

Cosmic Origins Program Analysis  
Group Report  
NAC Astrophysics Subcommittee  
Meeting – October 2016

Paul Scowen  
(COPAG EC Chair)

# COPAG EC Membership

**Paul Scowen** (Chair, APS Member)

**Lee Armus**

**Daniela Calzetti** ~

**Dennis Ebbetts** ~

**Suvi Gezari**

**James Green** ~

**Matt Greenhouse**

**Sara Heap** ~

**Chris Howk**

**Mary Elizabeth Kaiser**

**Joseph Lazio**

**Pam Marcum**

Arizona State University

Caltech

University of Massachusetts

Ball Aerospace

University of Maryland

University of Colorado

NASA/Goddard Space Flight Center

NASA/Goddard Space Flight Center

University of Notre Dame

Johns Hopkins

NASA/JPL

NASA/Ames

**Mario Perez** (Executive Secretary, Ex-Officio)

**Kartik Sheth** (Ex-Officio)

**Susan Neff** (COR Program Office, Ex-Officio)

**Deborah Padgett** (COR Program Office, Ex-Officio)

NASA HQ

NASA HQ

NASA/GSFC

NASA/GSFC

~ Members rotating off in Nov 2016

**Announcement Made for Replacement Members –  
Applications Due October 7!**

# COPAG Activities Since July

- Mid Decadal Review:
  - Discussion by members of the Executive Committee
  - Overall the EC regarded the report as an excellent summary of the status of ongoing missions and plans for future endeavours
  - There was some minor concern expressed about the security of the coronagraph instrument on WFIRST because of language in Findings 3-3, 4-2 and 4-4, and in particular Recommendation 4-1.
  - Through the efforts of SAG 6 the COPAG has established that there is real COR science value in the inclusion of the coronagraph, even if it is intended as a technology demonstration
  - There was also some minor concern about language in Recommendation 4-2 that could roll back investment in Euclid to NWNH levels from the elevated levels currently being implemented – and that this could adversely affect the efforts of the three science teams currently planning COR science
  - A letter summarizing these points was sent to Paul Hertz for his information

# COPAG Activities

- SPIE meeting of SIG2 on June 28, Edinburgh – Meeting discussed the need for some informed assessment of the Technology Gaps list – in response the COPAG is making the request to open a new Interest Group – a Technology Interest Group – the charter has been distributed to the APS Committee

# Technology Interest Group

- The intent is to form an open group of community members both from within the Astrophysics community and from within Industry to inform the COPAG as a whole on the Technology Gaps List
- Each year the COR Technology Office sends the draft list to the COPAG EC for review before it goes under review by a Technology Management Board
- This past year, the EC felt it did not have the expertise to address the list properly
- The new TIG will serve both as a more informed review body and provide input on technology developments throughout the year
- All input will be treated equally but will be reviewed to ensure that the needs forwarded to the COR Technology Office are complete

# COPAG Activities

- As previously reported, the COPAG EC has membership on the FIR (Lee Armus), HabEx (Paul Scowen) and LUVOIR (Daniela Calzetti) STDTs
- We had tasked two EC members to tag team to cover the activities of the X-ray Surveyor STDT – Joe Lazio and Suvi Gezari
- Gezari has now formally joined the SWG on “*X-ray Surveyor in the Multi-Wavelength, Multi-Messenger Era*”
- Lazio has also formally joined the SWG on “*First Accretion Light*”
- Similarly Scowen has now formally joined the LUVOIR SWG on “*Cosmic Origins Science*” to better interface the COR efforts within HabEx with those being developed for LUVOIR

## SIG#1: The Far-Infrared Science & Technology Interest Group

# FIRSIG: *Engaging the Community*

JD Smith & Duncan Farrah, co-chairs

- New **FIRSIG webinar series**: low-barrier way to track developments in US Space-FIR astronomy

[asd.gsfc.nasa.gov/firs/seminars/](http://asd.gsfc.nasa.gov/firs/seminars/)

Next speaker Al Wooten, NRAO — “*ALMA in the next decade*”, Fri Oct. 7th at 1pm

- Joint Jan **AAS splinter session** with the FIR-Surveyor/Origins Space Telescope. Join us! (details soon: [cor.gsfc.nasa.gov/sigs/sig1.php](http://cor.gsfc.nasa.gov/sigs/sig1.php))

## SIG 2 – UV-Visible Science and Technology (Paul Scowen, ASU, Chair)

- The SIG has been relatively quiet
- Many members of the SIG are actively involved in SWG activities on both LUVOIR and HabEx
- The SIG is planning a meeting at the Winter AAS on the morning of Tuesday January 3<sup>rd</sup>
- The 55-page final report on the Summer 2015 workshop has been completed and sent to the contributing authors for comment – we expect to submit for publication before the end of CY 2016.





**Jet Propulsion Laboratory**  
California Institute of Technology

# Cosmic Dawn Science Interest Group

Joseph Lazio

on behalf of the COPAG EC



# **Cosmic Dawn SIG**

Primary Activities – Past 3 Months

## **Engagement with the Flagship STDTs**

- **Membership on the Far IR Surveyor**
- **Observing X-ray Surveyor activities**

**Development of multiple Explorer mission concepts and Probe concept studies**

**Plans: The Cosmic Dawn SIG will meet at the Winter AAS on Tuesday Jan 3 in the morning**

# Cosmic Dawn SIG

Cosmic Origins PAG

**“We have learned much in recent years about the history of the universe, from the big bang to the present day. A great mystery now confronts us: When and how did the first galaxies form out of cold clumps of hydrogen gas and start to shine---when was our ‘cosmic dawn’?”**

*New Worlds, New Horizons*

**SIG focusses on science cases, observations, and technology development needed to address this "great mystery" of Cosmic Origins.**

- **Membership is open to all.**

To be added to the mailing list, please contact Joseph Lazio ([Joseph.Lazio@jpl.nasa.gov](mailto:Joseph.Lazio@jpl.nasa.gov))

- **Website: <http://cd-sig.jpl.nasa.gov/>**

# Actions Requested of the APS

- The COPAG requests permission to establish the new Technology Interest Group and to publish a call to the COPAG community for membership and participation

# COPAG Future Activities

- Bi-weekly EC telecons will continue
- The solicitation for replacement EC members closes in October 7, with selection announcements to be made by mid-November
- Active COPAG community engagement at the January 2017 AAS meeting – both SIG and community-wide joint meetings with the other PAGs
- Continued dialogue and support of ongoing STDT activities