

Plan Overview

A Data Management Plan created using DMPTool

Title: Brown carbon characterization

Creator: Lelia Hawkins

Affiliation: Non Partner Institution

Principal Investigator: Lelia Hawkins

Data Manager: Lelia Hawkins

Funder: National Science Foundation (nsf.gov)

Funding opportunity number: NSF 14-579

Grant: https://www.nsf.gov/awardsearch/showAward?AWD_ID=1555003

Template: NSF-AGS: Atmospheric and Geospace Sciences

Last modified: 01-15-2015

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Brown carbon characterization

Products of research

Describe the types of data and products that will be generated in the research, such as physical samples, space and/or time-dependent information on chemical and physical processes, images, spectra, final or intermediate numerical results, theoretical formalisms, computational strategies, software, and curriculum materials.

Measurements of the light absorption of ambient particles (observational data) will be collected, including time-dependent absorption spectra and time dependent organic carbon concentrations. Additionally, measurements of organic carbon concentration and light absorption spectra of model compounds will be collected, which will not be time-dependent. Physical samples of atmospheric aerosol particles will be collected and stored in a laboratory freezer. Physical samples of model compounds will also be generated and stored.

Measurements will be collected using a Particle Into Liquid Sampler for material collection, a UV/visible capillary waveguide spectrophotometer for light absorption spectra, a total organic carbon analyzer for concentration measurements, a photoacoustic extinction monitor, and other analytical instrumentation available in the department. The on-line instrumentation has computers to record time-dependent data. These computers will be backed up nightly (automatically) through a cloud backup service.

During active sampling periods, less than 1 GB of data will be collected per week.

Data format

Describe the format in which the data or products are stored (e.g. hardcopy logs and/or instrument outputs, ASCII, XML files, HDF5, CDF, etc). What metadata will be part of the data sets produced?

Time-dependent measurements will be stored in ASCII text files with appropriate headers including details of the instrumentation, units used (time/date format and spectral units), the name of the user, and the contact information for the corresponding author (PI). These files are universally accessible and include all pertinent information in one file.

Spectra will be recorded in tables, with wavelength given first and spectra given in columns following wavelength. Experimental details will be given in a readme file corresponding to the data.

Metadata will include the file headers and a readme text file for all experimental work.

Details will be initially captured in laboratory notebooks and files will be processed following initial data collection once experimental work has concluded.

Access to data, and data sharing practices and policies

Describe your plans for providing access to data, including websites maintained by your research group and contributions to public databases. If maintenance of a web site or database is the direct responsibility of your group, provide information about the period of time the web site or database is expected to be maintained. Also describe your practice or policies regarding the release of data—for example whether data are available before or after formal publication and the approximate duration of time that the data will be kept private. Describe your policies (where applicable) for protection of propriety data, privacy and confidentiality, intellectual property, or other rights or requirements.

Question not answered.

Policies and provisions for re-use, re-distribution and production of derivatives

Describe your policies regarding the use of data provided via general access or sharing. If you plan to provide data on a website, will the site contain disclaimers, or conditions regarding the use of the data in other publications or products? If the data or products are copyrighted, how will this be noted on the website?

Question not answered.

Archiving of data

Describe whether and how data will be archived and how preservation of access will be handled. For example, will hardcopy logs, instrument outputs, and physical samples be stored in a location where there are safeguards against fire or water damage? Is there a plan to transfer digitized information to new storage media or devices as technological standards or practices change? Will there be an easily accessible index that documents where all archived data are stored and how they can be accessed? If the data will be archived by a

third party, please refer to their preservation plans (if available).

Question not answered.
