

Air Masses & Fronts



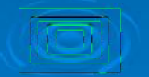
Air Masses

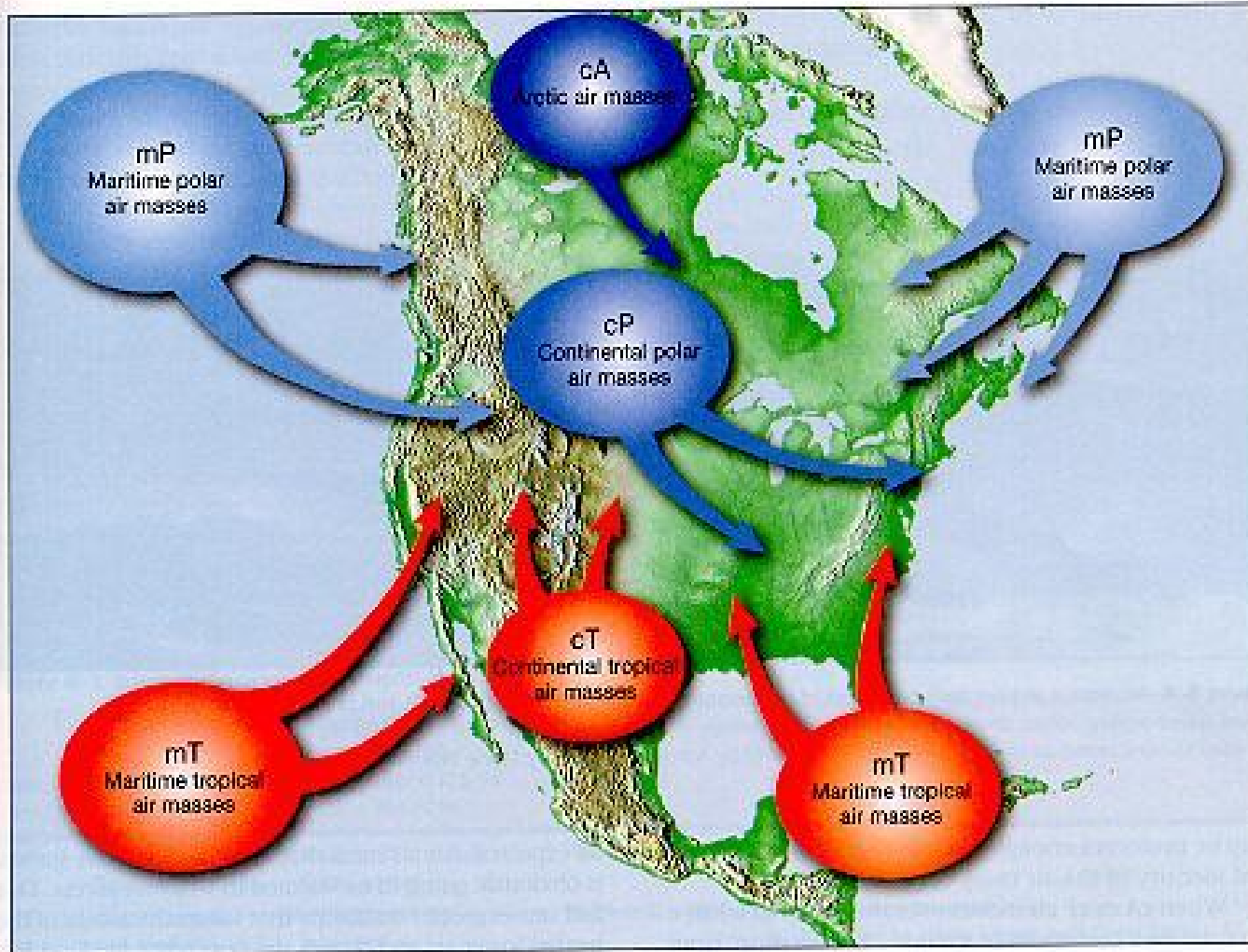
- Air Masses are a large body of air with uniform temperature and humidity.
- Front- the boundary between two air masses
 - There are 4 different types of fronts.
 - Cold, Warm, Stationary, and Occluded



Pressure Systems

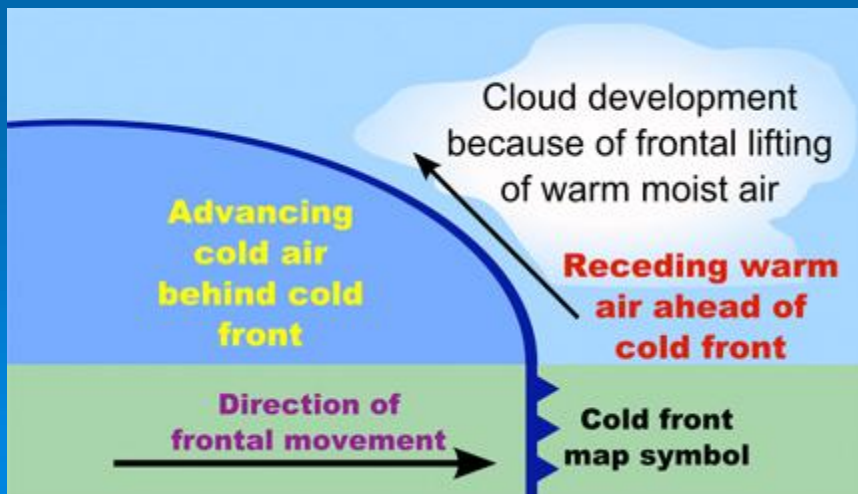
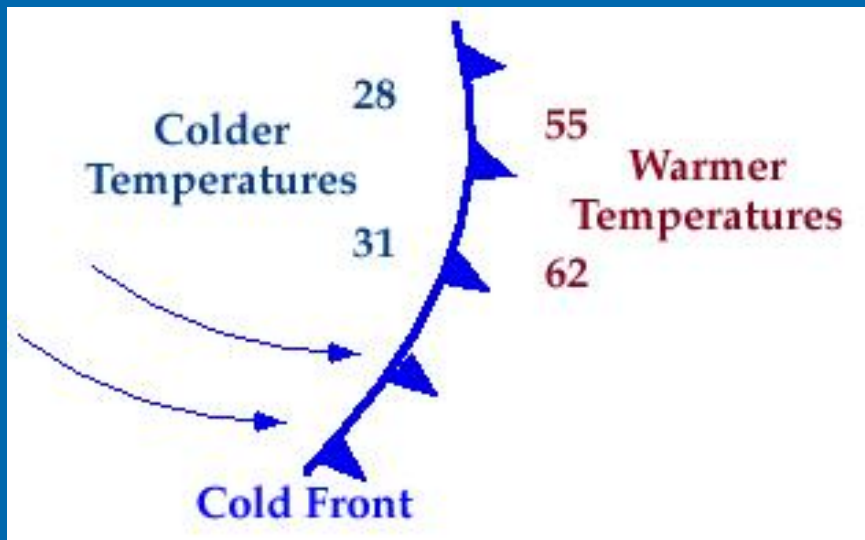
- High pressure-air mass of high pressure
 - usually brings fair weather
 - sinking motion does not allow warm air to rise; clouds can't form
- Low pressure- air mass of low pressure
 - warm air can rise and form clouds
 - usually brings precipitation/stormy weather.
- Standard pressure 29.92 inches of Hg.; 101,325 Pa (pascals) or 1 atmosphere or 760 mm Hg
- Hurricane Gilbert 1998 26.22 inches of Hg



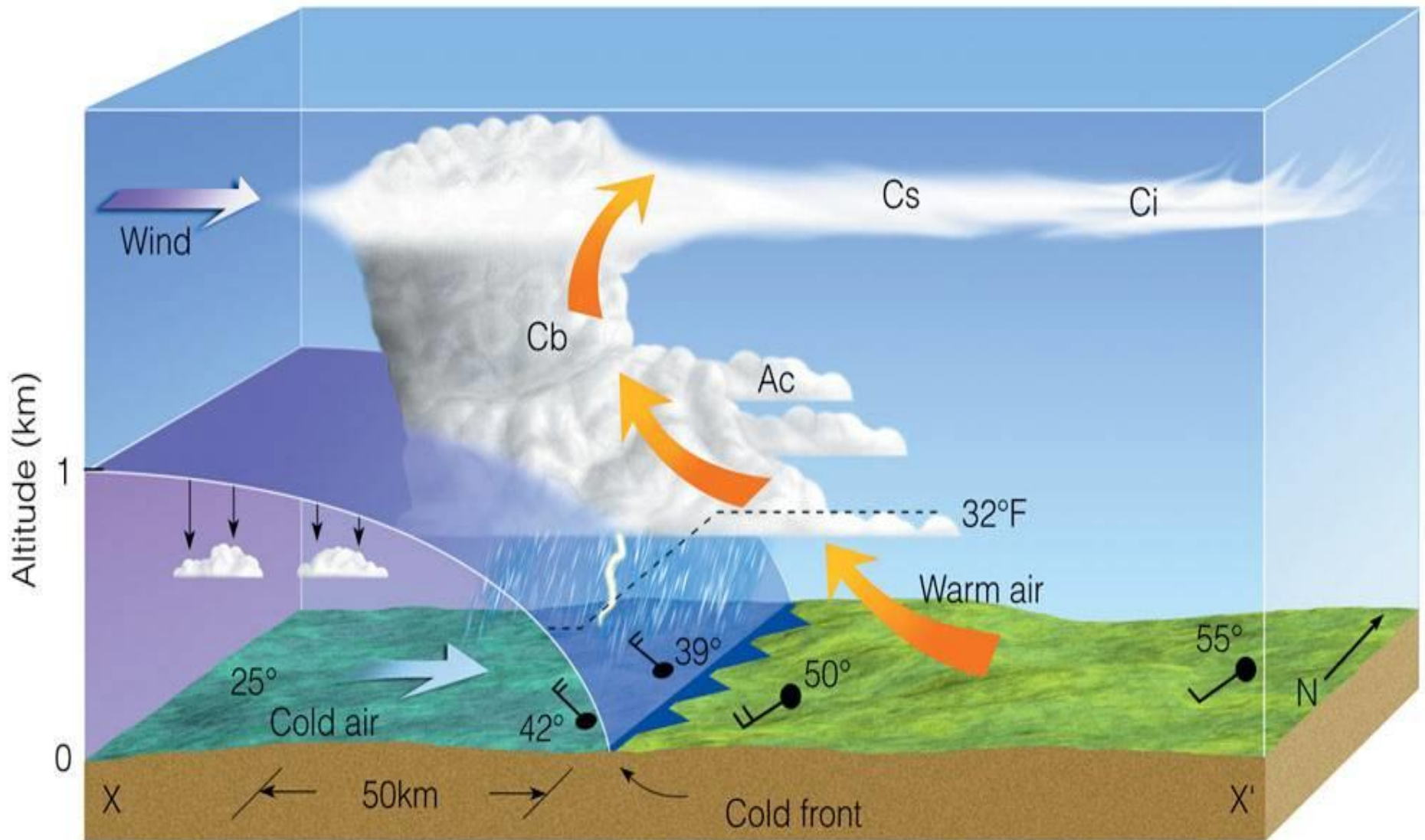


Air-mass source regions for North America. (Courtesy of Ward's Natural Science Establishment, Inc., Rochester, N.Y.)

Cold Front

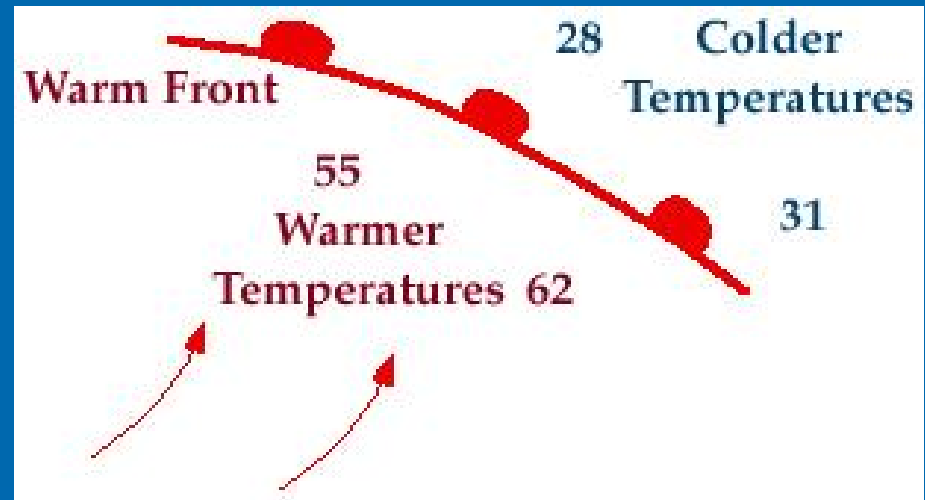


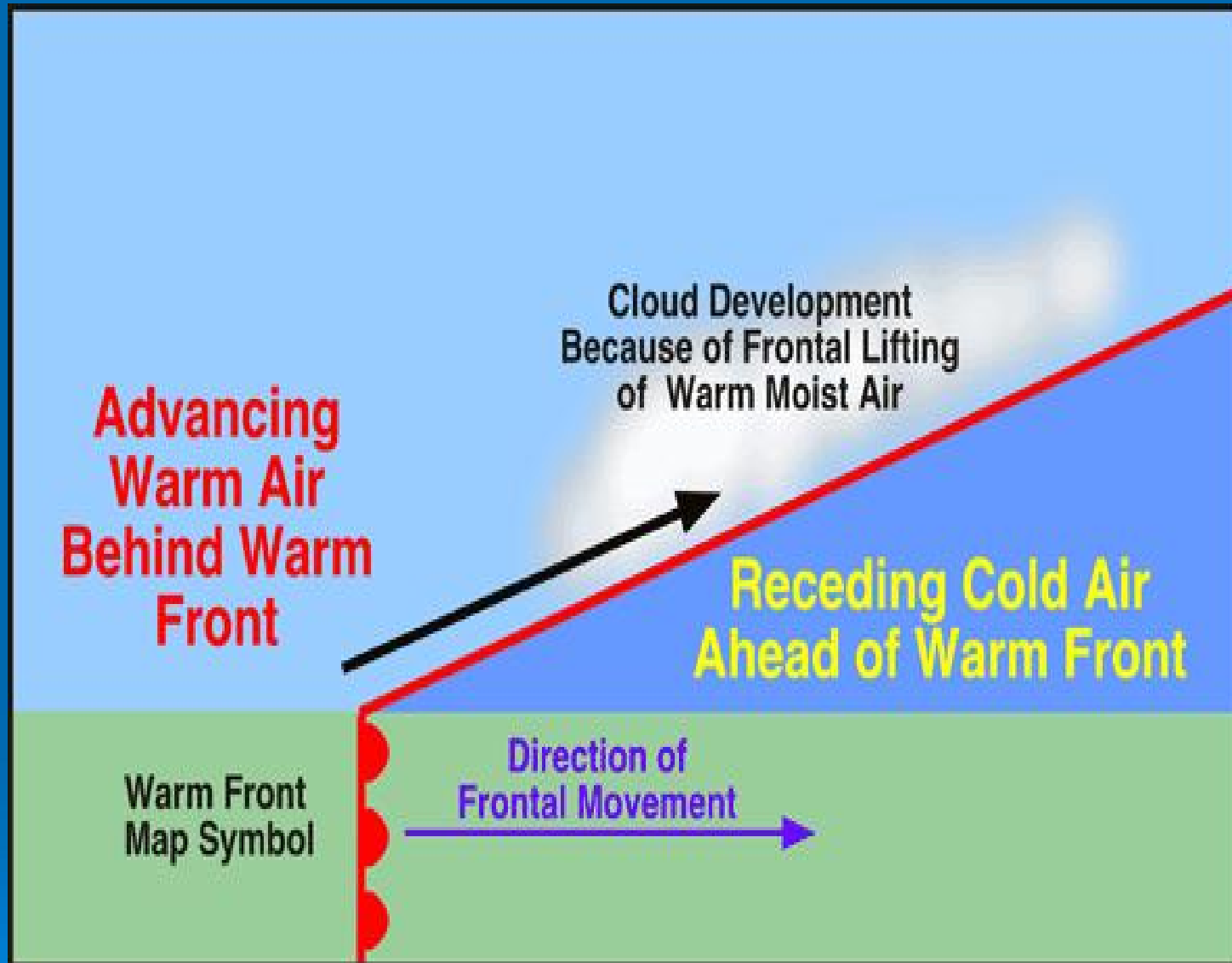
- Formed when cold air invades a warm air mass.
- Dense cold air pushes the warm air up, causing clouds to form and possible storms.



Warm Front

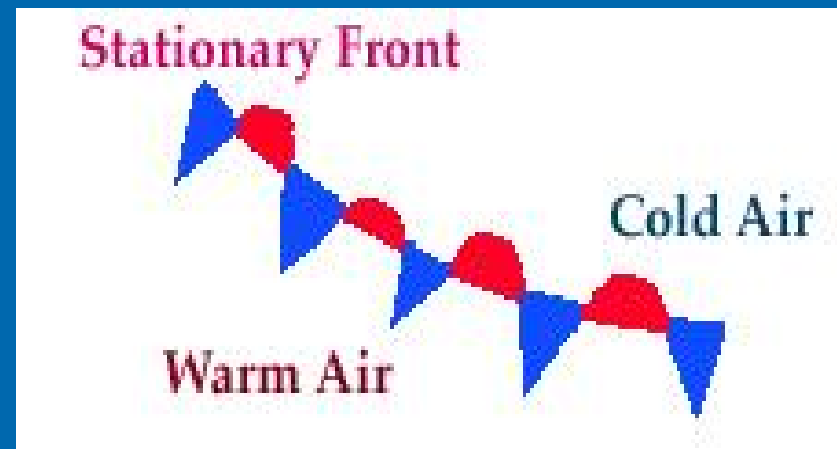
- Formed when warm air pushes into a cold air mass.
- Less dense warm air rises up and over the more dense cold air.
- Light, cirrus clouds are formed.

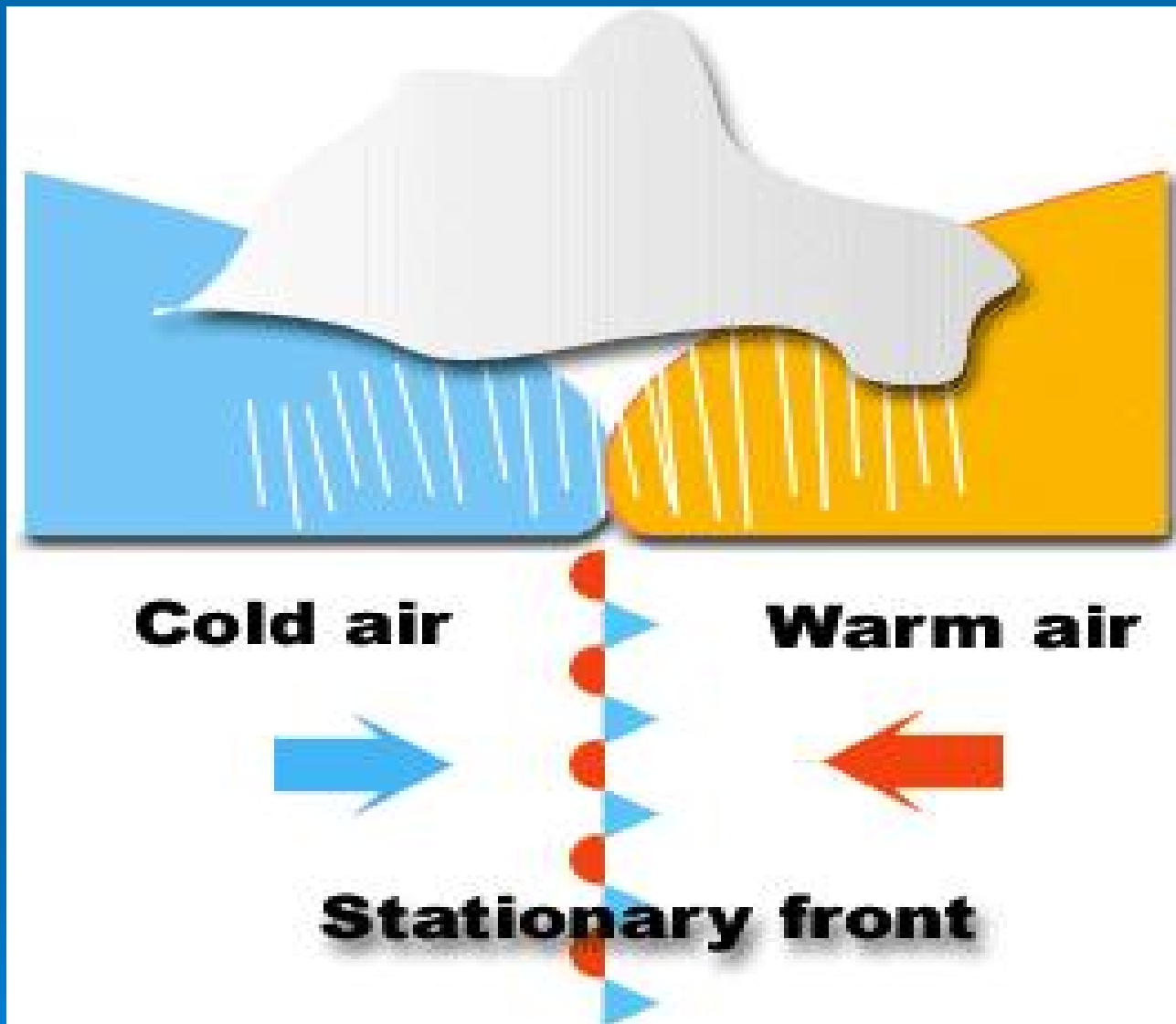




Stationary Front

- Formed when a warm air mass meets a cold air mass and no movement occurs.
- Rain may fall for many days.
- Pressure is reduced on the layers of warm air below.
- As a result, warm moist air rises and clouds form





Occluded Front

- A cold front overtakes a warm front and forces the air in between aloft.

