

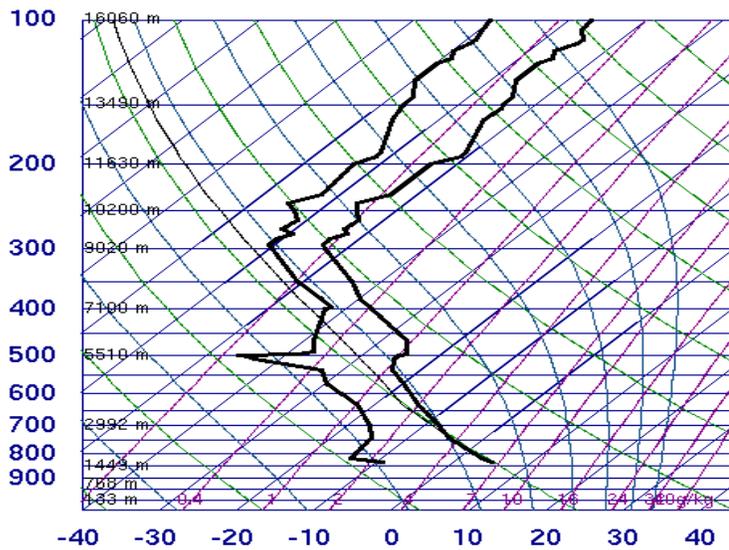
Cloud Image 1 Report

This image was submitted for the first cloud assignment. My intent was to capture an image that was both threatening, yet mesmerizing beautiful at the same time. I wanted to depict thunderously large clouds around sunset time to show the different effects that the sunlight would have while hitting the different areas of the cloud. Also, I wanted the image to be over mountains, where many different and miraculous clouds can be found, such as mountain waves. At first, I wasn't sure how large a field of view I wanted, but after taking several images, I found the best ones had a very large field of view, truly showing how large and mountainous the clouds themselves are.

This image was taken off of Colorado I-70 when I was heading east, approximately 40 miles away from Boulder. The camera was facing southwest, looking back at the Flatiron Mountain Range. The camera lens was at an elevation angle of approximately 15 degrees above the horizontal. The image was taken on February 11, 2010 at 4:49 pm.

Towards the very bottom of the picture there is a mountain range. Above this range, mountain wave clouds can be seen. Above these and part of, there seems to be a very large cumulonimbus storm cloud that takes up the majority of the center of the image. Above this extremely large cloud, higher up in the atmosphere, altostratus clouds can be seen surrounding the area of bright light that is visible. When this image was taken, the surrounding area of sky all had very similar clouds in it. The sky also seemed to have an orange/bluish tint to it, caused by the sun setting behind the giant cloud in the middle of the image. The clouds were not moving particularly fast and I am not too sure what the atmosphere or cloud cover was like the day before. However, I believe these clouds were part of a storm front moving southeast across Colorado, resulting in snow storms in Northern Texas the following day.

72469 DNR Denver



SLAT	39.75
SLON	-104.87
SELV	1625.
SHOW	-9999
LIFT	5.22
LFTV	5.15
SWET	-9999
KINX	-9999
CTOT	-9999
VTOT	-9999
TOTL	-9999
CAPE	0.00
CAPV	0.00
CINS	0.00
CINV	0.00
EGLV	-9999
EGTV	-9999
LFCT	-9999
LFV	-9999
BRCH	0.00
BRCV	0.00
LCLT	256.7
LCLP	633.5
MLTH	292.5
MLMR	1.70
THCK	5377.
PWAT	4.29

00Z 12 Feb 2010

University of Wyoming

Looking at a skew-T plot (provided by The University of Wyoming) from this day, taken at 6:00 pm, we find that the cape was equal to zero. This means that the atmosphere was stable. From the skew-T and the atmospheric conditions that day, it would be expected that mountain wave clouds would be seen as well as altostratus clouds, because both of these form in stable atmospheres. Sure enough, these were exactly the clouds seen in this image. Altostratus clouds form at elevations anywhere between 6,500-23,000 feet [1]. It is to my belief that the altostratus clouds in this image are approximately 18,000 feet above the ground. The mountain wave clouds towards the bottom of the image start at an elevation of approximately 3,000 feet from the ground, and then climb in elevation. Altostratus clouds are usually gray and fibrous in appearance and can span thousands of miles [1]. Here, they are composed of water droplets and ice crystals and because of their thin features can easily reveal the position of the sun [1]. This is exactly the case in this image, where the sun can be seen shining through the altostratus clouds towards the top center of the picture.

For the original image, I believe the field of view to be approximately 20,000 feet, when using a top to bottom height dimension. The mountains beneath the clouds are being used to estimate the distance from the object to the lens. I believe this distance to be around 75 miles. The lens focal length was 26 mm and the F-Number was F/8. This image was taken with a Nikon CoolPix S60 digital camera. The original image is 3648 x 2736 pixels. After alteration in iPhoto, the new doctored image has dimensions 3644 x 1674 pixels. The exposure of the image is 1/1500 sec and has an ISO setting of 60. Its resolution is 10 mega pixels and was taken in the camera's "sunset" scene setting. When altered in iPhoto the image was cropped. Then, the brightness was set to 35, the contrast set to 31, the saturation set to 76, the sharpness set to 100 and lastly, the exposure was set to 69.9. These adjustments lightened up the image making it more visible and also sharpened up the details of all the cloud elements.

To me, this image reveals both danger and beauty. The lower and darker clouds are thunderously large and almost threatening. At the same time, in the center and towards the top of the image it seems to take a heavenly effect. As if the light of some God is pushing through the thick cloud cover. Overall, I believe it creates an image that looks like the heavens where Greek Gods are present. It even somewhat looks like the CGI effects that were used to create the skies and atmospheres in the popular movie 300. I feel like my intent was completely fulfilled when looking at this image and think the only improvements that could be made are in the photo shopping techniques. The image appears a bit grainy, something that was caused by increasing the brightness. To develop this idea further, I think it would be worthwhile to experiment with different exposures and to alter the coloring further in Photoshop to create a more surreal and heavenly image, like those found in CGI.

[1] Pretor-Pinney, Gavin. *The Cloud Spotter's Guide*. Perigree, 2006.