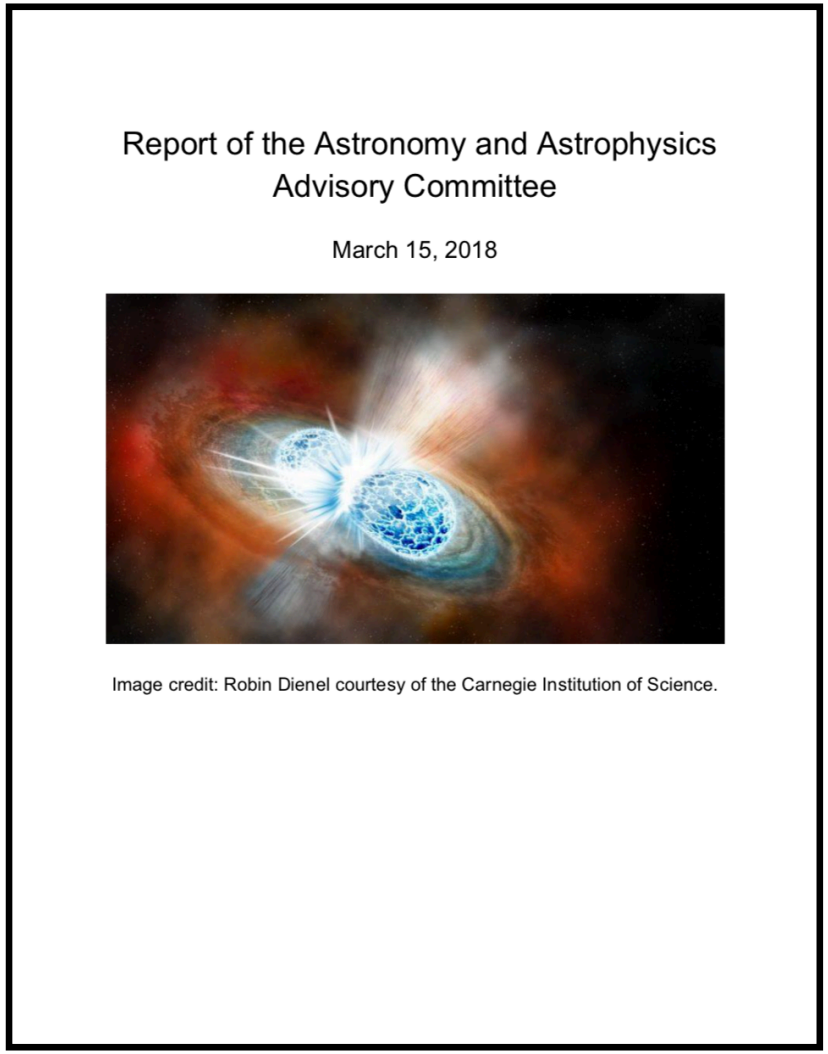
Astronomy and Astrophysics Advisory Committee



Discussion of Selected Recommendations from the 2017-2018 Report of the AAAC

Astronomy and Astrophysics Advisory Committee

Recommendation: The three agencies should coordinate, and where possible standardize, the guidelines and expectations for the releases of data sets, data products, data access tools, and related software used to produce future surveys, astrophysical simulations, and missions.

Our thrust here was that a good job was being done in the public releasing of data, both by NASA missions and NSF/DOE surveys, but more could be done to release the software used to generate the released data and to create the derived data products. We did not want to put too many details into the recommendation, as we do not want to over-constrain possible responses by the agencies. We were envisioning some kind of incentivizing of an open source model.

In the case of future surveys, we anticipate that making early versions of mission/survey software available during the development of the mission/survey would enable the community to plan/optimize their own use of the data products that would be forthcoming. Having the software available helps everyone understand what was done and has near and long-term scientific benefits. There will likely be effort, i.e. costs, incurred in order to make the software available. Our intent is that reasonable costs be supported (funded) and that some effort be made among the agencies to make it possible for tools to be shared. Coordination between the agenecies is expected to be beneficial. For example, we might avoid developing conflicting requirements (between agencies) for software and data releases.

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Recommendation: NASA and NSF should enhance their collaboration with each other and with other groups, including international agencies and commercial interests, to protect the accessibility of essential astronomical wavelengths to researchers.

See response to next recommendation.

Recommendation: Efforts, ideally coordinated with all three agencies, should be made to increase awareness of spectrum management issues among astronomers, the general public, and government agencies. Possible agents for meeting this recommendation might include the NSF-funded national facilities for operations at radio and optical wavelengths.

The two above are obviously linked. Prior to the discussion during our meetings, many of our members were only loosely aware of the issues behind spectrum management. The committee ended our discussion with the consensus view that the astronomical community should be more about how the electromagnetic spectrum access is managed and that there is a role for the agencies to play in not only playing a role in spectrum management at the federal level, but also in educating the community so that the community will be a more informed advocate for protection of access. We did not have a specific plan of action to recommend.

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Recommendation: NSF and NASA should continue to carry out and evaluate their strategies for reducing proposal pressure, reporting to the community for feedback on their evaluation strategies and the results.

We want to encourage both NASA and NSF to continue to build upon their past experiments with requests, review, and awarding of proposals in order to reduce the work load (by the community preparing/submitting proposals, the agencies in managing reviews of the proposals, and the effort of the community to participate in reviews) and increase success rates. We had in mind the examples the Agencies presented to us.

These included the NSF going to rolling proposals (no deadlines) for the Solar and Planetary grants and the NASA ATP (theory) grants moving to an every other year proposal cycle. In both cases, we questioned the agencies about their intentions to evaluate the impacts of these experiments. We are expecting continued evaluation of the outcomes, including not only whether success rates go up and workloads decrease, but also whether the demographics and other characteristics of supported programs change and in what ways.

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Recommendation:

All current and planned surveys should publicly release their data with suitable access tools and documentation. This is consistent with the AAAC Principles of Access recommended by the AAAC in their 2013 - 2014 annual report. In addition, the surveys should release the source code used to create the data products. Surveys supported in part or entirely by the federal government through its agencies should work to include funding enabling adequate public access to the data, software, and data products produced through these surveys.

The consensus of the AAAC is that that in addition to surveys making their data (and software) publicly available, they should also provide (fund) tools to access these data, documentation, and software. This recommendation is in some ways a bit redundant with the earlier recommendation above.