

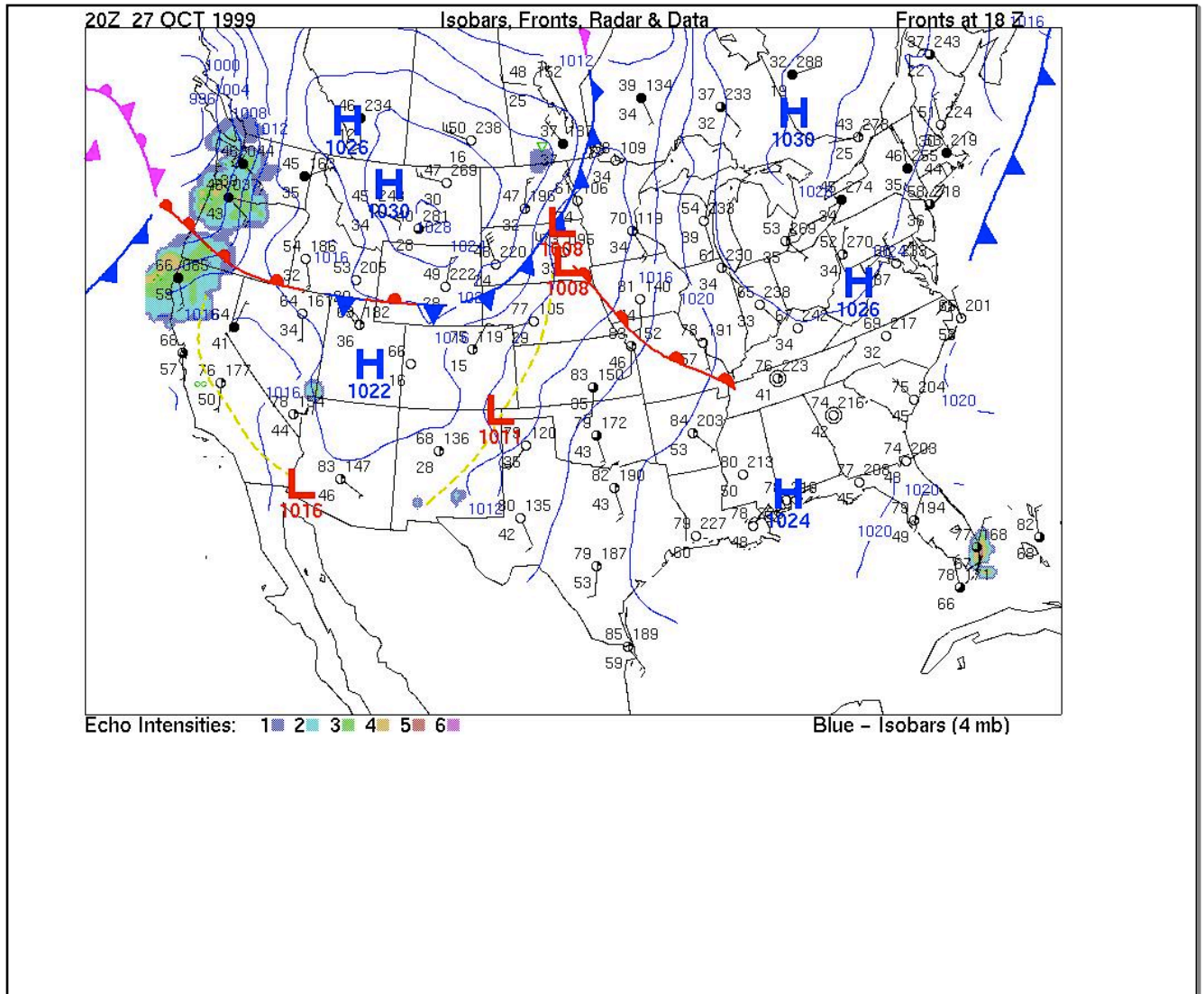
Basics of Forecasting

To accurately forecast the weather you need 4 things:

1. Understand **basic weather principals** (Meteorology)
2. What the **current weather** is (collected from weather instruments)
3. **Past couple of days of weather** to see changes (local records)
4. **Weather in other locations** (mainly to the west); from the internet

- Data is collected from thousands of weather stations every few hours
- **Radiosondes** (weather balloons) send back temp., humidity, pressure, and wind data from upper part of the troposphere
- Satellite data and radar show major weather systems and areas of precipitation
- **Doppler Radar** shows wind speed and direction in a storm
- All this info is put on a weather map

24B: Forecastings Notes



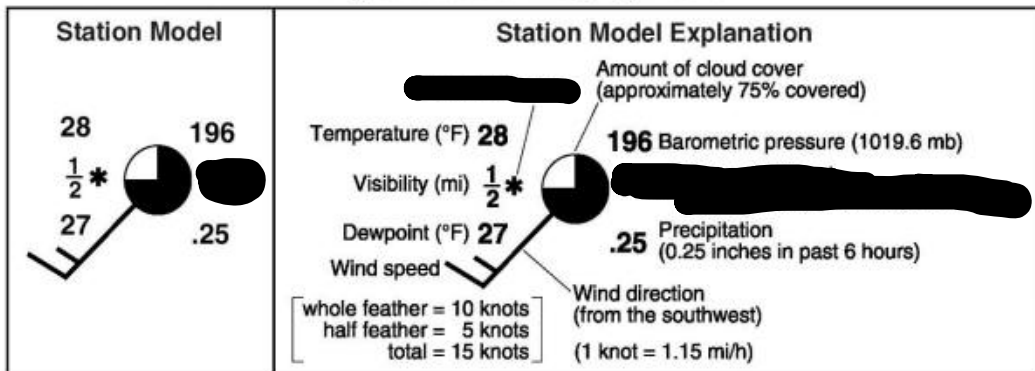
Making a Weather Map

- isobars: lines of equal pressure drawn to locate highs and lows
 - > also show wind speed and direction as air moves from High to Low
 - > Isobars close together= high wind speeds
- Fronts are drawn to show areas of clouds and precipitation

Station Models

- Around each weather station is a station model showing the weather:

Key to Weather Map Symbols



*Pressure (mb): place a decimal one place in from the right and then add a 9 or 10 to the left:

add a 10 if: 00.0-49.0 or add a 9 if: 50.0-49.0

Sky Cover:



Clear



Scattered clouds
(approximately 25% cloud cover)



Partly cloudy
(approximately 50% cloud cover)



Mostly cloudy
(approximately 75% cloud cover)



Overcast

Draw the station model:

Cloud Cover (%):

Pressure (mb):

Precipitation:

Wind Speed &

Direction:

Dew Point:

Visibility:

Temperature:

Types of Forecasts

- Most short term (3 to 5 day) forecasts are made by meteorologists using weather maps
- The NOAA is experimenting w/ using computers for short term forecasts
- Longer 6, 10, or even 14 day forecasts are made by computers

(NOAA: Nat'l Oceanographic and Atmospheric Admin.)