Hana Kieger
Assignment: Clouds One
Course: ATLS 4151-001
Cloud Type: Cirrus
Cloud Date/Time: September 30th, 6:43 p.m.
Cloud Location: About to land at DIA – Denver, CO

This photo was taken for an assignment for a flow visualization course (visualizing fluid physics). The assignment was to take a photo of clouds. I took this image to capture the sunset illuminating clouds from the perspective of an airplane, rather than the ground.

The image was taken from a moving airplane about to land at DIA in Denver, Colorado. The camera was facing west, slightly south west, but was at a 90 degree angle with the horizontal. The image was taken on September 30th at 6:43 p.m.

The image displays cirrus clouds in a stable atmosphere. The CAPE from the Skew-T chart is 0.00 which is indicative of a stable atmosphere. According to http://skywatch.colorado.edu/, the clouds on September 30 were above 6000 meters, which agrees with the clouds being cirrus (in addition to their physical appearance). There was no precipitation in the days leading up to September 30th, and it took until October 3rd for there to be a storm after. There were high winds starting on October 1st, and around the time of this image winds were very low, around 5mph (Boulder Muni…). Cirrus clouds are formed out of ice crystals, not water droplets. They are found higher up in the atmosphere because the ice particles need to be frozen, and the atmosphere is colder higher up (Carr).

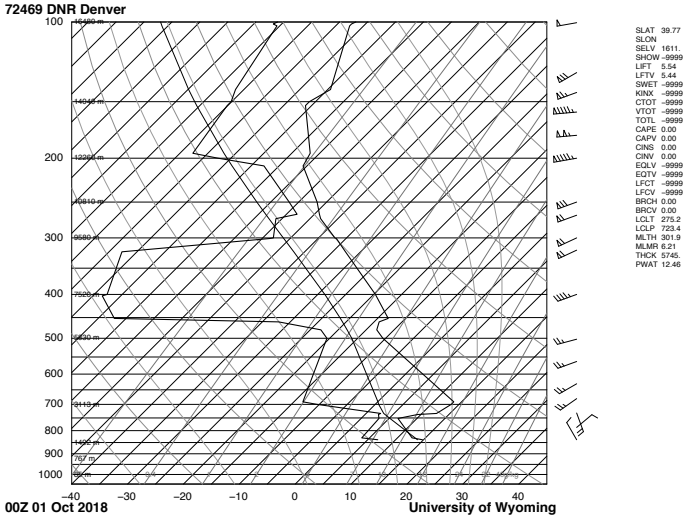

Figure One: Skew-T Chart

The field of view of this image is quite large, probably at least a mile wide. The mountains (the sun in the bottom of the image is right below the mountain line) are roughly 40 miles away from the airplane and therefore my camera. I was using an iPhone 7 Plus to take the image. The original dimensions were 3024 × 4032 and the final dimensions were 900 × 1200. The focal length was 3.99, the f number was 1.8, the exposure time was 1/912. For post-processing editing, I mostly increased the vibrance / saturation and cropped the image to have it focus more on the clouds.

I am pleased with this image. I like that you get a unique perspective of the clouds because the photo was taken from an airplane instead of the ground. I wish there was a little more contrast, but that wasn't able to be achieved in Photoshop due to the natural lighting of the photo.

Sources

"Boulder Muni, Boulder, CO, CO History." *Weather Underground*, www.wunderground.com/history/weekly/us/co/boulder-muni,-boulder,-co/KBDU/date/2018-9-29.

Carr. "Cirrus Clouds - Weather Science." Q*uatr.us Study Guides*, 24 Sept. 2018, quatr.us/physics/cirrus-clouds-weather-science.htm.