

Clouds Assignment 2:



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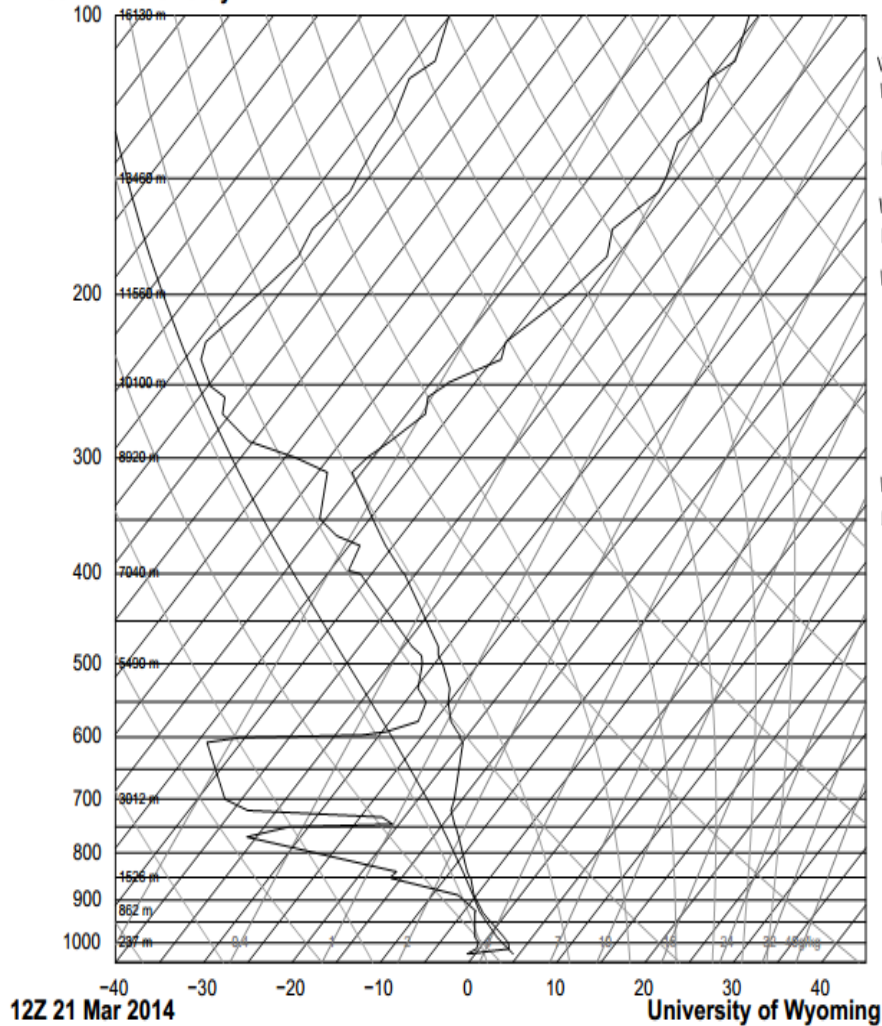
MCEN 4151: Flow Visualization

This image was taken for a course at the University of Colorado at Boulder titled Flow Visualization. The purpose of this assignment was to photograph clouds. The purpose of the image is to appreciate the symmetry in cloud shape size and spacing, in an asymmetric backdrop.

The picture was taken while driving on the Sea to Sky Highway in British Columbia. The photograph was taken facing North-East, looking over the town of Squamish. The angle from the horizontal is roughly 0° . It was taken March 21, 2014 at 9:00 AM.

The clouds in this image are cumulus humilis. Gavin Pretor-Pinney defines cumulus clouds as “low, detached, puffy clouds”¹. The species is humilis because they are wider than they are tall. They likely developed from thermal plumes. These thermal plumes are created when an area the earth’s surface warms from solar radiation. When the ground warms, the air above this warm ground rises and forms a cloud. There is a chance these could be mountain wave clouds but thermal plume formed cumulus is more likely. The skew-T diagram on the following page shows a stable atmosphere with a CAPE of 0. This makes sense with the cumulus humilis clouds shown.

71109 YZT Port Hardy



SLAT	50.88
SLOD	
SELV	17.00
SHOW	13.01
LIFT	10.77
LFTV	10.82
SWET	43.01
KINX	-20.5
CTOT	12.80
VTOT	21.80
TOTL	34.60
CAPE	0.00
CAPV	0.00
CINS	0.00
CINV	0.00
EQLV	-9999
EQTV	-9999
LFCT	-9999
LFCV	-9999
BRCH	0.00
BRCV	0.00
LCLT	271.4
LCLP	952.1
MLTH	275.2
MLMR	3.56
THCK	5253.
PWAT	7.54

The following camera information was used to create this image. The image was post-processed using Photoshop. The image was cropped to remove power lines and enhanced using curves.

Camera: Nikon D40

ISO: 200

F-stop: 11

Exposure time: 1/500 sec

Flash: no flash

Focal Length: 55 mm

Focus: Manual

Original Dimensions: 3008 x 2000

Edited Dimensions: 2320 x 1660

Field of View: Roughly 5 miles

The original image is shown below.



Overall, I think the image captures the moment well. I like the contrast between the soft clouds and sharp peak. Although the bay and town may draw a bit of focus away from the clouds, I think they make the image more complete and capture the scenic Sea to Sky Highway. An area of improvement would have to be to achieve more contrast in the foreground.

Works Cited:

1. Pretor-Pinney, Gavin. *The Cloudspotter's Guide*. London: Sceptre, 2006. Print.