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Flow Vis
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Clouds First Report

For the clouds first project I decided I wanted to capture something more colorful instead of just the blue sky, so capturing either the sunset or the sunrise was my plan. On the morning of the 24th of September I was walking to campus to take a picture for my friends senior design team. At around 6:30 am I arrived on campus near the business building and realized there was an incredible sunrise behind me. I ran to the top of the parking garage near the Engineering Center and was able to capture the beautiful sunrise.

Because it was still pretty dark out, I needed to decrease the shutter speed to 1/30 seconds so that I could have the ISO at 400, leaving minimal grain in the image. With this, I chose an aperture of f8.0 so that everything would remain in focus while allowing enough light in. The sky was exposed almost exactly how I intended, however I still had buildings and streets in the foreground that were darkened. I removed this in post to ensure the viewer was getting the full focus of the clouds and sky. During post processing I also increased the saturation, contrast, and exposure ever so slightly. Because I shot the image pretty close to how I wanted, I didn't need to do a lot of editing afterwards.

Like I mentioned before, this image was shot around 6:45 am on September 24th, 2018. The clouds themselves look slightly puffy, and relatively broken up. Looking at the Skew-T for 6 am on the 24th of September at Denver (shown below in Figure 1) indicated a Cape of 0, which means the atmosphere was mostly stable. I also checked the ceilometer for this time and day, and over the Boulder the lowest clouds were around 4 km. This information, along with how the clouds looked, told me that the clouds I captured were Altocumulus. Altocumulus clouds tend to range from 2 km to 6 km and appear puffy and broken up. The Skew-T also showed there likely would be clouds formed around 4 km due to the black lines being close together.

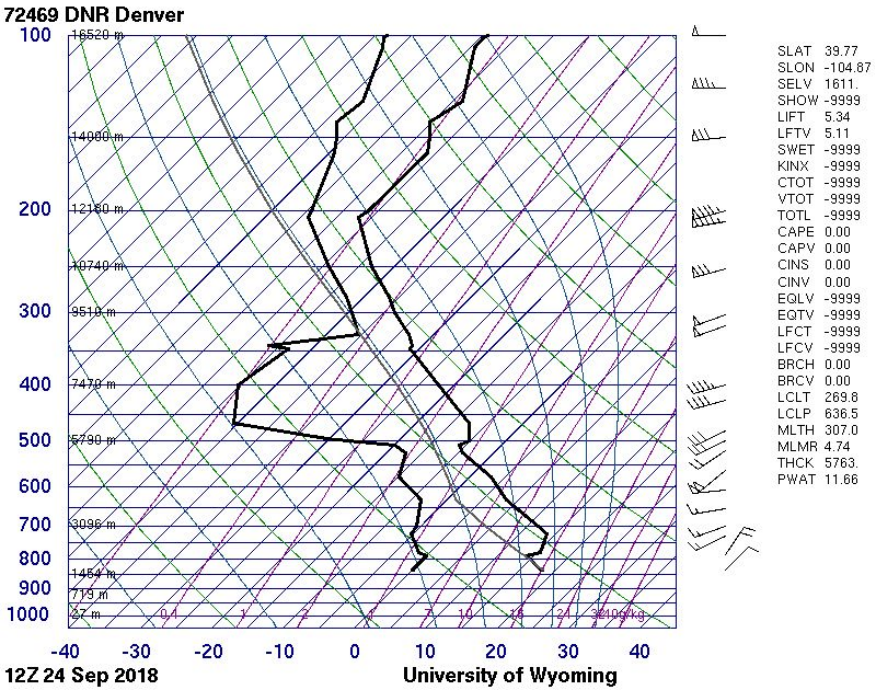

Figure 1: *Skew-T for September 24th at 6 am*

If I were to retake this image I would try to wait for the sun to come up a little bit more so that the clouds having more light on them, and are more visible. However, I am still very happy with how this image turned out, and I think it shows of Altocumulus clouds very well.