

The goal of this image is to capture the diversity of the skies above Boulder, Colorado, showing wide ranges in cloud type, size, and color. This image captures clouds at all altitudes including high level, mid level, and low level clouds their types and a discussion of their formation follows below.

This image was taken at approximately 1:30PM on November 18th, sounding data from the denver station captured at noon shows a majority of the sky to be in the stable range, with unsteady air pockets between 6000 and 7000 meters and again right around 8000 meters above sea level. The image mostly supports this with stable cirrus clouds high in the sky. Visible in the center of the image. Alto cumulus clouds are present in the pockets of unstable air and likely resulted in thunderhead formation later in the night. A few Stratus and a majority Altostratus clouds can be seen in much of the image covering the sky providing a blanket like effect. Its vast size and elevation supports this classification. At 10:35 AM MST the National Weather Service issued a cold front warning. These clouds were driven to stability by this cold front moving into the area forcing a warmer system out and allowing these dramatic cloud formations to appear to linger for several days with great stability and little motion. This image was captured at the tail end of this front as Monday the 19th proved to have weather in the low 60's. Skew T Sounding data from the University of Wyoming is provided below.

QuickTime™ and a
decompressor
are needed to see this picture.

It is important to note that the majority of the skew seems to follow closely the adiabatic curve so while most all of the sky is stable it is barely so and could easily be upset locally by a slight anomaly.

This image was captured with a Canon 10D DSLR 35mm camera which was tripod mounted. Exposure was determined based on the Basic Daylight Exposure calculation and stopped up to compensate for the extreme intensity of the sun reflection and to deliberately underexpose the horizon.

The image was captured with the following EXIF parameters:

Image Date	11/18/07 1:27 PM MST
Camera Model	Canon EOS 10D
Serial Number	620312005
Shutter Speed	1/180th second
Aperture	F16
Exposure Bias	0ev
Focal Length	16mm
ISO Speed Rating	ISO 100
Aspect Ratio	3:2
Orientation	Landscape
Depth	16-bit
Color Profile	Adobe RGB 1998

Additionally a MRC Neutral Density UV filter was used on lens to help reduce haze and improve the dynamic range of the blue in the sky. Computer manipulation was minor and was performed in Apple's Aperture software package. The exposure was increased by .31 of a stop, brightness by 20%, and contrast by 5%. Highlight shadows were magnified by 5% and the image was cropped in the y axis removing the lowermost 488 pixels. The final image is 3017x 1064 pixels in size. It is also important to note the Canon 10D body has a CCD crop factor of 1.6 compared to 35mm standard and the image was captured in digital CRW (Canon RAW format).

This image is quite contemplative to the viewer as such diversity is generally not seen in the sky in both an urban environment and when the conditions are warm and dry enough to be viewed by the casual onlooker. The blanket of clouds covering and dimming the sun provide a brooding and almost a dark mood to the image almost as if implying the future is very uncertain and is in constant turmoil.