MCEN 4151

Clouds Second Report

Motivation

The purpose of this assignment is to photograph clouds that we come across in our everyday lives. I would say that we take clouds for granted – they come and go, and don't really appear quite unique at first glance. However, clouds demonstrate interesting physical phenomena about how our world works.
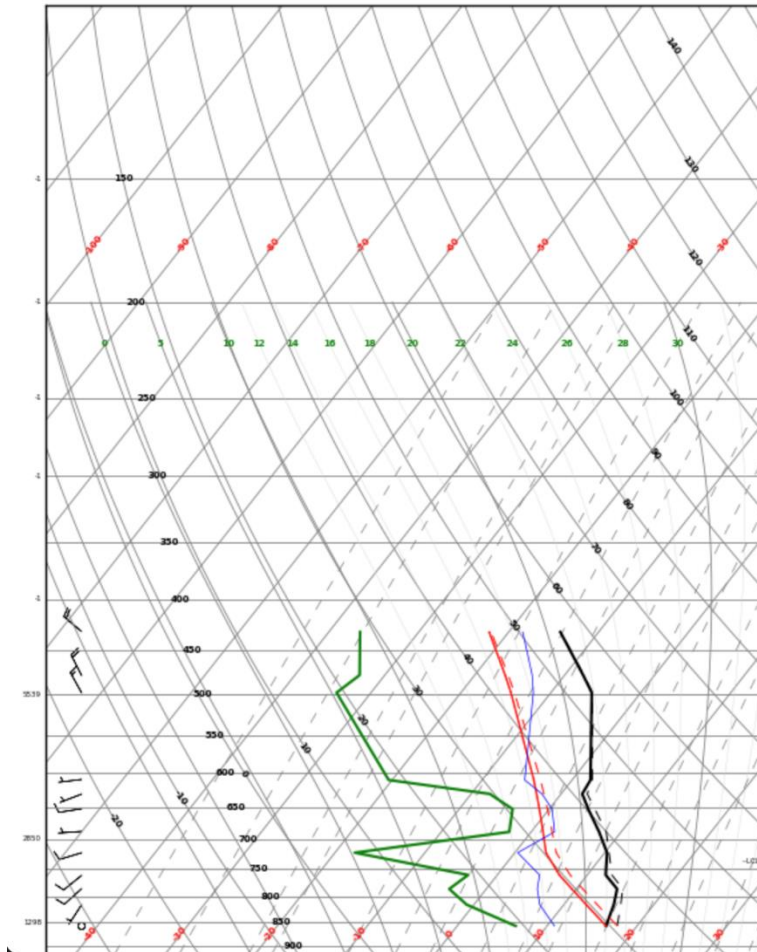
Circumstances of the Image

This image was taken over the skies of Miami, FL while flying out to the Dominican Republic over fall break. I was facing north and pointing my camera about 0 degrees above the horizon. The image was taken on November 18, 2023 at around 1:00PM EST (18:00 UTC).

The clouds presented in the image are several. At the lower levels, one can observe cumulus and stratocumulus clouds. At the medium levels, above the altitude of the plane I was in, there existed altostratus clouds.

The large presence of cumulus clouds demonstrated an unstable atmosphere, as warmer air continuously rises and disturbs the more stable air above it. This is a common occurrence in Florida, where temperatures are warm year-round, and the atmosphere is often filled with turbulence and warm air.

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The Skew-T diagram was taken from NOAA sounding data. It shows an unstable atmosphere.

Videography

For this video, I used my iPhone 14 Pro, which contains 3 separate camera lenses. The information for this video stated the following camera settings for the lens used for this specific photo. My iPhone used the 24mm focal length camera for this photo.

Setting	Value
Resolution	4K

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Conclusion

I am quite satisfied with how the final video turned out. I've attached a link to it here since I cannot seem to find a way to post the entire video on this report document.

Link: https://youtu.be/XZ78GgMavrg