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ATLS 4151-001

Cirrus and Altocumulus Clouds, Longmont, November 10<sup>th</sup>, 2:36 PM

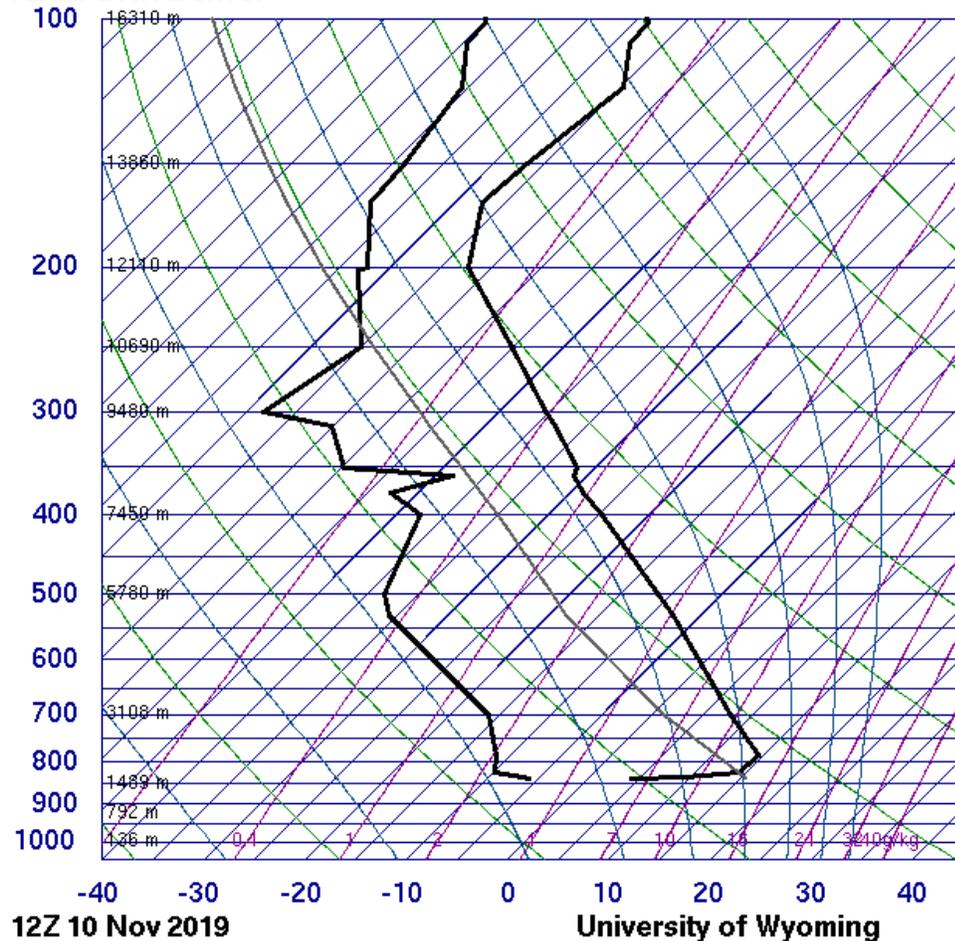
### Clouds Second

For the Clouds Second assignment, I was doing homework at my boyfriend's parents house in Longmont, CO. I looked outside and saw the clouds scattered beautifully through the sky. I thought that sky and the complimentary lighting of that time of day would be perfect for my clouds second project. To capture this image, I went up to the second floor of the house to include a nice view of the front range at the bottom of my picture and took a panoramic image of the sky. Unfortunately, since I took this picture on a whim because the clouds looked so beautiful in that moment, I wasn't prepared with my Nikon DSLR, so I had to take the picture on my iPhone. I took a few pictures within a couple of minutes and the final picture I chose was the best iteration. When I took this picture, I was at an elevation of 4,984 feet above sea level. I was facing directly west and held my phone at roughly a 35-degree angle upward to get the most clouds in the frame I could and just barely capture the front range at the bottom of the image, using them to frame the clouds. I decided to take a panoramic image instead of a regular framed shot because the clouds looked amazing everywhere in the sky and I wanted to capture as much of them as I could.

The day I took this picture was a warm fall day of about 70 degrees Fahrenheit while the day before had been even warmer; 77 F. The sunset that night was breath taking; the sky was filled with clouds that looked like spaceships and they lit up bright pink. Unfortunately, I didn't capture any pictures of this sunset because I took my boyfriend's dog for a walk during the sunset and didn't take my phone with me. That night and the next day the temperate dropped drastically to about 27 F and we got a massive snowstorm and school was delayed the next day. According to the skew-T plot, clouds could be expected to form that day at elevations of roughly 3,000m, 8,000m and 12,000m. I believe the clouds featured in my photo are Altostratus clouds lying at 3,000m/10,000ft elevation, Cirrostratus clouds lying at 8,000m/26,000ft or 12,000m/39,000ft elevation, and a few Cirrocumulus clouds lying at either 8,000m/26,000ft or 12,000m/39,000ft elevation. It is hard to determine which Cirro- clouds existed where because they both are found

anywhere between 20,000ft and 40,000ft. The Altostratus clouds are the thick, opaque clouds on the left side of the sky. These clouds indicate the approach of a warm front and sometimes thicken and fall to become nimbostratus clouds that produce precipitation (just like the snow we saw later that night). These clouds felt NW 25 mph winds. The Cirrostratus clouds are the wispy, feather like clouds that cover most of the sky and are clearly lying above the thick Altostratus clouds. Cirrostratus clouds are made up of ice crystals but do not produce precipitation. However, these clouds can also thicken and sink to become Altostratus, Stratus and even Nimbostratus clouds, the last of which produces precipitation. The Cirrocumulus clouds are lying on the right edge of the image, cut off by the framing of the pictures. These clouds are made up of ice crystals and can transform into cirrostratus clouds, which as we know, can end up producing snow. The Cirrocumulus and Cirrostratus clouds either felt W 40 mph winds (8,000m) or W 30 mph winds (12,000m) depending on where they were in the sky.

**72469 DNR Denver**



SLAT	39.77
SLON	-104.87
SELV	1611.
SHOW	-9999
LIFT	10.35
LFTV	10.18
SWET	-9999
KINX	-9999
CTOT	-9999
VTOT	-9999
TOTL	-9999
CAPE	0.00
CAPV	0.00
CINS	0.00
CINV	0.00
EQLV	-9999
EQTV	-9999
LFCT	-9999
LFCV	-9999
BRCH	0.00
BRCV	0.00
LCLT	259.0
LCLP	572.5
MLTH	303.8
MLMR	2.28
THCK	5644.
PWAT	4.73

To take this photograph, I used my iPhone 6s Plus. Since I took this picture on my phone, I didn't have any control of the settings the camera was shooting at. The camera automatically used these settings; f-stop of f/2.2, exposure of 1/6410, ISO 25, 72 dpi and a focal length of 4 mm. No flash was used. The original image was 7142 x 3848 pixels. My final image was cropped to 7141 x 3283 pixels to cut out most of the lawn and buildings I captured so the image was focused heavily on the clouds. I kept a little bit of the front range at the bottom of the frame to add some contrast to the clouds.



Overall, I was very happy with the image that I ended up with. I wish I had my Nikon DSLR with me to have been able to take a high-quality image, but I liked the clouds I was able to capture. I also wish that I was able to capture the sunset that night because it was one of the best sunsets I have ever seen. I do think it was cool capturing this sky the day before a big snowstorm.

I've observed that the best clouds happen right before or right after big snowstorms. These cloud assignments have helped me understand and identify clouds much more and helped me read the weather by looking at the sky!

## References

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