HANDOUT

Atmospheric Disturbances

Midlatitude Disturbances

1) Extratropical Cyclones

- large migratory low-pressure system that occurs within the middle latitudes & moves generally with the westerlies; move towards the east; dominate weather above 30° latitude; are responsible for day-to-day weather, in Europe called depressions, in U.S. called lows or wave cyclones

Characteristics

- a diameter of-1600 km (1000 mi)
- basically a vast cell of low pressure with a center surface pressure of bet. 900-1000 mb

Movements

- cyclonic wind circulation (ccw) in N.H.
- moves from west to east at 32-48 kph (20-30 mph)
- the cold front normally advances faster than the storm
- warm front advances more slowly than the storm

Life Cycle

- exist from a few hours to about 2 weeks
- most begin as waves along the contact zone between unlike air masses

Occurrence & Distribution

- occur at scattered but irregular intervals throughout the westerlies zone
- more numerous, better developed & faster moving in winter
- route of travel is undulating & erratic

2) Extratropical Anticyclones

- extensive migratory high-pressure cell frequently called a high; normally larger than an extratropical cyclone; moves west to east; contain no fronts; weather is clear & dry; wind movement is limited near the center but increases progressively outward; characterized by cold temperatures in winter, speed is equal to or a little slower than extratropical cyclones but they may stagnate for several days