



2 December 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 via telecon for a regular meeting on 19 November. In attendance for the meeting were APS members Jamie Bock, Joel Bregman, Julianne Dalcanton, Edna DeVore, Giovanni Fazio, Scott Gaudi, Gabriela Gonzalez, Fiona Harrison, Chryssa Kouveliotou, Gary Melnick, John Nousek, Terry Oswalt, Ken Sembach, Karl Stapelfeldt, and myself as Chair. Also in attendance were Paul Hertz (Director, NASA Astrophysics Division [ApD]), Joan Centrella and Hashima Hasan (NASA ApD, outgoing and incoming APS Executive Secretary, respectively). APS members Gary Bernstein and Paul Ray were unable to attend.

During the course of the meeting, the APS received updates on the status of the ApD (Hertz), the Explorer Program (Wilt Sanders), the status of NASA EPO programs and Senior Review planning (both by Jeff Hayes, NASA SMD), and an update on the AFTA Coronagraph (Feng Zhao, JPL). The APS thanks all the presenters for the time and effort they put into their informative reports.

In the course of the discussion of the Explorer program, I noted that I had been approached by members of the astrophysics community who felt that a modest increase in the cost cap for Small Explorers (SMEXs) would enable a much broader range of scientific possibilities for astrophysical investigations and that given the low frequency of SMEX Announcement of Opportunities this might be very desirable. Paul Hertz and I agreed to discuss further how we should approach this topic.

Last February, Dr. Hertz reported to the APS that a compelling 30-year vision for the future of space astrophysics would be very helpful to NASA. In response, the APS has chartered an Astrophysics Roadmap Team as a task force intended to develop and articulate this vision. The Roadmap Team was asked to submit its findings by the end of August 2013 and to have its final report prepared by no later than 16 December 2013. The Chair of the Roadmap Team, APS member Chryssa Kouveliotou, presented the penultimate version of their report at our telecon. After some discussion and comments, the APS accepted the Roadmap report. As members of the Roadmap Team, APS members Gaudi and Kouveliotou abstained from the vote, as did I as an ex officio member of the Roadmap Team. The vote to accept the report was 8 for, one opposed, and two abstaining. The final version of the Roadmap is currently in preparation and will be presented to the Science Committee upon completion. I will give a short summary of the Roadmap findings at our next meeting on 3-4 December. The APS commended the Roadmap Team for articulating an exciting vision for the future of space astrophysics and meeting their target dates, despite the temporary shutdown of the federal government at a critical time.

The APS also received reports from the chairs of its three Program Analysis Groups, Scott Gaudi for the Exoplanets Program Analysis Group (ExoPAG), John Nousek for the Physics of the Cosmos Program Analysis Group (PhysPAG), and Ken Sembach for the Cosmic Origins Program Analysis Group (COPAG). The APS considered the following requests from them:

- COPAG reports that the activities of three of their science analysis groups (SAGs) have been completed and requests that these SAGs be closed. These are SAG#1 (Science Objectives with a 4-8m UV/Optical Mission), SAG#2 (Technologies for a 4m-class Monolithic Telescope UV/Optical Mission with an Internal Coronagraph), and SAG#3 (Technologies for an 8m-class Segmented Telescope UV/Optical Mission with an External Occulter). The APS unanimously voted to approve closing these three SAGs, and thanks the members for their work.
- COPAG also reports that SAG#4 (Technologies for a Future Far-IR Mission) has completed its work, and asks that this SAG also be closed upon approval of their final report. Their final report has been submitted to the APS and



will be considered for approval at our next meeting. APS approves closing SAG#4 upon acceptance of their final report to the COPAG.

- COPAG requests starting three new SAGs, SAG#6 (Cosmic Origins Science Enabled by the WFIRST-AFTA Coronagraph), SAG#7 (Science Enabled by the Operations Overlap of the Hubble Space Telescope and the James Webb Space Telescope, and SAG#8 (Science Enabled by the WFIRST-AFTA Data Archive). COPAG also requests establishment of a Science Interest Group (SIG) on Far-Infrared Cosmic Origins Science and Technology Development (SIG#1). The APS approves all of these actions.
- ExoPAG has requested establishment of two new SAGs, SAG#10 (Characterizing the Atmospheres of Transiting Planets with JWST and Beyond) and SAG#11 (Preparing for the WFIRST Microlensing Survey). The APS approves both of these SAGs.

Paul Hertz noted that this is probably the final meeting for five APS members whose terms expire in March 2014. Paul thanked Gary Bernstein, Edna DeVore, Gabriela Gonzalez, Terry Oswalt, and Paul Ray for their three years of service to the ApD and to NASA. I add my own thanks, as all five have been significant contributors to the APS during my tenure as APS Chair. Their presence will be missed.

Sincerely, on behalf of the APS,

Bradley M. Peterson, Chair
NAC Astrophysics Subcommittee