Backscatter Cloud Probe (BCP) Specifications

Measured Parameters	Single particle light scattering
Auxiliary Parameters	Temperature Pressure
Derived Parameters	Particle diameter Particle number concentration Liquid water content (LWC) Effective diameter (ED) Median volume diameter (MVD)
Size Range	5µm to 75 µm
Number of Size Bins	10, with user-selectable boundaries
Number Concentration Range	0 - 1,000 particles/cm^3
Air Speed Range	10 - 250 m/sec
Sampling Frequency	Selectable, 0.04 sec to 20 sec
Light Collection Angles	Center-line: 156°, +/- 13°
Laser	658 nm
Laser Power	50mW or less
Data System Interface	RS-232 or RS-422 serial interface
Additional components	Electronics box, 1 m connecting cable
Calibration	Glass beads
Routine Maintenance	Optics cleaning before every field campaign
Recommended Service	Annual cleaning and calibration at DMT service facility
Software	Optional Particle Analysis and Display System (PADS) software – see below
Environmental Operating Conditions: Temp RH Altitude	 -40 to +40 °C 0 - 100%, non-condensing 0 - 50,000 feet
Weight	1.5kg
Probe Dimensions	11.7 cm x 10.7 cm x 4.5 cm, with 5.9 cm diameter mounting flange
Electronics Box Dimensions	21.6 cm x 12 cm x 5.7 cm
Power Requirements	28 VDC, 5 A for system and heaters

Specifications are subject to change without notice. The BCP is a Class 3B Laser Product.

CAUTION: The requirement for the BCP to be non-intrusive to aircraft operations (i.e., no external components) dictates that there be no laser beam-stop mechanism. The laser beam will project unimpeded from the optical window. The laser is not eye-safe, so precautions must be enforced for operation on the bench or ground.

DROPLET MEASUREMENT TECHNOLOGIES

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