NASA Releases Updated Scientific Information Policy for Science Mission Directorate (SMD)

On December 8, NASA's Science Mission Directorate (SMD) [released](#) an important update to its comprehensive [Scientific Information Policy (SPD-41a)](#), which represents a significant percentage of NASA's research expenditures. While this policy does not serve as NASA's official response to the [OSTP Nelson Memorandum](#), it is a good indication of what we are likely to ultimately see in NASA's agency-wide public access plan, which is due out in February 2023.

Relevant Details of the Policy

Requires that peer-reviewed publications be made openly available with no embargo period via deposit in an agency-approved repository.

1. Publications are broadly defined as peer-reviewed manuscripts, technical reports, conference materials, and books.
2. **Requires** all SMD-funded researchers to deposit a copy of their final accepted manuscript into a NASA-approved repository. Researchers can then choose to publish that manuscript in any journal they want, open access or otherwise.

Requires that research data be shared at the time of publication or the end of the funding award.

1. Scientific data is defined as information needed to validate the scientific conclusions of peer-reviewed publications. It includes the data required to derive the findings communicated in figures, maps, and tables.
2. Mission data is defined as information produced by missions including observations, calibrations, coefficients, documentation, algorithms, and any ancillary information.
3. The policy notes that underlying data should be made available at no cost, in a machine-readable format, and following the FAIR principles.
4. The policy encourages research data to be shared under a Creative Commons Zero license.
5. It requires that data be made citable through the use of persistent digital identifiers.
6. The policy explicitly encourages data citation.
7. All SMD-funded researchers are required to submit a Data Management Plan.

Requires mission software to be developed and shared openly.

1. Software is defined as scientifically or technically relevant computer programs in both source and object code that provide users some degree of utility or produce a result or service.
2. The policy specifically requires the code for open source software to be made publicly accessible with a persistent identifier in a repository that is widely recognized by the community. It also encourages researchers to release the software under a permissive

license, determined in consultation with the Chief Science Data Officer or agency IP Counsel as needed.
3. The policy requires that any software produced as a result of SMD funding be developed in a publicly accessible, version-controlled platform that allows for contributions and engagement from the community.
4. It requires that software be made citable through the use of persistent digital identifiers.
5. The policy specifically encourages software citation.
6. All SMD-funded researchers are required to submit a Software Management Plan.

Requires that the proceedings of SMD-sponsored meetings and workshops be held openly to enable broad participation .

1. The policy requires that the scientific publications produced for any public science event for which SMD is the primary sponsor be made publicly accessible through deposit in an agency-approved repository.
2. It applies to publications, presentations, media, or other materials produced as part of the event.
3. It does <u>not</u> include laboratory notebooks, preliminary analyses, drafts of scientific papers or preprints, plans for future research, peer-review reports, or communications with colleagues.
4. The policy also requires SMD-funded researchers who attend conferences, workshops, or symposia to also deposit any public scientific publications produced for the event in an agency-designated repository as well, and encourages funded researchers to do the same for publications presented at non-SMD sponsored events.

<u>Timeline</u>

The policy will apply to all new SMD missions and grants beginning in January 2023, starting with the NASA ROSES-2023 solicitation. It does not apply to research grants already made by the agency.

<u>Other Details</u>

NASA SMD will provide funding to comply with this policy that is consistent with the proposed work and resources available. It will also provide guidance for how best to meet these policies and shall provide additional tools to support meeting these policies.

<u>Resources</u>

- [Open-Source Science Guidance for SMD-funded researchers](#)
- [Scientific Information Policy Frequently Asked Questions (FAQs)](#)
- [Open science training through NASA's Transform to OPen Science (TOPS)](#)
- [Efforts to meet SMD's data and computing infrastructure needs](#)