

National Aeronautics and
Space Administration

Habitable Worlds Observatory AAS245 Special Session

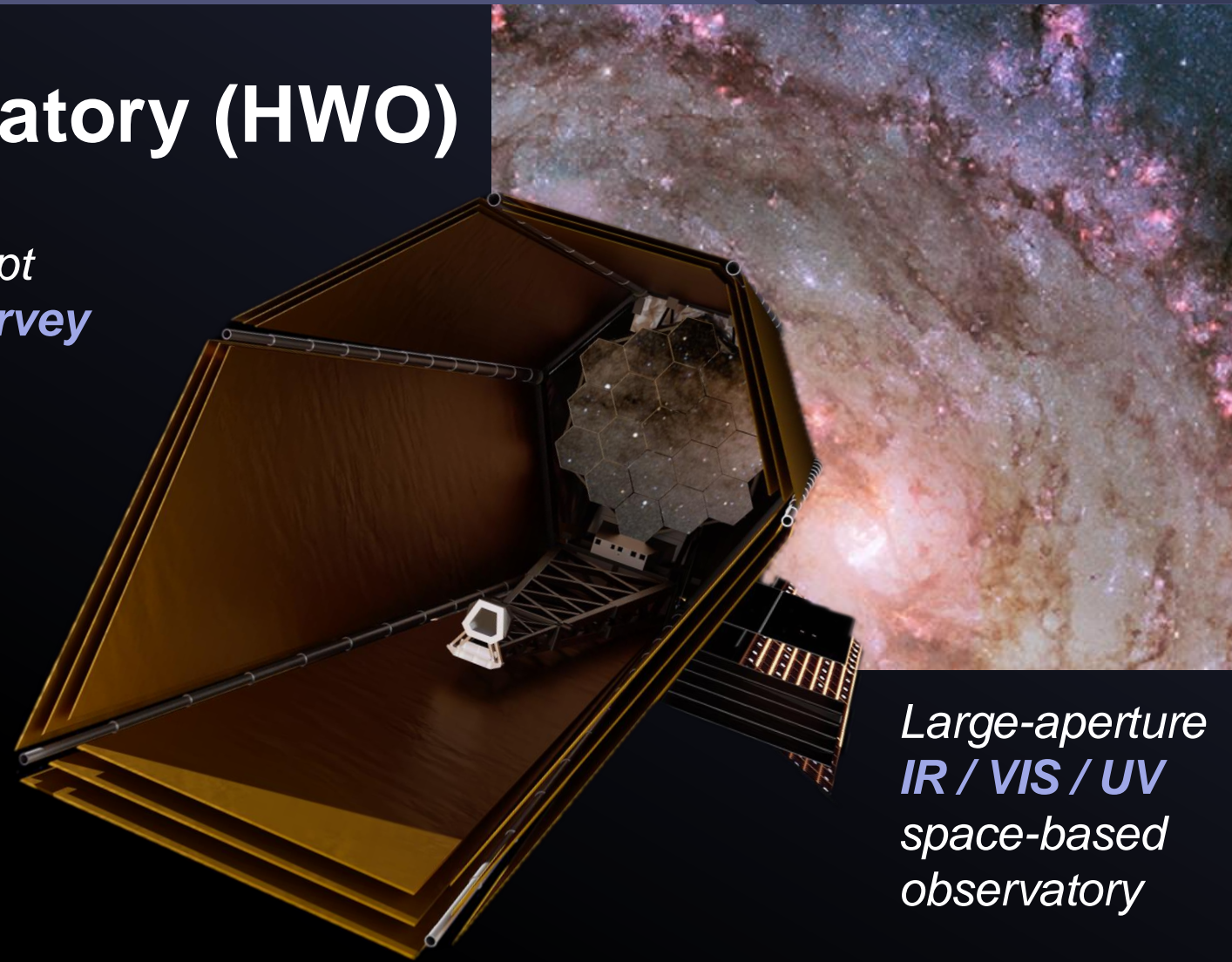
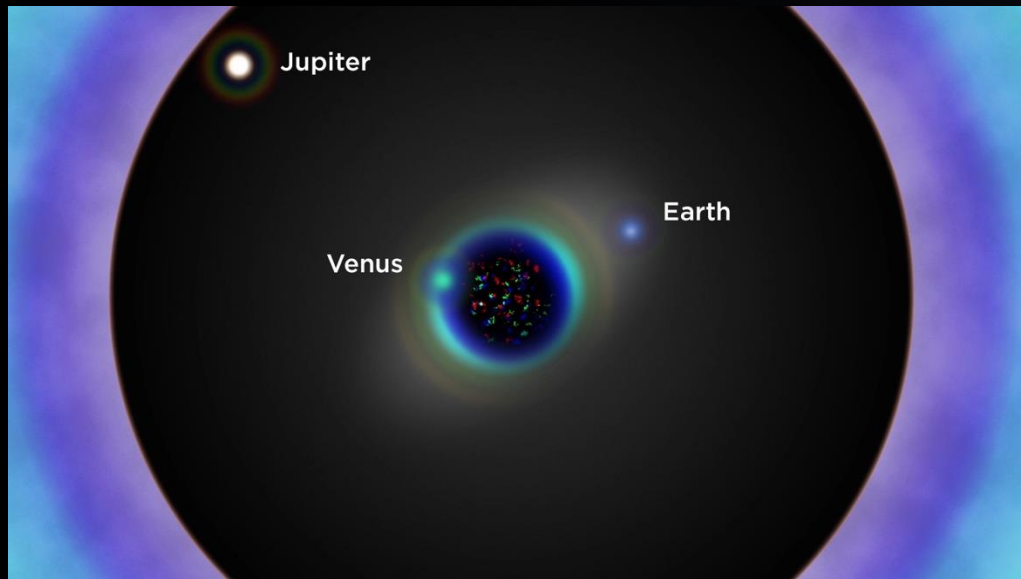
Megan Ansdell

HWO Program Scientist, NASA HQ



Habitable Worlds Observatory (HWO)

NASA astrophysics flagship mission concept recommended by the Astro2020 Decadal Survey



*Large-aperture
IR / VIS / UV
space-based
observatory*

First space telescope designed to search for signs of life on planets outside our solar system & will perform transformative astrophysics



Today's HWO Special Session Agenda

HWO Technology Maturation Project Office Update

Lee Feinberg (GSFC), HWO Principal Architect

The Science Potential of HWO

Giada Arney (GSFC), HWO Project Scientist (Acting)

Strategy for HWO Concept Maturation

*John Ziemer (JPL), HWO Pre-Formulation Architect (ex-officio)
Lee Feinberg & Aki Roberge (GSFC)*

From Science To Engineering

Aki Roberge (GSFC), HWO Pre-Formulation Scientist (Acting)

Technology Maturation Roadmap

Matthew Bolcar (GSFC), HWO Chief Technologist

Roman CGI and the HWO Coronagraph

*Bertrand Mennesson (JPL), HWO Pre-Formulation Scientist (ex-officio)
Michael McElwain (GSFC), HWO Deputy Project Scientist (Acting)*

Open Q&A

★ **Supports HWO TMPO to reach baseline mission concept design**

Nominally end-of-decade

★ **Dear Colleague Letter out now!**

Self-nominations due March 17



**HWO Community
Science & Instrument Team**

CSIT

★ **~20 community members**

*Seeking diverse expertise in UV/O/IR
astro, exoplanets, astrobiology, lab astro,
instrumentation, technology & more*

★ **Selection announcement
expected in early summer**

*Ahead of inaugural HWO25
community conference in DC*

HWO Community Science & Instrument Team (CSIT)



★ CSIT Activities

- *Execute scientific studies to support baseline concept definition*
- *Analyze potential science instruments*
- *Provide input to HWO TMPO's technology development plans*
- *Serve as ambassadors for broader sci/tech communities*

★ CSIT Selection Process

- *Self-nomination packages due March 17, 2025*
- *Independent reviewers evaluate based on specified criteria*
- *Selections announcement planned for summer 2025*

★ CSIT Timeline

- *Activities begin summer 2025*
- *Continue until Mission Concept Review (nominally end of decade)*
- *Members may be rotated/added*

HWO @ [the rest of] AAS245

Plenary Lecture “Are We Alone?” – Giada Arney

Wednesday, 11:40am–12:30pm @ Potomac Ballroom AB

HWO at NASA Booth – “SME High-top Tables”

Wednesday, 3:00pm–5:00pm @ Price George’s Exhibit Hall

HWO Splinter Session – “Current Status & Opportunities for Engagement”

Thursday, 9:00am–12:45pm @ Potomac Ballroom C

Oral Session #453 – “Exoplanet Direct Imaging: HWO”

Thursday, 2:00pm–3:30pm @ National Harbor 13