

**ERTH 260: Homework 3,
Weather Maps, Weather Features, and Soundings**
100 points
Due at beginning of class on Friday 16 February 2018

Examine the [500 mb chart](#), [700 mb chart](#) and [surface plot](#) for 12 UTC 5 April 2011.

1. On the [surface plot](#), put the correct symbols/lettering for the four pressure systems indicated, and the correct frontal symbol for the front indicated on the East Coast with the solid black line. (20 points)
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2. On the [500 mb chart](#), the lines indicated are either ridges or troughs. Annotate the chart correctly. (20 points)
3. Here is the sounding for [Cape Hatteras, North Carolina](#) at 12 UTC 5 April 2011. Determine the following from the sounding for the surface, 700 mb and 500 mb levels: temperature, dew point, wind direction and wind speed. (2 pts each answer, for 24 points)
4. Compare and contrast the information you obtained in (3) above with the same information plotted on the surface, 700 mb, and 500 mb charts, linked to at the top of the homework. (36 points)

[Hint: this is meant to be a somewhat trivial exercise in stating the obvious, but that "obvious" has to be backed by examination of actual data. Also, please note that the surface weather station at Cape Hatteras is not quite in the same location as the sounding site. This should be at least one paragraph]