Airborne Data Processing and Analysis (ADPAA)

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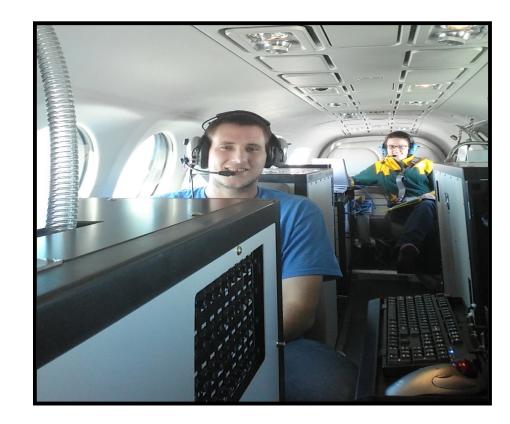University of North Dakota

Data File Formats Supported

- Processing of any *.sea File (Science Engineering Associates (SEA) Data Acquisition System)
    - Conversion scripts supports data recorded on instruments.
- Main Data Format
    - Gzipped NASA/UND (1001) ASCII
- Output Data Format
    - NASA/UND ASCII 1001 Format
    - 2013 ICARTT NASA Format (ict)
    - NetCDF
    - KML (Google Earth)
- Data File Import Routines
    - IDL, Python, Matlab, Scilab, Igor
- Conversion Routines
    - Too many to list.

Availability and Copyright

- SourceForge Repository (SVN)
  - Current version 3,237
  - 3 Admins
  - 10 Active Developers
  - 8 Inactive Developers
- Download
  - svn checkout
  - svn://svn.code.sf.net/p/adpaa/code/trunk adpaa-code
- GNU/GPL v3 Licensed
  - Have to remain open, even when forked.

Data Processing

- Data Quality Control
  - Calibration Checks
  - Data Missing Values Codes
  - Levels of Data Processing
  - Raw Recorded Data
  - Engineering to Physical Units
  - Single Instrument Data Files
  - Combined Instrument Data File
- Data Quality Assurance
  - Scientific Data Review
  - Scripts Search for Unrealistic Values

References: Data Processing

Delene, D. J., Andrea Neumann, Alexei Korolev, Matt Freer, Olivier Henry, Jonathan Crosie, Stephanie Gagne, Landan MacDonald, Aaron Bansemer, Andrew Heymsfield, Colin Gurganus, Wei Wu, Greg McFarquhar, Towards Community Software Development to Process and Analyze Cloud Physics In-situ Aircraft Data, Bulletin of the American Meteorological Society, in review, 2017.

Delene, D. J., Airborne Data Processing and Analysis Software Package, Earth Science Informatics, 4(1), 29-44, 2011, URL: http://dx.doi.org/10.1007/s12145-010-0061-4, DOI: 10.1007/s12145-010-0061-4.

ADPAA Web Site - https://sourceforge.net/projects/adpaa/

ADPAA Wiki - http://adpaa.sourceforge.net/wiki/index.php/Main_Page

Software Web Site - http://aerosol.atmos.und.edu/ADPAA/index.html

Getting Involved: ADPAA, ADTAE, and CoPAS

- **Users**
  - Read Earth Science Informatics ADPAA and BAMS Software Articles.
  - Create accounts and request Wiki access.
  - Submit documentation and tutorials.
- **Developers**
  - Read the programming guide.
  - Submit code to Administrator for review.
- **Administrators**
  - Be a long time active developer.
  - Vote of current Administrators.