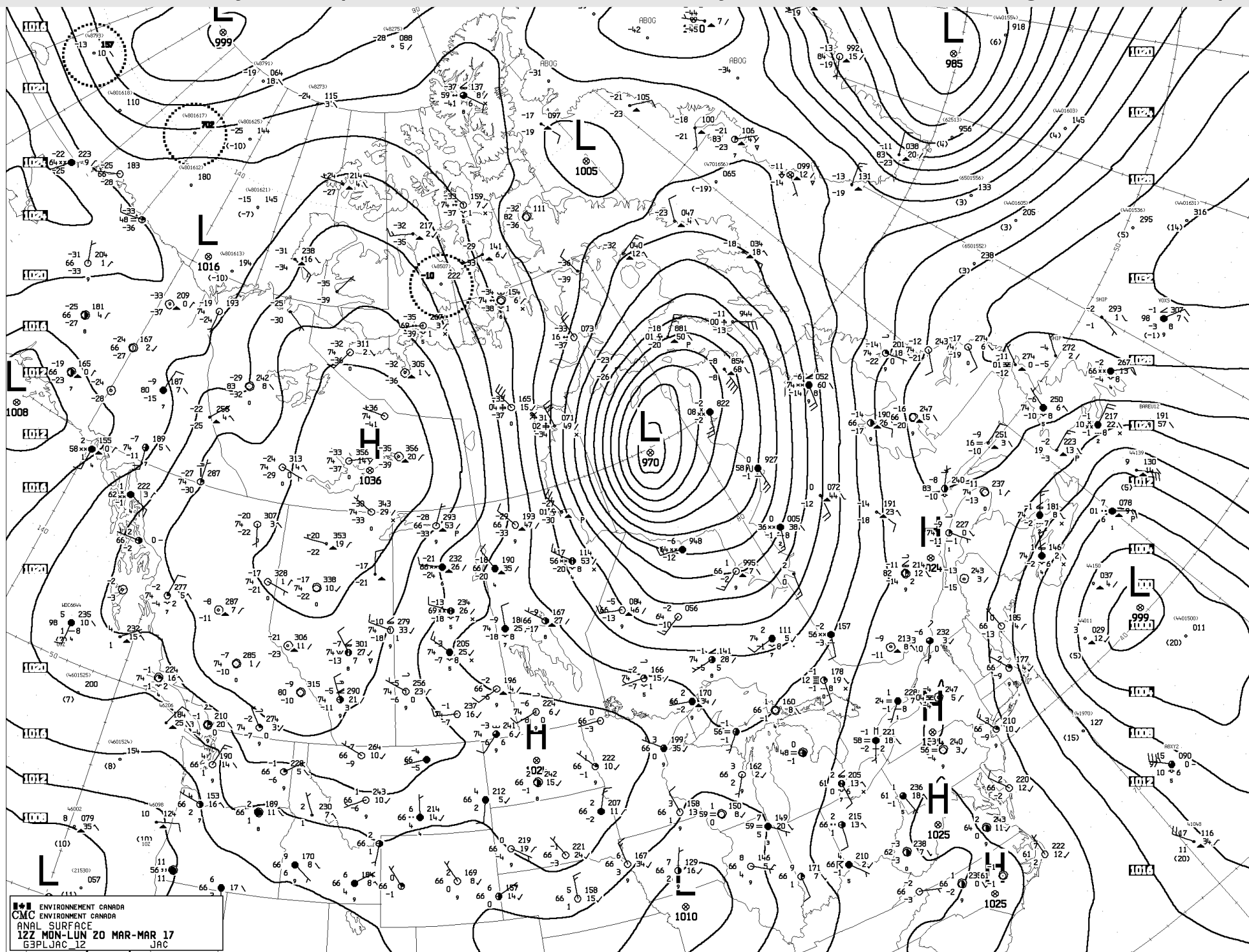
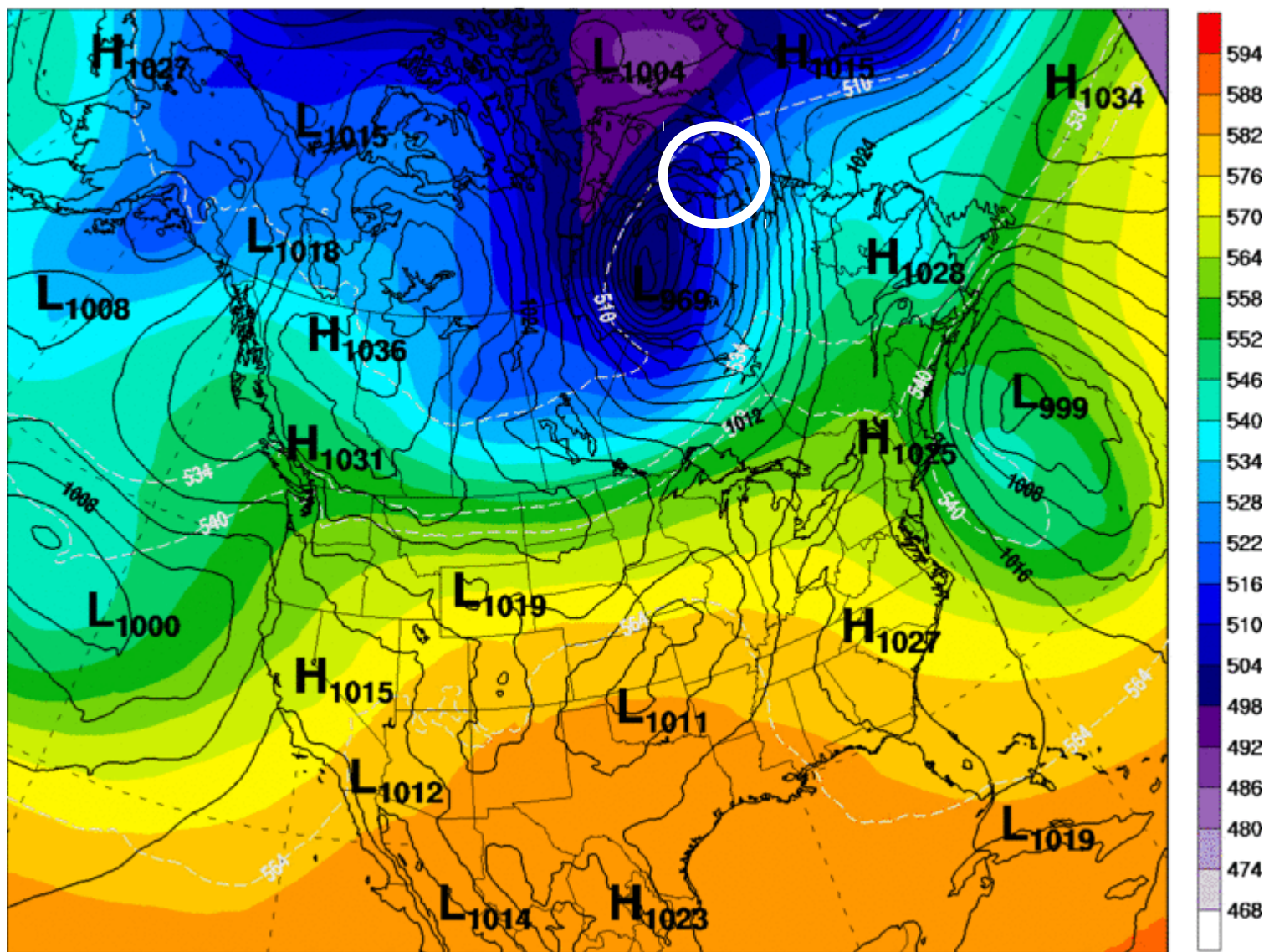


Patterns of vorticity & temp. advection, vertical velocity and Q-vector convergence – example



The white circle is a marker for position – NE of the surface low

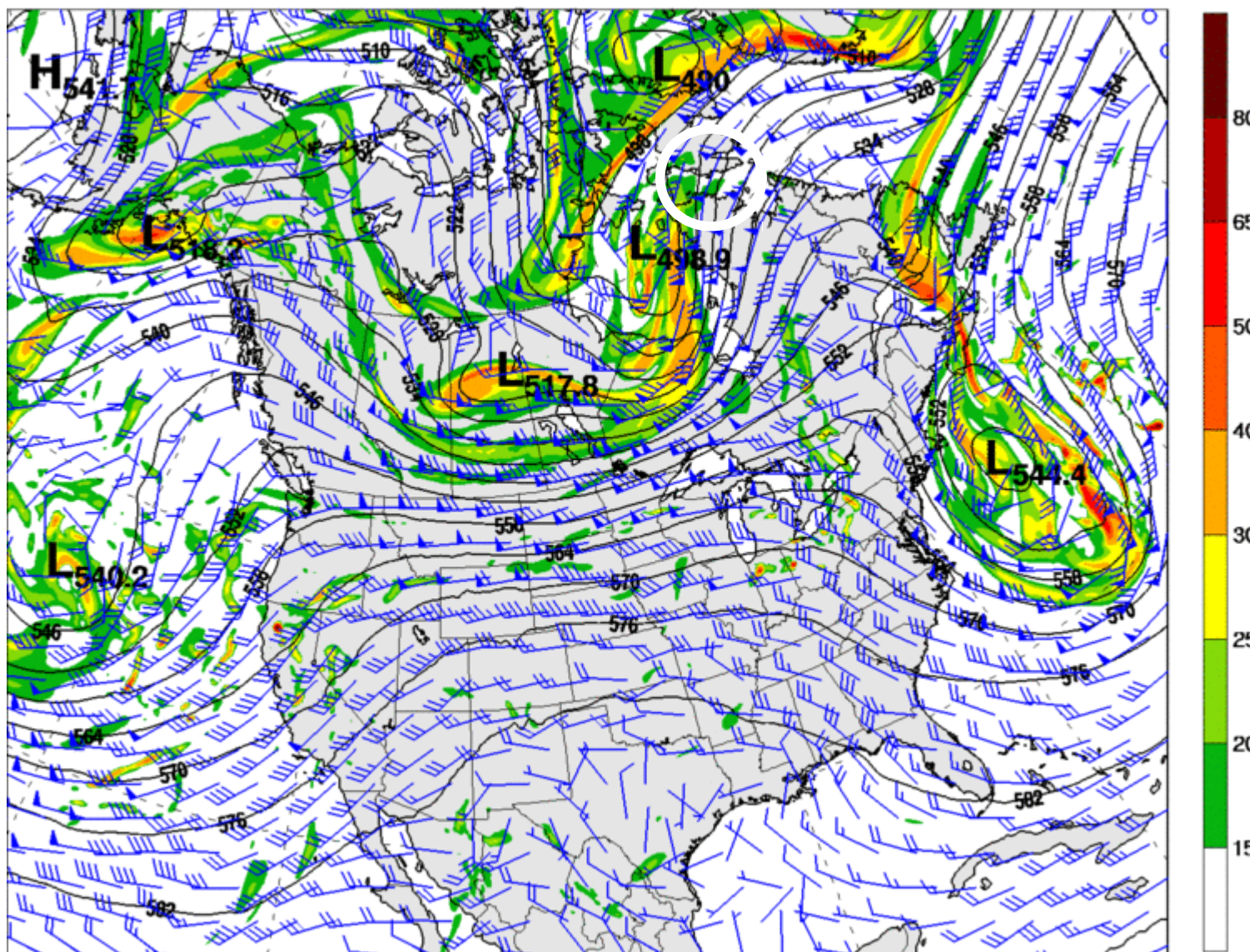
— Mean Sea Level Pressure (hPa)
- - - 1000-500 hPa Thickness (dam)
500-hPa Heights (dam)



Analysis Valid on Mon Mar 20 12:00:00 2017
CMC-RDPS data provided by Environment Canada - <http://meteocentre.com/>

Higher values of vorticity are being blown towards lower values: PVA (downwind of upper trough)

- 500-hPa Wind Barbs (knots)
- 500-hPa Heights (dam)
- 500-hPa Absolute Vorticity ($1E-5 s^{-1}$)

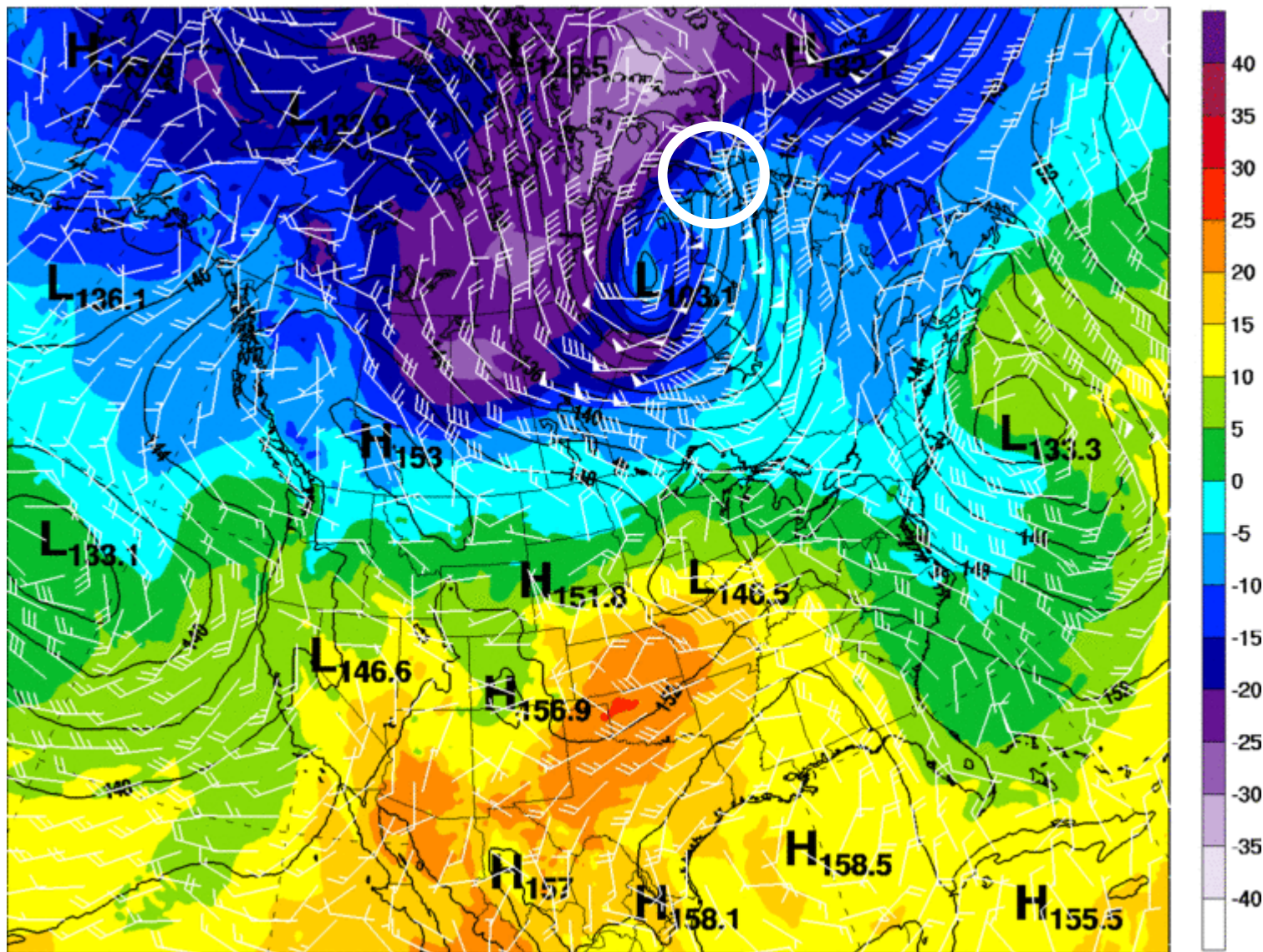


Analysis Valid on Mon Mar 20 12:00:00 2017

CMC-RDPS data provided by Environment Canada - <http://meteocentre.com/>

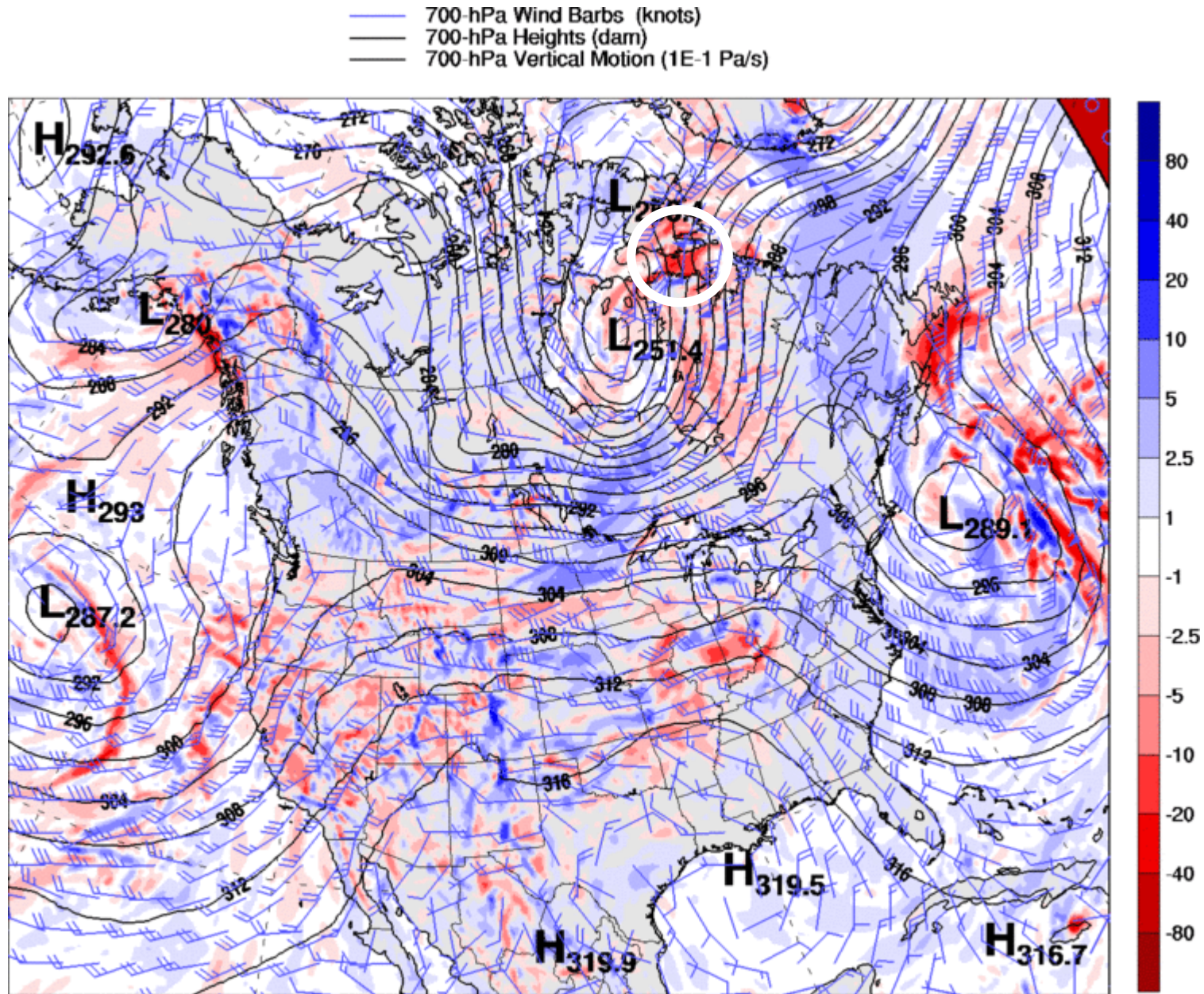
Warmer air is replacing cooler air: PTA

— 850-hPa Wind Barbs (knots)
— 850-hPa Heights (dam)
— 850-hPa Temperature (deg C)



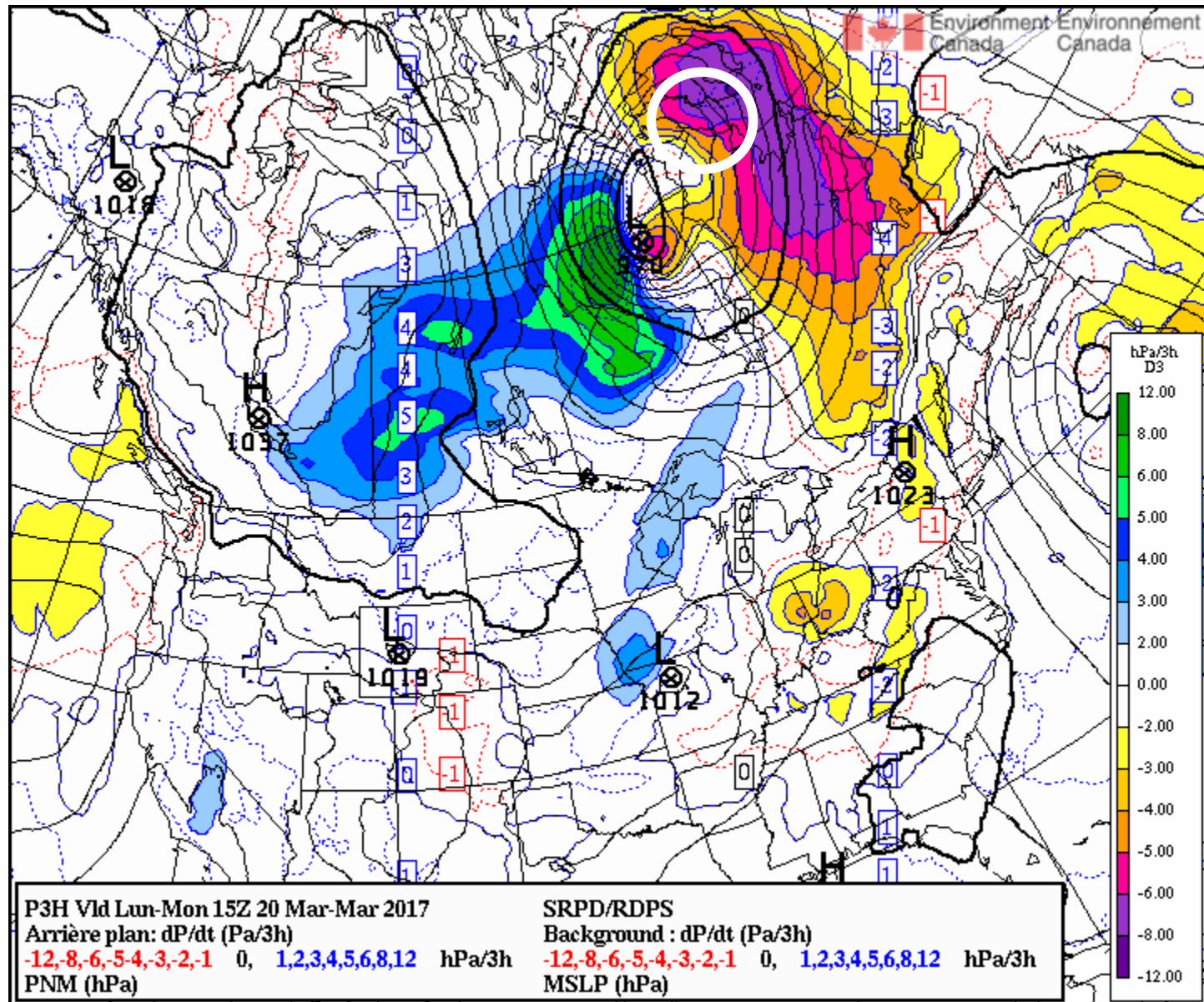
Analysis Valid on Mon Mar 20 12:00:00 2017
CMC-RDPS data provided by Environment Canada - <http://meteocentre.com/>

Ascending vertical motion is co-located with PTA and PVA

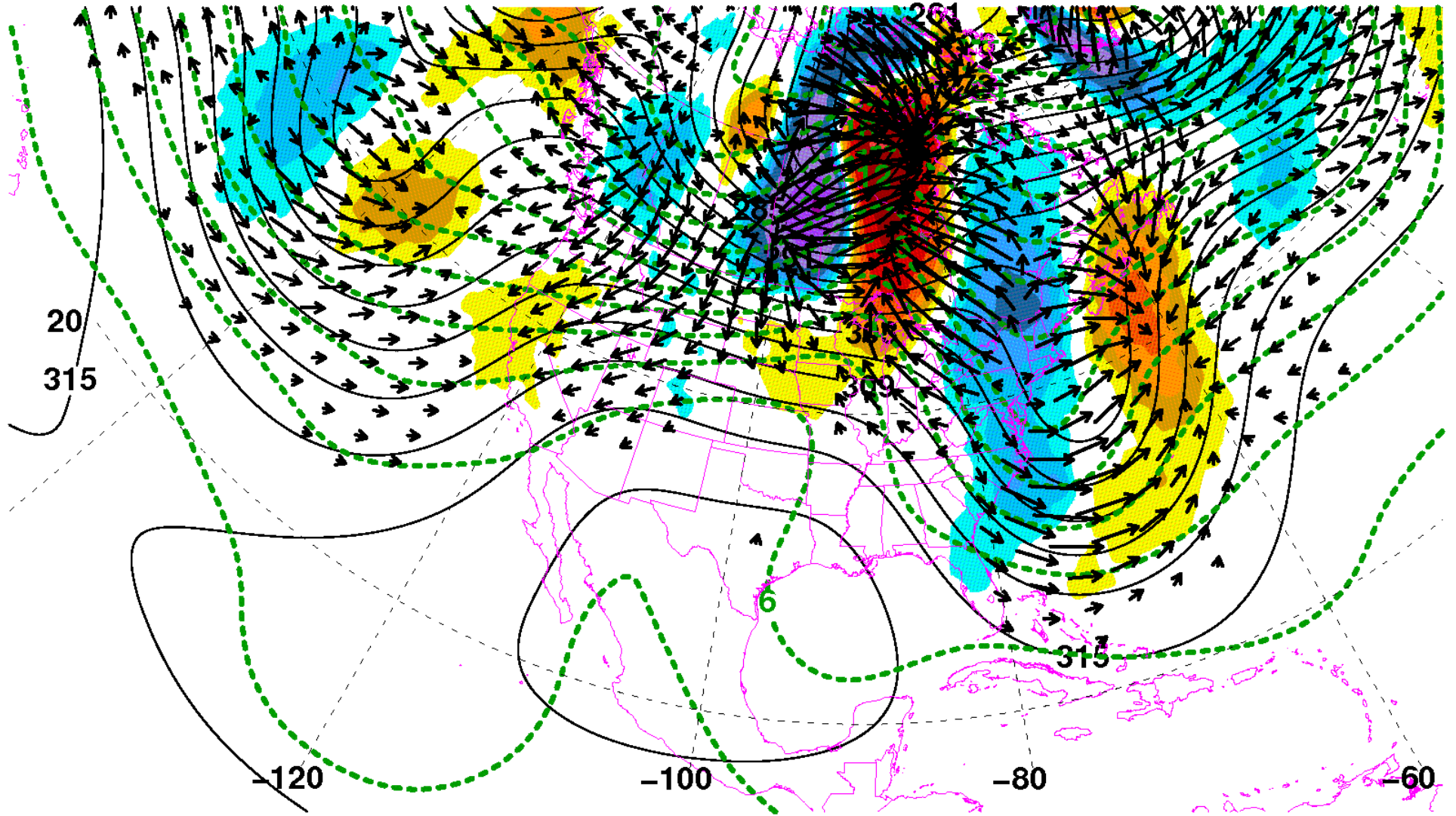


Unfortunately the U. Wyoming site that would have permitted to plot the horizontal divergence field is (temporarily) down

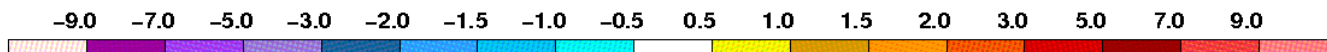
Surface pressure falling NE of the surface low (roughly where PTA, PVA occurring)



Q-vector convergence



700 HGT, TEMP, Q-vectors, Q-omeg RHS at 170320/0000V000



$5. \times 10^{-7}$ →