

Plan Overview

A Data Management Plan created using DMPTool

Title: Meteorological Measurements of Surface Conditions in East Antarctica in 2015

Creator: Shelley Knuth

Affiliation: University of Colorado Boulder (CU Boulder) (colorado.edu)

Principal Investigator: Shelley Knuth

Data Manager: Shelley Knuth

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Meteorological Measurements of Surface Conditions in East Antarctica in 2015

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.

This project will generate observational atmospheric data from 10 new meteorological instruments that will be deployed at various locations across East Antarctica in January 2015. The meteorological data collected will be cloud height and temperature. The data will be collected from the time of the station deployment (expect over several weeks in January 2015) until the following January (of 2016) when the stations will be removed. Latitudes, longitudes, and altitudes for each station are provided in an attached table.

The data will be logged in a storage module on the station, and collected at the end of the observing period (January 2016). It is expected that the data collected for one month at each station will be approximately 300 KB, equating to approximately 3.5 MB per station for the 12 month period. For the 10 stations, the total data collection will then be approximately 3.4 GB.

The observational data will be collected on board a 5 meter tall "station" that will house the cloud height and temperature instruments.

This data will complement existing temperature data from a suite of weather stations already present in the Antarctic, but the data collected as part of this proposal will be at new stations. Also, cloud height data is not collected at the other weather stations.

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?

The format of the data would be ASCII text files. It is anticipated that the data would be both .txt and .csv. These formats are ideal for the small, easy to read data that we need.

We will utilize metadata for each dataset. Our metadata will include items such as:

- Logistical information - time/date, location, person installing the station, email of contact person, weather conditions at installation
- Instrument information - what instruments are installed, the companies that make the instruments, height above the snow surface, etc.
- Information about the data, including formats, columns, units, etc.

We hope to use the World Meteorological Organization's standards for metadata as much as possible. These are well documented and provide a general standard for atmospheric scientists.

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.

The data will be accessible initially on our website, located at www.websitefordata.com. We regularly maintain this site (once/week), and will have links where the data can be downloaded via a zip file. The data will be freely available on this website by the end of the grant term (end of 2016). We will also submit the data to the US Antarctic Data Coordination Center (<http://www.usap-data.org/>), which is a repository intended for long term storage of the data.

The data will be kept available on this website for at least 10 years past the end of the grant.

Citation of the data should be made through a journal article that we will submit describing the data. We will provide a description of this journal article once it becomes published on the website where we house the data.

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?

There are no restrictions on using the data, other than proper citation.

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).

The data will be housed in an online repository at the US Antarctic Program Data Coordination Center, which will provide longer term access. We will also provide backups on two machines - one on site, and one off site. A third copy will be kept on a tape that will be kept in a completely different location.

The data will be regularly checked (~once/three months) to ensure its validity. The curator of the data will be the PI of the project (with help of postdocs and graduate students in the group).

Regularly scheduled meetings (once/three months) will be held to discuss the data and ensure the PI is kept up to speed.

The data will be kept 10 years past the end of the project.

It is not anticipated that there will be much transforming of the data for long term preservation, other than zipping the text files. Metadata (in text files) will be kept with the data. Any relevant code that may be used to transform the original text files will also be cleaned up and stored with the data.
