NASA Astrophysics

ASTROPHYSICS ADVISORY COMMITTEE

June 7, 2022
Virtual Meeting

MEETING MINUTES

Chick Woodward

Digitally signed by Chick Woodward
DN: cn=Chick Woodward, o, ou, email=woodw024@umn.edu, c=US
Date: 2022.06.28 07:45:50 -05'00'

Charles Woodward, Chair

HASHIMA HASAN

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Hashima Hasan, Executive Secretary

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Prepared by Elizabeth Sheley
Tom & Jerry, Inc.

Tuesday, June 7

Introduction and Announcements

Dr. Hashima Hasan, Executive Secretary of the Astrophysics Advisory Committee (APAC), called the virtual meeting to order. As this was a Federal Advisory Committee Act (FACA) meeting, it was open to the public and all statements and discussion would become part of the public record. This meeting was being recorded on WebEx. By attending the meeting, participants consented to their voice and likeness being recorded and shared on the APAC website and in any media in existence now or in the future. Participants released NASA from any claims and demands that may arise from such use, including claims for compensation. While discussions during the meeting were for APAC members only, the public would have opportunities to ask questions via the WebEx chat feature during a public comment session. All APAC member conversations during the meeting were required to be on the record. Formal minutes were being taken for the public record.

The NASA Science Mission Directorate (SMD) Associate Administrator (AA) had appointed the Committee members on the basis their subject matter expertise; as such, they must comply with Federal ethics laws applying to Special Government Employees (SGEs). Committee members were required to recuse themselves from discussion of any topics for which they had personal or institutional financial conflicts of interest (COIs). For purposes of this meeting, Dr. Louis-Gregory Strolger had a COI on Hubble Space Telescope (HST). Any members finding additional COIs were obliged to tell Dr. Hasan and recuse themselves during the discussion. Members should address any ethics questions to Dr. Hasan as well. She then introduced Dr. Charles Woodward, APAC Chair.

Dr. Woodward said the Committee had important work to do during this meeting. He then introduced Dr. Eric Smith of the NASA Astrophysics Division (APD).

Introduction to Senior Review Process

Dr. Smith, APD Chief Scientist, thanked Ms. Rachel Cocks and Dr. Kartik Sheth of APD. He then explained the Senior Review (SR) process.

As required by the NASA Authorization Act of 2005, NASA conducts periodic peer reviews of its operating science missions in order to assess their continued science productivity and to determine whether the missions should be extended. As part of this effort, the Agency looks at proposals from the operating missions, which submit budgets for 5 years out. The SR provides NASA a number of options, including:

- Authorizing a mission to pass from its prime phase to extended phase.
- Maintaining the status quo.
- Significantly restructuring a project.
- Deciding to terminate an ongoing science mission.

This astrophysics SR included missions that were previously reviewed in 2019, as well as New Horizons (NH), which originated in the Planetary Science Division (PSD). Other missions in the SR included:

- Chandra X-ray Observatory (Chandra)
- Fermi Gamma-ray Space Telescope (Fermi)
- Hubble Space Telescope (HST)
- Neutron Star Interior Composition Explorer (NICER)
- Nuclear Spectroscopic Telescope Array (NuSTAR)
- Neil Gehrels Swift Observatory (Swift)
- Transiting Exoplanet Survey Satellite (TESS)

Dr. Smith explained that APD was asked to consider a proposed NH augmentation for astrophysics science, though PSD continues to cover mission operating costs.

The SR was a subcommittee of APAC and consisted of an overall subcommittee and three subsidiary panels, one dealing with Chandra, another dedicated to HST, and the other addressing the Rest of [the] Missions (ROM). Subcommittee and panel meetings were a combination of virtual and hybrid, taking place between March 15 and May 5. Operating missions were required to submit Prioritized Mission Objectives (PMOs), described at https://science.nasa.gov/astrophysics/2022-senior-review-operating-missions. The PMOs were to address nine require proposal elements for the next 5 years. Dr. Smith provided a graphic of the nine elements, noting that the only change since 2019 was an additional element seeking project plans to "increase the diversity of thought." The SR asked missions to submit three budget scenarios: an "in-guide" budget consistent with NASA definitions; an "under-guide" that would allow for a lower budget; and an optional "over-guide" budget for situations in which the in-guide budget would pose a significant risk to continued operations. The HST and Chandra panels had additional instructions addressing efficiency, including metrics. The charge to the review panel can be found in the above link.

The ROM review criteria included: A. Scientific Merit (50 percent); B. Relevance and Responsiveness (25 percent); and C. Technical Capability and Cost Reasonableness (25 percent). Diversity of thought was included under Criterion B, and it addressed Diversity, Equity, Inclusion, and Access (DEIA). The Chandra and HST panels had additional criteria. One of these was unique to Chandra and asked whether the mission is still worth operating should the High Resolution Camera (HRC) not be recovered.

The panels provided final reports to the SR Subcommittee, along with additional materials that included the 2022 and 2019 SR proposals, and copies of presentations and Q&A responses. The Subcommittee was charged with using these inputs to assess the extent to which the projects met the review criteria, and to provide findings that NASA can use in implementing its operating mission portfolio. Dr. Smith concluded his presentation by providing several URLs for those wishing to delve further into the SR materials.

Charge to APAC

Dr. Paul Hertz, APD Director, thanked APAC and the SR panelists. The Terms of Reference (TOR) for the SR states that the Subcommittee does not advise NASA, but rather reports to APAC, which does indeed advise NASA. This meeting was for the purpose of APAC receiving the SR report, then advising NASA on what to do with the SR recommendations.

Senior Review Subcommittee Report

Dr. John O'Meara, SR Subcommittee Chair, provided the SR report to APAC. He thanked NASA, APAC, and the many participants in the SR process, noting the hard work that went into the report. The Subcommittee was tasked with reviewing a range of missions of various sizes, purposes, and scales. Among other things, this shows the diversity of NASA's astrophysics portfolio. When considering launch dates, the missions collectively have a century of operating time, which is a testament to the mission teams and engineers.

Dr. O'Meara then presented the top level findings. The overarching one is that the Subcommittee finds that NASA should continue to operate and support each of these missions, as all are operating at high efficiency. In addition, some of the over-guides merit funding and NASA should consider them if there is sufficient budget flexibility. The missions are all delivering world-class science, while also increasing coordination that results in an integrated portfolio. Nonetheless, the SR was asked to rank the missions, and the result was four tiers:

- Tier 1 – Chandra, HST
- Tier 2 – Swift, TESS
- Tier 3 – Fermi, NICER, NuSTAR, XMM-Newton

- Tier 4 – New Horizons.

The panel and final Subcommittee reports include the justifications for the various tiers. Dr. O'Meara added that XMM-Newton is a European Space Agency (ESA) mission to which NASA contributes. There were no subrankings within Tier 3.

The guiding principle in looking at the over-guides was to maximize community impact and science return while minimizing mission impact. There were five tiers, which the reports discuss in great detail. Tier 1 addresses ROM and is mostly XMM-Newton, while Tier 2 has to do with recovering large swaths of the Guest Observer (GO) program for HST or recovering large swaths of the mission capability for Chandra. Tier 3 is the second tier from the ROM over-guide, Tier 4 is remaining aspects of the HST and Chandra over-guide, and Tier 5 is the third tier from the ROM over-guide.

In addition, the Subcommittee endorsed the NH astrophysics experiments, which will address cosmic optical background, UV background, and more. There was a culture difference with PSD, however, having to do with what is competed. The SR Subcommittee would prefer using APD standards, making the data from these experiments broadly available, with analysis as a competed R&A element.

Another issue was inflation, especially as mandatory salary increases exert significant pressure on already thin budgets. Keeping budgets flat is not sustainable, and in fact many of the over-guide requests sought to maintain current science productivity rather than introducing new elements. On a more positive note, the increased communication across missions is impressive and growing. There are many opportunities for efficiency through shared resources in areas such as observation planning, DEIA, etc.

The Subcommittee spent a lot of time discussing how to plan for the future. Contingency planning is essential for aging facilities, and there was discussion of the need to rethink scientific optimization strategies beyond just repair of engineering items. In other words, it might be necessary to look for creative scientific optimization strategies in extended missions. As part of the discussion on how missions might change, NASA might consider engaging the larger community beyond user groups. Another issue was archiving, which should extend beyond mission termination. This calls for long-term planning that encompasses how to retain knowledge of the data developed for older missions. Mission closeout should be examined well in advance and on a longer timeline.

The Subcommittee also discussed DEIA at length, as inclusion is a NASA core principle. This is new for the missions, which need to be given clear and explicit guidance now. The guidance should include measurable outcomes such as PMOs for DEIA so that future SRs can do more complete evaluations and so that the missions can evolve. The missions should incorporate DEIA across all their PMOs and throughout all their mission activities. Missions should conduct periodic climate surveys designed with enough frequency to inform future reviews. SMD should work with the missions to develop mechanisms for accountability, or else the exercise will be wasted and counter-productive. NASA, not the missions themselves, should fund the core DEIA initiatives. An example is the Goddard Space Flight Center (GSFC) Guest Observer Facility (GOF). The SR Subcommittee observed that most DEIA initiatives were outward-facing, but the missions must do inward-facing DEIA work as well, with accountability. This is "bedrock" work. Additional items of note included software support and the difficulties in transitioning old software, and cloud computing. While new missions are exciting, extended missions are still missions and should not be relegated to second-class status.

Public Comment Period

The meeting was opened for comments from the public.

Dr. Terri Brandt asked Dr. O'Meara to elaborate on the concept of inward-facing DEIA. Dr. O'Meara replied that the missions focused a lot of their reports on outward DEIA efforts, though some talked about bringing in diverse team members as people leave. Part of this reflected that the guidance did not specify the elements to be reported. Therefore, it would be helpful for NASA to provide more explicit guidance on team composition. The GSFC GOF might play a role in understanding how DEIA would benefit the missions themselves. It is important to have accountability in these initiatives as well. The discussion may seem vague because it applies differently to each mission. However, it is essential to go beyond diversity of science to diversity of the team. Dr. Brandt asked if the discussion of funding from NASA Headquarters for inclusion initiatives covered both internal and external efforts. Dr. O'Meara explained that when there are diversity initiatives that are cross-mission or apply across all missions, the SR determined that it is not appropriate to fund them out of already stretched missions. If inclusion is a NASA core principle, then NASA should fund it, though the missions are doing a good job.

Dr. Nino Cucchiara asked if something like a standard code of conduct across missions and teams serve as an example of inward facing DEIA initiatives. Dr. Woodward said that APAC would return to this.

Discussion

Dr. Woodward reminded APAC that Dr. Strolger was conflicted on HST, then asked if Committee members had any particular issues with the SR document. Dr. Michael Meyer asked Dr. O'Meara about the weight given when the recommendations touched on intersectional issues with Time Domain Astrophysics and Multi Messenger (TDAMM) astronomy and open science. Dr. O'Meara replied that TDAMM was a factor in one or two over-guides. The 2019 SR highlighted that this will become more important, and the missions addressed it in their proposals. However, it was not mandated for the review, so weight was given according to the extent to which the missions prioritized TDAMM. There is still uncertainty about TDAMM in terms of funding and prioritization.

Dr. Strolger pointed out that none of the missions had time to fully digest the new Decadal Survey (DS), but they must be thinking about maintaining relevance. He asked if there were specific recommendations on how to better allocate time. Dr. O'Meara said that the short answer is "no," but there are recommendations about rebalancing GO time with HST and Chandra. The question is, as those missions with a wide swath of observations lose core capabilities, should NASA look at contingency planning to make up for those lost capabilities, and how should this be done? Should the Agency change how remaining instruments operate as missions progress to the end? The science community needs to say how time is allocated, especially on short-lived measurements. Dr. Woodward added that the emphasis here is on a larger, community-driven exercise to maximize science return as the facilities age.

Dr. Margaret Meixner thanked Dr. O'Meara and the SR members for all their work. She asked if anything proactive could be done about the future aging of mission teams, archives, etc. Dr. O'Meara said that nothing stood out regarding retirements of team members and institutional knowledge going into archives. The goal is to have the mission knowledge archived to help future investigators understand the provenance of the data. Some missions do this well, but the SR wanted to point out that the impact is large and it is important to capture as much as possible. Dr. Ryan Hickox said that this mirrors a conversation about the Nancy Grace Roman Space Telescope (Roman) and how much time should be dedicated to GO, core community surveys, etc. He thought there could be a synergy in optimizing the process of determining community input. He asked about the priorities of GO funding versus staffing and ongoing operations, and how to determine a minimum level of capability for GO, given that mission operations have another baseline. Dr. O'Meara said there was no clear answer, though it was a big discussion. Missions prioritized this differently. Over-specifying solutions and being too prescriptive is not a good idea. Future SRs may have to make some tough calls. Regardless, this is not sustainable because of inflation. He advised that APAC members read some of the language on the over-guide recommendations. He added that it is over-constrained, partly due to mandatory salary increases.

Dr. Meyer observed that some of the NH measurements seemed specialized. Dr. O'Meara noted that there is mission-level knowledge that needs to happen to get the experiment right. However, the SR struggled with the extended astrophysics element. It was thought that NH might fund the minimum needed within the teams in order to do the work, and that the community could do some of this. It is an interesting culture clash, which could become an issue as more missions overlap between divisions and communities. Dr. Jessica Gaskin asked if one approach might be to leverage Space Telescope Science Institute (STScI) staff expertise. Dr. O'Meara said that this question acknowledges the size of the STScI staff, and many missions communicate things in similar ways. Not all of the missions have the bandwidth to do Education/Public Outreach (E/PO) well on their own, so access via STScI is something to consider.

Dr. Shirley Ho asked if there is any way to address the expectation of flat budgets, which are neither sustainable nor insignificant. Dr. O'Meara answered that the White House and Congress set the budgets, so the community must rally to get increases. This is beyond APD and SMD capabilities. Documents like the SR report can help solve the problem, but not everyone is at liberty to lobby for increased budgets. Community engagement is key in getting the message to Congress. Dr. Kelly Holley-Bockelmann said she was quite impressed by the preparedness and forethought on possibly needing to change the observing strategies of aging missions. She suggested that a decision rule might be to find ways to enable science that is not currently well-enabled, such as TDAMM. She also endorsed the SR stance that NASA should fund efforts in DEIA. Dr. Erika Hamden said that the SR report was wonderful to read through and very thorough. She asked what types of community engagement are under consideration to plan for the future. Dr. O'Meara replied that this will probably be a "scope of mission" function. The user communities vary, and this is more guidance for APAC to pass on to NASA. The key word is "may" in dealing with contingency plans. The exercises will take some time and work. The missions know their communities, but the SR hopes for this to be a step beyond those comms.

Dr. Woodward asked about the flat-flat budget discussion and the extent to which it gives primacy to GO funding. Dr. O'Meara replied that there is no simple answer. The science impact is primary, and the role of GO on specific science impact for each mission is unclear. Perhaps the onus is on missions to calculate the resource impacts of GO. Current tools for gauging primacy are imperfect. Dr. Woodward thought this might be an area where the Program Analysis Groups (PAGs) might weigh in. Another thought is that the report first says that DEIA activities should not be charged to mission budgets, then later specifies that the Chandra over-guide request in this area not be exercised. He asked if the intent is that this should be a structural approach to the problem. Dr. O'Meara said that the Chandra panel felt the specific DEIA request was not ready and therefore did not warrant over-guide spending. On the other hand, GOF activities should be NASA funded because they are NASA activities rather than coming out of mission budgets. The SR panels want both inward and outward components. Dr. Woodward next asked about the NH conversation. One way to view this is to look at the absence of public accessibility to data products from the astrophysics experiment, along the lines of current APD-funded operations. He asked if the point is that it would be unwise to support that request without APD standards applied. Dr. O'Meara said that he understands that the exercise is not funded from the same bucket as the over-guides. If it were all out of the same bucket as the other SR missions, and if funding this exercise would preclude funding something else, he would say to not execute it. However, right now he understands that the funding sources are distinct, and funding NH would have no impact on funding the other operations. Dr. Woodward then asked for clarification regarding whether additional resources for NH come out of a separate budgetary bucket or the extended operations line. Dr. Hertz explained that the APD budget is fungible. It has a top line that covers cost growth, and extended missions come out of that budget.

Dr. Meyer said that the climate surveys are a start in addressing DEIA, but they call for the right expertise in developing the surveys. Dr. O'Meara agreed, saying that they also need to be periodic assessments. Dr. Woodward added that the exercise should be coupled with proper review and evaluation of the targets.

Formulate Recommendations
Dr. Woodward thanked the SR Subcommittee and asked APAC members if they accepted the report. There were no objections.

He moved on to formulating advice for the APD director. Dr. Hertz asked that APAC provide APD with guidance. If the guidance in the report is right, he asked that APAC tell him to do executable inputs as far as he can go. He cannot predict budgets. Dr. Woodward thought APAC should focus on the priority table on page 9 of the report. The table gives the following priorities:

- Priority 1 The Rest of Missions over-guide Tier 1 recommendation
- Priority 2 The majority of the Hubble and Chandra over-guide request
- Priority 3 The Rest of Missions over-guide Tier 2 recommendations
- Priority 4 The remaining Hubble and Chandra over-guide requests
- Priority 5 The Rest of Missions over-guide Tier 3 recommendations

Dr. Strolger said his starting point was to endorse the ranking, but he would combine Priorities 1 and 2. His reasoning was that Priority 1 essentially asks for an additional full-time employee (FTE) and he had misgivings about such requests in the over-guides; personnel requests should be absorbed at some other level. He also noted that Priority 2 meets the requirements Dr. O'Meara stated in regard to impact to the community. Dr. Gaskin preferred to just fund down until it is no longer possible. She wondered what to do if the funding cut-off is within Priority 2, necessitating a choice between HST and Chandra. Dr. Woodward observed that it was not clear how to manage a partial situation. Dr. Holley-Bockelmann was concerned about the over-guide information for Chandra and HST, despite the 2019 SR asking for greater explanation of how to be more efficient. She did not see a tick list or overall amount for the over-guide, so she could not prioritize within Priority 2. She added that HST had been asked for information on how to be more efficient, and she wanted to see what the mission has done in that area. Dr. Woodward called up the language from the report, which said:

> "The next priority should be to fund substantial fractions of the Hubble and Chandra over-guide requests. These missions are highly optimized and have been so for a significant time. Failing to provide over-guide funding to Hubble and Chandra would severely impact their science output. With regards to Chandra, the subcommittee suggests prioritizing at this level support for i) the preservation of the current staffing levels, and ii) the addition of two engineers in the operations team. However, if full funding of this 'basic' over-guide is not achievable, the committee recommends that the Chandra team should consider reducing the GO funding if needed to maintain observatory operations at an acceptable level. If full funding of the Hubble over-guide is not achievable, the Hubble team should consider seeking further efficiencies in its operational and community outreach support in order to preserve as much as possible the level of GO funding.
> "The guiding principle for both missions is that over-guide requests should be allocated to maximize the science returns for the community, which is sometimes best achieved by preserving mission infrastructure while maximizing GO funding."

Dr. Meyer said he favored keeping the line between Tiers 1 and 2, as the Agency needs operational latitude. Dr. Strolger reiterated his stance against the line. He added that the over-guides in Tier 5 are largely about GO funding, and there is very clear science return from GO funding. He then said that while there is clarity about the ranking in the table, it was less clear how to capture DEIA recommendations. Dr. Woodward said that his understanding is that APAC agreed that NASA should have an umbrella approach, meaning that NASA should fund it and have specific actions to guide the missions in their responses to this pillar. Regular climate surveys and accountability must be uniform. Dr. Meyer asked if this was for APD or SMD. Dr. Woodward said that the efforts should be parallel, and it needs to be

coherent within APD. If APAC considered it paramount, they should say so. The Committee members agreed.

Debrief to Astrophysics Division Director

Dr. Woodward noted the following points for Dr. Hertz:

1. APAC accepted the report and endorsed the recommendations.
2. With regard to management of the over-guides, the Committee endorsed the order from the table on page 9 of the report. APAC feels there is a grey line between Priorities 1 and 2.
3. APAC sees the DEIA activities as part of the NASA and SMD core, and therefore the members want the execution of the program to be elevated going forward. The missions themselves need clear standards against which to be held accountable, and that includes specifying measurement criteria. NASA should look carefully at funding the GSFC GOF for both outward- and inward-facing exercises to increase diversity.
4. It is also important to look at cloud computing and infrastructure for future operating missions.

In addition, the astrophysics component of NH looked interesting. There was further consensus about science opportunities and community thinking about aging missions. Dr. Holley-Bockelmann added that the PAGs should play a part in this.

Dr. Hertz said that he captured this discussion and would take it as the APAC recommendation. There will also be the minutes, and APAC could send him a short letter. APD will take the report, findings, and recommendations as the basis for making decisions and will communicate that to the missions.

Adjourn

The meeting was adjourned at 4:58 p.m.

Appendix A
Participants

Committee members
Charles Woodward, University of Minnesota, *Chair, Astrophysics Advisory Committee*
Kelly Holley-Bockelmann, Vanderbilt University, *Co-Chair*
Jessica Gaskin, NASA Marshall Space Flight Center
Erika Hamden, University of Arizona
Ryan Hickox, Dartmouth College
Shirley Ho, Flatiron Institute
Margaret Meixner, USRA
Michael R. Meyer, University of Michigan
Mark Mozena, Planet Labs, Inc.
Louis Strolger, Space Telescope Science Institute

NASA
Paul Hertz, NASA HQ
Director, Astrophysics Division
Hashima Hasan, NASA HQ
Executive Secretary, APAC
Zaven Arzoumanian
Patricia Boyd
Terri Brandt
Jenna Cann
Regina Caputo
Stephen Cenko
Graziano Chiaro
Mark Clampin
Rachel Cocks
Valerie Connaughton
Julie Crooke
Nino Cucchiara
Daniel Evans
Ingrid Farrell
Elizabeth Ferrara
Keith Gendreau
Shahid Habib
Elizabeth Hays
Christina Hedges
Don Horner
Rebekah Hounsell
Douglas Hudgins
Michelle Hui
Brian Humensky
Janet Letchworth
Sangeeta Malhotra
Craig Markwardt
Julie McEnery
Nestor Mirabal
Joshua Pepper
Mario Perez
Robert Petre
Natasha Pinol
Katja Pottschmidt
Judith Racusin
Alina Rhodes
Rita Sambruna
Joshua Schlieder
Kartik Sheth
Chris Shrader
Alan Smale
Eric Smith
Karl Stapelfeldt
Daniel Stern
Lynne Valencic
Robert Stone
Richard Terrile
Steve Unwin
Sanaz Vahidinia
Lynne Valencic
Priti Vasudeva
Brian Williams
George Younes
Abderahmen Zoghbi

Non-NASA/Unknown
Mitch Ambrose
Tom Barclay
Marshall Bautz
Alex Belles
Niel Brandt
Laura Brenneman
Eric Burns
Ed Cackett
Robert Cameron
Michael Corcoran
Jeanette Domber
Mike Fanelli
Justin Finke
Marc Gagné
Brian Grefenstette
Caryl Gronwall
Eric Grove
Jules P. Halpern
Dieter Hartmann
Erin Hicks
Wynn Ho
Jeroen Homan
Jimmy Irwin
Teresa Jensen
William Jones
Erin Kara
Steve Kendrick
Jamie Kennea
Alina Kiessling
Michelle Kunimoto
K.D.Kuntz
Dwayne Lawrence
Tiffany Lewis
Yuan Li
Justin Linford
Peter Michelson
Richard Miller
Mason Ng
Alison Nordt
John Nousek
April Olson
John O'Meara
Flora Paganelli
Joshua Peek
Randy Persinger
Annika Peter
Larry Petro
Peter Plavchan
Griffin Reinecke
George Ricker
Alexander Rudat
Lior Shamir
David Sheikh
Elizabeth Sheley
Ohad Shemmer
Ming Sun
Harvey Tananbaum
Nial Tanvir
John Tomsick
Aaron Tohuvavohu
Grant Tremblay
Jason Tumlinson
Roland Vanderspek
Peter Veres
Ben Williams
Alexandra Witze
Michael T. Wolff
Kent Wood

Appendix B
Astrophysics Advisory Committee Members

Charles Woodward, APAC Chair
University of Minnesota

Hashima Hasan, Executive Secretary
Astrophysics Division
Science Mission Directorate
NASA Headquarters

Manuel Bautista
University of West Michigan

Jessica Gaskin
Marshall Space Flight Center

Erika Hamden
University of Arizona

Ryan Hickox
Dartmouth College

Shirley Ho
Flatiron Institute

Kelly Holley-Bockelmann
Vanderbilt University

Margaret Meixner
USRA/SOFIA

Michael R. Meyer
University of Michigan

Mark Mozena
Planet Labs Inc.

Louis Strolger
Space Telescope Science Institute

Appendix C
Presentations

1. *2022 Astrophysics Senior Review*, Eric Smith
2. *Astrophysics Senior Review Subcommittee Report*, John O'Meara

Appendix D
Agenda

Astrophysics Advisory Committee
Virtual
June 7, 2022

Tuesday 7 June

3:00 p.m.	Introduction and Announcements	Hashima Hasan/Charles Woodward
3:05 p.m.	Introduction to Senior Review Process	Eric Smith
3:15 p.m.	Charge to APAC	Paul Hertz
3:20 p.m.	Senior Review Subcommittee Report	John O'Meara
3:40 p.m.	Public Comment Period	
3:45 p.m.	Discussion	APAC members
4:30 p.m.	Formulate Recommendation	APAC members
4:45 p.m.	Debrief to Astrophysics Division Director	Charles Woodward
5:00 p.m.	Adjourn	

Appendix E
WebEx Chat Transcripts

from Meixner, Margaret (Ext) to everyone: 3:07 PM
Hi Just artived Hashima..

from Kartik Sheth (Int) to everyone: 3:22 PM
How long did it take you to find this image John ;)

from Meixner, Margaret (Ext) to everyone: 3:43 PM
Kent wood has his hand raised

from Nino Cucchiara he/him, NASA HQ (Ext) to everyone: 3:48 PM
Could something like a standard code of conduct across missions and teams an example of inward facing DEIA initiatives?

from kelly holley-bockelmann (Ext) to everyone: 3:49 PM
I'll ask formally

from Michael Meyer (Ext) to everyone: 4:24 PM
Comment: I think engaging the Program Analysis Groups (PAGs) could be an appropriate way to engage the community regarding future novel operations models given aging facilities and losing capabilities.

from kelly holley-bockelmann (Ext) to everyone: 4:24 PM
Excellent point, Michael

from Shirley Ho (Ext) to everyone: 4:25 PM
Do we have analysis of how many dollars are supported via grant programs such as ADAP for each of the missions?

from Shirley Ho (Ext) to everyone: 4:25 PM
And how many proposals are submitted to work with specific missions?

from Lynne Valencic (Ext) to everyone: 4:26 PM
Can we get a link to the results, please? Thanks!

from kelly holley-bockelmann (Ext) to everyone: 4:28 PM
@Shirley -- we do get these data during our R+A updates. One thing I don't remember having, however, is if/how the ATP proposals are ever separated by how it enables or takes advantage of 'its mission(s)'

from Shirley Ho (Ext) to everyone: 4:30 PM
Thanks @Kelly!!

from PAUL HERTZ (Int) to everyone: 4:34 PM

@Shirley -- I have sent Doug Hudgins a note asking if ADAP tracls which missions are associated with each proposal.

from kelly holley-bockelmann (Ext) to everyone: 4:35 PM
I'm thinking about ATP (which might be difficult because often missions are mentioned in passing)

from Shirley Ho (Ext) to everyone: 4:37 PM
@Paul, this is great. Because this measures both how much each mission get (in addition to the mission directly) and an approximate measure of community interest in the mission.

from Shirley Ho (Ext) to everyone: 4:37 PM
Both ATP and ADAP make a lot of sense to track if possible.

from PAUL HERTZ (Int) to everyone: 4:38 PM
@Kelly -- Without asking, I am sure we do not track ATP proposals by mission.

from kelly holley-bockelmann (Ext) to everyone: 4:39 PM
@Yeah, I figured it would be intractible...

from Shirley Ho (Ext) to everyone: 4:41 PM
@Paul; if we can track ADAP, that will be great. thanks so much for responding

from Erika Hamden (Ext) to everyone: 4:46 PM
I can't seem to unmute myself, but I agree with Michael that I don't think we need to draw a line here

from kelly holley-bockelmann (Ext) to everyone: 4:47 PM
Gotcha now, Erika

from Mark Mozena (Ext) to everyone: 4:47 PM
same - cant unmute but echo the statement about not drawing. Line

from John O'Meara (Ext) to everyone: 4:47 PM
I would like to note that there are overguide requests beyond tier 5

from kelly holley-bockelmann (Ext) to everyone: 4:47 PM
gotcha, Mark

from Lou Strolger (Ext) to everyone: 4:51 PM
Agreed. It would have to go above priority 1

from kelly holley-bockelmann (Ext) to everyone: 4:51 PM
Does(n't) it go broader than SMD?

from Michael Meyer (Ext) to everyone: 4:52 PM

Good point Kelly. I guess I feel we have limited capacity to advise SMD as opposed to APD, and less agency wide, but YES!

from Jessica Gaskin (Int) to everyone: 4:57 PM
Job well done!

from Shirley Ho (Ext) to everyone: 4:57 PM
Just want to commend the report further :)

from Michael Meyer (Ext) to everyone: 4:57 PM
Thanks to the Sub-committee!!! Great job.

from kelly holley-bockelmann (Ext) to everyone: 4:57 PM
Thanks to the Senior Review folks for a thoughtful report!