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MCEN 5151 - Flow Vis

Prof. Jean Hertzberg

Cloud Second

16 December 2023

### Cloud Second Report

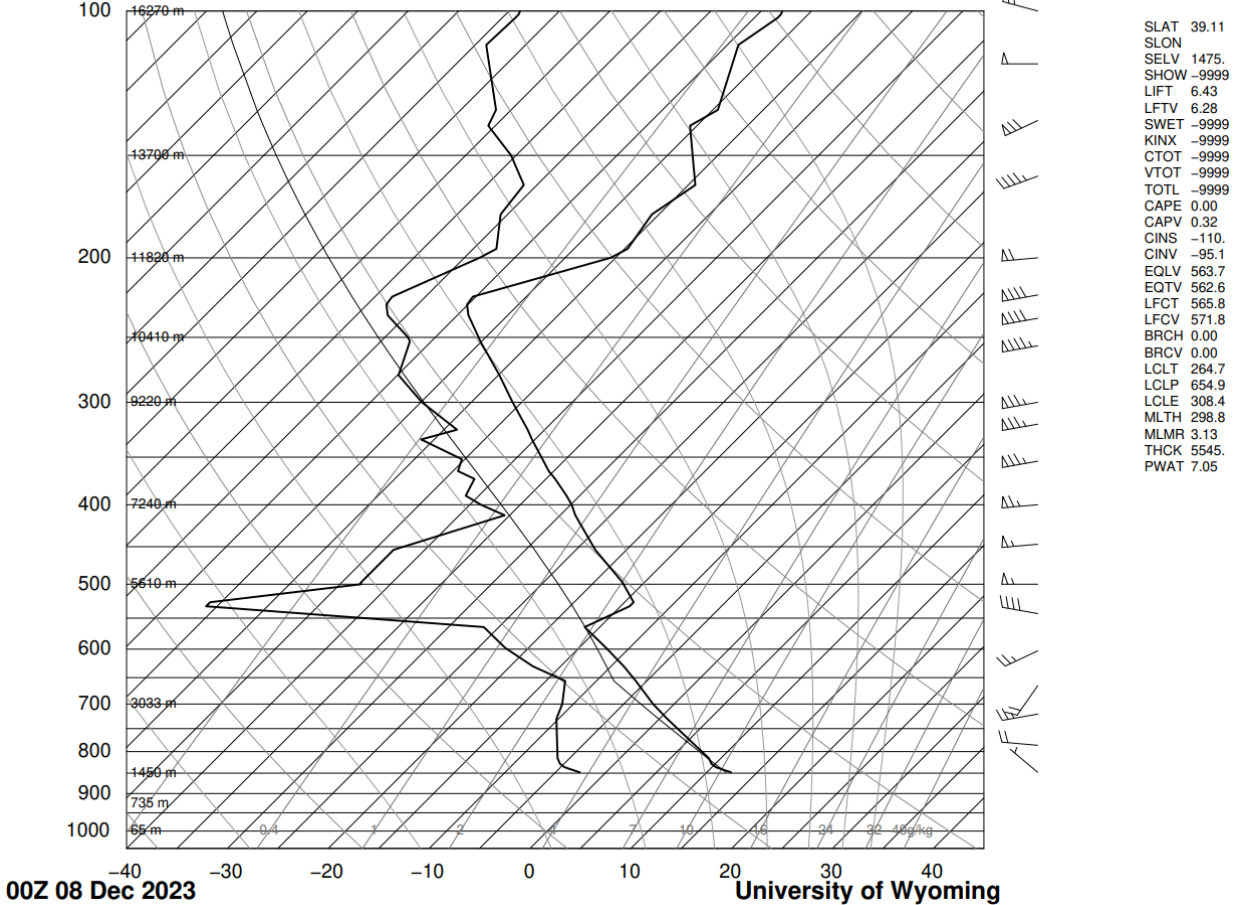


This is our cloud second assignment, we are tasked to take a picture of clouds during the second half of the semester. The intent was to capture the cloud shapes clearly and make the clouds easy to identify. I went to Flagstaff hoping the higher elevation would make a good result, but that's the day when the storm rolled in, there were a lot of gloomy clouds. This is the best I can capture of. Some of the other pictures do not have enough contrast, just a big gray cloud.

This is right before the storm rolled in, I was snowed on at the top of the mountain, but this picture is around a couple hundred feet down from the peak, there is no snow. We can see

some stratus and cumulus clouds. The big piece of gray cloud is hard to classify under, I think those are either nimbostratus or cumulonimbus. The Skew T chart are attached below from grand junction station, but the data could be significantly different because we are on the two different sides of the mountain. The clouds are low and thick, which is close to what we can see in the chart.

**72476 GJT Grand Junction**



The photo was taken at Sunrise Amphitheater. 1198 Flagstaff Dr, Boulder, CO 80302 around 4PM on December 8th. There are no visual techniques used for this picture. The camera frame was to capture the horizon at the bottom and show how big the gloomy clouds are. There is not a lot of great natural lighting on a storm day, there are no flash on camera.

Photographic technique was to capture the most amount of contrast between different clouds.

- Size of the field of view: 47.6 Degrees
- Lens focal length: 60 mm
- Type of camera: Sony a7R Mk.ii. Full Frame digital camera.
- Original pixels: 7952x4472
- Final image pixels: 7952x4472
- Exposure specs: f/4.5, 1/200 sec, ISO 100



The before and after picture is very close besides some post processing involved. Post processing includes brightness, contrast, hue, saturation, color curves. There are no cropping involved.

Image reveals the cloud in a low lighting environment with storms coming in the next couple hours. Of course, this condition is not perfect for photographing clouds, but it does offer

something a bit different. I think the big gloomy cloud is not the best on camera, I also wish it can open up a bit more to allow more light in. I think that will bring the picture together better.

*Atmospheric Soundings*, [weather.uwyo.edu/upperair/sounding.html](http://weather.uwyo.edu/upperair/sounding.html). Accessed 16 Dec. 2023.

*Skywatch Observatory*, [skywatch.colorado.edu/](http://skywatch.colorado.edu/). Accessed 16 Dec. 2023.