ATMO 1300 Section 001
In-class Worksheet #8
Aug 3rd, 2017
Chapter 11

1. What are the three supercell classifications? Describe why each is classified as such with a single sentence.

HP- high amounts of precipitation surround the updraft
LP- low amounts of precipitation surrounding the updraft, cloud base is clearly visible
Classic – blend between LP and HP

2. You see a lightning strike out in a field from your vantage point.

   a. You see the strike "flash" more than two times. What are these "flashes" called?

      Return strokes

   b. You audibly hear thunder about 15 seconds after you visually observed the lightning strike. How far away was the strike?

      3 miles. 15 seconds/5 seconds per mile

3. Tornado formation has three distinct phases.
   a. Describe each of the phases.

Organizing – Funnel cloud is visible with potentially a dust cloud at the surface. Typically, the funnel is not yet touching the ground
Mature – peak in intensity, largest in size, and it has a more cone or wedge shape.
Shrinking/Rope – tornado begins to weaken, takes on a "rope" shape and the diameter begins to shrink

b. What kind of tornado structure would you expect with each phase? Consider drawing examples of these formations.

Organizing – maybe a slender column or cone that hasn't quite touched the ground yet
Mature - wedge or cone shaped
Shrinking/Rope - rope or small column

4. Consider the environment and parcel temperatures below as height increases.

Height	Environment T	Parcel T/Td
6km	-22	-16/-16
5km	-16	-10/-10
4km	-8	-4/-4
3km	2	2/2
2km	11	8/8
1km	20	14/14
Ground	26	24/14

a. What is the LCL?
1km
b. What is the LFC?
3km
c. The 500-mb pressure level is about 6km in altitude. Using the above profile, what is the lifted index value? What does this say about the severity of storms that could form?

LI = -6 Storms that form have a stronger likelihood to be severe (more negative, more severe)