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MCEN 4151: Flow Visualization
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Cloud First

I captured this image on September 28th in the foothills of Fruita, Colorado while camping at approximately 7:00am. The main purpose of this task was to get familiar with cloud formation and how temperature, pressure and atmospheric stability play a role on they type of cloud present at a certain time. I decided to use this photo for my "First Cloud" assignment because of how vibrant the colors of both the sun rise and clouds are. I think leaving some nature in the picture such as the mountains and a couple of trees gave the image a more authentic look, while still maintaining the clouds as the center of attention of this photo.

Figure 1 is the Skew-T diagram provided for Grand Junction on the day the photo was taking. Grand Junction is about 10 miles away from Fruita so using this location is close enough to get the right data for the cloud present. In this image we can observe a bunch of cumulus cloud at approximately 6,000ft above the ground. The diagram tells us the atmosphere was virtually stable since the CAPE value was 57.86 (CAPE = 0 is stable). From the diagram we can also obtain that the temperature was around 15 °C which makes sense because cumulus clouds are formed in fair weather which is typical for September weather in Colorado.

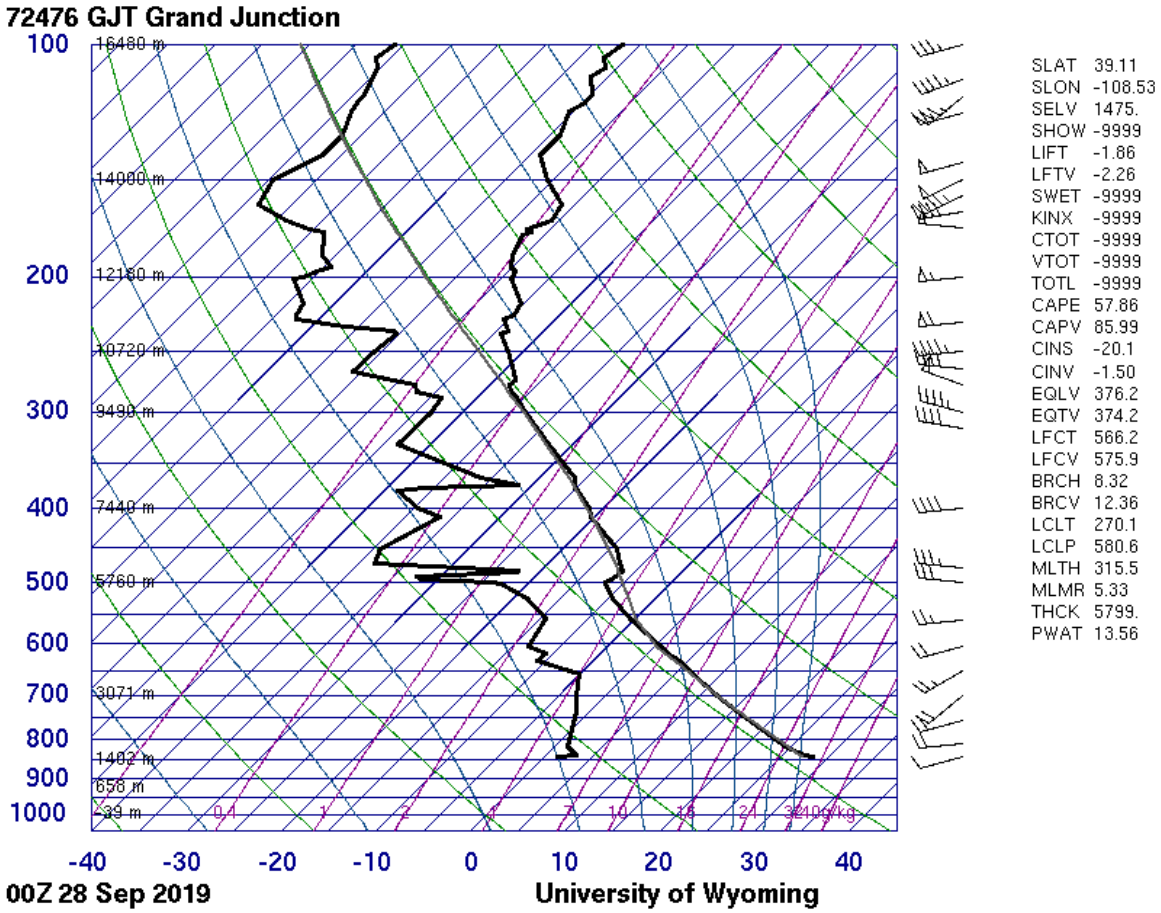

Figure 1

This photo was taken with my Pixel 2 phone camera and it was pointing directly to the East. I walked about 100 ft from my camping ground to be able to see the whole scenery before I decided to photograph it. I decided to photograph this because I really liked the way the sunlight reflected in the bottom of the clouds. Having the light shine in that direction made my cloud appear darker in the photo which I think was a cool effect as it have it a feel of raining clouds. I decided to leave my image unedited because I was afraid the natural beauty of the sunlight might become unrealistic.

References

"Skew-T Log-P Diagram." *Wikipedia*, Wikimedia Foundation, 2 May 2019, https://en.wikipedia.org/wiki/Skew-T_log-P_diagram.

Cumulus Clouds, https://eo.ucar.edu/webweather/cumulus.html.