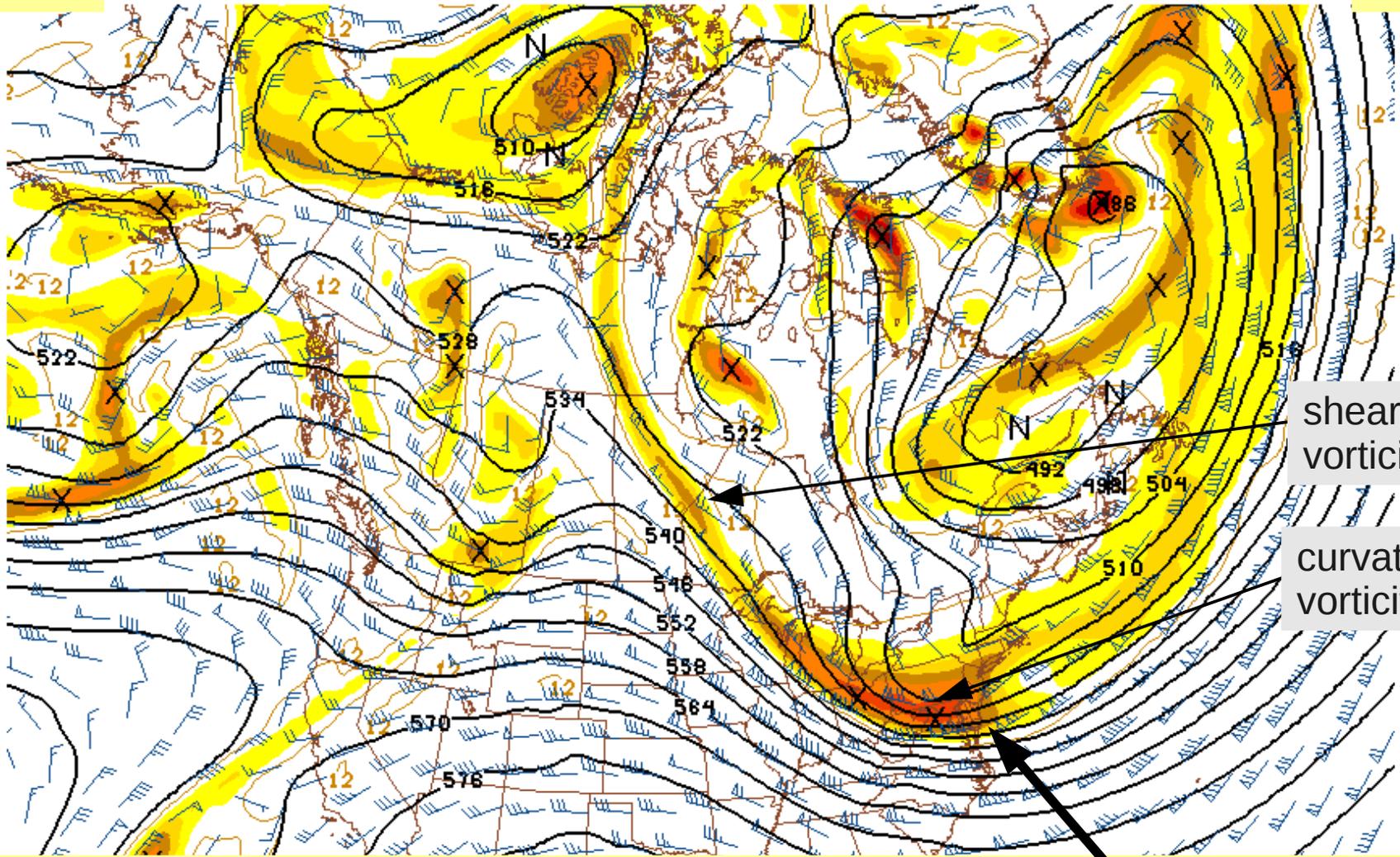


500 hPa

01/23/13 12UTC 024HR FCST VALID THU 01/24/13 12UTC NCEP/NWS/NOAA

24 hr



shear vorticity

curvature vorticity

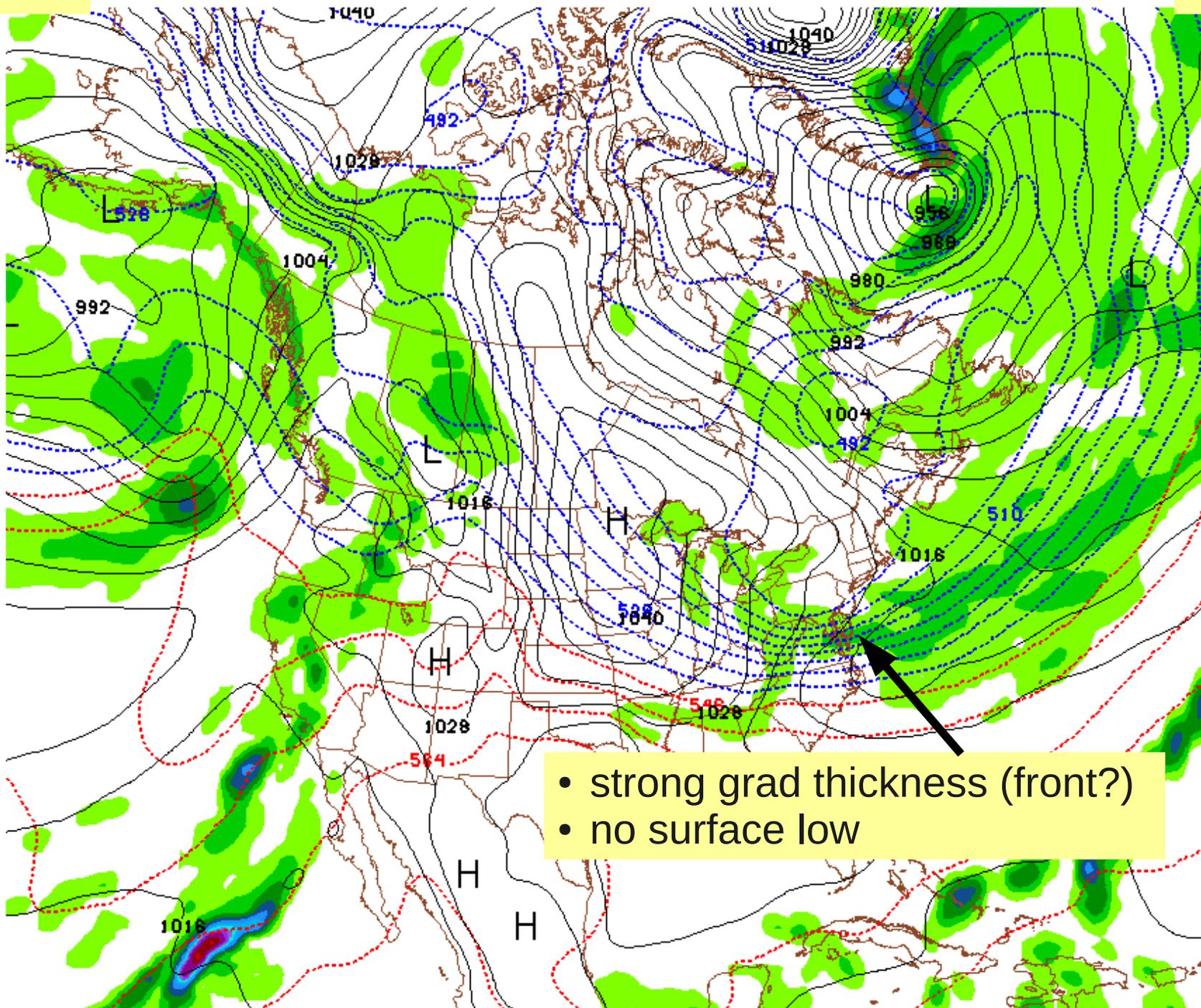
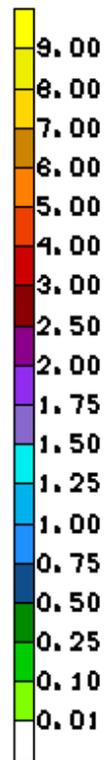
The following slides from the GFS run initialized 12Z 23 Jan. 2013 illustrate genesis & growth of a mid-latitude storm off the US east coast, supported by an **upper trough**

– motivates our impending coverage of Quasigeostrophic Theory –

surface

01/23/13 12UTC 024HR FCST VALID THU 01/24/13 12UTC NCEP/NWS/NOAA

24 hr



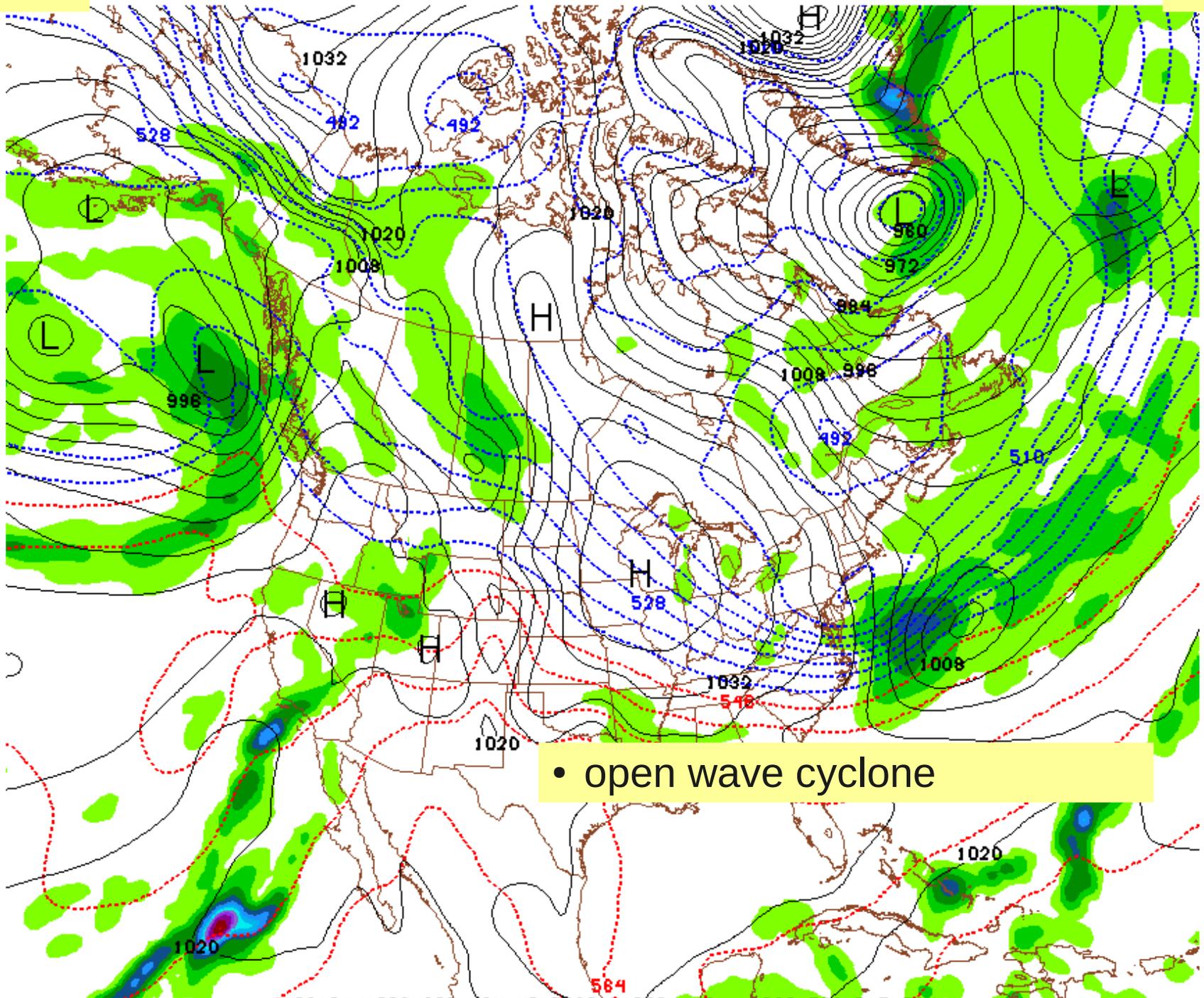
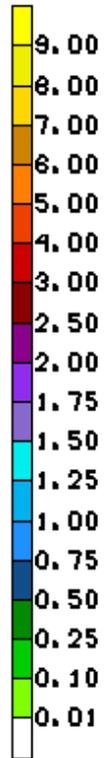
- strong grad thickness (front?)
- no surface low

130124/1200V024 NAM MSLP, 06HR PCPN (IN), 1000-500MB THICK

surface

01/23/13 12UTC 030HR FCST VALID THU 01/24/13 18UTC NCEP/NWS/NOAA

30 hr



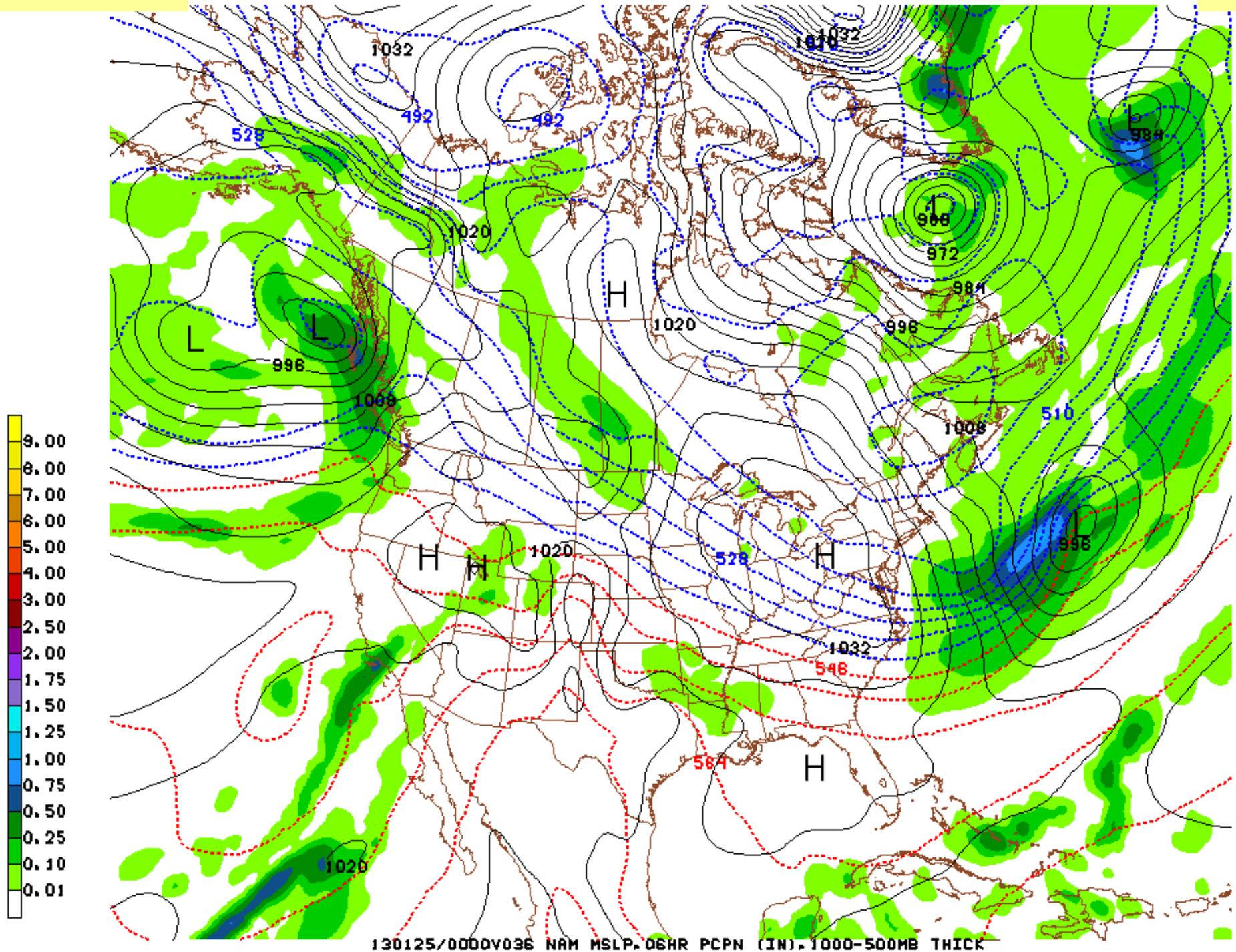
• open wave cyclone

130124/1800V030 NAM MSLP, 06HR PCPN (IN), 1000-500MB THICK

surface

01/23/13 12UTC 036HR FCST VALID FRI 01/25/13 00UTC NCEP/NWS/NOAA

36 hr

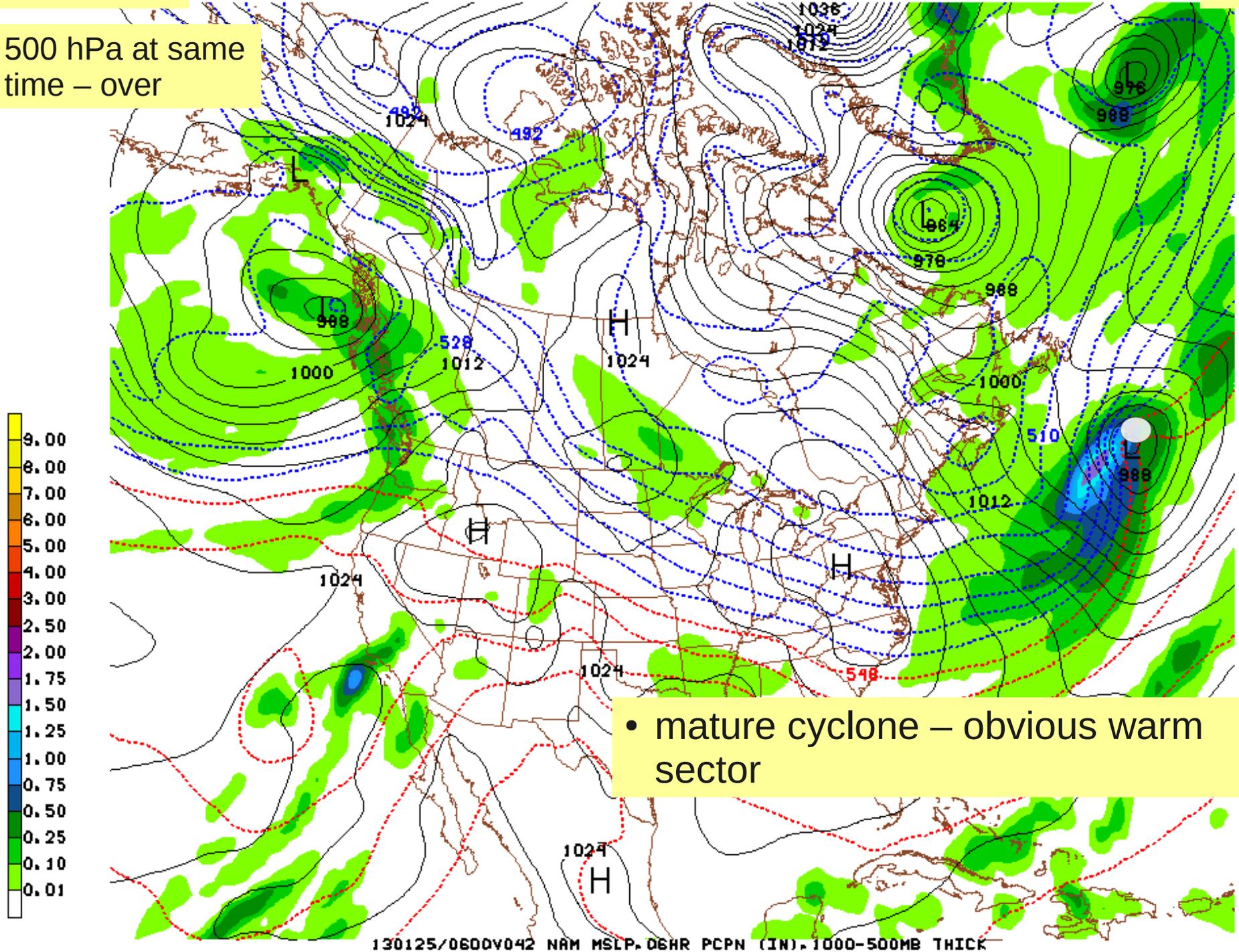


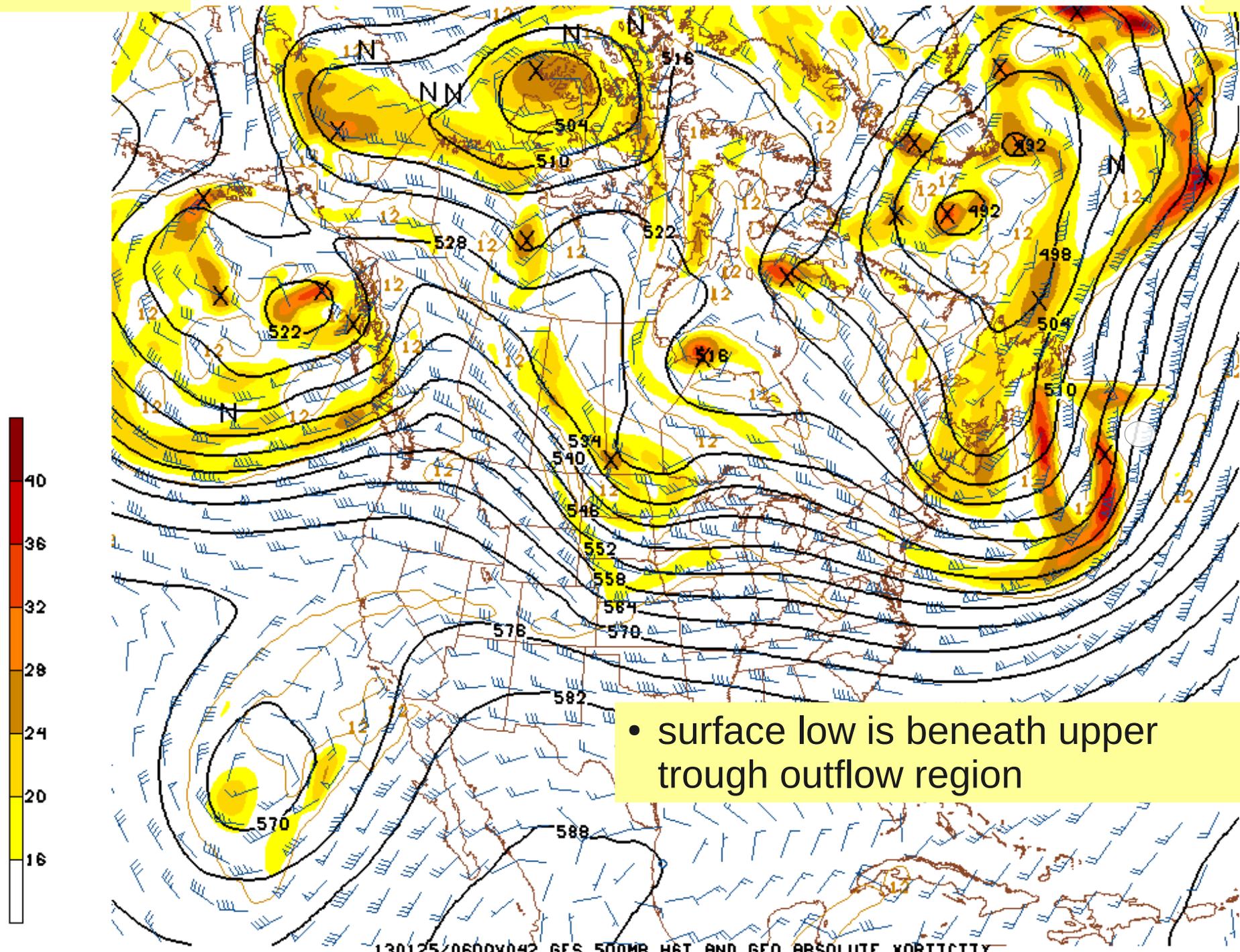
surface

01/23/13 12UTC 042HR FCST VALID FRI 01/25/13 06UTC NCEP/NWS/NOAA

42 hr

500 hPa at same time – over

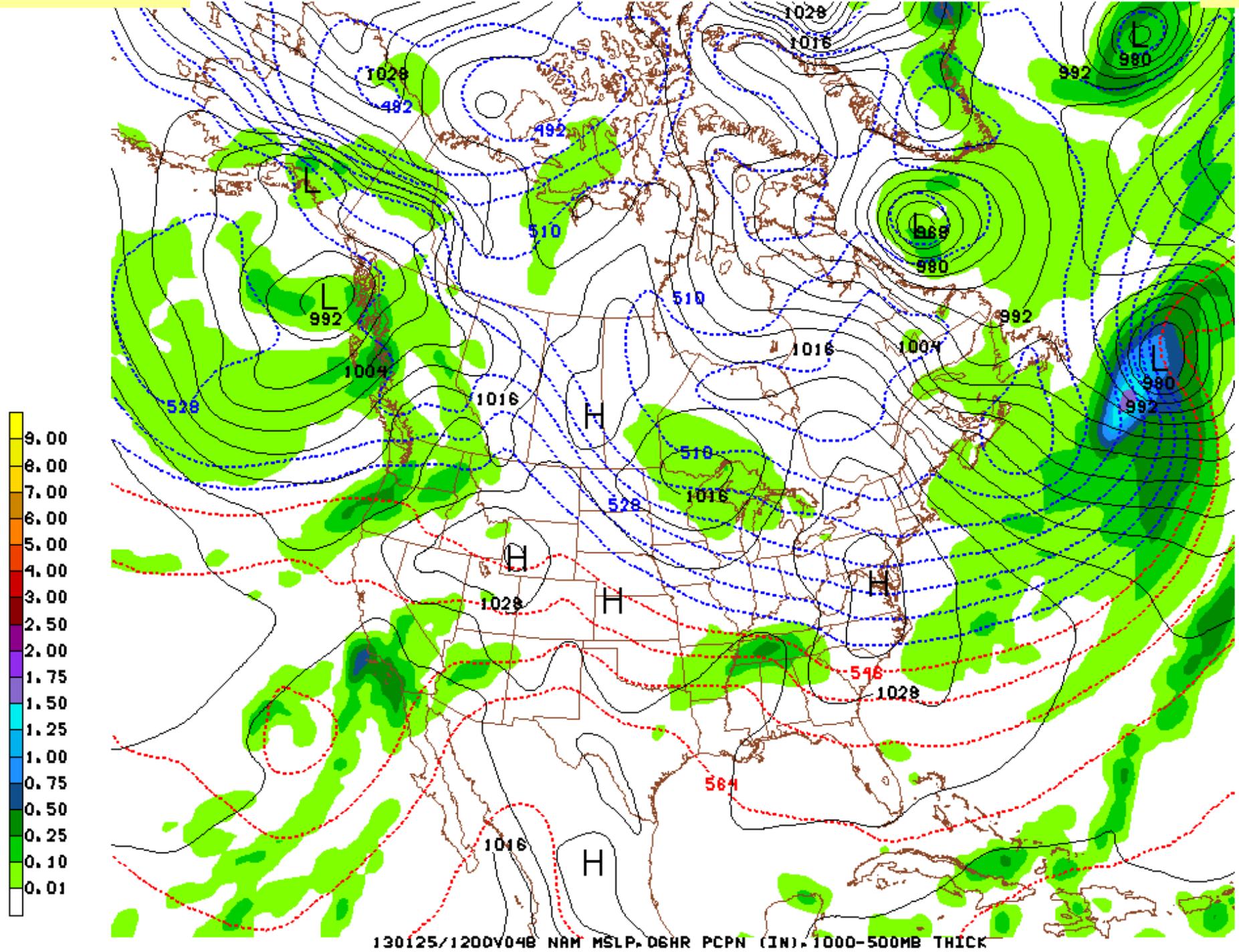




surface

01/23/13 12UTC 048HR FCST VALID FRI 01/25/13 12UTC NCEP/NWS/NOAA

48 hr

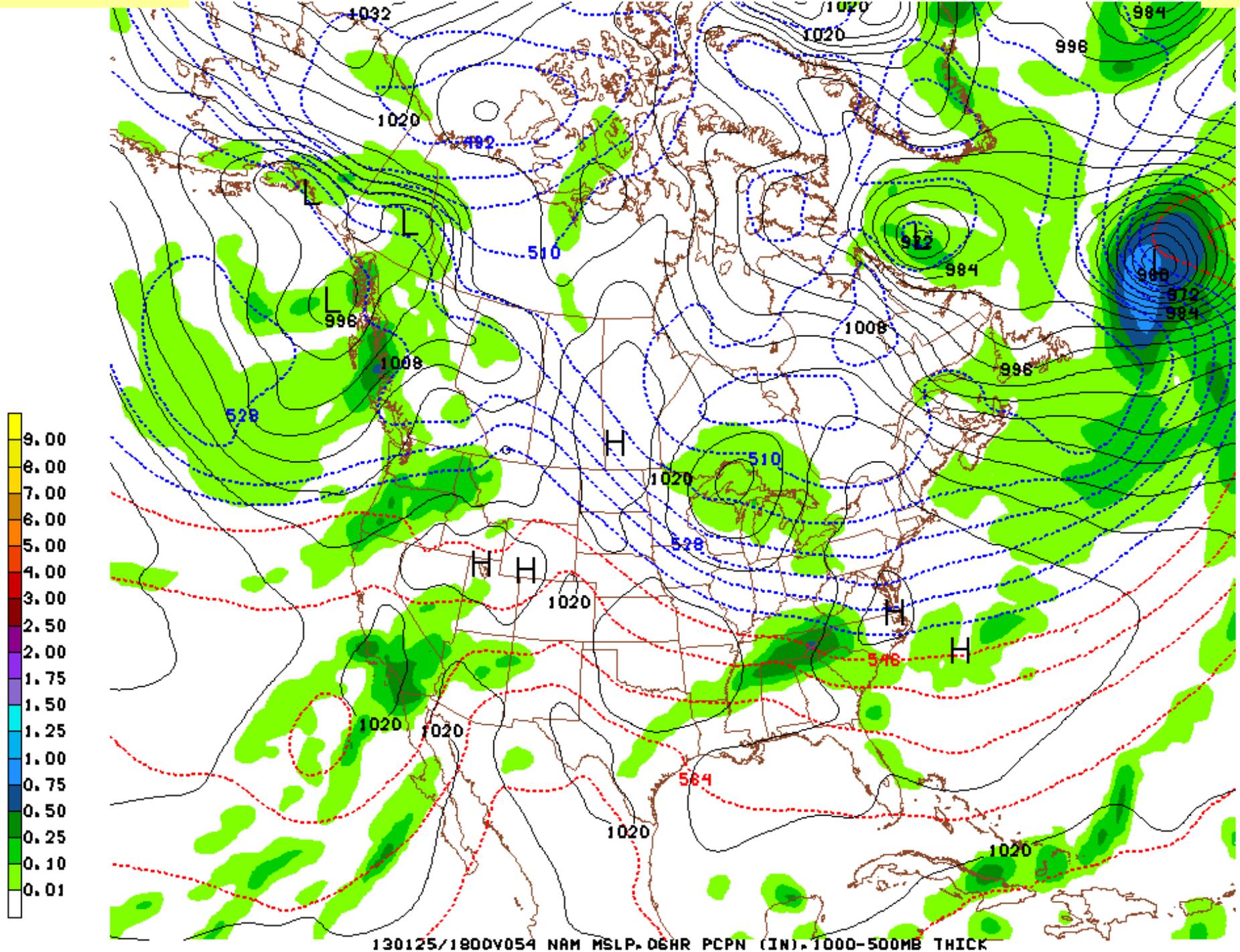


130125/1200V048 NAM MSLP, 06HR PCPN (IN), 1000-500MB THICK

surface

01/23/13 12UTC 054HR FCST VALID FRI 01/25/13 18UTC NCEP/NWS/NOAA

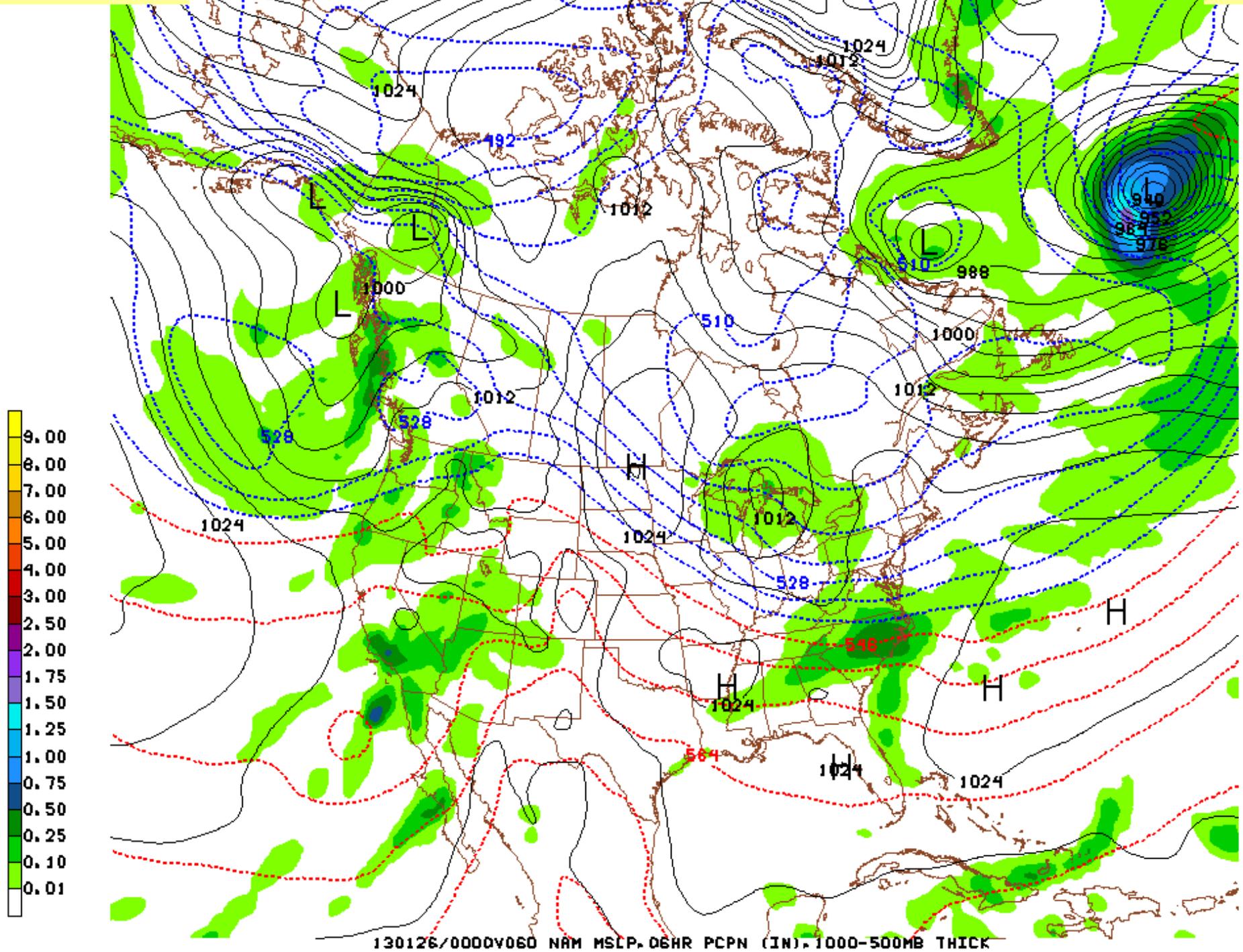
54 hr



surface

01/23/13 12UTC 060HR FCST VALID SAT 01/26/13 00UTC NCEP/NWS/NOAA

60 hr



130126/0000V060 NAM MSLP, 06HR PCPN (IN), 1000-500MB THICK