



WINTER DATA MANAGEMENT



Steve Williams

**NCAR Earth Observing Laboratory (EOL)
Computing, Data, and Software Facility (CDS)**



sfw@ucar.edu

WINTER Science and Planning Meeting

Boulder, CO

7 November 2014



EOL WINTER support sponsored by



NCAR

EOL DATA SERVICES

- **Data Questionnaire**
- **Data Management Plan Documents (e.g. policy/protocol)**
- **Real-time Data Ingest/Display (e.g. Ops Center)**
- **Field Operations Catalog and GIS (e.g. Mapserver, GE)**
- **Data Tracking, Processing, and Quality Assurance**
- **Interactive Data Archive and Distribution (EMDAC)**
- **Web Services**
- **Special Media Products/Services (including Mail lists)**
- **Long-term Archive and Data Stewardship**



WINTER Web Site at NCAR/EOL

WINTER 2015

Wintertime Investigation of Transport, Emission, and Reactivity

February 1, 2015 to March 15, 2015 Project Location: Hampton, VA

Funding Type: NSF Funded

Project Description:

WINTER is an atmospheric chemistry campaign that focuses on wintertime emissions and chemical processes in the Northeastern US. The project has three goals:

(1) to characterize the chemical transformations of wintertime emissions with an equal focus on nocturnal and multiphase processes as on photochemistry;

(2) to assess the dominant mechanism of secondary aerosol formation and quantify the geographical distribution of inorganic and organic aerosol types during winter; and

(3) to provide constraints on wintertime emission inventories for urban areas, power plants and agricultural areas, and characterize the export pathways of primary pollutants to the North Atlantic.

WINTER will use the NSF/NCAR C-130 based at NASA Langley in Hampton, VA to address these goals. Operation of the C-130 during winter in the Northeastern U.S. allows comprehensive sampling, in one campaign, of 1) large urban/industrial plumes of nitrogen oxides, VOC, and sulfur from the Northeast corridor as it is advected off the coast, 2) coal-fired power plants throughout the eastern U.S. including the Ohio River Valley and along the East Coast, and 3) distributed emissions from oil and gas extraction, agricultural or biofuel burning, and vegetation in the mid-Atlantic and southeast U.S.



MEETINGS & PRESENTATIONS

Latest Telecon Slides
Science/Planning Meeting Agenda

DOCUMENTS

WINTER White Paper

RELATED LINKS

Directions to NASA Langley

C130 OPERATIONS

C130 Floor Plan
C130 Upload Schedule


DATA ACCESS


Data Access
Field Catalog


FACILITIES & PLATFORMS

C-130

WINTER SOCIAL MEDIA

 Like us on **Facebook**

 Watch us on **YouTube**

 Follow us on **Twitter**

 Follow us on **LinkedIn**

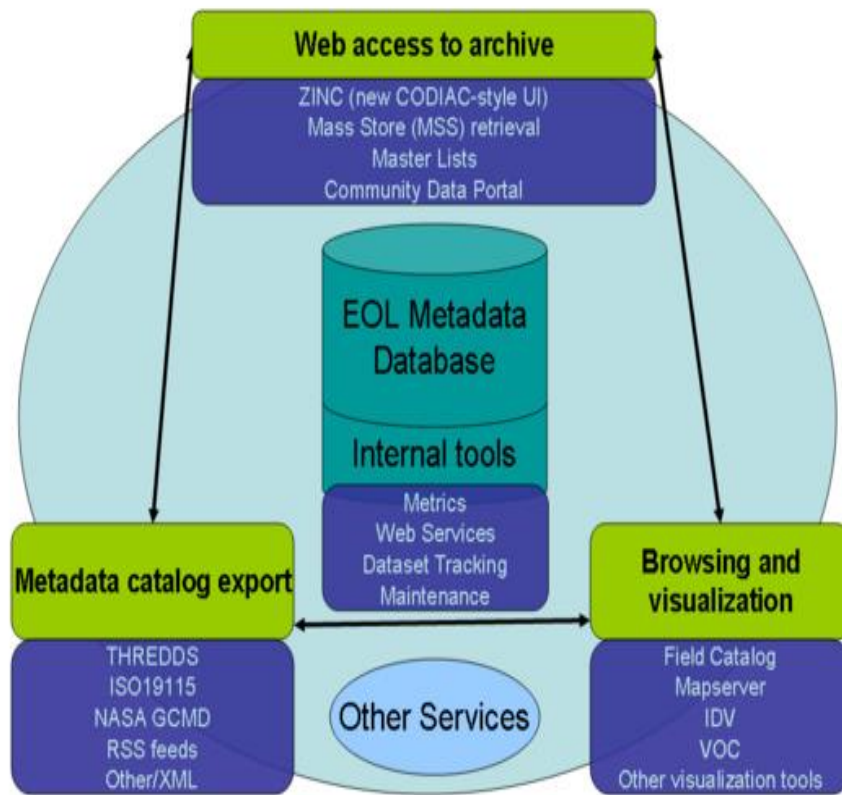
- Project Description
- Data Access & Field Catalog
- Publications
- Documentation
- Meetings and Presentations
- Mailing Lists
- Education and Outreach
- Related Web Pages
- PI and Contact Information

https://www.eol.ucar.edu/field_projects/winter

WINTER DATA POLICY SUMMARY (*Proposed*)

- **All investigators must agree to promptly submit their processed “preliminary” data to the WINTER archive no later than 15 September 2015**
- **All “preliminary” data shall be provided to other WINTER Investigators upon request (restricted as appropriate)**
- **During the initial 1-year data analysis period, data may be provided to a third party only with the permission of the investigator(s) who collected the data**
- **All data will be considered public domain not more than one year following the end of the WINTER preliminary data submission deadline (16 March 2016)**
- **Any use of the data will, at a minimum, include acknowledgment. Co-authorship TBD with the investigator(s) who collected the data**

EOL Metadata Database and Cyberinfrastructure (EMDAC)



EOL Data System (EMDAC)

Primary means for all project scientists and researchers to browse and retrieve data from any EOL-supported projects

Features:

- Long-term field project data archival and distribution
- Interactive data browsing, subsetting, and format translation
- Web-based access
- Value-added datasets
- Data documentation

Data Archive (Master List)



DC3 Data Sets



Data Set Name (Responsible Group/PIs shown in parentheses)	Date Posted	Info
Accompanying Archives		
NASA Langley DC3 Merged Aircraft Dataset Archive [Chen, Gao (NASA-LaRC)]	2012-08-02	
Aircraft		
Aircraft Meteorological Data Reports (AMDAR) and Aircraft Communications Addressing and Reporting System (ACARS) Data [(ESRL-GSD)]	2012-07-24	
Aviation Weather Center Convective, Icing, and Turbulence SIGMET Imagery [(NCAR-EOL)]	New 2013-01-07	
Aviation Weather Center Pilot Reports of Icing and Turbulence (PIREPs) Imagery [(NCAR-EOL)]	New 2013-01-07	
DC3 Field Catalog Earth Tool (Replay) [(NCAR-EOL)]	New 2013-01-07	
Aircraft: DLR Falcon		
NASA Langley DC3 Merged Aircraft Dataset Archive [Chen, Gao (NASA-LaRC)]	2012-08-02	
NOAA NWS Aviation Weather Center Aviation Digital Data Service (ADDS) [(NOAA-NWS-ADDS)]	New 2013-01-17	
DC3 Mission Summaries [(NCAR-EOL)]	2012-10-23	

DATA BY CATEGORY

- [Accompanying Archives](#)
- [Aircraft](#)
- [Ancillary](#)
- [Hydrology](#)
- [Land Based](#)
- [Lightning](#)
- [Model](#)
- [Photography](#)
- [Radar](#)
- [Satellite](#)
- [Upper Air](#)

DATA BY SITE

- [Alabama Region](#)
- [Colorado Region](#)
- [Oklahoma Region](#)

[Back to DC3](#)

[Email comments & questions](#)

http://data.eol.ucar.edu/master_list/?project=DC3

ARCHIVE DATA DOCUMENTATION

Data Set Documentation ("Readme") Guidelines

The documentation (i.e., the "Readme" file) that accompanies each project data set is as important as the data itself. This information permits collaborators and other analysts to understand any limitations or special characteristics of the data that may impact its use. Data set documentation should accompany all data set submissions, including both preliminary and final. The following outline and content is recommended and should be adhered to as closely as possible to make the documentation consistent across all data sets.

Data set Documentation/Readme Outline:

Title: This should match the data set name

Author(s):

Name(s) of PI and all co-PIs
Complete mailing address, telephone/facsimile numbers,
E-mail address of PIs, and web address (if applicable)
Similar contact information for data questions (if different than above)

1.0 Data Set Overview:

Introduction or abstract
Time period covered by the data
Physical location (including lat/lon/elev) of the measurement or platform
Data source if applicable (e.g., for operational data include agency)
Any web address references (i.e., additional documentation such as Project web site)

2.0 Instrument Description:

Brief text (i.e., 1-2 paragraphs) describing the instrument with references
Figures (or links), if applicable
Table of specifications (i.e., accuracy, precision, frequency, resolution, etc.)

3.0 Data Collection and Processing:

Description of data collection
Description of derived parameters and processing techniques used
Description of quality assurance and control procedures
Data intercomparisons, if applicable

4.0 Data Format:

Data file structure and file naming conventions (e.g., column delimited ASCII, NetCDF, GIF, JPEG, etc.)
Data format and layout (i.e., description of header/data records, sample records)
List of parameters with units, sampling intervals, frequency, range
Data version number and date
Description of flags, codes used in the data, and definitions (i.e., good, questionable, missing, estimated, etc.)

5.0 Data Remarks:

PI's assessment of the data (i.e., disclaimers, instrument problems, quality issues, etc.)
Missing data periods
Software compatibility (i.e., list of existing software to view/manipulate the data)

6.0 References:

List of documents cited in this data set description. Please provide links for on-line publications, if available.

DATA SUBMISSION

DC3 Data Submission Instructions

The DC3 Data Archive contains a master list of all DC3 international data sets (with links) and has been compiled to provide easy access to all DC3 data sets (both operational and research). Data sets are grouped by platform and sorted by data type (*i.e.*, aerosol, cloud properties, radar, satellite, *etc.*). This list will be updated frequently and is linked in the Data Access section of the [DC3 Project Page](#). It is available directly at [DC3 Data Archive](#). Please e-mail all corrections, additions, or deletions to the DC3 Data Archive list directly to [Steve Williams](#).

If you already have your data sets available on-line, please provide the web link or FTP access information to NCAR Earth Observing Laboratory (EOL). Once your data set (with metadata) is available, a link will be provided from the DC3 Data Archive along with a submission date to track future data set upgrades or revisions (if needed).

Please submit both your data set(s) and accompanying metadata or documentation files to the DC3 Data Archive. Data set documentation guidelines are available by direct link [here](#). NCAR EOL has established an anonymous FTP to accept your DC3 data set(s). **To FTP data to the NCAR EOL DC3 anonymous FTP, please use the following instructions:**

FTP: ftp.eol.ucar.edu
Login: anonymous (*No password required.*)
cd /pub/data/incoming/dc3

Once you have FTPed your data set to NCAR EOL, **it is very important to send an e-mail to [sfw at ucar.edu](mailto:sfw@ucar.edu)** indicating that the data file(s) have been FTPed, along with the file(s) names, data contact information, any data restrictions, and appropriate file documentation (*i.e.*, data formats, descriptions, acknowledgments, and metadata). Documentation files may be e-mailed to [sfw at ucar.edu](mailto:sfw@ucar.edu) directly if preferred. **If password protection is required for these data, please indicate this at the time of submission.** You will receive a unique "user ID" and "password" that can be changed at any time upon request. For users without direct Internet access, or if your data set(s) are too large to FTP, you may send digital file(s) on magnetic or optical media (with documentation) by conventional mail to the EOL shipping address below.

Thank you very much for your assistance in providing final data to the DC3 archive. Feel free to contact us should you encounter any problems or have any questions.

Steve Williams
DC3 Data Manager

PROJECT PUBLICATIONS LIBRARY

DC3 Publications

[How to Submit Publication References to this List](#)

[Publications](#)

[Conferences](#)

[Reports](#)

[Theses](#)

[Other Citation Links](#)

Publications

[A-D](#) [E-H](#) [I-L](#) [M-P](#) [Q-T](#) [U-Z](#) [Back to Top](#)

Conference Proceedings

[A-D](#) [E-H](#) [I-L](#) [M-P](#) [Q-T](#) [U-Z](#) [Back to Top](#)

- [Arkinson, Heather, T. Hanisco, M. Cazorla, A. Fried, J. Walega, 2012: In Situ Airborne Measurement of Formaldehyde with a New Laser Induced Fluorescence Instrument. Poster. AGU 2012 Meeting, San Francisco, California, U.S.A., A21H-0154.](#)
- [Barth, Mary C., M. Bela, K. Cummings, K. Pickering, T. Lyons, M. Weisman, K. Manning, G. Romine, W. Wang, F. Flocke, A. Weinheimer, T. Campos, T. Ryerson, G. Diskin, G. Sachse, 2012: Tracer and Chemistry Modeling of Thunderstorms for the DC3 Field Experiment. Poster. AGU 2012 Meeting, San Francisco, California, U.S.A., A21H-0152.](#)
- [Brock, Charles A., B. Anderson, L. Ziemba, K. Thornhill, R. Moore, A. Beyersdorf, E. Winstead, S. Crumeyrolle, N. Wagner, J. Langridge, M. Richardson, D. Lack, D. Law, T. Shingler, A. Sorooshian, 2012: Continuous Measurement of Particle Hygroscopicity as a Function of Diameter. Poster. AGU 2012 Meeting, San Francisco, California, U.S.A., A11A-0016.](#)
- [Bruning, Eric, R. Thomas \(2012\), Fractal-based lightning channel length estimation from convex hulls of VHF sources, Abstract AE12A-03 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.](#)
- [Campuzano Jost, Pedro, D. Day, B. Palm, A. Ortega, P. Hayes, J. Jimenez, 2012: Submicron Aerosol Transport and Aging by Convective Storms During the DC3 Campaign. Poster. AGU 2012 Meeting, San Francisco, California, U.S.A., A21H-0155.](#)
- [DiGangi, Joshua, A. O'Brien, M. Diao, C. Hamm, Q. Zhang, S. Beaton, M. Zondlo, 2012: Calibration and Field Deployment of the NSF G-V VCSEL Hygrometer. Poster. AGU 2012 Meeting, San Francisco, California, U.S.A., A31E-0078.](#)
- [Hall, Samuel, K. Ullmann, S. Schmidt, B. Kindel, J. Hair, 2012: Actinic flux measurements and photolysis frequencies enhancements near clouds during DC3 and TORERO. Poster. AGU 2012 Meeting, San Francisco, California, U.S.A., A51E-0116.](#)

USE OF DIGITAL OBJECT IDENTIFIERS (DOIs) FOR DATASETS

- DOIs becoming functional for proper citation of datasets (similar to publications)
- Provide users with a simple, standard way to reference datasets
- Allows for the unique tracking of metrics for individual datasets
- Allows for linking of related datasets and publications
- NCAR has established a process for creating DOIs (DataCite Registration)
- DOIs are considered “perpetual” and provides proper attribution



DC3 and SEAC4RS Joint Science Teams Meeting

February 21-23, 2012
Center Green Auditorium, NCAR, Boulder, Colorado

List of Attendees (Updated 17 Feb 2012)

Tuesday, February 21, 2012

- 7:30 Registration begins**
 Introduction (Main Auditorium) **ReadyTalk 4978380**
- 8:30 [Welcome](#) (M. Barth, W. Randel, A. Pszenny, H. Maring)
- 9:00 [Overview of the DC3 Science Plan & Experimental Design](#) (M. Barth)
- 9:40 [Forecasting Plans \[PPS\]](#) [\[Movie A\]](#) [\[Movie B\]](#) (M. Weisman)

10:00 Break

Ground Facilities (Main Auditorium) **ReadyTalk 4978380**

- 10:30 [Colorado](#) (S. Rutledge)
- 10:45 [Alabama \[PPS\]](#) (L. Carey)
- 11:00 [Oklahoma](#) (D. MacGorman)

Aircraft Facilities (Main Auditorium) **ReadyTalk 4978380**

- 11:15 [GV payload and flight patterns](#) (C. Cantrell)
- 11:30 [DC-8 payload and flight patterns](#) (W. Brune)
- 11:45 [Falcon payload and flight patterns](#) (H. Huntrieser)

12:00 Lunch

General Operations (Main Auditorium) **ReadyTalk 4978380**

- 13:00 [Operations Base](#) (J. Moore)
- 13:30 [Communications among Facilities](#) (M. Salazar)

.... Finally, please provide a copy of your PPT presentation for Workshop Documentation.

A PDF copy of your presentation (not the PPT file) will be posted on the WINTER web site

