.76	1986	1977
<i>750</i>	564	2550	564	12.3	21.0	6.8	560	6.6	563	176	0.9	5.5	10.75	0.79	1986	1982
<i>700</i>	564	3128	564	9.2	18.6	-9.0	554	2.5	563	159	0.7	5.4	10.98	0.88	1986	1974
<i>650</i>	555	3740	555	5.9	16.2	-5.3	540	-1.5	552	126	0.9	5.5	14.60	0.90	1990	1985
<i>600</i>	547	4391	546	2.4	14.6	-4.0	520	-5.1	543	099	1.3	5.7	14.20	0.99	1990	1971
<i>550</i>	538	5090	536	-1.3	11.8	-8.0	497	-9.0	534	095	2.2	5.8	18.58	1.13	1990	1971
<i>500</i>	531	5845	529*	-5.5	1.8	-11.0	470	-13.4	528	093	2.7	5.7	18.19	1.11	1986	1977
<i>450</i>	518	6664	516	-10.1	-2.9	-16.9	418	-17.9	515	089	3.3	5.8	22.80	1.21	1989	1979
<i>400</i>	512	7566	510	-15.5	-8.7	-22.5	370	-24.0	508	093	4.0	6.0	25.78	1.32	1989	1979
<i>350</i>	497	8562	497	-22.2	-12.9	-28.3	305	-30.6	494	094	4.8	6.6	31.24	1.45	1990	1979
<i>300</i>	484	9680	483	-30.5	-19.7	-39.0	220	-38.2	481	095	5.5	7.1	36.90	1.65	1990	1977
<i>250</i>	459	10951	458	-40.9	-26.5	-48.5	46	-45.7	459	096	7.3	9.0	43.41	1.74	1990	1985
<i>200</i>	426	12430	424	-53.8	-44.7	-63.3	6	-59.9	426	097	9.6	11.4	54.22	1.89	1988	1985
<i>175</i>	367	13275	365	-61.3	-50.1	-72.1	3	-69.0	365	097	10.8	12.7	63.41	2.18	1988	1985
<i>150</i>	320	14218	318	-69.1	-57.9	-79.0			318	098	13.0	14.5	72.47	2.39	1988	1977
<i>125</i>	263	15282	262	-76.7	-68.9	-87.0			259	100	14.4	15.6	81.00	2.31	1990	1978
<i>100</i>	211	16549	211	-80.6	-68.7	-91.0			209	097	13.4	14.6	92.72	3.48	1986	1977
<i>80</i>	152	17830	152	-75.2	-61.9	-89.0			148	094	9.4	10.9	104.57	3.76	1986	1978
<i>70</i>	114	18626	114	-70.8	-58.9	-85.0			113	093	7.6	9.3	130.39	4.35	1988	1978
<i>60</i>	82	19552	82	-67.1	-54.3	-83.0			82	096	7.2	9.4	142.35	4.92	1988	1978
<i>50</i>	70	20679	70	-62.0	-51.5	-77.0			69	104	6.2	9.3	158.29	4.27	1987	1978
<i>40</i>	49	22110	49	-56.6	-44.3	-71.0			49	092	3.4	8.1	208.63	5.78	1990	1978
<i>30</i>	21	24008	21	-53.0	-42.7	-63.0			21	089	5.0	9.4	130.77	3.66	1988	1972
<i>25</i>	13	25211	13	-50.5	-44.1	-58.0			13	087	7.8	9.3			1990	1972
<i>20</i>	6	26617	6	-48.5	-44.9	-56.9			6	107	5.9	8.7			1987	1990
<i>15</i>	1	28386	1	-44.5	-44.5	-44.5			1	110	14.0	14.0			1988	1988
<i>10</i>																
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
539	567	483	11	109	1619	-79.0	204	105	1630	-81.9

**NORMALS OF RADIOSONDE DATA**

43333 PORT BLAIR

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i><b>SURFACE</b></i>	600	1000	600	26.4	28.4	23.0	600	23.0	600	091	1.5	2.4	0.95	0.46	1979	1971
<i><b>1000</b></i>	526	82	334	26.3	28.4	23.0	334	22.6	334	083	1.8	2.4	7.06	0.54	1980	1971
<i><b>950</b></i>	526	528	526	23.1	27.6	17.4	526	19.8	526	091	3.6	6.0	7.91	0.48	1990	1985
<i><b>900</b></i>	526	1003	526	20.0	26.2	12.2	526	16.4	526	100	4.1	6.4	6.89	0.67	1986	1985
<i><b>850</b></i>	526	1495	526	17.2	23.4	11.0	524	12.7	526	106	3.9	6.3	6.30	0.69	1986	1985
<i><b>800</b></i>	526	2011	526	14.5	21.0	9.8	517	8.9	526	108	3.7	6.2	6.38	0.70	1986	1980
<i><b>750</b></i>	526	2552	526	11.8	19.0	6.8	504	5.0	526	107	3.5	6.0	7.43	0.71	1986	1984
<i><b>700</b></i>	526	3130	526	8.7	15.4	3.4	483	1.5	526	106	3.4	6.0	7.26	0.83	1986	1984
<i><b>650</b></i>	511	3740	510	5.6	11.8	0.8	455	-2.2	510	104	3.3	5.9	10.53	0.86	1986	1984
<i><b>600</b></i>	504	4391	502	2.1	8.4	-2.9	428	-5.5	503	099	3.4	5.9	9.89	0.89	1986	1984
<i><b>550</b></i>	496	5089	493	-1.6	5.0	-7.0	389	-9.3	492	100	3.7	6.1	15.71	0.97	1986	1973
<i><b>500</b></i>	494	5844	489	-5.8	1.4	-13.0	341	-13.5	489	096	4.0	6.6	14.66	1.15	1986	1978
<i><b>450</b></i>	489	6662	486	-10.3	8.6	-17.0	304	-18.5	487	098	4.3	7.0	20.87	1.37	1987	1973
<i><b>400</b></i>	483	7563	481	-15.9	-7.7	-23.0	258	-23.9	481	099	4.2	7.1	22.28	1.39	1988	1976
<i><b>350</b></i>	467	8557	466	-22.6	-14.5	-31.0	204	-30.6	466	104	4.4	7.1	28.55	1.39	1988	1976
<i><b>300</b></i>	447	9673	447	-30.8	-22.1	-37.9	144	-38.1	446	113	4.2	7.4	33.70	1.59	1986	1979
<i><b>250</b></i>	423	10942	422	-41.1	-31.9	-49.5	33	-45.7	421	129	4.4	7.9	40.05	1.81	1986	1979
<i><b>200</b></i>	386	12420	384	-54.1	-43.7	-62.0			384	134	5.6	9.4	54.65	2.62	1990	1977
<i><b>175</b></i>	354	13263	352	-61.4	-49.1	-70.1			348	130	6.5	10.3	65.23	2.58	1990	1987
<i><b>150</b></i>	306	14204	306	-69.2	-56.7	-78.9			306	124	7.4	11.0	77.90	2.68	1990	1987
<i><b>125</b></i>	246	15282	246	-76.9	-66.0	-86.0			243	116	7.7	11.3	96.01	2.62	1972	1976
<i><b>100</b></i>	199	16545	199	-81.6	-69.7	-92.3			198	105	7.7	10.0	109.17	2.74	1988	1979
<i><b>80</b></i>	133	17814	133	-77.4	-61.3	-89.0			133	099	5.8	7.8	143.65	2.97	1986	1977
<i><b>70</b></i>	101	18607	101	-72.8	-58.1	-86.9			99	097	4.7	7.1	166.14	3.77	1986	1988
<i><b>60</b></i>	78	19523	78	-68.6	-53.5	-79.9			77	093	3.4	7.0	180.12	4.45	1986	1979
<i><b>50</b></i>	59	20664	59	-64.4	-49.1	-73.0			59	091	2.9	8.2	476.21	3.67	1986	1972
<i><b>40</b></i>	36	22105	36	-60.4	-48.1	-71.0			36	096	4.6	8.1	517.69	4.45	1989	1972
<i><b>30</b></i>	22	23936	22	-55.4	-48.3	-69.0			22	093	6.7	9.8	216.90	3.93	1985	1972
<i><b>25</b></i>	15	25189	15	-53.2	-47.1	-66.0			15	098	6.6	9.7			1986	1972
<i><b>20</b></i>	9	26659	9	-49.0	-43.1	-55.5			9	099	10.1	11.0			1986	1982
<i><b>15</b></i>	2	28520	2	-47.8	-45.7	-49.9			2	079	7.0	7.5			1990	1985
<i><b>10</b></i>																
<i><b>7</b></i>																

**FREEZING LEVEL**

**1ST TROPOPAUSE**

**2ND TROPOPAUSE**

N P ALT

N P ALT T

N P ALT T

497 571 479

186 103 1639 -83.4

## NORMALS OF RADIOSONDE DATA

43333 PORT BLAIR

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	620	1002	620	26.2	28.4	21.6	620	21.6	620	060	2.9	3.3	0.95	0.41	1986	1980
1000	534	94	469	26.1	28.4	23.0	469	21.3	472	059	3.0	3.3	9.32	0.45	1988	1975
950	534	540	533	22.7	31.0	18.0	532	18.7	534	068	6.1	7.0	10.66	0.62	1990	1980
900	534	1014	533	19.5	28.0	14.0	531	15.3	532	077	5.9	6.9	10.58	0.68	1990	1977
850	534	1504	533	16.7	24.6	8.0	525	11.0	532	087	5.3	6.4	11.48	0.86	1987	1977
800	534	2020	534	14.4	22.4	7.4	503	6.4	533	092	4.4	5.8	12.10	0.76	1987	1984
750	534	2561	534	12.0	20.0	5.0	449	1.9	534	093	3.8	5.5	13.64	0.73	1986	1984
700	534	3138	533	9.2	18.8	2.4	393	-2.0	532	095	3.4	5.3	13.06	0.78	1990	1984
650	524	3749	523	5.9	14.2	-4.7	330	-5.3	523	094	3.4	5.5	14.44	0.95	1990	1980
600	518	4400	517	2.5	12.0	-4.0	285	-8.6	516	091	3.5	5.8	13.49	0.94	1977	1977
550	512	5098	512	-1.4	8.0	-9.0	241	-12.5	512	091	3.5	6.2	16.28	1.07	1990	1975
500	500	5853	500	-5.7	3.0	-11.0	200	-16.6	499	089	3.6	6.7	16.60	1.13	1990	1977
450	482	6671	480	-10.5	-1.1	-16.0	170	-20.8	481	093	3.6	7.1	20.62	1.18	1990	1977
400	473	7570	472	-16.2	-6.3	-23.0	147	-25.8	473	099	3.0	7.1	23.10	1.26	1990	1977
350	462	8563	461	-23.0	-11.3	-31.0	110	-31.9	461	122	2.1	7.3	27.98	1.44	1986	1977
300	452	9677	450	-31.3	-19.3	-39.3	78	-38.2	449	169	2.4	7.6	33.14	1.78	1990	1990
250	426	10943	426	-41.7	-28.3	-51.1	24	-46.3	425	186	4.3	8.7	42.11	2.12	1990	1990
200	396	12417	396	-54.7	-40.3	-73.0	3	-53.2	395	189	6.6	11.1	57.57	2.58	1990	1972
175	342	13258	342	-61.9	-47.1	-72.0	3	-64.2	341	187	6.9	11.3	62.41	2.41	1990	1978
150	309	14196	309	-69.3	-53.1	-78.9			309	183	6.7	11.7	74.87	2.51	1990	1979
125	260	15258	260	-77.0	-61.1	-87.0			258	170	5.2	10.3	96.90	3.09	1990	1976
100	204	16530	203	-81.7	-73.3	-93.0			202	133	4.3	9.0	112.94	2.62	1990	1977
80	141	17807	140	-78.1	-66.9	-88.0			140	110	3.3	7.2	126.28	3.35	1988	1977
70	110	18592	110	-74.3	-60.1	-85.1			108	115	2.4	6.9	145.08	2.99	1990	1982
60	85	19506	85	-68.5	-51.5	-80.0			83	211	1.1	7.7	160.08	3.47	1990	1976
50	60	20630	60	-63.2	-51.1	-72.0			59	212	1.3	9.0	158.74	3.01	1988	1976
40	33	22054	33	-58.2	-45.1	-67.0			33	108	1.3	11.4	190.90	3.41	1988	1971
30	16	23829	16	-56.0	-46.7	-63.0			16	113	3.2	11.8			1988	1976
25	11	25065	11	-52.5	-44.5	-58.9			10	121	3.2	11.6			1986	1982
20	7	26607	7	-48.1	-42.3	-54.3			7	080	6.9	13.8			1986	1982
15	4	28419	4	-47.2	-42.1	-51.7			4	171	2.3	19.3			1986	1982
10	1	31272	1	-41.5	-41.5	-41.5			1	080	24.0	24.0			1986	1986
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
513	567	485					189	101	1648	-83.4

## NORMALS OF RADIOSONDE DATA

42700 RANCHI

JANUARY 1979-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	310	947	310	19.4	25.0	12.0	304	8.8	310	321	1.1	1.6	0.89	1.19	1980	1981
<i>1000</i>	255	136											8.58			
<i>950</i>	242	571											18.72			
<i>900</i>	242	1042	242	16.4	23.4	8.0	230	4.3	241	315	3.1	4.4	7.94	1.08	1988	1989
<i>850</i>	242	1525	242	12.8	25.0	2.4	221	1.6	240	294	4.6	5.6	8.77	1.27	1988	1989
<i>800</i>	242	2031	242	9.6	23.0	-2.3	189	-1.0	240	290	6.6	7.8	10.03	1.53	1988	1987
<i>750</i>	242	2559	242	6.9	21.2	-4.1	157	-4.1	240	290	9.1	10.3	9.14	1.62	1988	1987
<i>700</i>	242	3128	242	4.1	18.2	-6.5	126	-8.1	241	289	10.9	12.2	12.50	1.79	1989	1987
<i>650</i>	235	3725	235	1.2	11.0	-10.3	90	-12.3	230	286	13.4	14.6	15.43	1.73	1989	1987
<i>600</i>	231	4368	230	-1.8	7.6	-13.1	66	-15.5	221	281	15.8	16.9	16.80	1.88	1989	1987
<i>550</i>	228	5058	225	-5.8	4.0	-16.1	48	-19.8	214	279	18.5	19.7	23.65	2.02	1989	1987
<i>500</i>	224	5796	222	-10.3	1.2	-19.5	40	-23.3	209	278	21.9	23.5	25.29	2.17	1989	1987
<i>450</i>	217	6599	215	-15.3	-3.1	-25.1	32	-28.0	195	277	25.5	27.2	28.95	2.40	1989	1982
<i>400</i>	212	7480	211	-21.1	-7.5	-32.7	24	-31.0	184	272	28.5	30.6	41.08	2.69	1989	1982
<i>350</i>	204	8454	203	-27.3	-17.7	-40.5	15	-35.9	153	272	33.1	35.5	48.17	2.55	1986	1982
<i>300</i>	194	9549	192	-34.1	-21.5	-46.7	7	-40.3	125	269	37.1	40.0	62.28	2.68	1986	1982
<i>250</i>	179	10802	179	-43.0	-34.3	-54.3	2	-44.9	90	266	42.2	45.0	71.59	2.48	1989	1982
<i>200</i>	164	12278	164	-53.3	-44.9	-62.9			54	268	42.1	45.3	79.97	1.60	1989	1988
<i>175</i>	134	13137	134	-58.4	-50.1	-71.1			36	271	42.5	44.7	79.31	1.41	1987	1989
<i>150</i>	120	14097	120	-64.2	-54.1	-82.1			22	278	42.3	43.7	75.71	1.74	1987	1989
<i>125</i>	90	15189	90	-69.0	-59.5	-77.9			16	278	35.5	38.0	90.19	1.48	1986	1989
<i>100</i>	71	16525	71	-73.9	-64.3	-82.1			13	272	26.3	28.7	102.68	2.16	1986	1988
<i>80</i>	56	17822	56	-74.5	-62.7	-83.5			6	268	20.9	21.3	112.50	3.51	1983	1987
<i>70</i>	52	18608	52	-71.0	-57.1	-79.3			5	289	13.4	15.0	91.10	2.37	1983	1988
<i>60</i>	48	19539	48	-66.8	-52.1	-74.1			3	300	8.9	11.3	96.10	1.98	1983	1986
<i>50</i>	40	20642	40	-61.3	-49.7	-68.3			2	255	7.4	10.0	122.77	4.50	1989	1987
<i>40</i>	33	22051	33	-56.3	-46.5	-64.1			2	257	8.5	9.5	142.22	4.13	1989	1987
<i>30</i>	19	23854	19	-52.5	-42.9	-60.3			2	174	12.4	12.5			1989	1987
<i>25</i>	9	25039	9	-51.9	-47.7	-55.5			1	131	17.0	17.0			1986	1986
<i>20</i>	6	26530	6	-50.8	-45.3	-53.9									1986	1986
<i>15</i>	1	28414	1	-51.3	-51.3	-51.3									1986	1986
<i>10</i>																
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

238	634	396		5	180	1296	-59.1			60	097	1676	-76.0
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# NORMALS OF RADIOSONDE DATA

42700 RANCHI

FEBRUARY 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	311	945	311	22.3	30.0	12.0	305	8.6	311	315	1.7	2.5	1.00	1.29	1980	1981
1000	248	115											12.05			
950	239	554											17.56			
900	239	1031	239	19.2	28.6	9.8	228	4.2	238	310	3.9	5.2	9.18	1.86	1988	1979
850	239	1519	239	15.1	25.0	4.4	226	1.5	237	294	5.0	5.9	7.00	1.86	1988	1982
800	239	2028	238	11.2	21.6	2.2	216	-0.6	237	284	6.8	7.6	6.55	1.81	1988	1983
750	239	2553	238	7.5	18.0	-4.9	198	-3.3	237	283	9.5	10.4	11.23	1.80	1988	1983
700	239	3127	239	4.3	14.6	-5.3	169	-6.8	237	285	12.1	13.1	9.57	1.68	1988	1979
650	236	3720	236	0.9	12.4	-7.7	128	-10.3	233	284	13.8	14.8	10.14	1.60	1988	1982
600	234	4365	234	-2.6	7.6	-10.5	95	-13.3	226	283	16.5	17.6	15.84	1.67	1988	1982
550	230	5051	230	-6.6	3.6	-14.7	76	-17.7	218	281	19.4	20.4	23.39	1.77	1988	1982
500	225	5790	225	-11.2	-2.1	-20.1	56	-22.0	212	278	22.6	23.8	24.11	1.76	1989	1982
450	218	6589	218	-16.3	-6.1	-24.9	42	-28.0	194	278	25.0	26.2	28.34	1.75	1989	1982
400	214	7468	214	-22.0	-11.9	-30.3	29	-32.7	186	276	30.0	31.5	35.27	1.89	1990	1982
350	207	8440	206	-28.0	-17.5	-40.3	18	-38.9	154	277	34.4	36.4	38.45	1.76	1989	1982
300	197	9534	195	-34.7	-25.7	-50.7	3	-40.9	125	275	39.2	41.4	48.60	2.31	1989	1982
250	173	10788	172	-43.1	-31.9	-59.9	1	-46.9	81	272	42.5	45.1	56.66	2.80	1989	1982
200	150	12268	150	-52.0	-41.9	-64.5			48	273	47.2	49.7	74.10	2.98	1983	1982
175	123	13121	123	-56.8	-48.9	-67.5			29	279	44.9	46.7	70.76	3.17	1987	1979
150	112	14088	112	-62.2	-53.7	-74.5			19	280	43.0	44.5	94.38	2.92	1987	1979
125	83	15190	83	-67.7	-58.5	-80.7			11	279	41.2	43.9	91.40	3.99	1990	1989
100	70	16525	70	-72.7	-64.1	-82.1			6	272	31.3	31.3	79.34	2.64	1990	1981
80	48	17837	48	-72.6	-57.5	-79.1			3	294	17.9	18.3	95.51	3.00	1986	1990
70	41	18625	41	-69.6	-51.5	-80.1			1	312	9.0	9.0	48.32	2.16	1986	1990
60	40	19552	40	-65.4	-47.5	-78.9			1	089	15.0	15.0	43.12	2.64	1986	1990
50	38	20682	38	-60.2	-43.5	-77.5			1	282	6.0	6.0	76.14	3.69	1986	1990
40	35	22065	34	-56.7	-47.9	-71.3			1	137	6.0	6.0	54.74	2.49	1986	1990
30	24	23874	24	-53.4	-45.3	-63.9							63.17	2.03	1983	1990
25	20	25018	20	-52.5	-47.1	-62.5									1988	1990
20	16	26463	16	-50.2	-44.1	-60.9									1988	1990
15	8	28402	8	-46.3	-40.3	-50.5									1988	1983
10																
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

233 639 388

2 190 1259 -63.5

53 097 1674 -74.5

NORMALS OF RADIOSONDE DATA

42700 RANCHI

MARCH 1979-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	331	943	331	27.0	36.8	15.0	323	9.0	330	308	2.5	3.5	0.80	0.94	1986	1982
1000	263	85											7.75			
950	246	530											13.80			
900	246	1015	246	23.8	32.0	14.0	233	4.7	240	302	4.4	6.2	7.52	1.06	1990	1986
850	246	1510	246	19.6	28.2	9.8	231	1.7	240	295	5.6	6.7	6.53	1.11	1986	1986
800	246	2028	246	15.2	25.4	7.2	227	-0.2	240	285	6.4	7.4	6.14	1.19	1986	1986
750	246	2557	246	10.7	19.8	4.2	221	-2.4	240	281	8.2	9.3	10.08	1.15	1986	1981
700	246	3140	246	6.4	15.2	-9.9	201	-5.2	241	283	10.6	11.7	5.89	0.87	1988	1988
650	240	3735	240	2.3	13.0	-6.9	173	-8.1	234	285	13.2	14.2	10.77	0.93	1988	1988
600	234	4385	233	-1.5	8.8	-9.5	143	-11.9	227	284	15.7	16.9	5.90	1.07	1988	1980
550	228	5075	227	-5.5	4.0	-13.3	108	-16.5	221	282	16.9	18.0	11.01	1.24	1988	1981
500	225	5813	224	-10.0	1.8	-19.1	88	-22.1	216	282	19.3	20.5	10.47	1.53	1988	1981
450	217	6617	216	-15.1	-0.9	-25.9	64	-26.4	201	279	21.2	22.5	16.81	1.76	1990	1980
400	216	7502	216	-20.9	-4.5	-30.9	47	-30.3	194	278	24.0	25.9	19.29	1.98	1990	1989
350	206	8481	205	-27.1	-11.7	-37.1	32	-37.2	170	278	26.5	28.6	27.85	2.41	1990	1989
300	195	9580	195	-33.7	-20.1	-46.3	12	-41.8	142	277	30.4	32.8	41.19	2.34	1990	1981
250	184	10839	184	-41.8	-30.5	-54.1	1	-43.7	112	275	35.5	38.7	52.10	2.27	1990	1981
200	157	12331	157	-51.0	-39.1	-63.3			67	271	39.1	41.4	58.26	2.62	1989	1988
175	134	13193	134	-55.9	-39.1	-70.1			47	273	34.8	36.7	79.13	2.72	1989	1990
150	114	14174	114	-61.1	-43.9	-70.3			33	277	33.1	35.0	79.03	2.86	1989	1989
125	87	15285	87	-66.6	-48.1	-76.5			23	274	31.9	33.2	89.12	3.21	1987	1986
100	75	16596	75	-72.3	-64.3	-82.9			17	282	26.6	27.8	94.28	3.56	1990	1979
80	57	17880	57	-72.9	-65.3	-81.9			10	288	14.0	16.7	106.02	3.49	1983	1979
70	53	18667	53	-70.3	-55.3	-79.3			7	299	14.5	16.1	116.38	3.62	1989	1979
60	44	19604	44	-66.5	-56.5	-75.9			7	341	3.8	12.9	93.75	3.44	1986	1983
50	40	20711	40	-60.7	-49.5	-71.5			8	104	2.9	10.9	97.40	2.65	1983	1983
40	33	22113	33	-54.3	-44.3	-63.9			8	244	6.7	17.9	75.12	2.89	1983	1983
30	25	23984	25	-49.3	-40.9	-56.1			5	171	6.2	11.4	88.98	3.70	1981	1983
25	15	25145	15	-47.7	-40.9	-53.7			4	306	4.9	14.0			1983	1988
20	10	26598	10	-44.9	-38.3	-49.1			4	071	1.4	13.7			1983	1983
15	3	28557	3	-41.6	-35.1	-44.9			1	043	8.0	8.0			1983	1983
10																
7																

FREEZING LEVEL

1ST TROPOPAUSE

2ND TROPOPAUSE

N P ALT

N P ALT T

N P ALT T

240 619 415

11 235 1115 -54.6

60 099 1673 -74.3



# NORMALS OF RADIOSONDE DATA

42700 RANCHI

APRIL 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	340	939	340	31.6	43.0	18.4	332	10.8	339	314	2.2	3.8	0.91	1.25	1986	1980
1000	277	44											5.78			
950	267	497											8.30			
900	267	990	267	28.8	41.8	18.6	257	6.5	262	306	4.3	7.0	5.36	1.20	1986	1983
850	267	1493	267	24.6	36.2	14.0	250	3.6	264	300	5.6	7.3	5.73	1.35	1986	1983
800	267	2020	267	20.1	31.8	10.6	249	1.4	261	295	6.4	7.6	5.65	1.30	1986	1983
750	267	2558	267	15.2	27.6	7.0	248	-0.5	261	288	7.5	8.4	8.83	1.35	1986	1985
700	267	3148	265	10.0	22.4	2.0	246	-3.0	262	283	8.8	9.9	8.53	1.44	1986	1985
650	263	3750	260	5.0	18.2	-4.0	230	-6.1	255	283	10.6	11.6	15.24	1.58	1987	1978
600	257	4405	254	0.3	10.8	-7.1	192	-9.7	245	284	12.7	14.0	13.21	1.55	1990	1985
550	253	5097	251	-4.1	4.2	-12.0	153	-14.9	238	289	14.2	15.5	18.46	1.58	1990	1978
500	247	5842	246	-8.6	-1.5	-16.1	103	-19.3	229	288	16.0	17.3	18.73	1.45	1990	1983
450	243	6649	243	-13.6	-5.9	-22.3	68	-23.6	218	286	18.1	19.6	22.34	1.39	1986	1983
400	232	7541	232	-19.2	-9.5	-29.1	45	-28.4	207	282	20.6	22.5	26.06	1.48	1986	1983
350	225	8522	225	-25.8	-17.9	-37.5	29	-34.6	181	281	24.3	26.5	28.48	1.52	1988	1985
300	211	9624	211	-33.1	-24.5	-42.9	12	-42.8	158	275	26.9	29.7	40.11	1.56	1990	1983
250	198	10882	198	-41.7	-27.0	-54.7	1	-51.1	123	267	31.4	35.9	49.73	2.09	1978	1983
200	180	12362	180	-51.5	-40.5	-63.3			86	266	28.9	33.7	62.54	2.17	1987	1983
175	166	13223	165	-56.8	-42.5	-69.7			61	265	27.9	31.4	70.00	2.13	1990	1987
150	148	14191	148	-62.6	-46.1	-71.1			50	268	23.6	26.8	77.74	2.42	1990	1983
125	125	15298	125	-68.3	-52.5	-79.1			39	267	20.2	22.6	97.61	3.72	1990	1979
100	105	16618	105	-73.1	-57.3	-83.0			28	267	13.3	17.5	104.76	3.53	1990	1978
80	79	17920	79	-72.7	-59.1	-81.5			18	261	6.5	14.0	103.85	2.92	1990	1981
70	69	18708	69	-69.4	-55.1	-82.0			11	323	4.1	10.9	129.16	2.76	1983	1978
60	59	19647	59	-63.8	-49.3	-74.1			5	302	4.4	6.8	132.70	2.10	1989	1986
50	53	20784	53	-57.6	-42.5	-70.9			4	034	0.8	6.0	145.35	2.88	1988	1983
40	39	22193	39	-52.9	-39.3	-64.9			3	256	0.3	3.0	175.29	3.02	1989	1983
30	31	24039	31	-47.8	-34.5	-53.7			1	281	1.0	1.0	158.08	2.98	1986	1981
25	20	25250	20	-44.3	-38.1	-57.1			1	281	1.0	1.0			1988	1988
20	11	26765	11	-41.6	-36.7	-47.1									1989	1989
15	4	28704	4	-37.0	-30.3	-41.1									1989	1986
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE				
N	P	ALT	N	P	ALT	T	N	P	ALT	T	
253	596	446									
			2	111	1593	-74.0		86	096	1689	-75.3

## NORMALS OF RADIOSONDE DATA

42700 RANCHI

MAY 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	371	936	371	32.2	40.0	20.0	365	15.1	371	313	0.9	3.5	1.58	1.99	1987	1986
1000	324	23											17.30			
950	301	478											17.04			
900	301	973	301	29.6	37.8	19.0	295	10.7	285	319	2.1	6.1	16.80	1.80	1980	1987
850	301	1478	301	25.5	35.0	14.0	291	7.5	284	316	3.5	6.2	15.26	1.73	1989	1987
800	301	2007	301	21.3	30.0	11.6	291	4.6	283	308	4.8	6.9	15.02	1.55	1989	1987
750	301	2552	301	16.6	32.2	5.8	290	2.4	284	308	6.4	7.5	15.28	1.62	1989	1989
700	301	3143	300	11.6	29.0	0.4	287	-0.3	285	303	7.6	8.7	15.98	1.69	1989	1989
650	293	3748	292	6.6	19.0	-2.9	271	-3.6	273	301	9.0	10.5	12.34	1.66	1989	1989
600	290	4407	290	1.9	12.4	-4.3	251	-7.6	262	296	10.4	11.8	19.61	1.73	1989	1987
550	281	5106	280	-2.2	6.8	-9.1	202	-11.6	250	295	11.0	12.5	21.65	1.83	1990	1987
500	272	5855	271	-5.9	3.0	-14.1	139	-16.0	238	295	11.9	13.8	25.40	1.82	1986	1985
450	267	6674	266	-10.2	6.2	-20.9	92	-20.4	223	290	12.0	14.2	27.77	2.10	1988	1986
400	259	7571	256	-15.4	-4.7	-26.1	61	-24.8	210	283	13.6	15.7	34.56	2.18	1990	1987
350	251	8567	248	-21.6	-8.5	-31.9	39	-30.0	190	276	15.2	17.3	38.10	2.38	1990	1987
300	238	9692	235	-28.9	-16.1	-40.9	22	-36.7	176	265	16.9	19.4	53.56	2.31	1990	1987
250	219	10975	218	-38.1	-25.9	-47.1	6	-44.2	148	259	19.1	21.7	66.71	2.58	1990	1981
200	192	12480	191	-49.5	-37.5	-61.7			118	252	17.7	21.0	89.40	2.62	1990	1987
175	161	13351	160	-55.9	-43.5	-64.9			96	251	16.3	19.5	102.14	2.70	1990	1979
150	139	14315	139	-62.9	-50.1	-71.9			78	245	13.2	16.3	112.92	2.70	1990	1979
125	114	15430	114	-69.5	-58.1	-80.5			52	237	7.0	12.1	140.11	3.17	1990	1979
100	100	16739	100	-75.0	-64.3	-85.9			52	209	3.1	9.7	150.06	2.99	1989	1979
80	78	18023	78	-75.5	-66.9	-85.1			38	113	3.5	10.2	143.19	2.51	1986	1979
70	74	18813	74	-71.5	-58.9	-81.9			36	117	4.6	9.2	154.72	2.89	1983	1979
60	63	19733	62	-66.3	-52.9	-76.0			27	069	3.8	9.6	180.93	3.41	1986	1978
50	56	20851	56	-59.7	-45.1	-72.0			21	089	4.1	7.0	179.75	4.70	1986	1978
40	44	22309	44	-54.5	-44.3	-68.0			16	057	5.1	9.6	217.31	4.76	1988	1978
30	33	24207	33	-48.2	-41.9	-59.1			9	102	5.7	7.7	160.50	1.60	1988	1988
25	25	25389	25	-45.9	-39.7	-56.7			6	340	2.1	11.2	137.85	1.95	1988	1988
20	21	26923	21	-42.7	-36.1	-55.1			2	324	1.1	6.5	132.31	2.70	1988	1983
15	5	28664	5	-44.8	-39.5	-49.9			2	044	9.4	9.5			1988	1988
10	2	31175	2	-41.4	-38.5	-44.3			1	113	5.0	5.0			1983	1988
7	1	33787	1	-37.1	-37.1	-37.1			1	254	6.0	6.0			1983	1983

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

287 577 472

84 095 1708 -77.5

### NORMALS OF RADIOSONDE DATA

42700 RANCHI

JUNE 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	360	933	360	29.3	40.8	22.0	349	21.4	359	151	0.1	3.2	0.76	1.76	1986	1981
<i>1000</i>	286	-6											10.41			
<i>950</i>	257	442											10.68			
<i>900</i>	258	934	258	27.3	38.8	20.6	254	17.9	223	317	0.7	6.1	9.35	1.43	1985	1988
<i>850</i>	258	1437	258	24.0	33.0	17.0	254	14.7	224	331	1.9	6.4	9.18	1.11	1986	1989
<i>800</i>	258	1964	257	20.4	28.8	10.6	252	12.2	223	324	2.9	7.0	9.02	1.01	1987	1989
<i>750</i>	257	2512	256	16.6	23.8	7.4	252	9.5	223	320	3.9	7.7	7.94	0.79	1990	1987
<i>700</i>	258	3101	257	12.6	21.6	5.8	254	5.8	224	318	4.8	8.6	8.75	0.94	1989	1989
<i>650</i>	250	3714	249	8.6	16.6	2.6	243	1.7	215	313	5.2	9.0	9.44	1.23	1989	1983
<i>600</i>	246	4376	244	5.0	13.2	-1.9	232	-2.5	205	310	5.3	9.1	7.84	1.35	1985	1979
<i>550</i>	241	5086	237	1.4	10.0	-8.1	213	-6.7	204	311	4.4	8.7	14.83	1.32	1985	1979
<i>500</i>	238	5844	234	-2.6	5.6	-13.1	197	-11.0	197	307	3.6	8.6	10.04	1.46	1990	1982
<i>450</i>	231	6673	229	-6.8	3.4	-13.9	173	-15.0	186	304	2.4	7.9	18.03	1.40	1985	1985
<i>400</i>	218	7585	217	-11.7	-2.9	-19.5	142	-20.0	170	297	2.0	7.5	17.76	1.49	1990	1986
<i>350</i>	213	8593	211	-17.8	-8.3	-26.1	116	-25.9	155	290	1.5	7.8	23.70	1.55	1983	1986
<i>300</i>	203	9733	200	-25.4	-18.3	-35.9	87	-33.9	141	259	1.2	8.7	32.53	1.60	1989	1986
<i>250</i>	183	11030	179	-35.2	-22.7	-47.5	36	-41.2	117	180	1.2	8.6	44.20	1.86	1988	1986
<i>200</i>	167	12548	165	-47.8	-39.5	-57.9			103	123	3.2	10.1	58.12	2.03	1988	1981
<i>175</i>	146	13422	144	-55.1	-47.1	-65.9			86	125	4.8	10.6	68.29	2.32	1988	1981
<i>150</i>	127	14397	125	-63.0	-53.9	-74.1			73	112	5.4	11.5	81.67	2.30	1990	1981
<i>125</i>	88	15503	86	-70.9	-51.1	-79.7			54	089	6.4	10.6	84.15	2.60	1988	1981
<i>100</i>	71	16805	70	-77.5	-61.1	-85.9			45	087	10.0	12.9	94.73	2.66	1989	1981
<i>80</i>	58	18080	58	-74.5	-55.7	-88.5			38	103	12.4	14.5	114.46	4.35	1989	1983
<i>70</i>	50	18878	50	-69.5	-49.5	-83.5			34	098	12.3	13.2	132.47	4.26	1989	1983
<i>60</i>	39	19797	39	-64.6	-51.3	-78.5			25	088	11.7	13.3	174.38	4.32	1988	1983
<i>50</i>	32	20907	32	-58.2	-44.3	-68.9			19	094	12.0	13.0	170.28	4.73	1988	1983
<i>40</i>	24	22362	24	-52.5	-40.5	-61.5			14	091	10.4	10.9	150.24	3.37	1986	1983
<i>30</i>	19	24277	19	-48.5	-38.9	-57.9			10	091	14.3	15.4			1986	1983
<i>25</i>	13	25405	13	-46.5	-36.9	-55.1			9	096	13.2	14.0			1988	1983
<i>20</i>	4	27034	4	-42.7	-38.7	-46.1			2	077	12.8	13.0			1985	1983
<i>15</i>																
<i>10</i>																
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
237	535	531					60	099	1694	-78.5

## NORMALS OF RADIOSONDE DATA

42700 RANCHI

JULY 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	370	934	370	26.6	35.0	20.0	361	23.7	370	194	0.5	2.5	0.82	0.82	1982	1981
1000	284	3											6.43			
950	244	451											11.18			
900	244	937	244	24.5	33.0	20.0	243	21.1	172	224	1.1	5.4	7.00	0.82	1982	1989
850	244	1437	244	21.5	30.0	15.0	243	18.2	171	261	1.2	6.3	6.70	0.74	1982	1989
800	244	1961	244	18.6	25.0	11.6	243	15.2	173	275	1.3	6.2	5.59	0.65	1988	1989
750	244	2507	244	15.6	24.0	8.8	243	12.5	173	269	1.2	6.3	5.91	0.80	1988	1989
700	244	3094	244	12.6	24.0	6.0	242	9.0	172	266	0.9	6.0	7.22	1.02	1988	1989
650	236	3709	235	9.4	17.4	3.0	234	5.0	162	250	0.3	5.9	10.47	1.01	1988	1989
600	228	4374	227	6.0	13.0	-1.7	222	1.1	154	073	0.6	6.1	9.46	1.14	1988	1979
550	218	5091	218	2.4	11.8	-4.7	214	-2.8	145	070	1.0	6.3	13.14	1.19	1988	1982
500	215	5848	215	-1.6	8.6	-8.7	207	-7.6	140	086	1.6	6.4	11.16	1.19	1988	1982
450	206	6679	206	-6.0	7.8	-12.5	189	-12.8	131	085	2.3	6.2	19.47	1.66	1982	1985
400	203	7593	201	-11.2	-3.3	-18.3	177	-18.9	125	088	3.2	6.7	23.46	1.70	1990	1985
350	192	8604	189	-17.3	-8.9	-25.5	146	-25.4	114	083	5.0	8.0	28.43	2.03	1990	1989
300	185	9749	182	-25.0	-17.7	-35.7	112	-33.1	107	092	7.4	9.3	40.89	1.99	1990	1989
250	173	11052	172	-34.8	-26.9	-44.3	55	-42.0	98	086	10.6	11.7	52.56	2.21	1988	1982
200	161	12574	161	-47.2	-37.5	-57.1	1	-49.1	84	085	13.1	14.2	69.08	2.69	1988	1982
175	145	13431	144	-55.3	-45.3	-67.1			79	079	15.0	16.3	75.12	2.55	1988	1982
150	120	14399	120	-64.0	-53.1	-78.1			62	079	16.0	17.8	100.05	2.57	1988	1982
125	94	15509	94	-72.0	-61.5	-83.9			45	081	18.7	20.8	124.70	2.35	1988	1985
100	68	16826	68	-76.3	-66.5	-84.0			33	079	24.8	25.5	160.85	2.67	1986	1978
80	53	18120	53	-72.9	-59.1	-84.1			26	083	23.6	24.6	171.93	3.99	1986	1980
70	47	18924	47	-68.6	-55.9	-80.1			22	089	22.2	23.3	171.88	3.71	1986	1980
60	40	19894	40	-63.1	-52.1	-72.1			18	088	20.0	21.3	160.99	3.54	1986	1980
50	31	21056	31	-57.6	-47.9	-65.5			11	097	19.2	19.8	186.00	3.12	1986	1980
40	20	22487	20	-53.5	-46.5	-59.9			4	097	22.0	22.5			1988	1980
30	16	24374	16	-48.6	-43.1	-53.1			3	100	23.4	23.7			1982	1988
25	10	25639	10	-45.4	-38.7	-50.7			2	099	26.6	27.0			1988	1980
20	8	27146	8	-43.7	-39.1	-51.3			1	095	17.0	17.0			1982	1988
15	3	29059	3	-40.0	-34.1	-43.9			1	073	24.0	24.0			1982	1988
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE				
N	P	ALT	N	P	ALT	T	N	P	ALT	T	
215	520	552	3	136	1462	-74.7		59	101	1683	-78.0

## NORMALS OF RADIOSONDE DATA

42700 RANCHI

AUGUST 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	372	934	372	26.6	32.4	17.0	367	23.5	372	137	0.5	2.5	1.08	0.59	1987	1978
1000	321	6											9.17			
950	297	452											10.38			
900	297	940	297	24.5	30.0	19.0	295	21.2	221	180	0.8	5.8	8.03	0.47	1989	1989
850	297	1439	297	21.3	34.0	15.4	295	18.3	221	177	0.5	6.4	8.09	0.52	1989	1989
800	298	1963	298	18.5	34.4	13.4	296	15.3	221	142	0.6	6.4	8.07	0.62	1989	1989
750	298	2510	298	15.5	32.8	6.6	293	12.1	219	152	1.0	6.5	6.93	0.65	1989	1989
700	297	3096	297	12.5	29.6	7.2	289	8.4	218	126	1.0	6.3	7.58	0.73	1989	1979
650	288	3713	288	9.4	24.8	3.8	282	4.3	212	107	1.1	6.4	7.63	0.83	1989	1979
600	283	4376	282	6.1	20.0	0.2	274	0.1	205	103	1.5	6.2	9.46	0.92	1989	1979
550	277	5091	275	2.4	15.0	-4.1	261	-4.6	201	096	2.1	6.3	15.12	1.00	1989	1988
500	275	5849	271	-1.6	6.0	-8.0	247	-9.3	198	084	2.4	6.3	12.38	1.03	1989	1978
450	265	6683	263	-6.1	-0.3	-12.0	228	-14.4	188	082	3.4	6.8	15.30	1.05	1990	1978
400	256	7595	254	-11.4	-4.5	-18.0	203	-20.4	177	086	4.1	7.1	19.42	1.02	1986	1978
350	250	8608	248	-17.7	-8.9	-26.0	153	-26.4	167	083	4.9	7.6	20.49	1.18	1990	1978
300	235	9748	231	-25.3	-17.3	-32.0	118	-33.4	155	084	6.3	8.1	27.74	1.16	1990	1978
250	227	11047	226	-35.3	-27.3	-42.5	48	-42.6	146	088	8.8	10.7	33.94	1.38	1990	1986
200	207	12563	207	-48.1	-37.7	-57.5	2	-48.7	127	083	10.8	12.3	46.49	1.72	1990	1986
175	183	13427	183	-55.8	-46.9	-66.0			104	082	12.5	14.5	51.41	1.66	1990	1978
150	160	14399	160	-63.9	-52.9	-73.0			88	080	14.3	16.3	56.20	1.76	1989	1978
125	128	15495	128	-72.4	-60.3	-80.9			74	076	16.5	18.0	75.57	2.17	1989	1979
100	100	16774	100	-77.8	-66.3	-87.5			51	080	19.9	20.6	87.40	2.57	1989	1987
80	73	18051	73	-73.8	-61.9	-82.1			38	087	19.5	20.3	102.61	3.24	1989	1987
70	64	18857	64	-69.0	-56.5	-79.7			30	091	18.6	19.5	126.80	3.76	1986	1987
60	53	19772	53	-63.6	-52.3	-75.9			24	093	15.3	16.3	123.79	3.51	1986	1987
50	46	20914	46	-59.1	-49.5	-72.0			18	088	13.9	15.2	122.53	4.44	1989	1978
40	36	22308	36	-55.6	-48.7	-65.7			13	093	16.8	17.1	90.81	1.61	1986	1986
30	24	24166	24	-51.5	-42.5	-62.1			6	094	19.0	19.5	146.39	4.04	1986	1987
25	18	25335	18	-50.5	-45.3	-61.1			4	094	18.1	18.3			1986	1987
20	13	26760	13	-47.5	-42.7	-56.3			3	073	24.4	27.3			1986	1987
15	8	28660	8	-45.3	-39.7	-53.9			2	085	18.5	18.5			1989	1987
10	3	31281	3	-43.3	-38.9	-51.1									1986	1987
7	1	33674	1	-40.7	-40.7	-40.7									1986	1986

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
273	519	553								
							84	103	1662	-78.8

## NORMALS OF RADIOSONDE DATA

42700 RANCHI

SEPTEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	360	938	360	26.5	33.4	20.0	352	22.7	360	134	0.6	2.0	0.76	0.63	1987	1980
1000	308	41											7.88			
950	277	488											7.62			
900	277	972	276	24.1	29.6	14.8	274	19.6	235	150	0.9	5.2	9.12	0.72	1986	1983
850	277	1470	277	20.9	31.0	15.2	275	16.6	234	152	0.7	5.8	9.11	0.77	1987	1987
800	277	1992	277	17.8	23.6	11.6	273	13.3	236	197	0.4	5.8	8.86	0.85	1987	1988
750	277	2534	277	14.6	22.0	9.0	272	9.4	236	226	0.6	6.0	9.31	1.14	1987	1987
700	277	3121	277	11.3	17.4	4.0	267	5.2	235	218	0.8	6.0	7.85	1.22	1990	1982
650	270	3730	269	8.0	18.0	0.4	254	1.5	219	212	0.7	6.1	6.57	1.35	1988	1982
600	265	4393	264	4.7	12.0	-1.9	239	-2.2	211	205	1.0	6.3	8.02	1.36	1987	1979
550	259	5103	258	1.1	9.4	-5.5	223	-6.3	204	217	0.9	6.0	17.16	1.49	1987	1979
500	253	5857	253	-3.0	6.0	-9.3	208	-11.0	200	231	1.2	6.0	13.10	1.58	1987	1979
450	246	6685	245	-7.5	0.6	-13.9	183	-16.3	189	219	1.2	6.1	20.64	1.57	1990	1982
400	237	7593	236	-12.9	-4.9	-21.1	153	-21.8	182	222	1.3	6.2	24.97	1.72	1990	1985
350	226	8596	225	-19.2	-10.5	-25.3	119	-28.1	170	198	0.9	6.1	30.63	1.77	1988	1982
300	216	9732	215	-27.2	-18.5	-33.7	77	-35.0	160	169	1.2	6.8	40.30	1.79	1988	1979
250	208	11023	208	-37.3	-29.5	-45.1	23	-43.4	144	130	2.5	7.5	50.04	1.93	1988	1982
200	186	12524	186	-50.1	-41.3	-59.9	1	-59.1	121	116	2.8	9.6	60.84	2.04	1990	1982
175	162	13382	162	-57.9	-48.7	-67.9			100	107	3.9	9.3	69.64	2.33	1990	1982
150	145	14334	145	-66.4	-56.1	-75.5			89	096	4.7	10.1	81.19	2.17	1987	1979
125	115	15410	115	-74.4	-65.1	-83.5			68	086	7.4	10.6	102.57	2.18	1988	1979
100	91	16675	91	-78.7	-71.5	-86.5			52	091	9.4	11.7	127.73	1.97	1988	1987
80	73	17955	73	-73.8	-63.5	-87.0			41	100	10.4	11.8	167.08	3.14	1988	1978
70	64	18760	64	-68.3	-56.7	-77.0			35	108	10.2	11.4	171.59	3.52	1985	1978
60	57	19676	57	-63.4	-55.9	-73.0			32	103	9.3	11.2	180.64	3.70	1985	1978
50	53	20810	53	-58.3	-45.1	-68.0			27	098	9.4	10.9	194.76	3.96	1985	1978
40	45	22227	45	-54.9	-45.7	-63.0			24	103	10.2	11.5	203.03	3.35	1988	1978
30	33	24076	33	-50.6	-44.1	-61.1			18	083	13.1	15.0	223.71	3.93	1982	1987
25	19	25267	19	-49.1	-40.9	-57.9			9	097	16.2	17.2			1985	1987
20	14	26784	14	-46.7	-38.1	-54.1			6	101	16.9	17.0			1985	1988
15	5	28601	5	-46.5	-41.5	-53.1			3	088	24.2	24.3			1988	1988
10	1	31024	1	-51.1	-51.1	-51.1			1	091	36.0	36.0			1988	1988
7	1	33380	1	-50.1	-50.1	-50.1			1	091	36.0	36.0			1988	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

257 537 530

84 105 1645 -80.4

## NORMALS OF RADIOSONDE DATA

42700 RANCHI

OCTOBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i><b>SURFACE</b></i>	371	943	371	25.4	32.0	17.4	358	17.3	371	336	0.7	1.5	1.08	1.11	1987	1983
<i>1000</i>	335	91							1	316	3.0	3.0	10.84			
<i>950</i>	312	538											13.36			
<i>900</i>	312	1018	312	22.4	31.2	7.2	307	12.9	291	341	2.0	4.5	11.80	1.20	1987	1988
<i>850</i>	312	1511	312	18.7	29.2	10.0	306	9.9	292	328	2.3	4.8	12.11	1.30	1987	1983
<i>800</i>	312	2029	312	15.0	27.0	8.0	300	6.5	290	309	2.6	5.4	11.72	1.18	1987	1981
<i>750</i>	311	2564	311	11.6	22.6	4.4	272	2.1	287	296	2.9	5.8	12.05	1.08	1987	1981
<i>700</i>	311	3144	311	8.6	19.0	2.2	221	-0.8	290	290	3.6	6.2	10.68	1.39	1987	1982
<i>650</i>	301	3749	301	5.7	17.4	-0.3	170	-4.3	277	282	4.6	6.9	10.82	1.53	1987	1982
<i>600</i>	297	4403	297	2.6	11.2	-4.5	137	-7.7	275	276	5.6	7.8	10.69	1.50	1987	1981
<i>550</i>	290	5108	289	-1.1	7.2	-9.7	106	-11.8	261	277	6.6	8.7	17.10	1.34	1987	1981
<i>500</i>	288	5856	287	-5.3	2.2	-14.5	86	-15.1	255	273	7.8	9.7	13.65	1.36	1989	1987
<i>450</i>	280	6678	279	-10.0	9.2	-20.5	68	-18.8	239	268	9.1	11.0	19.97	1.37	1980	1987
<i>400</i>	274	7577	274	-15.7	-7.9	-22.7	53	-23.8	232	265	10.7	12.5	21.90	1.48	1990	1982
<i>350</i>	265	8570	265	-22.3	-13.3	-30.0	41	-29.8	211	259	12.4	14.3	27.92	1.69	1990	1978
<i>300</i>	250	9688	248	-30.1	-20.9	-38.3	20	-37.2	196	255	13.9	16.2	34.00	1.96	1990	1982
<i>250</i>	235	10962	234	-40.0	-28.7	-49.9	4	-44.8	176	254	14.8	17.2	45.21	2.32	1983	1985
<i>200</i>	213	12447	211	-52.2	-40.1	-64.3			147	248	15.1	18.1	61.19	2.51	1983	1985
<i>175</i>	183	13299	182	-59.3	-45.1	-73.1			118	247	13.4	16.7	73.22	2.67	1983	1985
<i>150</i>	172	14248	170	-66.7	-51.1	-78.9			111	246	11.8	14.8	88.93	2.55	1988	1985
<i>125</i>	135	15324	135	-73.6	-57.1	-84.7			83	239	8.4	11.7	117.08	2.75	1988	1982
<i>100</i>	101	16615	101	-77.6	-64.5	-89.9			55	226	3.5	7.8	153.18	2.98	1985	1985
<i>80</i>	86	17894	86	-73.5	-62.5	-84.7			41	110	4.6	7.7	164.44	3.87	1988	1983
<i>70</i>	78	18694	78	-69.2	-57.1	-81.9			37	097	3.8	7.2	176.71	4.12	1989	1983
<i>60</i>	63	19608	63	-63.9	-55.5	-75.9			29	097	7.1	7.9	154.54	2.19	1981	1988
<i>50</i>	56	20724	55	-59.3	-50.1	-70.7			23	093	7.7	8.8	192.44	2.64	1985	1982
<i>40</i>	48	22134	48	-55.5	-46.7	-64.3			21	094	9.0	10.0	218.92	2.85	1985	1982
<i>30</i>	31	24034	31	-51.7	-42.9	-61.3			12	097	8.5	9.4	240.36	3.88	1987	1982
<i>25</i>	19	25241	19	-48.6	-38.7	-56.9			9	099	12.2	12.7			1987	1990
<i>20</i>	13	26744	13	-47.2	-41.7	-55.3			5	086	14.9	15.2			1988	1990
<i>15</i>	6	28776	6	-46.0	-42.1	-52.9			2	075	15.9	16.5			1985	1990
<i>10</i>	2	31276	2	-45.0	-42.9	-47.1			1	080	7.0	7.0			1983	1988
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
293	566	489					97	107	1623	-79.0

# NORMALS OF RADIOSONDE DATA

42700 RANCHI

NOVEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	360	946	360	22.4	28.0	0.0	354	12.7	360	334	1.0	1.5	0.76	0.91	1981	1990
1000	316	121											6.49			
950	301	565	4	19.9	21.2	18.2	4	10.9	2	000	0.0	0.0	6.10		1983	1983
900	301	1037	300	19.6	29.2	12.0	296	7.9	291	340	3.1	4.4	7.58	1.29	1989	1982
850	301	1526	300	15.6	24.0	4.4	290	5.0	290	323	3.3	4.6	8.63	1.41	1978	1988
800	301	2037	300	12.0	21.0	4.2	273	1.3	289	308	3.9	5.2	9.28	1.47	1978	1988
750	301	2570	301	9.3	16.0	2.0	200	-2.9	288	300	5.0	6.4	11.59	1.12	1988	1988
700	301	3143	299	7.0	16.0	-0.3	129	-6.3	289	296	6.8	7.9	11.35	1.01	1978	1981
650	294	3746	292	4.4	12.0	-4.1	86	-8.8	279	288	8.4	9.6	15.57	1.12	1978	1985
600	286	4398	283	1.3	13.2	-6.9	62	-11.5	263	286	10.1	11.4	14.80	1.21	1987	1981
550	278	5097	276	-2.7	4.2	-10.3	42	-12.4	259	283	11.7	12.9	23.15	1.34	1987	1982
500	274	5842	274	-7.2	0.4	-16.1	40	-16.6	258	280	14.0	15.4	20.63	1.52	1990	1988
450	268	6657	267	-12.4	-4.1	-21.7	34	-21.4	240	278	16.1	17.5	31.63	1.65	1987	1982
400	262	7547	259	-18.2	-8.9	-28.9	28	-25.9	221	276	19.3	21.0	32.17	1.88	1990	1982
350	251	8533	249	-24.7	-14.1	-33.5	22	-33.1	198	274	22.6	24.3	37.87	1.68	1990	1982
300	243	9641	242	-32.3	-23.1	-42.7	12	-39.0	188	268	26.9	28.7	46.36	1.79	1990	1982
250	230	10902	229	-41.6	-31.5	-53.0	3	-43.4	148	267	29.1	31.5	58.24	2.21	1985	1978
200	213	12385	213	-52.9	-41.9	-64.0			114	263	29.5	32.4	70.79	2.50	1989	1978
175	182	13239	180	-59.2	-45.9	-69.9			85	266	27.2	29.7	78.78	2.56	1989	1982
150	148	14186	148	-65.7	-54.7	-77.5			66	260	24.7	27.9	86.09	2.76	1988	1986
125	103	15273	102	-70.8	-59.3	-83.1			46	265	23.2	25.8	144.48	4.13	1989	1986
100	75	16582	75	-74.8	-63.1	-85.0			33	264	13.1	16.2	165.56	2.79	1989	1978
80	58	17885	58	-73.2	-60.5	-84.0			25	252	3.6	8.4	129.12	2.78	1982	1978
70	53	18683	53	-69.5	-59.7	-83.0			25	273	3.4	10.4	149.17	3.95	1982	1978
60	46	19602	46	-63.8	-52.5	-72.1			19	284	4.1	7.7	134.37	3.48	1982	1988
50	39	20746	39	-58.3	-49.7	-65.9			16	273	2.1	6.0	149.81	2.31	1982	1988
40	29	22201	28	-54.0	-49.9	-60.5			12	245	1.6	10.6	180.42	1.76	1988	1982
30	22	24082	22	-49.5	-45.1	-54.5			10	086	5.6	8.7	200.29	1.39	1982	1982
25	13	25214	13	-48.1	-43.5	-51.9			7	309	2.5	9.3			1988	1982
20	8	26768	8	-45.5	-41.1	-50.5			2	319	1.0	1.0			1988	1982
15	6	28604	6	-44.1	-38.1	-48.3			1	277	14.0	14.0			1988	1982
10	1	30774	1	-45.9	-45.9	-45.9									1988	1988
7	1	33155	1	-44.5	-44.5	-44.5									1988	1988

FREEZING LEVEL

1ST TROPOPAUSE

2ND TROPOPAUSE

N P ALT

N P ALT T

N P ALT T

278 585 462

6 179 1290 -65.1

66 102 1655 -76.5



# NORMALS OF RADIOSONDE DATA

42700 RANCHI

DECEMBER 1978-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	341	947	341	19.1	24.0	9.6	336	9.8	341	324	1.0	1.4	0.80	1.09	1985	1986
1000	269	144											33.72			
950	234	582	2	18.5	18.8	18.2	2	8.3	3	316	1.6	1.6	12.07		1983	1983
900	234	1049	234	16.2	22.2	7.4	227	4.2	230	320	3.3	4.4	31.19	1.53	1987	1986
850	234	1532	234	12.7	24.4	4.8	217	0.6	233	303	4.1	5.1	28.91	1.51	1987	1986
800	234	2039	234	10.2	20.0	1.8	163	-2.5	230	298	5.7	6.5	13.37	1.31	1987	1986
750	234	2570	234	8.4	20.6	-0.5	115	-5.2	230	295	6.9	8.2	13.24	1.70	1987	1986
700	234	3141	234	6.1	22.0	-2.5	78	-8.6	233	292	8.5	9.7	15.15	1.74	1988	1986
650	227	3740	227	3.2	19.8	-5.3	55	-11.4	221	290	10.1	11.3	15.51	1.80	1988	1986
600	221	4389	220	-0.3	16.2	-10.7	39	-15.1	212	285	11.6	13.2	19.74	1.47	1988	1986
550	218	5082	217	-4.4	12.8	-12.1	28	-18.1	204	283	13.7	15.1	20.87	1.44	1988	1986
500	211	5823	210	-9.3	9.0	-16.7	21	-22.1	198	281	16.5	18.0	26.21	1.55	1988	1986
450	204	6626	201	-14.6	-3.9	-21.7	21	-26.3	180	277	19.9	21.6	21.13	1.50	1987	1988
400	201	7512	194	-20.6	-10.9	-28.5	18	-30.6	178	274	22.8	24.7	30.53	1.58	1987	1979
350	190	8489	185	-27.3	-18.3	-36.1	15	-36.0	151	269	26.7	28.9	32.06	1.68	1982	1979
300	181	9582	179	-35.2	-25.1	-44.9	9	-41.7	135	266	29.7	31.7	37.94	1.59	1982	1979
250	169	10832	168	-44.6	-31.1	-54.9			113	261	34.9	37.7	42.85	1.67	1987	1988
200	154	12292	153	-55.5	-47.9	-64.9			87	259	37.7	39.9	44.82	2.08	1982	1986
175	139	13133	139	-60.9	-52.1	-70.1			65	258	36.2	37.9	52.53	2.58	1987	1983
150	111	14083	111	-66.1	-55.3	-75.0			39	260	33.9	34.9	63.76	1.97	1986	1978
125	85	15175	85	-71.2	-59.5	-82.0			27	262	27.4	28.4	76.52	1.73	1986	1978
100	66	16474	66	-75.8	-67.1	-84.3			21	265	17.4	19.6	94.41	2.06	1986	1987
80	37	17744	37	-75.6	-65.7	-83.1			14	283	12.4	13.7	82.48	3.92	1988	1987
70	30	18533	30	-73.3	-62.0	-80.1			12	328	4.0	12.2	70.47	4.18	1978	1982
60	26	19444	26	-69.3	-60.3	-79.1			10	287	7.0	11.0	71.35	4.36	1988	1982
50	21	20559	21	-63.3	-55.5	-74.5			10	302	4.7	11.9	146.23	4.56	1982	1982
40	18	21923	18	-57.7	-51.1	-67.5			6	229	7.3	10.7			1980	1982
30	15	23758	15	-51.8	-43.1	-61.7			4	230	5.8	13.2			1982	1982
25	9	24952	9	-49.1	-41.7	-59.5			2	275	8.9	12.0			1980	1982
20	2	26063	2	-50.5	-43.9	-57.1			1	263	21.0	21.0			1982	1982
15	1	27732	1	-53.5	-53.5	-53.5			1	265	22.0	22.0			1982	1982
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
221	611	427	6	173	1308	-69.7	50	103	1632	-77.1

## NORMALS OF RADIOSONDE DATA

42397 SILIGURI

JANUARY 1986-89

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	124	999	124	20.6	25.0	15.4	124	10.8	124	237	1.0	1.4	1.12	0.29	1987	1986
<i>1000</i>	112	109	51	20.8	24.6	17.8	50	11.5	45	236	0.6	1.1	11.09	0.46	1987	1987
<i>950</i>	112	516	112	17.3	24.0	7.0	110	8.9	107	238	1.9	2.8	13.17	0.57	1987	1987
<i>900</i>	112	1007	112	13.7	26.0	5.8	110	5.4	107	233	1.5	2.7	9.21	0.90	1988	1987
<i>850</i>	112	1485	112	10.1	21.8	3.2	108	1.5	107	213	0.6	2.7	8.56	0.71	1988	1986
<i>800</i>	112	1986	112	6.8	15.6	0.2	98	-1.3	106	114	0.3	3.2	10.70	0.54	1988	1986
<i>750</i>	112	2518	112	3.6	15.4	-3.3	74	-4.2	106	306	1.7	4.6	3.39	0.48	1988	1987
<i>700</i>	112	3068	112	1.1	15.8	-5.3	53	-8.1	106	292	5.6	7.6	11.12	0.48	1988	1989
<i>650</i>	110	3663	110	-0.8	13.0	-7.3	26	-12.0	93	289	10.4	12.2	9.62	0.47	1988	1989
<i>600</i>	108	4300	108	-3.5	7.6	-11.1	16	-12.2	84	287	15.2	15.9	14.86	1.12	1989	1988
<i>550</i>	107	5001	107	-7.0	2.8	-15.3	14	-17.4	71	288	18.3	18.8	11.01	1.62	1988	1988
<i>500</i>	104	5720	104	-11.4	-1.1	-21.1	13	-21.1	66	287	21.5	22.2	13.44	2.20	1989	1988
<i>450</i>	103	6533	103	-16.3	-3.1	-27.1	10	-23.9	41	287	22.9	24.1	16.95	2.34	1989	1988
<i>400</i>	100	7398	100	-22.2	-8.9	-32.1	12	-31.2	34	286	28.5	30.2	23.39	2.56	1989	1988
<i>350</i>	98	8376	98	-28.3	-17.7	-40.1	8	-36.0	26	280	31.2	34.2	27.18	2.13	1989	1988
<i>300</i>	93	9458	93	-35.0	-23.7	-48.9	3	-39.6	19	290	35.5	38.2	37.73	2.50	1989	1988
<i>250</i>	87	10709	87	-42.6	-33.3	-55.1			8	287	42.4	45.6	47.17	2.31	1989	1988
<i>200</i>	79	12204	79	-51.5	-42.3	-63.3			5	286	49.0	51.6	63.51	2.87	1987	1988
<i>175</i>	66	13065	66	-57.0	-47.7	-69.1							67.98	3.35	1989	1988
<i>150</i>	59	14034	59	-61.9	-50.9	-70.5							85.26	2.88	1987	1986
<i>125</i>	48	15166	48	-67.4	-58.5	-78.7							126.90	2.44	1989	1988
<i>100</i>	41	16493	41	-72.1	-64.9	-84.3							133.53	2.67	1989	1988
<i>80</i>	33	17821	33	-73.0	-62.1	-82.9							155.83	3.31	1989	1989
<i>70</i>	31	18614	31	-70.9	-60.1	-83.5							150.97	3.67	1989	1988
<i>60</i>	24	19531	24	-66.3	-54.9	-83.7							168.59	6.02	1989	1988
<i>50</i>	22	20664	22	-60.8	-51.5	-72.1							194.31	4.85	1987	1988
<i>40</i>	21	22069	21	-56.4	-48.1	-63.3							223.53	3.80	1989	1987
<i>30</i>	18	23901	18	-52.9	-43.9	-60.3									1989	1987
<i>25</i>	14	25037	14	-52.2	-45.1	-58.3									1989	1987
<i>20</i>	9	26479	9	-51.6	-48.1	-56.3									1988	1987
<i>15</i>	7	28329	7	-50.8	-46.9	-55.9									1988	1987
<i>10</i>	3	31034	3	-50.2	-48.5	-52.1									1989	1989
<i>7</i>	1	33365	1	-46.9	-46.9	-46.9									1989	1989

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

111	674	341		8	145	1434	-66.5		35	089	1726	-75.4
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# NORMALS OF RADIOSONDE DATA

42397 SILIGURI

FEBRUARY 1986-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	139	997	139	23.0	28.0	15.8	139	5.9	139	241	0.8	1.6	1.18	0.52	1987	1987
<i>1000</i>	126	89	18	22.4	25.0	15.4	18	13.1	18	237	0.5	1.3	10.60		1987	1987
<i>950</i>	126	500	126	19.7	27.6	12.6	125	9.3	124	244	2.3	3.7	9.69	0.80	1989	1986
<i>900</i>	126	993	126	15.8	24.0	9.0	123	6.7	124	247	2.8	3.9	12.45	0.73	1987	1986
<i>850</i>	126	1474	126	12.2	21.0	5.0	122	4.0	124	257	2.9	4.4	13.56	0.65	1987	1986
<i>800</i>	126	1979	126	8.5	17.2	1.6	113	1.0	124	262	3.6	5.2	15.82	0.69	1987	1986
<i>750</i>	126	2511	126	5.4	15.6	-1.9	105	-2.2	124	273	5.6	6.9	13.96	0.68	1987	1986
<i>700</i>	126	3069	126	2.3	14.0	-5.7	84	-6.1	124	279	8.3	9.8	17.60	0.70	1987	1986
<i>650</i>	124	3665	123	-0.4	9.6	-9.1	56	-10.4	109	284	11.1	12.4	23.03	0.89	1987	1986
<i>600</i>	122	4300	121	-3.8	5.8	-13.9	37	-14.9	98	287	13.7	14.6	19.73	1.24	1989	1986
<i>550</i>	121	4998	120	-7.7	2.2	-19.5	29	-19.1	85	287	15.7	16.3	20.33	1.30	1989	1986
<i>500</i>	120	5717	119	-12.6	-0.5	-25.1	19	-21.7	79	285	19.1	19.9	21.46	1.13	1988	1986
<i>450</i>	118	6524	117	-18.1	-9.9	-31.9	21	-26.2	62	283	21.4	22.9	27.52	1.01	1989	1986
<i>400</i>	117	7383	116	-24.2	-13.5	-34.9	17	-30.9	57	284	25.0	26.3	26.07	0.95	1989	1986
<i>350</i>	112	8355	111	-30.2	-18.9	-40.5	8	-36.5	31	279	28.7	30.2	32.19	1.25	1989	1990
<i>300</i>	108	9427	107	-36.5	-26.1	-49.5	1	-42.5	25	277	31.7	33.2	34.06	1.76	1990	1988
<i>250</i>	98	10668	98	-43.0	-32.3	-56.7			12	269	37.5	40.3	40.60	1.84	1990	1988
<i>200</i>	94	12157	94	-50.5	-43.3	-64.5			6	279	37.5	39.8	53.19	1.46	1989	1988
<i>175</i>	86	13028	86	-54.8	-43.7	-66.5			2	271	56.8	57.0	51.23	1.89	1990	1988
<i>150</i>	77	14004	77	-59.9	-50.3	-70.9							45.51	1.61	1990	1989
<i>125</i>	61	15130	61	-65.5	-56.5	-76.7							26.22	2.07	1990	1989
<i>100</i>	51	16458	51	-71.3	-62.3	-82.1							29.35	2.10	1990	1988
<i>80</i>	43	17746	43	-72.9	-65.7	-81.5							47.83	1.72	1989	1988
<i>70</i>	39	18548	39	-70.4	-60.7	-79.1							46.90	1.13	1989	1988
<i>60</i>	35	19457	35	-65.8	-57.9	-72.7							66.08	2.01	1989	1990
<i>50</i>	31	20572	31	-60.9	-51.7	-68.7							31.07	1.72	1989	1988
<i>40</i>	22	21985	22	-57.4	-45.9	-66.5							64.70	2.37	1989	1988
<i>30</i>	20	23817	20	-53.4	-43.3	-57.9									1989	1989
<i>25</i>	16	25002	16	-51.6	-42.3	-55.3									1989	1988
<i>20</i>	13	26509	13	-49.5	-40.9	-54.1									1989	1989
<i>15</i>	6	28320	6	-49.5	-44.7	-54.1									1988	1989
<i>10</i>	4	30975	4	-48.0	-41.5	-54.1									1988	1989
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
124	655	363	11	205	1197	-56.4	45	093	1683	-73.4

# NORMALS OF RADIOSONDE DATA

42397 SILIGURI

MARCH 1986-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	155	993	155	26.7	32.2	19.6	155	10.5	155	208	0.3	1.7	1.18	0.95	1987	1987
1000	143	60	5	24.5	26.4	22.4	5	9.5	5	024	0.3	1.0	11.37		1987	1987
950	143	476	143	22.9	29.4	13.6	141	11.8	141	209	0.9	3.6	12.08	0.66	1987	1990
900	143	974	143	19.1	26.4	10.2	140	9.5	141	245	1.7	3.6	9.98	0.55	1988	1987
850	143	1461	143	15.4	24.6	6.0	140	7.8	141	257	3.0	4.2	10.26	0.47	1988	1990
800	143	1970	143	11.8	22.2	1.0	137	4.7	141	264	3.8	5.0	9.93	0.56	1986	1990
750	143	2501	143	7.9	16.0	-3.5	130	1.8	141	275	5.8	6.7	15.53	0.67	1989	1990
700	143	3069	143	4.3	13.5	-7.5	125	-2.9	141	283	8.2	9.1	11.09	0.71	1990	1990
650	141	3658	141	0.8	10.0	-11.9	89	-6.8	127	285	10.8	11.6	22.83	1.07	1990	1990
600	139	4308	139	-2.8	6.4	-16.3	57	-10.8	115	285	13.4	14.1	12.37	1.20	1990	1990
550	137	5005	137	-6.6	2.8	-20.9	35	-14.3	104	283	15.1	15.8	21.34	1.60	1990	1990
500	134	5734	134	-11.3	0.0	-25.7	26	-19.5	100	284	16.6	17.4	17.40	1.50	1990	1990
450	130	6542	130	-16.7	-6.5	-30.5	22	-25.3	73	286	18.6	19.8	25.22	1.54	1988	1990
400	129	7407	129	-22.8	-10.7	-35.3	17	-29.7	70	284	20.6	22.4	25.37	1.19	1988	1990
350	125	8382	125	-29.3	-14.7	-40.9	13	-35.9	43	289	23.3	26.0	31.79	1.07	1988	1990
300	123	9458	123	-36.0	-22.5	-48.9	4	-45.3	33	289	27.8	31.1	35.28	0.78	1990	1987
250	116	10704	116	-43.7	-30.7	-58.5	1	-43.9	16	280	33.4	37.6	38.32	1.09	1990	1987
200	108	12185	108	-51.7	-40.7	-62.3			6	278	40.8	43.0	42.67	1.31	1990	1987
175	96	13045	96	-55.9	-44.3	-66.1			2	260	29.7	30.0	52.42	2.33	1990	1988
150	82	14016	82	-61.0	-52.9	-73.9							46.69	3.03	1989	1988
125	70	15126	70	-66.2	-54.1	-82.1							50.01	3.40	1989	1988
100	64	16464	64	-71.7	-58.7	-89.9							66.64	3.80	1990	1988
80	51	17780	51	-73.7	-63.9	-92.1							84.01	3.72	1990	1988
70	43	18590	43	-71.6	-60.1	-87.7							79.24	4.11	1990	1988
60	38	19497	38	-66.9	-55.7	-81.5							94.00	3.69	1989	1988
50	32	20593	32	-61.7	-52.1	-72.3							86.68	3.21	1990	1988
40	23	21585	23	-58.3	-53.3	-64.9							73.62	1.85	1988	1988
30	17	23784	17	-55.2	-51.5	-61.9									1989	1988
25	16	24937	16	-52.9	-46.9	-58.9									1989	1988
20	10	26391	10	-49.7	-44.1	-55.7									1989	1988
15	7	28287	7	-47.8	-42.5	-53.1									1989	1988
10	1	30932	1	-49.9	-49.9	-49.9									1988	1988
7	1	35250	1	-48.5	-48.5	-48.5									1988	1988

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

140 637 365

13 208 1198 -58.2

50 096 1677 -74.3

## NORMALS OF RADIOSONDE DATA

42397 SILIGURI

APRIL 1985-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	179	990	179	29.0	36.0	20.0	179	18.0	179	087	0.9	2.0	1.87	1.71	1989	1990
1000	148	26											14.37			
950	149	449	149	25.9	33.0	18.6	145	16.5	144	096	1.9	3.8	14.16	1.33	1989	1989
900	149	949	149	22.3	30.2	11.6	141	14.0	144	139	0.8	4.0	10.50	1.31	1990	1985
850	149	1442	149	19.0	30.0	9.2	140	11.2	144	253	2.4	5.3	10.26	1.30	1989	1985
800	149	1957	149	15.6	27.2	6.4	138	8.0	143	260	4.7	6.4	11.14	1.12	1989	1985
750	149	2498	149	11.9	22.2	3.0	134	4.1	142	274	7.2	8.3	12.80	0.87	1989	1989
700	149	3074	149	8.2	18.0	0.6	130	-0.2	144	280	8.6	9.3	12.59	0.94	1990	1985
650	145	3670	145	4.2	14.4	-4.1	100	-3.9	111	284	10.2	11.1	14.55	0.95	1990	1985
600	143	4326	143	0.4	10.0	-9.1	68	-8.9	107	286	13.2	14.0	16.10	1.32	1990	1985
550	142	5028	140	-3.9	5.6	-14.9	48	-14.8	103	286	16.1	16.8	17.84	1.56	1985	1985
500	141	5766	140	-8.6	2.6	-18.9	27	-18.8	101	287	16.8	17.8	19.22	1.13	1985	1985
450	139	6580	139	-13.8	-0.7	-23.9	26	-22.9	79	290	16.7	18.4	19.89	1.18	1985	1985
400	132	7460	131	-20.0	-3.3	-29.3	21	-26.5	70	291	19.4	21.1	26.83	1.72	1985	1986
350	126	8450	126	-26.9	-14.7	-37.1	14	-32.5	46	289	23.7	25.2	38.04	2.01	1989	1986
300	121	9537	121	-34.6	-23.3	-45.1	4	-33.6	39	285	25.0	27.4	44.31	2.47	1989	1990
250	116	10788	116	-43.3	-32.7	-54.5	2	-40.7	21	281	29.9	31.8	58.58	2.89	1989	1987
200	105	12264	105	-51.5	-39.5	-65.5	1	-47.1	9	277	38.5	40.1	77.85	2.27	1990	1990
175	83	13119	83	-55.7	-44.5	-69.3			6	282	37.2	39.3	91.47	2.64	1990	1990
150	73	14090	73	-60.2	-49.5	-73.5			4	287	41.1	43.0	96.59	3.69	1990	1990
125	67	15198	67	-65.7	-55.1	-79.3			1	296	18.0	18.0	106.36	3.09	1990	1990
100	60	16549	60	-71.2	-59.1	-87.1			1	269	13.0	13.0	124.77	2.60	1990	1990
80	49	17847	49	-75.3	-61.7	-87.9							127.33	4.31	1990	1988
70	46	18638	46	-74.3	-59.1	-89.7							146.48	5.29	1990	1988
60	35	19524	35	-70.3	-56.1	-88.7							208.92	6.55	1990	1988
50	30	20636	30	-65.6	-50.1	-85.3							261.24	6.23	1989	1988
40	21	21982	21	-59.5	-46.1	-75.1							271.33	5.09	1989	1988
30	14	23816	14	-54.7	-42.1	-66.7									1989	1987
25	13	24960	13	-51.9	-39.3	-65.3									1989	1987
20	10	26354	10	-50.5	-39.5	-62.7									1989	1987
15	5	28166	5	-49.7	-42.5	-60.1									1990	1987
10	1	31352	1	-39.5	-39.5	-39.5									1989	1989
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
143	596	440	12	198	1217	-57.4	48	087	1739	-75.7

# NORMALS OF RADIOSONDE DATA

42397 SHIGURI

MAY 1985-90

1200 UTC

LEVEL (HPA)	W	P/H	W	T	TX	TN	N	TD	N	DDO	VR	VM	SDHP	SDTT	YR TX	YR T
SURFACE	166	989	136	30.0	36.2	22.6	186	21.6	186	099	1.3	1.9	1.47	0.60	1989	1989
1000	144	14											10.21			
950	144	442	144	27.2	33.0	18.6	143	19.4	140	109	2.3	3.5	7.74	0.81	1989	1989
900	144	941	144	23.6	34.0	16.8	143	17.0	140	114	1.8	3.3	8.63	0.92	1985	1986
850	144	1435	144	20.3	32.4	12.4	143	14.4	140	163	0.4	3.7	8.09	1.13	1985	1986
800	144	1955	142	17.1	29.8	9.6	141	10.7	139	269	2.0	4.8	7.57	0.99	1985	1987
750	144	2504	143	13.7	27.0	5.0	138	6.7	139	277	4.2	6.4	12.20	1.16	1985	1987
700	144	3077	144	10.1	21.0	2.8	132	2.4	137	280	5.5	7.2	9.23	1.28	1988	1987
650	142	3687	142	6.4	18.0	-1.3	119	-2.4	125	287	7.6	8.8	13.35	1.31	1988	1987
600	142	4339	141	2.6	14.4	-4.7	96	-5.4	124	290	7.9	9.4	13.11	1.38	1988	1987
550	140	5054	139	-1.3	10.0	-8.3	76	-10.0	119	290	9.9	10.9	17.38	1.28	1988	1988
500	138	5792	137	-5.7	4.2	-12.9	53	-14.8	116	287	11.7	12.6	18.71	1.11	1989	1988
450	133	6621	131	-10.3	-0.7	-18.3	37	-20.5	98	286	13.0	14.6	21.92	1.00	1989	1988
400	129	7509	128	-16.0	-6.3	-30.7	28	-25.4	94	284	14.3	15.9	24.59	0.79	1989	1989
350	123	8513	122	-22.3	-11.9	-32.5	10	-29.3	66	279	15.8	17.7	27.28	1.50	1988	1990
300	115	9621	114	-29.8	-19.7	-41.5	8	-39.1	55	273	18.7	20.9	34.69	1.80	1988	1990
250	109	10895	109	-33.9	-29.1	-51.9	1	-40.1	39	271	23.4	25.2	43.90	1.92	1988	1990
200	101	12392	101	-49.5	-40.3	-64.1			26	269	23.5	26.0	63.41	1.59	1988	1990
175	84	13264	84	-55.1	-45.1	-67.3			12	266	23.5	26.3	94.54	2.06	1988	1990
150	78	14233	78	-61.9	-53.1	-72.9			9	263	22.6	25.2	79.67	1.23	1990	1990
125	72	15349	72	-68.3	-56.9	-79.1			4	246	21.2	26.5	81.34	1.56	1990	1990
100	65	16682	65	-74.3	-61.5	-87.1			1	242	35.0	35.0	71.59	2.74	1990	1988
80	56	17967	56	-75.3	-64.9	-87.9							85.06	3.89	1987	1988
70	49	18787	49	-72.1	-54.9	-84.3							92.81	5.32	1989	1988
60	44	19672	44	-68.0	-52.7	-82.7							117.06	5.19	1989	1988
50	40	20810	40	-61.3	-42.3	-79.9							124.20	4.76	1987	1988
40	32	22248	32	-55.6	-42.5	-71.5							144.01	4.27	1989	1988
30	23	24010	23	-51.8	-40.9	-68.1							237.63	4.61	1989	1988
25	21	25171	21	-48.8	-38.3	-58.1							255.29	4.00	1989	1988
20	17	26646	17	-47.0	-39.1	-51.7									1989	1988
15	7	28573	7	-43.9	-39.3	-46.5									1987	1990
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
142	568	479	5	146	1452	-66.1	57	089	1733	-77.1

## NORMALS OF RADIOSONDE DATA

42397 SILIGURI

JUNE 1985-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
	<b>SURFACE</b>	180	985	180	29.9	35.0	23.8	180	24.6	180	081	1.2	1.7	1.08	0.34	1988
1000	142	-20											9.98			
950	142	398	142	28.3	39.0	22.6	140	23.5	129	093	2.6	3.7	13.13	0.66	1990	1989
900	142	912	142	25.5	33.4	20.0	141	21.3	129	111	3.0	4.0	11.80	0.74	1990	1985
850	142	1410	142	22.7	31.0	16.2	141	18.8	130	122	2.6	4.6	13.11	0.86	1988	1985
800	142	1935	142	19.9	29.6	12.6	141	15.9	129	125	1.7	5.2	14.79	1.10	1988	1986
750	142	2502	142	16.9	26.2	8.2	139	12.5	125	164	1.0	5.6	18.65	1.24	1990	1986
700	142	3070	142	13.6	22.6	5.6	136	8.7	125	207	0.6	5.6	20.60	1.15	1990	1986
650	137	3699	137	10.3	20.2	2.4	132	4.9	104	207	0.2	5.8	22.81	1.07	1990	1986
600	135	4353	135	6.8	16.0	-3.7	120	0.8	96	250	0.6	5.7	26.72	0.97	1990	1986
550	132	5084	132	3.1	11.8	-5.5	111	-3.5	93	259	1.6	6.2	25.57	0.79	1990	1986
500	130	5828	130	-1.0	7.2	-10.7	96	-8.5	92	255	2.8	7.6	31.44	0.83	1988	1986
450	128	6679	128	-5.1	3.2	-14.9	76	-12.6	81	266	4.1	8.5	30.50	0.93	1987	1988
400	123	7576	122	-10.2	-2.9	-18.5	60	-18.3	75	268	4.9	8.5	33.28	0.88	1990	1988
350	117	8603	117	-16.3	-7.9	-24.7	40	-23.4	63	260	5.8	9.5	31.48	0.95	1985	1988
300	109	9745	109	-24.0	-17.9	-32.5	25	-30.8	52	262	6.0	9.4	38.31	1.15	1990	1986
250	100	11050	100	-34.0	-26.7	-43.5	11	-40.4	35	260	7.2	10.6	46.46	1.63	1990	1986
200	92	12577	92	-46.3	-37.1	-56.1			20	253	7.2	10.6	57.16	2.11	1990	1986
175	77	13452	77	-53.2	-44.1	-63.5			6	251	12.7	13.8	63.73	2.24	1990	1986
150	69	14435	69	-60.9	-51.1	-73.7			5	246	11.4	12.4	81.44	2.42	1990	1990
125	60	15541	59	-69.4	-59.1	-78.7			1	005	3.0	3.0	108.41	2.92	1990	1986
100	48	16852	48	-75.1	-68.1	-85.1			1	080	7.0	7.0	161.78	2.20	1988	1990
80	41	18139	41	-74.8	-60.3	-81.9							177.70	1.83	1990	1990
70	39	18964	39	-70.9	-59.9	-78.1							125.49	3.69	1989	1988
60	36	19884	36	-65.2	-51.1	-73.5							105.91	3.65	1987	1990
50	29	21012	29	-59.3	-48.1	-69.3							114.14	3.04	1990	1988
40	25	22407	25	-55.2	-43.9	-63.5							145.39	2.38	1990	1988
30	15	24234	15	-51.1	-43.1	-57.3									1988	1988
25	13	25441	13	-47.8	-40.1	-53.9									1988	1988
20	12	26930	12	-44.5	-36.7	-51.3									1988	1988
15	4	28800	4	-41.3	-36.5	-48.1									1990	1988
10	1	31314	1	-43.9	-43.9	-43.9									1988	1988
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
132	511	569					46	097	1708	-76.8

### NORMALS OF RADIOSONDE DATA

42397 SILIGURI

JULY 1985-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	186	986	186	28.9	34.0	24.2	186	25.0	186	079	1.2	1.7	1.08	0.47	1989	1987
1000	167	-13											8.32			
950	167	404	167	27.3	33.0	21.6	167	24.4	144	096	2.9	3.8	9.77	0.92	1990	1989
900	167	916	167	25.1	32.8	19.2	167	22.3	144	106	3.3	4.2	5.74	1.41	1990	1985
850	167	1415	167	22.3	30.0	12.0	166	19.8	144	116	3.4	4.7	6.82	1.40	1990	1988
800	167	1939	167	19.7	26.6	12.4	167	17.1	143	124	3.2	4.8	9.81	1.39	1990	1985
750	167	2504	167	16.8	23.4	9.0	167	14.1	141	127	2.6	5.0	8.82	1.38	1988	1985
700	167	3076	167	13.9	20.8	5.8	167	10.7	143	129	2.6	4.9	15.62	1.36	1988	1985
650	159	3702	159	11.0	21.0	2.8	157	7.2	103	134	2.6	5.1	17.20	1.30	1987	1985
600	157	4358	157	7.7	16.8	-0.5	155	3.2	92	148	2.2	4.9	20.96	1.30	1987	1985
550	155	5096	155	4.1	13.2	-4.5	153	-0.8	80	157	1.9	5.1	13.73	1.32	1990	1985
500	153	5839	153	0.1	6.8	-9.1	148	-5.3	80	146	1.8	5.1	27.70	1.17	1987	1989
450	149	6698	149	-4.0	6.2	-14.5	136	-10.5	73	151	1.7	5.1	26.26	1.01	1986	1990
400	144	7599	144	-9.0	-0.9	-22.3	115	-16.1	65	144	1.4	4.9	34.54	1.04	1987	1990
350	139	8631	139	-15.0	-6.7	-29.3	90	-23.0	52	100	0.9	4.8	32.37	1.17	1987	1985
300	134	9777	134	-23.0	-15.5	-31.9	57	-31.4	48	075	3.0	6.5	35.89	1.10	1987	1986
250	122	11093	122	-33.0	-25.3	-43.5	24	-40.9	35	061	5.4	8.8	42.17	1.24	1988	1986
200	119	12624	119	-45.8	-38.3	-59.9			29	057	7.3	11.6	47.90	1.00	1990	1986
175	106	13506	106	-53.2	-43.7	-61.5			15	054	7.6	11.5	45.09	0.53	1990	1990
150	88	14473	88	-61.3	-50.9	-70.7			12	072	7.6	12.8	41.31	0.65	1988	1987
125	78	15587	77	-69.4	-59.1	-77.1			5	064	9.3	13.0	47.51	1.19	1990	1989
100	68	16899	67	-75.4	-60.1	-85.7			3	041	10.2	13.3	34.81	2.14	1990	1988
80	58	18202	58	-73.8	-61.9	-86.1			2	088	12.3	13.0	37.47	0.71	1987	1990
70	53	19010	53	-69.4	-53.9	-82.9			2	073	21.0	23.0	34.38	1.82	1987	1990
60	43	19919	43	-63.6	-49.9	-79.1			2	096	19.8	22.0	46.11	3.29	1987	1990
50	38	21059	38	-57.8	-45.7	-74.9			1	068	14.0	14.0	68.84	5.52	1987	1990
40	30	22454	30	-53.8	-40.1	-69.5							54.63	2.54	1989	1990
30	23	24319	23	-50.9	-38.5	-64.1							116.14	2.51	1989	1990
25	19	25517	19	-47.9	-39.1	-53.1									1987	1988
20	15	27014	15	-45.4	-36.5	-50.1									1987	1988
15	10	28986	10	-42.6	-33.5	-47.9									1987	1988
10	7	31640	7	-40.9	-38.3	-45.1									1987	1988
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

154 498 590

64 096 1719 -77.3



# NORMALS OF RADIOSONDE DATA

42397 SILIGURI

AUGUST 1985-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
SURFACE	186	987	186	29.5	35.0	22.8	186	25.2	186	086	0.6	1.3	1.00	0.81	1986	1987
1000	172	-5											7.42			
950	172	415	172	27.7	37.6	22.0	168	24.3	146	104	1.6	3.0	8.25	1.25	1990	1987
900	172	925	172	25.0	36.0	19.0	168	21.7	146	117	1.8	3.5	12.13	1.61	1990	1985
850	172	1424	172	22.1	34.2	15.2	167	18.9	147	120	2.4	4.1	15.86	1.66	1990	1990
800	172	1947	172	19.2	30.8	12.4	166	16.1	146	120	2.8	4.7	19.78	1.62	1990	1987
750	172	2513	172	16.3	27.8	8.4	165	12.9	146	117	2.8	5.0	18.28	1.64	1990	1987
700	172	3081	172	13.2	24.8	5.8	167	9.0	146	115	2.8	5.2	28.25	1.63	1990	1987
650	170	3710	170	10.1	21.2	1.0	164	5.1	119	119	3.0	5.4	27.51	1.61	1990	1987
600	170	4362	170	6.8	17.2	-3.7	163	1.2	106	118	2.4	5.5	36.49	1.30	1990	1990
550	168	5094	168	3.2	12.8	-8.1	155	-2.9	99	116	1.9	5.6	32.61	1.18	1990	1990
500	164	5839	164	-0.9	8.0	-12.1	146	-7.3	93	122	2.0	5.6	43.34	1.04	1990	1990
450	159	6689	159	-5.2	4.0	-16.7	129	-12.3	80	117	1.7	5.5	40.88	0.90	1990	1990
400	153	7590	152	-10.4	-2.1	-21.9	99	-17.5	72	128	2.5	6.2	46.28	1.13	1990	1990
350	152	8612	151	-16.6	-4.3	-27.1	80	-24.5	53	110	2.2	5.6	39.30	1.25	1988	1989
300	149	9751	148	-24.6	-17.1	-37.5	50	-31.8	48	083	4.2	7.5	52.23	1.34	1990	1989
250	141	11056	141	-34.6	-26.1	-49.3	17	-39.1	39	075	5.6	9.1	59.06	1.74	1990	1989
200	133	12572	133	-47.9	-35.7	-61.3	1	-50.3	27	079	6.6	10.9	69.52	2.40	1990	1989
175	119	13451	118	-55.9	-45.9	-70.1			9	064	5.6	8.9	91.41	2.93	1988	1987
150	101	14408	101	-64.1	-53.1	-78.1			6	077	7.9	9.8	81.47	2.95	1988	1987
125	94	15508	94	-71.9	-58.1	-89.1			3	063	12.3	12.3	98.62	3.94	1988	1987
100	86	16815	86	-76.5	-66.7	-88.5			3	087	15.6	15.7	107.78	3.36	1988	1987
80	68	18115	68	-73.5	-59.9	-89.9			2	099	17.3	17.5	123.57	3.97	1989	1987
70	62	18934	62	-68.6	-51.1	-84.5			1	095	22.0	22.0	141.28	3.78	1989	1987
60	59	19836	59	-64.2	-49.7	-74.7							156.47	3.00	1989	1988
50	55	20956	55	-58.9	-44.1	-67.1							166.99	3.52	1989	1987
40	46	22371	46	-55.7	-46.1	-62.5							181.22	2.25	1989	1988
30	39	24226	39	-51.6	-44.1	-58.7							187.53	2.23	1990	1987
25	34	25362	34	-49.8	-41.5	-56.9							204.80	2.80	1989	1987
20	28	26857	28	-46.8	-37.1	-52.9							189.17	2.02	1990	1988
15	14	28754	14	-46.1	-36.9	-50.1									1990	1990
10	7	31508	7	-42.7	-33.5	-47.1									1990	1988
7	2	33710	2	-44.1	-43.1	-45.1									1988	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

163 512 565

79 101 1673 -78.1

# NORMALS OF RADIOSONDE DATA

42397 SILIGURI

SEPTEMBER 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	182	990	182	28.5	33.8	21.4	182	25.2	182	101	0.8	1.4	0.85	0.47	1990	1986
<i>1000</i>	146	22											7.49			
<i>950</i>	146	443	146	26.8	35.8	20.8	143	23.7	125	111	1.7	3.3	10.49	1.18	1990	1989
<i>900</i>	146	950	146	24.3	33.2	18.2	142	21.2	125	118	2.0	4.0	7.61	1.60	1990	1989
<i>850</i>	146	1450	146	21.8	30.6	15.8	143	18.3	125	128	1.2	4.1	56.09	1.57	1990	1986
<i>800</i>	146	1971	146	19.0	27.8	12.4	142	15.4	125	149	1.1	4.8	11.87	1.64	1990	1987
<i>750</i>	146	2532	146	16.0	25.0	9.0	141	12.1	123	140	0.6	4.6	8.34	1.66	1990	1985
<i>700</i>	146	3105	146	12.9	22.8	5.2	140	7.8	125	185	0.4	4.7	19.05	1.54	1990	1985
<i>650</i>	141	3724	141	9.8	20.4	3.2	128	5.0	101	215	0.9	4.7	17.79	1.39	1990	1985
<i>600</i>	139	4383	139	6.3	16.6	0.0	128	0.4	97	257	2.0	5.2	26.53	1.22	1990	1987
<i>550</i>	136	5113	136	2.7	11.2	-3.5	116	-3.6	87	251	2.7	6.1	18.92	1.15	1990	1990
<i>500</i>	132	5859	132	-1.5	6.2	-9.1	106	-8.1	84	259	3.3	6.7	32.56	0.97	1988	1990
<i>450</i>	131	6704	131	-6.0	1.8	-13.5	95	-13.4	71	259	3.2	6.5	34.55	1.31	1988	1990
<i>400</i>	126	7603	126	-11.3	-3.7	-20.9	70	-18.5	67	262	3.9	6.8	36.27	1.30	1989	1990
<i>350</i>	121	8628	121	-17.6	-9.1	-29.3	50	-25.2	51	262	4.4	6.9	30.68	1.73	1986	1990
<i>300</i>	115	9758	115	-25.7	-16.5	-39.1	32	-33.0	45	272	5.4	8.4	38.55	1.48	1988	1990
<i>250</i>	107	11058	106	-35.5	-25.7	-52.1	14	-40.7	33	271	4.0	9.1	44.23	1.60	1989	1990
<i>200</i>	97	12580	96	-48.5	-40.1	-67.7			21	303	4.5	7.9	76.52	2.28	1989	1990
<i>175</i>	84	13442	83	-55.8	-47.5	-64.9			11	293	5.9	8.6	83.67	2.06	1988	1989
<i>150</i>	78	14409	78	-64.1	-55.7	-76.3			9	274	3.9	8.9	126.02	2.94	1988	1989
<i>125</i>	66	15507	66	-71.7	-63.1	-82.5			5	259	2.9	11.2	137.91	2.55	1983	1989
<i>100</i>	63	16807	63	-77.3	-67.7	-88.5			2	108	7.9	8.0	148.52	2.43	1988	1988
<i>80</i>	55	18089	55	-73.6	-60.7	-83.9			1	126	28.9	29.0	154.15	2.67	1988	1990
<i>70</i>	51	18892	51	-69.3	-55.1	-80.3			1	359	8.0	8.0	159.90	3.65	1988	1990
<i>60</i>	47	19805	47	-64.7	-49.9	-75.5			1	141	20.0	20.0	186.44	5.21	1988	1985
<i>50</i>	45	20933	45	-58.9	-44.3	-67.7			1	121	11.0	11.0	150.25	3.93	1988	1988
<i>40</i>	32	22321	32	-54.9	-47.9	-63.1			1	096	15.9	16.0	146.16	3.42	1990	1988
<i>30</i>	21	24200	21	-51.5	-46.1	-57.7			1	083	27.9	28.0	180.22	2.50	1983	1988
<i>25</i>	19	25378	19	-48.9	-43.5	-55.3									1983	1990
<i>20</i>	14	26867	14	-47.5	-38.1	-53.9									1990	1990
<i>15</i>	7	28688	7	-45.9	-38.9	-52.1									1990	1990
<i>10</i>	1	31480	1	-43.1	-43.1	-43.1									1990	1990
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
134	517	559					61	101	1676	-7.5

# NORMALS OF RADIOSONDE DATA

42397 SILIGURI

OCTOBER 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	210	994	204	28.0	32.0	21.2	204	21.9	210	189	0.2	1.1	1.31	0.94	1983	1986
<i>1000</i>	173	65											10.90			
<i>950</i>	173	480	173	25.5	36.2	19.8	170	18.4	157	208	0.9	2.5	6.52	1.25	1988	1986
<i>900</i>	173	988	173	22.0	30.6	12.2	167	15.3	157	210	0.7	2.5	9.17	1.61	1990	1986
<i>850</i>	173	1481	173	18.7	27.8	9.4	158	11.8	157	160	0.3	2.8	9.00	1.38	1989	1989
<i>800</i>	173	1999	173	15.4	25.2	9.0	157	7.7	157	150	0.5	3.6	10.16	1.39	1989	1985
<i>750</i>	173	2540	173	12.0	22.8	5.2	150	4.1	156	117	0.5	4.1	13.40	1.32	1989	1985
<i>700</i>	172	3116	172	8.5	19.6	1.2	130	0.8	157	313	0.6	4.9	14.07	1.22	1989	1990
<i>650</i>	168	3721	168	5.0	15.6	-2.7	98	-2.0	139	291	1.7	5.7	17.05	1.16	1989	1990
<i>600</i>	165	4373	165	1.3	9.8	-6.1	73	-4.9	130	281	4.6	7.4	19.43	0.86	1987	1985
<i>550</i>	156	5082	156	-2.5	6.6	-9.9	51	-9.5	121	275	8.7	10.6	14.72	0.65	1988	1988
<i>500</i>	155	5817	155	-6.7	1.0	-15.9	36	-13.4	121	271	10.8	12.4	20.65	0.61	1988	1990
<i>450</i>	152	6639	152	-11.6	-3.3	-22.3	26	-18.2	109	272	14.0	15.6	19.81	0.52	1988	1990
<i>400</i>	145	7526	145	-17.3	-8.5	-27.9	15	-23.8	103	268	16.2	18.0	19.78	0.73	1989	1990
<i>350</i>	138	8522	138	-23.5	-13.9	-35.7	10	-29.2	69	266	19.1	21.4	24.78	1.13	1989	1990
<i>300</i>	133	9631	133	-30.7	-22.1	-40.9	6	-39.1	61	266	21.3	23.3	31.59	1.52	1989	1987
<i>250</i>	124	10900	124	-40.0	-31.1	-48.1			25	267	24.3	27.0	41.80	1.80	1989	1990
<i>200</i>	117	12391	117	-51.6	-41.1	-63.1			18	259	27.0	30.2	56.33	1.31	1988	1986
<i>175</i>	99	13239	99	-58.3	-46.5	-70.5			10	260	26.3	26.7	63.92	1.82	1988	1987
<i>150</i>	88	14192	88	-65.6	-54.1	-77.3			7	259	20.8	23.3	67.08	1.56	1988	1987
<i>125</i>	73	15274	73	-72.6	-60.7	-87.5			4	269	23.0	23.2	77.40	2.65	1988	1987
<i>100</i>	66	16568	66	-76.7	-61.5	-87.3			3	282	20.8	21.3	87.88	2.58	1985	1989
<i>80</i>	52	17839	52	-73.0	-60.5	-83.3							63.12	1.98	1990	1988
<i>70</i>	48	18661	48	-68.8	-56.7	-85.3							65.74	2.09	1990	1990
<i>60</i>	42	19562	42	-64.2	-52.5	-78.7							52.78	1.42	1990	1990
<i>50</i>	42	20672	42	-59.9	-47.9	-71.1							47.71	1.17	1990	1989
<i>40</i>	32	22048	32	-55.7	-42.9	-67.3							58.34	1.74	1990	1989
<i>30</i>	24	23889	24	-51.5	-40.7	-63.3							91.36	2.49	1989	1989
<i>25</i>	19	25016	19	-49.3	-38.5	-62.1									1990	1989
<i>20</i>	15	26445	15	-47.5	-33.1	-59.5									1990	1989
<i>15</i>	6	28338	6	-46.9	-42.7	-55.9									1988	1990
<i>10</i>	4	30953	4	-45.4	-38.5	-53.9									1987	1990
<i>7</i>	1	32480	1	-52.3	-52.3	-52.3									1990	1990

**FREEZING LEVEL**

N P ALT

160 584 462

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

67 103 1638 -78.0

# NORMALS OF RADIOSONDE DATA

42397 SILIGURI

NOVEMBER 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	197	997	197	25.4	29.4	19.2	197	17.4	197	201	0.1	0.7	0.85	0.94	1988	1988
1000	175	93	17	24.2	28.4	19.6	17	16.5	16	232	0.3	0.3	7.60		1990	1986
950	175	505	175	22.3	29.0	13.0	171	13.3	162	214	0.8	2.2	10.72	1.20	1990	1989
900	175	1005	175	18.6	29.2	9.2	165	10.0	162	229	0.8	2.3	6.61	1.39	1990	1989
850	175	1491	175	15.0	24.4	5.8	155	6.5	162	166	0.4	2.7	6.16	1.54	1990	1989
800	175	1999	175	11.8	26.4	3.8	149	2.4	162	145	0.5	3.5	8.74	1.62	1988	1989
750	175	2537	175	8.3	17.4	1.4	126	-0.8	161	311	0.6	4.1	14.86	1.73	1990	1989
700	175	3102	175	5.2	14.4	-2.1	99	-4.3	162	300	2.6	5.4	13.54	1.99	1990	1985
650	170	3703	170	2.0	10.6	-6.7	62	-8.3	143	290	5.6	7.6	17.82	2.11	1990	1989
600	162	4345	162	-1.2	8.2	-11.9	37	-13.5	130	288	8.8	10.4	20.14	2.26	1990	1989
550	159	5049	159	-4.9	5.6	-17.1	21	-16.7	120	290	12.0	13.0	25.34	2.23	1990	1989
500	157	5776	157	-9.6	0.0	-22.9	14	-19.6	117	287	15.2	16.3	30.63	2.31	1987	1989
450	150	6585	150	-14.8	-5.7	-28.3	11	-21.4	87	286	17.5	19.0	35.81	2.46	1987	1989
400	147	7468	147	-20.6	-11.5	-33.9	7	-24.1	81	282	21.0	22.5	44.68	2.47	1986	1989
350	134	8451	134	-27.3	-16.7	-41.5	4	-29.8	43	279	23.6	25.0	53.42	2.66	1986	1989
300	129	9538	129	-34.6	-25.5	-49.9	2	-34.2	38	278	26.5	29.6	63.90	2.79	1986	1989
250	120	10796	120	-43.1	-34.9	-56.7	1	-40.3	16	274	27.7	29.3	74.07	2.51	1988	1989
200	106	12259	106	-53.7	-43.5	-67.7			10	273	29.9	31.4	84.99	2.97	1983	1989
175	79	13104	79	-59.1	-48.1	-71.1			5	274	33.6	34.2	107.74	2.82	1988	1989
150	73	14060	73	-65.2	-53.3	-78.1			4	278	25.7	25.8	137.61	3.30	1988	1989
125	61	15175	61	-69.5	-60.7	-84.9			1	269	21.0	21.0	142.34	3.09	1988	1989
100	55	16516	55	-74.1	-65.3	-89.7			1	264	17.0	17.0	210.00	5.46	1988	1989
80	42	17835	42	-73.9	-63.9	-84.1			1	248	21.0	21.0	115.77	3.30	1985	1988
70	37	18638	37	-70.8	-58.5	-80.1			1	288	15.0	15.0	108.72	3.04	1987	1988
60	28	19538	28	-67.1	-55.7	-79.9			1	267	19.0	19.0	127.29	5.45	1985	1988
50	21	20665	21	-61.7	-51.7	-70.7							97.19	6.05	1988	1988
40	15	22061	15	-57.7	-51.3	-64.9									1990	1983
30	13	23930	13	-53.6	-45.9	-62.9									1988	1983
25	11	25066	11	-52.3	-47.1	-61.7									1990	1983
20	10	26575	10	-50.4	-45.5	-61.7									1990	1983
15	7	28501	7	-47.8	-42.5	-58.5									1990	1983
10	1	30871	1	-56.1	-56.1	-56.1									1983	1983
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
169	619	411	7	144	1438	-68.1	48	096	1679	-75.3

## NORMALS OF RADIOSONDE DATA

42397 SILIGURI

DECEMBER 1983-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	161	1000	161	22.1	26.4	15.0	161	14.8	161	235	0.3	0.8	2.73	1.12	1988	1985
<i>1000</i>	145	118	87	21.9	26.4	16.0	87	12.5	82	216	0.3	0.7	23.72	1.17	1988	1985
<i>950</i>	145	526	145	19.2	28.2	12.4	144	10.2	137	229	1.4	2.4	16.39	1.28	1990	1985
<i>900</i>	145	1021	145	15.9	28.8	7.8	139	7.2	138	235	1.0	2.3	21.22	1.28	1990	1985
<i>850</i>	145	1503	145	12.3	24.0	4.2	135	3.9	138	217	0.3	2.5	20.42	1.25	1990	1985
<i>800</i>	145	2007	145	9.1	20.0	1.0	123	0.0	138	226	0.1	3.3	19.39	1.21	1990	1985
<i>750</i>	145	2542	145	6.1	17.2	0.0	94	-3.3	138	300	0.9	4.2	21.10	0.88	1990	1985
<i>700</i>	145	3099	145	3.5	16.4	-3.1	65	-6.3	138	290	3.3	6.0	19.31	0.99	1985	1990
<i>650</i>	144	3701	144	1.0	12.8	-6.7	45	-10.5	125	285	7.7	9.7	15.39	1.45	1985	1985
<i>600</i>	144	4337	144	-1.9	9.6	-11.1	26	-15.5	117	285	10.5	12.0	15.44	2.12	1988	1990
<i>550</i>	143	5039	143	-5.9	6.0	-15.9	19	-17.7	107	283	13.1	14.4	18.57	2.41	1988	1990
<i>500</i>	138	5763	138	-11.0	1.8	-21.9	14	-20.3	103	285	15.5	16.7	16.34	2.44	1988	1990
<i>450</i>	135	6564	135	-16.8	-3.1	-29.1	11	-26.6	81	284	18.5	20.0	24.51	2.39	1990	1990
<i>400</i>	130	7443	129	-23.4	-9.9	-35.9	5	-28.3	64	286	21.6	23.7	23.54	1.76	1990	1990
<i>350</i>	126	8412	125	-30.4	-20.1	-43.1	2	-34.8	39	285	24.5	26.2	26.72	1.09	1988	1990
<i>300</i>	118	9482	117	-37.9	-28.9	-51.7	1	-40.9	32	282	30.4	32.9	31.78	1.06	1986	1990
<i>250</i>	106	10719	105	-46.3	-32.5	-61.9			13	282	31.7	37.0	33.04	1.80	1986	1990
<i>200</i>	99	12174	99	-55.2	-44.5	-69.1			6	282	37.3	41.6	34.73	2.06	1988	1988
<i>175</i>	78	13030	78	-59.3	-45.3	-75.5							43.13	2.79	1986	1988
<i>150</i>	67	13981	67	-63.6	-50.3	-77.3							43.42	4.39	1986	1988
<i>125</i>	52	15096	52	-67.7	-55.9	-80.7							36.81	3.52	1986	1987
<i>100</i>	47	16430	47	-71.5	-57.7	-83.5							51.16	3.55	1986	1988
<i>80</i>	37	17747	37	-71.7	-59.3	-80.1							55.26	3.07	1988	1987
<i>70</i>	34	18545	34	-69.3	-62.1	-78.1							58.63	2.57	1986	1987
<i>60</i>	29	19461	29	-65.7	-58.7	-77.5							77.29	2.31	1986	1987
<i>50</i>	27	20567	27	-61.7	-53.1	-72.9							98.75	3.31	1988	1987
<i>40</i>	21	21980	21	-58.4	-48.9	-74.9							136.92	2.18	1988	1987
<i>30</i>	15	23811	15	-54.3	-45.7	-68.3									1987	1987
<i>25</i>	12	24937	12	-53.4	-43.5	-65.5									1988	1987
<i>20</i>	7	26464	7	-52.5	-49.3	-60.1									1986	1987
<i>15</i>	6	28329	6	-50.8	-47.9	-58.5									1986	1987
<i>10</i>	3	30739	3	-51.2	-46.1	-56.7									1988	1987
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
143	632	394	16	182	1278	-61.3	42	102	1631	-73.0

# NORMALS OF RADIOSONDE DATA

42027 SRINAGAR

JANUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	558	843	558	5.1	16.0	-7.5	558	0.7	558	320	0.1	0.4	1.58	2.20	1974	1986
1000	471	176											22.12			
950	471	572											26.39			
900	471	1055											18.40			
850	471	1525	7	2.9	5.0	0.6	7	-0.4	6	000	0.0	0.0	15.38		1979	1987
800	471	2016	471	1.9	11.4	-14.3	468	-3.8	471	342	0.0	1.9	13.20	2.32	1990	1986
750	471	2526	471	-1.1	10.8	-12.1	453	-7.2	471	139	1.0	2.2	20.22	1.97	1990	1986
700	471	3082	471	-3.8	8.4	-13.0	425	-11.0	471	148	2.3	3.5	14.99	1.70	1990	1971
650	471	3664	471	-7.3	7.2	-18.0	395	-14.8	471	161	4.0	5.4	19.91	1.72	1983	1971
600	471	4286	471	-11.4	1.2	-22.0	363	-18.8	471	176	5.1	6.8	21.50	1.73	1990	1971
550	468	4952	468	-16.2	-3.7	-29.0	337	-23.0	468	203	5.9	8.5	30.54	1.88	1989	1971
500	463	5658	463	-21.2	-7.5	-32.0	307	-27.7	463	229	8.0	11.1	30.23	1.90	1989	1971
450	460	6427	460	-26.6	-12.5	-37.0	274	-32.6	460	246	10.9	14.2	36.92	2.05	1989	1971
400	457	7270	456	-32.5	-17.5	-44.0	236	-38.3	456	255	14.8	18.3	40.76	2.15	1989	1975
350	439	8199	438	-39.2	-23.7	-52.0	148	-44.8	436	262	19.2	22.9	47.74	2.56	1989	1978
300	434	9241	434	-46.5	-30.3	-61.0	72	-52.2	429	265	24.4	28.0	59.47	2.93	1989	1978
250	398	10435	398	-52.8	-37.9	-68.0	25	-57.9	381	267	29.0	32.8	73.94	2.73	1989	1978
200	350	11854	350	-55.9	-44.0	-70.1	9	-58.8	283	268	34.4	37.8	109.03	2.78	1978	1979
175	230	12699	230	-56.2	-46.5	-70.0			111	271	32.9	35.8	143.09	2.74	1981	1972
150	158	13670	158	-58.0	-48.0	-72.0			74	276	34.7	37.2	141.72	3.76	1973	1977
125	100	14821	100	-60.5	-52.3	-72.0			25	281	30.8	32.2	134.49	3.99	1982	1978
100	79	16202	79	-62.8	-54.0	-76.0			14	276	25.3	30.6	146.94	3.97	1974	1978
80	42	17561	42	-63.6	-57.0	-73.0			4	271	13.1	25.8	144.98	2.60	1971	1978
70	35	18399	35	-64.1	-54.1	-75.0			2	290	9.0	29.0	169.48	3.47	1981	1978
60	26	19315	26	-63.4	-51.3	-75.0							168.38	4.05	1981	1978
50	21	20436	21	-62.2	-46.1	-73.0			1	277	34.0	34.0	195.16	4.24	1981	1978
40	11	21808	11	-61.0	-41.5	-73.0									1981	1978
30	4	23434	4	-65.3	-60.0	-70.0									1971	1978
25	3	24524	3	-64.0	-60.0	-70.0									1971	1978
20																
15																
10																
7																

**FREEZING LEVEL**  
N P ALT

**1ST TROPOPAUSE**  
N P ALT T

**2ND TROPOPAUSE**  
N P ALT T

442 757 246

241 249 1050 -56.4

32 099 1638 -65.1

**NORMALS OF RADIOSONDE DATA**

42027 SRINAGAR

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	501	842	501	7.0	16.4	-1.3	501	1.8	501	304	0.2	0.8	1.35	1.53	1988	1982
<i>1000</i>	411	152											14.56			
<i>950</i>	411	554											21.22			
<i>900</i>	411	1037											13.50			
<i>850</i>	411	1510											14.48			
<i>800</i>	411	2005	411	3.8	13.8	-5.5	410	-2.1	411	276	0.3	2.4	15.17	1.53	1988	1982
<i>750</i>	411	2514	411	0.2	10.0	-8.0	408	-5.4	411	131	1.1	2.7	16.24	1.53	1988	1974
<i>700</i>	411	3076	411	-3.0	7.6	-11.0	400	-9.4	411	147	2.7	4.0	17.49	1.33	1990	1977
<i>650</i>	411	3658	411	-6.5	2.8	-15.0	389	-13.4	411	161	4.2	5.4	20.71	1.21	1979	1977
<i>600</i>	411	4281	411	-10.8	-1.0	-20.0	375	-17.5	411	178	4.9	6.8	19.69	1.19	1976	1978
<i>550</i>	409	4950	409	-15.5	-5.5	-26.0	353	-21.9	408	199	5.9	8.4	25.84	1.22	1989	1978
<i>500</i>	409	5658	409	-20.4	-8.9	-31.0	336	-27.0	409	227	7.8	11.2	24.44	1.26	1989	1978
<i>450</i>	407	6430	407	-25.9	-13.5	-36.0	305	-32.3	403	242	10.2	14.1	31.58	1.48	1989	1978
<i>400</i>	403	7275	403	-32.0	-20.1	-42.1	276	-38.5	400	251	13.7	17.6	32.93	1.72	1989	1982
<i>350</i>	388	8208	388	-38.8	-25.1	-52.0	184	-44.8	384	259	18.1	22.4	39.17	2.13	1989	1975
<i>300</i>	382	9251	382	-46.1	-31.9	-60.0	100	-51.2	375	260	23.4	27.6	48.39	2.36	1989	1978
<i>250</i>	351	10450	351	-52.5	-37.1	-66.0	37	-56.4	336	264	28.8	32.9	56.65	2.66	1989	1978
<i>200</i>	309	11884	309	-54.4	-41.1	-68.7	7	-57.4	252	267	34.5	37.9	70.41	2.45	1989	1979
<i>175</i>	230	12738	230	-54.9	-43.1	-70.0			112	273	35.4	38.8	84.75	2.49	1989	1975
<i>150</i>	154	13706	154	-56.5	-41.3	-68.0			71	275	36.9	39.6	90.59	3.22	1990	1977
<i>125</i>	83	14857	83	-58.3	-46.7	-69.5			22	283	32.7	33.7	80.68	3.18	1990	1987
<i>100</i>	66	16262	66	-61.1	-48.7	-72.0			15	278	27.0	28.6	90.26	4.04	1989	1971
<i>80</i>	35	17629	35	-61.3	-48.1	-70.5			6	267	13.2	16.6	119.88	5.19	1989	1987
<i>70</i>	32	18482	32	-61.5	-51.3	-67.3			5	288	0.3	16.0	153.71	4.78	1989	1987
<i>60</i>	26	19430	26	-59.8	-49.5	-68.0			3	079	9.4	12.0	155.14	5.14	1989	1978
<i>50</i>	16	20545	16	-57.4	-49.1	-65.0			2	311	7.7	9.0			1983	1971
<i>40</i>	8	22014	8	-55.4	-51.1	-63.0									1983	1978
<i>30</i>	5	23852	5	-53.2	-48.9	-62.0									1983	1978
<i>25</i>	4	24920	4	-52.0	-47.1	-61.0									1983	1978
<i>20</i>	2	26474	2	-47.6	-46.1	-49.1									1983	1983
<i>15</i>																
<i>10</i>																
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
403	743	260	249	247	1055	-55.3	23	100	1631	-61.5

# NORMALS OF RADIOSONDE DATA

42027 SRINAGAR

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	558	841	558	12.0	24.0	0.4	558	4.7	558	308	0.5	1.0	0.97	2.23	1971	1983
1000	478	120											11.08			
950	478	533											17.32			
900	478	1021											9.14			
850	478	1502											10.16			
800	478	2006	478	8.3	20.0	-2.0	478	1.0	476	311	1.0	2.8	12.23	1.84	1974	1978
750	478	2522	478	4.5	16.0	-5.3	472	-2.4	476	134	0.7	3.0	16.57	1.76	1977	1988
700	478	3093	478	0.7	11.0	-9.1	459	-6.1	476	143	2.8	4.1	16.71	1.49	1971	1980
650	477	3680	477	-3.2	6.6	-13.5	443	-10.1	475	161	3.5	5.3	26.10	1.16	1990	1980
600	476	4314	476	-7.7	5.0	-18.1	418	-14.3	474	184	3.9	6.4	21.31	1.15	1978	1980
550	474	4989	474	-12.4	1.2	-23.1	400	-18.6	472	209	5.0	7.9	28.82	1.29	1987	1980
500	473	5707	473	-17.5	-4.3	-29.3	376	-23.7	471	237	6.7	10.2	26.96	1.36	1987	1986
450	463	6491	462	-22.9	-12.3	-39.9	353	-29.4	459	251	10.0	13.9	33.66	1.50	1987	1986
400	459	7344	458	-29.1	-17.5	-40.0	306	-35.2	457	258	13.0	16.9	32.83	1.81	1990	1978
350	436	8289	436	-36.0	-23.1	-49.0	229	-41.9	430	262	16.8	20.9	41.57	2.15	1990	1978
300	430	9344	430	-43.6	-29.5	-58.0	131	-49.4	424	266	22.2	26.6	47.10	2.41	1990	1978
250	404	10552	404	-51.5	-34.7	-63.0	34	-56.6	382	269	27.8	31.8	61.93	2.60	1989	1978
200	369	11982	369	-55.5	-40.5	-68.9	4	-58.8	312	273	32.7	36.4	76.42	2.65	1990	1980
175	261	12830	261	-55.4	-44.1	-69.0			146	279	33.4	36.5	84.78	2.70	1989	1973
150	202	13810	202	-56.7	-46.5	-69.0			104	276	33.1	35.9	94.43	2.13	1982	1977
125	127	14945	127	-59.1	-45.9	-72.0			35	278	31.7	34.0	114.19	2.81	1987	1977
100	95	16321	95	-62.0	-45.9	-73.0			24	272	26.0	28.5	118.16	3.61	1987	1971
80	66	17701	66	-63.3	-48.7	-77.0			5	273	18.6	21.2	184.46	4.93	1987	1971
70	57	18532	57	-62.4	-50.5	-74.0			4	274	11.4	13.0	193.88	5.06	1987	1971
60	43	19540	43	-60.4	-48.9	-70.0			4	286	13.1	14.3	175.40	5.08	1981	1971
50	39	20713	39	-57.5	-44.9	-70.0			4	280	16.7	17.8	181.70	4.85	1981	1971
40	31	22142	31	-53.5	-40.5	-69.0			1	336	2.9	3.0	187.30	6.61	1981	1971
30	25	24065	25	-47.0	-32.7	-60.3			1	352	4.0	4.0	259.97	7.98	1981	1983
25	22	25256	22	-44.5	-33.1	-61.1			1	353	6.9	7.0	294.17	9.89	1981	1983
20	16	26711	16	-41.7	-30.1	-61.5									1981	1983
15	11	28601	11	-40.5	-29.5	-62.1									1981	1983
10	1	30566	1	-63.1	-63.1	-63.1									1983	1983
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

477	694	315	289	232	1107	-56.6	44	098	1649	-54.3
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# NORMALS OF RADIOSONDE DATA

42027 SRINAGAR

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	566	840	566	18.3	29.0	4.2	565	8.2	566	312	0.4	1.3	0.83	1.44	1971	1983
<i>1000</i>	485	74											11.73			
<i>950</i>	485	504											11.84			
<i>900</i>	485	994											8.94			
<i>850</i>	485	1486											8.80			
<i>800</i>	485	2002	485	14.7	25.0	-0.5	485	3.9	485	310	1.1	3.2	9.19	1.66	1979	1990
<i>750</i>	485	2525	485	10.4	22.8	-2.7	480	-0.1	485	170	0.2	2.9	12.49	1.78	1979	1990
<i>700</i>	485	3112	485	6.2	20.4	-6.5	478	-3.7	485	144	1.3	3.6	12.52	1.58	1985	1990
<i>650</i>	484	3707	484	1.6	14.4	-11.3	462	-6.9	484	168	1.7	4.4	20.50	1.58	1985	1990
<i>600</i>	483	4353	483	-3.1	10.8	-16.0	435	-10.7	482	208	2.1	5.5	16.99	1.60	1985	1973
<i>550</i>	481	5041	481	-8.1	9.0	-20.1	399	-15.3	481	237	3.3	6.9	19.42	1.62	1974	1990
<i>500</i>	481	5770	481	-13.3	2.2	-24.5	366	-20.7	481	251	4.9	8.8	22.97	1.48	1985	1990
<i>450</i>	476	6564	476	-18.8	-1.5	-33.0	325	-26.4	476	264	7.4	11.3	26.66	1.53	1985	1978
<i>400</i>	475	7433	475	-25.0	-3.0	-41.0	287	-32.9	474	268	10.1	14.1	30.88	1.54	1973	1978
<i>350</i>	467	8395	466	-32.2	-13.3	-51.0	214	-39.1	463	273	13.1	17.4	35.24	1.80	1985	1978
<i>300</i>	463	9465	462	-40.2	-20.1	-61.0	125	-46.6	458	275	16.4	20.9	40.84	2.17	1985	1978
<i>250</i>	448	10686	448	-48.9	-31.3	-60.0	47	-55.6	429	275	21.2	25.7	48.40	2.71	1990	1977
<i>200</i>	431	12127	431	-55.4	-38.1	-70.0	3	-56.7	375	277	27.5	31.1	63.60	2.86	1990	1978
<i>175</i>	328	12974	328	-56.5	-44.5	-71.0	1	-59.0	215	278	28.3	32.1	77.19	2.45	1989	1978
<i>150</i>	259	13947	259	-57.7	-45.3	-71.0			167	279	27.4	30.9	84.78	2.45	1986	1978
<i>125</i>	193	15085	192	-60.7	-49.1	-75.0			77	275	24.2	27.0	112.73	3.61	1981	1978
<i>100</i>	150	16455	150	-64.2	-50.7	-80.0			61	273	21.0	23.7	131.49	5.15	1989	1978
<i>80</i>	88	17803	88	-66.2	-56.1	-81.0			14	268	11.5	15.8	163.22	3.71	1982	1978
<i>70</i>	71	18630	71	-65.1	-56.5	-80.0			10	283	6.5	10.6	173.27	4.10	1989	1978
<i>60</i>	55	19589	55	-63.5	-53.1	-79.0			8	261	7.3	16.0	172.25	4.01	1981	1978
<i>50</i>	44	20755	44	-59.3	-47.7	-73.0			6	336	0.8	9.0	211.76	4.77	1982	1978
<i>40</i>	30	22167	30	-55.9	-40.3	-69.0			2	344	2.5	5.5	275.10	6.82	1981	1978
<i>30</i>	21	24047	21	-51.4	-38.7	-65.9			2	198	4.0	7.0	264.10	8.91	1981	1983
<i>25</i>	16	25257	16	-47.5	-37.5	-63.3			1	188	11.0	11.0			1981	1983
<i>20</i>	14	26759	14	-45.3	-38.3	-60.3									1981	1983
<i>15</i>	12	28680	12	-42.1	-35.1	-57.1									1981	1983
<i>10</i>	3	30946	3	-47.2	-36.5	-53.1									1981	1979
<i>7</i>																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

482 635 390

254 213 1174 -57.7

69 100 1673 -66.6

## NORMALS OF RADIOSONDE DATA

42027 SRINAGAR

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	587	838	587	22.0	33.0	7.0	587	11.1	587	266	0.2	1.3	1.21	1.95	1971	1982
<i>1000</i>	481	37											21.57			
<i>950</i>	480	476											18.50			
<i>900</i>	480	969											16.10			
<i>850</i>	480	1468											13.00			
<i>800</i>	480	1990	480	18.7	29.2	4.2	478	6.8	480	304	0.5	3.1	10.38	2.08	1981	1982
<i>750</i>	480	2518	480	14.4	26.4	1.0	474	2.6	480	321	0.2	3.1	15.30	2.37	1990	1975
<i>700</i>	480	3115	480	9.9	22.0	-4.0	470	-1.0	480	239	0.3	3.5	10.54	2.29	1990	1975
<i>650</i>	480	3713	480	5.1	18.0	-6.1	465	-4.2	480	250	1.0	4.2	17.72	2.18	1990	1982
<i>600</i>	477	4372	477	0.1	13.2	-11.0	446	-7.9	477	252	2.0	5.3	16.61	2.17	1990	1977
<i>550</i>	477	5062	477	-5.1	8.6	-15.0	420	-12.4	477	260	3.1	6.7	31.33	2.11	1990	1977
<i>500</i>	477	5804	477	-10.3	3.8	-20.3	385	-17.7	477	274	4.5	8.1	25.38	1.96	1990	1987
<i>450</i>	474	6607	474	-15.7	0.4	-26.0	333	-23.8	474	277	6.4	10.3	32.69	2.08	1990	1977
<i>400</i>	472	7487	471	-22.0	-4.3	-32.0	279	-29.9	471	279	8.9	12.8	36.85	2.23	1990	1975
<i>350</i>	465	8458	464	-29.0	-10.3	-42.0	230	-36.7	463	278	11.5	15.4	46.47	2.65	1990	1978
<i>300</i>	460	9545	459	-36.7	-17.3	-51.0	162	-44.3	458	280	15.5	19.4	57.35	3.09	1990	1978
<i>250</i>	440	10787	440	-45.0	-26.5	-59.0	47	-51.6	435	278	20.3	24.2	73.91	3.51	1990	1977
<i>200</i>	420	12255	419	-51.7	-35.5	-64.0	12	-56.5	387	279	25.4	29.4	92.27	3.20	1990	1977
<i>175</i>	332	13110	331	-54.7	-39.5	-71.0	1	-62.0	228	277	25.5	29.1	106.06	3.07	1985	1978
<i>150</i>	276	14085	276	-57.2	-45.1	-72.0			189	273	25.8	28.5	83.78	3.01	1985	1978
<i>125</i>	190	15224	190	-61.1	-48.9	-78.0			86	275	21.0	23.5	108.12	3.58	1988	1978
<i>100</i>	156	16597	156	-65.5	-49.9	-80.0			71	271	17.9	21.0	174.05	4.48	1986	1978
<i>80</i>	105	17942	105	-67.3	-55.1	-80.0			25	278	11.1	14.0	129.45	3.95	1985	1978
<i>70</i>	84	18747	84	-65.9	-54.5	-83.0			20	288	6.1	11.9	141.58	4.50	1986	1978
<i>60</i>	75	19697	75	-63.1	-50.1	-73.0			16	289	4.6	11.5	143.45	4.19	1981	1973
<i>50</i>	61	20857	61	-58.7	-45.3	-72.0			13	299	7.1	12.8	183.01	4.84	1986	1978
<i>40</i>	38	22314	38	-55.2	-41.1	-69.0			4	312	12.9	13.5	259.78	6.91	1989	1974
<i>30</i>	27	24237	27	-50.4	-39.9	-63.0			2	309	5.0	5.0	391.60	7.31	1989	1977
<i>25</i>	20	25396	20	-47.6	-39.9	-60.0			2	346	4.8	10.0			1981	1977
<i>20</i>	13	26939	13	-45.8	-38.3	-59.1									1989	1981
<i>15</i>	8	28910	8	-41.3	-35.5	-52.3									1981	1981
<i>10</i>	6	31702	6	-38.2	-31.7	-43.1									1989	1982
<i>7</i>																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

477 602 436

163 210 1192 -55.1

92 096 1687 -56.7

# NORMALS OF RADIOSONDE DATA

42027 SRINAGAR

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	535	834	535	25.6	36.0	12.0	535	14.7	535	308	0.2	1.0	1.55	1.68	1973	1974
1000	457	-29											25.47			
950	467	416											26.34			
900	467	913											20.74			
850	467	1418											17.84			
800	467	1949	467	23.5	34.8	8.0	464	10.8	467	322	0.6	2.9	15.60	1.81	1990	1975
750	467	2494	467	19.2	32.2	5.6	465	6.3	467	319	1.0	3.3	17.76	1.91	1990	1988
700	466	3093	465	14.6	29.8	0.8	459	2.5	465	303	1.7	3.7	13.90	1.91	1988	1983
650	466	3703	466	9.6	25.4	-2.1	454	-1.3	466	297	2.0	4.0	16.72	1.91	1988	1988
600	464	4370	464	4.4	19.8	-4.7	441	-5.3	464	295	2.4	4.9	16.19	1.86	1988	1988
550	460	5075	460	-0.9	13.4	-10.1	416	-10.2	458	302	2.9	5.7	29.90	1.86	1988	1983
500	459	5825	459	-6.2	7.4	-15.5	363	-15.8	458	297	4.2	7.0	22.04	1.75	1990	1983
450	451	6645	451	-11.4	1.8	-21.0	302	-21.0	450	293	6.0	8.8	26.44	1.77	1990	1975
400	448	7535	447	-16.7	-4.3	-27.0	231	-26.9	446	290	9.2	11.9	30.59	1.98	1990	1975
350	436	8531	435	-22.7	-10.7	-34.0	179	-33.1	435	285	12.7	15.3	32.89	2.13	1988	1972
300	434	9646	433	-29.4	-17.3	-43.0	136	-39.7	433	283	16.9	19.6	43.17	2.27	1990	1972
250	424	10929	424	-37.0	-25.3	-50.0	83	-47.2	416	281	21.1	23.9	54.47	2.28	1990	1972
200	397	12447	397	-46.1	-33.9	-57.0	23	-54.6	372	281	22.8	26.0	65.56	2.38	1990	1972
175	314	13315	313	-51.7	-40.3	-63.0	1	-57.0	206	276	20.9	23.8	83.60	2.97	1988	1977
150	262	14299	262	-57.3	-44.3	-71.0			175	277	21.4	23.7	70.64	3.19	1989	1978
125	188	15435	188	-64.1	-47.1	-80.0			74	280	14.3	17.4	87.34	4.86	1989	1978
100	153	16783	153	-69.6	-49.9	-86.0			56	280	9.1	13.4	96.14	5.29	1986	1978
80	100	18120	100	-69.7	-48.1	-85.0			20	306	3.2	9.4	150.66	6.20	1989	1978
70	82	18935	82	-67.2	-45.7	-80.0			16	138	2.4	6.9	188.53	5.80	1989	1978
60	67	19882	67	-62.8	-43.3	-76.0			11	103	3.5	9.3	195.52	4.80	1989	1977
50	52	21006	52	-57.9	-46.1	-74.0			9	080	6.4	11.0	248.34	5.53	1981	1977
40	33	22445	33	-52.8	-42.3	-67.0			3	108	8.4	11.3	181.92	5.53	1989	1978
30	17	24325	17	-48.4	-41.9	-62.0			1	082	19.0	19.0			1981	1977
25	8	25490	8	-47.9	-40.9	-62.0			1	061	13.0	13.0			1989	1977
20	5	27149	5	-41.1	-39.1	-43.1									1989	1982
15	3	29148	3	-37.3	-35.5	-40.3									1981	1982
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
462	560	493	23	223	1158	-49.9	105	105	1660	-70.9

# NORMALS OF RADIOSONDE DATA

42027 SRINAGAR

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	588	832	588	27.5	34.0	15.2	588	18.5	588	298	0.1	0.7	1.21	0.99	1983	1983
1000	552	-52											17.99			
950	552	389											21.83			
900	552	893											15.15			
850	552	1402											13.10			
800	552	1934	552	24.5	32.4	12.6	552	14.8	551	335	0.5	2.7	12.45	1.28	1990	1983
750	552	2483	552	20.3	29.8	2.0	552	10.4	551	349	0.7	2.8	22.09	1.42	1989	1975
700	552	3082	552	15.9	26.8	5.0	551	6.4	551	323	0.8	3.0	12.95	1.41	1989	1983
650	551	3700	551	11.3	22.2	0.6	547	2.9	549	290	1.2	3.6	18.81	1.35	1989	1989
600	548	4367	548	6.6	18.0	-4.3	537	-1.3	547	269	1.2	3.8	16.10	1.47	1976	1989
550	547	5085	547	1.8	12.4	-7.7	519	-6.1	546	271	1.1	4.7	32.62	1.56	1989	1989
500	547	5837	547	-2.9	9.4	-12.7	481	-11.1	546	283	1.9	5.7	22.25	1.56	1990	1989
450	540	6672	540	-7.5	4.8	-18.0	419	-16.1	539	275	3.7	7.3	30.51	1.57	1980	1972
400	537	7574	537	-12.4	-2.1	-24.0	348	-21.7	536	275	6.2	9.5	30.20	1.52	1989	1973
350	528	8585	528	-18.0	-7.7	-31.3	250	-27.8	527	274	8.7	12.4	34.11	1.56	1989	1989
300	523	9723	523	-24.9	-13.5	-36.0	179	-34.4	521	269	11.1	14.8	41.57	1.76	1981	1974
250	514	11028	514	-33.5	-16.0	-46.5	121	-43.2	508	265	13.4	17.0	49.61	2.12	1978	1990
200	491	12562	491	-44.3	-33.1	-60.0	35	-53.5	451	265	14.4	18.4	65.80	2.95	1981	1977
175	393	13434	393	-51.0	-39.1	-65.0	5	-53.8	291	263	12.9	16.9	76.60	3.61	1987	1977
150	327	14415	327	-58.2	-44.0	-75.0			253	271	12.2	16.0	94.83	4.20	1973	1977
125	246	15534	246	-65.5	-50.5	-79.0			135	271	6.4	12.0	95.05	4.59	1986	1978
100	211	16876	211	-70.8	-54.1	-87.0			112	257	1.3	10.0	106.73	4.38	1986	1978
80	154	18203	154	-69.5	-52.5	-85.0			48	080	5.3	8.0	148.73	4.64	1986	1978
70	131	19007	131	-66.7	-48.5	-83.0			47	087	7.8	10.3	172.39	4.81	1982	1978
60	96	19936	96	-63.1	-47.1	-79.0			34	094	9.1	10.9	186.02	4.21	1986	1978
50	74	21079	74	-58.2	-42.5	-76.0			28	088	11.0	11.9	175.71	4.30	1981	1978
40	43	22484	43	-55.0	-41.9	-69.0			13	091	10.7	12.7	221.46	3.50	1981	1971
30	29	24319	29	-51.7	-35.7	-63.0			7	072	11.2	13.2	248.03	3.81	1981	1971
25	20	25485	20	-51.5	-38.9	-61.0			4	094	16.9	17.7			1986	1971
20	10	27094	10	-46.5	-33.1	-55.1									1986	1985
15	6	28890	6	-46.8	-41.9	-54.1									1985	1985
10	5	31660	5	-45.2	-40.3	-52.3									1985	1985
7	1	34380	1	-39.1	-39.1	-39.1									1985	1985

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

545 530 538

160 101 1650 -72.5

# NORMALS OF RADIOSONDE DATA

42027 SRINAGAR

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	586	833	586	27.0	34.4	15.0	585	18.6	586	182	0.1	0.6	1.00	1.25	1983	1975
1000	529	-39											13.46			
950	529	398											13.72			
900	529	905											11.38			
850	529	1412											11.10			
800	529	1945	529	24.2	32.8	12.0	529	14.6	529	326	0.2	2.5	11.14	1.45	1990	1976
750	529	2490	529	20.1	28.4	11.0	529	10.3	529	343	0.5	2.5	18.75	1.57	1987	1973
700	529	3093	529	15.9	25.4	6.0	528	6.5	529	319	0.9	2.8	13.47	1.58	1989	1973
650	528	3708	528	11.3	21.6	2.0	524	2.9	528	292	1.1	3.2	16.86	1.51	1989	1973
600	525	4377	525	6.7	18.8	-4.0	515	-1.2	525	247	0.9	3.4	19.13	1.56	1987	1973
550	522	5096	522	2.1	12.4	-8.0	496	-5.6	522	245	1.2	4.2	35.05	1.56	1989	1973
500	521	5847	521	-2.6	7.0	-11.1	454	-10.4	521	255	2.4	5.3	26.43	1.61	1990	1981
450	515	6683	515	-7.0	7.0	-16.7	398	-15.5	514	261	3.9	6.9	32.95	1.61	1978	1979
400	515	7587	515	-12.0	-0.9	-21.0	320	-21.0	514	263	6.4	9.4	36.75	1.61	1989	1973
350	508	8600	508	-17.9	-7.1	-29.0	248	-27.2	507	264	8.9	11.7	40.29	1.76	1989	1976
300	506	9739	506	-25.0	-13.9	-39.0	184	-34.5	505	263	11.3	14.0	51.60	2.12	1989	1976
250	494	11042	494	-33.8	-23.5	-47.0	121	-43.9	489	262	13.5	16.3	63.65	2.49	1988	1976
200	474	12572	474	-44.9	-33.3	-60.0	25	-53.6	448	260	15.3	18.7	82.47	3.20	1990	1976
175	368	13446	368	-51.6	-39.5	-56.0	1	-45.0	265	259	15.3	18.3	101.62	3.83	1990	1976
150	297	14419	297	-58.9	-44.0	-71.0			234	261	14.8	17.9	131.72	4.52	1973	1976
125	223	15539	223	-65.9	-45.0	-78.0			118	264	9.5	13.7	145.93	4.73	1973	1978
100	187	16876	187	-70.8	-48.7	-85.0			99	253	5.4	11.2	145.08	4.18	1986	1978
80	140	18217	140	-68.7	-48.5	-87.0			45	141	2.0	7.3	162.28	4.33	1986	1978
70	109	19045	109	-65.9	-50.1	-82.0			38	074	2.2	7.6	187.47	4.44	1986	1978
60	82	19992	82	-62.0	-45.7	-81.0			26	086	5.4	8.4	203.77	4.83	1981	1978
50	61	21167	61	-58.0	-42.5	-74.0			21	111	5.1	8.6	212.11	5.37	1981	1976
40	26	22594	26	-53.5	-40.1	-63.1			7	097	7.4	14.3	198.25	4.02	1981	1987
30	15	24428	15	-50.1	-34.5	-60.1			4	152	1.6	16.0			1981	1986
25	7	25590	7	-49.7	-41.5	-58.1			2	092	7.4	8.0			1981	1987
20	4	26995	4	-50.3	-44.1	-57.1									1986	1987
15	4	28863	4	-51.3	-45.3	-58.3									1981	1987
10	3	31458	3	-51.2	-48.5	-53.7									1986	1987
7	2	33930	2	-50.0	-49.5	-50.5									1987	1986

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

524 526 544

155 106 1664 -71.6

## NORMALS OF RADIOSONDE DATA

42027 SRINAGAR

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	562	837	562	24.6	31.4	8.8	562	13.7	562	298	0.3	0.9	0.92	1.43	1987	1982
1000	483	13											10.47			
950	482	440											12.67			
900	483	952											8.38			
850	483	1455											7.69			
800	484	1982	484	21.6	31.0	5.4	484	9.0	484	314	1.0	2.9	6.35	1.47	1981	1982
750	484	2517	484	17.5	26.8	5.0	475	4.4	484	321	0.8	3.0	13.75	1.79	1988	1972
700	484	3119	484	13.0	23.8	2.0	465	0.7	484	305	1.0	3.2	9.59	1.91	1988	1973
650	483	3727	482	8.4	22.8	-1.5	455	-2.7	482	275	1.1	3.6	15.55	2.04	1988	1979
600	481	4390	481	3.3	19.8	-6.3	434	-6.7	481	244	1.4	4.0	17.63	2.15	1988	1979
550	479	5095	479	-1.8	13.8	-13.0	398	-11.2	479	242	1.5	4.9	33.75	2.24	1988	1977
500	479	5840	479	-6.9	5.6	-19.0	359	-16.2	479	261	3.1	6.4	27.91	2.32	1988	1974
450	473	6661	473	-11.8	0.6	-24.0	295	-21.2	473	266	5.8	8.6	38.27	2.26	1989	1972
400	471	7550	471	-17.1	-5.3	-31.0	223	-26.4	471	268	9.4	11.9	41.56	2.47	1989	1972
350	462	8546	462	-22.9	-11.1	-37.0	169	-32.8	460	268	13.4	15.9	47.95	2.67	1987	1974
300	455	9661	455	-29.5	-17.5	-43.0	123	-39.6	454	266	17.8	20.2	61.48	2.98	1969	1972
250	431	10942	431	-37.6	-25.1	-51.0	81	-47.9	424	267	22.2	24.5	78.29	3.20	1969	1974
200	407	12449	407	-47.4	-36.3	-61.0	19	-56.0	373	265	24.6	27.2	91.62	3.19	1990	1977
175	309	13317	309	-53.3	-41.9	-65.1	1	-61.0	176	264	24.7	27.0	103.39	3.28	1990	1982
150	239	14283	239	-59.5	-45.0	-72.1			144	264	23.2	24.9	121.09	3.39	1973	1982
125	149	15381	149	-65.9	-53.5	-78.1			55	267	17.3	19.4	155.43	3.25	1986	1982
100	127	16712	127	-69.6	-50.9	-80.0			47	266	16.0	17.6	181.96	4.14	1986	1974
80	81	18034	81	-68.5	-48.7	-81.0			14	281	3.5	8.2	204.64	5.19	1986	1974
70	63	18875	63	-65.5	-47.5	-79.0			11	303	4.5	6.9	238.29	6.79	1986	1976
60	47	19773	47	-62.1	-50.0	-73.0			5	080	2.0	7.2	176.17	5.35	1973	1974
50	41	20936	41	-57.6	-45.0	-70.0			4	108	3.7	6.7	178.33	4.89	1973	1978
40	22	22322	22	-54.0	-47.3	-67.0			2	360	3.1	6.0	140.58	2.51	1982	1978
30	14	24165	14	-50.7	-42.7	-62.0			1	082	7.0	7.0			1982	1978
25	6	25336	6	-49.8	-45.1	-56.0									1982	1972
20	4	26916	4	-46.6	-44.1	-48.7									1982	1982
15	2	28982	2	-44.1	-42.9	-45.3									1982	1982
10	2	31713	2	-42.2	-41.1	-43.3									1982	1982
7																

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

481 567 484

3 279 1000 -42.7

96 108 1628 -70.1

## NORMALS OF RADIOSONDE DATA

42027 SRINAGAR

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	842	589	19.2	29.0	1.0	589	8.8	588	305	0.1	0.4	1.19	1.61	1971	1982
<i>1000</i>	487	83											17.28			
<i>950</i>	487	508											19.14			
<i>900</i>	487	1008											15.09			
<i>850</i>	487	1500	2	11.9	16.4	7.4	2	4.9	1	326	5.0	5.0	10.86		1979	1982
<i>800</i>	487	2017	487	16.4	26.0	0.2	486	3.7	485	310	0.8	2.3	9.34	1.26	1975	1982
<i>750</i>	487	2536	487	12.4	22.8	-0.9	480	-1.0	485	236	0.3	2.6	13.17	1.07	1989	1982
<i>700</i>	487	3135	487	8.1	19.8	-5.9	460	-4.7	484	187	0.2	3.0	8.34	1.13	1988	1986
<i>650</i>	483	3725	483	3.2	16.4	-10.9	436	-8.2	481	203	1.0	3.6	14.90	1.13	1990	1986
<i>600</i>	482	4384	482	-1.7	11.8	-15.3	399	-12.0	480	204	1.7	4.3	10.10	1.17	1989	1986
<i>550</i>	480	5069	480	-7.0	6.4	-19.7	362	-16.6	477	223	2.3	5.7	20.87	1.34	1990	1986
<i>500</i>	477	5806	477	-12.2	4.4	-23.3	312	-21.8	473	252	3.7	7.2	15.83	1.51	1988	1986
<i>450</i>	468	6604	468	-17.6	-2.7	-30.0	257	-27.8	464	263	6.8	10.0	25.39	1.60	1990	1972
<i>400</i>	464	7478	464	-23.5	-7.9	-36.0	189	-33.0	462	268	10.6	13.7	25.87	1.81	1990	1972
<i>350</i>	450	8446	450	-30.1	-12.9	-43.0	139	-39.6	448	271	14.9	17.7	30.02	2.03	1990	1972
<i>300</i>	443	9528	443	-37.2	-19.7	-50.0	92	-46.0	441	271	19.4	22.3	42.00	2.51	1990	1972
<i>250</i>	427	10769	427	-44.8	-27.7	-58.1	54	-52.0	416	269	25.4	28.2	54.83	2.89	1989	1980
<i>200</i>	384	12236	384	-52.3	-38.7	-64.1	16	-57.3	338	272	29.4	32.2	72.86	2.90	1988	1979
<i>175</i>	254	13090	254	-56.0	-40.5	-67.1			160	272	31.7	34.4	95.29	3.09	1988	1979
<i>150</i>	190	14043	190	-60.0	-43.1	-73.0			118	269	31.1	33.4	113.55	3.33	1988	1976
<i>125</i>	126	15169	126	-62.9	-52.5	-72.1			23	273	23.3	24.7	161.56	3.59	1988	1982
<i>100</i>	96	16526	96	-64.7	-55.1	-78.0			15	267	25.0	26.9	109.86	4.57	1981	1977
<i>80</i>	68	17890	68	-64.4	-53.5	-76.0			2	289	15.7	22.0	152.61	4.71	1981	1971
<i>70</i>	54	18717	54	-63.3	-49.5	-74.0							231.13	5.08	1981	1977
<i>60</i>	45	19660	45	-60.7	-52.5	-70.0							129.92	3.34	1981	1971
<i>50</i>	38	20811	38	-57.3	-49.1	-66.0							134.92	3.60	1985	1971
<i>40</i>	26	22239	26	-54.6	-44.7	-61.0							142.54	4.15	1985	1971
<i>30</i>	12	24193	12	-50.5	-38.5	-58.0									1985	1971
<i>25</i>	6	25229	6	-50.6	-44.3	-57.0									1986	1971
<i>20</i>	3	26758	3	-48.1	-45.3	-52.5									1982	1982
<i>15</i>	1	28852	1	-40.5	-40.5	-40.5									1982	1982
<i>10</i>																
<i>7</i>																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
486	618	415	39	199	1220	-58.5	59	112	1602	-66.6

# NORMALS OF RADIOSONDE DATA

42027 SRINAGAR

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	570	844	570	12.9	22.0	0.4	570	4.5	570	323	0.2	0.3	1.10	1.35	1977	1986
1000	479	139											15.11			
950	479	550											17.40			
900	479	1042											11.85			
850	479	1524	3	6.2	9.0	3.6	3	4.5	1	000	0.0	0.0	10.10		1982	1986
800	479	2030	479	10.2	20.0	-0.5	475	-0.7	476	339	0.4	1.8	9.55	1.74	1990	1979
750	479	2544	479	6.7	16.6	-4.9	459	-5.0	475	147	0.4	2.0	18.69	1.97	1983	1981
700	479	3125	479	3.2	13.6	-8.0	429	-9.1	477	149	1.0	2.7	13.52	1.92	1988	1975
650	477	3711	477	-1.0	9.0	-11.0	382	-12.6	470	165	1.9	3.7	21.92	1.91	1988	1975
600	474	4355	474	-5.8	4.4	-15.3	354	-16.3	473	186	2.6	5.0	20.40	1.96	1987	1979
550	470	5030	470	-10.8	0.4	-20.3	315	-20.6	467	207	3.2	6.0	37.11	2.12	1988	1981
500	466	5756	466	-16.0	-4.3	-25.0	272	-25.6	466	242	5.3	8.7	30.54	2.20	1990	1975
450	463	6541	463	-21.4	-4.9	-32.0	238	-30.5	463	259	8.8	12.0	42.69	2.30	1986	1975
400	463	7403	463	-27.6	-15.3	-40.0	207	-36.0	463	264	13.4	16.2	44.15	2.46	1990	1974
350	446	8352	446	-34.4	-22.9	-45.0	155	-42.3	441	268	17.6	20.4	53.81	2.59	1990	1974
300	437	9414	437	-41.7	-30.1	-54.0	88	-49.7	436	272	22.6	25.8	63.38	2.75	1981	1975
250	401	10635	401	-49.0	-32.9	-61.0	29	-55.6	389	273	28.0	31.0	77.33	2.70	1987	1974
200	358	12087	358	-55.1	-42.9	-66.5	7	-57.6	318	276	30.1	33.1	91.37	2.48	1988	1983
175	233	12924	233	-57.4	-44.9	-68.0			132	276	31.1	33.5	103.85	2.42	1988	1976
150	165	13877	165	-59.4	-48.1	-72.0			104	272	33.8	35.5	122.86	3.04	1981	1977
125	104	15012	104	-61.7	-51.5	-73.1			39	272	30.5	33.0	126.13	2.67	1982	1979
100	83	16348	82	-63.8	-54.9	-76.0			30	275	24.3	26.0	155.54	2.96	1982	1974
80	52	17741	52	-63.6	-54.5	-76.0			6	288	18.1	19.0	195.86	3.07	1981	1977
70	46	18616	46	-62.6	-52.1	-74.0			6	280	14.8	15.8	181.86	3.15	1981	1977
60	35	19571	35	-60.7	-48.5	-68.0			4	281	8.9	9.8	180.66	3.52	1981	1972
50	28	20749	28	-57.9	-43.5	-67.1			5	276	13.9	14.6	164.78	3.85	1981	1981
40	18	22223	18	-55.2	-45.1	-68.0									1980	1972
30	8	23962	8	-53.3	-41.9	-60.0									1985	1972
25	4	25040	4	-53.8	-50.0	-58.0									1978	1972
20	3	26529	3	-49.0	-46.3	-51.7									1981	1985
15																
10																
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

476 665 354

105 230 1116 -55.6

32 109 1607 -65.4



# NORMALS OF RADIOSONDE DATA

42027 SRINAGAR

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	589	845	589	6.3	16.4	-3.1	589	1.8	589	331	0.1	0.3	1.17	1.96	1985	1986
1000	450	187											13.65			
950	450	584											16.07			
900	450	1071											11.33			
850	450	1543	20	4.7	12.0	-3.3	20	1.2	19	101	0.2	0.3	8.56		1978	1986
800	450	2037	450	3.7	13.8	-7.0	450	-3.2	447	070	0.1	1.8	9.12	2.51	1985	1972
750	450	2551	450	1.0	11.8	-10.0	434	-7.0	447	142	0.8	2.0	20.93	2.60	1985	1972
700	450	3109	450	-1.2	10.0	-13.0	414	-10.3	447	144	1.6	3.1	16.14	2.21	1987	1974
650	449	3699	449	-4.4	8.4	-15.0	376	-13.9	446	152	3.3	4.7	24.74	2.16	1987	1977
600	448	4324	447	-8.7	4.4	-18.0	347	-17.6	445	172	4.3	6.0	26.11	2.16	1987	1972
550	447	5000	446	-13.6	-0.9	-23.0	330	-21.8	444	201	5.4	7.7	37.03	2.09	1987	1974
500	446	5711	445	-18.6	-7.0	-31.0	310	-26.5	443	230	7.4	10.6	37.04	2.11	1978	1977
450	439	6492	438	-24.1	-7.9	-37.0	281	-31.5	436	245	10.5	13.8	43.97	2.25	1989	1977
400	436	7340	436	-30.3	-18.1	-46.0	240	-37.1	433	255	14.3	17.5	50.12	2.44	1987	1977
350	429	8280	427	-37.0	-25.3	-55.0	160	-43.8	423	261	18.7	21.8	59.83	2.64	1980	1977
300	426	9329	426	-44.6	-30.9	-59.0	79	-51.6	419	263	23.3	26.5	71.08	2.80	1980	1977
250	397	10531	397	-52.0	-36.9	-67.0	20	-57.3	377	268	29.3	32.5	87.42	2.57	1980	1977
200	357	11960	357	-57.1	-41.1	-72.0	2	-59.0	304	269	33.7	36.6	103.55	2.27	1980	1977
175	229	12786	229	-58.9	-47.7	-78.0			129	272	34.6	37.1	111.29	2.61	1989	1978
150	163	13742	163	-60.1	-48.1	-72.0			87	272	37.0	39.1	110.63	3.34	1980	1977
125	99	14900	99	-61.8	-49.1	-72.0			25	269	27.8	29.3	133.36	4.01	1986	1978
100	76	16275	76	-63.5	-53.5	-74.0			20	269	21.8	22.7	162.94	4.18	1988	1978
80	41	17620	41	-64.1	-56.3	-75.0			3	274	22.4	22.7	178.42	3.37	1980	1978
70	33	18464	33	-64.5	-55.5	-74.5			3	281	17.6	18.0	205.30	3.90	1980	1986
60	20	19406	20	-63.8	-53.9	-71.0			3	275	18.3	19.0			1989	1977
50	14	20510	14	-63.1	-53.5	-70.0			1	265	20.0	20.0			1980	1977
40	6	21923	6	-59.4	-51.7	-65.0									1980	1977
30	4	23705	4	-57.8	-54.0	-63.0									1978	1977
25	3	24900	3	-57.2	-50.5	-62.0									1980	1977
20	1	26065	1	-59.1	-59.1	-59.1									1981	1981
15	1	27860	1	-58.1	-58.1	-58.1									1981	1981
10																
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
439	728	282	176	227	1115	-58.3	23	115	1634	-64.8

## NORMALS OF RADIOSONDE DATA

43371 THIRUVANANTHAPURAM

JANUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	1002	600	29.3	33.0	23.0	600	21.5	600	248	1.9	2.3	0.89	0.53	1974	1971
1000	591	81	547	29.0	32.0	19.0	544	21.0	538	248	2.9	3.5	5.99	0.52	1973	1978
950	591	523	591	24.2	29.6	14.0	587	17.0	582	248	1.9	3.3	14.18	1.28	1987	1975
900	591	1003	591	20.8	28.8	13.8	585	13.5	582	030	2.1	3.7	6.80	1.23	1984	1989
850	591	1495	591	17.7	24.0	11.0	584	9.8	582	043	4.7	5.4	7.73	1.23	1977	1975
800	591	2012	590	15.0	20.6	8.0	555	4.1	581	049	4.4	5.4	9.59	1.19	1980	1975
750	591	2552	591	12.8	20.0	5.0	463	-1.2	581	055	3.1	5.2	10.54	1.15	1978	1975
700	589	3132	589	10.1	16.4	4.0	396	-5.4	579	066	2.7	5.3	12.54	1.10	1990	1972
650	588	3737	587	6.9	19.0	-4.0	348	-8.8	576	077	3.0	5.6	13.98	1.23	1977	1978
600	587	4398	586	3.2	10.2	-11.0	312	-11.7	575	078	3.7	6.1	17.79	1.24	1989	1978
550	587	5097	586	-0.7	6.8	-10.3	276	-15.5	574	076	4.1	6.7	18.95	1.21	1989	1984
500	586	5854	586	-5.0	3.6	-12.0	247	-19.6	573	073	4.2	7.4	23.86	1.31	1988	1978
450	581	6671	581	-9.7	-2.1	-19.0	224	-24.3	566	073	4.1	7.8	22.65	1.45	1985	1971
400	580	7577	580	-15.4	-8.0	-26.0	193	-30.5	563	070	3.0	8.1	32.47	1.67	1977	1974
350	571	8570	571	-22.3	-12.9	-29.0	171	-36.5	553	077	1.5	8.0	33.05	1.83	1990	1972
300	569	9691	569	-30.6	-20.7	-38.1	158	-44.1	552	174	1.7	8.3	45.92	1.88	1990	1982
250	562	10960	562	-40.8	-23.0	-50.0	104	-52.3	541	174	4.8	10.6	55.72	1.86	1971	1978
200	550	12441	550	-53.0	-40.9	-63.0	1	-58.0	529	171	6.3	12.7	67.45	1.91	1987	1978
175	533	13292	533	-59.8	-48.7	-72.0			507	169	5.8	13.1	73.89	1.88	1990	1978
150	520	14241	520	-67.2	-56.3	-79.0			488	166	4.7	13.0	81.27	1.91	1990	1978
125	499	15323	499	-73.6	-64.1	-82.5			465	148	3.7	12.2	88.90	2.00	1987	1980
100	474	16610	474	-78.7	-68.0	-87.3			439	107	4.1	9.8	96.83	1.86	1976	1988
80	414	17895	414	-75.4	-61.1	-89.7			370	111	3.7	7.9	104.04	2.65	1986	1985
70	393	18688	393	-71.1	-56.1	-87.1			347	123	1.0	7.6	116.86	3.11	1983	1985
60	348	19606	348	-66.7	-53.1	-86.3			303	225	1.1	8.4	121.71	3.08	1983	1985
50	308	20729	308	-61.9	-47.1	-77.3			271	140	1.1	10.2	139.89	3.29	1988	1985
40	244	22126	244	-57.5	-43.3	-70.0			202	087	3.3	12.9	159.75	2.89	1985	1978
30	168	23988	168	-52.8	-39.5	-64.9			132	096	7.1	15.7	151.10	2.69	1983	1984
25	113	25171	113	-50.8	-40.5	-63.3			82	098	10.8	17.2	123.40	2.77	1980	1987
20	78	26637	78	-48.4	-41.1	-59.7			46	099	13.2	19.2	124.75	2.69	1987	1984
15	42	28520	42	-45.7	-37.3	-57.1			15	088	15.5	19.3	185.53	2.78	1987	1984
10	10	31050	10	-45.8	-30.1	-54.1			2	100	35.1	35.5			1987	1984
7	1	33401	1	-46.3	-46.3	-46.3									1984	1984

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

587 557 498

438 100 1666 -80.4

# NORMALS OF RADIOSONDE DATA

43371 THIRUVANANTHAPURAM

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	565	1001	565	29.8	34.0	23.2	565	22.0	565	250	2.6	3.1	1.32	0.63	1973	1979
<i>1000</i>	556	76	481	29.5	33.0	23.0	480	21.6	461	246	3.4	4.1	9.95	0.60	1973	1979
<i>950</i>	556	518	556	24.8	30.0	17.0	553	18.0	533	242	2.6	3.9	15.19	1.18	1990	1974
<i>900</i>	556	1000	556	21.6	28.6	13.0	550	14.6	533	035	1.3	3.8	11.74	1.09	1982	1985
<i>850</i>	556	1494	556	18.5	25.6	11.0	544	11.4	533	045	4.9	5.7	12.88	1.16	1990	1978
<i>800</i>	556	2012	556	15.6	24.0	9.0	531	6.2	532	049	6.0	6.9	14.25	1.29	1983	1978
<i>750</i>	556	2552	555	13.2	20.0	4.0	459	0.2	532	056	4.7	6.5	14.75	1.23	1988	1981
<i>700</i>	556	3134	555	10.5	20.0	4.8	384	-4.5	534	061	3.3	6.0	18.10	1.15	1977	1984
<i>650</i>	556	3738	555	7.0	14.0	1.0	340	-8.1	535	069	2.6	6.0	19.46	1.14	1978	1975
<i>600</i>	555	4401	554	3.4	13.0	-4.0	307	-11.8	534	068	2.8	6.2	22.26	1.21	1977	1972
<i>550</i>	555	5100	555	-0.5	9.4	-6.1	285	-15.6	531	068	3.0	6.7	22.70	1.21	1988	1984
<i>500</i>	554	5858	554	-4.7	1.4	-10.1	258	-19.8	530	069	2.8	7.1	26.93	1.24	1990	1982
<i>450</i>	549	6673	549	-9.5	-2.3	-16.0	214	-24.3	524	059	2.6	7.9	27.16	1.51	1990	1971
<i>400</i>	548	7582	548	-15.1	-7.1	-22.5	198	-29.9	521	043	2.4	8.4	36.30	1.72	1990	1982
<i>350</i>	544	8574	544	-22.0	-11.9	-29.1	171	-36.0	516	049	0.8	8.7	35.91	1.93	1987	1982
<i>300</i>	539	9697	539	-30.3	-21.5	-38.0	152	-43.7	513	163	1.5	8.9	50.85	1.99	1990	1975
<i>250</i>	533	10970	532	-40.4	-29.5	-50.0	89	-51.9	506	164	3.2	10.1	61.27	2.18	1987	1975
<i>200</i>	516	12453	516	-52.6	-41.1	-65.0	2	-54.5	484	158	4.3	12.3	74.77	2.25	1990	1974
<i>175</i>	503	13304	503	-59.3	-47.7	-69.3			461	153	3.8	12.7	84.20	2.32	1990	1982
<i>150</i>	487	14256	487	-66.7	-54.1	-77.9			447	146	3.2	12.2	94.83	2.44	1990	1982
<i>125</i>	451	15344	451	-72.9	-59.9	-83.5			413	125	2.5	10.9	106.76	2.35	1990	1983
<i>100</i>	433	16633	432	-77.9	-63.9	-89.7			391	104	2.1	8.3	120.32	1.92	1985	1983
<i>80</i>	379	17921	378	-75.1	-62.3	-85.3			339	118	1.7	7.4	131.46	2.56	1990	1982
<i>70</i>	347	18714	347	-71.6	-57.5	-85.3			308	222	1.7	7.6	139.24	2.98	1986	1988
<i>60</i>	314	19629	314	-67.2	-54.7	-84.0			271	258	2.7	9.3	138.98	2.83	1986	1973
<i>50</i>	270	20750	270	-62.2	-49.9	-78.0			232	244	1.6	10.4	149.39	3.14	1983	1973
<i>40</i>	221	22157	221	-58.0	-46.3	-69.7			188	129	0.9	12.0	180.18	2.71	1981	1985
<i>30</i>	163	24026	163	-52.9	-39.1	-64.3			131	092	3.5	13.9	205.80	3.53	1990	1989
<i>25</i>	128	25221	128	-50.5	-39.5	-62.5			96	099	5.2	14.5	185.36	3.80	1985	1989
<i>20</i>	89	26688	89	-47.8	-36.9	-59.3			56	113	5.9	16.2	133.35	3.38	1983	1989
<i>15</i>	43	28618	43	-45.5	-36.1	-56.1			11	214	3.7	15.4	217.10	4.20	1981	1989
<i>10</i>	16	31305	16	-43.2	-32.3	-52.3			1	096	18.0	18.0			1990	1989
<i>7</i>	1	33430	1	-49.9	-49.9	-49.9									1989	1989

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

555 555 502

400 100 1668 -79.7

NORMALS OF RADIOSONDE DATA

43371 THIRUVANANTHAPURAM

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	619	1001	619	30.5	41.0	22.4	619	23.4	619	256	3.0	3.8	1.12	0.57	1977	1989
1000	604	72	464	30.2	34.0	22.6	464	22.9	459	251	3.5	4.4	5.01	0.59	1978	1989
950	604	515	604	25.6	31.0	20.0	602	19.6	593	245	3.0	4.5	13.08	1.27	1988	1971
900	604	999	604	22.4	28.8	15.8	602	16.3	589	071	0.7	3.9	5.87	1.09	1985	1989
850	604	1494	603	19.4	26.0	12.0	598	13.2	588	054	4.8	5.7	7.20	1.24	1978	1989
800	602	2014	601	16.3	24.2	6.0	593	8.7	581	054	7.1	8.0	9.40	1.29	1988	1973
750	600	2554	599	13.3	21.8	1.8	571	2.2	577	055	7.6	8.6	10.74	1.35	1983	1981
700	598	3136	598	10.5	21.0	1.8	493	-3.7	575	061	6.1	7.5	14.27	1.25	1988	1989
650	597	3740	597	7.2	15.0	-0.7	427	-7.8	561	070	4.5	6.5	17.32	1.10	1989	1989
600	595	4404	595	3.6	12.0	-3.1	371	-11.2	557	076	3.6	6.1	19.40	1.18	1990	1989
550	593	5104	593	-0.3	8.2	-8.0	321	-15.3	554	073	3.3	6.1	20.77	1.25	1988	1972
500	591	5861	591	-4.6	5.0	-14.0	282	-19.8	552	068	3.1	6.4	25.94	1.50	1988	1972
450	585	6678	585	-9.3	7.2	-19.9	242	-24.3	546	056	2.0	6.9	27.60	1.71	1983	1985
400	583	7586	583	-14.9	-5.0	-26.1	211	-29.6	548	048	0.8	7.5	36.05	1.77	1977	1985
350	580	8577	580	-21.9	-11.9	-34.1	185	-36.2	542	238	0.8	8.0	36.69	1.90	1990	1985
300	575	9703	575	-30.0	-19.5	-43.3	150	-43.7	538	223	1.9	8.8	51.53	1.84	1990	1985
250	568	10977	568	-40.1	-27.1	-53.1	84	-52.6	533	213	3.4	10.0	61.38	1.95	1981	1985
200	553	12462	553	-52.2	-42.9	-65.3			526	207	4.4	11.3	73.67	2.08	1990	1985
175	526	13317	525	-58.9	-50.1	-68.5			494	206	4.2	11.8	81.99	2.09	1990	1985
150	510	14269	510	-66.3	-57.0	-78.0			477	208	2.8	11.6	90.59	2.12	1977	1976
125	479	15356	479	-72.8	-64.0	-85.3			430	180	1.3	10.2	98.92	2.01	1977	1983
100	456	16648	456	-78.1	-68.5	-88.9			408	103	2.7	8.7	108.29	1.73	1986	1982
80	406	17939	406	-75.2	-61.7	-86.0			333	102	2.2	7.5	120.24	2.01	1983	1978
70	366	18734	366	-71.1	-57.3	-87.0			295	255	0.5	7.7	130.10	2.37	1983	1978
60	332	19649	332	-66.9	-53.5	-78.0			253	262	2.6	9.1	128.95	2.20	1983	1978
50	293	20765	293	-61.4	-47.5	-73.5			228	264	2.8	10.2	134.75	2.24	1982	1982
40	235	22170	235	-57.3	-41.7	-68.1			168	314	0.7	12.1	141.22	2.39	1982	1984
30	183	24027	183	-51.7	-39.9	-62.9			121	088	4.8	13.1	155.29	3.30	1983	1984
25	136	25207	136	-49.3	-34.1	-60.1			75	097	7.1	14.6	157.33	2.94	1983	1981
20	82	26688	82	-46.2	-32.5	-57.5			37	098	13.6	18.8	140.56	2.21	1984	1986
15	35	28543	35	-44.1	-31.1	-55.9			7	057	3.9	18.0	236.53	4.61	1982	1981
10	15	31212	15	-42.9	-34.5	-53.5			3	068	11.2	19.0			1983	1981
7	3	33830	3	-41.8	-39.7	-43.1									1989	1983

FREEZING LEVEL

N P ALT

1ST TROPOPAUSE

N P ALT T

2ND TROPOPAUSE

N P ALT T

590 552 506

430 099 1671 -79.8

## NORMALS OF RADIOSONDE DATA

43371 THIRUVANANTHAPURAM

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	599	999	599	30.2	33.4	22.0	599	24.8	598	277	3.5	4.5	0.77	0.82	1990	1971
<i>1000</i>	587	59	211	29.7	33.4	22.0	211	24.4	203	267	3.3	4.7	4.87	1.34	1990	1971
<i>950</i>	587	505	587	25.9	31.6	18.0	584	21.3	575	278	4.2	5.8	12.95	1.28	1983	1971
<i>900</i>	587	988	587	22.9	30.8	16.0	583	18.2	575	303	1.9	4.7	6.02	1.29	1983	1971
<i>850</i>	587	1484	587	20.1	28.0	14.0	583	15.5	575	036	3.0	4.8	7.58	1.34	1983	1971
<i>800</i>	587	2006	587	17.1	26.4	9.6	583	11.5	569	050	5.3	6.2	9.95	1.36	1983	1981
<i>750</i>	587	2549	587	14.0	23.8	7.0	575	6.3	567	055	6.8	7.6	11.14	1.42	1983	1971
<i>700</i>	587	3132	587	10.9	21.4	3.2	548	0.4	568	060	6.9	7.9	14.85	1.39	1983	1986
<i>650</i>	585	3737	585	7.4	18.6	-3.0	494	-4.1	562	064	5.6	7.1	14.54	1.45	1983	1976
<i>600</i>	583	4400	583	3.8	14.2	-4.0	450	-8.1	560	070	4.2	6.2	19.86	1.43	1983	1976
<i>550</i>	579	5100	579	-0.1	9.6	-9.0	406	-12.0	554	075	3.7	6.2	20.70	1.40	1983	1976
<i>500</i>	574	5860	574	-4.3	4.4	-14.0	358	-16.1	549	075	3.6	6.5	27.20	1.47	1983	1976
<i>450</i>	570	6678	570	-9.0	6.8	-20.0	314	-20.9	542	070	3.4	7.2	26.91	1.71	1984	1976
<i>400</i>	562	7589	562	-14.5	-7.3	-28.0	279	-26.3	540	067	2.4	7.5	37.62	1.66	1988	1976
<i>350</i>	556	8582	556	-21.3	-13.3	-30.9	239	-32.6	530	060	1.0	7.6	36.84	1.68	1989	1986
<i>300</i>	547	9713	547	-29.5	-21.3	-39.5	201	-40.1	522	204	0.7	7.8	49.50	1.76	1987	1986
<i>250</i>	540	10989	539	-39.4	-29.5	-49.9	127	-49.0	510	188	2.5	8.5	58.79	1.86	1985	1986
<i>200</i>	529	12482	528	-51.6	-40.5	-65.3	7	-58.3	503	178	3.6	9.9	71.65	2.02	1985	1986
<i>175</i>	513	13338	513	-58.5	-46.1	-72.0			480	174	3.4	10.2	79.87	2.14	1990	1974
<i>150</i>	502	14291	502	-66.1	-51.5	-77.1			471	158	2.5	10.0	89.30	1.98	1990	1984
<i>125</i>	477	15378	477	-73.1	-61.5	-87.1			435	121	2.9	9.5	96.84	1.88	1990	1984
<i>100</i>	455	16667	454	-79.3	-66.7	-88.1			413	104	5.2	8.9	107.65	1.96	1989	1984
<i>80</i>	399	17945	399	-76.4	-62.1	-89.9			338	092	4.2	8.2	119.65	2.33	1988	1985
<i>70</i>	369	18740	369	-71.8	-59.3	-85.9			311	096	1.9	8.0	138.00	2.23	1990	1984
<i>60</i>	337	19656	337	-67.1	-49.5	-86.0			277	232	0.7	8.5	135.88	2.99	1990	1978
<i>50</i>	299	20784	299	-61.5	-42.5	-76.1			243	093	0.6	9.4	148.34	3.92	1990	1984
<i>40</i>	226	22199	226	-56.4	-37.7	-70.1			170	085	3.6	11.9	177.37	3.40	1990	1984
<i>30</i>	159	24079	159	-51.0	-37.7	-66.7			112	093	8.1	14.5	183.49	3.34	1984	1984
<i>25</i>	103	25243	103	-49.1	-36.5	-63.7			68	094	6.9	16.0	171.39	2.89	1990	1982
<i>20</i>	73	26733	73	-45.9	-34.9	-61.7			37	094	6.5	19.0	217.26	4.29	1985	1982
<i>15</i>	37	28627	37	-43.9	-36.1	-59.9			8	095	16.5	21.6	246.92	4.48	1984	1982
<i>10</i>	12	31329	12	-39.4	-28.3	-55.3			2	100	15.9	16.0			1984	1983
<i>7</i>	4	33816	4	-40.7	-37.1	-46.1									1984	1985

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
581	551	509					416	098	1684	-81.1

NORMALS OF RADIOSONDE DATA

43371 THIRUVANANTHAPURAM

MAY 1971-90

1200 UTC

<i>LEVEL (HPA)</i>	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	999	620	29.8	33.4	23.0	620	24.9	620	292	4.7	5.3	0.81	0.75	1987	1972
<i>1000</i>	600	55	182	29.3	33.2	22.6	182	24.5	181	290	5.6	6.1	6.13	1.40	1987	1982
<i>950</i>	599	500	599	25.8	31.0	20.0	598	21.2	587	294	7.1	7.7	13.01	1.26	1983	1971
<i>900</i>	599	983	599	22.6	30.4	12.0	598	17.8	587	302	6.5	7.6	6.15	1.28	1983	1977
<i>850</i>	599	1479	599	19.9	27.8	13.0	597	14.8	587	314	5.2	6.6	7.16	1.26	1983	1975
<i>800</i>	599	2000	599	17.1	24.8	11.8	595	11.4	585	333	3.9	6.4	8.32	1.25	1990	1982
<i>750</i>	599	2545	599	14.3	21.6	7.0	593	6.6	581	004	2.9	6.5	10.56	1.30	1989	1976
<i>700</i>	597	3127	597	11.0	20.0	2.0	577	1.6	579	031	3.0	6.8	11.46	1.33	1988	1977
<i>650</i>	595	3735	595	7.4	16.0	2.0	565	-3.1	574	039	2.9	6.9	11.29	1.36	1976	1971
<i>600</i>	589	4396	589	3.7	10.6	-2.0	526	-7.0	569	035	1.9	6.4	16.63	1.37	1990	1971
<i>550</i>	583	5097	582	-0.2	6.2	-6.0	487	-10.9	561	009	1.0	5.9	18.68	1.19	1990	1977
<i>500</i>	580	5855	580	-4.1	5.0	-9.5	454	-15.0	559	358	0.7	6.0	22.82	1.26	1976	1981
<i>450</i>	575	6675	575	-8.6	4.0	-14.9	407	-19.4	550	014	0.9	6.1	22.50	1.46	1982	1984
<i>400</i>	572	7586	571	-13.9	-5.3	-20.3	373	-25.0	547	027	1.1	5.9	32.41	1.60	1990	1981
<i>350</i>	568	8582	567	-20.7	-11.1	-27.1	309	-31.1	541	049	1.2	5.7	32.07	1.76	1988	1981
<i>300</i>	563	9714	562	-28.8	-17.1	-36.0	257	-38.8	534	084	1.6	6.1	46.57	1.78	1990	1976
<i>250</i>	558	10993	558	-38.7	-28.1	-49.0	173	-48.2	530	087	3.1	7.0	55.91	1.96	1989	1971
<i>200</i>	547	12489	547	-51.0	-40.5	-61.0	8	-57.0	516	097	6.5	9.8	69.30	2.12	1988	1971
<i>175</i>	519	13348	519	-58.0	-46.9	-68.3			481	096	9.4	12.4	76.74	2.01	1988	1981
<i>150</i>	509	14304	509	-65.9	-54.1	-76.1			471	095	11.7	14.2	85.77	1.96	1987	1980
<i>125</i>	468	15394	468	-72.9	-60.1	-86.7			431	093	13.3	15.2	94.47	1.90	1987	1980
<i>100</i>	444	16685	444	-78.5	-67.5	-90.1			409	093	12.3	13.9	105.47	1.79	1987	1987
<i>80</i>	385	17972	385	-75.1	-61.5	-85.7			340	089	8.5	10.7	109.90	2.16	1982	1986
<i>70</i>	354	18764	354	-70.8	-54.1	-82.0			313	089	5.5	8.6	123.94	2.45	1982	1975
<i>60</i>	308	19678	308	-66.3	-54.0	-80.9			266	099	3.8	8.3	125.88	2.79	1977	1985
<i>50</i>	281	20802	281	-60.8	-46.0	-74.7			240	084	5.4	9.9	143.15	4.05	1977	1984
<i>40</i>	222	22227	221	-55.7	-42.9	-68.7			169	089	8.0	13.1	146.43	2.64	1985	1987
<i>30</i>	158	24090	158	-50.3	-38.1	-62.5			121	094	12.3	16.2	148.51	2.22	1990	1987
<i>25</i>	119	25280	119	-47.8	-35.9	-57.5			81	093	15.6	19.7	157.41	2.63	1982	1987
<i>20</i>	84	26764	84	-44.7	-35.1	-54.1			53	091	17.7	21.4	116.38	2.28	1988	1981
<i>15</i>	37	28678	37	-43.0	-32.7	-52.1			19	095	18.8	22.8	139.05	4.05	1987	1986
<i>10</i>	18	31436	18	-40.5	-33.3	-46.5			12	096	23.7	24.7			1988	1984
<i>7</i>	12	33864	12	-39.2	-32.9	-45.9			5	097	25.8	26.2			1988	1984
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FREEZING LEVEL			1ST TROPOPAUSE							2ND TROPOPAUSE						
N	P	ALT	N	P	ALT	T	N	P	ALT	T	N	P	ALT	T		
587	552	506									417	101	1668	-80.0		

## NORMALS OF RADIOSONDE DATA

43371 THIRUVANANTHAPURAM

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	599	1000	599	28.0	35.0	22.0	599	24.1	599	300	5.7	6.3	0.59	0.89	1976	1972
1000	590	63	297	27.5	32.2	20.0	297	23.8	287	302	7.1	7.7	4.74	1.04	1983	1976
950	590	504	590	24.1	29.2	16.8	588	20.2	577	297	10.0	10.6	9.88	1.07	1979	1980
900	590	986	590	21.0	27.2	15.0	587	16.8	577	296	12.2	13.0	5.30	1.14	1979	1972
850	590	1479	590	18.2	24.0	12.0	588	13.6	575	295	12.8	13.5	6.57	1.19	1982	1971
800	590	1998	590	15.4	22.0	8.0	587	9.9	575	292	12.6	13.4	9.04	1.27	1977	1975
750	590	2539	590	12.8	23.0	5.4	584	5.7	575	288	11.8	12.7	11.23	1.25	1978	1986
700	589	3119	589	10.0	16.8	3.0	574	1.2	573	283	11.0	12.0	12.90	1.28	1988	1971
650	589	3723	589	6.8	13.8	-4.9	562	-2.9	569	280	9.5	10.9	14.36	1.36	1988	1986
600	583	4386	583	3.4	10.4	-4.9	540	-6.3	559	276	8.0	9.5	18.45	1.32	1988	1980
550	579	5085	579	-0.3	6.4	-8.1	524	-10.0	552	273	6.4	8.2	19.31	1.30	1988	1983
500	575	5845	575	-4.5	6.0	-12.9	505	-13.9	547	273	4.5	6.6	24.68	1.34	1976	1983
450	574	6663	573	-9.2	-0.5	-20.0	471	-18.2	542	274	2.7	5.9	24.01	1.50	1987	1976
400	570	7572	570	-14.6	-7.3	-22.0	435	-23.5	537	339	1.0	5.7	34.24	1.57	1988	1971
350	565	8564	565	-21.2	-11.3	-29.0	369	-30.6	529	055	2.8	6.3	32.92	1.67	1989	1976
300	562	9696	562	-29.2	-22.1	-37.3	306	-38.8	528	071	5.6	8.3	47.38	1.73	1982	1981
250	552	10973	552	-39.1	-27.9	-48.7	176	-48.3	507	081	10.8	12.7	57.18	1.98	1982	1982
200	543	12465	543	-51.2	-41.1	-62.1	6	-58.7	494	080	20.0	21.2	69.75	2.19	1990	1981
175	518	13322	518	-58.1	-46.1	-70.1			460	079	25.6	26.8	77.90	2.10	1988	1981
150	504	14277	504	-65.9	-51.7	-79.9			442	080	29.8	30.8	86.85	2.08	1988	1986
125	479	15368	479	-72.8	-60.1	-84.1			405	085	31.7	32.6	96.52	2.00	1988	1984
100	459	16659	459	-77.1	-64.7	-90.1			384	086	24.4	25.4	107.34	1.62	1988	1984
80	415	17953	415	-73.0	-57.3	-88.7			318	086	16.3	17.2	112.87	2.09	1990	1983
70	389	18759	389	-69.2	-52.5	-84.1			293	085	12.0	13.4	129.25	2.79	1990	1983
60	346	19678	346	-65.4	-46.5	-81.9			259	085	11.0	12.3	129.91	3.08	1990	1984
50	310	20807	310	-61.0	-41.7	-77.0			228	088	11.3	13.0	144.01	3.22	1981	1977
40	251	22203	251	-56.5	-40.1	-68.3			166	095	14.5	16.1	134.23	2.80	1990	1983
30	203	24072	203	-51.0	-35.9	-70.5			121	093	18.9	20.5	169.35	3.33	1990	1985
25	148	25256	148	-48.5	-35.1	-63.1			74	094	20.5	21.9	158.72	4.23	1982	1983
20	92	26753	92	-46.1	-33.1	-59.1			47	096	20.9	22.6	116.37	2.95	1982	1983
15	62	28675	62	-43.9	-26.1	-55.3			28	096	22.7	24.4	179.84	2.67	1982	1983
10	45	31422	45	-40.9	-34.7	-53.1			18	100	26.0	28.2	180.75	2.71	1988	1988
7	29	33906	29	-38.6	-30.1	-50.9			8	084	23.2	23.7	320.68	3.93	1988	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

580 554 502

446 104 1646 -78.9

## NORMALS OF RADIOSONDE DATA

43371 THIRUVANANTHAPURAM

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	1000	620	27.9	31.4	22.0	620	23.7	620	308	6.2	6.7	0.84	0.74	1981	1972
1000	606	65	338	27.8	31.4	22.0	338	23.5	332	306	8.0	8.4	6.47	0.89	1981	1972
950	606	505	606	23.9	30.0	19.0	605	19.9	596	303	10.6	11.1	9.40	1.00	1983	1974
900	606	987	606	20.6	28.4	11.0	605	16.5	596	303	12.6	13.1	7.59	1.01	1983	1976
850	606	1480	606	17.8	26.2	12.4	605	13.1	596	303	13.0	13.6	8.52	1.07	1983	1980
800	606	1998	606	15.1	23.4	10.2	604	9.5	596	299	12.6	13.2	10.43	1.09	1983	1980
750	606	2537	606	12.5	19.2	7.0	600	5.4	594	293	11.6	12.4	12.23	1.08	1983	1976
700	606	3118	606	9.8	19.0	4.0	590	1.1	595	287	10.3	11.1	13.69	1.00	1982	1975
650	604	3721	604	6.6	13.8	1.0	575	-2.6	588	283	8.4	9.4	13.68	1.00	1983	1971
600	602	4384	601	3.2	9.4	-3.0	561	-5.8	583	279	6.3	7.7	18.05	1.06	1983	1975
550	601	5081	600	-0.6	6.2	-6.1	540	-9.4	585	281	4.5	6.7	18.40	1.10	1988	1981
500	595	5841	594	-4.7	2.6	-11.3	520	-14.0	580	287	2.7	5.8	23.50	1.20	1988	1981
450	591	6657	591	-9.5	8.2	-20.0	485	-19.3	573	318	0.8	5.6	23.37	1.47	1980	1975
400	583	7566	582	-15.1	-5.3	-32.0	438	-25.3	562	081	2.4	5.9	32.35	1.46	1988	1974
350	577	8558	576	-21.8	-11.1	-27.7	361	-32.4	553	086	5.4	7.5	31.02	1.46	1988	1990
300	572	9684	572	-29.9	-19.1	-37.0	294	-40.5	548	091	9.2	10.7	43.63	1.62	1988	1976
250	562	10958	561	-39.8	-28.1	-47.3	155	-49.1	536	087	15.3	16.5	52.85	1.86	1988	1981
200	554	12444	554	-51.9	-42.0	-64.0	5	-58.2	527	080	24.5	25.2	61.49	1.91	1973	1976
175	539	13299	539	-58.8	-48.9	-68.9			500	080	29.0	29.7	68.13	1.83	1990	1981
150	530	14248	530	-66.6	-56.9	-77.1			487	080	33.1	34.0	76.58	1.85	1983	1981
125	491	15333	491	-73.2	-63.9	-84.0			445	083	34.2	35.2	86.65	2.15	1990	1978
100	457	16628	457	-75.3	-59.3	-86.9			408	086	25.4	26.2	95.08	2.56	1990	1982
80	397	17941	397	-70.0	-54.5	-84.0			333	087	18.3	19.0	105.64	2.99	1990	1973
70	377	18757	377	-66.7	-51.3	-80.0			313	087	16.1	16.9	121.62	2.79	1990	1973
60	346	19689	346	-63.5	-49.1	-76.0			274	087	15.7	16.6	121.23	3.32	1985	1973
50	316	20821	316	-59.8	-44.1	-73.0			252	088	16.9	17.6	138.45	3.27	1982	1973
40	252	22237	252	-55.8	-38.5	-68.1			176	092	18.6	19.5	144.17	3.42	1985	1984
30	187	24116	187	-50.5	-38.1	-63.9			110	095	20.4	21.3	168.45	4.49	1990	1984
25	139	25295	139	-48.4	-35.5	-63.1			61	093	21.6	22.7	170.81	3.91	1987	1984
20	94	26795	94	-45.9	-37.7	-62.1			37	095	25.1	25.8	152.15	2.44	1982	1984
15	65	28706	65	-43.9	-36.3	-55.5			16	098	26.5	26.8	174.22	2.22	1982	1984
10	35	31448	35	-41.2	-33.3	-49.5			7	100	20.8	21.4	277.93	3.00	1980	1986
7	15	33956	15	-38.1	-33.9	-43.9									1988	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

599 557 497

441 109 1617 -77.7



## NORMALS OF RADIOSONDE DATA

43371 THIRUVANANTHAPURAM

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	619	1000	619	27.7	31.0	17.0	619	23.4	619	307	6.3	6.8	0.67	0.59	1976	1978
1000	602	66	381	27.6	31.0	22.2	381	23.2	377	305	7.9	8.3	5.22	0.70	1990	1986
950	602	510	602	23.7	27.6	15.8	600	19.6	591	304	10.6	11.1	10.89	1.13	1984	1981
900	602	987	602	20.6	27.0	12.0	600	16.2	591	306	12.3	12.9	7.43	1.12	1983	1971
850	602	1480	602	17.8	23.4	8.0	599	13.0	591	304	12.8	13.3	9.05	1.11	1982	1974
800	602	1998	602	15.2	21.6	7.0	599	9.5	589	299	12.2	12.8	10.18	1.11	1982	1974
750	602	2540	602	12.7	19.6	7.0	595	5.3	586	293	11.2	12.0	13.11	1.05	1984	1972
700	602	3119	602	10.0	17.2	3.8	585	0.8	585	288	10.2	11.0	13.75	1.00	1983	1982
650	600	3725	600	6.9	17.8	1.0	571	-3.0	580	282	8.5	9.4	14.64	1.05	1987	1976
600	594	4386	594	3.3	9.2	-5.1	549	-6.3	570	280	6.7	7.9	17.95	1.02	1988	1981
550	593	5085	593	-0.5	8.0	-10.5	525	-10.2	567	280	4.9	6.6	19.03	1.02	1985	1981
500	590	5844	590	-4.6	0.6	-14.0	488	-14.3	562	282	2.8	5.4	22.54	1.10	1989	1974
450	583	6661	583	-9.3	5.8	-21.0	445	-19.3	551	306	1.0	5.1	22.26	1.42	1989	1974
400	578	7570	578	-14.8	-7.3	-28.0	404	-25.5	545	076	2.1	5.3	30.30	1.62	1988	1974
350	573	8562	573	-21.7	-14.1	-35.0	327	-32.5	537	089	5.1	7.3	31.46	1.80	1988	1974
300	567	9688	567	-30.0	-20.9	-43.0	268	-40.9	536	096	9.3	10.6	45.19	1.86	1982	1974
250	557	10962	557	-40.0	-31.5	-50.1	142	-49.2	525	089	16.2	17.2	53.93	1.90	1982	1982
200	549	12448	549	-52.0	-40.1	-63.7	2	-59.5	513	082	25.7	26.3	66.30	1.91	1987	1987
175	527	13303	527	-58.9	-50.1	-68.0			477	081	30.2	31.0	72.72	1.98	1988	1971
150	518	14255	518	-66.6	-56.1	-77.0			465	081	34.3	35.3	80.85	1.93	1990	1971
125	496	15336	495	-73.3	-62.1	-83.0			430	084	34.1	34.9	88.80	1.94	1986	1976
100	453	16630	453	-75.2	-55.9	-85.5			387	087	23.2	24.0	94.64	2.31	1983	1985
80	399	17940	399	-69.5	-55.1	-81.0			321	087	15.6	16.3	110.66	2.83	1990	1973
70	373	18755	373	-66.3	-54.1	-76.0			304	086	14.9	15.6	123.41	2.88	1990	1971
60	326	19693	326	-63.2	-49.5	-78.0			253	086	14.8	15.4	127.87	2.83	1983	1971
50	294	20834	294	-59.6	-42.3	-72.0			227	088	15.0	15.9	140.91	2.84	1983	1971
40	218	22260	218	-55.9	-41.9	-70.0			147	091	16.0	17.0	147.57	3.81	1987	1972
30	141	24103	141	-51.1	-38.5	-68.0			93	092	16.7	18.3	155.63	4.85	1981	1972
25	96	25285	96	-48.9	-35.1	-58.7			55	088	18.5	20.2	120.04	2.33	1987	1984
20	64	26740	64	-46.8	-39.1	-56.1			26	091	19.3	21.0	168.65	1.72	1980	1982
15	29	28598	29	-45.6	-36.7	-53.5			3	085	27.5	27.6	145.64	3.18	1982	1982
10	13	31263	13	-44.8	-36.3	-51.1									1984	1985
7	5	33657	5	-43.8	-38.1	-49.3									1984	1985

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
595	555	500					451	110	1611	-77.9

NORMALS OF RADIOSONDE DATA

43371 THIRUVANANTHAPURAM

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	598	1000	598	28.1	31.4	23.0	598	23.6	598	300	5.1	5.6	0.71	0.69	1990	1971
1000	581	66	365	28.0	30.6	23.0	362	23.4	360	299	6.5	7.0	5.06	0.64	1987	1975
950	580	509	580	24.2	38.0	15.6	576	19.3	569	299	8.4	8.9	11.33	1.11	1977	1984
900	580	988	580	21.0	29.2	16.0	575	15.6	567	302	8.6	9.3	6.44	1.08	1980	1971
850	580	1481	580	18.3	27.2	12.0	574	12.6	568	302	8.0	8.9	7.72	1.10	1980	1971
800	580	2000	580	15.6	24.4	9.0	574	9.3	568	298	7.3	8.4	9.70	1.08	1980	1975
750	580	2542	580	12.9	21.4	4.0	565	5.3	565	291	6.6	8.1	13.69	1.03	1980	1971
700	580	3121	580	10.1	18.0	3.0	554	0.8	564	285	6.1	7.6	13.59	1.00	1980	1975
650	575	3727	575	6.9	14.4	-5.1	530	-3.1	558	283	5.2	6.9	15.84	0.93	1989	1990
600	574	4387	574	3.3	10.6	-5.1	511	-6.4	557	284	3.6	6.0	17.41	0.93	1985	1988
550	570	5087	569	-0.5	8.0	-7.0	496	-9.8	553	291	2.3	5.3	19.84	1.01	1985	1971
500	566	5846	565	-4.6	4.0	-13.0	467	-14.1	553	300	0.9	4.9	21.46	1.06	1989	1978
450	558	6662	557	-9.2	8.6	-19.0	429	-19.1	546	064	0.9	5.1	22.77	1.32	1986	1971
400	554	7573	554	-14.7	-6.7	-26.9	379	-24.9	544	088	2.8	5.8	27.95	1.36	1985	1990
350	550	8565	550	-21.6	-12.9	-30.0	317	-31.7	538	097	5.1	6.9	28.54	1.41	1989	1972
300	546	9693	546	-29.8	-21.3	-38.3	259	-39.8	533	099	8.3	9.5	38.56	1.46	1988	1990
250	537	10967	537	-39.9	-30.0	-49.1	152	-49.3	519	092	13.8	14.6	45.95	1.56	1975	1990
200	531	12450	531	-52.3	-42.5	-68.9	3	-58.8	509	085	20.1	20.9	56.58	1.87	1988	1986
175	511	13303	511	-59.3	-48.9	-68.3			478	084	23.9	24.7	64.62	1.80	1988	1982
150	498	14252	498	-67.2	-57.5	-76.5			466	085	26.9	27.8	71.68	1.90	1988	1988
125	470	15334	468	-73.7	-62.0	-83.1			439	089	25.5	26.3	84.67	2.19	1977	1984
100	440	16632	438	-75.1	-65.1	-88.1			412	091	17.5	18.3	91.46	2.05	1985	1986
80	337	17946	397	-69.9	-56.9	-80.1			360	088	12.7	13.6	102.53	2.23	1987	1987
70	373	18759	373	-66.4	-50.7	-77.0			331	087	11.7	12.7	116.75	2.63	1987	1973
60	327	19694	327	-63.4	-49.5	-78.0			280	086	10.9	12.1	120.35	3.00	1985	1973
50	293	20832	293	-59.8	-48.3	-71.0			246	091	11.2	12.5	142.93	3.22	1988	1972
40	217	22263	216	-55.7	-43.1	-67.0			176	095	10.9	13.1	180.39	4.25	1985	1972
30	156	24142	156	-50.8	-37.7	-72.1			114	094	11.2	14.3	184.89	3.77	1984	1985
25	104	25349	104	-48.4	-36.5	-58.1			66	093	9.1	13.0	207.89	3.59	1985	1983
20	57	26771	57	-46.6	-38.1	-55.9			29	098	9.1	13.0	221.66	3.27	1989	1983
15	25	28638	25	-46.6	-38.7	-53.5			7	095	10.9	12.4	150.54	3.47	1989	1983
10	12	31310	12	-44.5	-40.3	-50.1			3	101	10.4	13.0			1987	1983
7	1	33427	1	-48.5	-48.5	-48.5									1983	1983

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

572 555 501

437 111 1604 -77.5

## NORMALS OF RADIOSONDE DATA

43371 THIRUVANANTHAPURAM

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	619	1001	619	27.9	31.2	22.0	619	23.8	619	288	2.9	3.6	0.63	0.65	1990	1972
1000	614	71	462	27.6	31.0	16.8	461	23.5	441	287	3.8	4.7	5.55	0.61	1988	1984
950	614	513	614	24.1	34.8	16.0	613	19.6	585	286	4.7	5.8	11.21	1.18	1990	1990
900	614	994	614	21.1	30.2	14.0	613	16.3	588	295	4.0	5.7	6.23	1.21	1990	1990
850	614	1487	614	18.4	27.2	10.6	612	13.4	589	308	3.2	5.7	7.52	1.26	1990	1990
800	614	2006	614	15.6	24.8	9.0	608	10.0	588	313	2.7	5.8	9.49	1.20	1990	1975
750	613	2548	613	12.8	20.8	6.0	601	5.9	584	309	2.7	6.0	11.37	1.13	1990	1975
700	613	3127	613	9.9	18.6	2.8	594	1.9	584	300	2.8	6.0	13.15	1.02	1990	1980
650	609	3733	609	6.8	16.0	-1.0	575	-2.0	575	290	2.3	5.8	13.83	1.01	1976	1972
600	608	4393	608	3.3	12.0	-4.5	559	-5.7	573	286	1.4	5.5	17.02	1.04	1976	1988
550	604	5093	604	-0.4	6.0	-8.3	534	-9.5	569	325	0.4	5.3	18.34	1.10	1976	1990
500	601	5851	601	-4.4	3.0	-12.7	510	-14.0	569	075	0.8	5.2	21.06	1.21	1976	1990
450	595	6670	595	-9.0	3.4	-19.3	465	-19.0	559	086	1.9	5.2	20.95	1.34	1988	1990
400	593	7579	593	-14.5	-7.1	-28.1	417	-24.6	557	094	2.9	5.5	28.25	1.40	1983	1983
350	589	8573	589	-21.4	-12.0	-30.9	344	-31.3	551	100	3.9	6.1	29.24	1.52	1977	1982
300	583	9700	583	-29.7	-20.5	-39.3	296	-39.4	547	100	5.8	7.7	39.73	1.57	1983	1989
250	576	10974	576	-40.0	-28.5	-49.7	167	-48.6	539	096	9.1	10.7	47.20	1.53	1983	1982
200	566	12459	566	-52.4	-39.5	-64.0	13	-57.7	525	089	13.3	14.7	55.63	1.46	1983	1977
175	552	13311	552	-59.5	-49.1	-70.3			503	089	15.3	16.8	62.20	1.39	1983	1986
150	539	14260	539	-67.3	-56.5	-77.5			499	094	16.7	18.3	68.70	1.50	1984	1986
125	518	15341	518	-74.2	-63.1	-86.0			476	096	14.8	16.3	76.75	1.85	1984	1977
100	480	16625	480	-77.5	-60.5	-87.0			441	091	9.9	11.3	82.39	2.01	1982	1978
80	431	17915	431	-72.8	-57.9	-86.0			386	088	8.0	9.7	90.17	2.73	1985	1977
70	401	18718	401	-69.0	-54.5	-82.0			361	089	6.1	8.5	109.87	2.92	1985	1972
60	351	19648	351	-65.1	-50.5	-79.5			318	092	5.1	8.5	111.23	3.08	1985	1979
50	333	20770	333	-61.1	-45.5	-77.3			298	094	5.9	9.8	126.37	3.46	1990	1980
40	256	22178	256	-57.0	-41.9	-70.1			206	093	8.5	12.7	149.43	3.85	1985	1980
30	172	24034	172	-51.5	-36.3	-67.5			130	095	11.1	14.9	172.53	3.49	1983	1980
25	108	25206	108	-49.5	-34.5	-66.1			71	092	10.4	13.9	222.13	5.79	1983	1980
20	67	26705	67	-46.3	-33.3	-64.1			35	098	11.2	16.5	191.75	5.59	1983	1980
15	39	28628	39	-44.7	-36.9	-61.5			10	100	10.2	17.5	242.89	5.45	1982	1980
10	22	31302	22	-42.1	-34.5	-57.9							302.67	6.84	1979	1980
7	6	33584	6	-41.9	-38.9	-44.9									1988	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
609	554	502	2	118	1581	-77.0	483	107	1628	-79.2

### NORMALS OF RADIOSONDE DATA

43371 THIRUVANANTHAPURAM

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	598	1001	598	28.1	32.0	22.0	598	23.6	596	273	1.8	2.5	0.74	0.54	1983	1975
1000	583	74	468	27.9	31.0	19.0	468	23.2	460	273	2.5	3.5	5.62	0.64	1983	1978
950	583	515	583	24.1	29.6	17.0	580	19.4	570	273	2.4	3.9	12.31	1.16	1990	1975
900	583	997	583	21.0	28.4	14.0	579	16.1	567	324	1.2	4.1	6.49	1.18	1990	1971
850	583	1490	583	18.2	26.2	11.0	579	12.9	566	014	2.0	4.9	7.67	1.17	1990	1975
800	583	2008	583	15.3	23.2	8.0	575	9.5	562	018	2.0	5.3	8.94	1.28	1990	1976
750	582	2549	582	12.6	21.6	6.0	561	5.4	560	006	1.4	5.4	9.30	1.19	1990	1975
700	582	3129	582	9.8	20.0	1.2	535	1.5	559	344	1.1	5.6	12.98	1.11	1990	1979
650	581	3734	581	6.7	18.2	1.0	522	-2.3	559	004	0.7	5.6	12.19	1.05	1986	1973
600	576	4394	576	3.2	11.6	-3.0	503	-6.0	552	047	1.2	5.7	17.94	1.11	1990	1975
550	573	5094	573	-0.5	8.2	-8.0	473	-9.9	544	062	2.1	6.1	18.29	1.12	1988	1975
500	567	5852	567	-4.7	5.6	-11.3	450	-14.6	543	069	2.7	6.3	24.00	1.14	1980	1981
450	565	6669	565	-9.4	0.0	-22.0	418	-19.3	545	073	3.2	6.4	23.12	1.30	1986	1974
400	558	7578	558	-14.8	-6.7	-24.0	384	-25.0	537	079	3.4	6.6	31.29	1.43	1990	1973
350	556	8570	556	-21.8	-10.7	-33.0	336	-31.6	535	089	3.9	6.7	31.58	1.68	1989	1978
300	551	9696	551	-30.0	-21.1	-42.0	298	-40.0	531	105	4.7	7.3	43.85	1.68	1989	1971
250	545	10969	545	-40.3	-30.5	-50.0	165	-49.3	518	113	6.8	9.3	52.39	1.71	1986	1971
200	539	12451	539	-52.6	-40.9	-64.0	7	-58.1	511	111	9.0	12.5	61.72	1.70	1986	1971
175	526	13302	526	-59.7	-50.9	-70.5			496	110	9.2	13.4	66.75	1.65	1989	1981
150	509	14251	509	-67.5	-58.5	-75.9			479	110	8.3	13.3	74.48	1.68	1989	1981
125	484	15331	483	-74.5	-65.7	-88.0			450	102	7.0	11.0	82.23	1.77	1989	1976
100	452	16617	450	-79.1	-66.5	-87.9			423	093	6.3	9.0	89.96	1.82	1982	1984
80	392	17901	392	-74.7	-59.5	-86.1			353	095	4.7	7.5	95.09	2.53	1986	1983
70	351	18695	350	-70.7	-58.1	-84.0			321	103	2.8	7.3	117.14	2.84	1982	1973
60	313	19614	313	-66.7	-52.1	-83.9			288	114	1.9	8.3	116.96	3.07	1982	1987
50	286	20737	286	-61.8	-46.7	-78.0			257	101	2.9	9.8	132.43	3.51	1982	1971
40	223	22142	223	-57.5	-43.1	-72.0			173	097	4.7	12.5	153.85	3.87	1982	1971
30	161	24002	161	-52.6	-38.7	-67.0			113	096	9.6	16.8	177.19	3.68	1984	1976
25	126	25187	126	-50.3	-36.9	-59.0			82	098	11.1	16.8	175.93	3.20	1984	1972
20	78	26650	78	-47.5	-37.1	-57.9			40	096	14.2	19.5	132.68	2.49	1982	1979
15	43	28508	43	-45.3	-36.7	-53.1			4	083	9.7	21.5	169.17	2.63	1979	1988
10	11	31235	11	-41.8	-35.7	-50.1			1	094	19.9	20.0			1979	1987
7	1	33850	1	-43.3	-43.3	-43.3									1988	1988

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

573 556 501

2 115 1569 -79.1

433 103 1645 -80.9

# NORMALS OF RADIOSONDE DATA

43371 THIRUVANANTHAPURAM

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	584	1002	584	29.0	32.6	24.0	584	22.6	582	261	1.5	2.0	0.71	0.77	1985	1971
1000	568	78	524	28.9	32.0	24.0	520	22.3	520	261	2.2	3.2	5.42	0.73	1985	1973
950	568	520	568	24.6	34.0	15.0	562	18.3	563	277	1.5	3.3	15.12	1.42	1990	1976
900	568	1002	568	21.1	31.2	12.0	562	14.9	560	036	2.1	3.9	8.97	1.57	1990	1976
850	568	1495	568	18.0	27.6	10.4	560	11.8	560	049	4.0	5.1	12.27	1.68	1990	1990
800	568	2013	568	15.3	24.2	7.6	553	7.7	558	055	3.9	5.3	15.15	1.55	1982	1990
750	568	2553	567	12.8	21.2	3.0	528	3.3	558	062	3.2	5.3	14.83	1.36	1982	1981
700	567	3133	567	9.9	18.2	2.8	498	-0.9	560	070	2.9	5.4	20.60	1.48	1990	1979
650	567	3739	566	6.7	16.0	-4.0	452	-4.1	558	071	3.5	5.7	19.06	1.51	1978	1976
600	566	4399	564	3.2	11.0	-3.1	426	-7.8	554	074	3.8	6.0	26.40	1.53	1976	1979
550	565	5099	563	-0.8	8.0	-10.9	402	-12.0	552	077	4.3	6.7	30.71	1.49	1976	1988
500	562	5855	560	-4.8	4.0	-11.5	363	-16.4	547	076	4.6	7.1	33.23	1.60	1976	1979
450	556	6672	554	-9.6	-0.9	-20.0	313	-21.1	537	078	4.6	7.4	33.46	1.82	1990	1977
400	554	7579	552	-15.2	-7.7	-22.0	273	-27.1	537	080	3.8	7.4	40.29	1.87	1990	1972
350	549	8570	549	-22.1	-13.9	-29.5	223	-33.7	533	095	2.6	7.4	38.73	1.80	1987	1982
300	544	9694	544	-30.4	-22.7	-42.0	185	-41.5	528	139	3.1	8.3	47.26	1.82	1988	1976
250	539	10965	539	-40.6	-27.9	-50.1	111	-50.9	525	152	5.4	10.2	52.81	1.87	1988	1982
200	527	12450	527	-52.9	-40.5	-67.7	1	-60.0	510	165	6.7	12.4	80.00	1.80	1988	1985
175	513	13300	513	-59.7	-47.9	-68.9			491	174	5.9	12.7	86.63	1.85	1988	1982
150	504	14247	504	-67.2	-56.1	-77.0			476	194	4.3	11.7	93.07	1.82	1988	1977
125	481	15330	481	-73.9	-60.9	-86.1			453	204	2.8	10.0	102.79	1.93	1987	1981
100	449	16615	449	-79.4	-67.0	-89.7			423	109	2.7	8.4	110.30	1.98	1971	1983
80	403	17892	403	-75.6	-61.1	-90.1			363	101	4.7	7.9	124.49	2.70	1986	1981
70	375	18686	375	-70.9	-58.1	-86.0			337	114	2.1	7.5	142.13	2.79	1988	1977
60	330	19607	330	-66.4	-54.1	-84.0			291	202	1.1	8.3	142.99	3.19	1984	1977
50	293	20733	293	-61.4	-42.5	-80.0			261	147	1.2	10.8	160.90	3.66	1983	1971
40	233	22149	233	-56.9	-39.5	-75.0			189	110	3.5	14.0	196.75	4.29	1984	1977
30	176	23999	176	-51.4	-37.1	-70.0			136	094	5.6	17.0	239.68	6.15	1984	1971
25	133	25177	133	-48.9	-35.9	-68.0			92	094	5.2	18.2	252.32	6.50	1987	1971
20	93	26675	93	-46.1	-33.1	-60.1			51	101	4.5	19.6	124.64	3.29	1982	1982
15	52	28515	52	-44.7	-36.1	-57.5			12	082	7.8	20.4	172.30	4.34	1979	1982
10	18	31269	18	-42.3	-31.1	-54.9									1986	1988
7	1	33914	1	-39.5	-39.5	-39.5									1986	1986

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

563 559 498

426 099 1668 -81.2

## NORMALS OF RADIOSONDE DATA

43150 VISHAKHAPATNAM

JANUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	590	1007	590	25.5	29.0	19.6	590	19.8	590	118	2.1	3.5	1.57	0.81	1980	1986
<i>1000</i>	565	109	557	24.9	28.8	19.2	557	19.1	547	116	2.4	3.9	12.79	0.89	1980	1986
<i>950</i>	557	541	557	21.0	31.4	13.6	545	13.5	546	100	2.5	4.4	21.19	1.37	1989	1987
<i>900</i>	557	1022	557	18.4	30.4	11.6	540	8.8	546	039	2.4	4.4	11.30	1.55	1989	1986
<i>850</i>	557	1509	557	15.6	25.4	8.4	527	4.6	546	002	3.4	5.2	11.15	1.79	1989	1989
<i>800</i>	557	2022	556	13.0	21.0	4.6	496	0.7	546	346	4.0	5.7	11.64	1.71	1971	1989
<i>750</i>	557	2558	557	10.4	22.0	3.0	444	-3.5	546	331	3.8	6.0	13.91	1.69	1989	1976
<i>700</i>	557	3133	557	7.9	19.0	-2.0	398	-8.0	546	305	4.1	6.6	14.69	1.77	1978	1978
<i>650</i>	548	3739	548	5.2	23.6	-4.3	308	-11.1	538	287	5.8	7.9	17.26	1.85	1989	1981
<i>600</i>	543	4390	543	2.1	12.0	-6.1	256	-14.4	533	280	7.6	9.5	20.66	2.02	1988	1981
<i>550</i>	538	5084	538	-2.1	9.0	-10.9	210	-18.1	528	278	9.4	11.0	25.37	2.17	1989	1981
<i>500</i>	535	5838	535	-6.7	5.0	-16.7	189	-22.7	524	277	11.1	12.9	30.70	2.23	1989	1981
<i>450</i>	526	6650	525	-11.8	-3.1	-22.0	169	-27.3	514	274	13.3	15.2	35.50	2.40	1989	1976
<i>400</i>	519	7547	518	-17.5	-8.0	-31.0	151	-32.5	506	273	15.6	17.6	44.54	2.67	1971	1976
<i>350</i>	510	8531	509	-24.0	-13.9	-34.0	130	-38.2	491	271	18.4	20.4	54.83	2.93	1990	1976
<i>300</i>	497	9646	496	-31.8	-20.3	-43.3	117	-45.2	473	265	20.8	22.6	66.38	2.97	1987	1982
<i>250</i>	475	10909	475	-41.5	-30.5	-52.0	80	-53.3	440	258	21.8	23.8	41.26	2.03	1987	1972
<i>200</i>	448	12389	448	-53.1	-41.7	-65.0	2	-61.0	388	251	21.5	23.5	50.73	1.88	1987	1972
<i>175</i>	403	13242	402	-59.4	-49.3	-67.9			299	248	19.5	21.5	57.58	1.89	1984	1982
<i>150</i>	356	14190	356	-66.2	-55.3	-76.1			264	248	17.3	19.7	64.80	2.08	1984	1980
<i>125</i>	277	15279	277	-72.5	-62.1	-80.5			192	246	12.6	15.6	70.89	2.68	1983	1989
<i>100</i>	222	16562	222	-78.3	-67.1	-87.9			152	245	7.8	11.2	80.90	2.91	1983	1989
<i>80</i>	164	17837	164	-75.9	-65.1	-86.1			101	264	3.1	7.0	102.50	2.69	1981	1989
<i>70</i>	150	18624	150	-72.5	-56.9	-84.0			90	276	3.0	7.0	109.22	3.18	1989	1978
<i>60</i>	125	19549	125	-68.1	-52.3	-80.0			61	306	1.6	5.3	112.60	2.83	1989	1978
<i>50</i>	104	20662	104	-63.0	-47.3	-71.7			46	191	0.4	5.7	122.11	2.99	1989	1979
<i>40</i>	83	22041	83	-58.8	-45.1	-66.1			34	128	1.6	6.7	137.17	2.78	1989	1987
<i>30</i>	51	23860	51	-54.2	-41.3	-61.1			19	088	5.2	7.7	127.50	2.59	1989	1984
<i>25</i>	31	25037	31	-52.7	-47.5	-58.3			10	088	7.4	9.1	159.88	1.61	1989	1987
<i>20</i>	20	26469	20	-49.5	-43.5	-57.7			6	064	4.7	9.8			1987	1987
<i>15</i>	8	28293	8	-49.1	-43.3	-56.9									1980	1987
<i>10</i>	3	30888	3	-50.8	-46.3	-55.9									1986	1987
<i>7</i>	1	33140	1	-51.9	-51.9	-51.9									1989	1989

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

544 575 472

182 099 1665 -80.0

# NORMALS OF RADIOSONDE DATA

43150 VISHAKHAPATNAM

FEBRUARY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	564	1006	564	27.1	31.0	18.0	564	21.7	564	180	2.4	3.8	1.72	0.58	1971	1977
1000	538	92	512	26.6	31.0	18.0	510	21.1	507	179	2.6	4.1	15.00	0.53	1971	1977
950	525	528	525	22.9	30.0	15.0	523	14.3	519	178	2.7	4.8	20.84	0.68	1987	1972
900	525	1011	525	20.7	27.0	12.0	516	9.2	519	189	0.7	4.4	15.57	0.86	1972	1974
850	524	1502	524	17.8	29.0	10.0	507	6.0	519	329	1.6	4.7	15.56	0.71	1985	1972
800	523	2019	523	14.4	24.0	7.0	503	3.1	517	330	3.9	6.0	15.11	0.76	1985	1972
750	523	2555	523	10.9	19.0	4.0	479	-0.6	515	324	5.3	7.0	15.08	0.78	1990	1975
700	523	3132	523	7.6	16.2	0.0	440	-4.9	515	312	5.5	7.3	14.36	0.91	1990	1975
650	517	3737	517	4.6	15.0	-3.5	362	-8.7	508	295	6.2	8.1	13.94	0.89	1988	1989
600	514	4387	513	1.4	12.4	-5.3	301	-13.4	507	282	8.2	10.1	13.77	1.03	1983	1982
550	507	5078	506	-2.4	5.6	-8.1	226	-17.8	498	278	10.0	11.7	15.27	1.08	1990	1990
500	499	5834	498	-6.7	1.4	-14.0	199	-22.0	491	276	12.0	13.7	14.22	1.25	1988	1971
450	498	6646	497	-11.6	-1.5	-23.0	175	-25.9	481	274	14.2	16.1	16.76	1.42	1990	1974
400	488	7543	487	-17.3	-8.0	-27.0	152	-31.0	472	273	16.5	18.8	17.03	1.65	1971	1972
350	474	8530	473	-23.6	-14.9	-32.3	129	-36.7	449	271	19.2	21.4	21.42	1.67	1990	1982
300	454	9644	453	-31.5	-22.3	-40.3	109	-44.2	430	267	21.0	23.3	26.04	2.03	1983	1982
250	421	10911	421	-41.1	-30.3	-50.1	74	-53.5	392	261	22.1	24.5	33.09	2.17	1990	1989
200	386	12395	386	-52.4	-39.1	-60.3	2	-59.5	345	257	22.0	24.8	48.94	2.48	1990	1981
175	326	13246	326	-58.7	-47.7	-66.9			257	257	20.3	23.6	61.23	2.50	1990	1986
150	292	14198	292	-65.5	-51.9	-75.0			236	255	18.3	21.3	71.70	2.54	1990	1975
125	223	15286	222	-71.7	-60.3	-83.5			159	251	14.7	17.4	89.65	2.85	1990	1979
100	178	16572	178	-77.5	-66.1	-86.9			128	254	10.1	12.7	107.35	3.23	1984	1989
80	122	17854	122	-75.4	-61.1	-84.3			74	271	4.9	7.5	139.05	3.09	1987	1989
70	103	18629	103	-72.6	-55.5	-84.1			67	269	3.8	8.1	149.37	3.98	1989	1987
60	90	19546	90	-67.9	-53.1	-79.0			49	313	1.2	6.8	155.39	4.03	1989	1971
50	71	20675	71	-62.3	-48.9	-76.0			38	121	1.5	7.0	175.31	4.95	1988	1971
40	48	22056	48	-58.9	-50.1	-70.0			24	082	1.9	7.3	180.26	3.92	1980	1971
30	32	23926	32	-52.7	-45.3	-64.0			19	082	3.8	9.1	214.49	4.42	1984	1971
25	23	25113	23	-50.8	-39.9	-60.1			10	094	3.7	6.0	219.01	4.64	1981	1987
20	19	26625	19	-48.8	-38.3	-58.7			5	056	4.3	6.8			1986	1987
15	11	28423	11	-47.4	-38.1	-57.1			1	288	6.0	6.0			1986	1987
10	8	31101	8	-45.5	-37.3	-55.3			1	276	3.0	3.0			1986	1987
7	1	32800	1	-53.9	-53.9	-53.9									1987	1987

### FREEZING LEVEL

N P ALT

481 582 463

### 1ST TROPOPAUSE

N P ALT T

### 2ND TROPOPAUSE

N P ALT T

134 097 1679 -79.2

## NORMALS OF RADIOSONDE DATA

43150 VISHAKHAPATNAM

MARCH 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	589	1003	589	28.7	31.0	24.0	589	23.6	589	211	4.1	4.9	1.36	0.48	1971	1971
1000	566	74	503	28.3	31.0	24.0	501	22.7	501	210	4.2	5.1	12.55	0.46	1974	1971
950	552	512	552	25.4	34.4	19.0	547	15.2	551	218	5.2	6.2	21.07	0.53	1989	1989
900	552	1000	552	24.2	32.0	17.0	540	8.2	551	222	2.8	5.0	12.83	0.76	1989	1971
850	552	1498	552	21.3	31.0	12.0	540	4.8	551	287	0.8	4.3	12.60	0.77	1985	1971
800	552	2020	552	17.6	26.6	9.0	537	3.0	551	344	2.6	4.9	11.99	0.74	1981	1971
750	552	2561	551	13.4	20.8	2.4	529	0.6	551	341	4.8	6.4	13.54	0.67	1981	1985
700	552	3143	551	8.9	17.0	3.0	521	-2.4	551	336	5.8	7.4	11.66	0.73	1971	1971
650	543	3750	542	4.8	14.8	-2.1	481	-6.9	541	326	5.7	7.6	11.00	0.82	1985	1986
600	535	4399	534	1.2	10.4	-5.5	406	-12.3	532	308	5.6	8.0	11.38	1.10	1985	1984
550	530	5090	529	-2.5	8.0	-12.0	291	-16.9	525	291	6.7	9.0	14.81	1.36	1986	1978
500	523	5845	522	-6.8	2.2	-16.3	241	-21.7	518	283	8.8	10.8	14.84	1.45	1990	1984
450	510	6657	508	-11.8	-2.1	-19.0	184	-26.6	500	278	11.0	13.1	19.23	1.70	1990	1978
400	502	7555	501	-17.8	-7.5	-25.3	169	-32.1	489	276	13.2	15.6	21.95	2.07	1990	1981
350	481	8539	480	-24.3	-13.7	-35.5	136	-37.5	460	273	16.1	18.5	28.64	2.13	1989	1982
300	464	9651	464	-31.8	-21.3	-40.5	117	-43.9	445	266	19.1	21.6	38.41	2.30	1990	1979
250	440	10917	440	-41.0	-29.9	-51.0	77	-52.8	407	262	21.2	23.7	47.92	2.34	1987	1977
200	421	12402	421	-51.8	-40.3	-63.3	6	-59.6	378	258	21.2	23.4	62.76	2.62	1990	1981
175	372	13260	371	-57.8	-48.3	-66.9			312	258	19.9	22.2	67.45	2.61	1987	1981
150	350	14218	349	-54.6	-54.5	-74.1			285	258	17.8	20.4	75.70	2.80	1990	1979
125	274	15310	273	-71.1	-59.0	-86.3			201	256	13.7	16.3	92.19	3.05	1971	1989
100	224	16609	224	-77.1	-64.1	-87.5			158	262	9.3	12.4	111.57	3.21	1990	1987
80	170	17889	170	-75.9	-64.3	-86.1			105	273	5.1	9.3	130.67	2.96	1985	1989
70	159	18677	159	-72.8	-56.1	-86.1			97	274	4.1	8.2	146.97	3.14	1990	1989
60	134	19598	134	-67.8	-54.0	-84.5			76	274	3.6	7.4	159.18	3.67	1971	1989
50	122	20714	122	-62.2	-50.1	-76.7			66	299	1.3	7.3	172.33	3.45	1981	1989
40	88	22145	88	-56.7	-45.9	-67.5			39	076	2.6	6.8	154.89	2.87	1990	1986
30	63	24016	63	-51.9	-38.1	-61.5			20	116	2.5	6.8	191.74	3.42	1983	1986
25	51	25189	51	-49.6	-36.7	-58.1			14	109	4.7	7.0	185.97	3.56	1990	1982
20	39	26685	39	-46.6	-35.1	-57.5			9	078	8.0	11.1	236.80	4.34	1990	1983
15	16	28468	16	-45.4	-32.9	-54.9			1	031	4.0	4.0			1984	1983
10	7	31048	7	-44.3	-36.1	-51.1									1984	1986
7	2	33735	2	-46.4	-42.3	-50.5									1989	1986

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

535 583 464

1 122 1550 -73.9

178 095 1691 -78.6



### NORMALS OF RADIOSONDE DATA

43150 VISHAKHAPATNAM

APRIL 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	600	1000	600	30.0	32.6	20.6	600	25.8	600	221	5.5	6.0	1.40	0.65	1980	1990
1000	570	46	329	29.6	32.6	23.0	329	25.2	328	222	5.3	5.8	12.17	0.64	1980	1971
950	568	490	568	26.6	35.0	20.0	566	19.8	563	227	7.3	7.8	21.69	0.53	1984	1977
900	568	977	568	26.1	35.0	17.0	561	13.2	563	243	4.8	5.9	11.74	1.02	1990	1977
850	568	1479	568	23.7	30.8	13.0	558	8.1	563	281	1.8	4.1	12.38	0.95	1980	1977
800	568	2004	568	20.1	28.0	10.6	558	4.7	563	342	1.9	4.1	12.45	0.96	1990	1984
750	568	2551	568	15.7	25.0	4.0	554	1.8	562	357	3.0	4.9	12.93	0.97	1972	1984
700	568	3137	568	10.9	19.0	2.8	554	-1.2	563	358	3.8	5.8	12.94	1.02	1990	1984
650	563	3749	563	6.2	18.4	-5.1	532	-4.6	557	351	4.5	6.7	13.79	1.11	1987	1985
600	560	4401	560	1.9	9.8	-5.0	509	-9.5	554	335	4.6	7.0	13.99	1.18	1990	1977
550	555	5093	555	-1.9	6.0	-11.0	418	-14.5	548	309	4.8	7.3	15.80	1.34	1988	1977
500	551	5851	551	-6.0	2.2	-14.0	368	-19.8	542	290	6.1	8.7	18.75	1.32	1990	1977
450	541	6665	541	-10.8	-2.3	-20.0	307	-24.3	523	283	8.3	10.7	21.00	1.40	1988	1977
400	537	7566	537	-16.5	-5.7	-26.0	268	-29.4	519	278	10.8	13.0	24.75	1.55	1990	1977
350	528	8555	528	-23.1	-11.3	-32.0	219	-34.8	500	274	12.6	15.0	30.32	1.78	1990	1977
300	518	9673	518	-30.8	-18.9	-42.3	189	-42.1	490	268	15.2	17.7	35.69	2.05	1990	1982
250	497	10944	497	-40.3	-27.1	-57.3	114	-51.4	461	265	17.0	19.8	44.05	2.23	1990	1982
200	473	12431	473	-51.6	-37.7	-69.9	8	-58.5	433	259	17.6	20.2	56.62	2.49	1990	1982
175	438	13287	438	-57.9	-45.1	-68.0			378	259	16.4	19.0	61.42	2.47	1990	1977
150	417	14243	417	-64.9	-51.9	-74.5			360	261	14.0	16.5	69.41	2.59	1990	1982
125	357	15337	357	-71.3	-60.1	-81.1			283	265	9.3	12.7	77.82	2.91	1990	1986
100	298	16632	298	-77.8	-67.0	-89.9			227	272	3.7	9.5	98.72	3.05	1971	1989
80	225	17910	225	-76.7	-64.1	-88.1			144	081	1.6	8.0	121.54	2.69	1983	1988
70	196	18688	193	-73.7	-56.1	-86.5			126	071	1.8	7.8	133.96	2.88	1983	1989
60	166	19593	166	-68.7	-52.1	-81.5			95	074	2.6	7.2	142.02	2.87	1983	1988
50	142	20705	142	-62.9	-45.9	-77.9			83	101	3.2	7.2	161.09	2.82	1983	1988
40	114	22110	114	-57.8	-42.1	-69.0			56	097	4.8	7.0	192.96	2.49	1983	1978
30	94	23975	94	-51.5	-39.5	-65.0			42	097	7.4	8.7	184.68	3.15	1986	1978
25	80	25159	80	-49.0	-38.1	-60.5			32	095	9.2	10.0	119.92	3.39	1984	1987
20	64	26650	64	-46.4	-33.1	-60.9			23	088	7.4	10.1	112.63	2.76	1984	1987
15	38	28565	38	-45.4	-36.3	-56.5			5	074	3.0	8.4	165.60	2.78	1988	1984
10	24	31297	24	-43.1	-32.5	-53.1							171.02	3.24	1984	1987
7	13	33808	13	-40.1	-32.5	-51.5									1984	1987

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

556 574 476

239 095 1695 -79.7

# NORMALS OF RADIOSONDE DATA

43150 VISHAKHAPATNAM

MAY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTM
<b>SURFACE</b>	620	997	620	31.2	36.2	22.8	620	26.8	620	216	4.4	5.3	2.10	0.80	1987	1986
1000	597	17	101	30.5	33.0	25.0	101	26.1	100	215	4.4	5.7	16.22	0.93	1973	1971
950	581	468	581	28.1	39.0	18.0	577	22.0	568	227	5.4	6.7	23.64	0.74	1972	1986
900	581	952	581	27.0	36.0	17.0	576	17.2	568	256	3.5	5.5	16.67	0.96	1978	1986
850	581	1456	581	24.6	32.0	15.0	575	12.3	568	308	2.6	4.7	16.40	1.08	1973	1986
800	581	1984	581	20.9	28.0	11.0	577	8.0	568	346	3.1	5.2	16.70	1.08	1978	1971
750	581	2533	581	16.6	24.2	6.0	577	4.0	565	001	3.7	5.9	17.55	1.01	1986	1971
700	581	3120	581	12.0	21.0	2.0	579	0.1	566	009	4.3	6.5	16.86	0.92	1986	1971
650	574	3733	574	7.3	19.4	-2.0	564	-3.5	557	004	4.6	7.1	16.74	0.97	1988	1971
600	569	4389	569	2.7	10.8	-5.0	555	-7.4	550	355	4.6	7.3	16.71	0.97	1990	1975
550	567	5084	567	-1.1	7.4	-10.7	520	-12.0	540	341	4.3	7.0	18.45	0.99	1990	1985
500	565	5844	565	-5.0	3.2	-12.1	470	-16.8	539	323	4.2	7.3	18.67	1.01	1990	1983
450	561	6663	561	-9.5	3.6	-21.0	394	-21.5	523	308	4.2	7.8	20.84	1.23	1989	1976
400	553	7569	553	-14.6	-3.1	-23.0	339	-26.8	512	294	4.5	8.3	22.36	1.24	1990	1978
350	539	8566	539	-21.0	-11.5	-29.3	251	-32.6	495	279	4.6	8.6	26.27	1.43	1990	1981
300	528	9695	527	-28.6	-18.3	-38.1	213	-39.8	482	263	4.8	9.0	31.24	1.64	1990	1982
250	513	10976	512	-38.4	-27.3	-50.3	133	-48.8	461	250	5.2	9.5	38.17	1.80	1990	1982
200	492	12471	492	-50.4	-38.5	-66.1	25	-56.7	436	226	4.9	10.4	48.43	1.84	1990	1982
175	458	13331	458	-57.4	-41.9	-70.0			387	204	3.6	10.1	52.56	1.79	1990	1975
150	439	14287	438	-65.3	-49.7	-77.0			375	171	3.6	10.3	57.62	1.86	1990	1975
125	385	15377	384	-72.5	-55.1	-85.0			308	125	5.0	10.0	75.21	2.35	1983	1975
100	311	16662	310	-79.3	-64.1	-89.5			255	103	8.3	10.9	91.95	2.52	1990	1987
80	230	17925	229	-77.6	-60.1	-87.0			170	099	10.0	11.3	91.95	2.54	1982	1977
70	206	18705	206	-73.8	-54.1	-86.0			157	097	9.5	11.1	100.16	2.95	1982	1977
60	168	19613	168	-68.4	-55.5	-83.1			118	096	9.6	10.5	102.84	2.73	1982	1989
50	138	20729	138	-61.9	-50.7	-76.5			101	097	9.3	9.9	110.87	2.51	1987	1989
40	101	22145	101	-57.1	-42.5	-72.0			71	089	11.4	12.1	153.13	3.37	1986	1977
30	80	23995	80	-51.4	-39.1	-68.0			52	093	12.5	13.5	168.44	3.88	1987	1977
25	59	25180	59	-48.5	-34.1	-65.0			25	091	13.1	13.7	247.65	4.70	1986	1977
20	45	26671	45	-44.9	-35.3	-56.5			21	100	14.1	15.9	269.06	5.02	1985	1990
15	30	28615	30	-43.3	-32.1	-54.9			9	084	17.2	17.9	157.41	4.76	1986	1990
10	18	31388	18	-40.6	-33.1	-47.7			1	070	17.0	17.0			1984	1984
7	8	33840	8	-38.5	-29.1	-44.7									1984	1984

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

567 563 488

255 096 1694 -80.7

# NORMALS OF RADIOSONDE DATA

43150 VISHAKHAPATNAM

JUNE 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	599	993	599	31.1	38.0	23.8	599	26.1	599	228	4.4	5.2	1.60	0.70	1984	1986
1000	567	-12	4	32.2	33.0	31.0	4	28.6	4	225	4.8	4.8	12.67		1983	1982
950	562	439	560	28.4	37.0	20.2	560	22.0	556	239	5.6	6.7	23.37	0.74	1987	1989
900	562	923	560	26.0	35.0	18.0	559	18.7	556	266	5.3	6.7	13.27	0.87	1972	1971
850	562	1425	561	23.0	32.2	14.0	560	15.4	555	291	5.2	6.8	14.19	1.01	1983	1971
800	562	1951	562	19.6	28.2	10.8	560	12.2	554	301	5.3	7.3	15.35	1.05	1986	1985
750	562	2500	561	16.0	23.4	6.6	558	8.5	554	302	5.0	7.5	16.42	0.90	1989	1985
700	562	3086	561	12.1	19.2	4.4	557	4.7	554	304	4.4	7.4	17.72	0.90	1989	1985
650	556	3700	555	8.1	14.8	2.0	547	0.7	547	308	4.1	7.5	19.44	0.91	1989	1984
600	552	4360	551	4.2	12.0	-2.5	540	-2.9	539	308	4.0	7.4	20.15	0.98	1978	1985
550	545	5059	544	0.3	7.0	-7.0	527	-6.6	529	303	4.0	7.3	22.35	1.06	1990	1976
500	542	5823	542	-3.5	2.4	-11.0	514	-11.0	527	302	3.2	7.0	23.69	1.02	1989	1972
450	533	6646	533	-7.8	0.0	-15.7	479	-15.8	511	319	2.3	6.6	26.67	1.09	1978	1987
400	525	7559	525	-12.7	-4.5	-20.3	458	-21.6	498	010	1.5	6.3	27.89	1.23	1989	1988
350	512	8563	512	-18.9	-12.5	-26.1	389	-27.9	476	063	2.9	6.5	33.16	1.27	1982	1985
300	504	9701	504	-26.7	-18.5	-33.3	340	-35.3	469	081	5.3	7.7	35.46	1.47	1989	1981
250	490	10993	490	-36.5	-28.0	-44.9	231	-45.1	447	086	8.5	10.3	41.65	1.55	1972	1986
200	471	12500	471	-49.1	-39.1	-57.5	48	-55.9	427	086	12.9	14.3	50.64	1.68	1990	1987
175	444	13364	443	-56.5	-48.1	-66.0			394	086	15.6	16.8	56.50	1.68	1990	1972
150	424	14325	423	-64.8	-56.1	-76.1			375	085	18.9	20.0	62.11	1.65	1990	1986
125	360	15415	360	-72.6	-53.5	-86.1			306	084	21.9	23.2	66.82	1.96	1983	1986
100	305	16695	305	-79.4	-63.1	-90.1			258	085	23.2	24.2	77.13	2.40	1989	1988
80	214	17956	214	-76.9	-57.1	-90.1			163	085	21.9	22.4	98.91	3.19	1990	1979
70	180	18741	180	-72.3	-57.1	-86.0			139	089	19.7	20.2	117.30	3.73	1985	1977
60	144	19656	144	-66.6	-51.1	-81.0			100	094	17.6	18.0	128.08	3.65	1989	1973
50	116	20787	116	-60.6	-42.7	-73.0			80	095	16.1	16.7	154.46	4.39	1989	1973
40	81	22180	81	-55.9	-40.1	-71.1			50	087	17.1	17.5	193.82	4.57	1982	1987
30	59	24037	59	-49.6	-38.9	-64.7			37	089	18.9	19.5	233.90	4.29	1982	1987
25	41	25236	41	-48.2	-38.7	-61.1			21	092	17.8	18.6	317.30	5.48	1989	1987
20	33	26734	33	-45.1	-35.1	-56.3			16	092	20.2	20.6	358.48	5.65	1986	1987
15	25	28672	25	-42.3	-32.1	-54.9			7	083	21.2	21.5	425.32	6.15	1990	1987
10	11	31305	11	-41.2	-33.5	-51.9									1990	1987
7	2	33124	2	-45.0	-40.1	-49.9									1985	1987

**FREEZING LEVEL**

N P ALT

545 546 512

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

240 097 1691 -81.3

## NORMALS OF RADIOSONDE DATA

43150 VISHAKHAPATNAM

JULY 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	520	995	620	29.8	36.4	24.0	620	25.7	619	232	4.6	5.1	1.02	0.86	1987	1984
1000	600	-3	4	26.9	30.0	20.4	4	23.8	4	258	2.9	4.0	7.66		1978	1985
950	594	444	594	26.8	33.8	20.8	592	22.1	578	244	6.2	6.9	16.89	0.77	1982	1983
900	594	928	594	24.1	31.0	18.0	592	19.1	579	263	6.4	7.5	9.36	0.77	1980	1975
850	594	1426	593	21.1	29.0	14.2	591	16.2	579	279	6.7	7.9	9.56	0.67	1975	1986
800	594	1949	593	18.0	28.0	11.2	591	13.1	579	284	7.1	8.4	9.83	0.79	1987	1986
750	594	2495	593	14.8	24.0	7.6	589	9.7	578	280	7.1	8.5	10.92	0.77	1973	1986
700	594	3080	594	11.4	20.0	3.0	590	6.1	577	277	6.8	8.3	11.17	0.91	1980	1986
650	583	3693	582	8.0	18.0	-0.5	576	2.2	558	274	6.1	8.0	12.53	0.86	1975	1986
600	580	4353	579	4.4	14.8	-4.3	574	-1.5	547	275	5.3	7.6	13.38	0.88	1989	1986
550	575	5054	573	0.8	9.8	-8.0	564	-5.3	534	276	4.0	7.0	15.82	0.86	1989	1976
500	573	5820	570	-3.0	4.0	-11.0	559	-9.8	532	287	2.4	6.4	15.64	0.93	1989	1974
450	566	6645	565	-7.4	2.4	-14.0	536	-15.1	514	332	0.9	6.0	17.64	1.08	1983	1978
400	558	7561	558	-12.6	-5.3	-32.0	518	-20.7	504	061	2.4	6.2	20.05	1.26	1990	1976
350	540	8563	540	-19.0	-10.5	-27.0	443	-27.3	480	078	5.1	7.3	26.54	1.45	1989	1971
300	530	9702	529	-26.7	-17.9	-38.0	403	-35.9	468	086	8.2	9.7	29.97	1.82	1989	1977
250	513	10994	512	-36.6	-28.1	-49.0	268	-45.6	443	086	13.2	14.1	39.07	2.04	1984	1977
200	492	12503	492	-49.0	-38.3	-60.0	61	-55.7	408	082	19.5	20.2	51.34	2.17	1989	1973
175	459	13365	459	-56.4	-45.3	-67.1			372	079	22.5	23.2	59.78	2.14	1983	1986
150	435	14329	435	-64.6	-55.7	-76.9			354	078	25.8	26.6	68.46	2.12	1983	1986
125	359	15420	359	-72.5	-57.3	-83.3			283	080	30.0	30.9	79.82	2.36	1985	1986
100	310	16715	310	-78.4	-66.1	-90.1			248	083	32.2	33.0	93.98	2.45	1981	1987
80	230	17996	230	-73.7	-59.1	-86.7			168	086	26.8	27.1	117.46	2.85	1986	1987
70	200	18791	200	-69.3	-52.7	-82.0			142	086	24.3	25.0	138.15	3.15	1986	1978
60	163	19725	163	-64.8	-48.1	-78.0			100	091	22.0	22.5	146.31	4.22	1982	1975
50	141	20843	141	-59.9	-38.1	-74.0			84	091	20.1	20.7	166.07	5.09	1982	1975
40	97	22292	97	-55.3	-38.1	-68.0			37	092	20.2	20.6	197.27	5.32	1982	1974
30	75	24158	75	-50.4	-36.3	-59.1			26	088	20.9	21.1	205.41	4.14	1990	1987
25	59	25353	59	-48.4	-35.5	-57.1			17	087	21.5	21.6	256.94	5.20	1990	1982
20	44	26838	44	-46.4	-30.7	-55.5			7	093	19.4	19.6	344.25	7.52	1990	1982
15	32	28703	32	-45.5	-37.3	-53.3			3	087	26.9	27.0	216.38	2.75	1985	1982
10	20	31417	20	-42.7	-36.1	-50.3			1	091	26.0	26.0			1985	1982
7	7	33990	7	-41.2	-36.3	-45.7									1985	1985

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
575	539	521					270	101	1668	-79.9

## NORMALS OF RADIOSONDE DATA

43150 VISHAKHAPATNAM

AUGUST 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	620	995	620	29.6	34.8	24.2	620	25.7	619	233	4.2	4.9	1.16	0.59	1979	1986
1000	608	-3	7	30.4	31.6	29.0	7	25.3	7	215	1.7	2.7	9.30		1979	1971
950	603	441	602	26.7	33.8	20.0	601	22.2	588	245	5.8	6.7	17.13	0.48	1983	1977
900	603	927	602	23.8	31.2	18.6	600	19.2	588	266	6.2	7.2	10.57	0.53	1980	1988
850	603	1425	602	20.8	29.8	16.0	600	16.4	588	283	6.7	8.0	10.67	0.55	1980	1976
800	603	1948	602	17.8	26.0	12.0	600	13.3	586	285	7.0	8.4	10.68	0.66	1980	1985
750	603	2495	602	14.8	22.4	8.0	599	9.9	585	281	6.9	8.5	9.87	0.78	1983	1975
700	603	3079	603	11.5	18.8	4.4	598	6.4	586	277	6.4	8.2	11.17	0.85	1983	1984
650	599	3693	599	8.2	16.0	1.4	595	2.5	574	274	5.9	8.0	11.10	0.87	1975	1987
600	594	4353	593	4.7	12.8	-2.7	588	-1.4	570	276	5.0	7.5	12.77	0.96	1988	1987
550	587	5055	587	1.0	10.0	-7.1	573	-5.4	552	279	3.7	7.0	13.98	1.01	1982	1987
500	581	5820	581	-2.9	4.8	-10.1	566	-9.9	544	290	2.6	6.7	15.81	1.01	1982	1984
450	569	6646	569	-7.4	6.0	-17.7	535	-15.1	522	306	1.1	6.6	16.64	1.16	1985	1982
400	563	7559	563	-12.6	-5.9	-20.5	514	-21.0	510	065	1.6	6.6	20.06	1.25	1983	1985
350	552	8564	551	-19.1	-10.5	-27.9	446	-27.3	485	081	4.1	7.1	25.86	1.47	1983	1985
300	546	9701	545	-26.8	-18.9	-35.5	414	-35.6	478	086	7.3	9.1	31.04	1.78	1983	1984
250	526	10991	524	-36.8	-27.9	-46.1	285	-45.5	451	087	11.9	13.1	39.64	2.07	1983	1984
200	502	12496	501	-49.3	-39.1	-59.0	58	-55.8	426	083	16.9	17.8	52.34	2.29	1983	1976
175	473	13360	472	-56.6	-46.9	-68.0			384	081	19.9	20.9	58.64	2.25	1983	1976
150	439	14320	438	-64.9	-54.5	-76.0			362	078	22.8	23.8	68.89	2.40	1983	1976
125	364	15409	364	-72.8	-61.1	-86.1			284	080	25.7	25.7	78.08	2.53	1986	1987
100	291	16694	291	-78.5	-66.0	-89.9			227	084	27.7	28.5	92.76	3.25	1971	1988
80	210	17983	210	-73.3	-59.9	-89.9			144	087	24.9	25.4	108.13	3.51	1985	1987
70	186	18780	186	-69.4	-54.5	-86.1			125	085	21.9	22.3	122.06	3.67	1986	1987
60	149	19703	149	-65.7	-53.1	-82.5			82	091	20.7	21.1	126.91	3.38	1984	1987
50	129	20819	129	-61.5	-46.1	-78.1			69	089	19.6	20.1	137.12	3.71	1985	1987
40	95	22230	94	-57.8	-43.5	-73.5			42	094	20.1	20.7	187.00	4.14	1985	1987
30	74	24090	74	-52.8	-37.1	-68.3			26	094	21.4	21.7	181.76	3.92	1985	1987
25	58	25264	58	-51.0	-41.3	-66.1			19	094	24.7	25.2	202.88	4.16	1986	1987
20	43	26755	43	-48.1	-38.1	-65.1			11	089	21.5	21.8	233.68	4.31	1981	1985
15	30	28685	30	-47.0	-36.5	-65.5			5	092	18.9	19.4	225.71	3.44	1990	1985
10	20	31411	20	-43.9	-35.5	-54.5			2	091	24.9	25.0			1983	1983
7	8	33684	8	-44.6	-39.5	-53.1									1986	1983

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE				
N	P	ALT	N	P	ALT	T	N	P	ALT	T	
586	536	526	1	128	1518	-77.5		252	102	1659	-80.1

## NORMALS OF RADIOSONDE DATA

43150 VISHAKHAPATNAM

SEPTEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	599	998	599	29.6	34.0	22.6	599	25.6	598	218	2.7	3.9	1.16	0.54	1973	1985
1000	570	26	123	29.7	32.0	26.0	123	25.4	124	203	2.5	3.8	10.86	0.73	1977	1986
950	565	467	565	26.2	33.0	17.0	561	21.9	553	229	3.2	5.2	19.28	0.72	1976	1972
900	565	955	565	23.4	30.2	14.2	565	18.6	553	264	2.2	4.9	10.62	0.78	1988	1986
850	565	1452	565	20.5	26.0	11.6	565	15.5	553	303	2.2	5.2	10.84	0.66	1987	1986
800	565	1974	565	17.3	28.2	9.0	563	12.2	551	319	2.8	5.8	10.43	0.77	1983	1986
750	565	2519	565	14.1	25.0	6.0	562	8.6	547	316	2.8	6.0	11.57	0.78	1977	1986
700	565	3102	564	10.9	17.4	4.8	561	4.7	546	308	2.4	5.8	10.43	0.82	1988	1982
650	559	3715	558	7.6	18.0	0.0	552	0.5	533	293	1.7	5.6	10.74	0.87	1977	1972
600	553	4374	551	4.1	11.0	-1.9	541	-3.8	522	282	1.0	5.5	11.87	0.84	1983	1980
550	546	5075	545	0.4	6.4	-5.0	520	-7.9	513	300	0.3	5.5	12.91	0.94	1983	1976
500	546	5836	543	-3.6	2.4	-10.1	507	-12.4	513	076	0.6	5.5	13.54	0.97	1989	1986
450	533	6659	530	-8.3	-1.9	-17.1	456	-17.1	484	080	1.5	5.6	14.46	1.17	1987	1980
400	524	7571	521	-13.6	-6.9	-21.3	419	-23.1	474	081	2.8	5.9	17.96	1.27	1984	1987
350	505	8571	503	-20.2	-12.1	-28.0	339	-29.0	449	086	4.4	6.6	23.43	1.51	1983	1976
300	493	9701	492	-28.1	-20.5	-37.0	295	-37.3	441	089	6.1	7.8	30.27	1.82	1983	1977
250	485	10985	485	-38.2	-29.0	-49.0	204	-47.1	424	094	8.7	10.0	40.22	1.90	1974	1977
200	467	12482	467	-50.7	-33.0	-62.3	47	-57.6	402	091	12.6	13.7	53.19	2.04	1974	1980
175	431	13341	431	-58.1	-49.1	-70.0			365	088	14.9	15.9	64.15	2.25	1983	1977
150	405	14294	405	-66.4	-57.1	-78.0			346	085	17.4	18.4	77.71	2.37	1983	1977
125	323	15373	323	-74.0	-64.1	-86.1			272	084	19.5	20.5	92.73	2.50	1990	1981
100	249	16650	249	-79.2	-62.1	-88.0			209	087	20.8	21.4	111.05	2.86	1989	1977
80	167	17928	167	-73.5	-60.1	-90.0			119	088	17.5	18.3	134.09	3.36	1982	1974
70	149	18720	149	-69.6	-56.5	-83.0			107	091	17.2	18.1	147.49	3.89	1982	1974
60	108	19640	108	-66.1	-55.5	-73.0			73	098	15.3	16.0	154.14	3.11	1985	1977
50	85	20741	85	-62.0	-50.5	-72.0			48	093	15.3	16.1	175.72	3.57	1985	1977
40	55	22161	55	-57.0	-45.1	-65.0			22	087	15.9	16.5	188.76	3.08	1985	1977
30	34	24059	34	-51.7	-38.3	-61.7			8	094	15.5	15.8	215.25	4.29	1985	1984
25	22	25225	22	-48.8	-41.1	-57.5			5	087	15.6	16.0	232.27	3.57	1984	1984
20	15	26708	15	-45.9	-33.5	-52.1			2	091	12.0	12.0			1988	1984
15	6	28626	6	-42.9	-39.7	-46.5			1	095	20.0	20.0			1988	1988
10	1	31493	1	-38.9	-38.9	-38.9									1990	1990
7																

FREEZING LEVEL			1ST TROPOPAUSE				2ND TROPOPAUSE			
N	P	ALT	N	P	ALT	T	N	P	ALT	T
544	544	516					216	104	1646	-80.5

# NORMALS OF RADIOSONDE DATA

43150 VISHAKHAPATNAM

OCTOBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	619	1002	619	29.1	32.0	22.0	619	24.0	619	106	1.4	3.7	2.00	0.56	1976	1982
<i>1000</i>	600	61	428	28.8	32.0	21.0	428	23.4	429	098	1.9	3.6	16.06	0.59	1976	1981
<i>950</i>	577	502	577	25.3	34.0	17.8	576	19.4	564	083	2.2	5.0	25.74	0.66	1974	1987
<i>900</i>	577	988	577	22.3	29.8	15.8	575	15.6	564	054	2.8	5.5	17.32	0.80	1987	1987
<i>850</i>	577	1483	577	19.2	26.0	12.6	576	11.8	564	040	3.4	6.2	17.47	0.75	1989	1979
<i>800</i>	577	2002	577	16.0	22.2	10.0	570	8.4	564	031	3.3	6.5	17.80	0.75	1989	1983
<i>750</i>	577	2543	577	12.9	22.0	6.4	563	4.6	564	032	2.7	6.1	19.04	0.79	1976	1984
<i>700</i>	577	3125	576	9.8	17.0	4.0	543	0.9	564	043	1.7	5.6	17.28	0.94	1989	1978
<i>650</i>	572	3736	570	6.8	14.0	-4.9	497	-2.5	557	070	0.6	5.4	17.10	0.98	1976	1979
<i>600</i>	567	4391	565	3.6	10.0	-4.1	467	-6.5	553	146	0.6	5.3	17.72	0.95	1989	1984
<i>550</i>	562	5090	559	-0.2	8.0	-9.0	415	-10.3	545	148	0.7	5.3	18.37	1.01	1988	1975
<i>500</i>	561	5851	560	-4.3	3.4	-12.0	390	-14.9	544	151	0.7	5.5	19.94	0.99	1988	1978
<i>450</i>	553	6670	553	-9.1	0.6	-18.0	344	-19.3	527	153	0.6	5.7	20.90	1.08	1988	1978
<i>400</i>	548	7577	548	-14.6	-5.3	-24.0	320	-25.2	519	177	0.8	5.9	23.45	1.35	1989	1978
<i>350</i>	529	8573	529	-21.3	-13.1	-29.0	256	-31.1	495	184	1.1	6.3	26.84	1.63	1989	1976
<i>300</i>	524	9700	524	-29.3	-20.1	-37.5	219	-39.0	492	183	1.6	7.0	32.02	1.74	1990	1985
<i>250</i>	510	10976	510	-39.6	-30.5	-48.0	144	-48.8	469	175	2.4	8.2	39.25	1.88	1983	1977
<i>200</i>	487	12465	487	-52.0	-42.5	-61.0	28	-58.3	442	158	4.0	9.8	49.28	1.92	1990	1977
<i>175</i>	442	13319	442	-59.1	-50.1	-68.5			395	151	4.8	10.3	55.37	1.83	1990	1986
<i>150</i>	406	14270	406	-67.0	-57.5	-76.0			361	138	6.0	11.4	66.16	2.02	1983	1977
<i>125</i>	326	15346	326	-74.3	-60.9	-82.1			278	120	7.0	11.0	78.05	2.11	1984	1981
<i>100</i>	250	16620	250	-80.1	-70.5	-92.0			221	104	9.1	11.0	99.02	2.62	1983	1976
<i>80</i>	169	17912	169	-75.0	-59.1	-83.5			147	098	9.0	10.0	117.00	2.56	1983	1983
<i>70</i>	150	18701	150	-70.8	-58.1	-81.0			133	097	8.6	9.3	128.67	2.98	1983	1976
<i>60</i>	125	19628	125	-66.4	-55.1	-82.0			102	097	8.7	9.3	124.17	2.87	1983	1976
<i>50</i>	109	20743	109	-61.7	-50.9	-73.0			85	092	10.2	10.9	136.77	3.15	1983	1978
<i>40</i>	69	22158	69	-57.7	-47.1	-66.1			49	095	10.6	11.1	178.63	2.53	1983	1983
<i>30</i>	39	24024	39	-52.9	-41.3	-63.1			28	093	12.5	13.1	193.95	3.60	1983	1983
<i>25</i>	26	25215	26	-51.1	-41.1	-59.1			13	089	14.9	15.8	222.05	3.55	1983	1983
<i>20</i>	17	26657	17	-50.2	-41.5	-59.1			7	082	13.9	14.4			1989	1983
<i>15</i>	7	28470	7	-48.1	-41.1	-52.1			1	088	15.0	15.0			1982	1979
<i>10</i>	3	31092	3	-46.5	-42.1	-49.7			1	097	11.0	11.0			1983	1979

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

558 551 506

212 103 1652 -81.0

# NORMALS OF RADIOSONDE DATA

43150 VISHAKHAPATNAM

NOVEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<i>SURFACE</i>	599	1005	599	27.3	30.0	22.0	599	21.2	599	068	3.7	4.8	1.32	0.48	1972	1987
1000	550	89	523	27.0	30.0	22.6	518	20.7	519	071	3.8	4.7	11.03	0.52	1974	1979
950	544	526	543	23.3	32.2	17.4	539	15.7	539	063	5.4	6.2	19.65	0.78	1988	1984
900	544	1006	543	20.2	31.4	14.0	537	11.5	539	047	5.5	6.5	10.78	1.09	1988	1971
850	544	1500	543	17.2	29.4	9.4	527	8.0	539	036	4.8	6.5	10.59	1.10	1988	1985
800	544	2016	543	14.5	25.2	6.0	504	4.2	539	029	3.5	5.9	10.89	0.94	1988	1973
750	544	2555	544	12.1	20.4	5.0	459	0.6	537	034	2.6	5.4	12.12	0.78	1988	1974
700	544	3134	544	9.5	17.4	3.0	425	-3.1	537	033	1.8	5.1	11.41	0.76	1987	1984
650	536	3745	535	6.6	16.8	1.0	376	-5.9	521	022	1.2	5.1	11.72	0.72	1984	1975
600	530	4398	529	3.2	9.8	-3.1	349	-9.6	515	329	0.9	5.5	13.08	0.68	1990	1984
550	527	5095	525	-0.7	7.2	-5.7	310	-13.6	509	319	1.3	6.0	15.35	0.73	1989	1980
500	518	5855	516	-5.0	1.8	-11.0	283	-18.1	500	301	2.1	6.7	15.45	0.69	1989	1974
450	509	6673	507	-10.0	-1.7	-16.0	252	-22.9	486	287	3.3	7.9	17.32	0.84	1987	1974
400	504	7575	503	-15.8	-7.1	-22.0	240	-28.3	479	279	4.5	8.7	18.81	1.09	1989	1974
350	488	8565	487	-22.5	-13.7	-29.0	196	-34.3	456	266	6.0	9.8	23.88	1.37	1989	1971
300	480	9687	479	-30.5	-20.7	-38.0	178	-42.0	447	256	8.2	11.2	26.80	1.62	1989	1978
250	465	10955	464	-40.8	-30.1	-48.0	115	-51.6	420	242	9.9	12.5	33.26	1.61	1989	1978
200	436	12438	436	-53.0	-41.9	-61.3	14	-59.2	389	226	11.4	14.5	45.03	1.83	1982	1985
175	385	13287	384	-59.9	-49.3	-72.0			337	222	11.2	14.3	56.92	2.00	1982	1974
150	349	14236	349	-67.5	-57.1	-77.0			306	222	9.9	13.3	66.61	2.09	1984	1977
125	266	15308	266	-74.0	-57.5	-81.1			211	221	6.9	11.4	80.39	2.54	1983	1981
100	206	16591	206	-79.5	-68.1	-90.0			163	191	2.1	8.0	90.08	3.13	1990	1978
80	141	17870	141	-75.4	-60.9	-84.0			106	105	2.0	6.9	108.35	3.32	1990	1977
70	122	18663	122	-71.8	-58.3	-81.0			85	085	2.8	6.1	125.01	3.60	1990	1977
60	99	19577	99	-67.4	-54.5	-77.0			65	099	3.4	5.7	143.43	3.99	1990	1977
50	84	20705	84	-62.2	-48.9	-74.5			49	099	4.6	7.3	152.74	4.20	1990	1984
40	54	22124	54	-57.3	-42.5	-67.9			25	095	4.8	7.2	215.79	4.81	1990	1984
30	30	23927	30	-53.9	-43.1	-63.9			11	098	5.4	9.2	170.85	2.42	1983	1984
25	18	25151	18	-51.4	-42.1	-61.1			6	093	8.0	9.2			1988	1984
20	11	26575	11	-50.5	-43.7	-57.3			4	088	11.4	12.0			1982	1984
15	4	28531	4	-46.6	-43.1	-52.1			1	073	17.0	17.0			1982	1984
10	1	31538	1	-43.7	-43.7	-43.7									1989	1989
7																

**FREEZING LEVEL**

N P ALT

**1ST TROPOPAUSE**

N P ALT T

**2ND TROPOPAUSE**

N P ALT T

526 558 497

169 101 1655 -80.0



## NORMALS OF RADIOSONDE DATA

43150 VISHAKHAPATNAM

DECEMBER 1971-90

1200 UTC

LEVEL (HPA)	N	p/H	N	T	TX	TN	N	TD	N	DDD	VR	VM	SDHP	SDTT	YRTX	YRTN
<b>SURFACE</b>	620	1008	620	25.6	29.0	22.0	620	19.1	620	081	3.4	4.1	1.32	0.52	1977	1975
1000	554	111	553	25.1	28.0	15.4	549	18.5	550	080	3.7	4.3	11.10	0.54	1976	1984
950	554	544	554	21.2	28.8	15.0	549	13.2	551	068	4.6	5.2	21.16	0.91	1990	1975
900	554	1024	554	18.4	26.6	13.6	548	9.0	551	041	4.4	5.2	11.21	0.97	1990	1987
850	554	1512	553	15.9	26.8	9.8	532	4.7	551	018	4.0	5.4	11.40	0.92	1990	1982
800	554	2026	553	13.4	24.6	8.0	476	0.7	551	007	3.4	5.3	11.55	0.88	1990	1973
750	554	2564	553	11.2	21.0	4.0	411	-2.8	550	357	2.6	5.3	12.53	0.83	1990	1975
700	554	3139	552	8.8	19.0	0.0	364	-6.9	551	330	2.0	5.3	12.79	0.88	1975	1975
650	550	3748	549	5.8	12.6	-4.3	288	-9.6	546	304	2.5	5.9	14.35	0.81	1990	1980
600	540	4400	540	2.4	8.8	-5.0	246	-12.9	537	289	3.6	6.7	14.62	0.72	1983	1977
550	533	5095	532	-1.6	8.6	-9.0	213	-16.2	528	285	4.5	7.8	15.86	0.78	1983	1977
500	524	5851	523	-6.1	1.4	-15.0	196	-20.8	521	279	6.0	8.9	16.14	0.75	1982	1977
450	518	6666	517	-11.3	1.0	-22.0	183	-24.9	512	274	7.8	10.6	17.73	0.91	1984	1975
400	517	7563	516	-17.2	-9.1	-33.1	184	-30.6	512	269	10.1	12.8	19.62	1.09	1982	1984
350	502	8548	502	-24.0	-15.7	-34.0	154	-36.3	488	267	12.7	15.2	22.85	1.30	1982	1977
300	492	9662	492	-32.0	-23.9	-42.1	136	-43.3	476	262	15.5	18.0	26.34	1.56	1982	1988
250	471	10924	471	-41.9	-33.9	-49.1	95	-52.5	451	253	17.7	20.5	31.02	1.55	1984	1982
200	443	12401	443	-53.6	-45.7	-61.5	9	-59.1	412	245	18.7	21.6	40.32	1.77	1982	1985
175	388	13252	388	-60.0	-50.3	-69.5			332	244	18.0	20.7	46.29	2.06	1989	1985
150	357	14200	357	-67.0	-57.5	-74.1			304	245	16.3	18.9	51.58	2.28	1983	1982
125	283	15284	283	-73.0	-60.5	-83.1			215	248	12.1	14.3	72.22	2.81	1983	1985
100	211	16565	211	-79.0	-66.1	-89.3			157	254	5.8	9.8	88.61	2.77	1983	1988
80	141	17844	141	-76.5	-62.1	-88.1			91	222	1.2	6.6	107.38	2.83	1983	1982
70	120	19620	120	-73.1	-58.5	-87.1			75	335	1.3	5.4	100.20	2.77	1983	1982
60	95	19522	94	-69.1	-59.1	-81.0			51	006	1.3	5.6	108.06	2.11	1982	1978
50	78	20618	78	-63.5	-53.5	-73.1			43	040	0.9	5.1	130.43	2.33	1982	1982
40	54	22018	54	-59.7	-51.5	-69.5			26	231	0.4	7.1	118.88	2.21	1983	1982
30	40	23842	40	-54.7	-45.9	-66.1			23	106	0.7	6.3	147.62	3.03	1982	1984
25	26	24999	26	-53.7	-46.5	-66.1			13	311	0.1	6.9	145.74	3.38	1986	1984
20	15	26411	15	-52.7	-46.5	-65.9			7	335	1.3	5.6			1980	1984
15	5	28232	5	-54.0	-47.9	-63.1			1	031	3.0	3.0			1988	1984
10	3	30767	3	-50.6	-43.7	-58.1			1	065	6.0	6.0			1988	1984
7	2	33071	2	-46.7	-38.9	-54.5			1	089	15.0	15.0			1988	1984

FREEZING LEVEL  
N P ALT

1ST TROPOPAUSE  
N P ALT T

2ND TROPOPAUSE  
N P ALT T

537 570 480

161 097 1679 -80.4