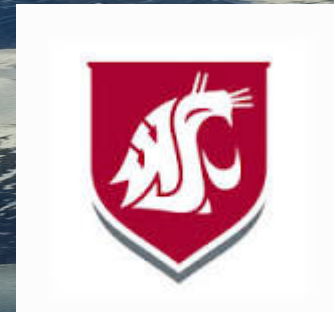


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# Datagrams: Summit IcePIC



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File name: YYYYMMDDhhmmZ → icepicJJJ.jpg

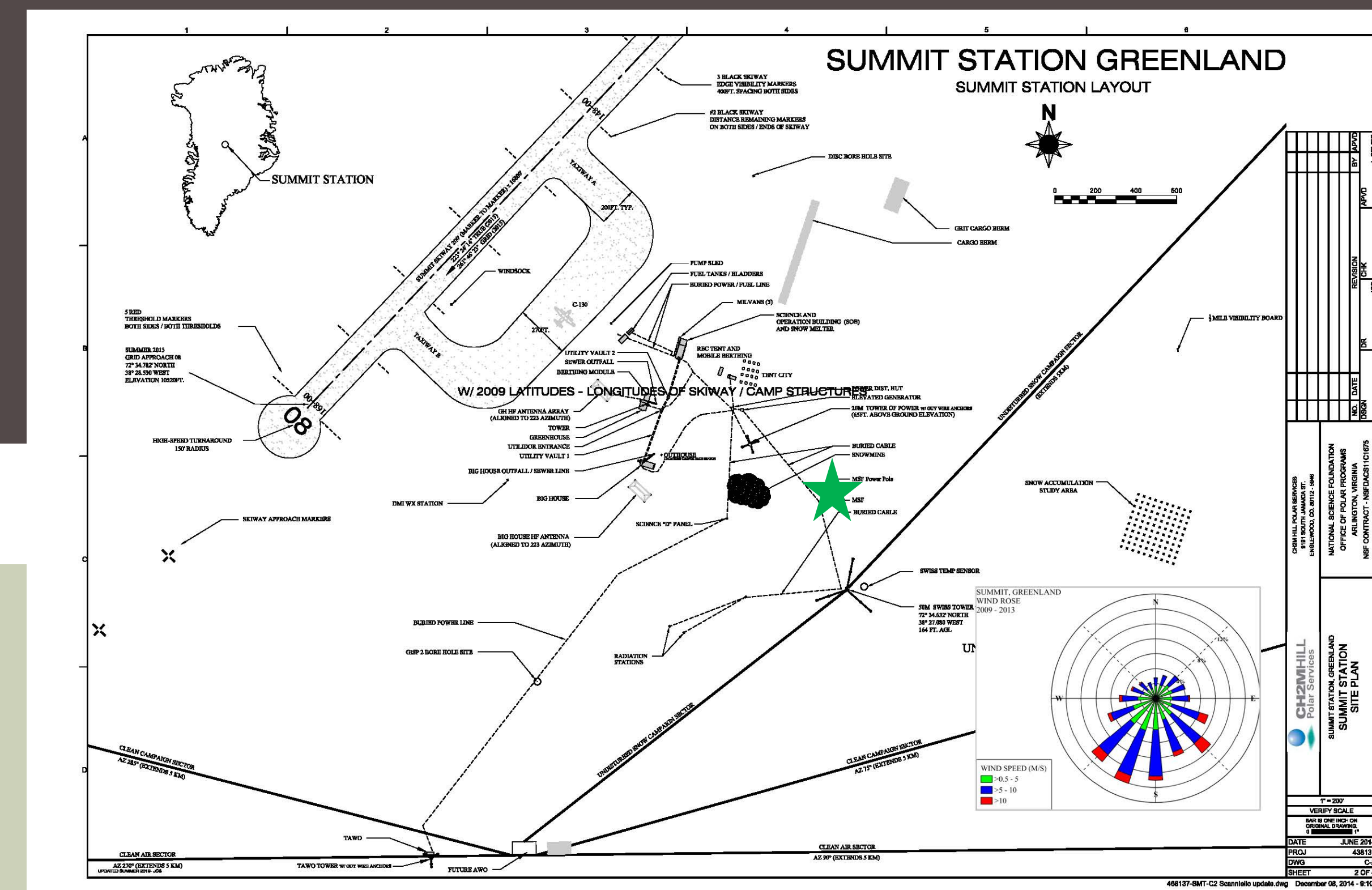
Summit Data  
Center

NOAA

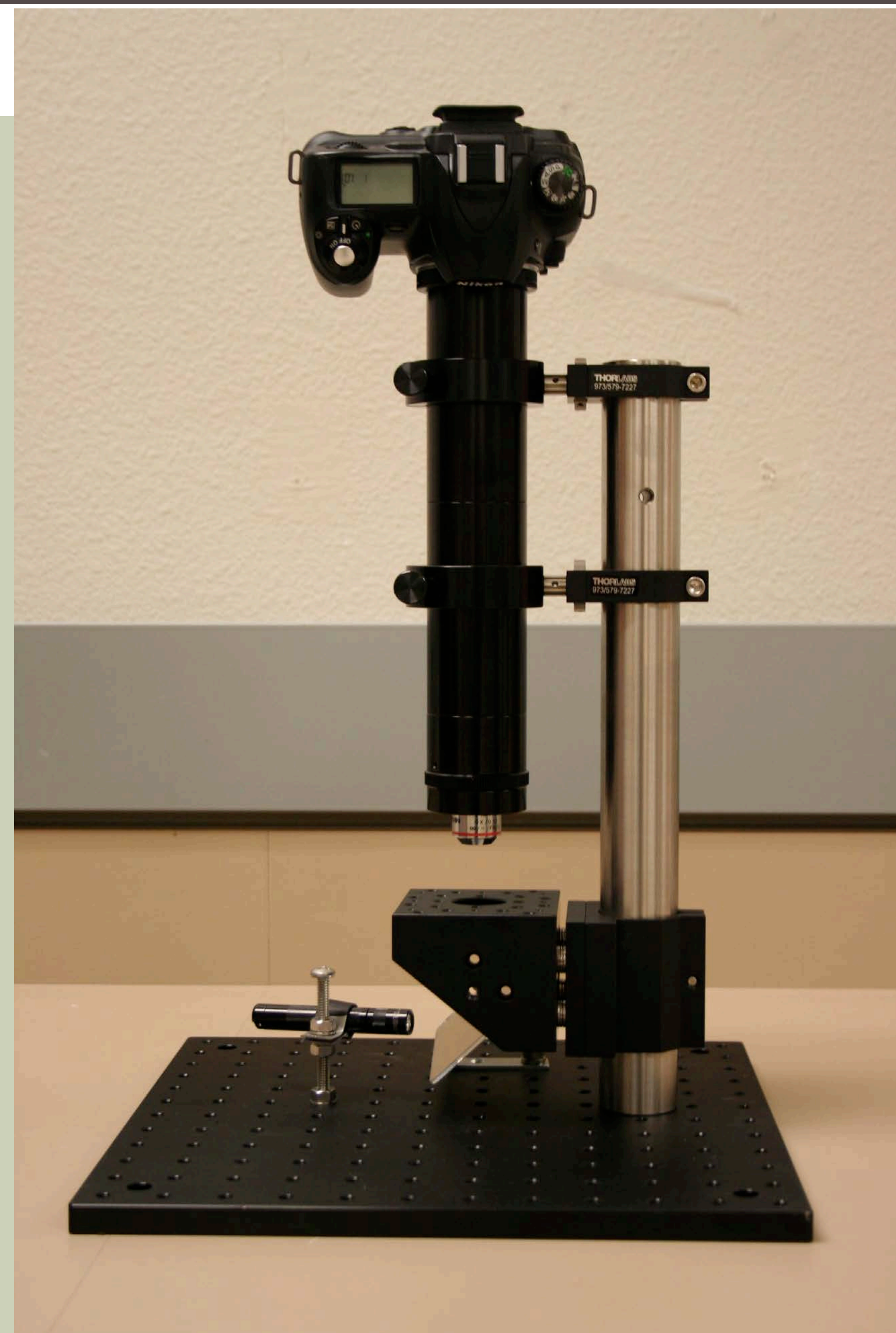
FTP File locations at NOAA:  
From Summit Data Center to:  
ftp://ftp.etl.noaa.gov/psd3/arctic/summit/icepic/

Processing

Quicklooks



★ Indicates current location of instrument



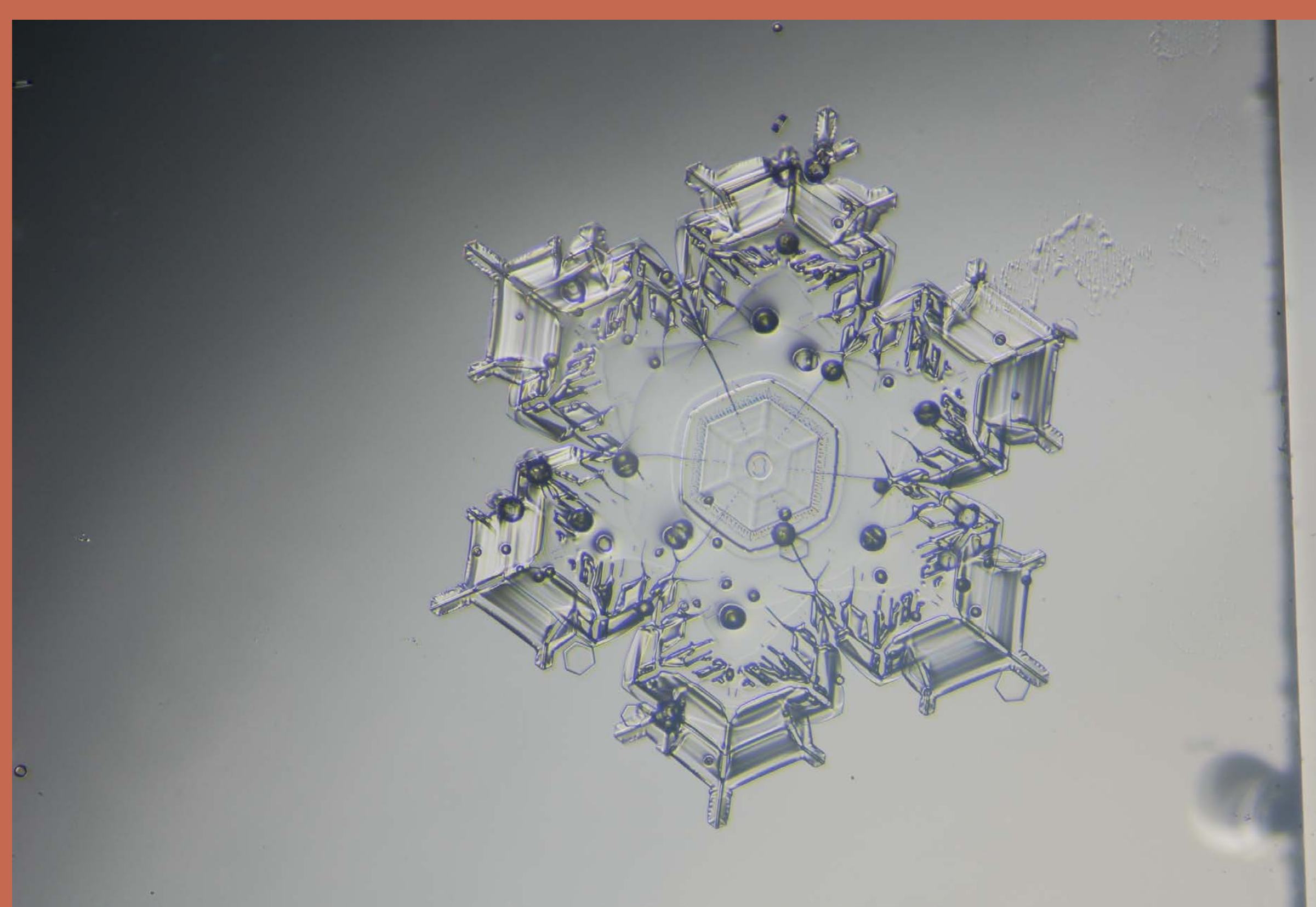
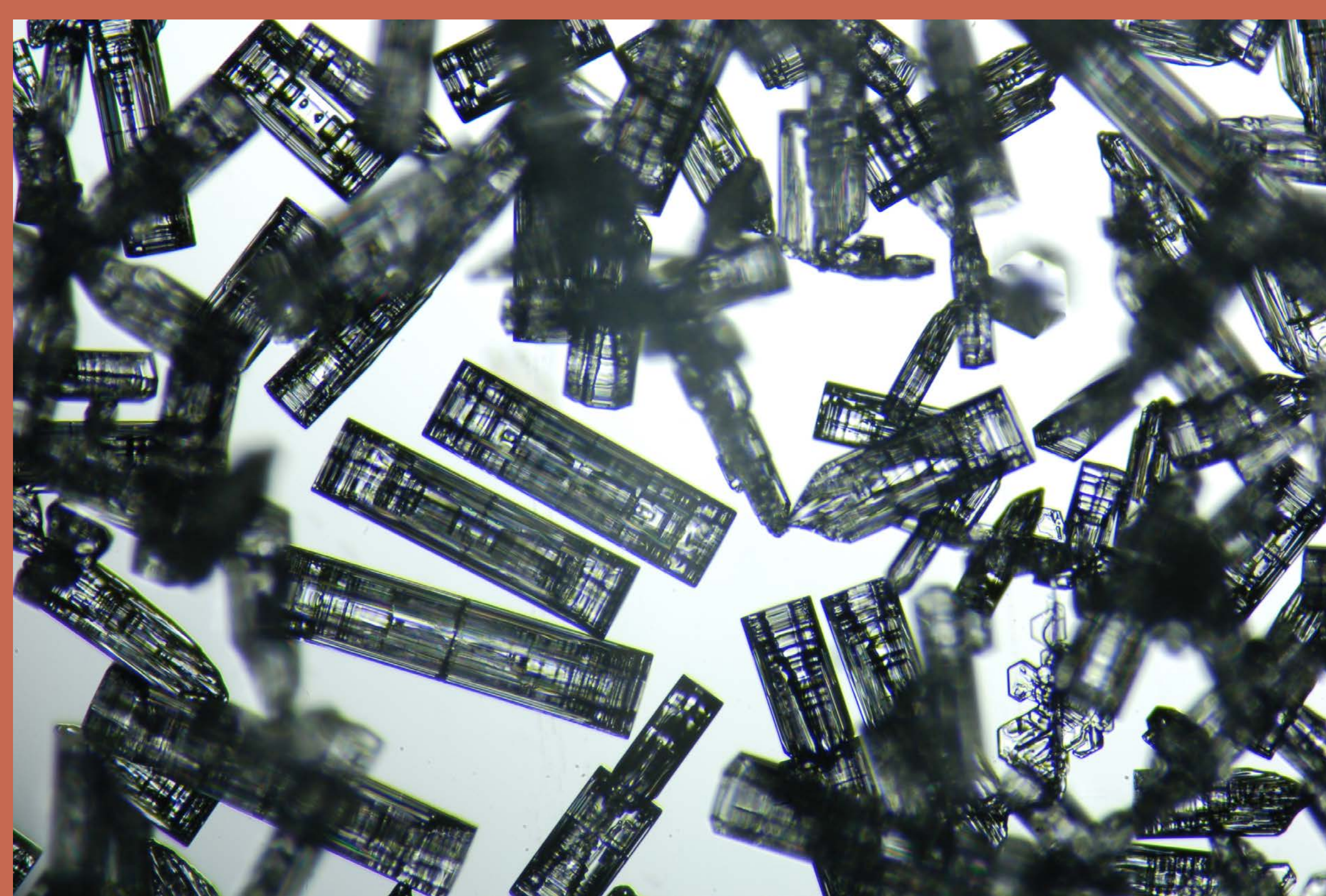
<ftp://ftp.etl.noaa.gov/psd3/arctic/summit/icepic/>

{The IcePIC device is housed in a white painted wooden shed on the east porch of MSF. The shed protects the device and prevents snow contamination from getting onto the slide or within the optics. Since the shed is outside and air can circulate relatively freely through it, the microscope stage and air around the device are kept at or near ambient. As of March 30th I have followed a protocol with IcePICs. The point of the protocol is to:  
a) prevent snow contamination from turbulence blowing snow from the MSF roof onto slides  
b) maintain consistency  
c) use the cleanest slides possible  
d) get collocated and concurrent data with isotope snow samples  
Two clean slides are placed on a upside-down plywood "T", with the wall between them. The "T" is set so the that the wall is perpendicular to the wind so that accumulation falls on the wind and lee side slides. Accumulation time is minimized, but kept long enough to collect a good sample (a couple minutes in snow, an hour in flurries, a couple hours for diamond dust). Overnight accumulations are taken as well. Accumulation times are noted. When enough accumulation has occurred, a snow sample is taken as well. Several IcePIC samples can be taken while a snow sample is accumulating. The snow sample table is about 40-50m east of MSF near the power pole and SODAR. This is a good place because it is not susceptible to influence from the MSF building. As of April 1, slides are carried to the IcePIC device in a small box that prevents collection from snow blown around MSF and off its roof. Met and sky obs are noted. Sky photos are taken. Occasionally, a photo of the calibration slide (1mm in 0.01mm increments) is taken, but IcePIC has been set with a "stop" to prevent focal adjustment. A new set of slides dried inside MSF, and when necessary, cleaned with isopropyl/glycol glass cleaner are set on the plywood "T" for next accumulation. General points:  
1) Once I thought that the lee side slide might have preferentially collected a certain type of crystal. I try to take pics of both slides, though. The wind side slide sometimes accumulates too much and is difficult to get good pics from.  
2) Overnight accumulations often show rime and irregular mixes, where the last short duration sample form the previous evening showed pristine crystals. This suggests that the riming is probably occurring on the surface and not in the sky.  
Christopher J Cox 4/3/2011 }

## Instrument Details

| Specifications                               |  |
|--|--|
| Measurement                                  | Photomicrographic instrument   |
| Serial #                                     | n/a  |
| Instrument Manufacturer                      | DSRL camera mounted to microscopic objective   |
| Type   | Nikon D50, Thorlabs RMS4X ~4.1 x 2.8 mm (resolution ~1.5 microns)                        |
| Location                                     | Housed in a white painted wooden shed on the east porch of the MSF                       |
| Additional Corrections Applied (y/n/explain) | For calibration a periodic photograph of a 1mm (10micron tick) calibration slide is made |

## Example Plots:



Home:

<http://www.esrl.noaa.gov/psd/iasoa/>

Data:

<http://www.esrl.noaa.gov/psd/iasoa/dataatagance>

IASOA Portal

Product

Product File:

See images above: plot section