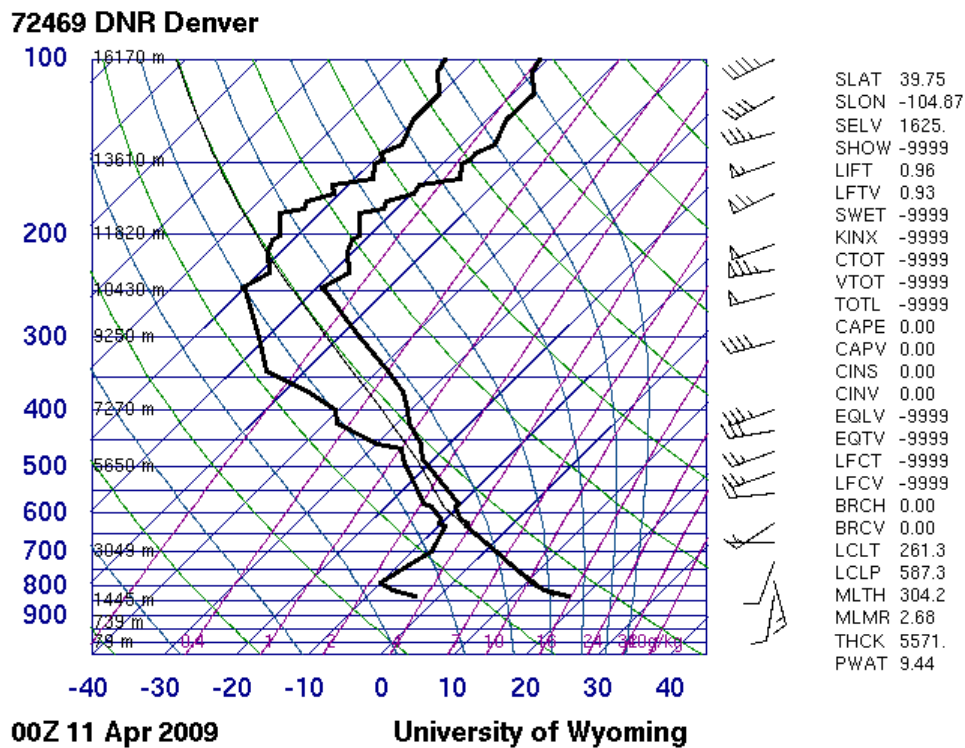


Kevin McCoy
 Flow Visualization
 Cloud Project

The purpose of the image was to capture the clouds above the Formula SAE testing venue. The image captures the mood of the day by displaying the predominantly overcast sky with the altocumulus clouds covering the majority of the sky.

The image shows altocumulus clouds across the sky of the Front Range with a portion of the fsae testing track setup in the foreground. The weather was generally overcast throughout the day with a very short shower a little earlier in the day. The photograph was taken from the parking lot of Splitsz bowling alley in Westminster, CO. The camera was pointed West-North-West and elevated at approximately 20 degrees from the horizontal. The photograph was taken on April 11, 2009 at 3:48 PM.

The clouds are located from 3,500 to 6,500 meters since that is where the dew point and the air temperature lines are close together in the Skew-T plot shown below. The clouds visible in the photograph are altocumulus due to their puffy nature and their midlevel height of approximately 3,500 to 6,500 meters. The stability of the atmosphere seems to be unstable at the lower portion of the cloud laden portion of the atmosphere and the stable at the upper portion due to the orientation of the adiabatic line and the air temperature line. I think this correlates with the predominantly but not completely overcast sky. The skew T plot is also not for the exact time of the photograph or the exact location which can account for slight differences.



Skew T Plot of Denver on April 11, at 6PM

Size of the field of view	6,666 m X 5,000 m.
Distance from object to lens	14,619 m.
Lens focal length	N/A
Lens specifications	N/A
Type of camera	HTC - 8900
Original Image Size	2048 X 1536
Final Image size	2048 X 1536
Aperture	F/6.3
Shutter Speed	1/640 second
ISO Setting	100

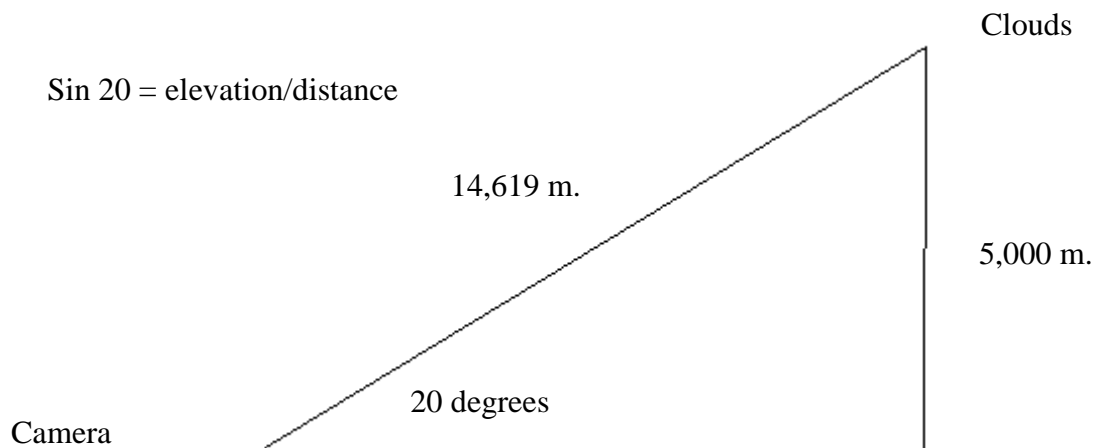


Diagram describing how distance from object to lens was calculated.

The photo was not edited in any way in Photoshop or any other photo modification software.

I thought the image captured the mood of the day as well as the typical cloud orientation quite well. The range of the height of the clouds in the skew-T plot also resembles what is seen in the picture. You can see how some of the clouds are at different elevations adding depth and texture to the image. I enjoyed how the clouds are set above our testing venue. In retrospect I would have had the car mid corner during the image to really emphasize what is going on. I can visualize the scene but it is not obvious to the casual observer. I attempted to take another image the next day out during testing but there weren't any clouds. I would have preferred a less cluttered image, less light poles for example, but the angle provided didn't allow for such an image. As for improvements: I believe the photo could have been taken in better light; the image appears flat and in a way, dreary. But I also think that is a highlight, not every picture has to be beautiful and enlightening.

References:

Skew T Plot, <http://weather.uwyo.edu/upperair/sounding.html>

Cloud Information, <http://www.colorado.edu/MCEN/flowvis/links/index.html>