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

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

Products of the Research (Type of Data Produced)

This project will collect, analyze, and produce the following five types of data:

1. SDO/HMI active regions data with high cadence (every few hours) for solar cycle 24 (2008 onwards).
2. SoHO/MDI magnetograms active region data for solar cycle 23 (1996 through 2008).
3. Pre-processed and smoothed form of data (1) and (2) suitable to be fed into MHD-SWT-DART assimilation system.
4. Predicted active region evolution as product of our assimilation system.
5. MHD-SWT-DART system model and model-output.

The project will also collect processed observations of solar irradiance, far-side images, coronal structure and periodicity of activity bursts, for validating model-outputs.

Data Format (Data Organization and File Format)

The pre-processed and smoothed data from SDO/HMI and SoHO/MDI magnetograms will be stored in netCDF format and fed into the assimilation system. The predicted active region raw data will also be stored in netCDF format, and their evolutionary maps will be stored in standard JPEG/PNG image format.

The naming convention for the data files will be created to reflect the content in each file, including the temporal characteristics, and the final naming structure will be described and shared via NCAR Search and Discovery system.

The project data's total volume will depend on the types of smoothed variables, resolutions, and frequency of collection. Currently, the project team estimates that it will be between a few tens to few hundreds of GBs. During the project's lifecycle, the project team will monitor the progress and document the resulting data size.

Metadata

The technical or file level metadata for each project data/image file will be recorded automatically through the built-in capability of the netCDF or JPEG/PNG file. Additional metadata that will help others in searching, discovering, and understanding the project, including project workflow and software name/version, will also be documented and made available through NCAR DASH Search and Discovery system.

Access to Data and Data Sharing Practices and Policies

The end product of this project (i.e. the latitude, longitude locations, size, strength and tilts of active regions) will first be published through NSF reports and standard peer reviewed journals (the preparation of the journal articles will be completed during the project lifecycle) and later shared through NCAR HAO lab websites. All the intermediate data products will be available to peer researchers through requests to PIs during the project and then be freely available and openly accessible through HAO lab websites to anyone within 2 years of the project's conclusion, as per the NSF data access policy. On successful implementation and testing of MHD-SWT-DART system, the version controlled DART interfacing scripts and code will be available through the DART distribution website (http://www.image.ucar.edu/DAReS/DART/index.php), which is also freely available and openly accessible. 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

This project will not involve the acquisition of either animal or human subjects data, and therefore, does not anticipate any confidentiality/privacy issues.

Other scientists who are working on similar researches are the most likely primary users. However, once the project results are shared via publications, NCAR HAO websites, and NCAR's Search and Discovery system, they are open and free for others to use according to NSF and UCAR/NCAR's policies. Users are expected to cite the project and the corresponding data, including the original publications, NSF grants and related UCAR/NCAR programs in their research articles and derivative works (when citing DART, the following DOI along with version number should be used: https://doi.org/10.5065/D6WQ0202), according to the citations that will be established by the project team.

The project team does not anticipate that there will be any significant intellectual property issues involved with the acquisition of the data. In the event that discoveries or inventions are made in direct connection with this data, access to the data will be granted upon request once appropriate invention disclosures and/or provisional patent filings are made via office of the University Corporation for Atmospheric Research, General Counsel (https://president.ucar.edu/counsel/intellectual-property).

Archiving of Data (Data Storage and Preservation of Access)

All the intermediate and final data and source product with version information will be stored for the long term in the NCAR HPSS tape storage system. The website data will also be backed up in the system as per the standard policies and practices of NCAR websites.

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 establishing dedicated project websites within the NCAR HAO and CISL labs, resources to provide long term management/stewardship of the project results will be provided by the NCAR HAO and CISL labs.

Roles and Responsibilities

Project data will be managed by the project's scientists. These duties will include but might not be limited to generating thorough documentation, facilitating data distribution, tracking of processed data, performing quality assurance, and ensuring that all data could be readily reproduced by re-running experiments, if necessary. Additional consultations regarding best data management practices will be conducted with NCAR's Data Curation & Stewardship Coordinator as needed**.**