

Clouds Two

This is the second project in which we are able to explore interesting cloud formations which are a form of fluid dynamics. Due to the fact that nature is being photographed, it is very difficult to get a good shot in a limited amount of time and patience is necessary to wait for the right one. In similar fashion to my first assignment, the image was captured in the late afternoon which provided dramatic, directed lighting of clouds from the side rather than above.

This image was captured in Superior, CO on April 14th, 2009 at approximately 6pm. The temperature was approximately 55 degrees and the wind was calm. Being only an hour or so before sunset, the clouds opened up from what was otherwise a very overcast day. The photograph was taken facing the Northwest and features high altitude clouds in the foreground with very low altitude clouds over the mountains in the background.

In this photograph, there are two types of clouds featured. In the foreground, the wide, relatively flat clouds look to be either stratocumulus or altostratus. In the background, above the mountains lie low bunches of stratocumulus lenticularis clouds. I estimate the former clouds to be around 4,000 m above ground with and the latter clouds at above 1,000 m above ground. Wind was calm and the weather seemed stable. The day's Skew-T plot confirmed the stability of the weather: the air temperature line is significantly steeper than the adiabatic line; therefore as one follows the adiabatic line up in altitude, they end up in a colder region than the local air temperature, indicating stability. The plot indicates that the atmosphere is stable from approximately 2,000 m to 12,000 m encompassing the estimated altitude of the pictured clouds. Finally, the plot also indicates that there is mild to wind blowing East at ground level with the intensity picking up as altitude increases.

The photograph was taken with a Sony Alpha-100 Digital SLR camera. The lens used is a 50mm fixed focal length "prime" lens. A circular polarizer was used to increase the contrast between the clouds and sky and also enhanced the blueness of the sky. Plenty of light was available; therefore the ISO was set to the lowest setting of 100. The aperture was set to F11 to keep a sharp focus and the shutter speed was set to 1/320 of a second. These settings helped to capture more of the highlights and give good detail of the clouds. The white balance was set to AUTO and the flash did not fire. The image was captured at 3872 x 2592 pixels (10 megapixels) and was left completely uncropped.

Adobe Photoshop was utilized to reduce some spots as well as a few stray, unwanted clouds. In addition, the shadows were darkened greatly to direct the attention to the sky and clouds rather than the distracting foreground.

I really liked this photograph for a few reasons: I thought the mountains looked great in the varying shades of darkness and I like that it featured low lenticular clouds over the mountains, far away,

as well as stratocumulus/altostratus clouds in the foreground. I also thought the timing was great as photographs at this time of day are often very dramatic with interesting non-flat lighting.