

Figure 4.9. Surface weather map and station weather for Thursday April 16, 2020 at 7:00 EST or 11:00 UTC (Z). Map Source: [National Oceanic and Atmospheric Administration, Weather Prediction Center, Daily Weather Map website.](#)

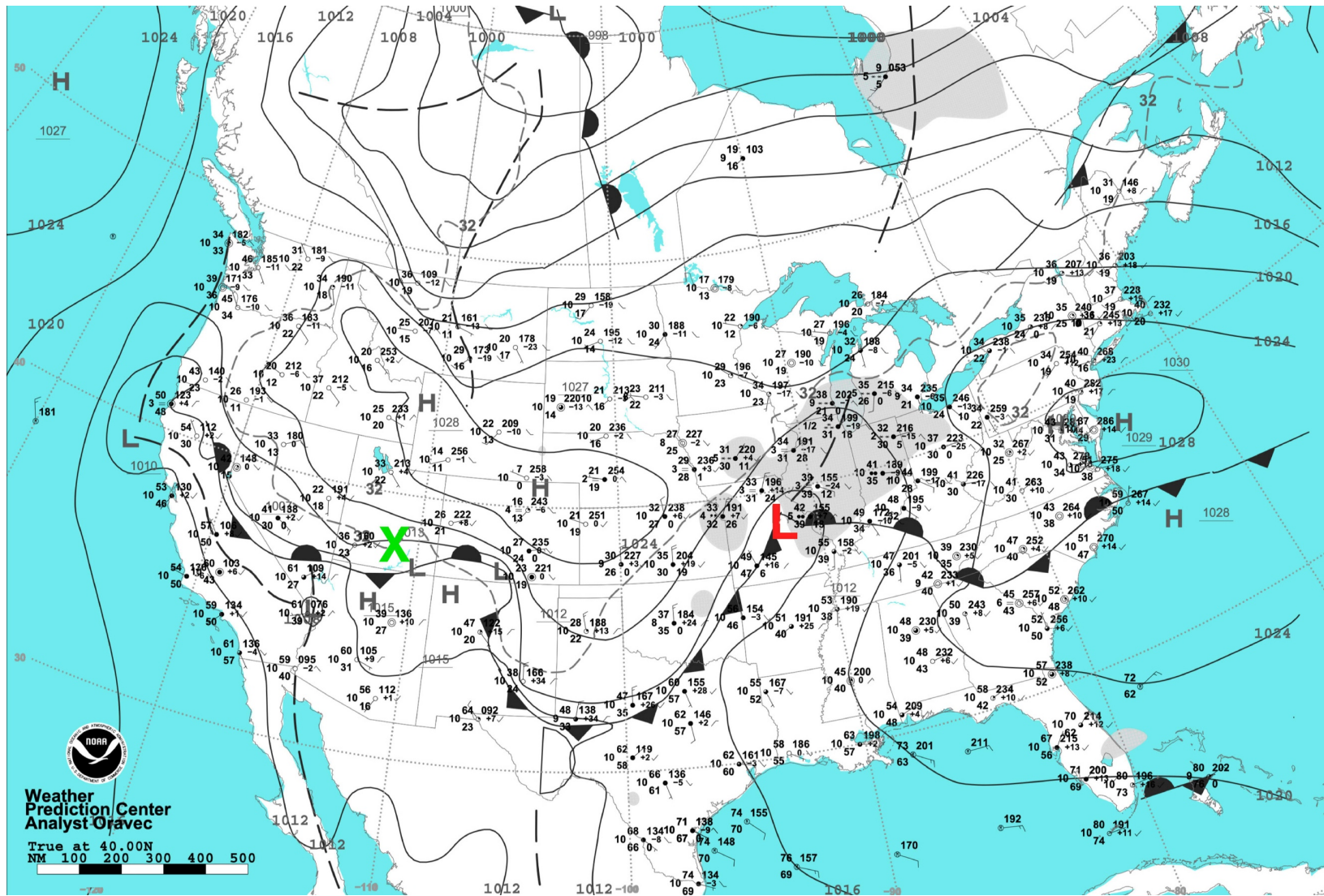


Figure 4.10. Surface weather map and station weather for Friday April 17, 2020 at 7:00 EST or 11:00 UTC (Z). Map Source: [National Oceanic and Atmospheric Administration, Weather Prediction Center, Daily Weather Map website.](#)

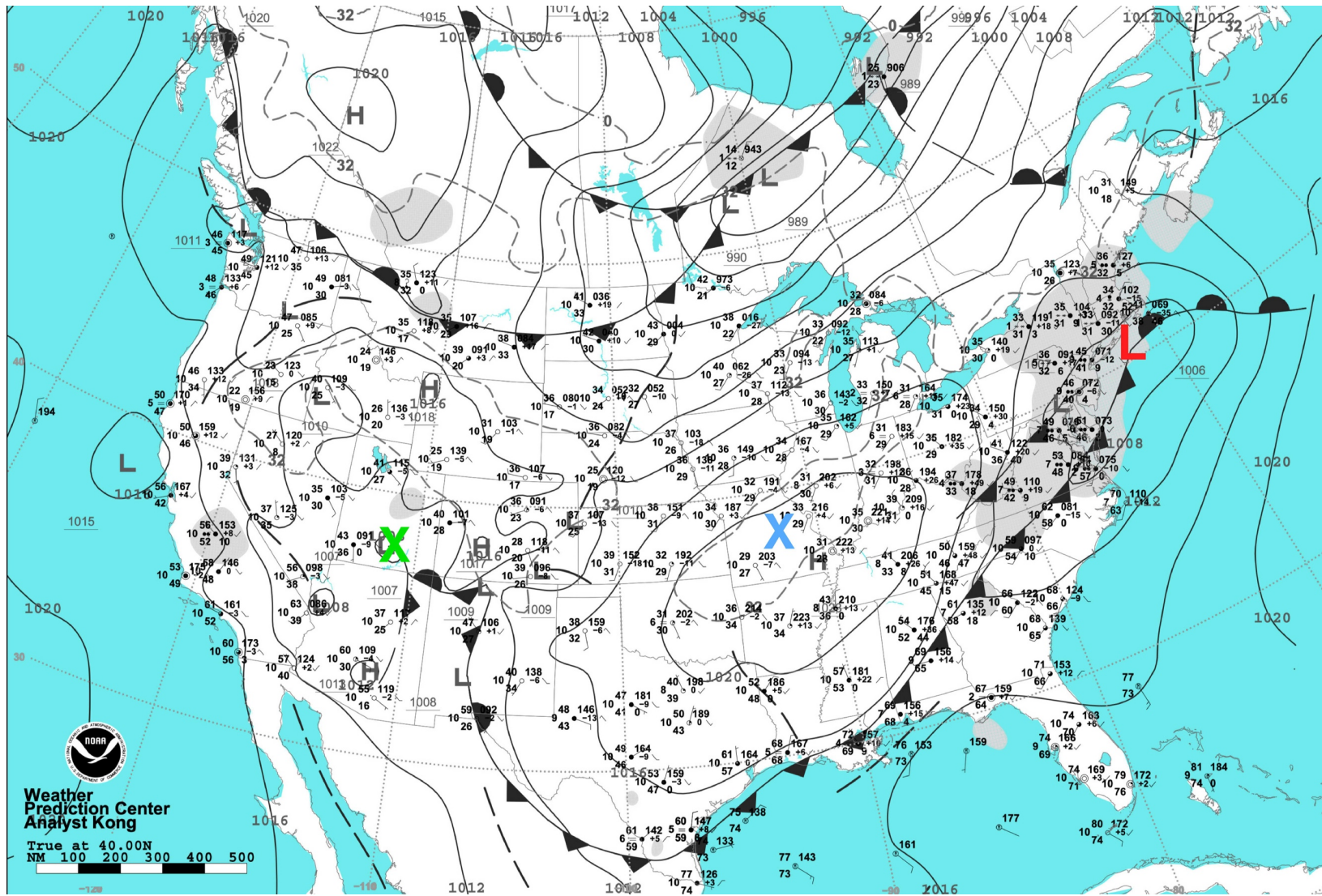





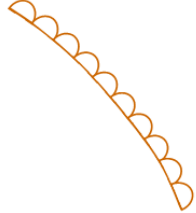




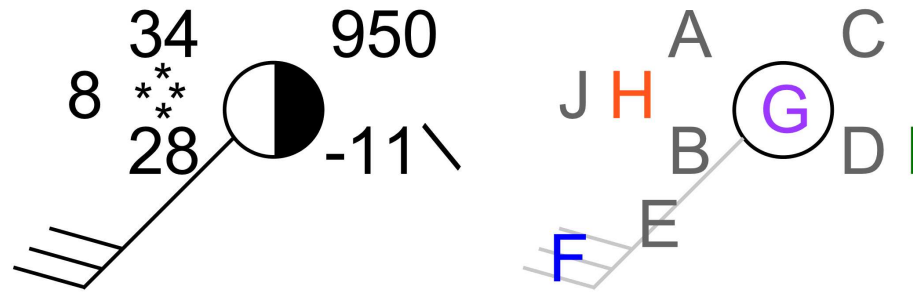
Figure 4.11. Surface weather map and station weather for Saturday April 18, 2020 at 7:00 EST or 11:00 UTC (Z). Map Source: [National Oceanic and Atmospheric Administration, Weather Prediction Center, Daily Weather Map website.](#)

Legend – Surface Fronts and Boundaries

Source: <https://www.wpc.ncep.noaa.gov/html/fntcodes2.shtml>

	<p>Cold Front - a zone separating two air masses, of which the cooler, denser mass is advancing and replacing the warmer.</p>		<p>Warm Front - a transition zone between a mass of warm air and the cold air it is replacing.</p>
	<p>Stationary Front - a front between warm and cold air masses that is moving very slowly or not at all.</p>		<p>Squall Line - a line of active thunderstorms, either continuous or with breaks, including contiguous precipitation areas resulting from the existence of the thunderstorms.</p>
	<p>Stationary Front - a front between warm and cold air masses that is moving very slowly or not at all.</p>		<p>Dry Line - a boundary separating moist and dry air masses. It typically lies north-south across the central and southern high Plains states during the spring and early summer, where it separates moist air from the Gulf of Mexico (to the east) and dry desert air from the southwestern states (to the west).</p>
	<p>Occluded Front - a composite of two fronts, formed as a cold front overtakes a warm or quasi-stationary front. Two types of occlusions can form depending on the relative coldness of the air behind the cold front to the air ahead of the warm or stationary front. A cold occlusion results when the coldest air is behind the cold front and a warm occlusion results when the coldest air is ahead of the warm front.</p>		<p>Tropical Wave - a trough or cyclonic curvature maximum in the trade wind easterlies.</p>

Legend – USA Station Model



F. Wind Speed

- No wind
- 1-3 kph
- | 4-13 kph
- | 14-19 kph
- | 20-32 kph
- | 33-40 kph
- | 41-50 kph
- | 51-60 kph
- | 61-69 kph
- | 70-79 kph
- | 80-87 kph
- | 88-96 kph
- | 97-106 kph
- | 107-114 kph
- | 115-124 kph
- | 125-134 kph
- | 135-143 kph
- | 144-198 kph

G. Cloud Cover

- No clouds
- ⊖ ≤10%
- ⊖ 20-30%
- ⊖ 40%
- ⊖ 50%
- ⊖ 60%
- ⊖ 70-80%
- ⊖ 90%
- 100%
- ⊗ sky obscured

H. Current Weather

- ∨ Rain shower
- Light rain
- Moderate rain
- Heavy rain
- ∨ Snow shower
- ** Light snow
- ** Moderate snow
- ** Heavy snow
- △ Ice pellets
- = Fog
- ⊠ Thunderstorm

I. Pressure Tendency

- / Rising steadily
- / Rising, then steady
- ∧ Rising, then falling
- Steady
- \ Falling steadily
- \ Falling, then steady
- ∨ Falling, then rising

The following list helps interpret the weather station model shown above. Use the graphic in the top-right corner to decipher the symbols and shorthand code.

A = Current **air temperature** at the weather station, which is 34° Fahrenheit

B = Current **dew point temperature** at the weather station, which is 28° Fahrenheit

C = Current **atmospheric pressure** adjusted for sea level at the weather station, which in our example is 995.0 millibars (mb). Pressure at sea level usually varies between 970.0 and 1050.0 mb. Meteorologists represent this measurement in shorthand form on a synoptic weather map. The shorthand form involves dropping the initial 9 or 10 from the number and removing the decimal. For example, if air pressure at a weather station was measured as 1013.2mb, this would be shown as 132 on the weather map.

D = **Atmospheric pressure change** at the weather station in the last 3 hours, which is a decrease (-) of 1.1 mb. Note on the synoptic weather map the decimal point is removed from the reading.

E = **Wind direction** at the weather station, which is southwest.

F = **Wind speed** at the weather station, (converted from mile per hour) which is 51-60 kilometers per hour (kph).

G = **Sky covered by clouds** at the weather station, which is 50% covered by clouds.

H = **Current weather** conditions at the station, which is heavy snow.

I = **Atmospheric pressure tendency** over the last 3 hours at the weather station, which is falling steady.

J = **Visibility** distance in miles, which is 8 miles or about 13 kilometers.