

For questions or more information, please contact: datahelp@ucar.edu

Data Management Plan Sample: A Sample Plan for Measurement/Instrument-Based Projects
[DASH Preferred Data Management Plan Format]
[Primary Funder Requirements: NSF/NOAA/NASA]
[Solicitation #]

Products of the Research (Type of Data Produced)

The primary product from this research will be atmospheric O₂ and CO₂ concentration measurements at 1 Hz. The measurements will be made on flights for the Atmospheric Tomography Mission (ATom) (2 test flights and 11 additional research flights) using the NCAR Airborne Oxygen Instrument (AO2), and NCAR/Scripps Medusa Airborne Flask Sampler. The AO2 and Medusa measurements will be rigorously tied to both Scripps (O₂ and CO₂) and WMO CO₂ calibration scales.

Data Format (Data Organization and File Format)

The AO2 and Medusa data files will be modest in size at approximately 10 MB per flight. All provided data files will be in the ICARTT data format and follow the ICARTT's file naming and structuring convention as described by ICARTT File Format Standards document (<http://www-air.larc.nasa.gov/missions/etc/IcarttDataFormat.htm>).

Metadata

The technical or file level metadata for each project data file will be recorded automatically through the built-in header section of the ICARTT file. Existing instrument descriptions from other projects are available and applicable to this project for AO2 (<https://data.eol.ucar.edu/dataset/490.015>) and Medusa (http://data.eol.ucar.edu/master_list/?project=HIPPO-1). A publication updating and providing further details on these instruments is in preparation. Metadata that will help others in understanding the workflow and intended uses as well as searching and discovering the project will be documented and made available through NCAR DASH Search and Discovery system.

Access to Data and Data Sharing Practices and Policies

The project team is fully supportive of rapid and open data sharing policies and archival methods that provide long-term access and support for updates, and will conform with the already established ATom data policy. Initially, the project team will make preliminary versions of the data available to collaborators starting 24 hours after each flight on a by request basis. All of the data collected for this proposal will ultimately be made freely available to the atmospheric and carbon cycle research communities, and the general public, within 12 months of the end of the ATom campaign or the subsequent laboratory analyses, whichever is later. The project team also has experience with and demonstrated success in widely sharing customized data products from the HIPPO project (<http://hippo.ornl.gov>).

Quick-look data will be delivered to the NASA ESPO data site (<https://espo.nasa.gov/>) for merging with other data within 24 hours after landing each flight. As was learned in HIPPO, these merged quick-look products will be critical for assessing instrument performance and catching any problems as rapidly as possible. Fully processed and quality assured/controlled data files will be thoroughly documented, and archived for long term distribution by the NASA ESPO archive. Raw data files will also be archived by NCAR EOL and Scripps.

The project team will maintain software systems for generating fully processed and quality assured/controlled data files from raw data, in such a way that makes it easy to incorporate changes to primary calibration scales or new information about measurement biases in the future. The systems can be shared with other researchers on a by request basis. If updates to the data are made, the most current revision will be issued accordingly with version information. All instructions regarding how to request

access to the project's final products will also be provided and shared via the NCAR Search and Discovery system.

Policies for Re-Use, Re-Distribution, and Production of Derivatives

Anyone who is interested in using/reusing the data files and relevant project results will be requested to use the associated citations as provided by the project team. The citation information, along with the full metadata of all the results from this project, will be made available through NCAR DASH Search and Discovery system. Users are asked to follow the descriptions in the metadata for specific policy details, including access method, update frequency, contact information, and terms and conditions for use/reuse.

Archiving of Data (Data Storage and Preservation of Access)

By storing and archiving the data files with NASA ESPO's archive, the data files are expected to be available and accessible for as long as the archive will remain available. It is also expected that the archive will help in providing the long-term strategy and services for maintaining, archiving, curating, and preserving the data files.

Cost of Implementing the DMP

During the project lifecycle, the related data management activities will be integrated as part of project tasks. Beyond the project period and by using NASA ESPO's archive, resources to provide long term data management/stewardship of the project results will be provided by the archive.

Roles and Responsibilities

Project data will be managed by the project's lead PIs. These duties will include but might not be limited to generating thorough documentation, facilitating data distribution, performing quality assurance, and ensuring that all data are archived properly. Additional consultations regarding best data management practices will be conducted with NCAR's Data Curation & Stewardship Coordinator as needed.