The CAPS probe is a combination cloud spectrometer from Droplet Measurement Technology (DMT). The probe consists of three different instruments: the Cloud Imaging Probe (CIP), the Cloud and Aerosol Spectrometer (CAS), and the Hotwire Liquid Water Content Sensor (Hotwire LWC, not available for NAAMES). The data were collected using the PADS 3 software provided by DMT.

The CIP data were processed using OASIS Software Version: 1.4996 (DMT software written by Dr. Jonathan Crosier). OASIS utilizes the image files created by the PADS software to do all data analysis for the CIP. The following parameters are what were used in the OASIS data panel:

Probe Configuration Settings:
- Current-ID: CIP-GS 15
- Arm Sep: 100
- Pixel Res: 25
- Num Pixels: 64
- Probe type: CIP Gray

Data Analysis Settings:
- Size: X
- M-2-D: Liquid Sphere
- SA: Centre-in
- DoF corr: None

Things to Note:
- Efforts have been made to recover or remove periods of bad data (due to low diode voltage, window fogging, etc.) as much as possible. If periods of suspicious data are identified in the files, please contact the PI/DMs so that those periods can be investigated using additional diagnostics.
- Stuck Diode Correction: The CIP probe had a diode that was not receiving any current for all the NAAMES campaign (the 3rd diode to be specific). Code written by Jonathan Crosier was used to remove the stuck pixel from the data.
- OASIS_Gray2Mono is an OASIS function that determines the amount of particles to reject. The value of this function is set to 0 to include as many particles as possible.
- Z value (adjustment factor for depth of field calculations) set to 7.8 based on recommendations of Matt Freer (DMT), Darrel Baumgardner, and the theoretical work of Alexei Korolev. There was also no correction for the electronics response time due to the upgraded electronics of the CIP (Matt Freer, DMT).
- The True Air Speed (TAS) used to calculate the sample volume of the particles was taken from the Hskping data. The Hskping data was converted to m/s to allow for the correct calculation of sample volume. The Hskping file revision used for each flight is specified below.
- The lowest size bin available from the CIP (bin center at 25 um) is not reported in these files due to the stuck diode issue and prior experience with the instrument.

Hskping Revision Used:
- 05/13/16: NAAMES-Hskping_c130_20160513_R1.ict
- 05/18/16: NAAMES-Hskping_c130_20160518_R1.ict

- 05/19/16: NAAMES-Hskping_c130_20160519_R1.ict
- 05/20/16: NAAMES-Hskping_c130_20160520_R1.ict
- 05/26/16: NAAMES-Hskping_c130_20160526_R1.ict
- 05/27/16: NAAMES-Hskping_c130_20160527_R1.ict
- 05/28/16: NAAMES-Hskping_c130_20160528_R1.ict
- 05/29/16: NAAMES-Hskping_c130_20160529_R1.ict
- 05/30/16: NAAMES-Hskping_c130_20160530_R1.ict
- 06/01/16: NAAMES-Hskping_c130_20160601_R1.ict
- 06/03/16: NAAMES-Hskping_c130_20160603_R1.ict

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