

Homework #10
AOS 101 – Section 305
DUE: May 9th, 2008

Name:

Instructions: Using the attached maps and corresponding packet, perform the following tasks. Turn-in these maps when you turn in your case study final project.

#1. You are given contoured maps of surface pressure (contour interval: 4 hPa) and surface temperature (contour interval: 10°F) for the following three times:

1200 UTC 10 April 2008 (6 AM CST, 4/10),
0000 UTC 11 April 2008 (6 PM CST, 4/10),
1200 UTC 11 April 2008 (6 AM CST, 4/11),

On the surface pressure maps, draw fronts with appropriate symbols based on the wind, temperature and pressure fields for each time (Hint: each map will have exactly one cold front and one warm front, and the third map may have an occluded front.)

#2. For the same three times as above you are given maps with the following 500 hPa observations: height of 500 hPa surface in meters (upper right) and wind barbs (speed in knots).

Contour the maps in regards to height with a contour interval of 60 meters with contour lines having values that are multiples of 6: 5460, 5520, 5580, 5640, 5700, 5760, and 5820 meters. The winds should be rather close to geostrophic balance, so the height contours should be nearly parallel to the winds. Please remember to follow the rules of contouring that we covered early on in the semester.

Also, draw in the approximate location of the trough axis with a dashed line (---) for each time.

These maps are necessary for the case study, so wait to turn them in with the final project on May 9th.