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# **Brown carbon characterization**

*A Data management plan created using the DMPTool*

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# Brown carbon characterization

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## **Products of research**

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**

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**

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

## **Archiving of data**