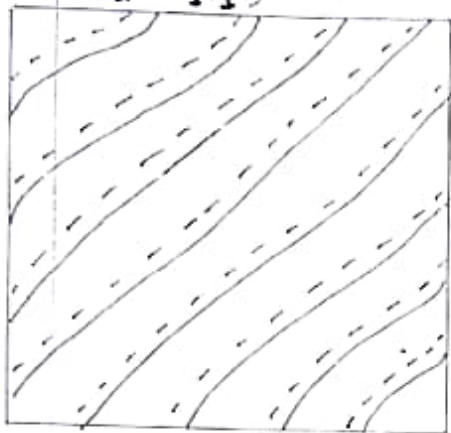
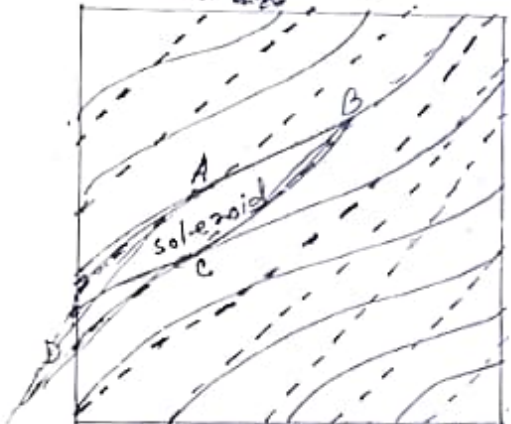


FIG. 1.1



[Barotropic atmosphere]

FIG. 1.2



[Baroclinic atmosphere]

Solid lines are isobars and dashed lines are isotherms

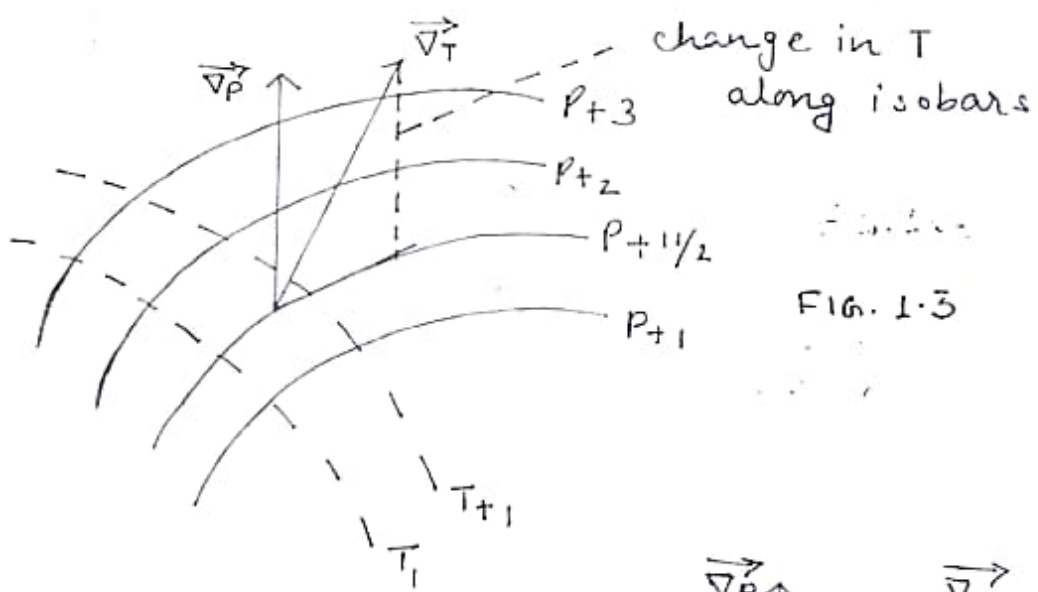
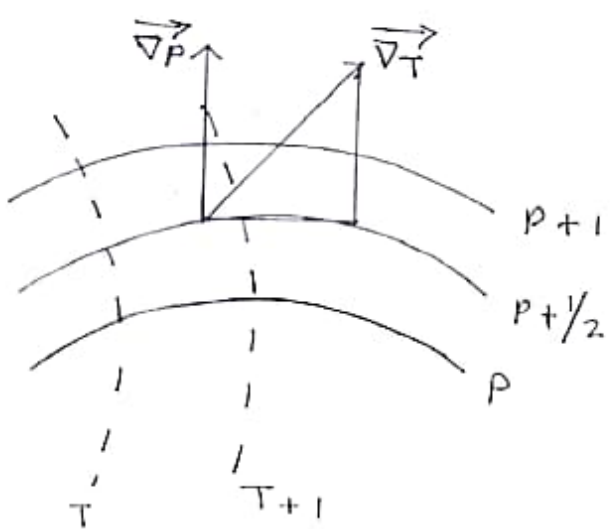


FIG. 1.3

FIG. 1.4



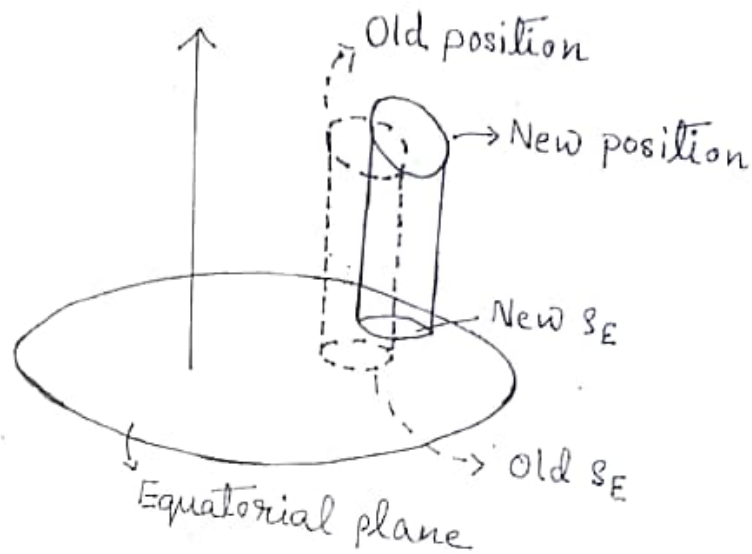


FIG. 1.5 : Tipping effect.

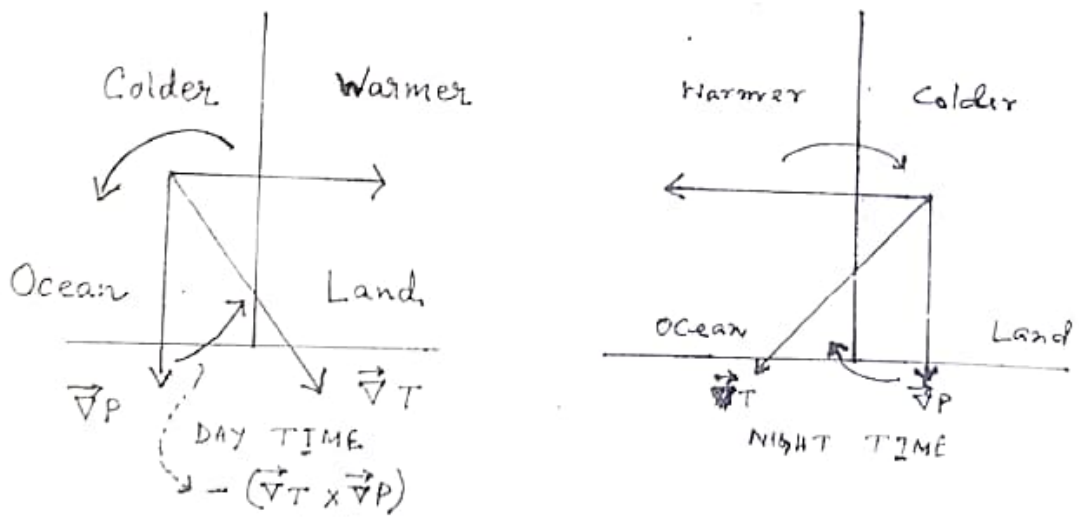


FIG. 1.6

FIG. 1.7

Explanation of Sea & Land breeze using Kelvin's circulation theorem.

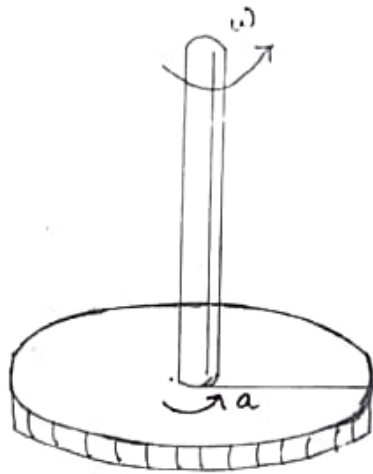
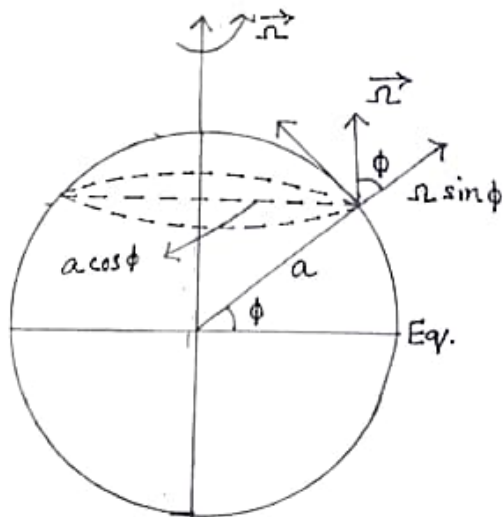


FIG. 1.8
Vorticity for solid body rotation.



Exaplanation for Planetary Vorticity
FIG. 1.9

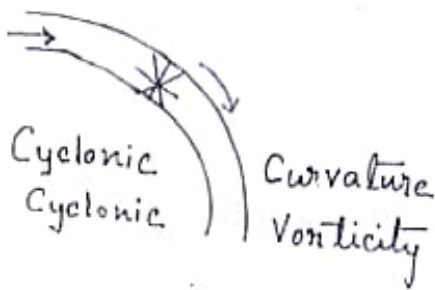
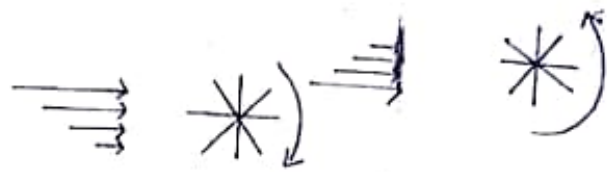


FIG - 1.10

Illustration of curvature vorticity

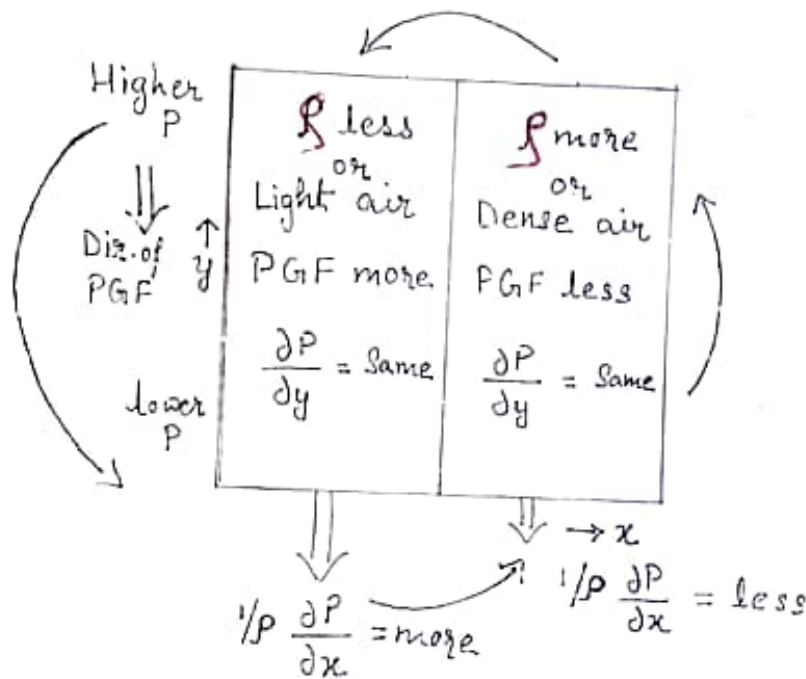


FIG - 1.11

Effect of solenoid term - Vorticity equation

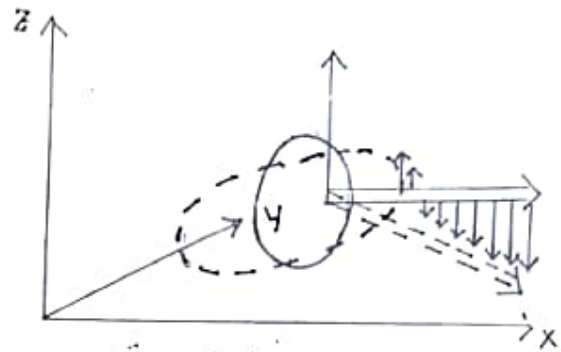
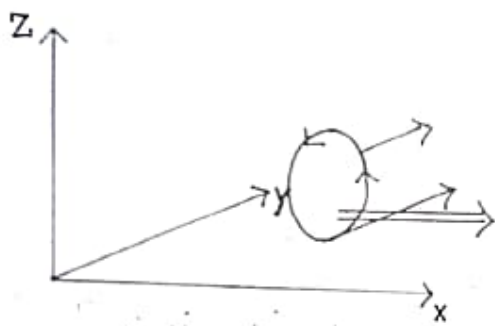


FIG. 1.12: Tilting term.

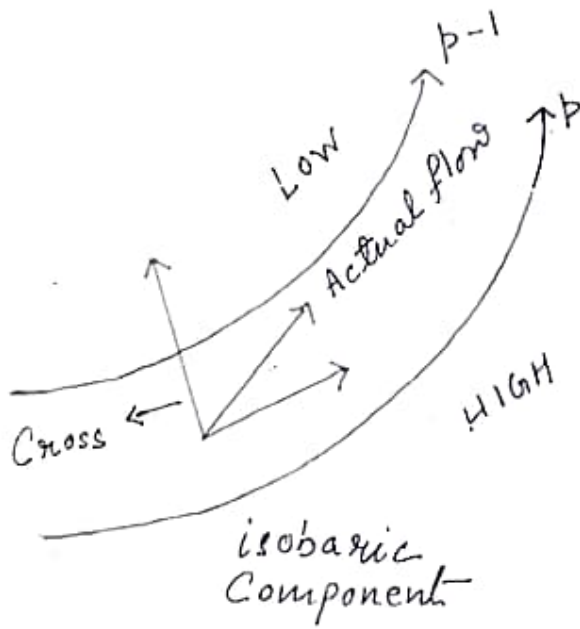


Fig- 1.13: Frictional term.

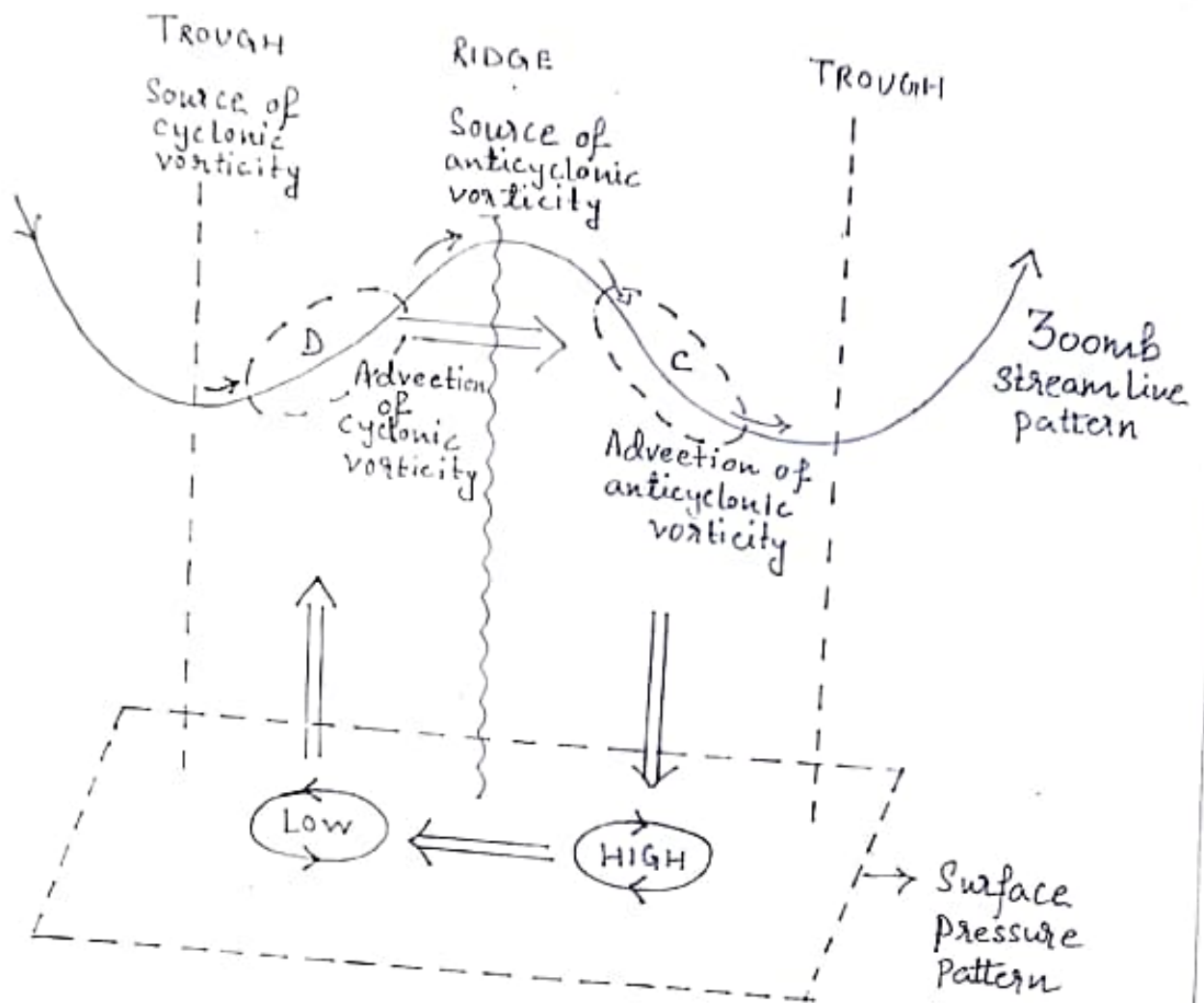


FIG. 1.14: Formation of Surface Low/high ahead of upper air westerly trough/ridge.

II - Left Entrance

$$\beta = - \left[\frac{40-80}{2} \right] = +20$$

$$f = - \left[\frac{50-105}{2} \right] \text{ (C)}$$

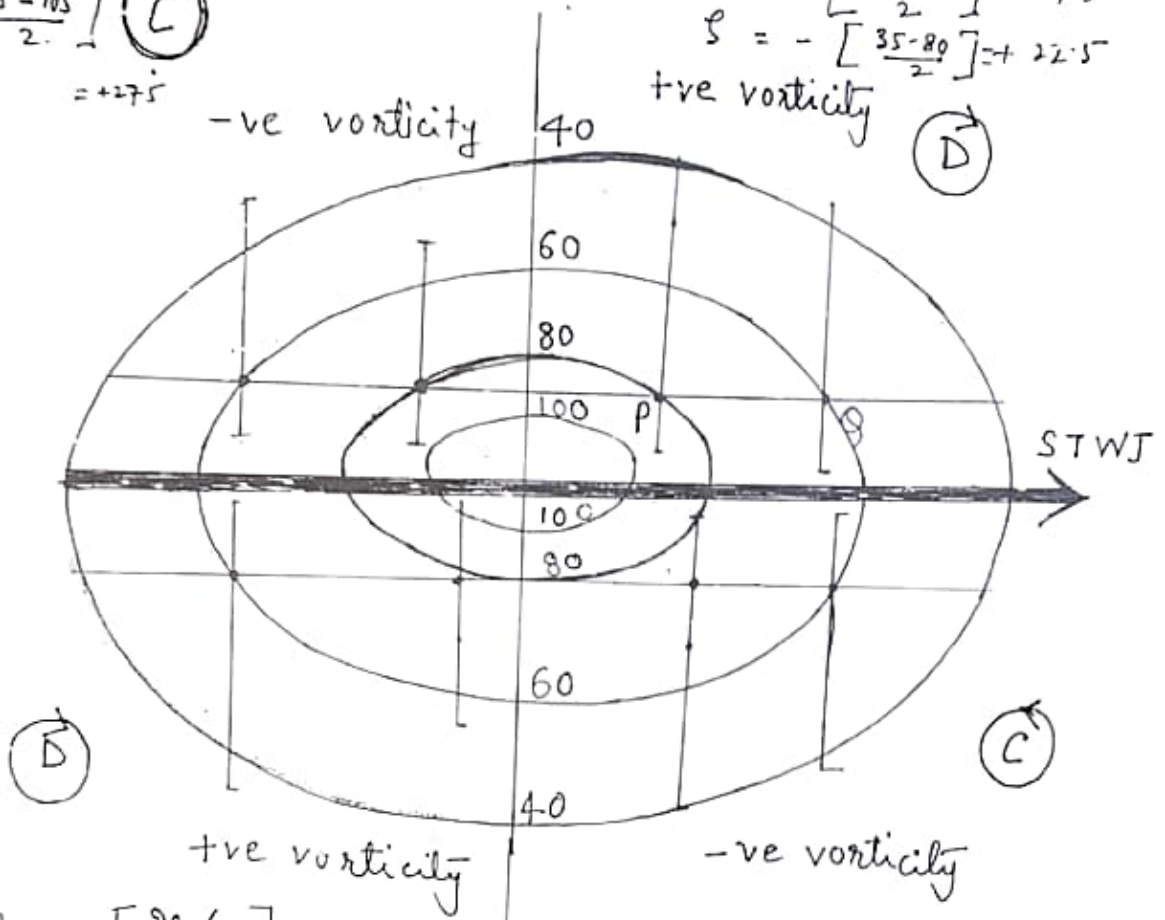
$= +27.5$ -ve vorticity

I - Left Exit

$$\beta = - \left[\frac{40-95}{2} \right] = +27.5$$

$$f = - \left[\frac{35-80}{2} \right] = +22.5$$

+ve vorticity (D)



$$f = - \left[\frac{90-60}{2} \right] = -15$$

$$f = - \left[\frac{110-45}{2} \right] = -32.5$$

III - Right Entrance

$$f = - \left[\frac{100-40}{2} \right] = -30$$

$$f = - \left[\frac{90-40}{2} \right] = -25$$

IV - Right Exit

FIG. 1.15

Divergence / Convergence over different sections of STWJ.

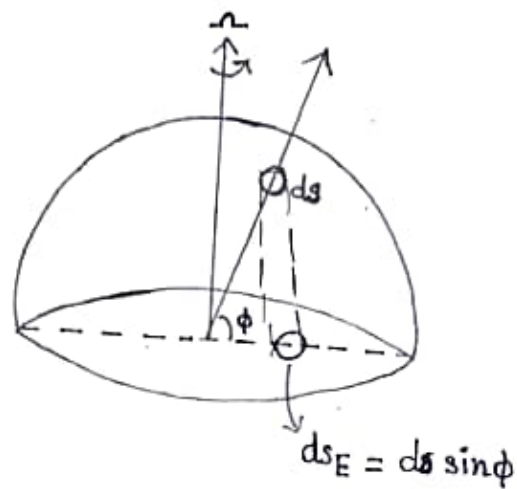


Fig - 2(a)

Bjerknes Circulation Theorem

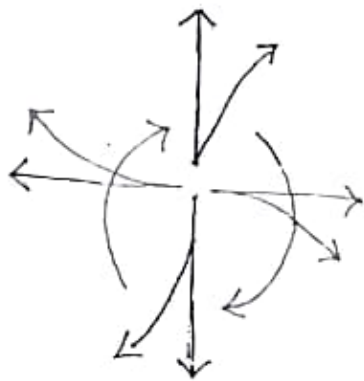


Fig- 2(b)

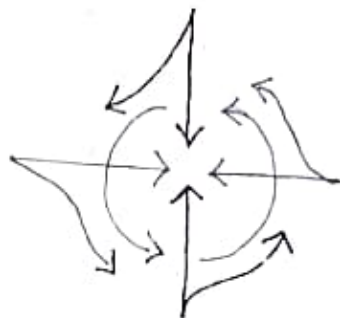


Fig-2(c)

Effect of Divergence or Convergence
on relative circulation