

ATM 211

Atmospheric Forcing for Ascent and Analysis

In this assignment, you are to analyze three 18Z upper-air maps and a surface map, from Tomer Burg's page. In a typed or neatly written analysis, describe the overall pattern and regions where you would expect upward vertical motion (ascent), as well as the development of clouds and/or precipitation. Links to the maps are listed below, and are also listed on the course website.

*300 mb: Describe the overall pattern (ridges, troughs) and the location and intensity (in knots) of the jet streaks. Where, geographically, would you expect upper divergence and ascent (or upper convergence and subsidence)? Why?

*500 mb: Describe the overall pattern and the location of vorticity maxima. Are the maxima associated with shear vorticity, curvature vorticity, or a combination? Based on this map, where would you expect upper divergence and ascent? Why?

*850 mb: Describe the overall temperature pattern. Where are the cold/warm airmasses at 850 mb? How does this link to what you see at 300-mb? Where is there CAA and where is there WAA? Are there any fronts? Is there any frontogenesis (we may not get to frontogenesis by the due-date)?

*SLP/thickness/precip: Describe the positions of surface highs, lows, and fronts, as well as the locations of 6-hour accumulated precipitation. Referring to the three upper-air maps above, with what features are each of the surface highs, lows, and precipitation areas associated?

*Note: **Be sure to list the date/time of your maps!** This can be found at the top of the map. It would be a good idea to **save each map to a file on your computer**, so that you can refer to it later, although I will archive the maps online. *The maps will update every 24 hours to reflect new data, but you can always find old maps at:*
<http://www.atmos.albany.edu/facstaff/ralazear/img/211mapassign/>