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Science Interest Group

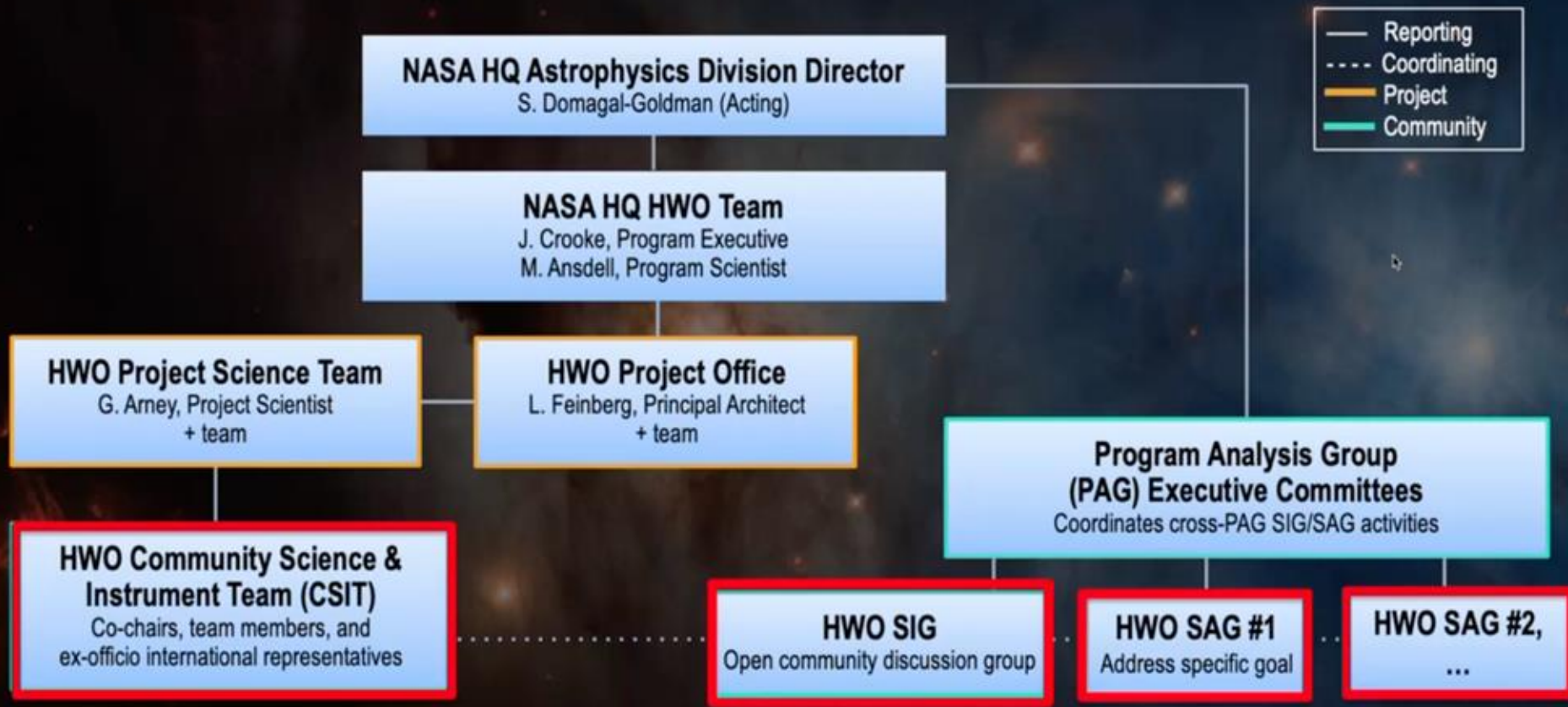
Fabio Pacucci

on behalf of:

HWO SIG Chairs:

Laura Mayorga, Joe Burchett, Jessie Christiansen, Richard Massey, Fabio Pacucci, Vivian U

HWO RELATIONS TO COMMUNITY GROUPS



SIG = Science Interest Group
SAG = Science Analysis Group

Stay involved in HWO science with the HWO Science Interest Group!

Joint activity of ExoPAG, PhysPAG & COPAG

Community forum for soliciting/coordinating analysis and input in support of HWO

Regular webinars with updates from the HWO project and community SAGs/SIGs

Join the email list at the QR code for updates

Be part of an international community supporting HWO!



Leadership Team

ExoPAG

Jessie Christiansen (IPAC/NExSci)

Laura Mayorga (JHU/APL)

COPAG

Joe Burchett (NMSU)

Vivian U (IPAC)

PhysPAG

Fabio Pacucci (CfA)

Richard Massey (Durham)

HWO SIG Website

Science Interest Group

Habitable Worlds Observatory

The Habitable Worlds Observatory SIG serves as a forum and focal point for the HWO community.

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About HWO SIG

The Search for Earth-Like Planets in Habitable Zones

HWO is a large infrared/optical/ultraviolet space telescope recommended by the National Academies' Pathways to Discovery in Astronomy and Astrophysics for the 2020s.



“Unofficial” Website

Habitable Worlds Observatory Science Interest Group (HWO SIG)

The Habitable Worlds Observatory Science Interest Group (HWO SIG) is an interdisciplinary, community-based forum coordinating analysis and communicating input in support of the Habitable Worlds Observatory across the three NASA Astrophysics Program Analysis Groups: Exoplanet Exploration, Cosmic Origins, and Physics of the Cosmos.

This page is unofficial and run by the HWO SIG leadership council. The official HWO SIG page is [here](#).

[Terms of Reference](#)

Recent SIG Activities

HWO Seminars

08 October 2025 10PT/1ET

[Recording](#)

[HWO SIG Welcome](#) - Vivian U

Update from TMPO - Bertrand Menneson

[SAG Process](#) - Karl Stapelfeldt

[SAG Highlight #1](#): UV IFU - Emily Witt

[SAG Highlight #2](#): Exozodi - John Debes

[Walk on Discussion](#) - Laura Mayorga

11 February 2026 10PT/1ET

[Recording](#)

[HWO SIG Welcome](#) - Richard Massey

[Updates from the CSIT](#) - Evgenya Shkolnik

[HWO news from AAS](#) - Laura Mayorga

[Requirements on HRI Imaging PSF for dark matter](#) - Georgios Vassilakis

[How to measure \$0.3\mu\text{s}\$ astrometry](#) - Pierre-Olivier Lagage

03 December 2025 10PT/1ET

[Recording](#)

[HWO SIG Welcome](#) - Laura Mayorga

[Update from CSIT](#) - David Charbonneau

[Planetary Defense with HWO](#) - Andy Rivkin

SAG Advertisements - Hartman, Moin

- [Multi-star Systems](#)
- [ML/AI for HWO](#)

01 April 2026 10PT/1ET

HWO SIG Welcome - Joe Burchett

Update from CSIT - Scott Gaudi

O VI in Diffuse Media - Sanch Borthakur

HWO Red Wavelength Limit - Kyle Cook

Open Astro2030 Discussion - Joe Burchett

HWO-related Groups

Group	PAG	Contacts	Group Type
OVI in diffuse media	COPAG	Sanch Borthakur	Working Group
Spatially Resolved UV Spectroscopy Science Analysis Group in Support of Habitable Worlds Observatory	COPAG	Emily Witt	SAG
Exoplanet demographics	ExoPAG	Rachel Fernandes, Kiersten Boley	SIG
Exoplanet/Solar System synergies	ExoPAG	Vikki Meadows, Kathy Mandt	SIG
Exoplanet Reflectance Spectroscopy for the Habitable Worlds Observatory	ExoPAG	Renyu Hu, Ty Robinson	SAG
Exploring the Complementary Science Value of Starshade Observations	ExoPAG	Sara Seager, Stuart Shaklan	SAG

HWO-related Groups (continued)

Group	PAG	Contacts	Group Type
The Impact of Exo-Zodiacal Dust on Exoplanet Direct Imaging Surveys	ExoPAG	John Debes, Yasuhiro Hasegawa	SAG
HWO red wavelength limit	COPAG	Roberta Paladini, Kyle Cook, Benne Holwerda	SAG
Exploring galaxies throughout the universe	COPAG	Aaron Yung	SIG
Astrophysics from the Moon	PhysPAG	Dave Pooley	Other
Planetary Defense with HWO	N/A	Andy Rivkin	Other

HWO Conference Proceedings



Astronomical Society of the Pacific Conference Series

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Title: ***HWO25 Proceedings Part I: Community Science Case
Development Documents***



Monograph: **10**

Year: **2026**

[View this Volume on ADS](#)

**Open
Access**

Editors: **Janice C. Lee, Jessica Noviello, Stephanie LaMassa, and Marc Postman**

ISBN: **978-1-58381-970-8**

eISBN: **978-1-58381-971-5**

60 Science Cases

HWO Conference Proceedings

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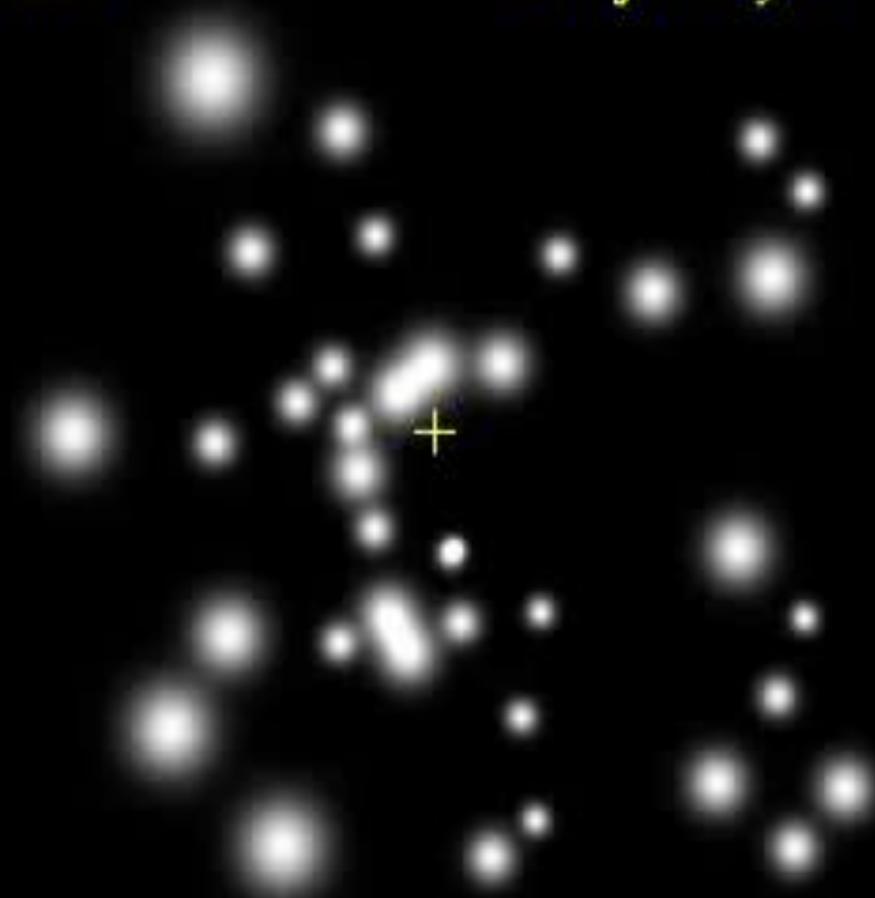


Habitable Worlds Observatory
Simulated Solar System Time-lapse
Observed from 33 light-years away
Time = 10 years, 1 second = 72 days

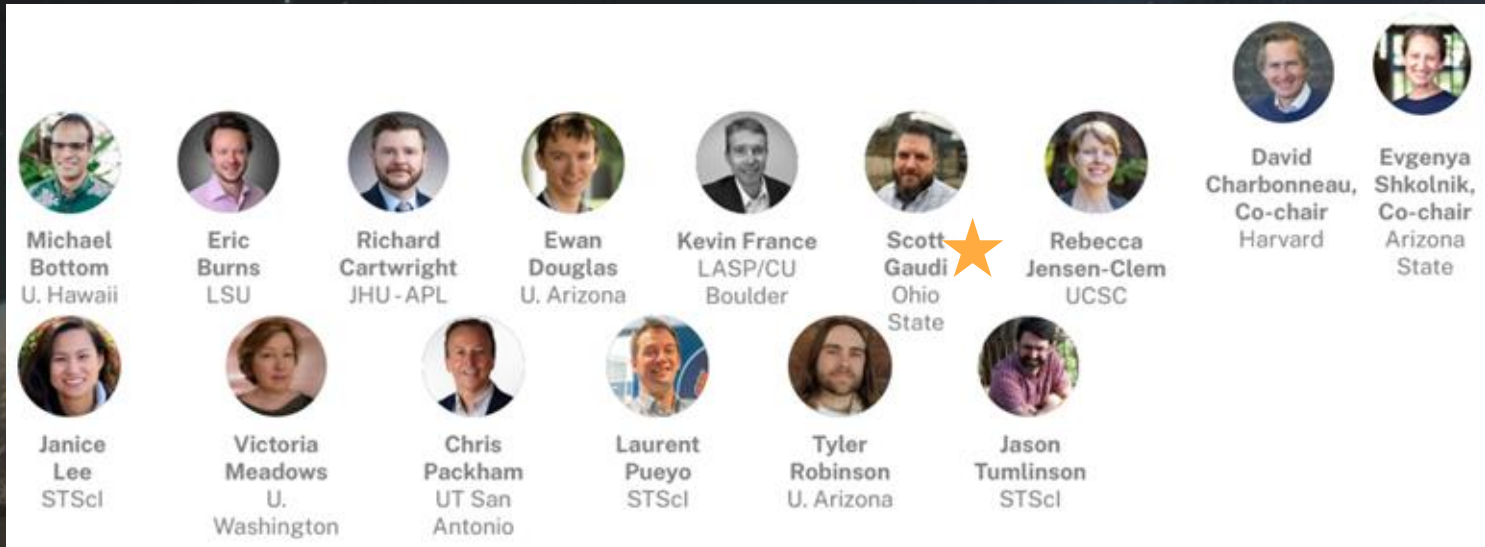
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1992

10 light days



Relation with CSIT



- Community Science & Instrument Team (CSIT) is the science community's direct link to the HWO Project Office.
- Ensures HWO's design is driven by transformative science.
- 15 US-based experts across UV/O/IR astrophysics, exoplanets, astrobiology, and instrumentation.
- The CSIT completes its work at the Mission Concept Review later this decade.

Ways to Support HWO

- Further study what is interesting and exciting... and explore!
 - More detailed analyses following SCDDs. Focus on “enabling” science.
 - Advocacy for science cases.
 - Identifying important science not covered by SCDDs.
- Technology, hardware, and programmatic topics are valid SAG topics! Not only science!
- Synergistic activities:
 - Supporting observations, e.g., large time baselines.
 - Big computations that will take time to complete.
 - Laboratory astrophysics.