



National Aeronautics and
Space Administration

NASA 101: Introduction to NASA and Opportunities to Engage

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About Me



About me:

Education:

- BS Physics (Minor in Biology), MIT 1997
- MA Astronomy, Harvard 1999
- PhD Astronomy, Harvard 2004

Postdocs:

- Carnegie Fellow/NAI Fellow, Carnegie Institution for Science, DTM 2004-2007
- Michelson Fellow, University of Maryland & NASA GSFC 2007-2010
- Postdoc, Space Telescope Science Institute 2011

Faculty:

- Assistant Professor, University of Wyoming, 2011-2017
- Associate Professor, University of Wyoming, 2017-2021

NASA Headquarters:

- Program Scientist (IPA), NASA HQ, 2020-2021
- Program Scientist (Civil Servant), NASA HQ, 2022-present



About NASA



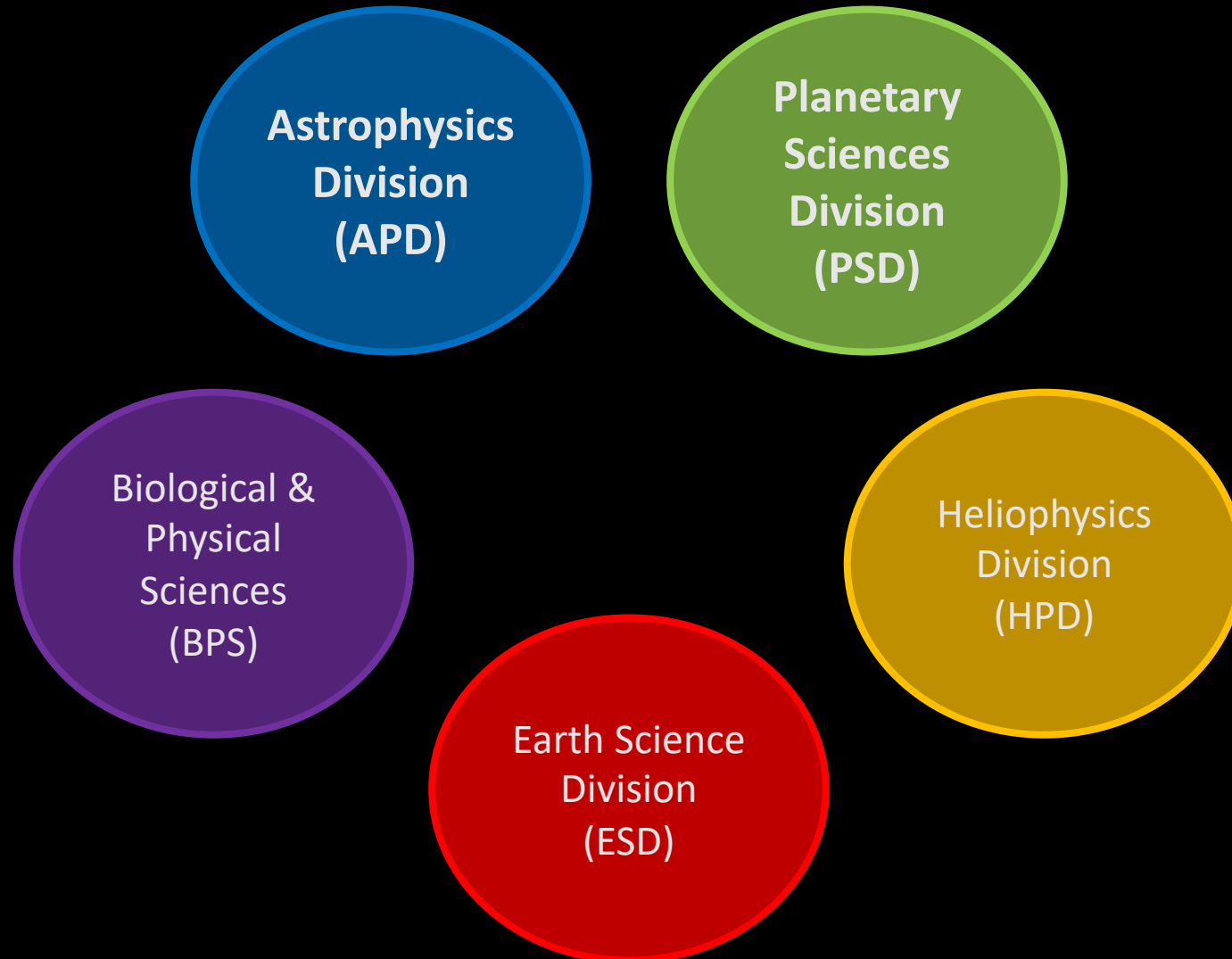


My current job:

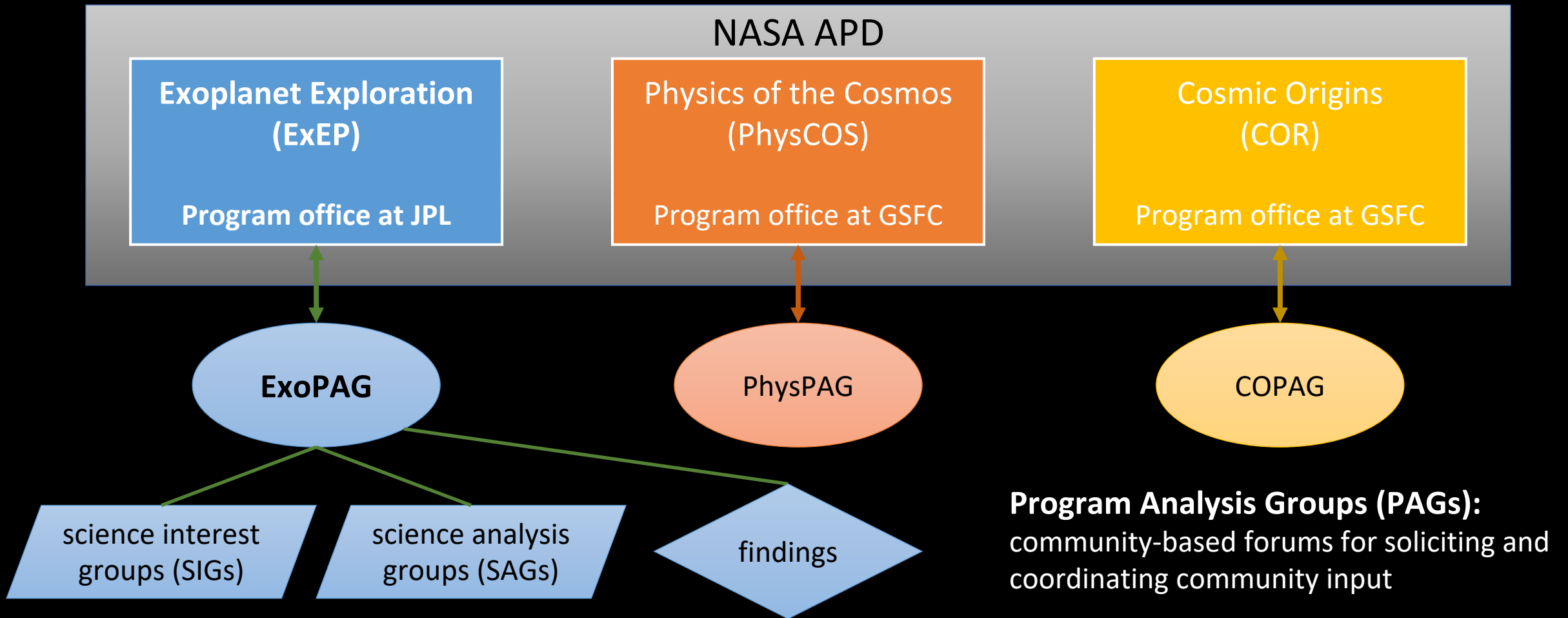
- National Aeronautics and Space Administration (NASA)
- NASA Headquarters (HQ)
- Science Mission Directorate (SMD)
- Astrophysics Division (APD)
[Planetary Science Division (PSD)]
- Program Scientist



Science Mission Directorate



Astrophysics Division – PAGs



More about the ExoPAG: <https://exoplanets.nasa.gov/exep/exopag/overview>

PSD Analysis/Assessment Groups (AGs)



Mapping and
Planetary Spatial
Infrastructure
Team (MAPSIT)

Mars Exploration
Analysis Group
(MEPAG)

Outer Planets
Assessment
Group (OPAG)

Extraterrestrial
Materials
Analysis Group
(ExMAG)

Small Bodies
Assessment
Group (SBAG)

Venus
Exploration
Analysis Group
(VExAG)

Mercury
Exploration
Assessment
Group (MExAG)

Lunar
Exploration
Analysis Group
(LEAG)

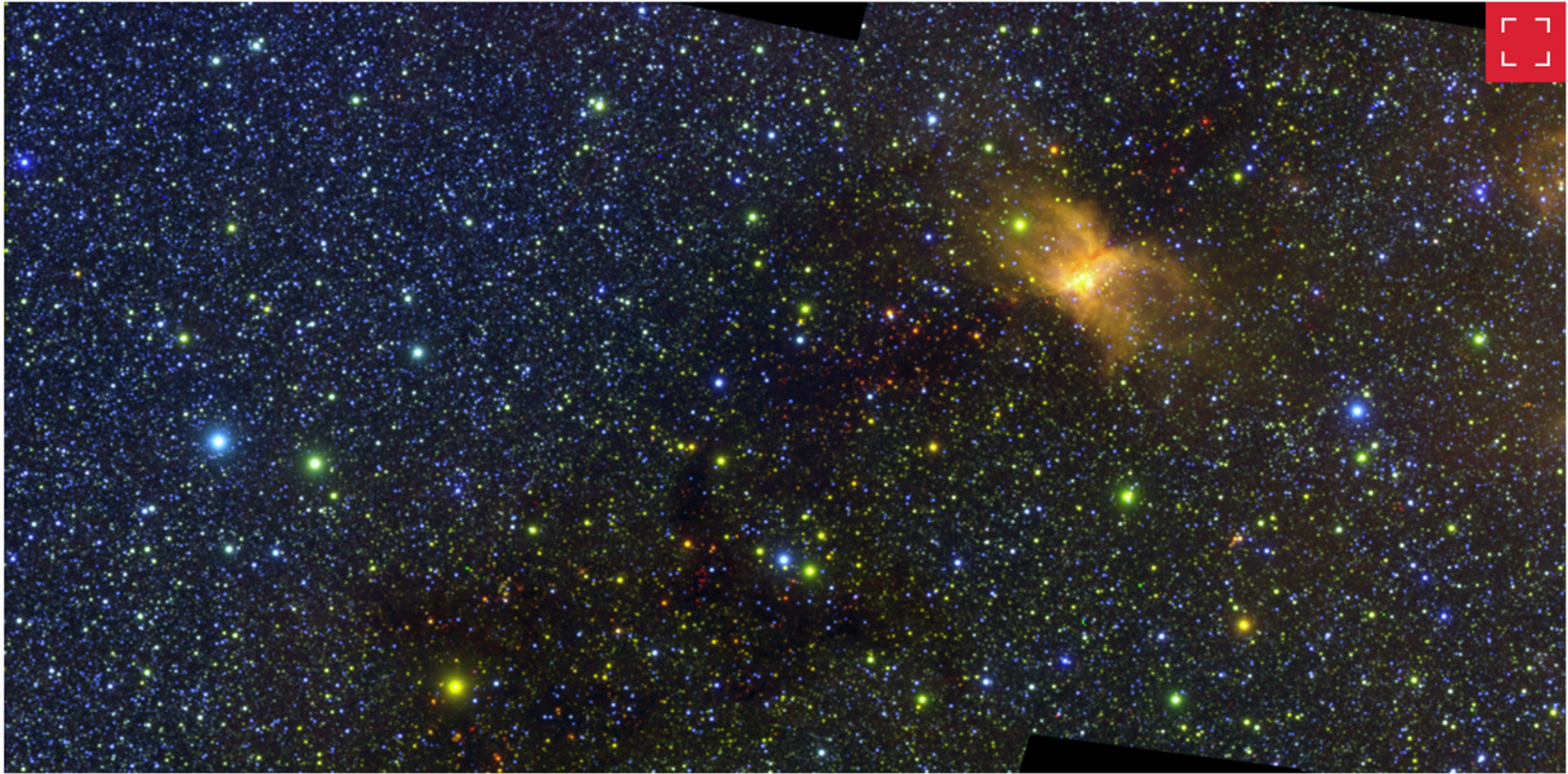


ASTROPHYSICS FLEET





SPHEREx Mission Data Release - July 2, 2025



This image of the Vela Molecular Ridge was captured by SPHEREx and is part of the mission's first public data release. The yellow patch on the right side of the image is the emission nebula RCW 36, a cloud of interstellar gas and dust that glows in some infrared colors due to radiation from nearby stars. Credit: NASA/JPL-Caltech



- The Roman Space Telescope is over 90% complete. Ahead of schedule and on budget.
- With all major hardware now delivered, Roman has entered its final phase of preparation for launch, undergoing integration and key environmental testing at Goddard.
- Roman is targeted to launch by May 2027, with the team working toward a potential launch as early as October 2026.

ROMAN'S THREE CORE SURVEYS

GALACTIC BULGE TIME-DOMAIN SURVEY



Exoplanets



Transients



Black Holes



438 days, primarily in six sets of 72 days each



Full survey area imaged every 12 minutes



1.7 square degrees

The area of
8.5
full moons



HIGH-LATITUDE WIDE-AREA SURVEY



520 days over five years



Exposure times from
11 to 150 minutes



5,100 square degrees



12%

of the entire sky
(25,500 full moons)



Dark Energy



Dark Matter



Galaxies



Solar System



Milky Way

The area of
90
full moons



HIGH-LATITUDE TIME-DOMAIN SURVEY



180 days, primarily in two years



30 hours every five days



18 square degrees



Supernovae



Transients



Galaxies



Dark Energy

About My Job



What does a Program Scientist Do?

- Manage Research and Analysis (R&A) grant programs (e.g. ADAP, ATP, APRA, XRP)
- Oversee Mission Development, Implementation, and Operation (from CubeSats to Explorers to Flagships)
- Strategic planning
- Communicate with PIs and proposers
- Implement NASA policies
- Accounting

What Do I Do?

Current:

- James Webb Space Telescope (JWST)
- Ariel
- Exoplanet Exploration Program

Former:

- TESS
- Exoplanets Research Program (XRP)
- ExoPAG Executive Secretary
- Explorers (MIDEX & MO)
- FINESST (Future Investigators in Earth and Space Sciences)

What can a program officer do for you?

What we can do	What we can't do
Manage review panels	Evaluate proposals
Recommend proposals for selection	Select proposals (done by selecting official)
Tell you whether your proposal is relevant to my call, or help you figure out where to submit it	Tell you whether your proposal has merit
Debrief you on your proposal evaluation	Unilaterally change your proposal evaluation

Opportunities For You



How do I get funding from NASA?

- Be part of a mission
 - E.g. Help write mission proposals, analyze mission data, calibrate data, provide user support, write papers and studies, develop software or hardware, etc.
- Get a research grant (Research and Analysis = R&A)
 - Research Opportunities in Space and Earth Science = **ROSES**
 - Usually released on or about February 14 every year
 - You must be at a US institution to receive funding
 - ROSES-2025:
<https://solicitation.nasaprs.com/ROSES2025>



ROSES 2025 “Table 3”

C.1	Planetary Science Research Program Overview	N/A	N/A
C.2	Solar System Science	N/A	No Due Date [3]
C.3	Maturation of Instruments for Solar System Exploration	Not Solicited This Year	
C.4	Planetary Science Enabling Facilities	Not Solicited This Year	
C.5	Planetary Science Early Career Award	N/A	12/04/2025
C.6	Development and Advancement of Lunar Instrumentation	TBD	TBD
C.7	Interdisciplinary Consortia for Astrobiology Research	Not Solicited This Year	
C.8	Yearly Opportunities for Research in Planetary Defense	09/12/2025 (Step-1)	11/18/2025 (Step-2)
C.9	Analog Activities to Support Artemis Lunar Operations	Not Solicited This Year	
C.10	Lunar Mapping Program	N/A	12/03/2025
C.11	Planetary Instrument Concepts for the Advancement of Solar System Observations	Not Solicited This Year	
D.1	Astrophysics Research Program Overview	N/A	N/A
D.2	Astrophysics Data Analysis	TBD	TBD
D.3A	IXPE, NICER, and Swift General Observer	N/A	09/11/2025 (Phase-1 via ARK RPS)
D.3B	NuSTAR and Fermi General Investigator	N/A	01/29/2026 (Phase-1 via ARK RPS)
D.3C	TESS and XRISM General Observer	TBD	TBD
D.4	Theoretical and Computational Astrophysics Networks	TBD	TBD
D.5	Astrophysics Pioneers	01/23/2026 (Mandatory NOI)	03/13/2026
E.1	Biological and Physical Sciences Research Overview	N/A	N/A
E.2	Physical Sciences: Research Studies	TBD	TBD
E.3	Space Biology: Research Studies	TBD	TBD
F.1	Cross Division Research Overview	N/A	N/A
F.2	Topical Workshops, Symposiums, and Conferences	Follow link from title	
F.3	Exoplanets Research	11/23/2025 (Step-1)	01/26/2026 (Step-2)
F.4	Habitable Worlds	Not Solicited see C.2 and F.3	
F.5	Future Investigators in NASA Earth and Space Science and Technology	TBD	TBD

Special Notes about ROSES-2025

- Release was late this year
- **READ EACH SOLICITATION CAREFULLY**
- Some programs are skipped this year (e.g. ATP)
- Some programs have TBD due dates
- Some programs have been condensed or consolidated
 - E.g. Most Planetary Science programs (Appendix C) are in one omnibus solicitation
- You can always reach out to a program officer with questions

F.3 Exoplanets Research Program (XRP)

- Cross-divisional program (APD, PSD, HPD)
- IS solicited this year
 - Step-1 due date: **November 25, 2025 – Mandatory**
 - Step-2 due date: January 26, 2026
- <https://nspires.nasaprs.com/external/solicitations/summary.do?solId={2F7D763F-B1F4-2C89-27C5-B1A961209D3F}&path=&method=init>
- Questions: John.P.Wisniewski@nasa.gov



F.5 Future Investigators in NASA Earth and Space Science and Technology (FINESST)

- Funding for graduate students: Future Investigator (FI)
- Written by FI, submitted by advisor
- This program element may solicit proposals this year, but final details and dates are not yet determined (i.e., this is shown as 'TBD' in Tables 2 and 3).
- Questions: HQ-FINESST@mail.nasa.gov





Planetary Science Division ROSES Roll Out July 29 12:30 PM Eastern

On July 29, 2025, at 12:30 PM Eastern Time, NASA's Planetary Science Division (PSD) Research and Analysis (R&A) Programs will host a webinar to discuss the recently released Research Opportunities in Space and Earth Science (ROSES) relevant to the Planetary Science Community.

NASA's Science Mission Directorate (SMD) announced the release of its annual omnibus solicitation for basic and applied research, ROSES-2025 as NNH25ZDA001N on or about July 10, 2025, at

<https://solicitation.nasaprs.com/ROSES2025>. This webinar is an opportunity for the PSD to discuss program elements available for the planetary science community to propose to.

In advance of and during the webinar, questions may be submitted and upvoted on at: <https://nasa.cnf.io/sessions/ss4t/#!/dashboard>

Questions regarding this announcement may be directed to Dr. Kathleen Vander Kaaden, Director of Planetary Research Programs, at Kathleen.e.vanderkaaden@nasa.gov.



How can I learn to write a successful proposal?

- Stay tuned for Christina Richey's talk!
- Serve on a review panel
 - Grad students can be Executive Secretaries
 - If you have a PhD, you can be a full panel member

Volunteer to Serve on a NASA Peer Review Panel

Personal professional development:

- See how the whole review process works
- Learn what constitutes excellent proposals
- Network with your professional colleagues and NASA scientific staff

Institutional achievement:

- Improve at competing for NASA money
- Increase knowledge of NASA's research and technology programs

Investment in the future:

- Help select the most transformative science
- Ensure that all proposals receive a fair and competent review

All reviewers receive an honorarium from NASA

Sign up to be a panel reviewer:

- <https://science.nasa.gov/researchers/volunteer-review-panels>
- or contact a NASA program officer (for contact info, see <https://science.nasa.gov/researchers/sara/program-officers-list>)

Stay Connected with NASA

NSPIRES mailing list – information about NASA solicitations

- <https://nspires.nasaprs.com/>

PAG mailing lists: (Cosmic Origins, Exoplanet Exploration, Physics of the Cosmos) – information about NASA missions and science

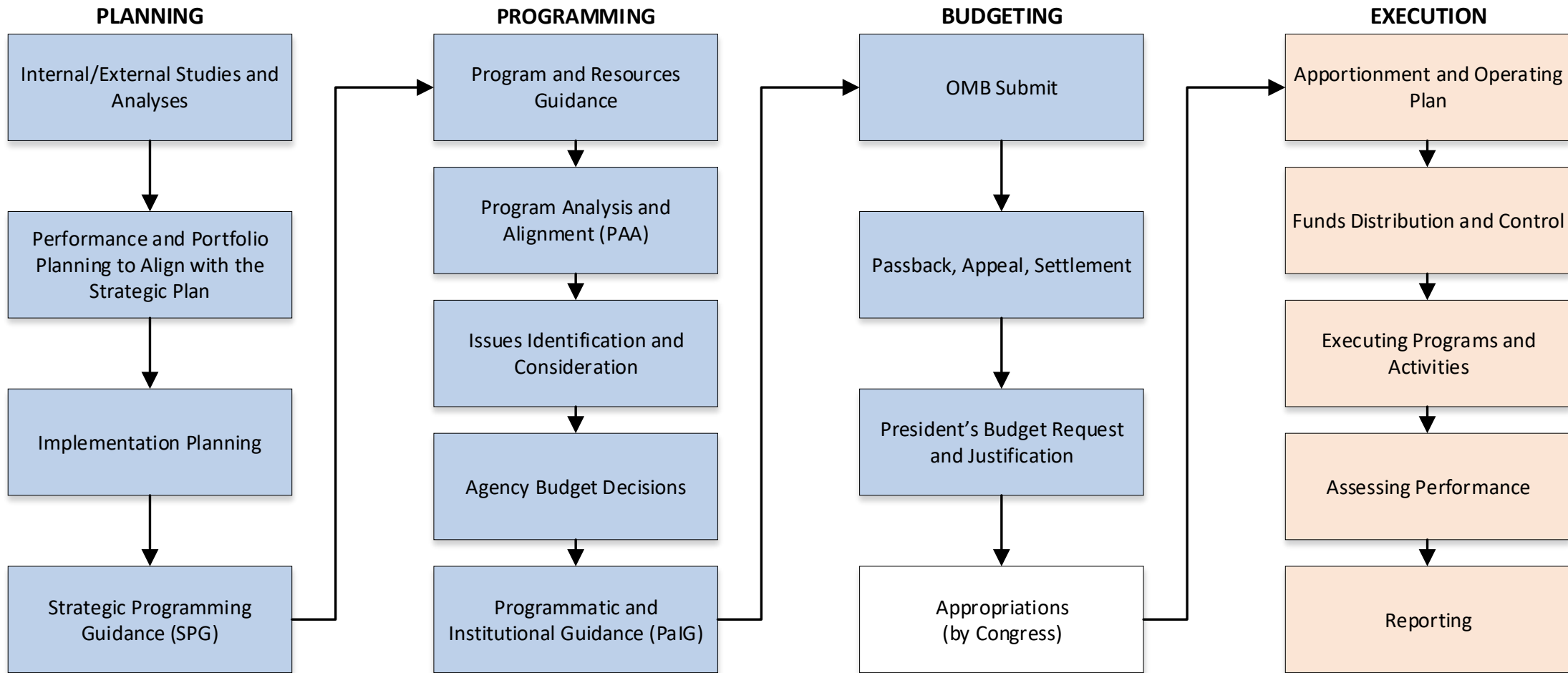
- <https://cor.gsfc.nasa.gov/cornews-mailing-list.php>
- <https://exoplanets.nasa.gov/exep/exopag/announcementList/>
- <https://pcos.gsfc.nasa.gov/pcosnews-mailing-list.php>

NASA Astrophysics Federal Advisory Committees

- NASEM Committee on Astronomy and Astrophysics (CAA)
http://sites.nationalacademies.org/bpa/bpa_048755
- Astronomy and Astrophysics Advisory Committee (AAAC)
<https://www.nsf.gov/mps/ast/aaac.jsp>

Backup Slides

Budget Management Overview



Legend:

Budget Formulation

Budget
Execution

Congressional or
Administration Action