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 Flow Visualization
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This is the first cloud image taken for Flow Visualization at the University of Colorado at Boulder. Capturing interesting cloud interaction with light was my goal.

I took this picture while hiking in the flat irons of Boulder, Colorado on the morning of Thursday, Feb. 18. It looks east at an elevation of approximately 6,000 ft.

Thursday broke a period of mountain wave clouds in the area with snow and nimbus-type clouds around 3pm. The skew-T plot shows stable atmosphere in Denver for both times surrounding the image. Figure 1 shows the skew-T for 6 am. Given the stable atmosphere, I would expect more mountain wave clouds in the flat irons during this time. If this stratocumulus cloud captured in my image was not caused by unstable skies, it likely formed as air was forced to climb the flat irons. The sun was shining and winds were mild at the time of the image.

72469 DNR Denver

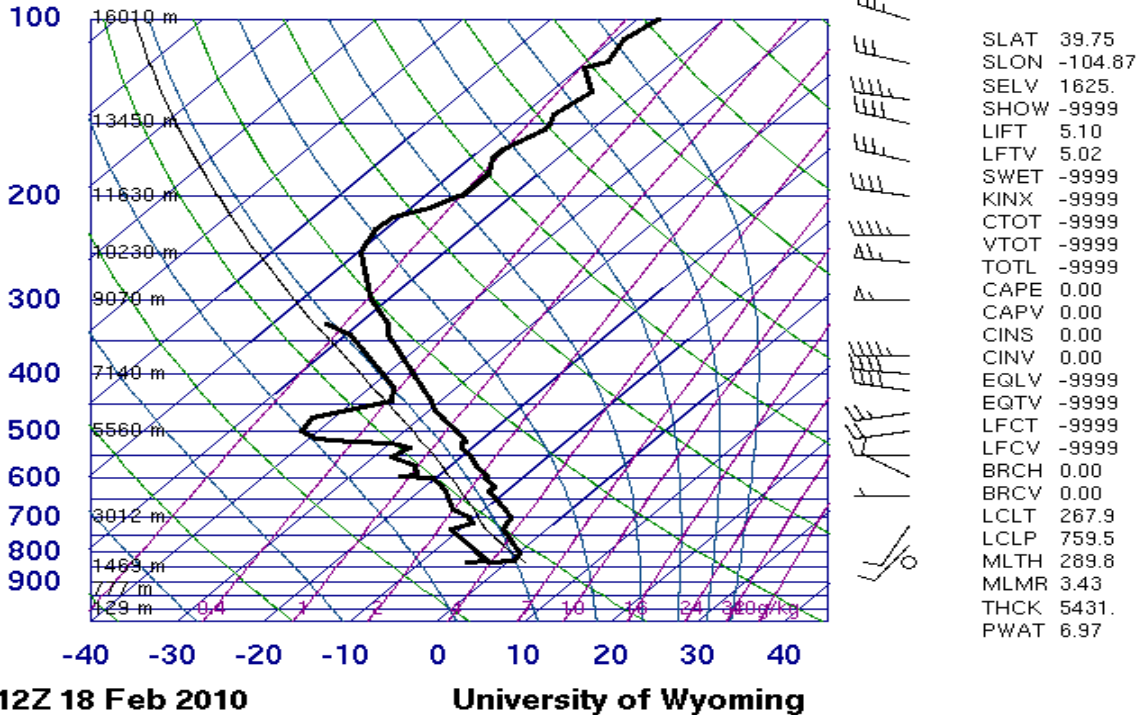


Figure 1. A skew-T diagram for Denver, Colorado at 6 am on Thursday, February 18 shows stable atmosphere.

The image is approximately 250 ft wide at its base with a lens to cloud distance of 500 to 1,000 ft. The image was taken with an exposure time of 1/640, an F-number of 7.9, and a focal length of 6.3 mm. A Casio Ex-S10 digital camera with dimensions of 2736 × 2821 pixels captured the picture. I used Iphoto to increase the exposure, sharpness, and contrast.

I like the strength of the light behind the clouds; this intensity of light gives a positive feel to stratocumulus clouds that often project a darker feeling. Focusing concentration towards the center of the image by cropping the perimeter may have augmented this theme. I am happy with the image, but I think this light interaction scheme could be improved greatly by a more complex reflection. It would be great to capture light being scattered of a central cloud, then reflected back toward the image center by other (higher) clouds.