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Clouds 2 Report  
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After living in Estes Park for nearly ten years I have grown accustomed to seeing the mountains of the continental divide shrouded by wispy, precipitating stratus clouds. I chose to photograph this variety of clouds because of their unique nature and the fact that they have always held a bit of mystery for me. These clouds often appear above the mountains even when the weather in the valley below is relatively warm and pleasant. Of course, this was a phenomenon that puzzled me as a child. I believe that this species of cloud was significantly different from the cloud image I submitted early in the semester and would therefore present different physics to document and explore. As with the last image, I did wish to include a significant amount of foreground in the image. One should keep in mind that this type of cloud is usually visible only in fall, winter and early spring seasons. The clouds of this image can rarely be seen during the warm months of summer.

This image was taken from the top of a hill in Estes valley. A vantage point at a significantly lower altitude within Estes Park would have made the observation of the tops of the clouds difficult. The photograph displays the eastern slope of the continental divide, meaning that the lens was pointed in a westerly direction. Relatively high easterly winds made the steadying of the camera difficult. However, the quality of the finished product does not indicate such. Although I am not entirely certain of the angular position of the lens my estimation places the lens at approximately 30 degrees from horizontal. The skies above Estes valley itself were relatively clear, meaning that a large amount of light was available. This image was taken on the date of March 26<sup>th</sup> at 10:38am.

This image displays nimbostratus precipitatio. As said before, the sky not included in the image was relatively cloudless which had been the general condition of the skies the previous 24 hours. There was a significant amount of wind on the day this photograph was taken. As is usually the case with this particular weather situation, precipitation can be expected in Estes valley within hours of viewing this type of cloud formation. As one can easily see in the photo the clouds do not rise very far above the tops of the peak onto which they are depositing snow. This is due to the stability of the atmosphere that essentially “anchors” them to the mass of land that is the mountain range. Based on the skew-t from March 26 clouds could be expected to form at an altitude of approximately 15,000'. However, the clouds in the image are significantly lower in altitude than the skew-t plot would suggest. The peaks of the mountains in the photo are all under 14,000' and the bulk of the cloud mass seems to sit lower on the peaks than near their summits.

The size of this image is 3264x2176 pixels. The image was taken by a Sony DSC-H3. The aperture was set at f/9 with an exposure time of 1/500 seconds. The ISO of this photo is 125. There was no manipulation of this photo with any photo editing software. I can only estimate that the field of view of the image is about 5 miles. I will also

estimate that the distance from object to the lens is approximately 15 miles.

I believe this image was successful in displaying the cloud type and the physics responsible for producing them. If the opportunity had presented itself I would like to have had a shot from directly above the clouds.