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Clouds First
MCEN 4151
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**Clouds First**

This report is for the submission of the Clouds First assignment. For this image, I wanted to explore and examine the clouds in the sky and use information and analysis to classify the cloud type. By using a skew-T plot and researching the weather patterns from the day the image was taken, I'm able to make and educated assumption on what the clouds captured in the image may be. The image also displays an artistic perspective on the clouds by using objects in the foreground and favorable color pallets.

The image was taken on October 11th, 2020 at 6:23PM. The image was taken by me while I was in the passenger seat of a car. I was heading home while on the I-225 South highway in Aurora, Colorado. The image was taken at sunset of the day which would explain the coloration of the clouds. I would approximate the angle the image was taken to about twenty degrees from the horizontal. From this, the elevation of the clouds seems to be at 5000 feet above the ground.

The clouds captured in the image belong to the stratocumulus genus of clouds. The type of cloud is a combination of stratus and cumulus clouds and are usually characterized by their rounded shape. Stratocumulus clouds also tend to be large in size and can vary in color. Stratocumulus clouds almost always form in groups which explains the long shape of the clouds in the image. These clouds also usually form at elevations from 2000 feet to 7000 feet above the ground. Sometimes, if the air over land is moist and hot enough, stratocumulus clouds can develop into cumulus clouds or they may become thick enough to produce some light rain [1]. However, at the time the image was taken, within a few hours before and hours after, there was no rain or snow. From the skew-T plot below, the CAPE value of 0.00 J/kg at the time the image was taken describes a stable atmosphere. In terms of precipitation, stratocumulus clouds usually produce none and are often seen at either the front or tail end of worse weather [1].
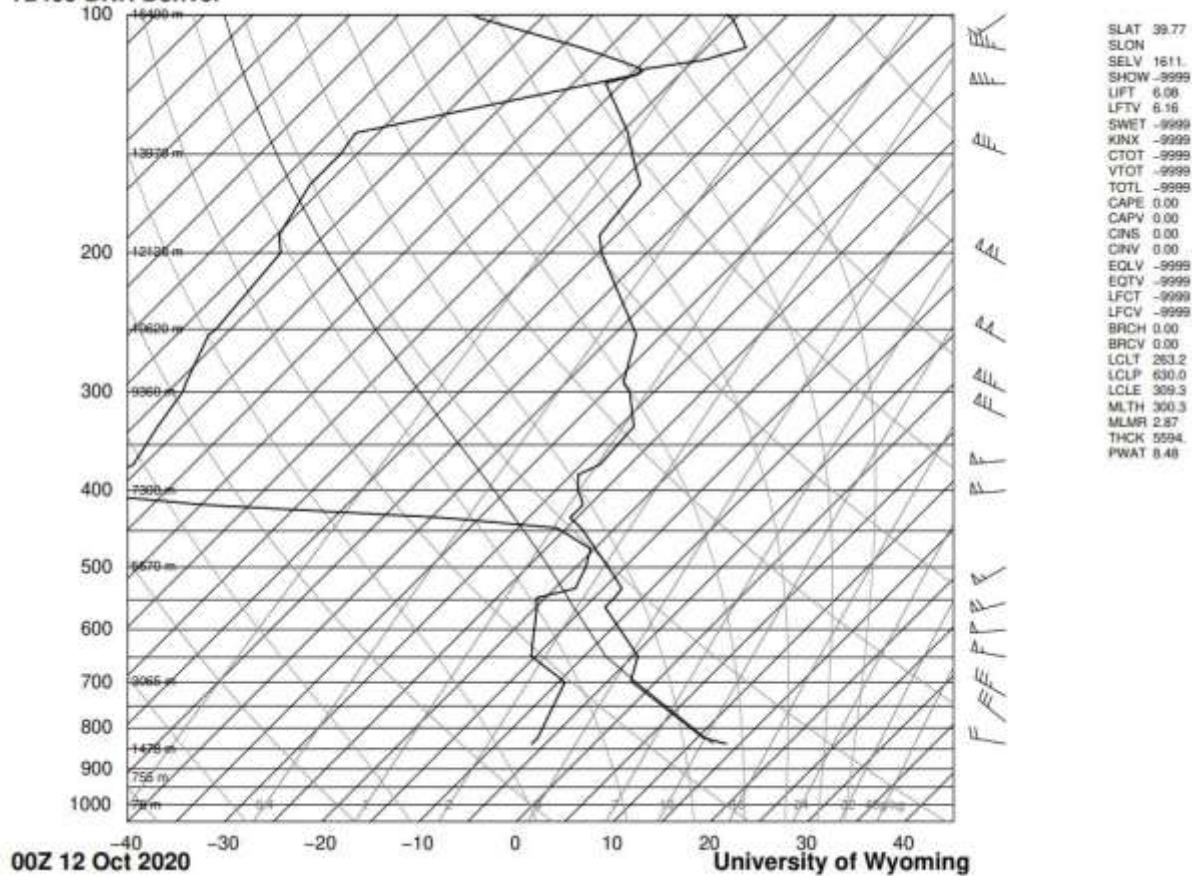
**Skew-T Diagram**

When the image was taken, the clouds were approximately 20 miles away from my position. The field of view of the image is about 75 degrees. The image was taken on an iPhone XR in the landscape position. The image was taken with a focal length of 4.25mm and an aperture of f/1.8. The ISO was set at 25. The original image has dimensions of 4,032 x 3,024. The exposure time set by the iPhone was 1.696. In post processing, no alterations were made to the exposure or colors. Since the iPhone's imaging technology is very advanced, the chosen exposure was perfect and the coloration and saturation of the clouds were already adequate. Most of the changes made in the edited image revolved around the cropping of the image. I cut out most of the sky above the clouds as well as the cars in the foreground. The image was also straightened to be level with the horizontal.

**RAW Image**



**Edited Image**

Overall, I am highly impressed with the image. I enjoy the colors of the clouds with the light and 'airy' palette. I also like the composition of the image with the building on the right side that contrasts the horizontal shape of the clouds. The bridge gives the image a sense of grounded-ness and somewhat shows the angle at which the image was taken at. With this image, I'm confident in saying that I was able to fulfill my desired intent of capturing beautiful clouds.

However, I would like to edit the contrast of the image to show more details in the clouds. I believe increasing the contrast would define the shape of the clouds more. In the future, I would also like to take the image with a better camera to capture clouds in a high resolution of further show the details within the clouds.

**References**

[1] Wikipedia contributors. (2020, July 10). Stratocumulus cloud. In *Wikipedia, The Free Encyclopedia*.
Retrieved 04:41, October 25, 2020,
from https://en.wikipedia.org/w/index.php?title=Stratocumulus_cloud&oldid=967036296