

COPAG Virtual Town Hall

March 10, 2015

Note: This webex session is being recorded
and will be publicly available.

COPAG Webex Session Info

When you join the Webex session, your microphone will be muted automatically. Tony Darnell will be moderating the participants and sending chat messages if there is any relevant information to convey while the meeting is going on. If you have a comment or would like to ask a question, please use the 'Raise Hand' feature to let the moderator know and he will indicate that he's seen that with a chat message. Alternatively, you can send a question via **webex chat**, a tweet (**#CosmicOrigins**), or an email (**stsocial@stsci.edu**) to the moderator and he will ask it on your behalf. You will need to remember to unmute your microphone when you acknowledged and mute again when you are done.

Cosmic Origins Panel (Meeting number / Access Code: 649 877 380)

Tuesday, March 10, 2015

3:00 pm | Eastern Daylight Time (New York, GMT-04:00) | 1 hr

Join WebEx meeting

<https://stsci.webex.com> (select “unlisted meeting”, enter meeting number)

Join by phone

1-855-244-8681 Call-in toll-free number (US/Canada)

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COPAG Executive Committee

- Daniela Calzetti (University of Massachusetts)
- Dennis Ebbetts (Ball Aerospace, retired)
- James Green (University of Colorado)
- Matt Greenhouse (NASA/GSFC)
- Sara Heap (NASA/GSFC)
- Lynne Hillenbrand (Caltech)
- Mary Elizabeth Kaiser (Johns Hopkins)
- Joseph Lazio (NASA/JPL)
- James Lowenthal (Smith College)
- Pam Marcum (NASA/Ames)
- Kenneth Sembach (Chair) – STScI

Ex-officio

- Susan Neff & Deborah Padgett (GSFC Cosmic Origins Program Office)
- Mario Perez (NASA HQ)



Background (Hertz AAS Presentation): Preparing for the 2020 Decadal Survey

- The 2020 Decadal Survey will prioritize large space missions to follow JWST and WFIRST.
 - To enable this prioritization, NASA needs to provide information on several candidate large space mission concepts for consideration by the 2020 Decadal Survey Committee.
- What information needs to be provided to the Decadal Survey committee to enable prioritization of large missions
 - Science case
 - Strawman design reference mission with strawman payload
 - Technology development needs
 - Cost requirements assessment
- NASA needs to initiate technology development for candidate large missions so that technology will be ready when needed.
 - Technology needs to be sufficiently mature when it is time to start the highest priority large mission in the 2020 Decadal Survey.
 - The next large mission after WFIRST could be started when funding becomes available as WFIRST approaches launch in the early or mid-2020s.



Background (Hertz AAS Presentation): Schedule for Large Mission Studies

Part A – 2015

- Identify a small set of candidate large mission concepts to study
 - Incorporate community input through the three Astrophysics Program Analysis Groups (PAGs)

Part B – 2016-2019

- Initiate studies
 - Includes community-based Science and Technology Definition Teams
- Conduct studies
 - Includes NASA Center-provided engineering teams
- Identify technology requirements to motivate early technology development
 - Enables funding through existing Astrophysics technology programs
- Deliver results to 2020 Decadal Survey committee

Planning for the 2020 Decadal Survey: An Astrophysics Division White Paper
available at <http://science.nasa.gov/astrophysics/documents>



Background (Hertz AAS Presentation): PAG Involvement

Part A: Identify a small set (~3-4) of large mission concepts to study

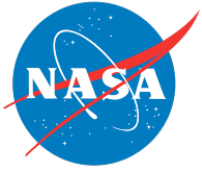
- The community has invested considerable resources in discussing notional classes of mission concepts for consideration as large missions following JWST and WFIRST and in parallel with the ESA-led missions Euclid, Athena, and L3.
 - The 2010 Decadal Survey, *New Worlds New Horizons in Astronomy and Astrophysics*.
 - The 2014 Astrophysics Visionary Roadmap, *Enduring Quests, Daring Visions*.
- NASA has drawn an initial small set of 4 candidate mission concepts from the missions discussed in these strategic documents.
- [Paul Hertz is] charging the Astrophysics PAGs to solicit community input for the purpose of commenting on the small set, including adding or subtracting large mission concepts; each PAG will submit a report regarding the small set of large mission concepts for consideration by the NAC Astrophysics Subcommittee.
- At its Fall 2015 meeting, the NAC Astrophysics Subcommittee will consider the three PAG reports and submit a report to NASA on the small set of large mission concepts for study.
- [Paul Hertz] will decide which large mission concepts will be studied as input for the 2020 Decadal Survey.



Background (Hertz AAS Presentation): The Suggested Mission List

The initial short mission list (alphabetical order):

- **FAR-IR Surveyor** – The Astrophysics Visionary Roadmap identifies a Far IR Surveyor as contributing through improvements in sensitivity, spectroscopy, and angular resolution.
- **Habitable-Exoplanet Imaging Mission** – The 2010 Decadal Survey recommends that a habitable-exoplanet imaging mission be studied in time for consideration by the 2020 decadal survey.
- **UV/Optical/IR Surveyor** – The Astrophysics Visionary Roadmap identifies a UV/Optical/IR Surveyor as contributing through improvements in sensitivity, spectroscopy, high contrast imaging, astrometry, angular resolution and/or wavelength coverage. The 2010 Decadal Survey recommends that NASA prepare for a UV mission to be considered by the 2020 Decadal Survey.
- **X-ray Surveyor** – The Astrophysics Visionary Roadmap identifies an X-ray Surveyor as contributing through improvements in sensitivity, spectroscopy, and angular resolution.



Background (Hertz AAS Presentation): Charge to the PAGs

Charge to the PAGs (subset):

1. Each PAG, under the leadership of its Executive Committee, shall broadly solicit the astronomy and astrophysics community for input to the report in an open and inclusive manner.
 - To accomplish this, each PAG is empowered to envision and use its own process.
2. Each PAG will consider what set of mission concepts should be studied to advance astrophysics as a whole; there is no desire for mission concepts to be identified as “belonging” to a specific Program or PAG.
 - Each PAG shall keep the number of large mission concepts in the set as small as possible.
 - Each PAG is specifically charged to consider modifications and subtractions from the small set, and not just additions.
3. Each PAG shall produce a report, where it shall comment on all large mission concepts in its small set of large missions, including those in the initial small set and those added or subtracted.
 - The PAGs may choose to work together and submit coordinated or joint reports.

What the COPAG Will Be Doing in Response to this Charge

- Collecting Cosmic Origins community input for the four missions in NASA's shortlist
 - Science cases
 - Technology needs
 - Comments on the four strawman missions
- Identifying any other large missions having broad community support for Cosmic Origins science
- Summarizing that input for each of these missions for the Astrophysics Subcommittee (Final report due October 2015)
- Working with the PhysPAG and ExoPAG in responding to this charge when possible (collecting/sharing input, joint reports)

What the COPAG Will Not Be Doing in Response to this Charge

- Prioritizing these flagship missions
 - This is the work of the Decadal Survey Committee
- Advocating for specific mission concepts
 - Focus on capabilities, science drivers, science synergies, technology tall poles,
- Advocating for smaller missions
 - Only large (>\$1B) missions are being considered (i.e., no Probes, Explorers)
 - Other avenues for input are (or will be) available
- Performing Technical Trade Studies
 - This is the work of the STDTs in Part B of Paul Hertz's charge
 - Input collected will inform the STDT studies

Request for White Papers

- The COPAG wants your input
- White paper solicitation
 - http://cor.gsfc.nasa.gov/copag/rfi/Large_missions_white_paper_solicitation-01Mar2015.pdf
 - Length = 1-2 pages
 - Due April 24, 2015
 - PDF, MS Word, or ASCII format
 - All white papers will be posted on the COPAG website:
<http://cor.gsfc.nasa.gov/copag/rfi/copag-rfi.php>
 - Submit papers (or questions) to:
COPAG_Contact@bigbang.gsfc.nasa.gov

Next Steps

- COPAG will hold another virtual town hall to discuss the community input it has received
 - May 2015 timeframe
 - Date/time and webex details will be posted on the COPAG website
- COPAG Science Interest Groups will help to collect community input through their activities
 - SIG#1 (Far-IR, Leads: David Leisawitz / Paul Goldsmith)
 - SIG#2 (UV-Optical, Lead: Paul Scowen)
- The COPAG Executive Committee is available to answer questions about this process. Contact us at (COPAG_Contact@bigbang.gsfc.nasa.gov)

Questions / Comments?

Please remember to “raise your hand” via webex

Or send a tweet to #CosmicOrigins

Or send an email to stsocial@stsci.edu