Tethered balloon-borne cloud measurements with Cloud Particle Microscope (CPM) sonde in Ny-Alesund.

Hiroshi Kobayashi (University of Yamanashi, Japan)
Kosei Ohora (Tokyo Gakugei University, Japan)
Masataka Shiobara (National Institute of Polar Research, Japan)
Kazutoshi Sato (National Institute of Polar Research, Japan)
Makoto Koike (University of Tokyo, Japan)
Toshiaki Takano (Chiba University, Japan)
Kengo Uno (Chiba University, Japan)
Jinro Ukita (Niigata University, Japan)
kobachu@yamanashi.ac.jp

Tethered balloon-borne cloud measurements with Cloud Particle Microscope (CPM) sonde to measure cloud microphysics in Ny-Alesund (78.9N, 11.9E), Svalbard. The number-size distributions of clouds were measured in clouds directly. The measured mode diameter was varied with altitude or observation date. In 27 June 2014, the mode diameter in the lower cloud was around 10 µm, although that in the upper cloud was 20 µm. The result shows that the CPM could measure the size distribution of cloud droplet in the size range from several micrometer to tens micrometer in-situ.