

Supercell
Splitting

Rainy Downdraft
kills Convection
in middle

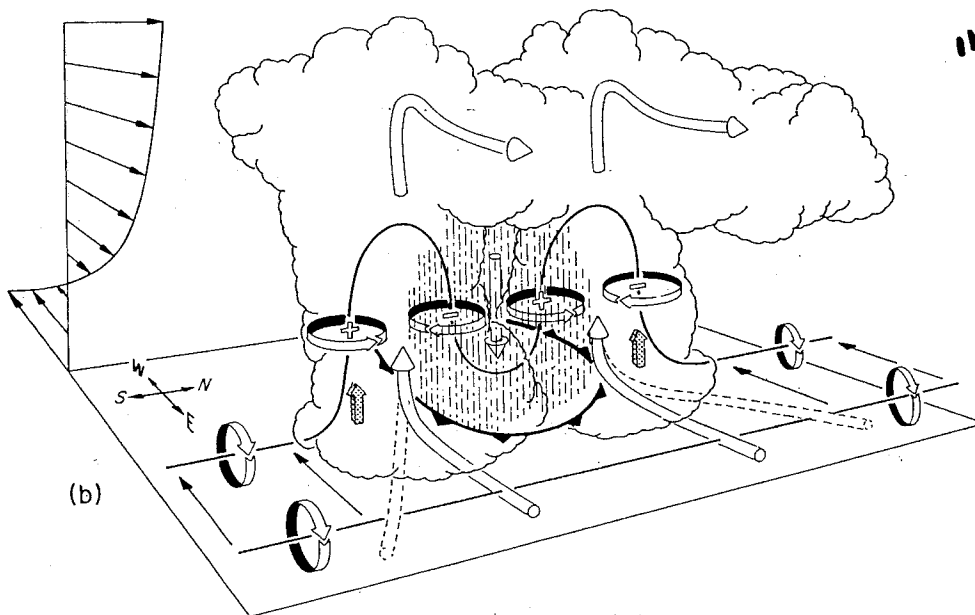


Fig. 11.28 Schematic drawing showing the deformation of vortex tubes (solid lines) by evolving supercell convection in unidirectional shear. Cylindrical arrows show the direction of storm-relative flow. Shaded arrows depict accelerations due to nonhydrostatic pressure perturbations and water loading and evaporation. [From Klemp (1987).]

Figure 11.29 shows the orientation of a particular vortex line as it passes through the storm along the surface of $\theta_e = 331$ K. To the east of the convective circulation, near the surface, the vortex lines are oriented north-south, reflecting the ambient west-east shear. The vortex lines that intersect the gust front connect to *baroclinically generated vorticity* at the