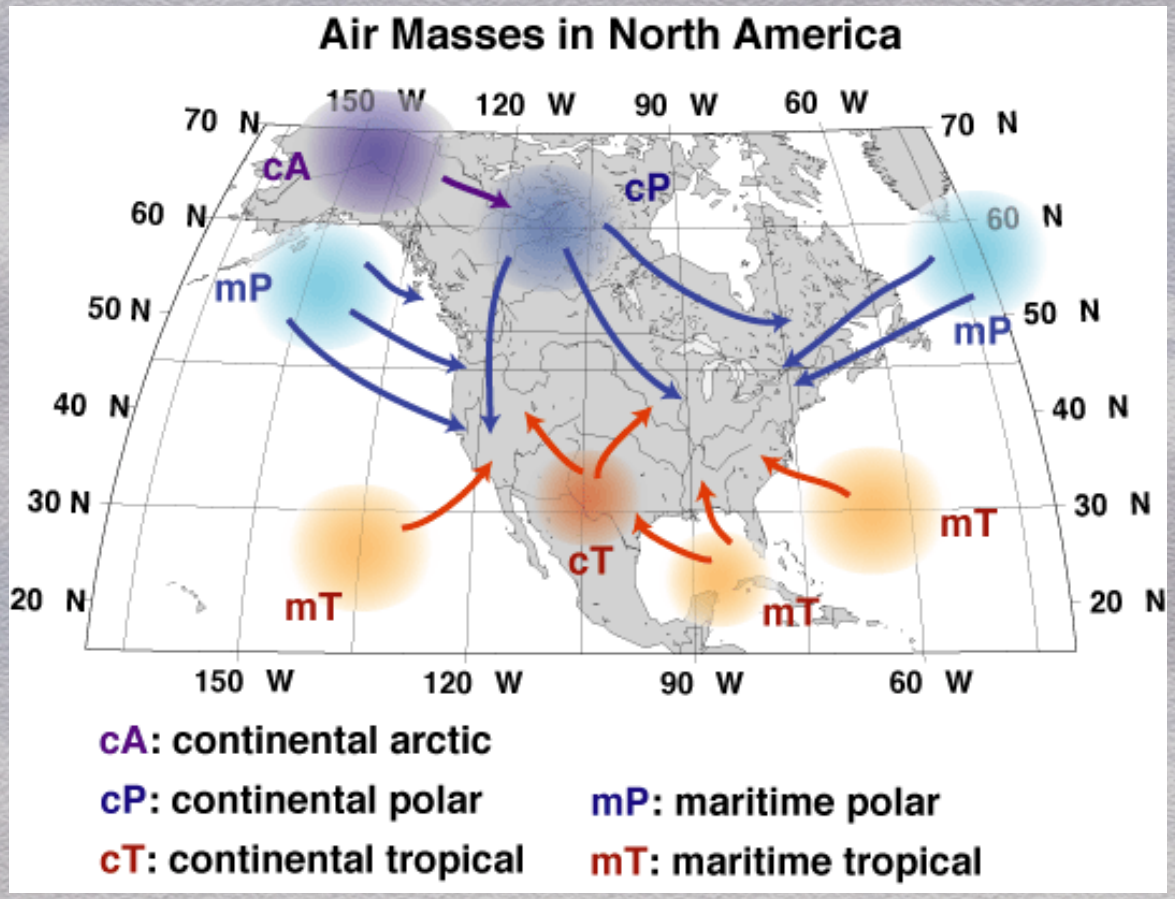
Air Masses

- a large body of air (> 1500km) with similar T and humidity
- forms over large flat, calm area (source region)
- ideal source region: surface H pressure area



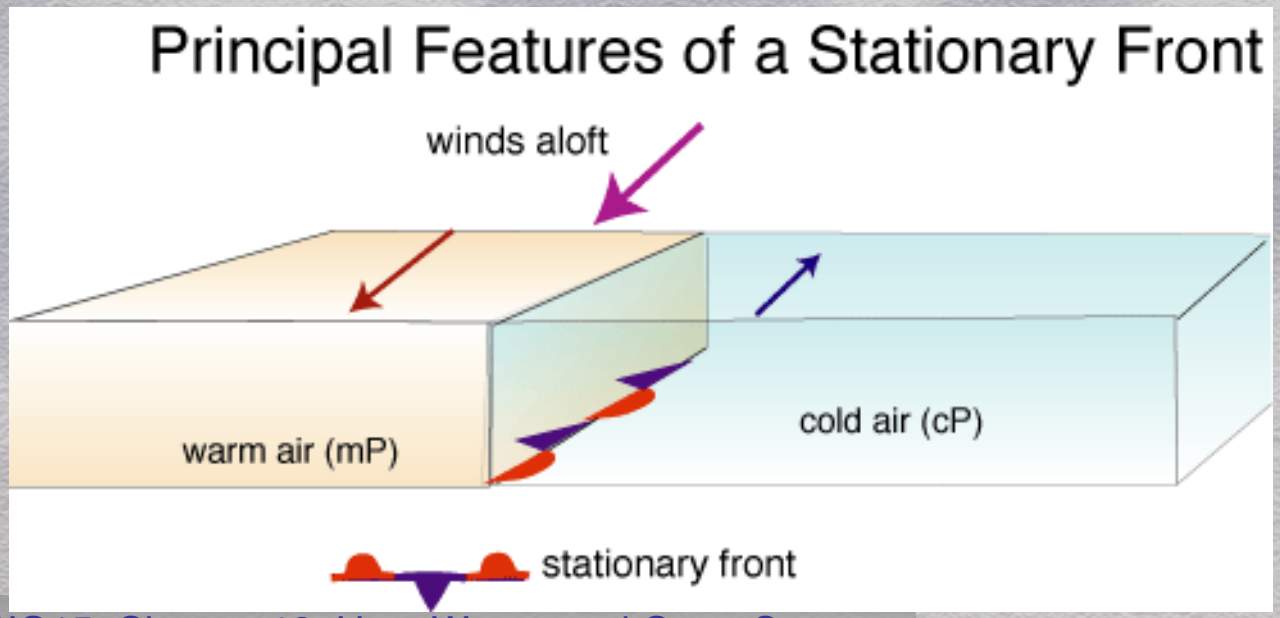
Classification:
arctic/polar/tropical
continental/maritime

- moved by winds aloft
- changes when it moves

Air Masses and Fronts

- weather changes when one air mass replaces another
- front: boundary between two air masses

• 2 air masses butt against each other but do not replace each other
• surface winds parallel to front/opposite directions
• precipitation along front
• winds aloft usually along front
• may dissipate or turn into cold/warm front or L
• barbs/lobs in map; alternating direction

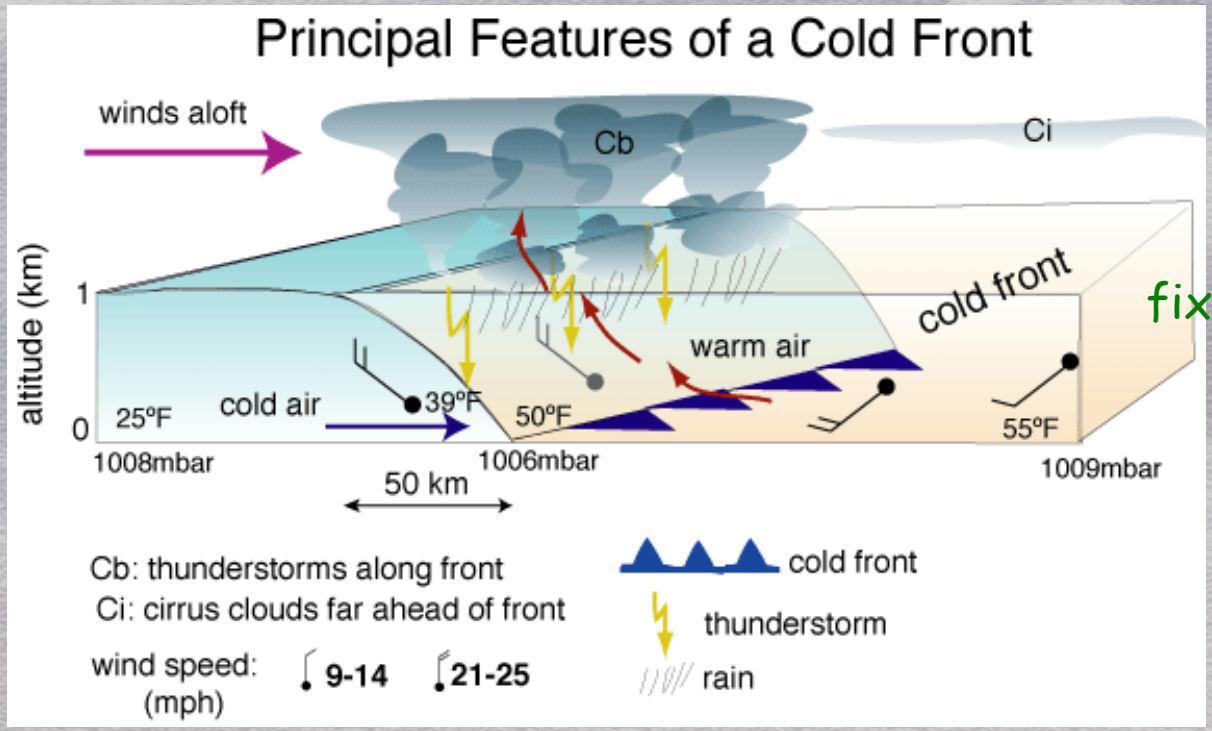


STATIONARY FRONT

Air Masses and Fronts

- weather changes when one air mass replaces another
- front: boundary between two air masses

- cold air mass pushed underneath warm mass
- air rises quickly (-> Low pressure)
- local heavy rains (behind front)
- barbed in map

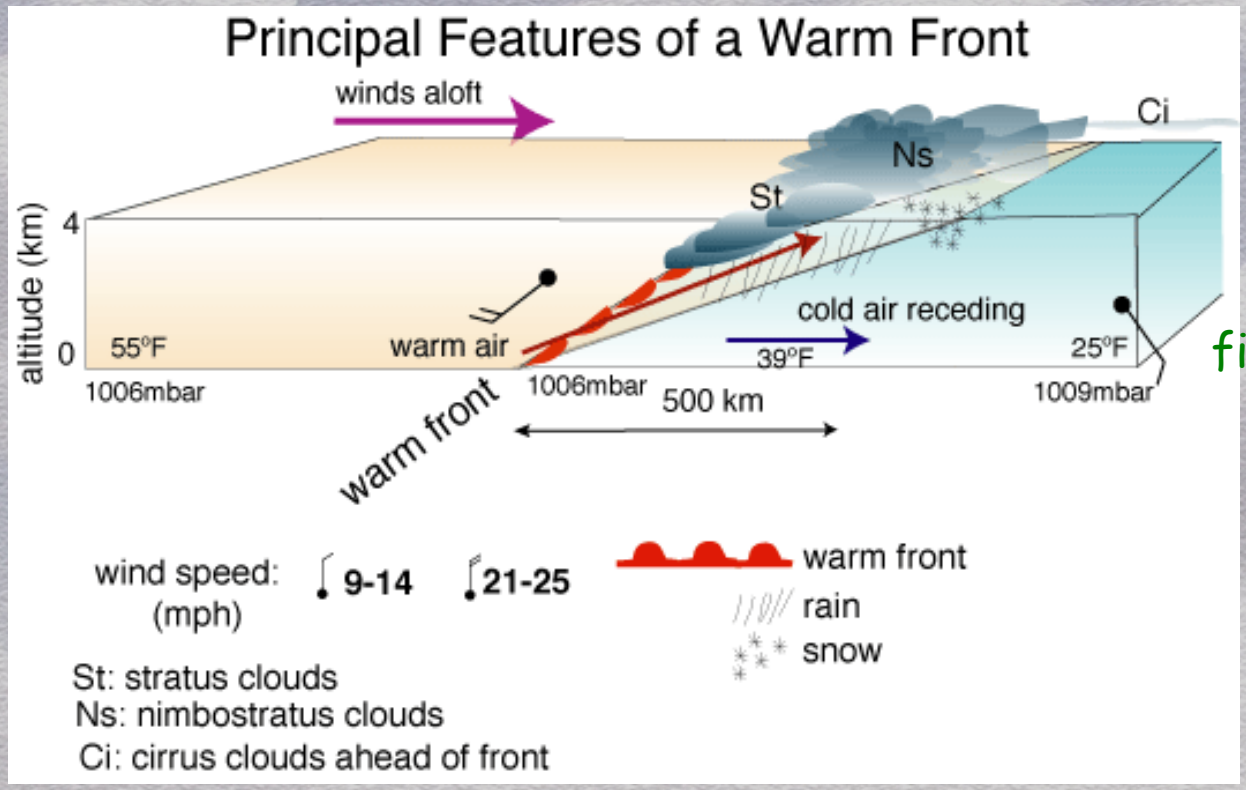


COLD FRONT

fixed

Air Masses and Fronts

- warm air mass moves on top of cold air mass
- air rises slowly
- rain in large area (before front)
- lobed in map



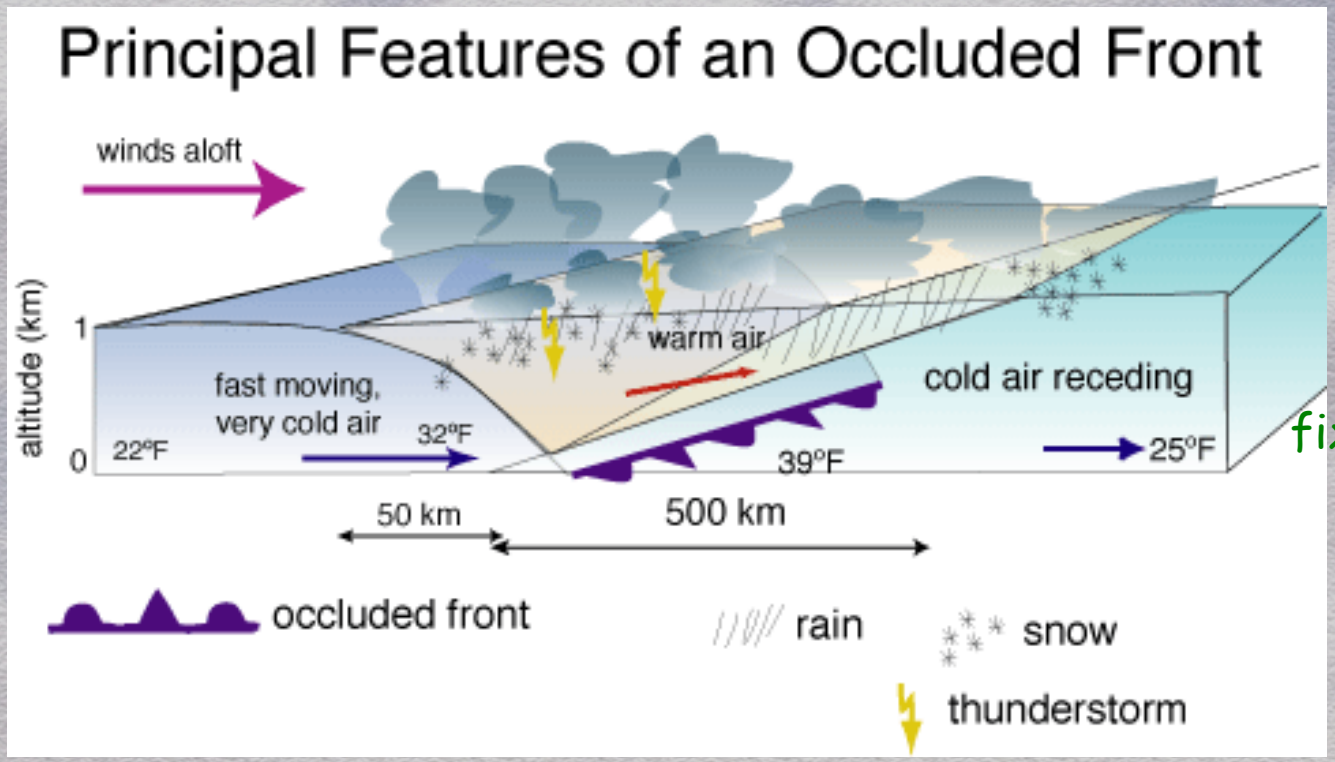
WARM FRONT

fixed

Air Masses and Fronts

- fast moving cold front overtakes warm front
- widespread rain
- mixed in map

OCCLUDED FRONT



fixed

Weather Map (Nov 14, 2007)