Processing Package Summary (ADPAA, D2G,EGADS,OASIS SAMAC, SODA, SPEC, UIOPS)

EUFAR ICCP Workshop On Data Processing, Analysis and Presentation Software

David Delene, Alexei Korolev, Matt Freer, Jonathan Crosier, Stephanie Gagne, Aaron Bansemer, Colin Gurganus, and Wei Wu

Airborne Data Processing and Analysis (ADPAA)

- **Contact:** David Delene and Andrea Neumann, University of North Dakota
- Availability: Repository svn://svn.code.sf.net/p/adpaa
- **Copyright:** GNU/GPL Version 3
- **Platform:** Redhat, Fedora, Ubuntu Linux (Windows)
- **Language:** IDL, Python 2, Perl, Bash, Csh, C, Fortran, Matlab, Scilab, Igor.
- **Status:** 2796 Commits, 12 Active Developers, 2 Administrator.
- **Scope:** Processes data from SEA data acquisition systems, many instruments but does not process OAP data. Does visualization, analysis and file conversion.

D2G Software Package (D2G)

- **Contact:** Alexei Korolev, Environment Canada
- Availability: Local Team Software
- Copyright: Open Question
- **Platform:** Linux, Windows, and Mac
- Language: Matlab
- **Status:** +1 Admins, +2 Developer.
- Scope: Processing and visualization of airborne data with focus on OAPs (2DC, 2DP, CIP, PIP, 2DS, and HVPS). Developed tools for OAP quality assurance.

EUFAR General Airborne Data-processing Software (EGADS)

- **Contact:** Matt Freer (Droplet Measurement Technologies) and Olivier Henry (European Facility for Airborne Research)
- Availability: Repository https://github.com/eufarn7sp/egads-eufar
- **Copyright:** New BSD License
- **Platform:** Linux, Mac and Windows
- Language: Python 2.x
- Status: 2+ Active Developers
- **Scope:** Toolbox and framework for processing Airborne Atmospheric Data. Includes meta-data and units. All algorithms are thoroughly documented in separate, referenceable PDF.

Optical Array Shadow Imaging Software (OASIS)

- **Contact:** Jonny Crosier, The University of Manchester
- Availability: Purchase from Droplet Measurement Technologies (DMT).
- **Copyright:** DMT Closed Source
- **Platform:** Windows, Wine on Linux (Poor Performance)
- Language: IGOR, Additional Coding in C/C++
- Status: 1+ Active Developer, 6 Manchester User
- **Scope:** Analysis Package for Optical Array Probe Data. All new Probes (CIP, PIP/CIP-100, SPEC 2DS and HVPS. Uses HDF5 format.

Software for Airborne Measurements of Aerosol and Clouds (SAMAC)

- **Contact:** Stephanie Gagne and Landan MacDonald, Dalhousie University
- Availability: Repository https://github.com/StephGagne/SAMAC
- **Copyright:** GNU/GPL Version 3
- **Platform:** Linux, Mac, Windows
- **Language:** Python 2.7 (Matplotlib, Scipy, Numpy, Basemap, H5py, Xlrd)
- **Status:** 13,000+ Lines, 2 Developer
- Scope: Analysis Package for Calculating, Displaying and Storing Segments from Processed Data Sets

System for OAP Data Analysis (SODA)

- **Contact:** Aaron Bansemer and Andrew Heymsfield, National Center for Atmospheric Research
- Availability:
 - GitHub https://github.com/abansemer/soda2
 - Simulations

-ftp.ucar.edu/pub/mmm/bansemer/simulations/

- **Copyright:** BSD-3 License: Free use, UCAR/NCAR retain copyright notice.
- **Platform:** Linux and Windows, likely Macs
- Language: IDL (Bash Scripts)
- Status: +90,000 Lines, +1 Developer
- **Scope:** GNU and script based analysis package for optical array probe data that uses shattering correction and other options to derive particle spectrum.

Legacy SPEC OAP Processing (SPEC)

- **Contact:** Colin Gurganus and Ted Fisher, SPEC Inc.
- Availability: Download from SPEC Web
 Site
- Copyright: Open, As Is
- **Platform:** Linux, Windows, and Mac
- Language: Matlab, IDL
- **Status:** +1 Developer.
- **Scope:** Analysis Package for SPEC Optical Array Probe Data (2D-S, HVPS3).

University of Illinois OAP Processing Software (UIOPS)

- **Contact:** Wei Wu and Greg McFarquhar, University of Illinois
- Availability: https://github.com/weiwu5/UIOPS
- Copyright: GNU GPL V3
- **Platform:** Linux, Windows, and Mac (CGAL modern image processing)
- **Language:** Matlab (C++ Image processing, Python, Bash/Csh)
- **Status:** +1 Developer.
- **Scope:** Analysis package for optical array probe data.