After photographing an immense amount of clouds, I finally decided on a specific cloud.

The purpose of the image was to capture a beautiful picture of a cloud(s), and then

describe and understand the physics behind that cloud(s). I tried using both digital and

film to take photos, and used a red filter with black and white film. Unfortunately, I did

not have the printing available for this project, and those photos will have to come later.

The final image after a slight photo editing can be seen below.



**Figure 1: Clouds 1 final picture**

The photo was taken from the top of the Lot 437 parking lot at 5:00pm facing

south east. A Nikon 3100 digital camera, with 3.1 Megapixels was used for this photo.

The focus was set to infinite, so as to deal with the automatic focusing problems that

most digital cameras have. The camera was set up on top one of the side walls of the

garage using a mini tripod, which ensured that there would be no motion blur from the

movement of the camera. The clouds that are in the picture demonstrate cumulus humilis clouds, which are low to mid-level fair weather clouds. Below is a Skew T plot for Denver from today, which indicates a stable weather system.
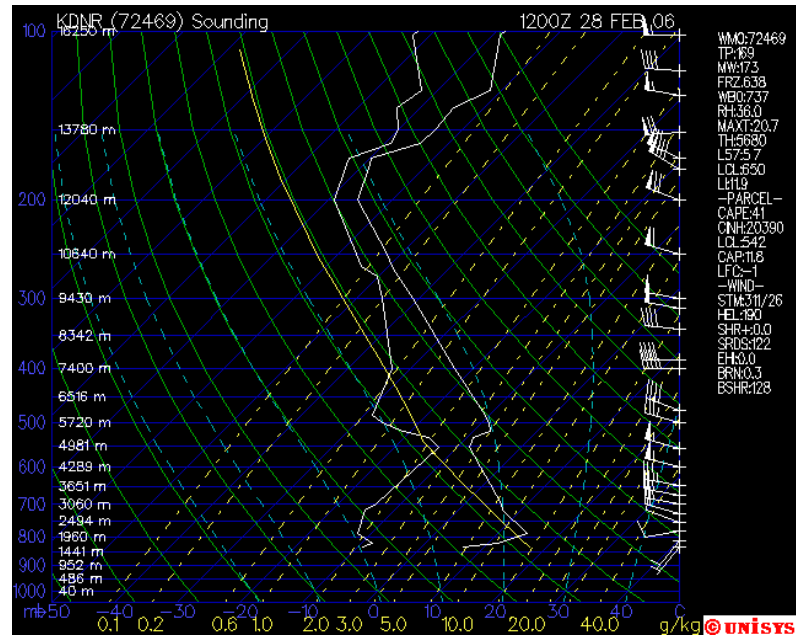


**Figure 2: 02/28/06 Denver Skew T Plot[1]**

The cloud is formed by rising air that is warmer than the surrounding air, causing it to rise until in equilibrium. Occasionally, the air will continue rising past equilibrium and be surrounded by cooler air. This cools the warmer air, causing the water vapor to condense if it is super saturated. The continued rising air forces the cloud to stay aloft. When the air stops rising, the clouds dissipate. If there is enough water that condenses, and forms together enough to overcome the force of the rising air, rain occurs.

The picture was taken during the daylight, using natural sunlight as the light source. The picture was taken on a 3.1 Megapixels digital camera using infinite focus,

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[1] "-12 hour Skew T plot for Denver CO." Unisys. 28 Feb. 2006.
<http://weather.unisys.com/upper_air/skew/previous/skew_KDNR-1.html>.

and a very fast shutter speed. The image was manipulated only by adding more contrast to it, so as to better see the boundary layers.

I really like this picture due to the many clouds, and the obvious boundaries of the clouds, which created a visually pleasing image. It would be preferable if it was a better resolution, but I used what I had available. I also really like sunsets, however decided not to go with one as it is harder to visualize the physics of what is going on.

**Figure 3: Original Image**



**Figure 4: Edited Image**