



15 August 2013

Dr. David J. McComas
Chair, NASA Advisory Council Science Committee
Southwest Research Institute

Dear Dave,

The NASA Advisory Council's Astrophysics Subcommittee (APS) met at NASA Goddard Space Flight Center (GSFC) on 16-17 July 2013. In attendance for the meeting were APS members Gary Bernstein, Joel Bregman, Edna DeVore, Giovanni Fazio, Scott Gaudi, Chryssa Kouveliotou, Gary Melnick, John Nousek, Terry Oswalt, Paul Ray, Ken Sembach, Karl Stapelfeldt, and myself as Chair. Also in attendance were Paul Hertz (Director, NASA Astrophysics Division [ApD]) and APS Executive Secretary Joan Centrella (NASA ApD), as well as her designated successor Hashima Hasan (NASA ApD). APS member Gabriela Gonzalez attended most of the meeting via telecom. APS members Jamie Bock, Julianne Dalcanton, and Fiona Harrison were unable to attend.

During the course of this two-day meeting, we heard presentations from Paul Hertz (ApD update), Dan Woods (Science Mission Directorate [SMD] Science Plan), Chryssa Kouveliotou (Astrophysics Roadmap Task Force), and James Reuther (Space Technology Mission Directorate [STMD]). We spent a considerable amount of time on the James Webb Space Telescope (JWST) Project: we received updates on various aspects of the Project from Jonathan Gardner, Amber Straughn, Mark Clampin, and Matt Greenhouse, and had a tour of the JWST facilities at GSFC. We also discussed the Astrophysics Division's response to the Government Performance and Results Act (GPRA) Modernization Act (GPRAMA) with Joan Centrella and Jennifer Kearns (SMD Directorate, NASA HQ) and received mandatory annual ethics training from Katie Spear (Office of the General Counsel, NASA HQ). We are grateful to all the presenters for the time and effort they put into their presentations.

Findings:

The APS is pleased to report the following findings:

- The *James Webb Space Telescope* remains on track for a 2018 October launch. The APS is very pleased with the progress that has been made. We saw the flight ISIM with two instruments (MIRI and FGS) being integrated into the structure. A third instrument, NIRcam, has recently arrived at GSFC.
- The consensus opinion of the APS is that the Astrophysics Roadmap Task Force is on track to deliver its final report to the APS in November for general release in December. The APS thanks the members of the Roadmap Task Force for their hard work to date for what promises to be the type of visionary report we have been hoping for.
- The APS commends Dan Woods for his Division's work on the SMD Science Plan. Individual APS members have been invited to submit comments.
- The ApD has approved further study of the Astrophysics Focused Telescope Assets (AFTA), the two 2.4-m telescopes offered to NASA by the NRO, to pursue WFIRST science. The baseline instrumentation now includes a coronagraph, which APS believes is a significant enhancement to the concept.
- The APS was very pleased to see the developing relationship between SMD and STMD, in particular for the development of AFTA coronagraph, which is now a high priority for SMD. The APS strongly endorses a role for STMD in bringing AFTA to technical readiness for an FY17 new start. Our time with James Reuther was deemed to be much too short and we would like to have him return at a future meeting of the APS for a longer discussion.



- The APS assisted the ApD in preparing the Government Performance and Results Act Modernization Act (GPRAMA) by serving as the independent assessment experts. We are pleased to report that we rated all three ApD sections as “green.”
- The APS accepted the report of Exoplanet SAG5 on Flagship Exoplanet Imaging Mission Science Goals and Requirements and thanks the EXOPAG and SAG5 for their work.
- The APS has a growing concern about the science value of an asteroid retrieval mission. It is understood that such a mission is primarily a technology demonstration, but we want to make sure that NASA undertakes studies about how to get the most science out of this mission. We have no specific recommendation at this point, but the APS chair will engage the chair of the Planetary Science Subcommittee on the issue.

Recommendation:

The APS remains concerned about the status of EPO funding, especially in light of the Administrator’s non-concurrence with our recommendation of 2013 April that advocates maintaining the current structure. Given political uncertainties, it is not clear when or if restructuring will take place. We strongly recommend that NASA should strive for continuation and continuity in its most effective EPO programs. The APS will continue to monitor the situation and will provide further recommendations as we deem necessary.

The APS also wishes to take this opportunity to commend ApD Director Paul Hertz for his masterful understanding of the complex situation of the ApD from a fiscal and managerial standpoint and his outstanding leadership of the Division. Following Paul’s presentation and the questions and answers that followed, the APS believes that the ApD is being very well managed in a highly constrained environment.

Finally, the APS is grateful to the *JWST* staff, particularly Jane Rigby, for an interesting, informative, and enjoyable tour of the *JWST* facilities at GSFC. We also thank Robin Alford and Marian Norris for their effective handling of the Subcommittee logistics. We also want especially to acknowledge the extraordinary support we have received from Executive Secretary Joan Centrella. We are extremely grateful to her for her willingness to continue in this position until the Astrophysics Roadmap Task Force completes its work at the end of the calendar year.

Sincerely,

Bradley M. Peterson, Chair
NAC Astrophysics Subcommittee