

Microscope objective screws into the bellows here.

Assembly screws onto base here, or wherever is convenient.

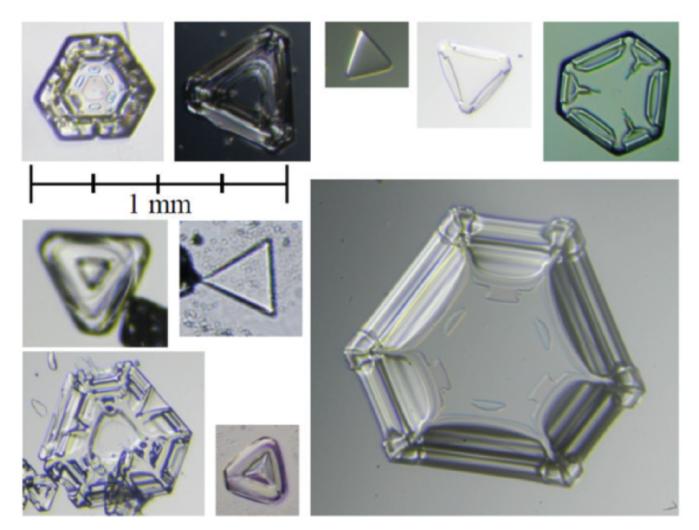


Fig. 2. Ice crystals with threefold symmetry from Summit, Greenland. Crystals were sampled manually using cold slides and a microscope in the Integrated Characterization of Energy, Clouds, Atmospheric State and Precipitation at Summit (ICECAPS) project, Greenland (3216 m MSL) (Shupe et al. 2013).



Fig. 8. Halo display on the Greenland plateau during a diamond dust event. The red arrow indicates a sunvex Parry arc. The trigonal crystals shown in Fig. 2 were sampled during this display, which is consistent with Westbrook's hypothesis that scalene crystals are required for the Parry orientation. The surface temperature was -28°C and the solar elevation angle was estimated at 5°. [Photo credit: Ed Stockard.]

Murray et al. (2015)

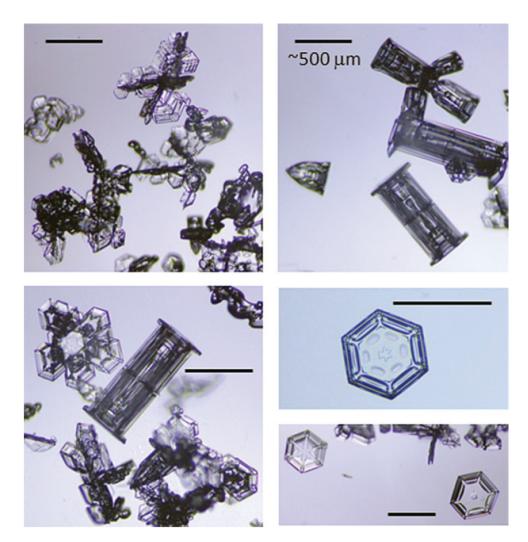


Fig. 8. IcePIC ice crystal photographs taken at 1740 UTC 21 Sep 2010. In each photograph a reference bar of  $500-\mu m$  length is provided for scale.

Shupe et al. (2013)

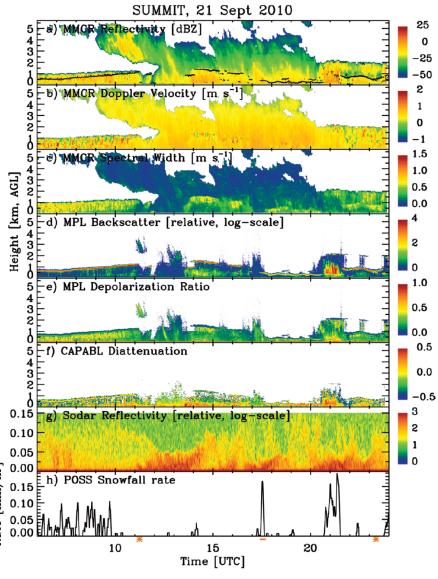


Fig. 3. Active remote-sensor measurements on 21 Sep 2010, including time-height cross sections of (a) radar reflectivity, (b) mean Doppler velocity, (c) Doppler spectrum width, (d) lidar backscatter, (e) depolarization ratio, (f) diattenuation, (g) sodar reflectivity, and (h) a time series of POSS-derived snowfall rate. The ceilometer-observed cloud-base heights are given as black dots in (a). Orange stars along the abscissa designate the time of radiosonde launches shown in Fig. 6. The orange bar along the abscissa designates the time during which photos were taken using the IcePIC in Fig. 8.

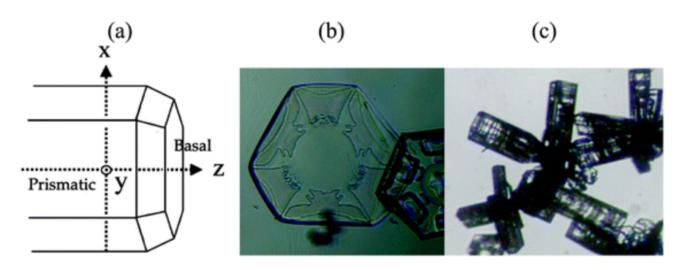


Fig. 1 (a) Schematic of a hexagonal ice prism indicating definitions of coordinates used in this paper. Coordinate z coincides with the vector perpendicular to the basal (0001) facet (i.e., the crystallographic c-axis); coordinate y coincides with the vector perpendicular to the prismatic (1010) facet; and coordinate x coincides with the vector [perpendicular to the secondary prismatic (1120) facet]. (b) Optical photograph of hexagonal plates recorded at Summit, Greenland on 31 August 2012 (temperature –17 °C, 91% relative humidity), supplied courtesy of Chris Cox (personal communication). (c) Optical photograph of a cluster of hexagonal columns recorded at Summit, Greenland on 2 December 2013 (–52 °C, 57% relative humidity), supplied courtesy of Von Walden (personal communication). Gladich et al. (2015)