

ARCTAS Data Policy and Management Plan

Official version, 6 March 2008

The ARCTAS data management team is committed to full sharing of data between all participants during all phases of the field experiment and subsequent research and analysis activities. This document is intended to provide a framework through which this sharing might be efficient and inclusive. The ultimate goal is not only to have unfettered access to data, but to foster collaborations across the various components of ARCTAS as well as the POLARCAT partners that will maximize the scientific value of the ARCTAS observations in a broader context of IPY research. Given the size and diversity of the ARCTAS effort, it is imperative that scientific courtesy be observed and that investigators be consulted and appropriately acknowledged whenever their data is used.

Data Timeline

The status of data sets can be thought of as going through three phases: **Field**, **Research**, and **Public**. Each phase will have its own Data Repository (described below). For ARCTAS, the dates corresponding to these phases are:

- **Field Phase:** April 1 – July 15, 2008
- **Research Phase:** up to July 15, 2009
Preliminary data due October 1, 2008
Final data due April 1, 2009
- **Public Phase:** July 15, 2009 onward

During the Field Phase, it is requested for investigators to submit their data to the Field Repository within 24 hours of the measurement, except for the pre-agreed exemptions. These Field Data (raw data, QA/QC level 0) will be used only during the Field Study to assess that the science goals of the mission are being met and to evaluate the forecast models. All data in the Field Repository will be deleted when the Preliminary data is due (i.e., October 1, 2008).

To facilitate scientific analysis of all the data, it is requested that Preliminary Data (QA/QC level 1) be submitted to the Research Repository by October 1, 2008. Final Data must be submitted by April 1, 2009. During the Research Phase, data are only available to ARCTAS participants and the Research Repository will be protected by password. Each data file should include in its header (metadata) a clear indication of whether the data is Preliminary or Final. Upon request, these repositories are available to the POLARCAT partners. The ICARTT format also specifies to label each file with a revision number (in the file name as well as the file header). File revision tracking will be checked by the scanning software when the files are submitted to the archive.

All data will be made publicly available on July 15, 2009 by removing the password control on the Research Repository, and also placing the data on a permanent archive (NASA/Langley Atmospheric Science Data Center also known as LaRC DACC).

Data Policy

In order to be sure that data is used and acknowledged fairly and properly, all ARCTAS participants are requested to accept the following responsibilities:

- Submit data according to the specified schedule
- Submit data in ICARTT format
- Provide adequate metadata in data files
- Consult with PIs when using their data
- Invite PIs of any data used to be co-author (particularly during research phase)
- PIs should be available to answer questions about their data after submission (need to provide contact information in file headers)

During the Research Phase, all ARCTAS participants will have access to all data. Investigators are encouraged to share data and collaborate with the groups associated with POLARCAT partners. Such data sharing must respect all relevant data usage policies

All data will become public on July 15, 2009. This is consistent with NASA policy to make data public 1 year after an experiment. Component groups may also elect to share data or collaborate with groups outside the ARCTAS community. Such data sharing with third parties will be arbitrated by leadership within the relevant component group and will respect the protected status of data from the other component groups.

The data to be archived includes:

- All funded Measurements
- Model results
- Satellite observations
- Meteorological forecasts

Acknowledgement Statements

When any of the ARCTAS data are used in a publication, an acknowledgement statement should be included, recognizing the efforts and funding from the large number of people and agencies involved.

Data Formats

To allow consistency with previous measurement campaigns, the ICARTT file format (modified NASA Ames) will be used. The ICARTT format is a text (ascii) file format that is easily produced and used by most investigators. The full description of the ICARTT format can be found at: <http://www-air.larc.nasa.gov/missions/etc/IcarttDataFormat.htm>.

Data Repositories

- <http://www-air.larc.nasa.gov/missions/arctas/arctas.html>
 - Automatic web upload and format-checking software ready for ICARTT format
 - Will accept Field, Preliminary, and Final Data for DC8, P-3B, B200, and POLARCAT partners

Merges

Combining all measurements from one platform or site on a common time base makes the files much easier to use for analysis. Merges are valuable to have at all stages (preliminary, as data is revised, final).

The NASA Langley group (Gao Chen and Jennifer Olson) plans to create merges of the ICARTT-format files that are in the ARCTAS archive. The merge files will be made available at the data Repositories along with each stage of data submission process.

Data Manager

The ARCTAS Data Manager will ensure that data is submitted to the Field Data Repository during the field study. After the campaign, the Data Manager will ensure that all data is submitted to the Research and Final Repositories, according to the deadlines given above.

Data Manager Contact Information:

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