# POST DATA MANAGEMENT AND ARCHIVING UPDATE

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**POST Science and Data Workshop**

**Salt Lake City, UT**

**5-6 Feb 2009**

# EOL Data Management Philosophy

- Early involvement in project planning
- Involvement with PIs to develop data management strategy (e.g., plan, policy, format, special collection and processing, data integration)
- Consistent implementation of strategy for lifetime of project and beyond (stewardship – data access and publications!)
- Reliable and efficient archive and distribution system
- Easy and efficient access to datasets and products by the broader community including stakeholders, educators and students

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# Project Data Management Considerations

- Develop Data Management Plan ✓
- Data Types – ASCII and netCDF
- Data Formats and Documentation ✓
- Data Collection ✓
- Real-time Data Requirements ✓
- Data Quality Control – PI's will do ✓
- Data Archival – EOL project page
- Data Distribution – EOL master list
- Coordination with other Programs

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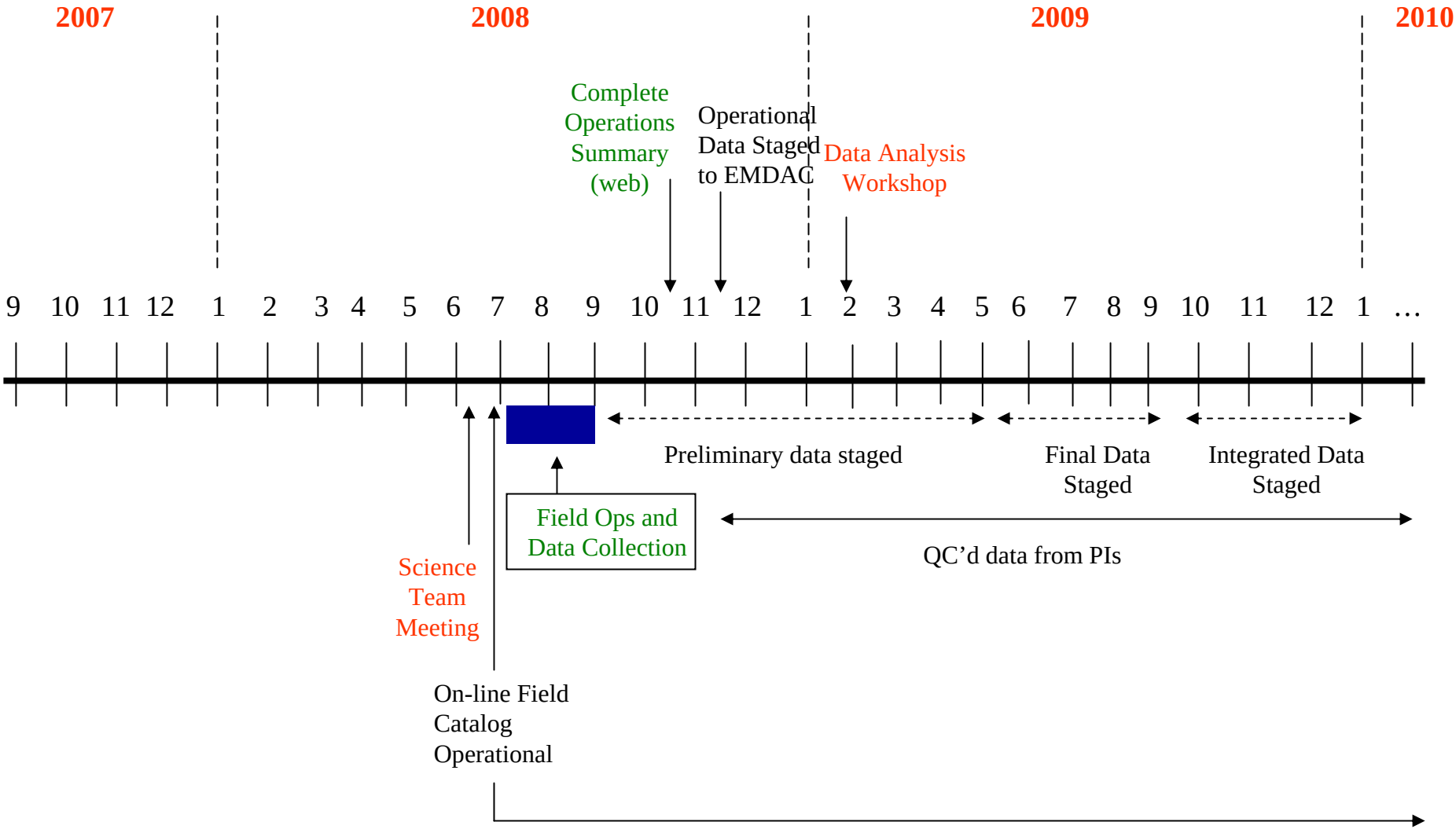
# POST Data Management Timeline



# POST

http://www.eol.ucar.edu/projects/post/

"One-stop access to everything POST!"

## Physics of Stratocumulus Top

## POST News

The POST Field Phase was held 14 July to 15 August 2008. Click here for the Field Catalog

The POST Science Team Meeting was held 12-13 June 2008 in Marina, CA. The presentations are available here.

## Project Description

In the **Physics of Stratocumulus Top (POST)** project stratocumulus clouds (Sc) off the west coast of California are studied using a combination of aircraft measurements and modeling. The objective is to improve the understanding of the physical processes that occur near Sc top, and that influence the entrainment process and boundary-layer evolution. The processes include wind shear, entrainment rate, CTEI (cloud-top entrainment instability), solar and infrared radiation, hydrometeor and CCN (cloud condensation nuclei) effects, and the formation and role played by the EIL (entrainment interface layer).

### POST Field Phase and Instrumentation

The study is a combination of field measurements and modeling. For the former, the **CIRPAS Twin Otter research aircraft** is deployed out of Monterey, CA for ~20 flights from 14 July to 15 August 2008. It carries a full complement of sensors to produce measurements related to those physical processes. Sensors include the UFT (ultra-fast temperature probe), PVM (fast particulate volume

## Data Access

Master List of All POST Data Sets
POST Field Catalog
Data Policy
Dataset Documentation Guidelines
Data Submission Instructions
Preliminary Twin Otter Flight Data - *Password Protected*

## Publications

Publications

## Documents

POST Proposal (PDF)
POST Parameter List (PDF)

## Meetings and Presentations

POST Science Team Meeting (12-13 June 2008)
POST Science and Data Workshop (5-6 Feb 2009)

## Participant Web Pages

Colorado State University
National Center for Atmospheric Research
NexSat (NRL)
University of Warsaw
University of Washington (Rob Wood)

# POST Data Policy

http://www.eol.ucar.edu/projects/post/ -> Data Policy

## ACCESS TO DATA

- All quality controlled data to be submitted to the POST data archive as soon as possible – 6 month maximum from the end of the Field Phase (15 Feb 2009).
- For one year following the six month submission deadline, POST PIs will have exclusive access to this data. All PIs have equal access to all data.
- After one year from the submission deadline, all research data will become publicly available (16 Feb 2010)
- Data should normally be in ASCII or NetCDF format. If in a special format, software (and documentation) for reading the data must be submitted to the archive along with the data set.
- Data and software to be well documented (metadata).

# DATASET METADATA

**http://www.eol.ucar.edu/projects/post/ -> Dataset Documentation Guidelines**

**TITLE:** This should match the data set name

**AUTHOR(S):**

- Name(s) of PI and all co-PIs
- Complete mailing address, telephone/facsimile Nos.,
- E-mail address of PIs, and WWW 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 World Wide Web address references (i.e. additional documentation such as Project WWW 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 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

# POST Data Policy

## PI RESPONSIBILITIES

- To carefully quality control their data to ensure maximum possible data integrity and value.
- To thoroughly document their data, including:
  - Instrument specifications;
  - Errors;
  - Problems with data (gaps and other problems);
  - Limitations.
- To provide full contact details.
- To make the data available for inclusion in the POST archive within 6 months of the field phase (15 Feb 2009).

# POST DATA SUBMISSION INSTRUCTIONS

**http://www.eol.ucar.edu/projects/post/ -> Data Submission Instructions**

A POST home page has been created. This page contains relevant links to project and data documentation, distributed data access, and other collaborating projects data sets.

An initial master list of all POST international data sets (with links) has been compiled to provide easy access to all POST data sets (both operational and research). Data sets are grouped by categories and sorted by data type. This list will be updated frequently. It is linked from the POST home page or is available directly at: http://data.eol.ucar.edu/master_list/?project=POST .

If you collected data for POST, please review this list to verify that your data set(s) are properly named with the appropriate Principal Investigators (PIs) identified. Please e-mail any corrections, additions, or deletions directly to sfw@ucar.edu. If you already have your data sets available on-line, please provide the WWW link or FTP access information. Once your data set (with meta data) is available, a link will be provided from the master list WWW page along with a submission date to track future data set upgrades or revisions (if needed).

Please submit your data set(s) (including accompanying metadata or documentation files) to the POST Long-term Data Archive at NCAR/Earth Observing Laboratory (EOL). Data set (and metadata) submission guidelines are available from the POST home page or by direct link to: http://www.eol.ucar.edu/projects/post/documents/data_doc.html .

To expedite matters, the EOL has established an anonymous FTP capability to accept your POST data set(s). The Internet address is:

FTP: data.eol.ucar.edu
LOGIN: anonymous
PASSWORD: use your e-mail address
cd pub/incoming/post

OR COME SEE ME TODAY OR TOMORROW!!!

It is very important to send an e-mail to 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@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 POST archive. Feel free to contact me should you encounter any problems or have any questions.

Steve Williams
POST Data Manager

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Steve Williams
NCAR/Earth Observing Laboratory (EOL)
Telephone: (303) 497-8164
Internet: sfw@ucar.edu

Mailing address:
P.O. Box 3000
Boulder, Colorado, USA 80307

Facsimile: (303) 497-2044
http://www.eol.ucar.edu/
Shipping Address:
NCAR/EOL
1850 Table Mesa Dr
Boulder, Colorado, USA 80305

# POST Data Policy

## USE OF DATA

- The PIs who gathered the data should be informed of the intent to use the data and approve (if necessary).
- It is strongly encouraged that PIs responsible for acquisition of data be invited to become collaborators and co-authors on any projects/publications/presentations. If the contribution of the data product is significant to the publication, the PIs responsible for generating a measurement or a data product should be offered the right of co-authorship.
- In all circumstances, the PIs responsible for acquisition of data should be acknowledged appropriately.

# POST Data Policy

## USE OF DATA

- *Suggested acknowledgement*: The xxxx data was gathered as part of the The Physics Of Stratocumulus Tops (POST). The primary sponsor of POST was the US National Science Foundation. The acquisition of the xxxx data was carried out by Dr. Yyyyy using the zzzz instrument and was funded by ????
- Acknowledge that data was obtained from the POST Data Archive at NCAR/EOL, i.e. “Data provided by NCAR/EOL under sponsorship of the National Science Foundation. http://data.eol.ucar.edu/”

NCAR Earth Observing Laboratory

# EOL DATA MANAGEMENT TOOLS

## EOL Field Catalog

***In-field tool to ingest and display operational and preliminary research imagery and project documentation for making real-time decisions and evaluating project progress***

**Features:**

- **Daily Mission Reports**
- **Operations Summary**
- **Facility Status Reports**
- **Data Analysis Products**
- **Authoring Tools**
- **Web-based access**

## 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**

# POST Field Catalog

Physics of Stratocumulus Top Experiment

Catalog Home | Daily Reports | Operational Products | Model/Forecast Products | Research Products | Missions | Tools & Links

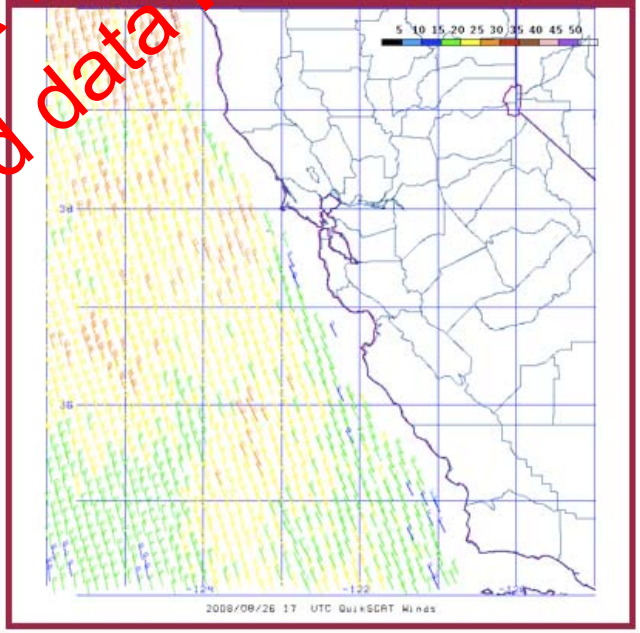
## POST Operations Info

Latest Operations Plan

Mission Summaries, Instrument status, Reports

Latest GOES-W Color Vis/IR Imagery


Latest QuikSCAT Imagery




**Project Operations: 14 July - 15 August 2008**



University Corporation for Atmospheric Research
PO Box 3000 Boulder CO 80307 USA


**DATA BY CATEGORY**

- Aircraft
- Model

Back to POST

Email comments & questions to
*webmaster@eol.ucar.edu*

# POST Data Sets

| Data Set Name (Responsible Group/PIs shown in parentheses) | Date Posted | Info |
|---|---|---|
| | | |
| **Aircraft** | | |
| | | |
| **Aircraft: CIRPAS Twin Otter** | | |
| 1-hz Composite Flight-Level Data - NetCDF format [NCAR/EOL] | In Progress | |
| 10-hz Composite Flight-Level Data - NetCDF format [NCAR/EOL] | | |
| 100-hz Composite Flight-Level Data - NetCDF format [NCAR/EOL] | | |
| 1000-hz Composite Flight-Level Data - NetCDF format [NCAR/EOL] | | |
| CIRPAS 1-hz FSSP Drop Size Spectra [Haf Jonsson] | | |
| CIRPAS 1-hz PCASP Drop Size Spectra [Haf Jonsson] | Expected 2009-02-28 | |
| CIRPAS 10-hz CAS Drop Size Spectra [Haf Jonsson] | Expected 2009-02-28 | |
| CIRPAS 10-hz CIP Drop Size Spectra [Haf Jonsson] | | |
| CIRPAS 1hz CCN [Roy Woods] | | |
| CIRPAS Twin Otter 1-hz Navigation, State Parameter, and Microphysics Flight-Level Data - ASCII format [Haf Jonsson] | New 2009-01-09 | |
| CIRPAS Twin Otter 1-hz Navigation, State Parameter, and Microphysics Flight-Level Data - NASA Ames format [NCAR/EOL] | Updated 2009-01-28 | |
| CIRPAS Twin Otter 1-hz Navigation, State Parameter, and Microphysics Flight-Level Data - NetCDF format [NCAR/EOL] | Updated 2009-01-28 | |
| CIRPAS Twin Otter 10-hz Navigation, State Parameter, and Microphysics Flight-Level Data [Haf Jonsson] | | |
| CIRPAS Twin Otter 100-hz Navigation, State Parameter, and Microphysics Flight-Level Data [Haf Jonsson] | | |
| Desert Research Institute (DRI) CCN and supersaturation [Jim Hudson] | Expected 2009-02-15 | |
| Gerber scientific (GSI) 1-hz PVM - ASCII format [Herman Gerber] | In Progress | |
| Gerber scientific (GSI) 1-hz PVM - NASA Ames format [NCAR/EOL] | In Progress | |

http://www.eol.ucar.edu/projects/post/ -> Master List


DATA BY CATEGORY
- Aircraft
- Model

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webmaster@eol.ucar.edu

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| CIRPAS Twin Otter 1-hz Navigation, State Parameter, and Microphysics Flight-Level Data - NetCDF format [NCAR/EOL] | Updated 2009-01-28 | |
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| Gerber scientific (GSI) 1-hz PVM - NASA Ames format [NCAR/EOL] | In Progress | |
| Gerber scientific (GSI) 1-hz PVM - netCDF format [NCAR/EOL] | In Progress | |
| Gerber scientific (GSI) 10-hz PVM - ASCII format [Herman Gerber] | New 2009-01-29 | |
| Gerber scientific (GSI) 10-hz PVM - NASA Ames format [NCAR/EOL] | New 2009-02-04 | |
| Gerber scientific (GSI) 10-hz PVM - netCDF format [NCAR/EOL] | New 2009-02-04 | |
| Gerber scientific (GSI) 100-hz PVM - ASCII format [Herman Gerber] | New 2009-01-29 | |
| Gerber scientific (GSI) 100-hz PVM - NASA Ames format [NCAR/EOL] | New 2009-02-04 | |
| Gerber scientific (GSI) 100-hz PVM - netCDF format [NCAR/EOL] | New 2009-02-04 | |
| Gerber scientific (GSI) 1000-hz PVM - ASCII format [Herman Gerber] | New 2009-01-30 | |
| Gerber scientific (GSI) 1000-hz PVM - NASA Ames format [NCAR/EOL] [NCAR/EOL] | New 2009-02-04 | |
| Gerber scientific (GSI) 1000-hz PVM - netCDF format [NCAR/EOL] | New 2009-02-04 | |
| NCAR 100-hz Mixing Ratio Lyman-Alpha - ASCII format [Stuart Beaton] | In Progress | |
| NCAR 100-hz Mixing Ratio Lyman-Alpha - NASA Ames format [NCAR/EOL] | In Progress | |
| NCAR 100-hz Mixing Ratio Lyman-Alpha - netCDF format [NCAR/EOL] | In Progress | |
| NRL 1-hz Solar and IR Radiometers [Anthony Bucholtz] | Expected 2009-03-31 | |
| NRL 10-hz Solar and IR Radiometers [Anthony Bucholtz] | Expected 2009-03-31 | |
| Twin Otter 1hz Forward and Side-looking camera movies - mp4 format [Stuart Beaton] | In Progress | |
| U. of Warsaw 10-hz, 100-hz and 1000-hz fast hot-wire temperature (UFT) [Szymon Malinowski] | Expected 2009-03-15 | |
| UC Irvine 40-hz Probes - ASCII format [Djamal Khelif] | In Progress | |
| UC Irvine 40-hz Probes - NASA Ames format [NCAR/EOL] | In Progress | |
| UC Irvine 40-hz Probes - netCDF format [NCAR/EOL] | In Progress | |
| UC Santa Cruz 10-hz PDI concentration and LWC [Patrick Chuang] | Expected 2009-04-01 | |
| UCSC 10-hz PDI Drop Size Spectra [Patrick Chuang] | Expected 2009-04-01 | |

# CIRPAS Twin Otter 1-hz Navigation, State Parameter, and Microphysics Flight-Level Data - NetCDF format [NCAR/EOL]

## Summary

This data set includes airborne measurements obtained from the CIRPAS Twin Otter aircraft during the "Physics of Stratocumulus Tops" (POST) project off the west coast of Monterey, CA. This data set contains 1 hertz (1 sps) navigation, state parameter and preliminary microphysics flight level data. The files are in NetCDF format.

## Data access

ORDER data for delivery by FTP

## Additional information

Related projects: POST
Observational frequency: 1 second
Spatial type: raster
Categories: Aircraft
Platforms: Aircraft, CIRPAS Twin Otter
Restrictions: this dataset requires a password.

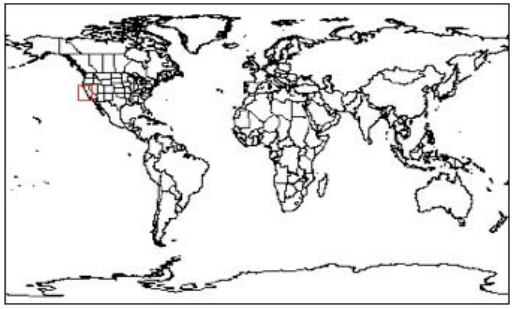
**User: POST**
**Password: stratocum**

## Temporal coverage

Begin datetime: 2008-07-16 01:01:00, End datetime: 2008-08-15 23:59:59

## Spatial coverage

Minimum latitude: 35.000000, Minimum longitude: -125.000000
Maximum latitude: 39.000000, Maximum longitude: -120.000000



## Point of contact

NCAR/EOL
Codiac Support
E-Mail address: codiac at ucar dot edu
Homepage: http://data.eol.ucar.edu/

# CIRPAS Twin Otter 1-hz Navigation, State Parameter, and Microphysics Flight-Level Data - NetCDF format [NCAR/EOL]

## Order data and information

Use the following form to retrieve a subset of the **CIRPAS Twin Otter 1-hz Navigation, State Parameter, and Microphysics Flight-Level Data - NetCDF format [NCAR/EOL]** dataset. Next, you will be allowed to subset the dataset by event.The data will be made available on our anonymous ftp server, and we will email you a status report when your data is finished being processed.

Note that the default search criteria will retrieve the **entire** dataset. To reduce the amount of data retrieved and the processing time required, it is suggested that you attempt to retrieve data within a small time frame or limit the geographic location, when appropriate for the dataset. **Be nice** to other users. Please don't request everything at once!

## Data Set Specific Criteria

Events: ***(Select one or more)***

| Event name | Number of files | Total size (MB) | Begin date | End date |
|---|---|---|---|---|
| RF01 | 1 | 2 | 2008-07-16 17:13:01 | 2008-07-16 23:13:00 |
| RF02 | 1 | 2 | 2008-07-17 17:23:01 | 2008-07-17 23:23:00 |
| RF03 | 1 | 2 | 2008-07-19 01:04:01 | 2008-07-19 07:04:00 |
| RF04 | 1 | 2 | 2008-07-21 17:27:01 | 2008-07-21 23:27:00 |
| RF05 | 1 | 2 | 2008-07-28 01:06:01 | 2008-07-28 07:06:00 |
| RF06 | 1 | 2 | 2008-07-29 00:49:01 | 2008-07-29 06:49:00 |
| RF07 | 1 | 2 | 2008-07-30 17:22:01 | 2008-07-30 23:22:00 |
| RF08 | 1 | 2 | 2008-08-01 17:03:01 | 2008-08-01 23:03:00 |
| RF09 | 1 | 2 | 2008-08-02 16:53:01 | 2008-08-02 22:53:00 |
| RF10 | 1 | 2 | 2008-08-04 17:11:01 | 2008-08-04 23:11:00 |
| RF11 | 1 | 2 | 2008-08-06 00:51:01 | 2008-08-06 06:51:00 |
| RF12 | 1 | 2 | 2008-08-08 00:48:01 | 2008-08-08 06:48:00 |
| RF13 | 1 | 2 | 2008-08-09 00:56:01 | 2008-08-09 06:56:00 |
| RF14 | 1 | 2 | 2008-08-12 00:51:01 | 2008-08-12 06:51:00 |
| RF15 | 1 | 2 | 2008-08-13 00:50:01 | 2008-08-13 06:50:00 |
| RF16 | 1 | 2 | 2008-08-14 17:00:01 | 2008-08-14 23:00:00 |
| RF17 | 1 | 2 | 2008-08-15 16:18:01 | 2008-08-15 22:18:00 |

**Data Set Output Specifications**

- Output Data Format
  The only data format available is **netCDF compressed with GNU Zip (.gz)**.
- Output Archive/Compression Method [None]
- Email Address [privacy policy]
- Affiliation [Please select]

## Acknowledgement

Please acknowledge us in your publications with text such as:

Data provided by NCAR/EOL under sponsorship of the National Science Foundation. http://data.eol.ucar.edu/

Reset form | Continue


DATA BY CATEGORY

- Aircraft

Back to POST

Email comments & questions to
webmaster@eol.ucar.edu

## POST Data Sets

Currently, there is only aircraft data in the data archive.
What other supporting datasets do you require?

- Land Based
- Model
- Radar
- Satellite
- Upper Air

# PROJECT PUBLICATION LIST AND ARCHIVE

T-REX Publications - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.eol.ucar.edu/projects/trex/publications/publications.html

st paul island alaska articles

CNN.com UCAR/NCAR E-mail and... NOAA Staff Directory AT&T: Directory: Direc... Colorado Weather Weather and Climate F... NCAR/EOL/CDS/DM Pr... Forecast Models National Weather Imag...

T-REX Publications | Untitled Document | Friday Photo

## T-REX Publications

T-Rex

(How to Submit Publication References to this List)

Web of Science Meteorological Abstracts - *(UCAR access only)*

### Peer Reviewed Publications

- Doyle, J.D., and D.R. Durran, 2007: Rotor and sub-rotor dynamics in the lee of three-dimensional terrain. J. Atmos. Sci., 64, 4202.4221.
- Grubišić, V., and B. J. Billings, 2007: The intense lee-wave rotor event of Sierra Rotors IOP 8. J. Atmos. Sci., 64, 4178.4201.
- Grubišić, V., and B. J. Billings, 2007: Climatology of the Sierra Nevada mountain wave events. Mon. Wea. Rev. In press.
- Grubišić, V., and M. Orlić, 2007: Early observations of rotor clouds by Andrija Mohorovičić. Bull. Amer. Meteor. Soc., 88, 693-700.
- Poulos, G.S., J. Wang, D. K. Lauritsen, and H. L. Cole, 2007: Targeted dropwindsondes in complex terrain. J. Atmos. Oceanic Technol., 24, 1489-1494.
- Sheridan, P.F., Horlacher, V., Rooney, G.G., Hignett, P., Mobbs, S.D., and Vosper, S.B., 2007: Influence of lee waves on the near-surface flow downwind of the Pennines. Q. J. R. Meteorol. Soc., 133, 1353-1369.

### Conference Proceedings

- Grubišić, V., L. Armi, J. P. Kuettner, S. J. Haimov, L. Oolman, R. R. Damiani, and B. J. Billings, 2006: Atmospheric rotors: Aircraft in situ and cloud radar measurements in T-REX. AMS 12th Mountain Meteorology Conference, Santa Fe, Amer. Meteor. Soc.
- Grubišić, V., and B. J. Billings, 2006: Sierra Rotors: A comparative study of three mountain wave and rotor events. Poster. AMS 12th Mountain Meteorology Conference, Santa Fe, Amer. Meteor. Soc.
- Grubišić, V., and J. D. Doyle, 2006: Terrain-induced Rotor Experiment, Invited Talk, AMS 12th Mountain Meteorology Conference, Santa Fe, Amer. Meteor. Soc.
- Grubišić, V., and M. Xiao, 2006: Climatology of westerly wind events in the lee of the Sierra Nevada, Poster. AMS 12th Mountain Meteorology Conference, Santa Fe, Amer. Meteor. Soc.
- Jumper, G.Y., R.R. Roadcap, E.A. Murphy, and J.W. Myers, 2007: In situ measurements of waves and turbulence in the T-REX Campaign, AIAA 2007-80, 45th AIAA Aerospace Sciences Meeting and Exhibit, Jan 2007, Reno, NV

Done

# Thank you!

Please give me your presentation from this meeting and I will add it to the POST project website.