

Operational Weather Analysis Exercise

Geostrophic/Gradient Wind Interpretation: 500 mb

Objective: Apply the concepts of geostrophic and gradient wind to a 500 mb chart.

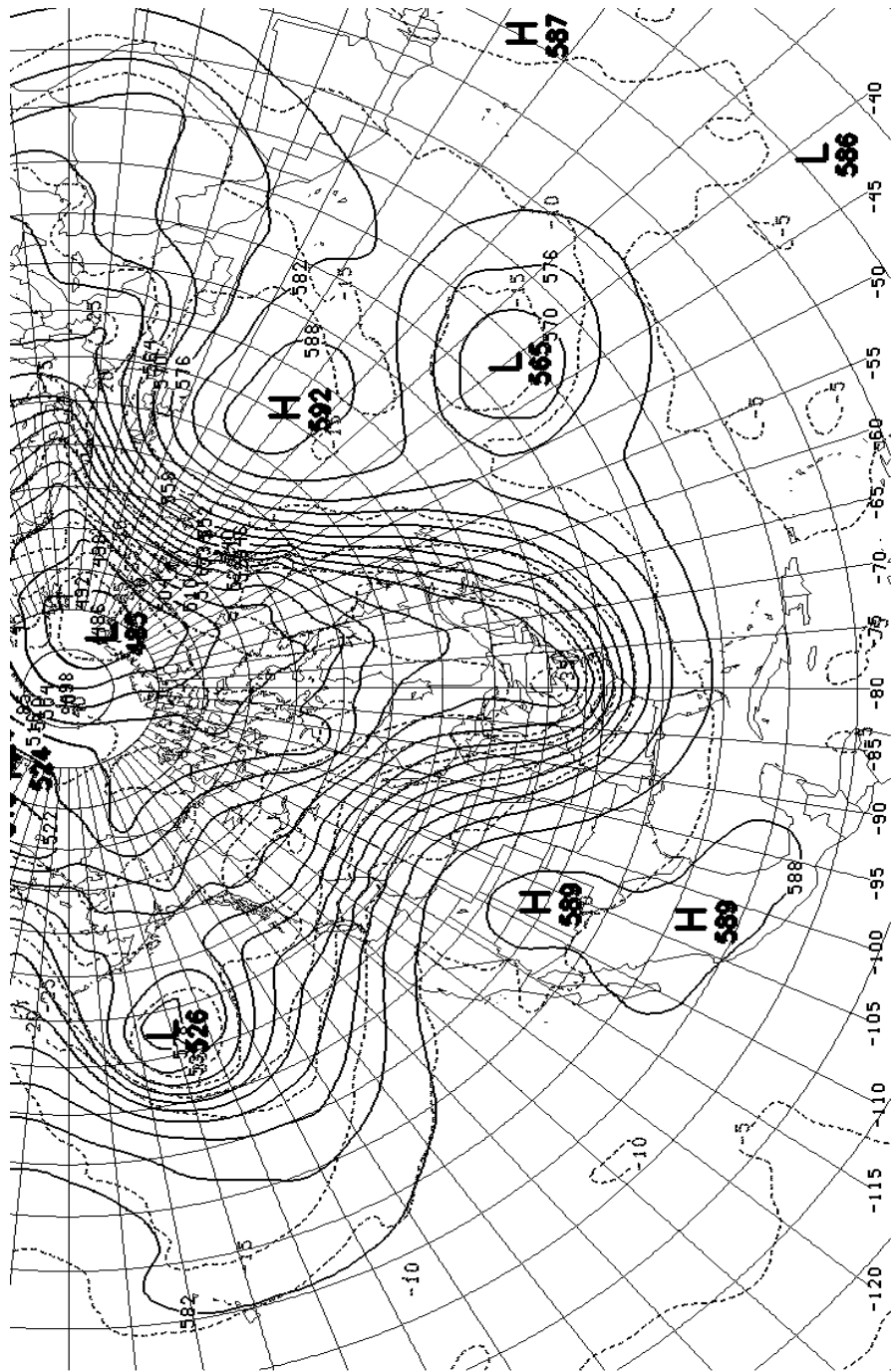
An operational meteorologist should be able to look at a 500 mb chart and infer numerous things about the wind field based on the concepts of geostrophic and gradient wind. Using the 500 mb chart on the next page, do the following:

- Compare the wind speed at the following locations and indicate which location would have the faster wind speed based on geostrophic/gradient wind considerations.
 - Oklahoma or North Carolina
 - Minnesota or New York
 - Southern California or Arkansas

- What would the wind direction be at the following locations:
 - Oregon
 - North Dakota
 - South Carolina
 - Nova Scotia
 - New Mexico

- Based on geostrophic/gradient wind speed, draw a line representing the axis of the jet stream across southern Canada and the continuous 48 United States.

- Identify the main ridge and main trough across southern Canada and the continuous 48 United States.



11/18/2008 12UTC 000HR FCST VALID TUE 11/18/2008 12UTC NCEP/NWS/NOAA