



# CLOUD 1 REPORT

Cumulus clouds are illuminated by the moon in an unstable atmosphere.

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Flow Visualization

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## Cloud 1 Report

The final cloud that was imaged is a combination of the illumination of the moon and the surrounding clouds. These clouds were imaged at the Recreation Center on campus facing southwest on the date September 16<sup>th</sup>, at approximately 9:41 PM. The clouds you see in the image are cumulus clouds in an unstable atmosphere. Using the rule of thumb that two fingers held a distance away from yourself in fact measure to be of cumulus cloud type. It has also confirmed an unstable atmosphere shown through the skew-t diagram in figure 1 below, since the CAPE number of “282.7” was a value greater than zero indicating an unstable atmosphere.

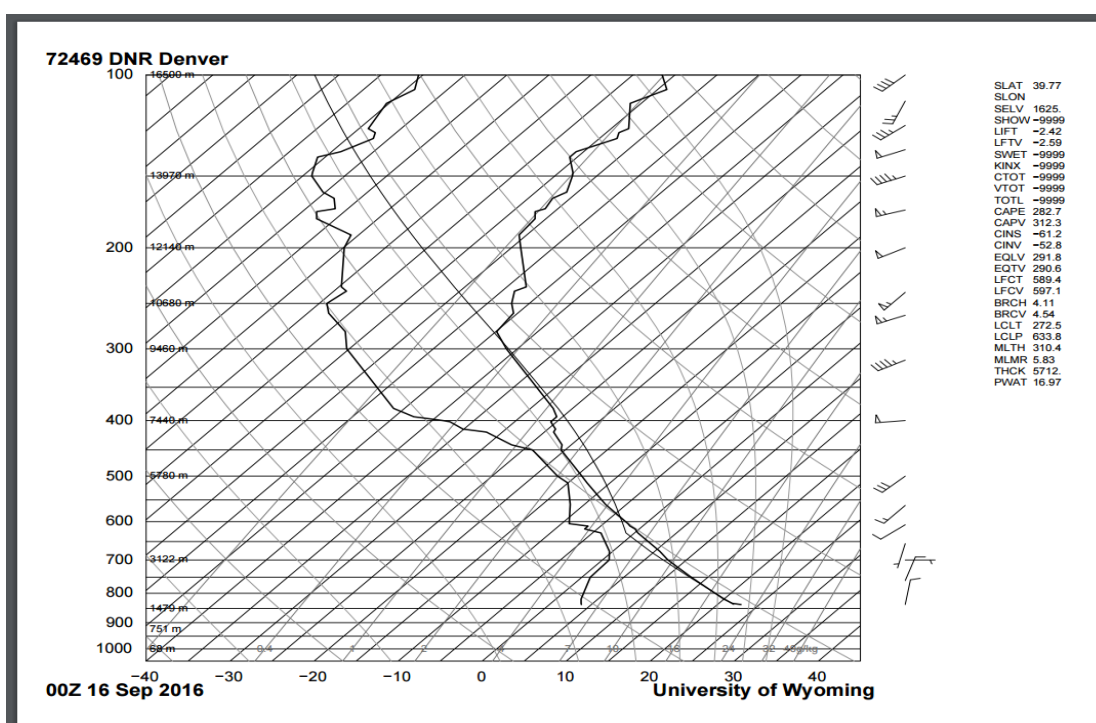


FIG 1: Displays the skew-t diagram for that night displaying the CAPE number for an unstable atmosphere

Since the cloud was moving at a rather fast pace the image was difficult to capture. At that time, I was waiting for a friend outside the Recreation Center and happened to notice how beautiful the clouds were. Unfortunately, I did not have my camera on hand to take a better resolution image, I had to resort to using my phone camera instead. I did the best I could to focus on the image, and used post-processing in Gimp to achieve a photograph that seemed reasonable.

In the post-processing I corrected the highlights, mids, and shadows in order to make the moon less bright and not over expose the photo. I think it was important to do that because the illumination of the moon had “blown out” the middle of the image instead of illuminating the

clouds properly. I also changed the RGB values and saturated them appropriately to achieve a more violet/blue color background.

Figure 2 below shows the comparison from the original image to the edited image in figure 3 on the next page. I found it more pleasing to have less clouds in the photo than the original because I wanted to focus on the clouds surrounding closer towards the moon.



FIG 2: Original unedited image of moon illuminating cumulus clouds in unstable atmosphere



FIG 3: Post-processed image of moon illuminating cumulus clouds in unstable atmosphere

Despite, that night being a really calm night the clouds had shown an unstable atmosphere above. According to the skew-t diagram the clouds had shown to be unstable and had characteristics of cumulus clouds. In the future, I would like to be able to properly photograph these night images with clouds because it is interesting occurrence. I really dislike the low resolution of the image and ideally would like to have a better lighting condition and perhaps some foreground to get a better focus on the clouds above. I think it would be much better to look at the image with a clear boundary of the clouds instead of a more blurred image.

Moving forward, I would like to use a longer lens to focus on the image more properly. Using a small focal length with my camera phone made the image blurry and did not get the proper resolution I had hoped for.