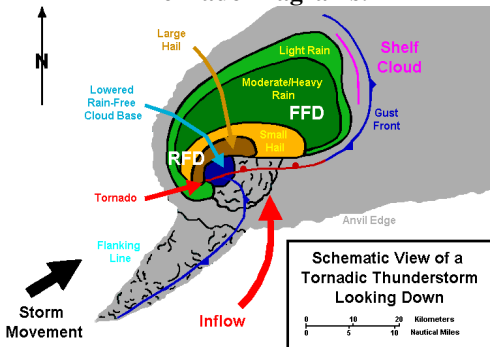
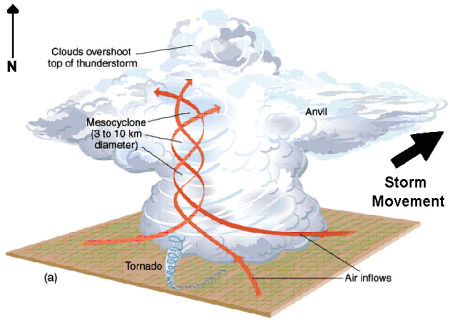
Spotter Quick Reference Guide – Severe Weather Diagrams & Images

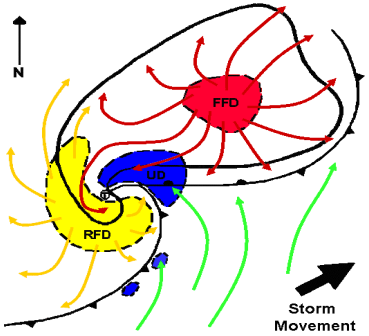
NOAA's National Weather Service

Tornado Diagrams:

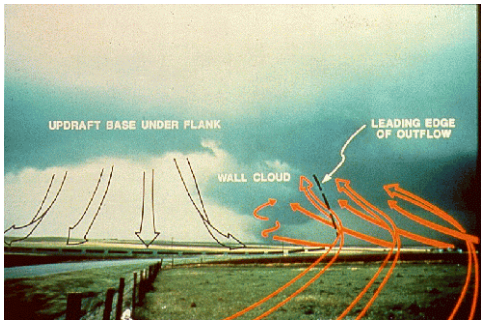




Tornado on backside of the storm relative to storm motion.

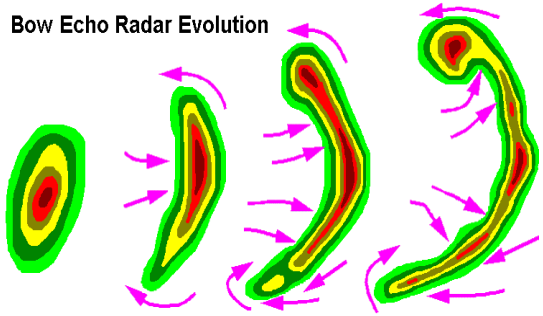


Surface wind flow near tornado.

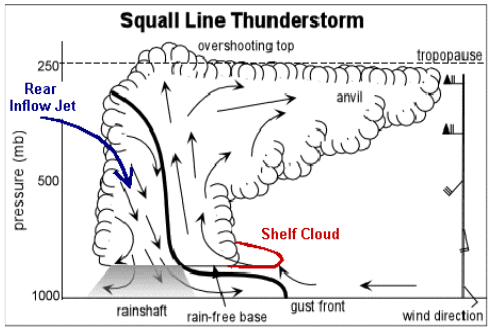


RFD flow on left. Inflow on right. Tornado/wall cloud in middle.

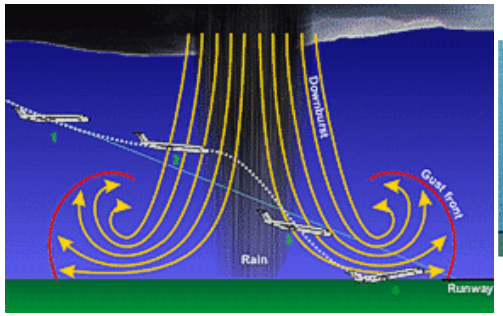
Straight-line Wind / Downburst Diagrams:



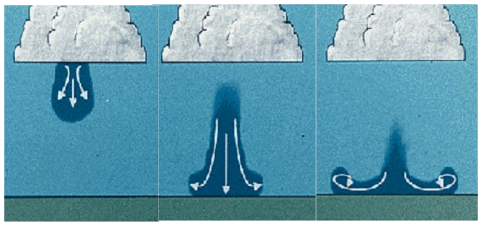
Moves to right. Arrows : surface winds. At apex : downburst.



Squall line moving right. Shelf Cloud on leading edge.



Microburst. Plane: headwind/lift, then downward tailwind.



Evolution of a microburst.

Pictures:

Wall cloud w/ beaver tail. Moving right.

Striation marks on updraft indicate Rotation (mesocyclone).

Well developed mesocyclone with extreme rotation on vertical axis at cloud base.

Tornado formation? No! Shelf cloud with trailing rain on the right. Storm moving left.

A wet microburst (cold air descending with torrential rain) about to hit the ground.

Shelf cloud : leading edge of storm outflow. Gusty winds behind. Storm moving to left.

Low hanging scud – may look like a funnel cloud, but no rotation, no funnel.

Mammatus clouds represent extreme turbulence aloft…not funnel clouds.

Funnel cloud – no ground circulation.

Note circulation ground affects…rotating dirt/debris proves it is a tornado! The funnel isn't the tornado! Amazing!!!