

Theo Petrides

Clouds 2 Report

Introduction:

The final image of the edited cloud seen below in figure 1 was taken on a plane trip to an international laser award ceremony in Baltimore. The clouds appear to be of type altostratus undulatus due to its rippling nature. The rippling nature might have been caused when the cloud is agitated by moving gusts that leave turbulent air behind which causes the wave-like formations in the sky.

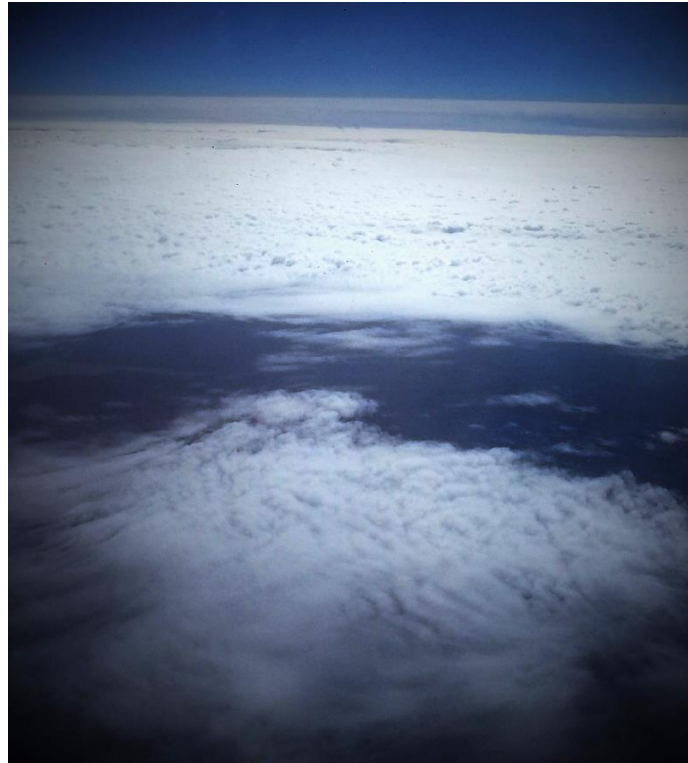
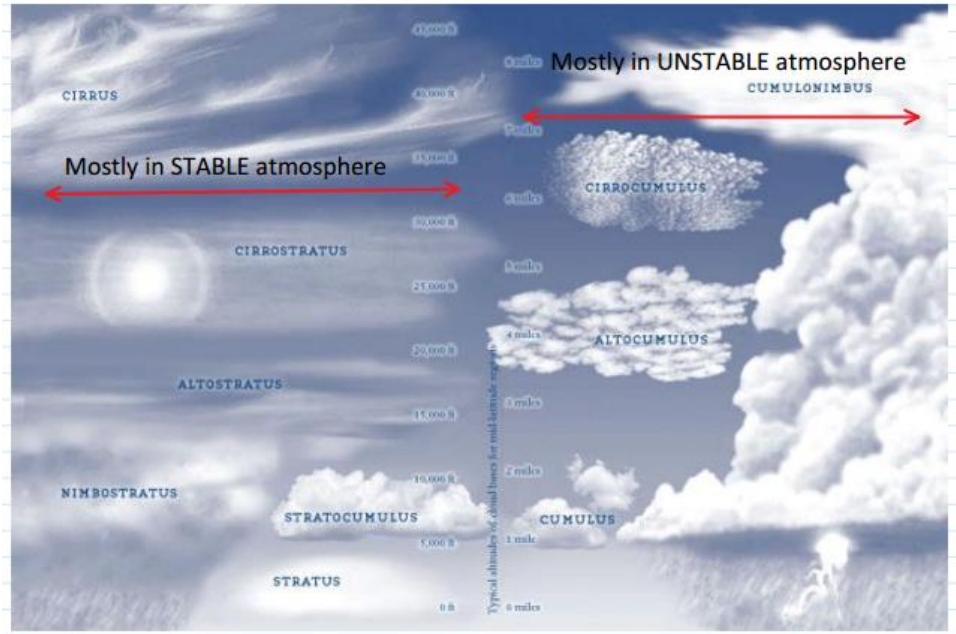


FIG 1: Shows the final edited cloud image on a plane trip to Baltimore

The altostratus clouds exist at an elevation above 8,000 ft to 20,000 ft according to the figure 2 below. This type of cloud was fascinating to see on the trip because it provided a different perspective that is not normally seen with clouds. Since a majority of our time is spent on the ground looking up at a cloud it is wonderful to see the opposite when being at a high elevation.



Pretor-Pinney, Gavin. *The Cloudspotter's Guide*. Perigee/Penguin, 2006.

FIG 2: Shows the cloud types for both stable and unstable atmospheres

The skew-t diagram figure was not shown during this because the location was unknown during the flight. It may have been possible that a turbulent flow had gone through the sky just before in order to create the rippling waves seen in the photo. However, during the flight it seemed to be unstable atmosphere given that there was some turbulence when moving up through the clouds during the elevation gain to above 20,000 ft.

Photographic technique:

The image was shot on my camera phone Samsung Galaxy S3 and edited further in the Gimp software. The goal was to create a focus away from the window of the plane and focused inwards on the clouds.

I really was fascinated by the fact that it had still been summer and there was little snow, the image reminded me of fresh snow covering the ground with little open areas where the snow had melted that morning.

The details for the original image seen below in figure 2 include: a resolution of 3254x2448, focal length of 3.7mm, aperture of 2.6, exposure time 1/ 8832, and ISO of 80.



FIG 3: Shows original cloud image taken on a plane trip to Baltimore

The pink spots on the original edited image were corrected using the clone stamp tool in Gimp and further processing was done to get the desired effect of snow on a cool yet warm morning.

References:

“Cloud types for observers, Reading the sky”,

http://www.metoffice.gov.uk/media/pdf/r/i/Cloud_types_for_observers.pdf. Met Office, 2006, PDF. 12/4/2016

Hertzberg, Jean. “16.Clouds3.” <http://www.flowvis.org/media/course/Lecture2016/16.Clouds3.pdf>. Flowvis.org, Saturday, February 05, 2012, PDF. 12/4/2016

International Cloud Atlas. Geneva: Secretariat of the World Meteorological Organization, 1975, Print.

Pretor-Pinney, Gavin. The Cloudspotter’s Guide. Perigee/Penguin, 2006