EDITORIAL

Data Archiving and Citation within AMS Journals

On 25 February 2015, the American Meteorological Society (AMS) posted in the AMS author guidelines a new set of recommendations for AMS journals titled, ''Data Archiving and Citation.'' These recommendations promote the archiving of data related to papers published in AMS journals and provide guidelines for how such data should be cited within AMS papers (http://www.ametsoc.org/PubsDataPolicy).

The AMS academic, government, and commercial sectors rely on the production, management, and distribution of data related to environmental phenomena. In the policy statement, ''Full and Open Access to Data,'' adopted by the AMS Council in December 2013, AMS affirmed its commitment to promoting full, open, and timely access to environmental data, associated metadata, and derived data products within the Earth system science community. The accessibility of data related to scholarly publications was explicitly discussed in that statement, as follows: ''the AMS expects all scholarly papers published in its journals to contain sufficiently detailed references to public sources of information (literature and data) and methodology such that independent research can test the paper's scientific conclusions. This expectation assumes that the data and metadata upon which the conclusions are derived are properly cited and readily available to the scientific community.''

This new AMS recommendation is representative of a larger national and international movement toward increased access to scientific data. A number of other scientific publishers have also recently updated their publications policies to include data citation recommendations, including the American Geophysical Union, which updated its Data Publications policy in December 2013. In addition, AMS is an original signatory on a recent joint statement of commitment to expanding access to data that was developed by a group of publishers, data facilities, and consortia who make up the Coalition on Publishing Data in the Earth and Space Sciences (COPDESS, http://www.copdess.org/statement-of-commitment/).

The new AMS ''Data Archiving and Citation'' recommendation grew out of a joint effort between the AMS Board on Data Stewardship (BDS) and the AMS Publications Commission (PC). In early 2014, the BDS submitted a recommendation to the PC that more formal data citation best practice guidelines be developed and added to the AMS journals Authors Guide. After some dialogue between the two committees, a joint subcommittee of 11 people was formed to develop these guidelines: three members of the PC, six members of the BDS, one individual who sits on both committees (the Publications Commissioner), and the Journals Production Manager for AMS journals. This joint subcommittee developed best practice guidelines for data citation, which after review by the Publications Commission were approved for use in AMS journals.

The new best practice guidelines are intended to enable readers of articles in AMS journals to identify and find the dataset(s) related to a given publication. The guidelines ''encourage authors to archive their data in a repository that can ensure the longevity and continued utility of datasets.'' They also provide a small number of examples of how to create formal citations to datasets. As the guidelines are implemented by authors within AMS journals, cases will certainly emerge of more complex or detailed datasets that are not

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well addressed by the current recommendations and examples. Authors, editors, reviewers, and the AMS publications office should work together to ensure that solutions are found that meet the needs of both the author(s) and the broader scientific community. These challenging cases may be brought to the attention of the AMS editors or publications staff to spur the development of additional examples and iterative improvement of the recommendations themselves over time.

The development of these guidelines is both timely and beneficial. It dovetails with numerous other ongoing initiatives within scientific research, government, and funding institutions, and it helps to increase reproducibility and transparency of the scientific results and discoverability of the data produced by the AMS community.

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