

Osborn – Flow Visualization
Cloud Assignment 3
11/29/2007

1. Cloud Assignment. Photograph an interesting cloud or cloud phenomena and discuss what you think might be involved in the physics.
2. A huge bank of clouds began building up the evening before I took these pictures. When morning came – I jumped in the car and drove out of town to the lookout on Rt. 36 and began taking series-panorama and general photos of the clouds. Sun was nearly due south and at just before noon was high over my shoulder as I took these photos.
4. Photo Info
 - a. Field of View: Wide Angle. Subject is front range.
 - b. Distance: In the sounding data the atmosphere is very stable for both the 5am and 5pm Skew-T plots. Given the pile up over the divide and the complete clear sky over the plains this does not surprise me. Some interesting temp changes seem to occur around 6500m.
 - c. Canon G7 – 10MP digital camera
 - d. Aperture: f4.0, Shutter: 1/1000, ISO: 80, Focal Length: 19mm. (zoom equiv.). UV lens filter.
 - e. Photoshop used to composite and stitch panorama – no color or contrast adjustments
5. The cloud pileup lasted days finally breaking the day after these photos were taken. It seems to me that there were two equally balanced weather systems along the two sides of the divide and west of the mountains was an unstable atmosphere formation that piled up enormous banks of Stratus clouds (with some cumulous closer to the ground). Maybe a cold front holding the ground with a warm front over it west of the divide and very little wind to push the warm air front up and over the mountains to our side? Or a cold front from the east met the a warm front from the west and they were held against the mountain line?