Casey Munsch

Flow Visualization

MCEN 4151-001

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Cloud Image

For this first assignment, I wanted to try to get a different image of a cloud during sunset. Many of the other images I had taken of clouds did not have the bright colors as the final image, and I wanted to capture a silhouetted mountain in the image. The final image I used was taken on October 22, 2108 at 5:00 PM near Folsom Field.

The cloud in the image is a Cumulus and is defined by its fluffy, thick shape and height in the atmosphere. The atmosphere was stable when the image was taken with a cape of zero. Although cumulous clouds are usually formed in an unstable atmosphere, they can also be formed by the movement of air coming over the mountains. The Skew-T diagram is shown below in Figure 1 and from this diagram we can assume that they could height was at an elevation of about 550 meters.

This image was taken at the start of a sunset and the sky was still bright. It was a clear day and the cloud in the image was one of the few in the sky at that time. The image was taken the day after a light snow, but the day of the sunset was warm and clear. The temperature at the time of the image was around 65 degrees.

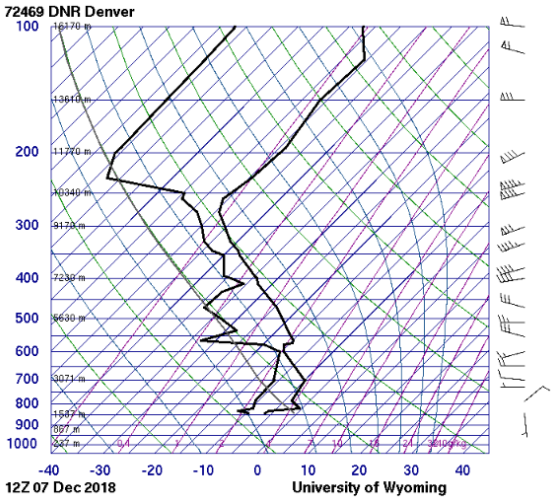
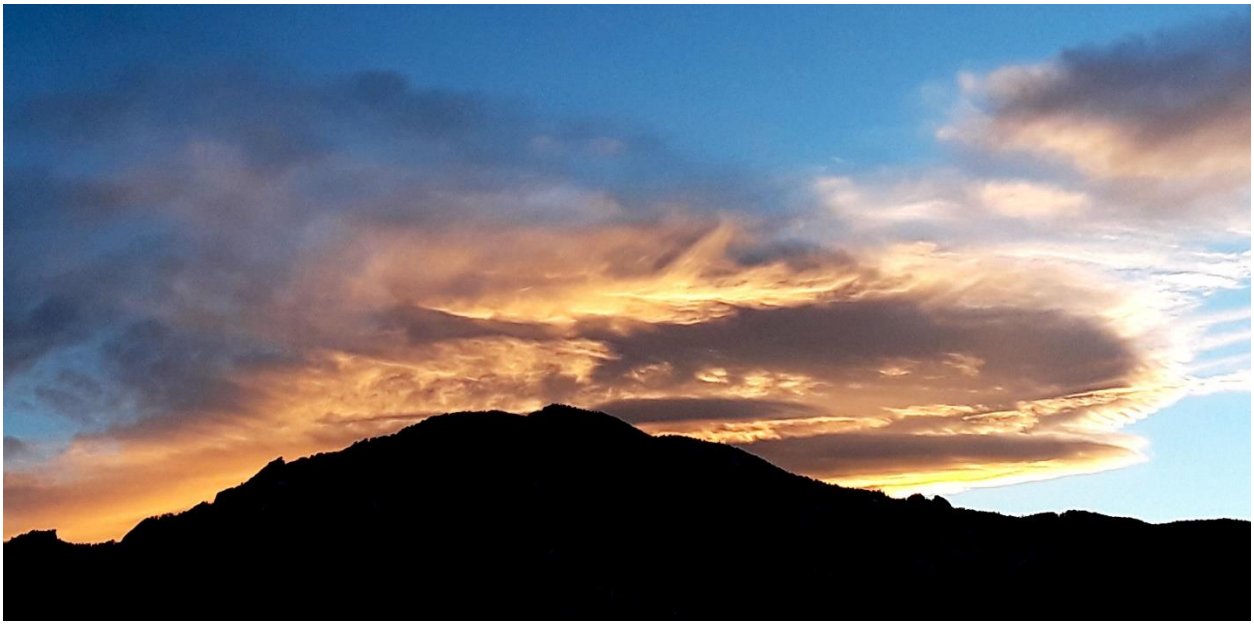


Figure 1: Skew T on October 3, 2018 provided by the University of Wyoming

Image was taken with a built-in function called High Dynamic Range with an iPhone camera. The camera has a fixed f2.2 lens. The High Dynamic Range is used to create a larger light and dark contrast range. The shutter speed was set to 1/60 seconds with an IOS of 400. In post processing, the sky was brightened, and the contrast was increased slightly. The mountains were blacked out in the image to form a silhouette.

I think the image does a good job portraying the sunset cloud and has interesting colors. If I were to retake this picture I would try to capture a more interesting image. I also was hoping to take an image of a different type of cloud because my first image was also a cumulous cloud.



Works Cited

[1] “Atmospheric Surroundings .” Atmospheric Soundings, University of Wyoming College of Engineering, 22 Oct. 2018, weather.uwyo.edu/upperair/sounding.html.