Clouds First Fall 2025

Stratocumulus and Cirrostratus Above the Front Range

Nathaniel Wheaton Flow Visualization 5151-001, 12/05/2025
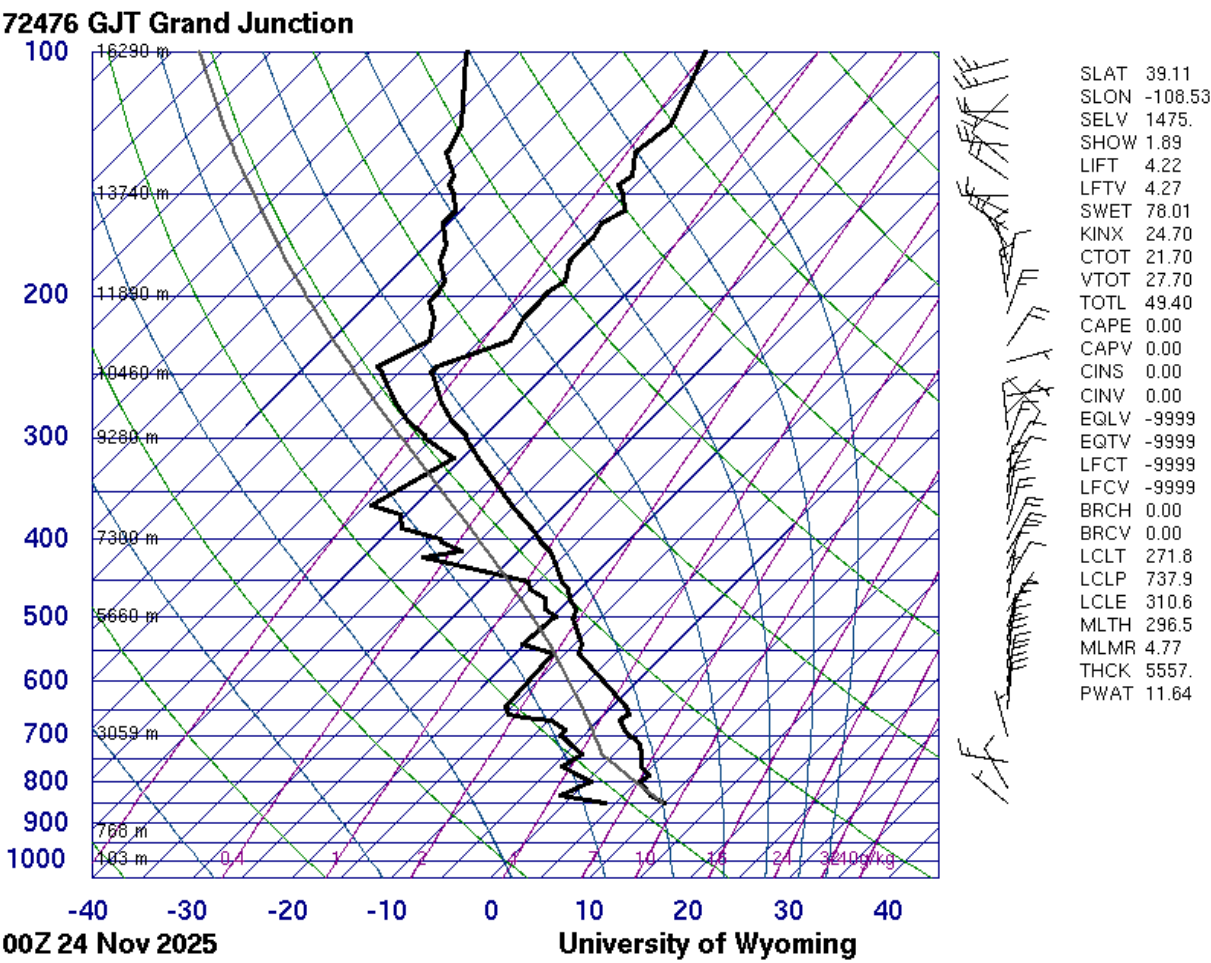

Intent

I noticed some particularly interesting looking clouds from my house one evening, so I drove to a spot with minimal infrastructure. I wanted to capture the large amounts of contrast in the sky. I took several pictures from various directions, but this image had the best composition of all of my attempts. The coloring, and the large amount of clouds caught my attention. The image captures both Stratocumulus and Cirrostratus clouds. The clouds span a very large distance so many variations are visible. I really enjoy the scale and color the mountains add to the image

Conditions

I took this photo in the late afternoon (~4 pm) on the Rabbit Mountain open space in northern Boulder county, facing south at a slight angle above the horizon. The image was taken on November 24th 2025.

Cloud Identification

The clouds observed in this image are identified as stratocumulus and cirrostratus. The stratocumulus clouds form the lower, layered structures with a textured appearance, while the cirrostratus clouds appear as thin, wispy layers higher in the atmosphere. The sky is only partly covered, allowing breaks of blue sky, no precipitation occurred near the time of observation. The atmosphere appears relatively stable based on the above skew plot, consistent with layered cloud development rather than deep convection. Overall, the observed clouds match the expected conditions, with formation possibly

driven by orographics effects due to the mountain proximity. The skew T will be slightly inaccurate due to the fact that the image was taken in the afternoon and the atmospheric analysis was done in the morning.

Photographic Technique

The image was taken with a Canon EOS 600D which is a DSLR camera with focal length 47mm. The image was taken with the following settings; ISO: ISO-200, Aperture: f/20, and Shutter speed 1/160 sec. The unaltered image is shown above, the final image was created in Darktable, the main alteration to the image was the altering of the tone curve to lighten the light sections and darken the dark sections. The original image is 5202 x 3464 and the edited image is 4324 x 3317.