

AltoCumulus Cloud- October 9th 2020 6:21 PM

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This report will go over the purpose, capturing, and physics of a cloud image. The purpose of this assignment was to capture a cloud image and describe the cloud phenomena. I wanted to capture a cloud image that displayed the beautiful colors of Colorado sunsets.

My image was captured on October 9th 2020 at 6:21 PM in Boulder, Colorado facing the West. The temperature was around 65°F. The AQI was moderate at 87 due to the Cameron Peak wildfires about 80 miles northwest of Boulder. The angle from the horizontal was around 30°.

The clouds in the image are altoCumulus clouds because of the fair weather and their altitude. [3] The weather the days leading up to and following the 9th were fairly warm and mild and the AQI was moderate to high on the surrounding days. The CAPE value was 0.0 indicating a stable atmosphere. The height of these clouds was likely around 10,000 feet from the ground. Because of the smoke in the air, the sun was tinted red which created an extremely colorful sunset. [1] AltoCumulus clouds are caused by the lifting of moist air pockets which are cooled by gentle turbulence. The mountainous terrain creates atmospheric waves causing the cotton ball texture of these clouds.

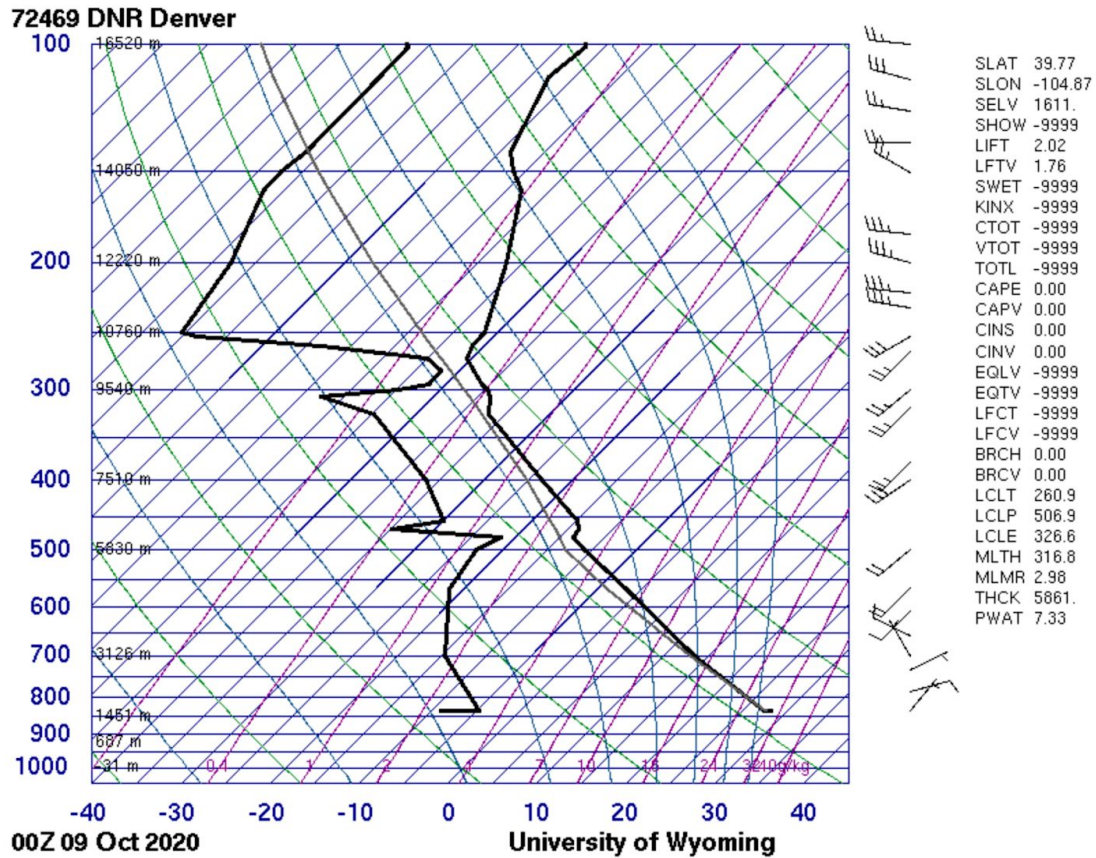


Figure 1: Skew-T October 9th evening [2]

This photo was unplanned and taken while I was waiting for the bus on the main campus of CU Boulder. Because I was not expecting to capture this photo at the time, I used my iPhone 11 camera. The camera was on an automatic setting with an ISO of 32, and aperture of f/1.8, and a shutter speed of 1/182 seconds. The lens size was 4.25 mm. The original image is 3024 × 4032 pixels and the edited image is 600 × 600 pixels. The clouds were around 10,000 feet above the ground. To edit the photo, I brightened the colors in order to make the photo pop and I edited out the light posts so that they would not distract from the clouds.



Figure 2: Original image



Figure 3: Edited Image

The photo shows altocumulus clouds hanging above a colorful Colorado sunset. Overall, I really like how my final image turned out. I wish that I had been prepared for the beautiful colors and had my camera with me to increase the quality of the photo. I would like to improve the quality of the photo by using a camera made for capturing more professional looking photos.

References:

[1]“*Altocumulus Clouds.*” *Met Office,*

www.metoffice.gov.uk/weather/learn-about/weather/types-of-weather/clouds/mid-level-clouds/altocumulus.

[2]*Atmospheric Soundings,* *weather.uwyo.edu/upperair/sounding.html.*

[3]“*WeatherSpark.com.*” *Average Weather in October in Boulder, Colorado, United States - Weather Spark,*

weatherspark.com/m/3561/10/Average-Weather-in-October-in-Boulder-Colorado-United-States.