

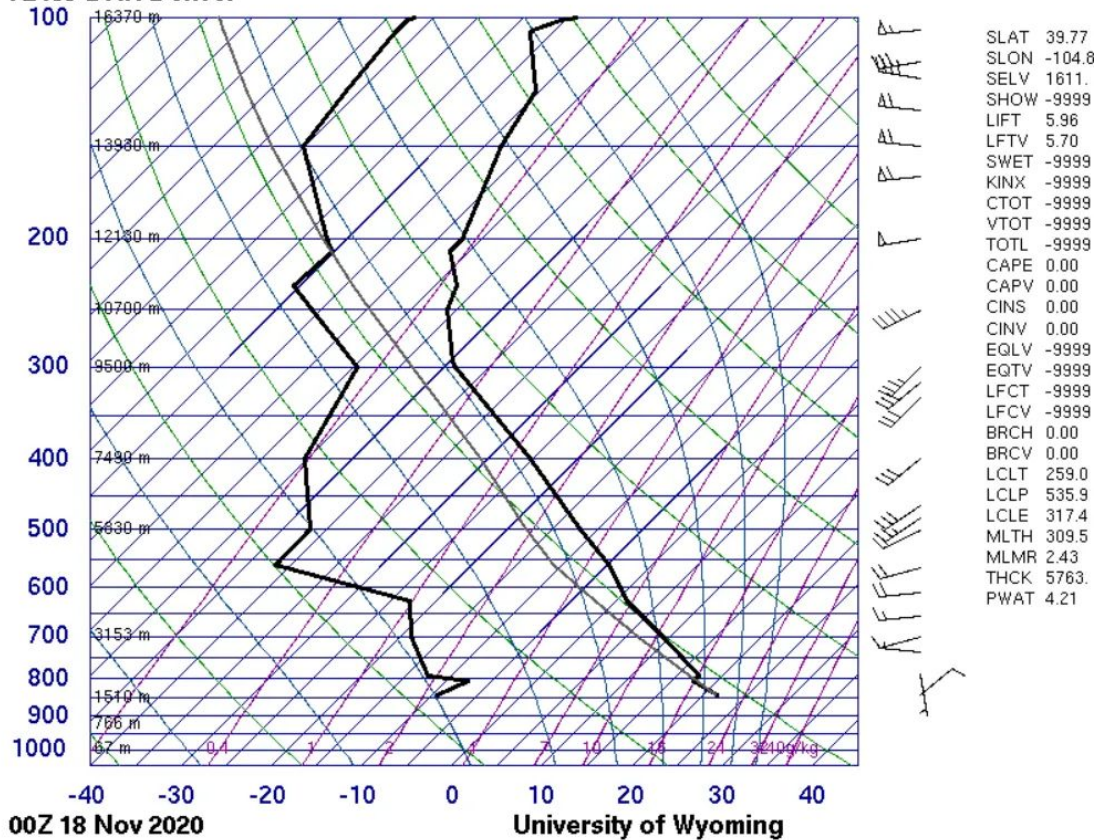
Cloud Image 2: Westminster, Colorado

This image was taken for the second cloud image assignment. I took this image in order to capture the afternoon clouds and their beautiful and unique geometry. I liked the contrast of the white wispy fibers and tendrils of the clouds, and the bright blue of the sky. I also thought that the framing of the central, feather-like cloud was very interesting, and something that I didn't often see in clouds.

This picture was taken in Westminster, Colorado, at an elevation of about 5384 ft. It was taken facing South, but very strongly overhead. The angle of the camera was almost directly upward, with just enough angle to capture the tops of the trees in the foreground. This sunset was captured on November 17th, 2020, at 1:02pm MST.

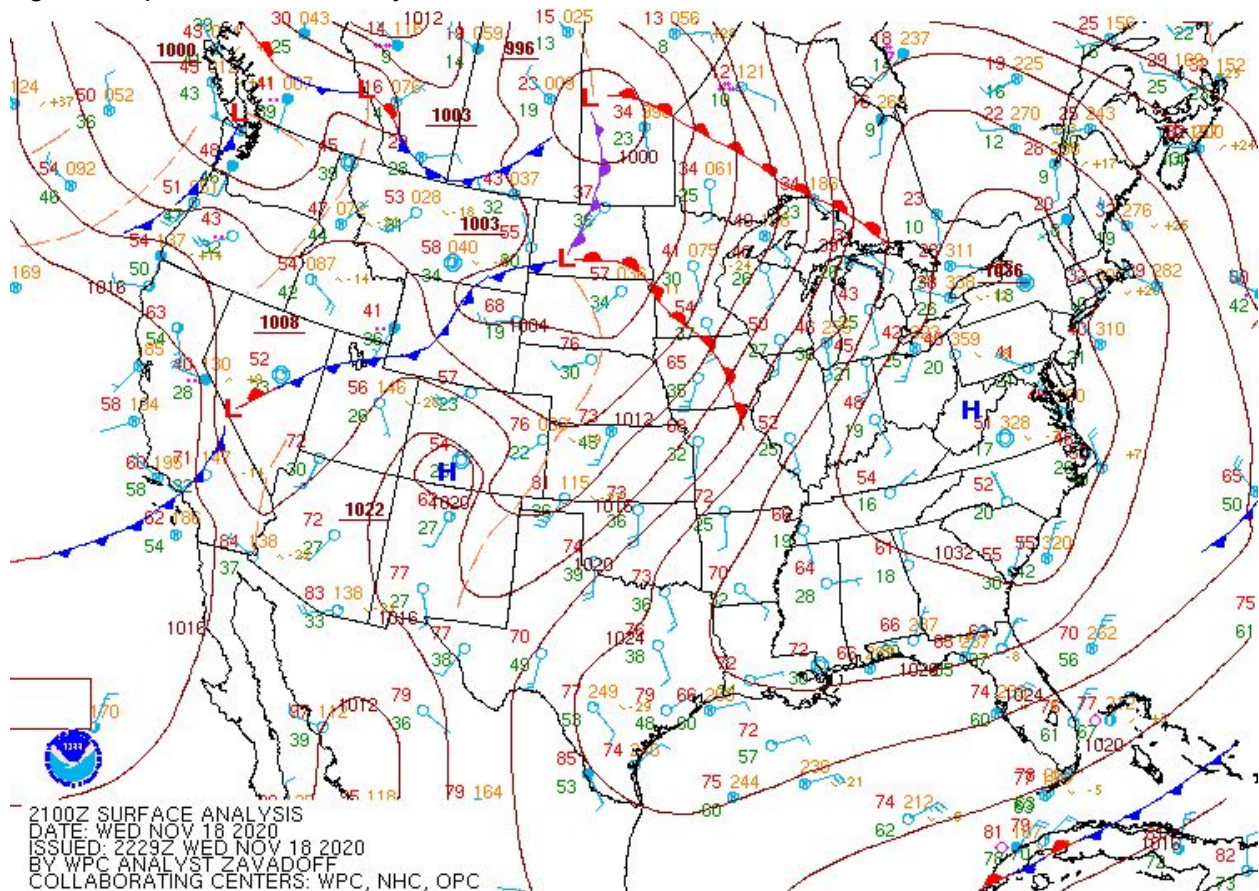
There appear to be high white cirrus uncinus and cirrus fibratus clouds. These cloud types were reflective of the rest of the sky as well, which had a thin layer of very feathery clouds throughout. There was clear bright weather that afternoon, with moderate to warm temperatures. These temperatures had been warming across the past few days, and peaked on the day that this picture was taken, to cool off in the following days. The SkewT diagram from Denver International Airport can be seen below, gathered by the University of Wyoming.

72469 DNR Denver



The diagram indicates no instability, with a CAPE value of 0. This is further reflected in the cloud formations, since cirrus clouds are often reflective of a very stable atmosphere. I expect that these clouds were above 20,000 ft given their type. This is somewhat reflected in the SkewT-- there is a slight necking at 9500 meters, which is an elevation of about 31000 feet, which could be where the clouds are occurring. However, it must be noted that the location where the image was taken, and the location of the SkewT at DIA are somewhat far (a little over 30 miles).

Because of this, I also included a weather map of the United States, to view a broader perspective of the atmospheric phenomena that were occurring. This information was gathered, presented, and archived by NOAA/The National Weather Service. I have included this diagram below. As visible in the diagram, Westminster is receiving a warm front that brought in the higher temperatures, and likely affected the local cloud formations.



This image was taken on the camera of an iPhone 6s Plus. The f stop was f/2.2, with an exposure of 1/986, and an ISO of 25. The focal length was 4.15 mm. I would estimate that the field of view is a number of miles for the cloud portion. The trees in the foreground span about 50 feet. This image was edited in darktable. The saturation was increased to intensify the colors, and an s-curve was given to the color in order to brighten the cloud filaments against the blue background. The exposure was also increased slightly in order to brighten the overall image. The image is 4032/3024 pixels, and was cropped. Below, the original image and the edit

are placed side by side:



Original



Edit

This image reveals uncommonly seen fluid phenomena in the atmosphere. I love the texture of the clouds in this image, and the lovely thin details that you are able to see. I also thought that it made an interesting combination with the trees at the bottom, since they give the picture a sense of scale, and also mimic the thin branching details. I fulfilled my intent with this image, and I am proud of how it turned out. I wish that I had been able to take this image with a better camera than my phone camera, because I think the details would have been stunning in higher quality. However I only had my phone camera at the time, so I was not able to. Regardless, I was pleased with the result.