Clouds Second Report

Flow Visualization

MCEN 4151

Team First

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I captured a picture of cloud. The phenomenon This cloud is cited a v north view from campus on April 8th and I decided to use that cloud as my submission of Cloud Second Image. I wanted to capture overlapped clouds, so I focused on the surface of cloud which is in front of other clouds and make the cloud at the center of frame. The sky was clear and very bright blue, so the cloud was seen very well. I found that the type of cloud in the image is stratocumulus by its appearance.

Figure 1: Pre-Photoshop/Original Image

The figure 1 is showing the pre-photoshop/original image. The pre photoshop has

more margins around the cloud object. I increased the color contrast to make my image looks more dramatic with overlapped clouds. The cloud is an aerosol comprising a visible mass of minute liquid droplets, frozen crystals, or particles suspended. The cloud forms when the invisible water vapor in the air condenses into visible water droplets or ice crystals. It sometimes contains tiny gas particles or dust. Five main factors that cause to form the cloud are surface heating, topography forcing, frontal, convergence, turbulence.

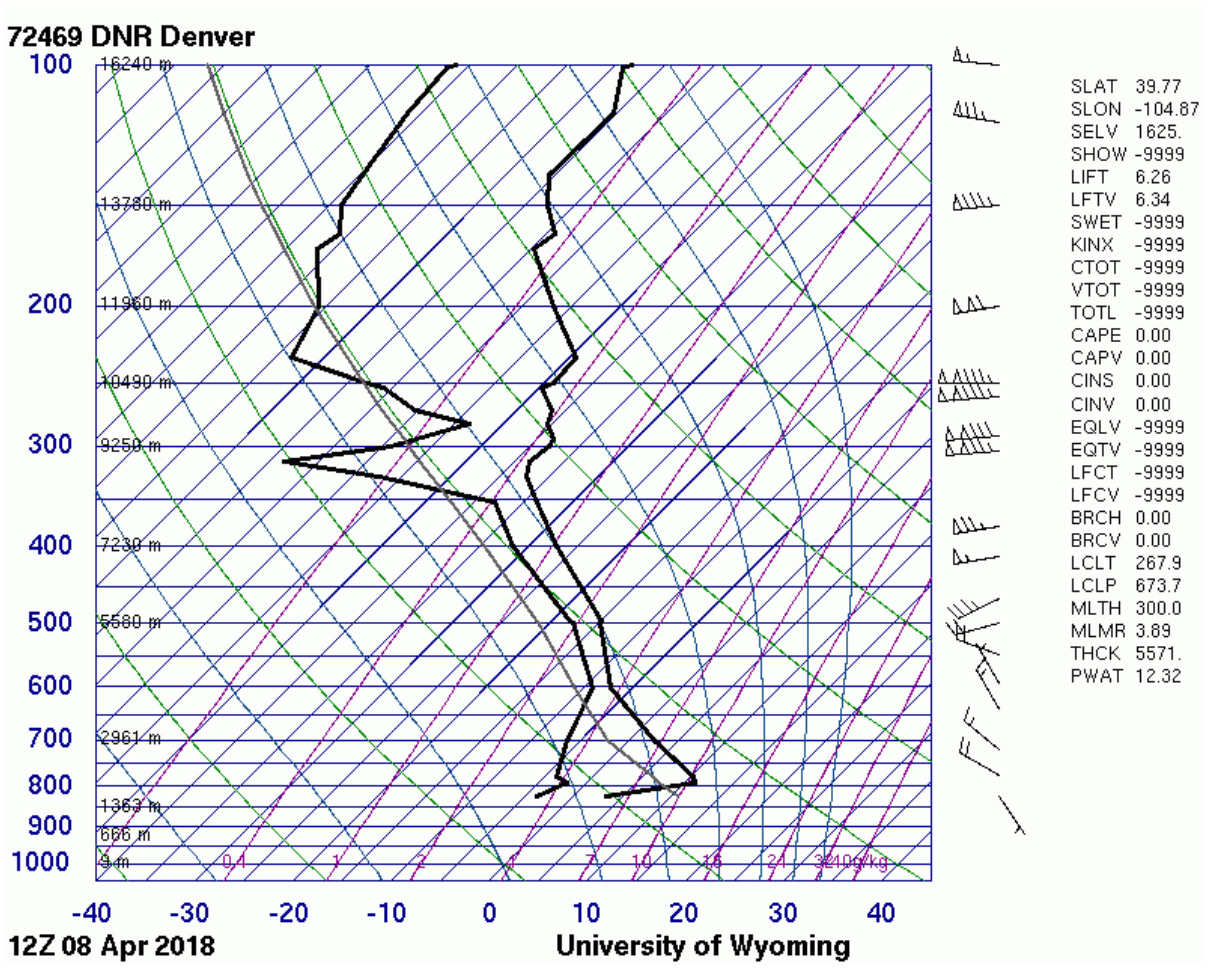

Figure 2: Skew-T Diagram of The Day That The Cloud Is Captured

Figure 2 is the skew-T diagram of the day that the cloud is captured. As the diagram is

shown, the value of cape is 0.00, which means the atmosphere was stable at the moment when the picture was taken. I have used iPhone as my shooting method, and iPhone has two different lenses which are wide-angle lens and telephoto lens. The wide-angle lens measures 28 mm, and the telephoto lens measures 56 mm. From the EXIF data, we know that the focal length is 3.9 mm. The camera specifications are 1080p at 60 fps, 7 MP, f/2.2 and 32 mm. I reduced video quality to 720p from 1080p due to the size of video by using iMovie.

In my opinion, the image came out well. It is captured the behavior and shape of the cloud very well. The color saturation emphasizes my cloud more and makes it beautiful. A question I could ask is why cloud is white on clear climate. I think that it would be a significant improvement if I use more professional camera to capture the cloud.

Works Cited

"Cloud." *Wikipedia*, Wikimedia Foundation, 23 Apr. 2018,

en.wikipedia.org/https://en.wikipedia.org/wiki/Cloudwiki/Cloud.

"What Are Clouds and How Do They Form?" *Met Office*, Met Office, 12 July 2017, www.metoffice.gov.uk/learning/clouds/what-are-clouds.