Clouds First

Boulder, Co

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Figure 1: Final result of clouds first

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Introduction

For the first clouds assignment, I went to the closest scenic view of Boulder. It was snowing in the morning and the afternoon was a warmer when I took the picture. I had the chance to capture Cumulus clouds. I preferred this picture from other pictures I took because it showed different shades of the clouds.

Experimental Setup

The picture was taken at the scenic view at US 36. The spot is very close to Boulder. Most of the city can be viewed from that spot along with some other reservoir. The picture was taken in October 10, 2019 at 1:40 PM aiming to the east.

Description of the Clouds

The state of the clouds that afternoon was mostly stable atmosphere according to the CAPE number provided from the diagram below which is 0.

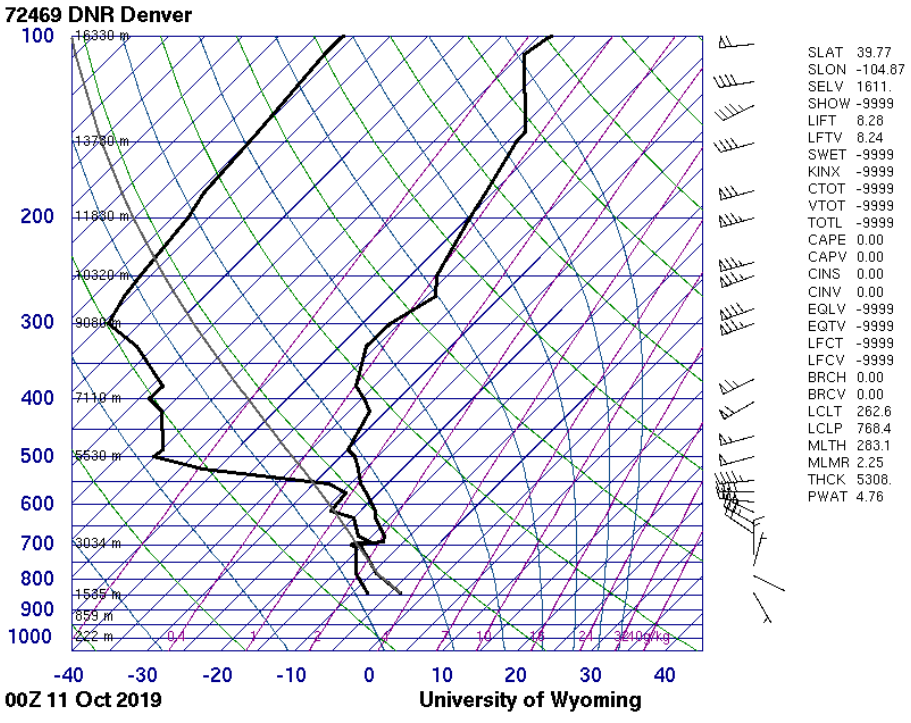

Figure 2: Skew-t diagram from October 11 00Z 2019 of Denver's sounding.

The first layers were formed around 3000-3500 meters of altitude which is possible since the picture was taken in mountainous area. Furthermore, the layers had a temperature between -10° C and 0° C. The pressure where the clouds were formed is in betweem 400 millibars to 800 millibars. Cumulus clouds can be described as puffy cotton looking clouds. The hight of this type of clouds is shorter than other types.

Techniques used

- Camera Techniques

I have used my iPhone 11 pro to get this picture. The iPhone 11 pro has three camera lenses. I thought that using the wide-angle lens would better in capturing clouds. The reason is that the lens would capture more space and clouds. The original dimension of the picture was 4032×3024 pixels. The focal length was 6mm. The F number was f/2. The shutter speed that the iPhone chose automatically is 1/5319. I have tried to get the actual ISO value, but I could not. However, I did a bit of research and I found out the auto ISO value for the wide-angle can be anything in between 32 until 3072.

- Editing Techniques

For this picture, I have put some edits on it using the iPhone built-in photo editing program. I have played with the settings for a while but then the picture became blurry. So, I thought that editing too much would lead to a bad result. Thus, I just changed the contrast 5 bars to the right. Similarly, I moved the saturation 5 bars to the right in order to get better colors.

Figure 3: A comparison between the raw picture on the right and the edited version on the left.

Conclusion

In conclusion, I have taken many pictures in different circumastances. I got my new iPhone not a while ago. Therefore, I could not take a lot of pictures with it which I am excited to do for the second clouds assignment. The wide-angle lens is very good in capturing big spaces which is required for this type of assignments. The spot where I captured the picture was high enough to get closer to the clouds.

Reference

Skew-t diagram
http://weather.uwyo.edu/upperair/sounding.html

Cumulus Clouds
https://eo.ucar.edu/webweather/cumulus.html

iPhone 11 pro camera review
https://www.androidpit.com/apple-iphone-11-pro-max-camera-review