

The Future of Scientific Publishing in the Geosciences: A Perspective from the American Geophysical Union

*Brooks Hanson¹, Frank Krause¹, Chris McEntee¹

1. American Geophysical Union

The American Geophysical Union is the largest society publisher in the Earth and space sciences. AGU now has 20 journals publishing more than 6000 papers per year. Broadly we see a series of trends in publishing that will make the literature more available, connected, open, and enriched, and that will integrate publications better with improvements in researchers' workflows and needs of readers. At the same time, these developments should enhance scholarship, quality, and integrity, which are all critical for facilitating and expanding the wise use of peer-reviewed science throughout society and in important societal decisions. AGU's recent journals have all been Gold Open Access journals and have been aimed at interdisciplinary research (*James*, *Earth's Future*, *Earth and Space Science*, and *GeoHealth*) and open-access publishing has been growing across the other journals. In addition, AGU expanded access to all recent content 24 months after publication and supports green open access through CHORUS and institutional repositories. Content is already being increasingly connected through identifiers such as ORCID, institutional and funder identifiers, sample identifiers, and linked data sets and software. AGU has been helping lead efforts to identify and promote best practices around these (see www.copdess.org), and has providing some examples through a special collection of papers around the geoscience paper of the future (<http://www.ontosoft.org/node/16>). A variety of efforts are increasing discovery of content across journals, enriching content for diverse audiences (for example, AGU Journals now include plain-language summaries), and providing added context. Authors and reviewers are also starting to receive recognition of their individual contributions (AGU has adopted CREDIT and is promoting reviews through ORCID), and experiments and efforts are underway to help reviewers, to increase the quality of reviews, and expand the pool of reviewers. Following AGU's position statement that data in the Earth and space sciences are a world heritage

(<https://sciencepolicy.agu.org/files/2013/07/AGU-Data-Position-Statement-Final-2015.pdf>) AGU is committed to expanding access to data and software related to publications and helping repositories and our community broadly manage that data well (<http://dataservices.agu.org/>). Best practices around these goals and to enhance reproducibility are also starting to be applied across many disciplines and journals.

Keywords: Scientific Publishing, Peer-review, Open access