Lily Pelton
Fall 2021 Cloud 2
ATLS 4151: Flow Visualization
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Lenticular Cloud
Taken on November 14th at 3 pm at the 29th street mall.

I. Introduction

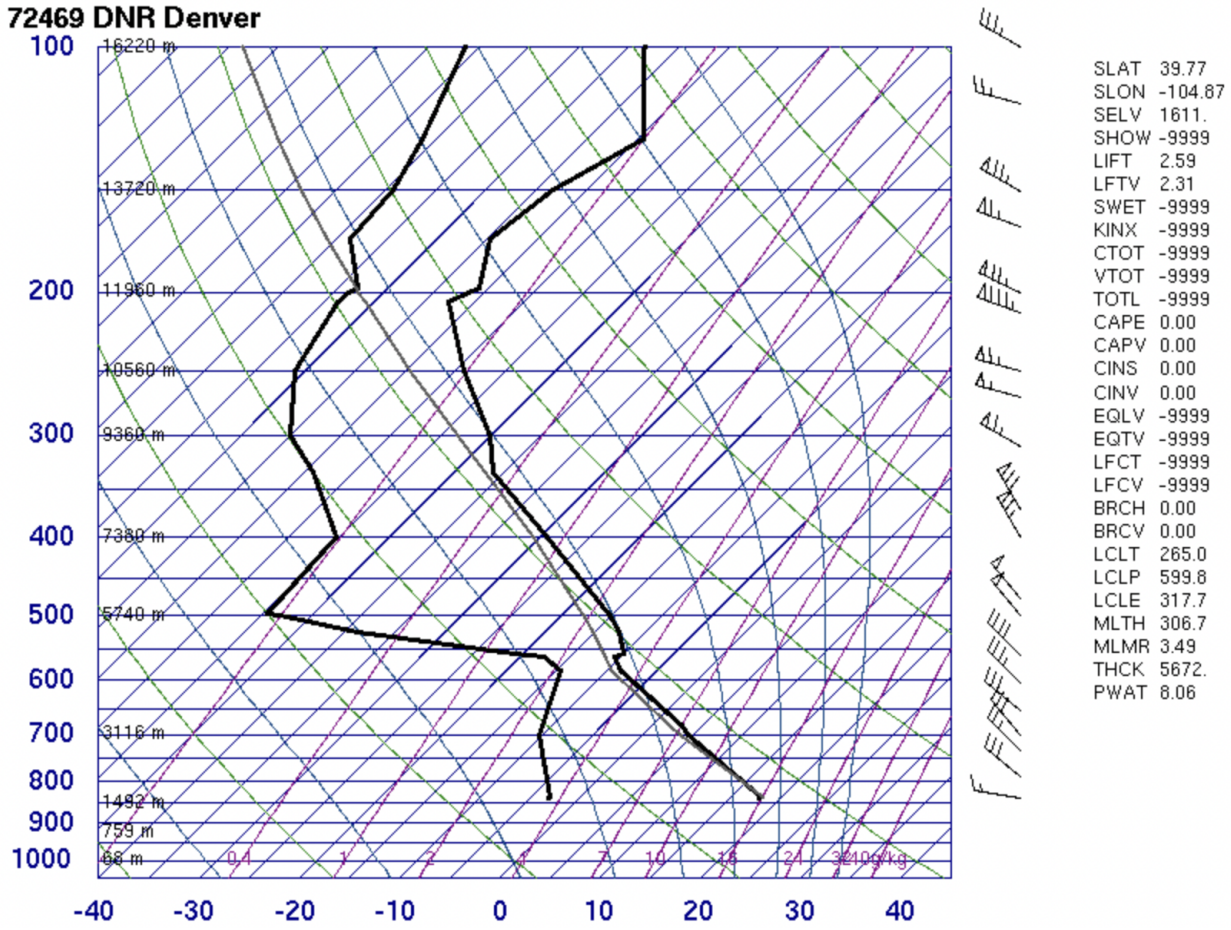
My friends and I had just gotten back from Crested Butte and stopped to get some Firehouse Subs at the 29th Street Mall and I looked behind me to see one of the coolest clouds I have maybe ever seen. I have never witnessed this type of cloud, which I found out to be characterized as a lenticular cloud.

II. Image Circumstances

This image was taken in front of Firehouse Subs at the 29th Street mall on November 14th at around 3:00pm. I took this photo facing slightly Southwest towards the Flatiron mountains and my phone was pointed at about an angle of 55 degrees from horizontal.

III. Cloud Description

The clouds captured in this picture are lenticular clouds. Lenticular clouds are stationary clouds that usually form in layers in the same direction as the wind. These types of clouds almost always form near mountains and generally not over low-lying or flat ground terrain. As air travels along the earth's surface, it comes in contact with these obstructions (like mountains) and forms areas of turbulence. When stable moist air flows over these turbulent areas, large standing waves form on the side of the mountain. Then, if the temperature at the crest of this wave drops under the nearby dew point, the air's moisture condenses to form lenticular clouds. Oftentimes these types of clouds have been mistaken for UFOs because they look like saucers. Looking at the skew T diagram, the CAPE value is equal to 0 which means the atmosphere was stable. You can also see that the height of the cloud is about 1,492 meters from the ground which means this specific lenticular cloud is stratocumulus, which is the lowest type of cloud. The Skew T diagram can be found below.



IV. Photographic Technique

I used my iPhone 12 Pro's camera to take this photo. It was taken using a wide camera (26 mm), ISO 32, and f1.6. The size of the photo is 4032 x 3024 pixels. I used just a little post processing to play with the colors and make everything pop a little more.

V. Final Results

I love the way this photo came out and I am really happy that I was able to capture a cloud of this type. I like the contrast of the clouds near the mountains and how it makes the cloud look absolutely massive. Almost overwhelmingly. I love how you can see the layers of the cloud and the way it curves around. Personally I think it's super cool.