Jayson DeBellis
Flow Viz. – spring 2009
Visualization Report #2 - Clouds
Submitted: 2.25.2009

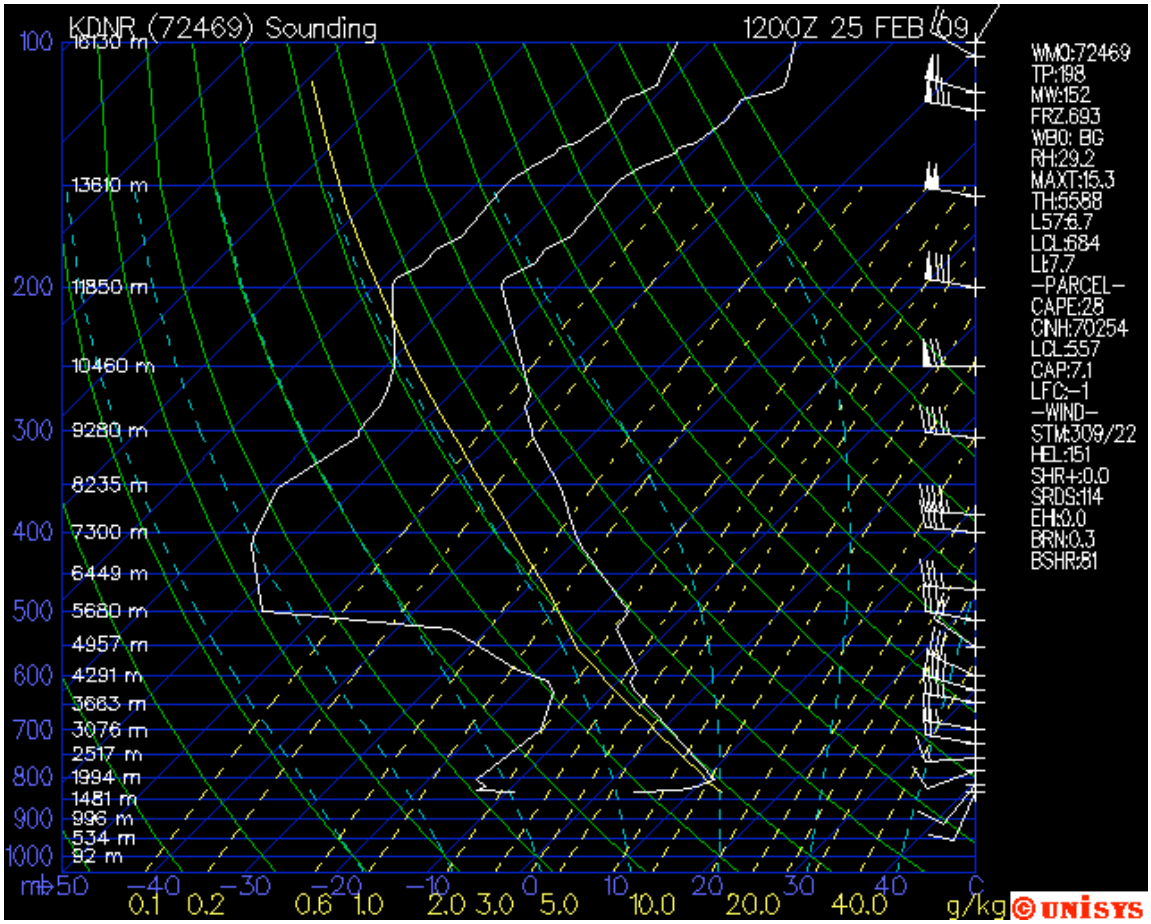
I took this image about a block from my house while shooting for this project specifically. I took about 15 photos with a digital camera, and my biggest problem was the amount of clutter in the images, mostly power-lines and dead trees. I decided on this image because I liked the cloud formation the most and it was also easiest to edit in Photoshop.

The picture was taken on the southwest corner of Aurora and 15th street in Boulder. I was on an elevated platform (someone's porch) and the camera was only at about a 15-degree elevation from horizontal. It was about 11:00am on the morning of the 25th, the weather was slightly breezy, just about 60 degrees.

When comparing the cloud image with the cloud chart we were given in class, I am fairly confident they are Cirrus-uncinus type clouds. The rest of the sky was vivid blue with a few batched of clouds of the same type dispersed here and there. According the Skew-T, the atmosphere is very stable. I would estimate the elevation of the clouds to be at about 4300m, based on the relation of the dew point to the relative temperature. The winds at this elevation are westbound and moving fairly quick (I think). These types of clouds occur higher in the atmosphere and generally indicate an approaching warm front and eventual precipitation, usually rain.

I'd estimate the field of view in this image to be about 50 feet wide, plus or minus 10 feet. I was shooting on a 5mpx SONY PSC-T1 camera. It has a fixed focal length of 15.4mm and a relative ISO of 100. The f/stop was 6.3 and the shutter speed was set to 400. The original image was 1.7mb and had a pixel ratio of 2592x1944, which I preserved for the final image as well. The final image is sized at about 3.3mb. As far as manipulation, I first cut out most of the trees and power lines that had ringed the outer portion of the image. I then adjusted the RGB curves to bring out the contrast of the clouds against the sky so you can see detail better.

The image ultimately turned out much better than I thought it was going to. The clouds are clear and distinct against the background; it is simple but effective in showing the fluid motion of clouds. I tried to find information on how these types of clouds specifically form but I had trouble finding out anything beyond that they are the result of moving warm fronts, so I am interested in that. I feel I could develop this further in a series of images, rather than just one, since these clouds had a tendency to completely change shape within ten to fifteen minutes.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LI:7.7
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-WIND-
STM:309/22
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