

# Particle Analysis and Display System (PADS)

The Particle Analysis and Display System (PADS) is LabVIEW-based software that works with many DMT instruments and other leading instruments in the atmospheric sciences. It features an easy-to-use interface, with one tab for each instrument in the system. Optional PADS tabs also display data simultaneously from different instruments, combine data from several instruments into overall measurements, and allow the user to send data to other computer systems.



In acquisition mode, PADS displays real-time data. In playback mode, it displays previously recorded files. Users can zoom in on sampling periods of interest and view time-series graphs of data.

## Advantages

- Tab structure for rapid view of multiple instruments
- Automated calculation of parameters of interest such as effective diameter (ED), Median Volume Diameter (MVD), and Number Concentration
- Preservation of both raw and processed data
- Ability to start new files automatically at timed intervals
- Sampling speeds of 0.05 to 25 Hz
- Real-time view of two-dimensional image data for imaging-instrument modules
- Intuitive particle-size histograms and time-series charts
- Easy configuration of instruments and of PADS displays
- Selectable sources for airspeed, temperature and pressure measurements, to ensure most accurate particle concentrations for individual probes
- Unlimited distribution of playback system
- Compatible with Windows 2000, Windows XP, and Windows 7

Information contained in this brochure is current as of August 30, 2011.



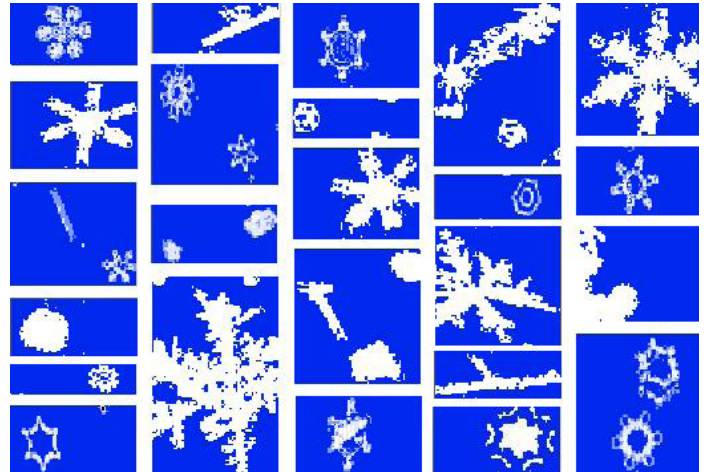
2545 Central Avenue  
Boulder, Colorado, USA 80301  
www.dropletmeasurement.com  
ph: 303-440-5576, fax: 303-440-1965

## Supported Instruments and Modules

- Air Data Probe (ADP) and AIMMS-20
- Aerosol Particle Spectrometer with Depolarization (APSD)
- Anemometer with NI A2D Converter
- ARINC 429
- Back-Scatter Cloud Probe (BCP)
- Cloud and Aerosol Spectrometer (CAS)
- Cloud and Aerosol Spectrometer with Depolarization (CAS-DPOL)
- Cloud Condensation Nuclei Counter with Single (CCN-100) or Dual (CCN-200) Columns
- Cloud Droplet Probe (CDP) and CDP with Particle-by-Particle (CDP-PBP)
- Cloud Imaging Probe (CIP) and CIP Grayscale (CIP-GS)
- Dewpoint
- Ethernet UDP Output
- Fog Monitor (FM-100)
- Forward-Scattering Spectrometer Probe (FSSP) with SPP-100 or SPP-300 electronics
- Garmin GPS
- General Input (a module that accepts data from a wide variety of other instruments)
- Hot-wire Liquid Water Content Sensor (LWC-100)
- National Instruments' NI A/D Converter (NI A2D)
- Meteorological Particle Spectrometer (MPS)
- Passive Cavity Aerosol Spectrometer Probe, airborne version (PCASP-100X) and ground-based version (PCASP-X2)
- Precipitation Imaging Probe (PIP)
- Serial Output
- Sonic Anemometer
- Summary



A DMT CAPS probe mounted on a British Antarctic Survey Twin Otter. Photo Courtesy of BAS.



Particle images gathered with the PADS Cloud Imaging Probe (CIP) and CIP-GS Modules. CIP-GS Data Courtesy of Forschungszentrum Jülich.

## Data Recording

PADS records both raw and processed data files. Because raw data are preserved, data can easily be reprocessed, allowing for post-sampling calibrations and corrections to variables like airspeed that affect particle concentrations. Probe housekeeping channels can be both reprocessed and renamed.

Data are recorded at user-selectable sampling speeds of 0.05 to 25 Hz. Files are recorded in comma-delimited format (.csv). They can easily be viewed in any spreadsheet program such as Excel. In addition, data can be imported into database or graphing programs for additional analysis. PADS file names are date- and instrument-stamped for easy identification.

## Pricing

Contact DMT for pricing, more information, or to inquire about custom software development for modules not listed above: +1.303.440.5576, [customer-contact@dropletmeasurement.com](mailto:customer-contact@dropletmeasurement.com).



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