

## Seth Dry – Clouds Second Report

MCEN 5151 December 5<sup>th</sup>, 2025



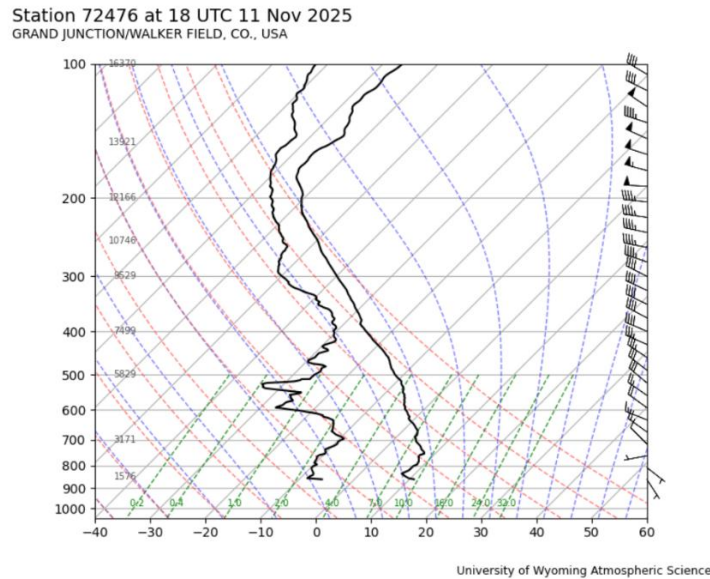
*Figure 1 – Final Image*

The image shown in figure one was produced for my “Clouds Second” assignment. My primary intent with this assignment was to capture a lenticular cloud, which I was successful in doing. This type of cloud had intrigued me since learning about them in class, and I wanted to see one for myself, knowing that they could appear in Colorado. After seeing this cloud formation, I was also interested in capturing the cloud in an aesthetically pleasing way and spent some time looking for and shooting from different angles to produce the final image shown here. I am quite proud of my final image and am happy with how I was able to capture and present this interesting cloud formation.

The image was taken at Coyote Creek Golf Course in Fort Lupton, Colorado at about 3 pm on November 11<sup>th</sup>, 2025. I was facing due west to capture the image which also allowed for the inclusion of the mountains in the background. The camera is essentially level to the horizon.

I have identified this cloud as altocumulus lenticularis. The skew-T plot for the nearest station, in Grand Junction, Colorado is shown below in figure 2. We can see from the plot the atmosphere was totally stable at this location, and it appears from the formation of this type of cloud that this held in Fort Lupton. The weather was fair on this day and there was no perceptible wind while I was taking the picture. From the shape of the cloud, we can see some wind is

probably blowing left to right higher in the atmosphere. Considering the atmospheric conditions and observed cloud morphology, I feel confident that this cloud is altocumulus lenticularis.



*Figure 2 – Skew-T Diagram*

This image was taken using an iPhone 14 Pro Max. The picture was taken with the main camera, with a fixed aperture of f/1.78 and a focal length of 24mm. The shutter speed was 1/1815 s and the ISO was 32. The size of the original image was 3024x4032 px, and the size of the cropped image is 3023x1868 px. The image was edited to increase contrast, and exposure was lowered for some blue bands to emphasize the cloud formation. The original imager can be seen below in figure 3.



*Figure 3 – Unedited Image*

I am very happy with the final image I was able to produce for my clouds second assignment. I think that it is an excellent example of a lenticular cloud, and a visible pocket of rising air coming into the cloud, showing how these kinds of clouds are formed in a stable atmosphere, where layers of air accumulate to give the classic lenticular shape. I am fortunate to have seen this type of cloud formation and captured it so well. I think the final image does an excellent job of both showing the physics of the cloud formation and the natural beauty of the cloud.