

Flow Visualization
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Report 5: Second Cloud Picture



The fifth photo topic for this class was to have students take more pictures of clouds. Again, this project gave the student a month or so to spend sporadically looking up that the sky to discover a cloud development, sunrise, or sunset. This picture in the report was taken on November 6, 2016 of the clouds in Seattle on a clear day. This report will look into the weather steadiness of the day as well as the creative and scientific thinking behind this photo.

This photo was taken in Seattle, Washington at 12:40 pm on Sunday November 6, 2016. There wasn't a complex setup for this photograph, it was taken on a boat because the sky looked pretty. It was chosen because it was in a different location, which had slightly different cloud formations, which is interesting. The camera was angled slightly upward ~5 degrees from being horizontal, to display more of the cloud formations while still keeping the city skyline in the frame of the snapshot.

These clouds are Cirrus and Stratocumulus clouds. This can be seen by looking at the Skew-T diagram of the day, shown in Figure 1.

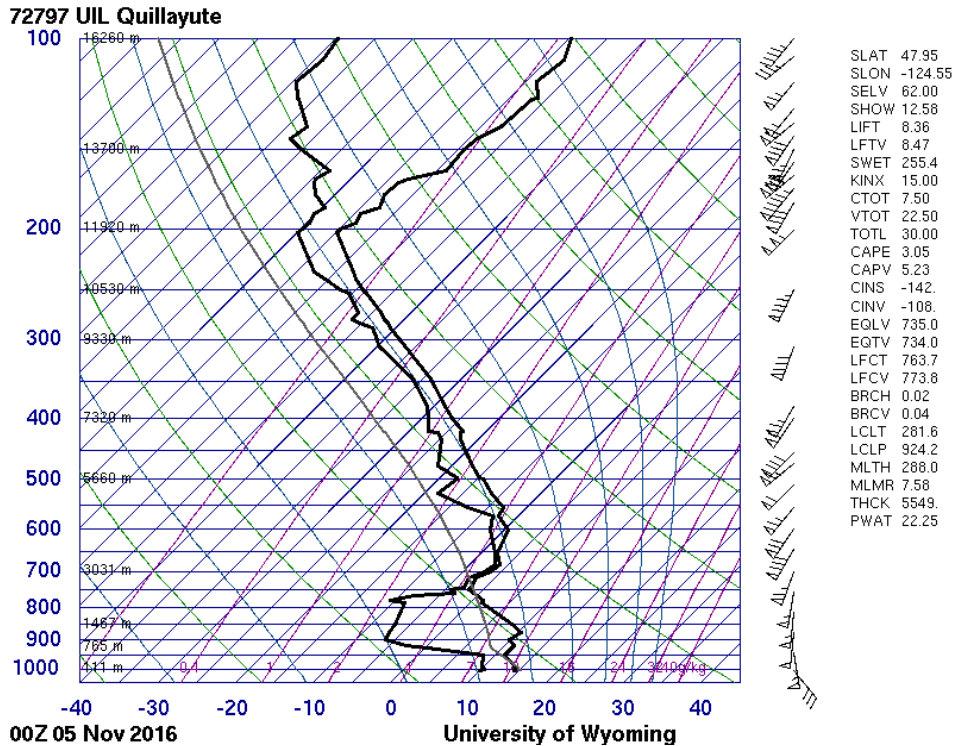


Figure 1: Skew-T Diagram for November 6, 2016

By looking at the CAPE value, it can be seen that the climate was pretty stable. Knowing this as well as knowing the shapes of the cloud formations, it can be seen that these clouds are in fact both Cirrus and Stratocumulus clouds. Because they are Stratocumulus clouds it is assumed that they were located in the Stratosphere, approximately 30-50 km above ground and the Cirrus clouds were slightly above that. The previous day before this photo was it taken was very stormy and it had rained all day. The day the photo was taken there was wind present.

The camera used was a iPhone camera. The aperture was f/2.2 and the ISO was at 32. The shutter speed was 1/2083. Editing was simple, the photo was slightly cropped and brightened. The original picture is shown in Figure 2.



Figure 2: Original Photo before Editing

As can be seen, not much about the picture was changed other than the slight brightness modifications and a crop.

The photo was chosen because of the interesting formations that are seen. I liked the photo, but it would have been better if I could have taken the photo with the DSL camera rather than the iPhone, but it wasn't present at the time.