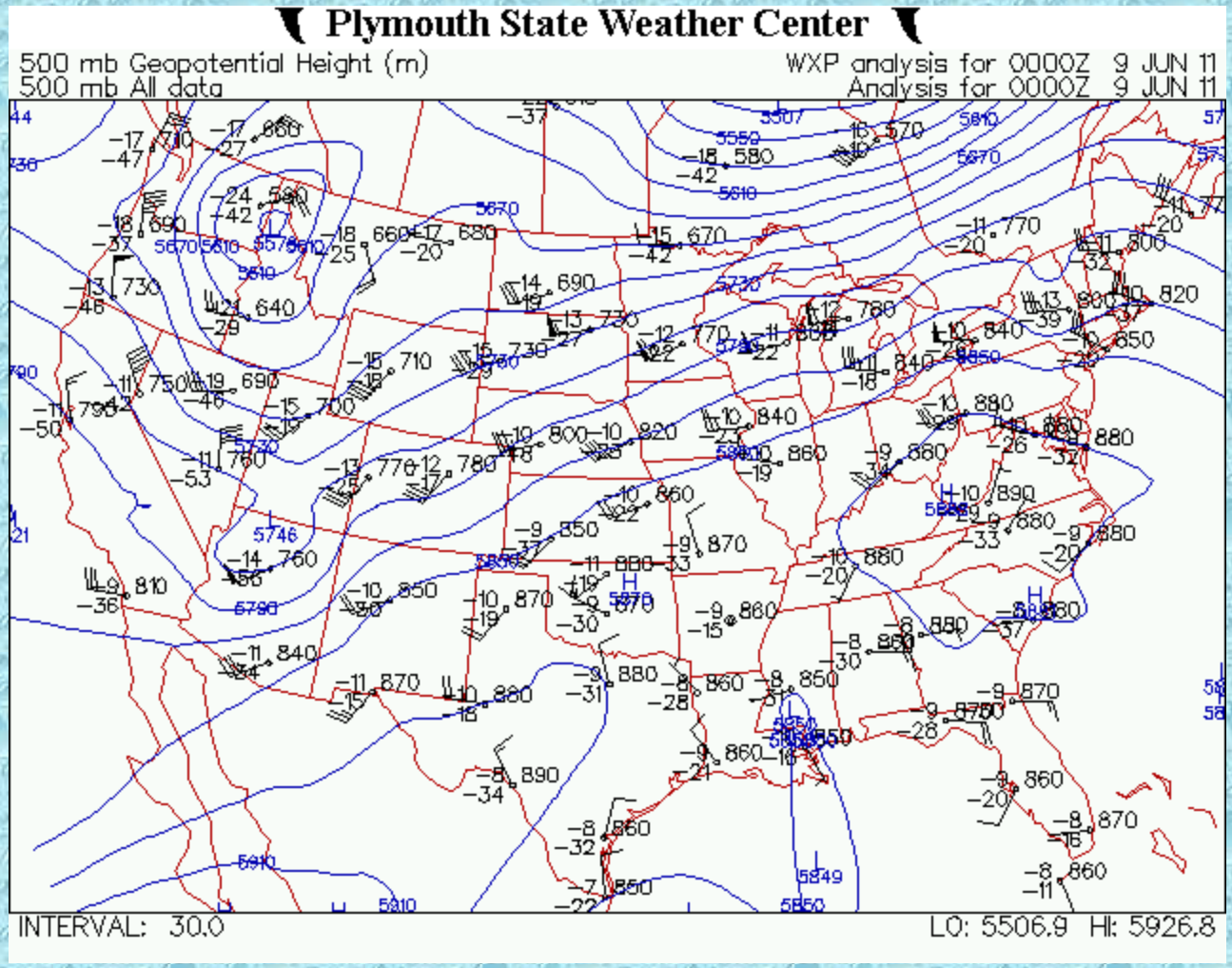
Severe Weather Case Study:
June 9, 2011
Nocturnal Convection

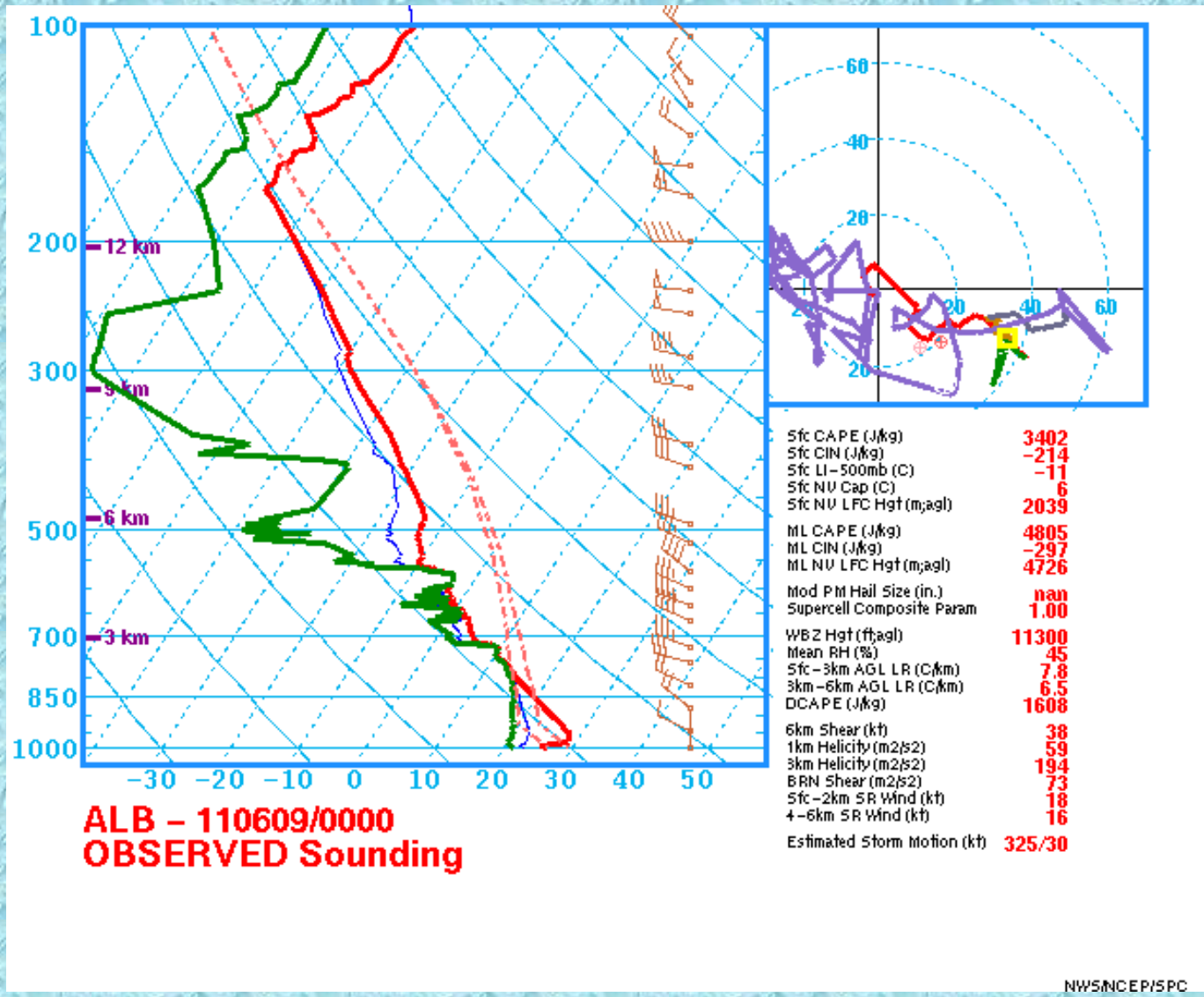
500 mb Analysis: 00z June 9

- **Ridge centered over the Appalachians**
- **Shortwave trough moving through the region**
- **Jet streak near BUF**
- **Temperatures around -10C**



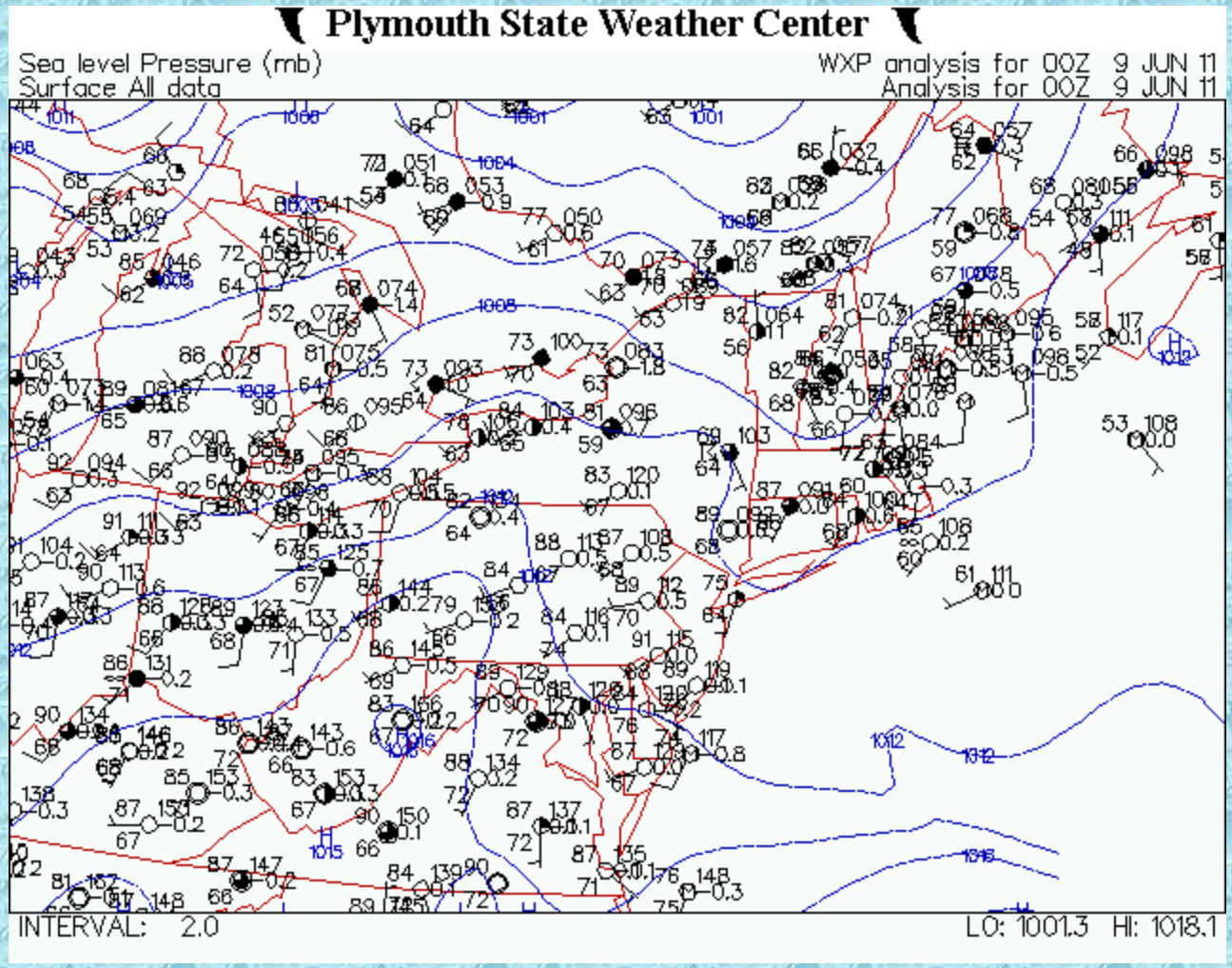
Albany 00z June 9 Sounding

- "Inverted V" sounding favors downdraft potential
- High CAPE (3426 J/kg)
- Unidirectional winds increasing with height favor linear convection
- Precipitable water around 1.92 inches



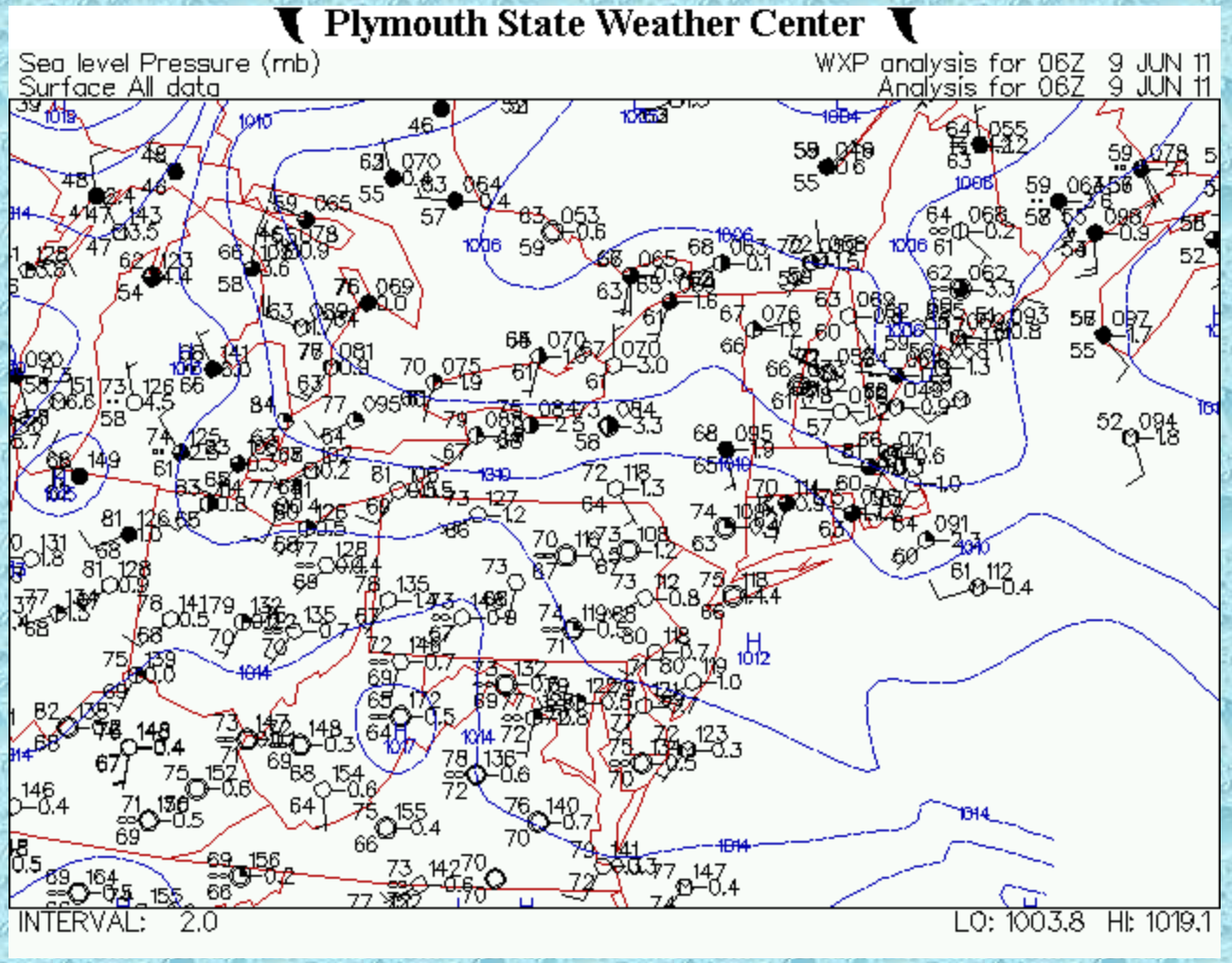
Surface Analysis: 00z June 9

- **Weak surface trough in western New England**
- **Temperatures in the 80s with dew points in the mid to upper 60s**

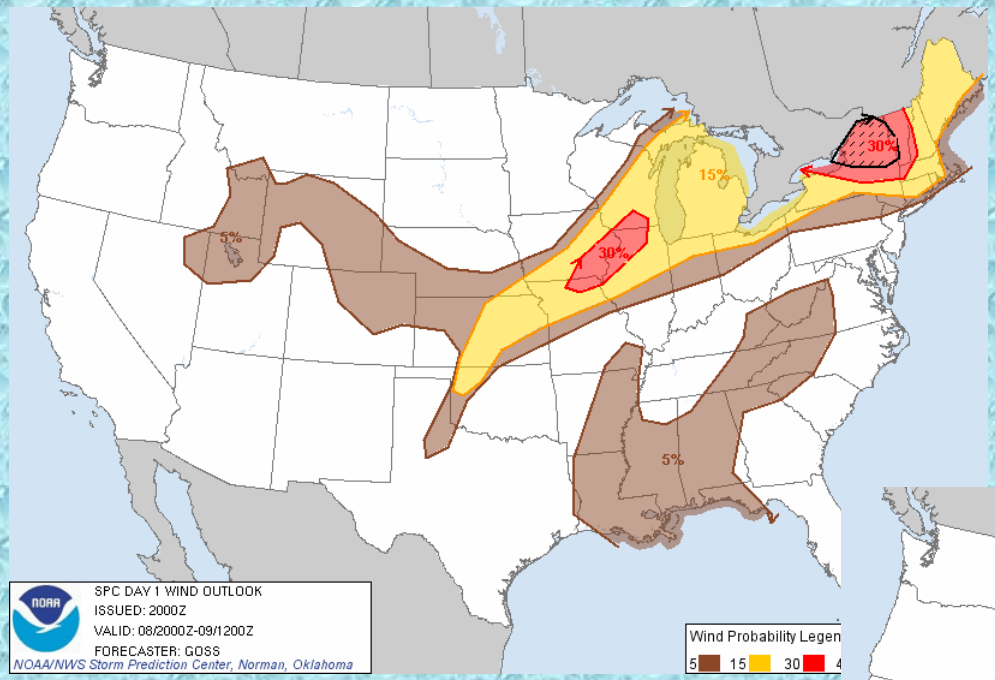


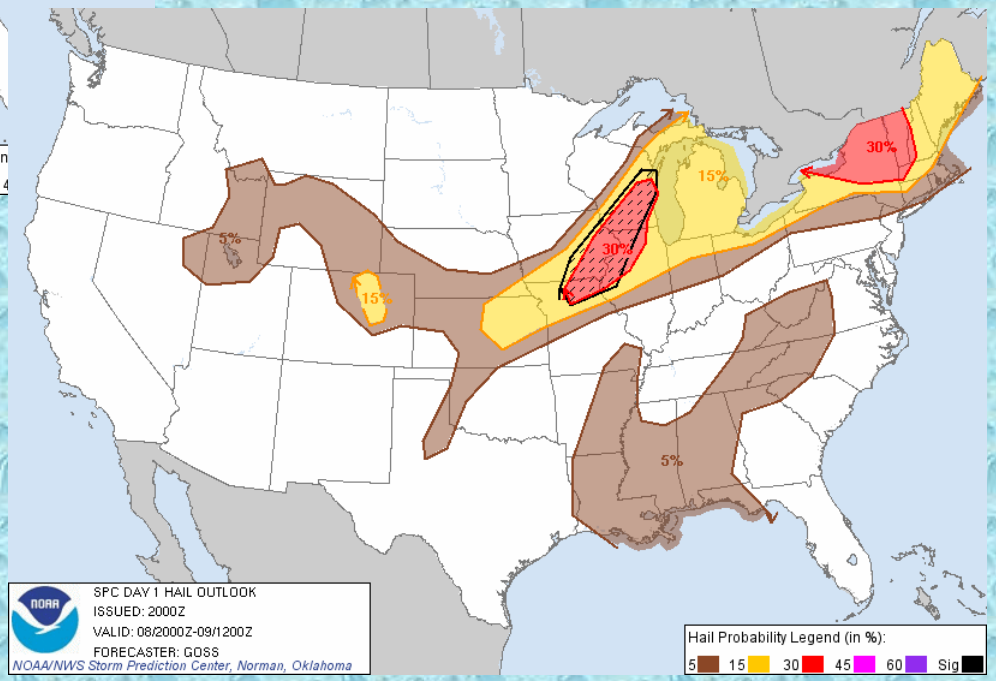
Surface Analysis: 06z June 9

- **First trough was moving offshore**

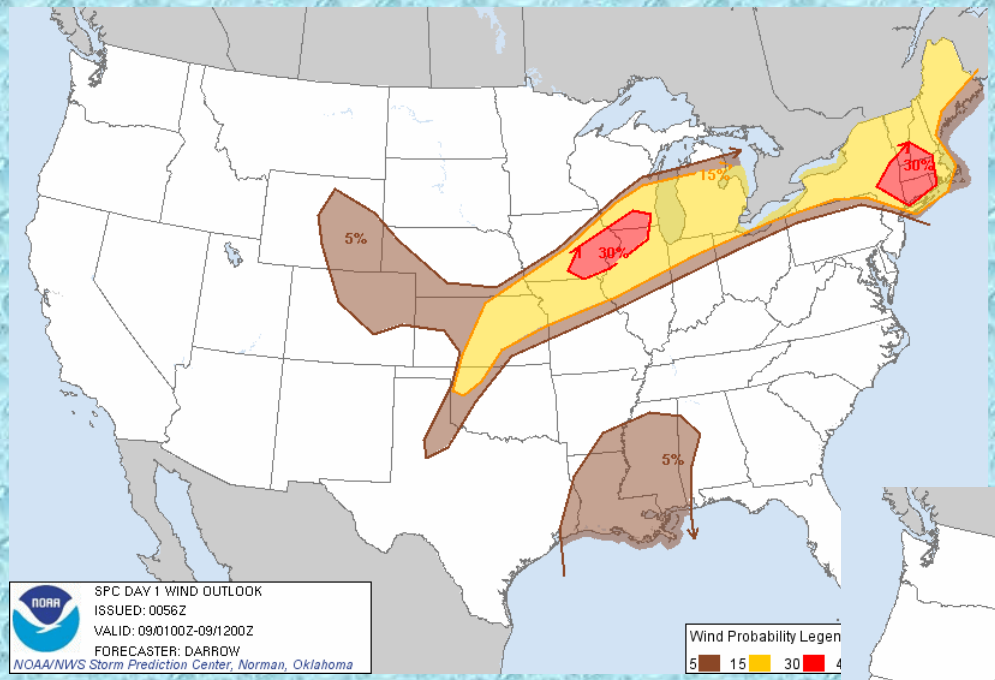


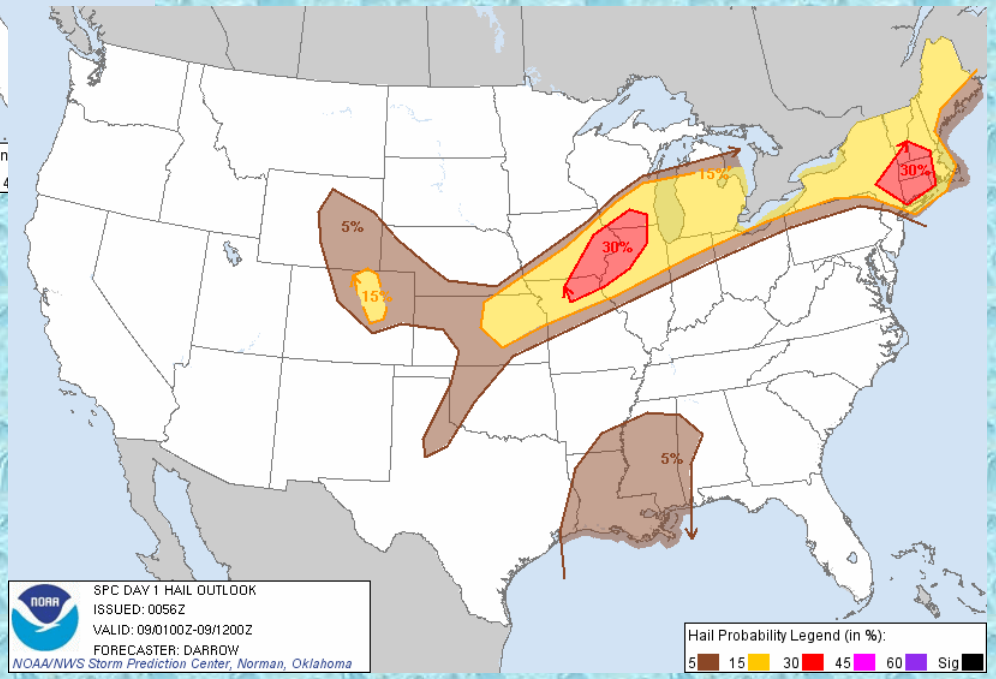
SPC Day 1 Outlook: 20Z



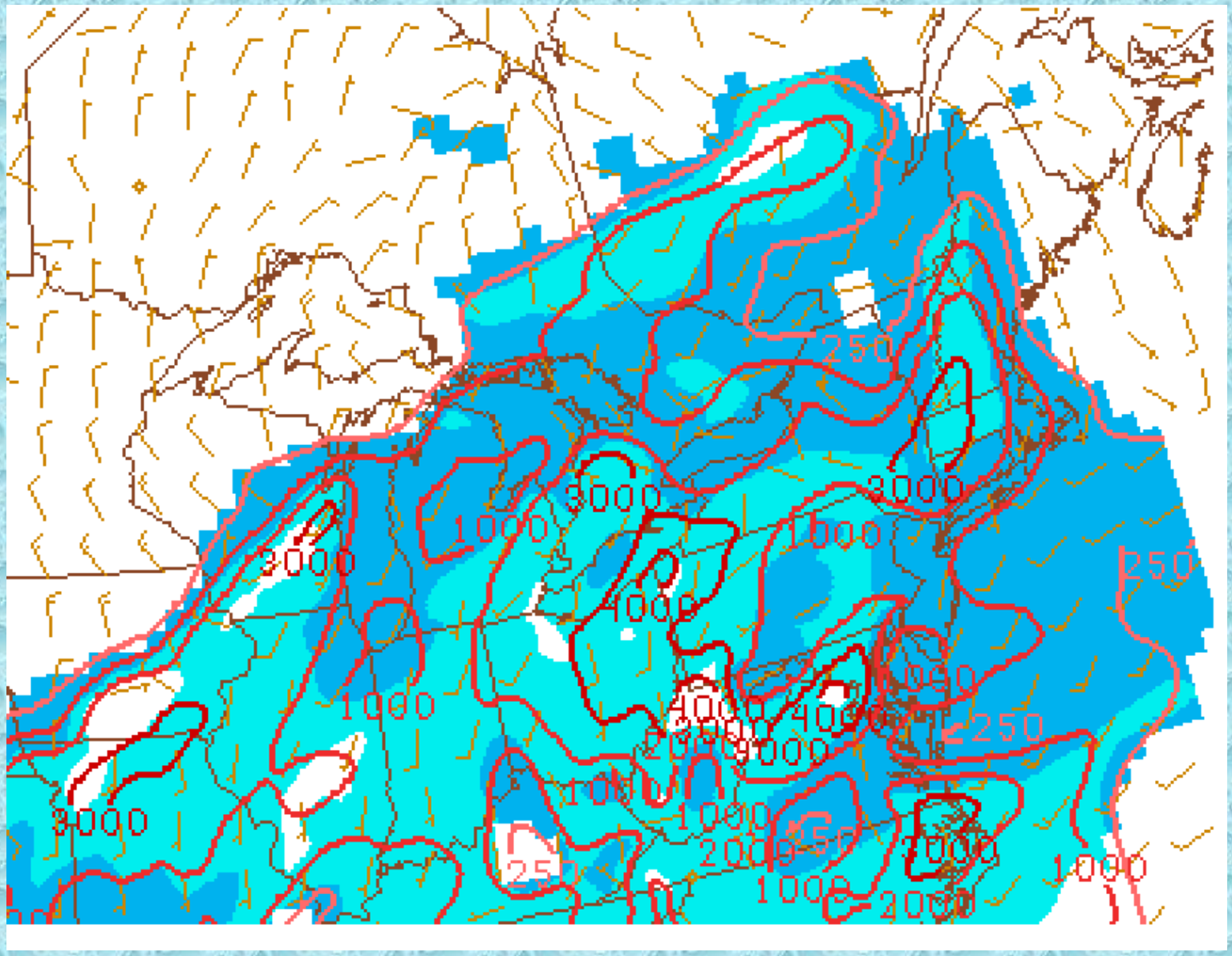


SPC Day 1 Outlook: 01z





100mb ML CAPE: 01Z June 9



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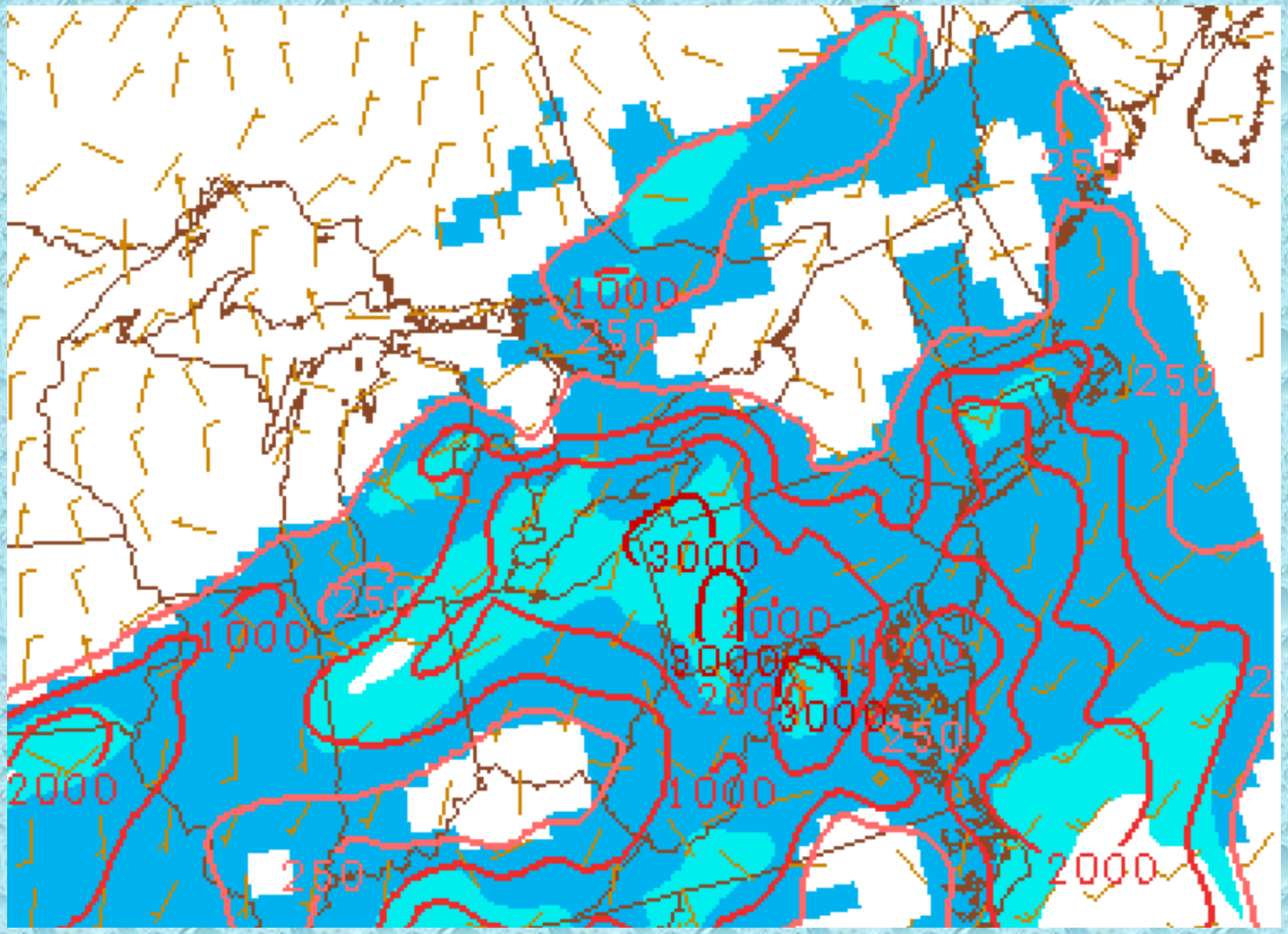
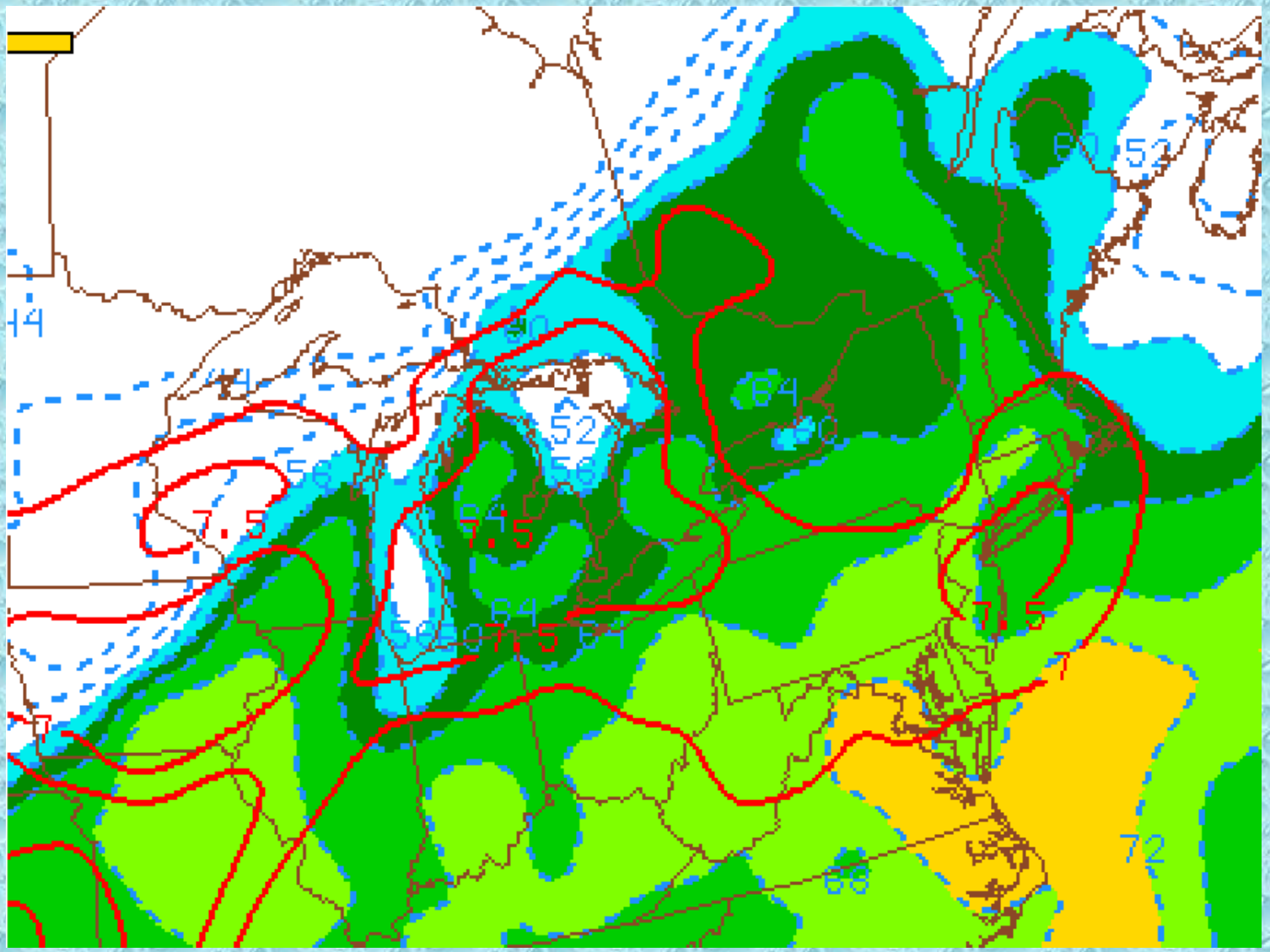


Dewpoint and 700-500mb Lapse Rate: 01Z June 9



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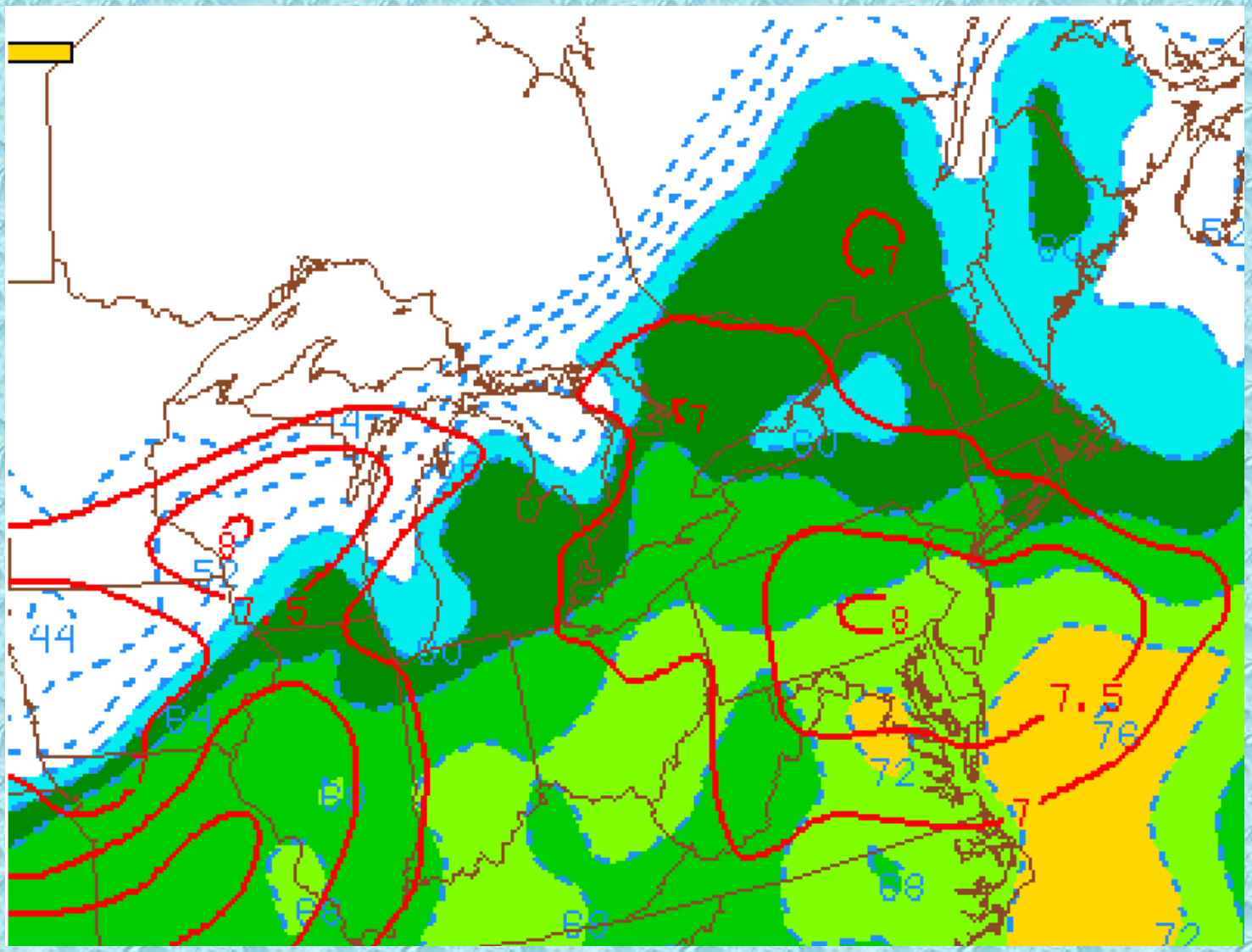
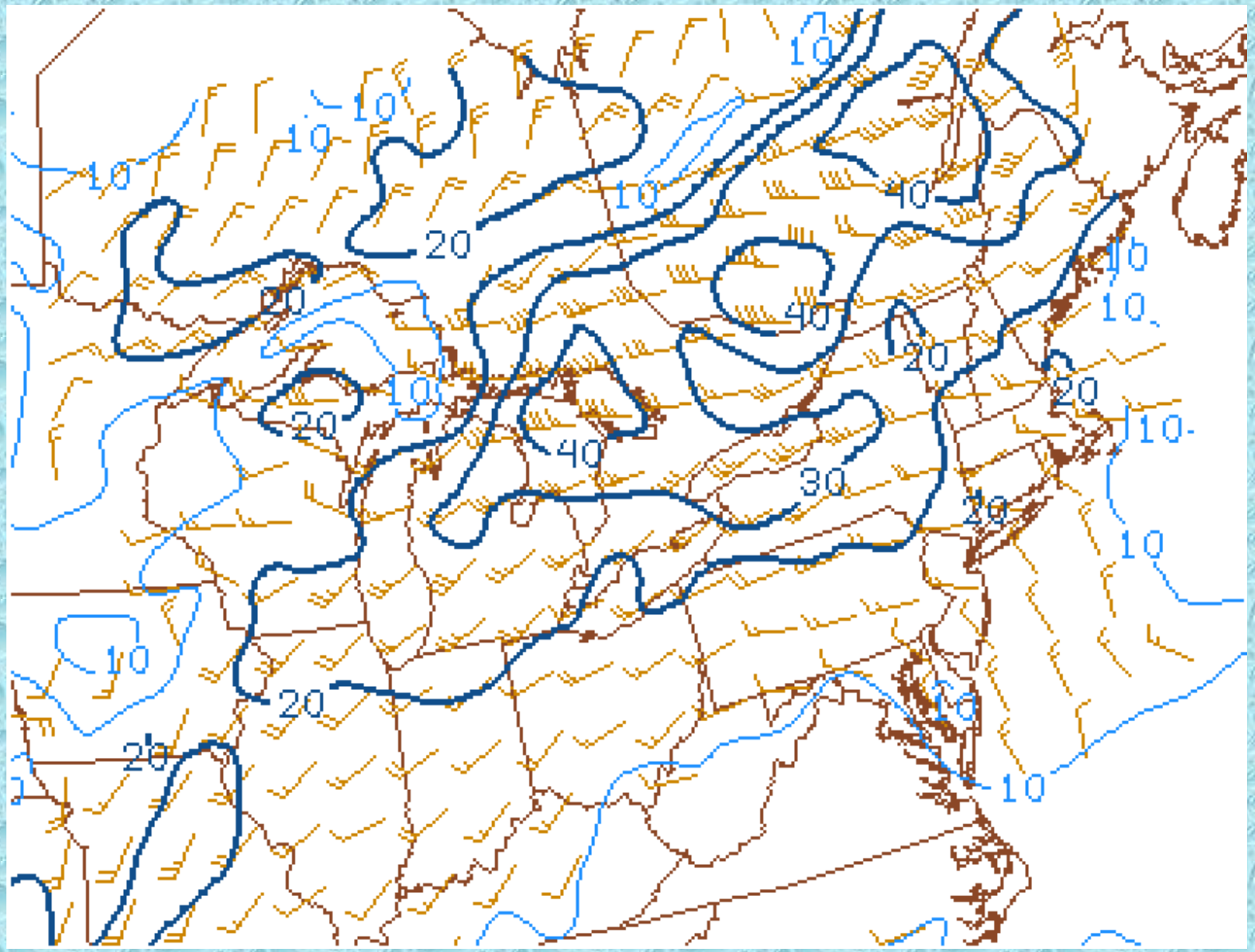
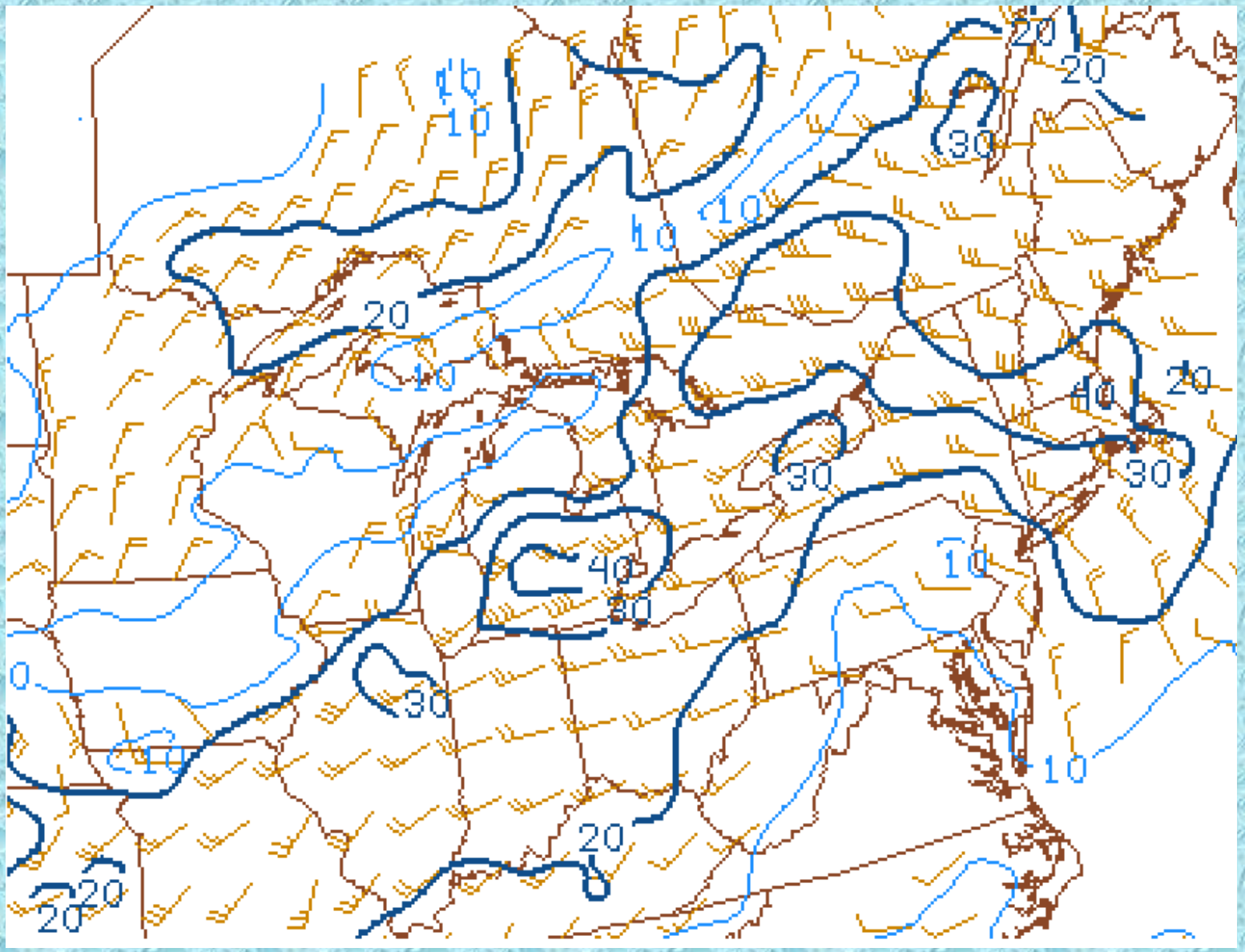


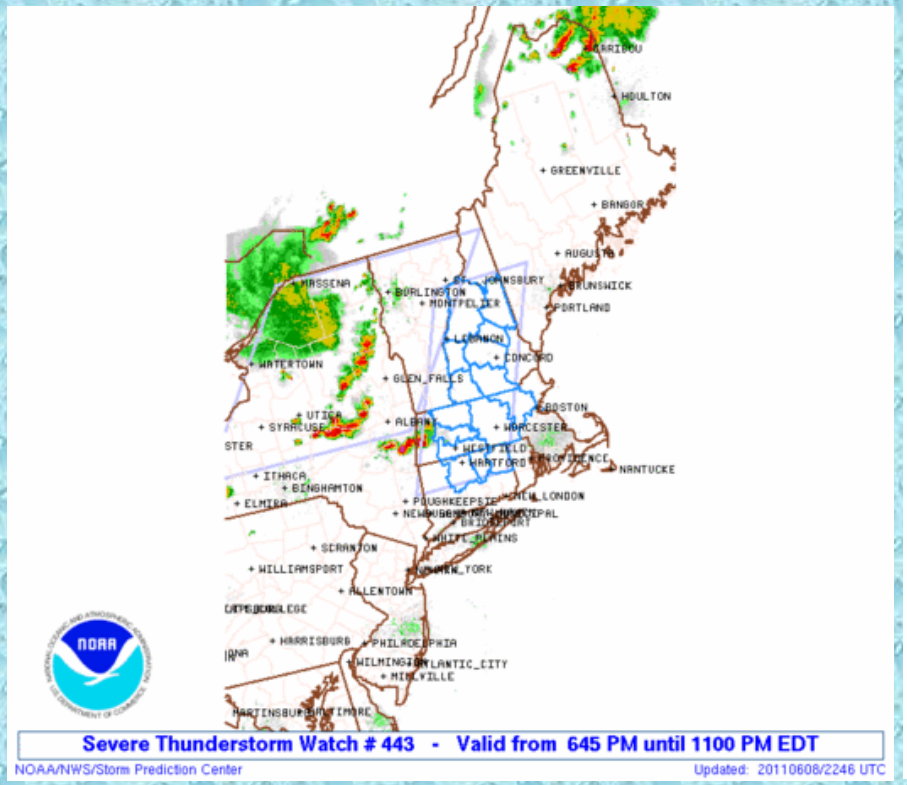
0-1km Shear: 01Z June 9

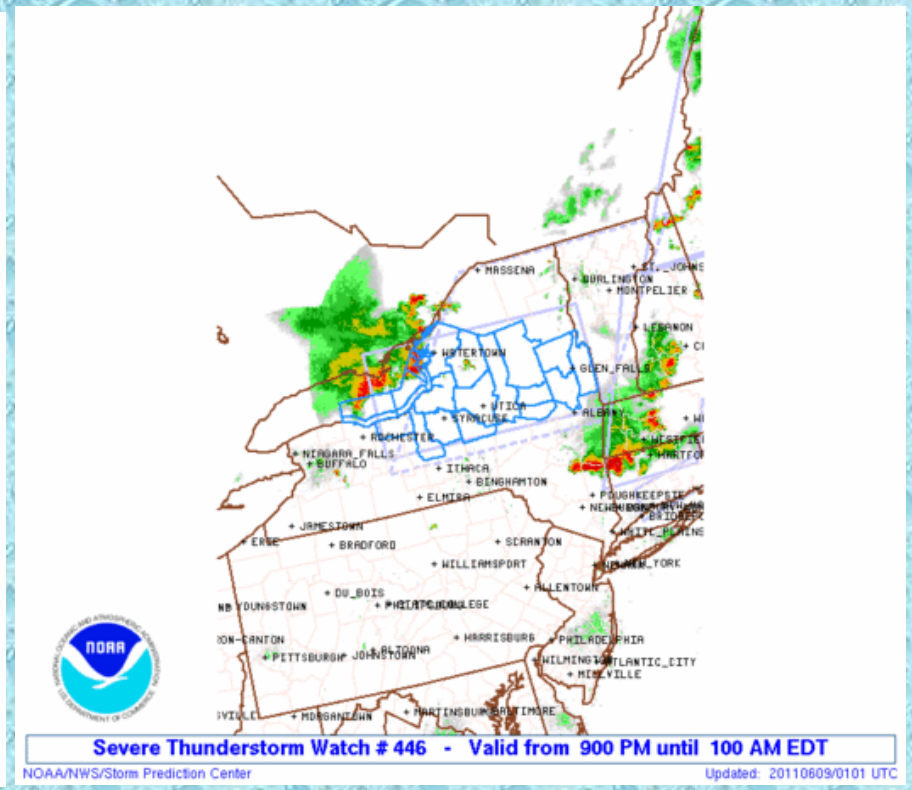


0-1km Shear: 06Z June 9

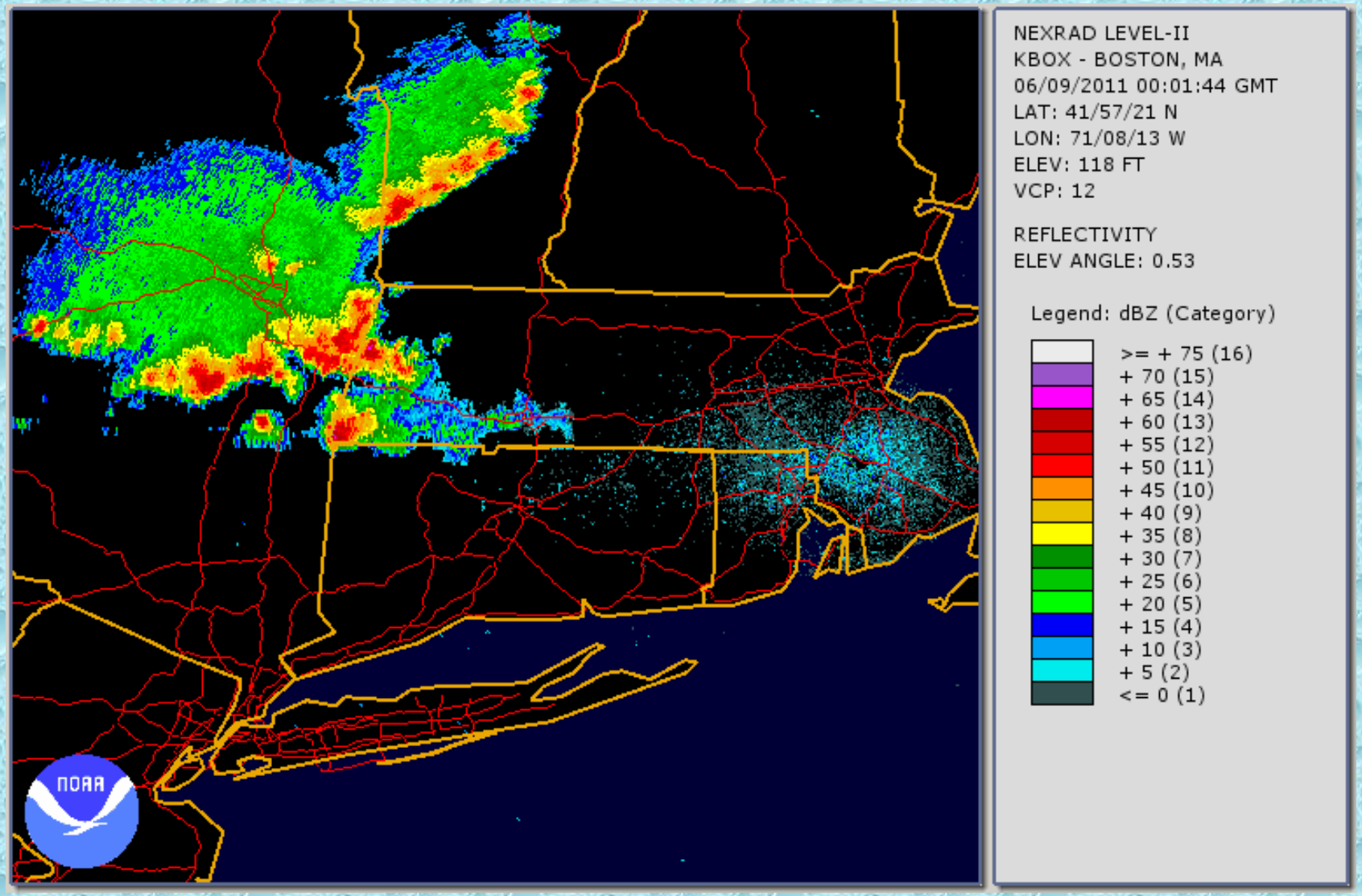


SPC Watches


Severe Thunderstorm Watch # 443 - Valid from 645 PM until 1100 PM EDT
NOAA/NWS/Storm Prediction Center
Updated: 20110608/2246 UTC

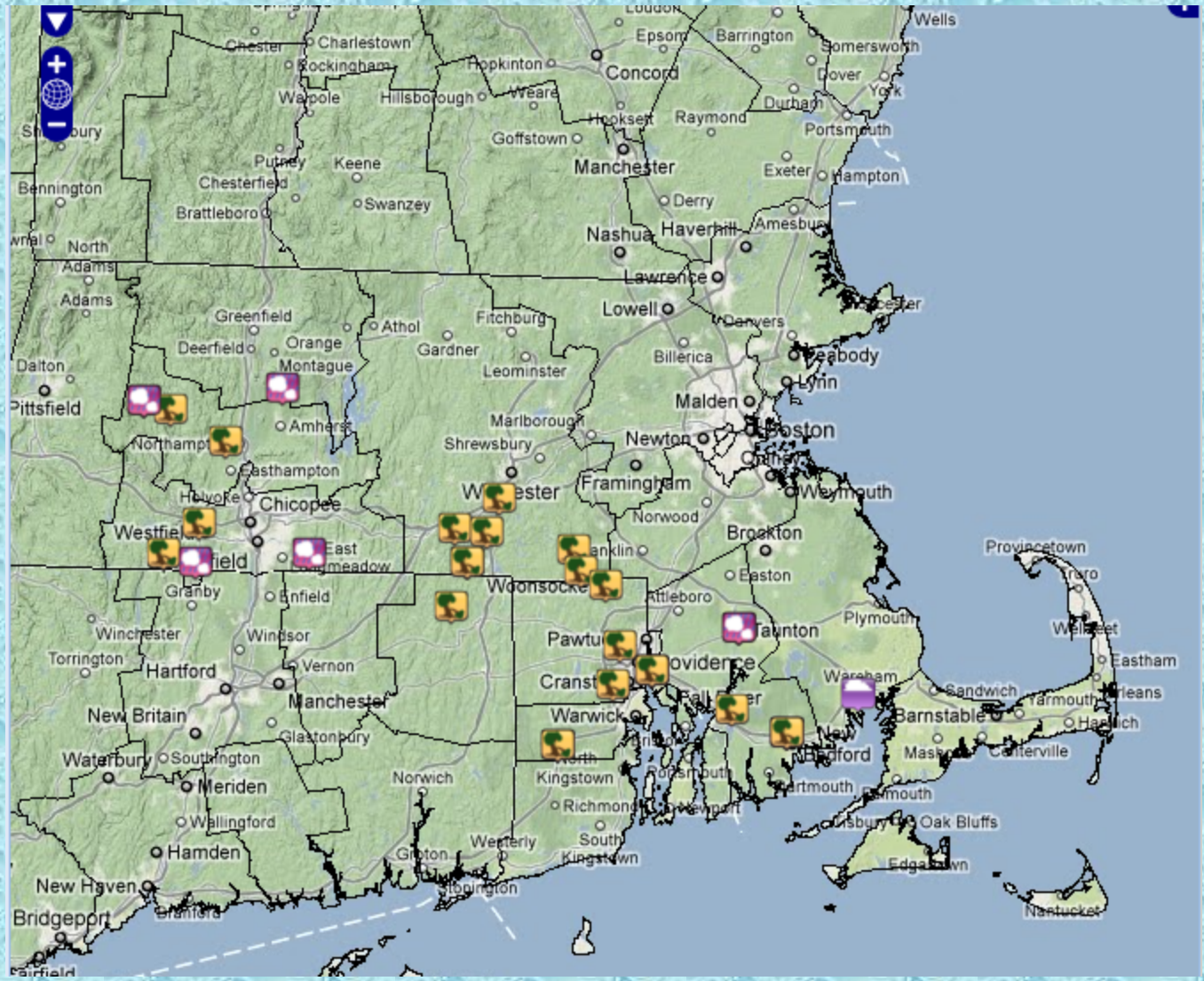

Severe Thunderstorm Watch # 446 - Valid from 900 PM until 100 AM EDT
NOAA/NWS/Storm Prediction Center
Updated: 20110609/0101 UTC

Radar Loop: 00z to 06z June 9



Storm Reports

- **Many reports of downed trees and wires, hail up to nickel size**
- **Significant damage in Cranston and Providence**



Storm Damage in Providence