Flow Visualization 4151-003: Clouds First

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The above image was taken in North Boulder facing West-Southwest while attempting to capture the above Cumulus and Altostratus clouds. This was taken on October 11th, 2024 at 10:14 AM. Shown below is the original unedited picture.

The camera was pointed about 5 degrees up from horizontal West-Southwest. It was captured for the Clouds First assignment and was my favorite of the photos taken for the project.

The clouds seen in the above photos appear to be cumulus and altostratus clouds [1]. The cumulus clouds are the small fluffier clouds with flat bottoms. The second cloud type seen is higher in elevation, called altostratus clouds. These are characterized by their uniform grey look. The weather that day was a bit chilly in the morning but had no expectations of rain or wind. Fig. (1) shows the skew-T plot from that day.

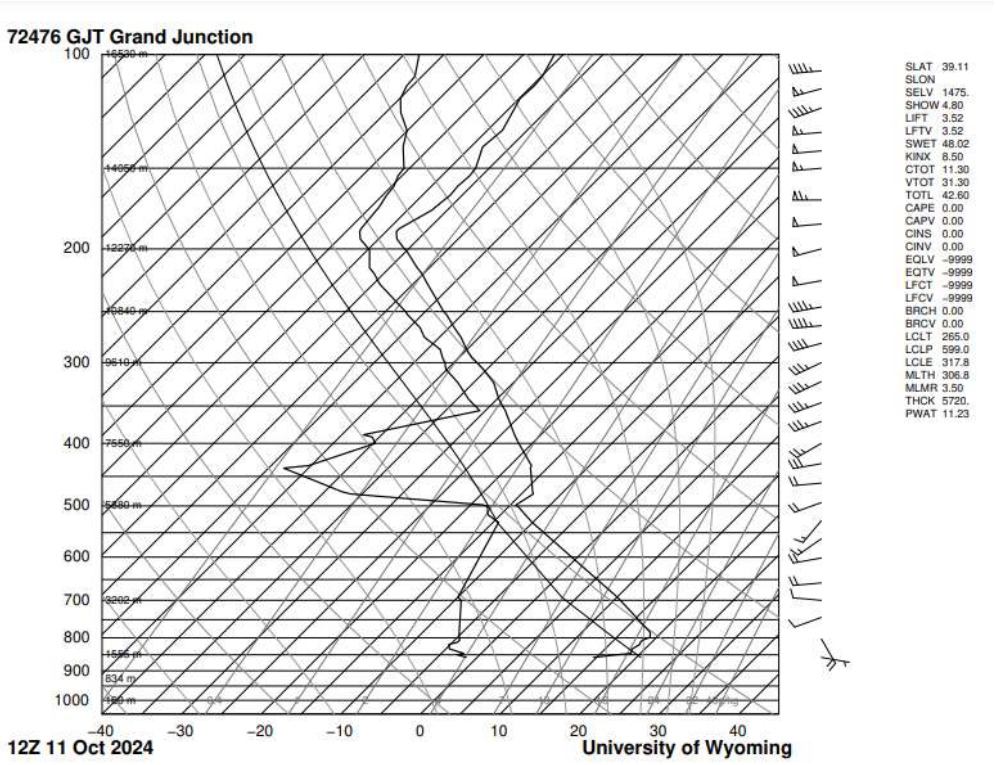

Figure 1. Skew-T plot from Grand Junction Colorado on Oct. 11th, 2024.

Given how close in elevation the cloud formations look in the captured photos, the skew-T plot would indicate that these formations would be happening at the shown elevations (where the lines nearly intersect) and are likely an accurate indication of the weather seen. According to the skew-T, the cumulus clouds are at about 5,000 feet and the altostratus clouds are at about 8,000 feet. Also, as was observed, all the clouds were moving slowly west as indicated by the speed and direction arrows. The cumulus clouds were also appropriately seen as common in the morning before the sun warms up the atmosphere for them to disperse and disappear entirely in the afternoon [1].

The goal of the picture was to capture the patterns of the clouds while also keeping much of the landscape in focus for a sense of scale and perspective of where the picture was taken. This picture was taken with a Canon T6i, f/5.6, 1/1250 second shutter, ISO 200, 55 mm zoom at 6000 x 4000 original, 4857 x 3238 cropped after editing in Adobe Lightroom. The distance from the camera to the subject(s) varies from 300 feet to the trees to about 5 miles in distance to the mountains and clouds. There were numerous things adjusted for the color corrections including brightness, contrast, warmth, individual color tint and saturation, and a mild vignette.

As seen, the picture reveals the cumulus and altostratus clouds seen that day. The image turned out well in terms of framing and the rule of thirds, but the color corrections need re-evaluating. The colors are fine for showing off the cloud patterns, but the vignetting is too intense.

References

[1] *Ten Basic Clouds.* (2023, March 28).

Www.noaa.gov. https://www.noaa.gov/jetstream/clouds/ten-basic-clouds