

Contextualizing Exoplanet Science in the Roman Era



Sagan Summer Workshop

19 July 2026



Jet Propulsion Laboratory
California Institute of Technology

Government sponsorship acknowledged.

Contextualizing Exoplanet Science in the Roman Era



Roman lead (80-50 BCE) for physics experiments

Used in the Cryogenic Underground Observatory for Rare Events (CUORE) in Gran Sasso, Italy.

Courtesy: Il Nuovo Saggiatore/Società Italiana di Fisica di Bologna and INFN.



Nancy Grace Roman (1925-2018) + Hubble Space Telescope





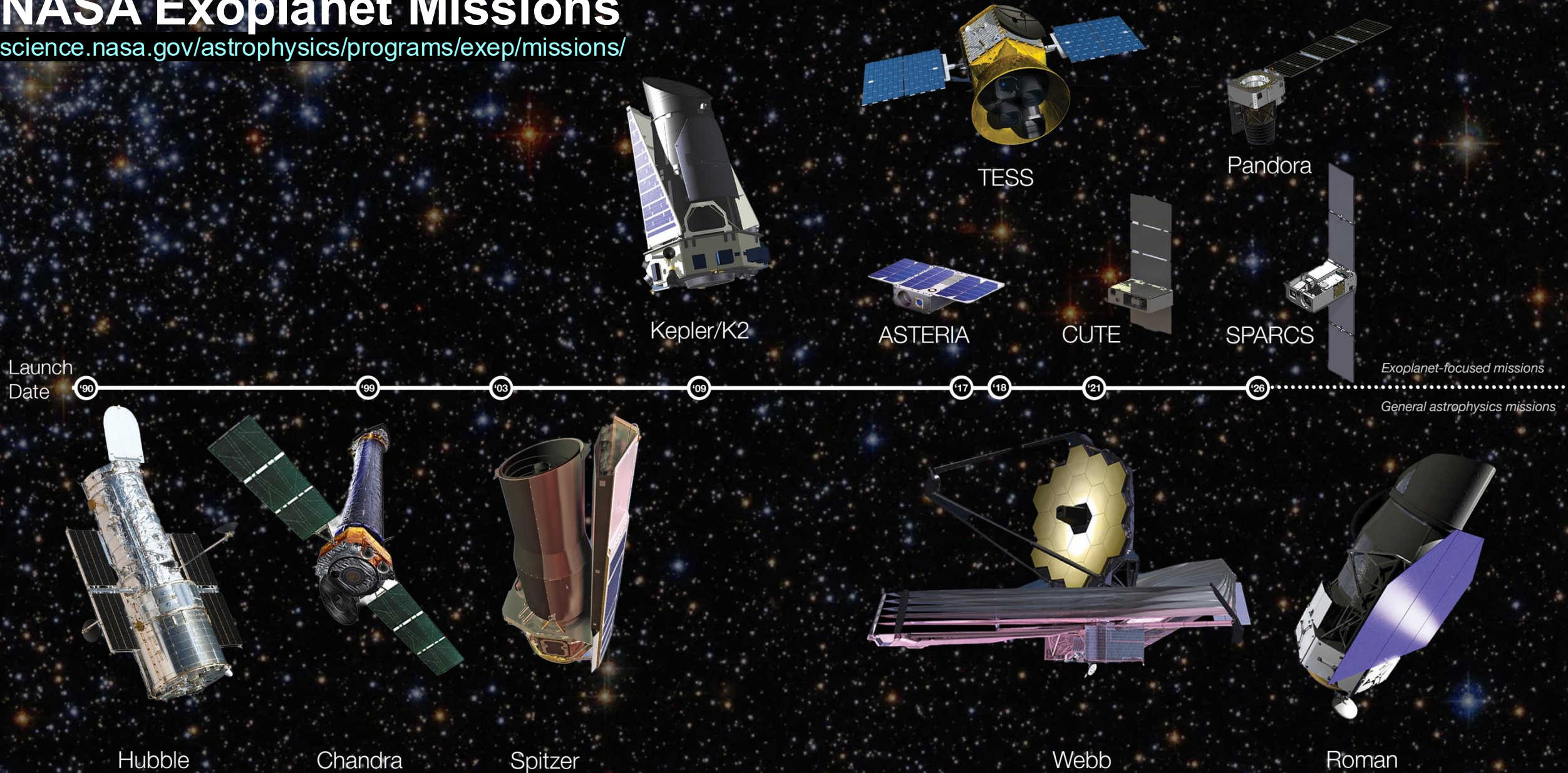
Exoplanet Missions

- ¹ NASA/ESA Partnership
- ² NASA/ESA/CSA Partnership
- ³ CNES/ESA
- ⁴ ESA/Swiss Space Office
- ⁵ NSF Partnership (NN-EXPLORE)



NASA Exoplanet Missions

science.nasa.gov/astrophysics/programs/exep/missions/



Launching ≥ 30 August 2026

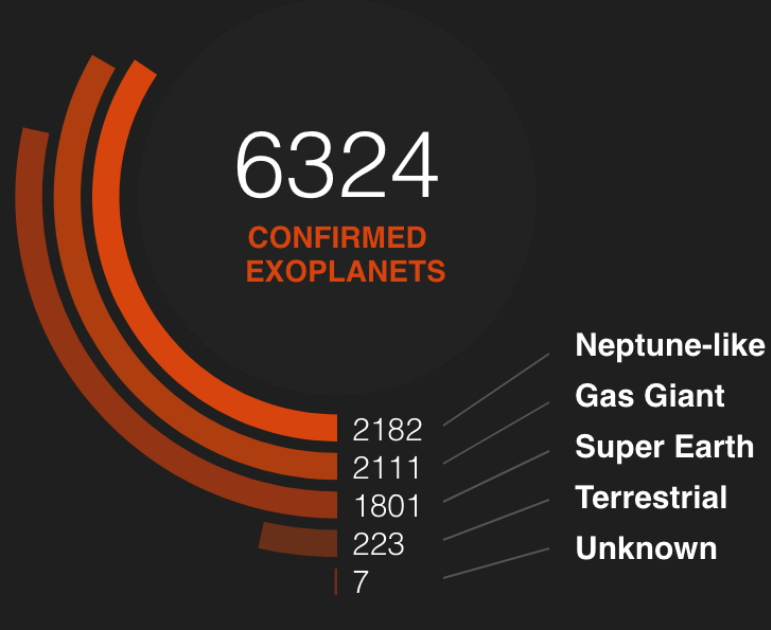
ROMAN SPACE TELESCOPE

AND THE JOURNEY TO SPACE

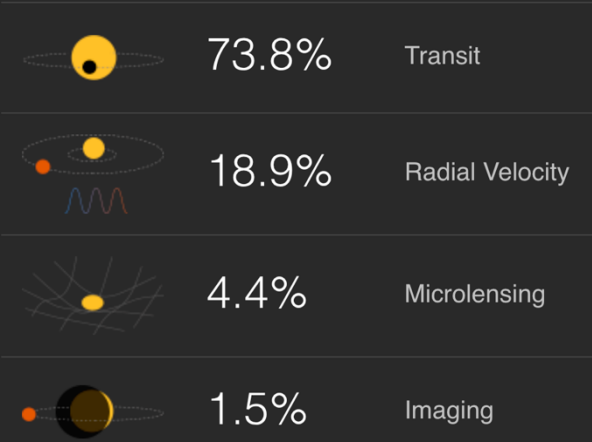
Exoplanet Discoveries

as of 16 July 2026

science.nasa.gov/exoplanets/discoveries-dashboard/



By Method

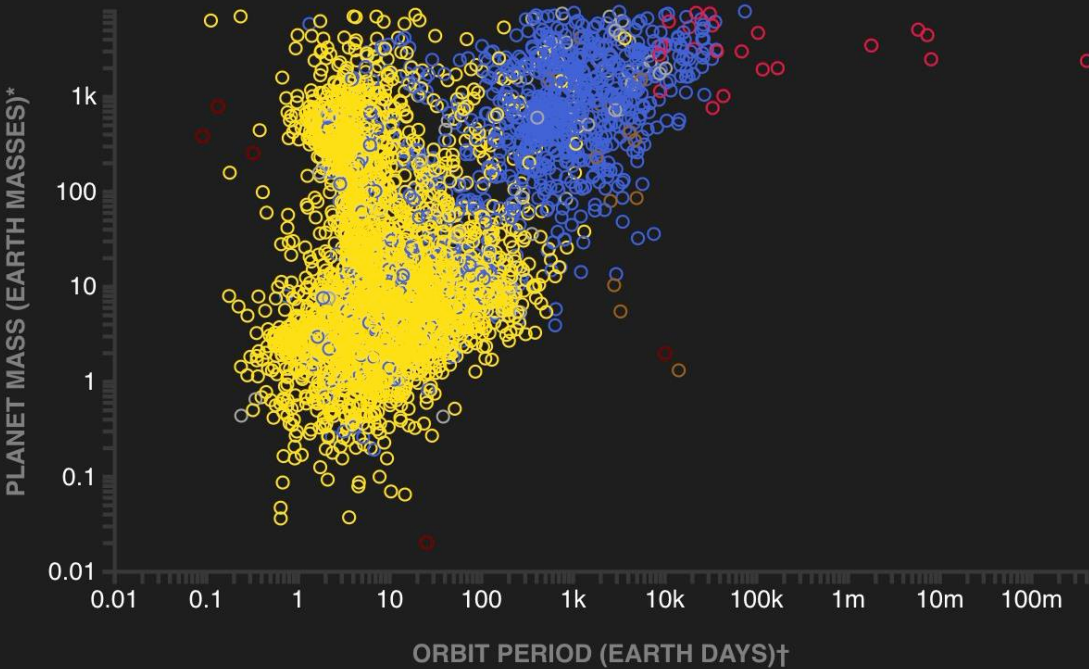


0.63% Transit Timing Variations, 0.27% Eclipse Timing Variations, 0.14% Orbital Brightness Modulation, 0.13% Pulsar Timing, 0.09% Astrometry, 0.03% Pulsation Timing Variations, 0.02% Disk Kinematics

Exoplanet Census

For planets with both measured or estimated orbital period and mass

- Transit (4641)
- Radial Velocity (1184)
- Microlensing (12)
- Imaging (24)
- Pulsar Timing (7)
- Other (69)

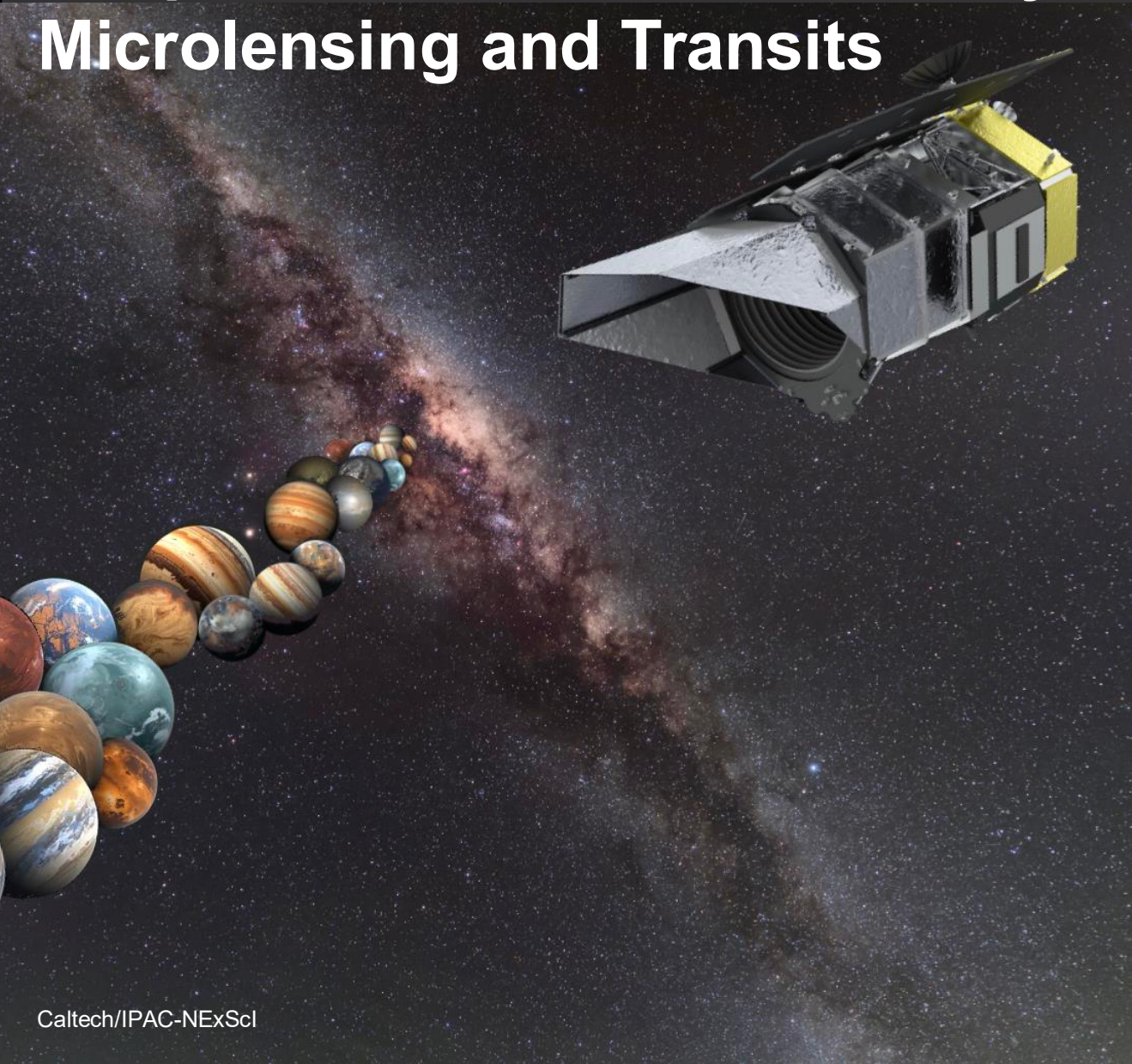


YEAR 2026 | DISCOVERIES‡ 6324

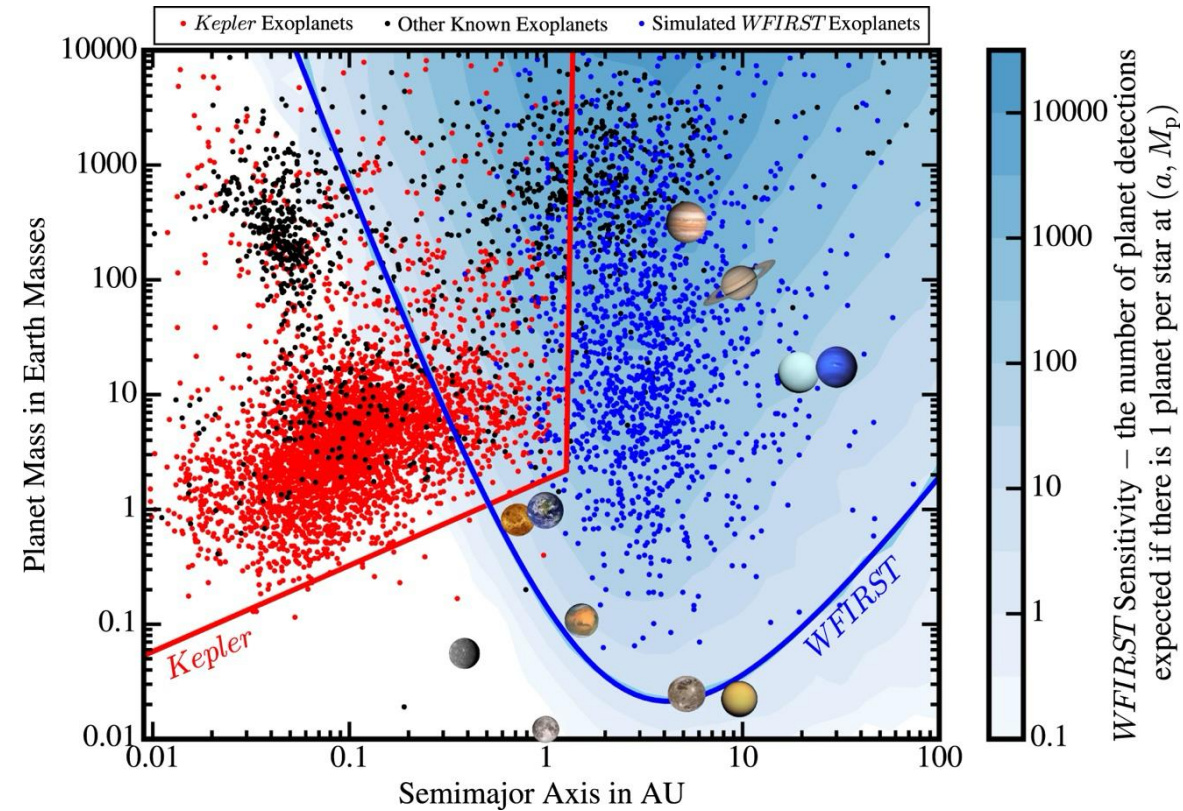
k=thousand,m=million
*Masses and orbital periods are estimated for some planets based on other parameters
†Orbit period is equal to one trip around the star
‡Does not include discoveries where mass or orbit period is unknown or mass in Jupiters is > 25

2026 Sagan Summer Workshop

Exoplanets with Roman Surveys: Microlensing and Transits



Get ready!



Predictions of the WFIRST Microlensing Survey. I. Bound Planet Detection Rates
(Penny et al., 2019)



2026 PROTO Sagan Summer Workshop:

Contextualizing Exoplanet Science in the Roman Era

12:45pm

The Impact of Kepler

1:30pm

**Cosmic Co-Discovery with AI:
Where to Start?**

2:30pm – Break

3pm

Exploring the Dark Universe with Roman

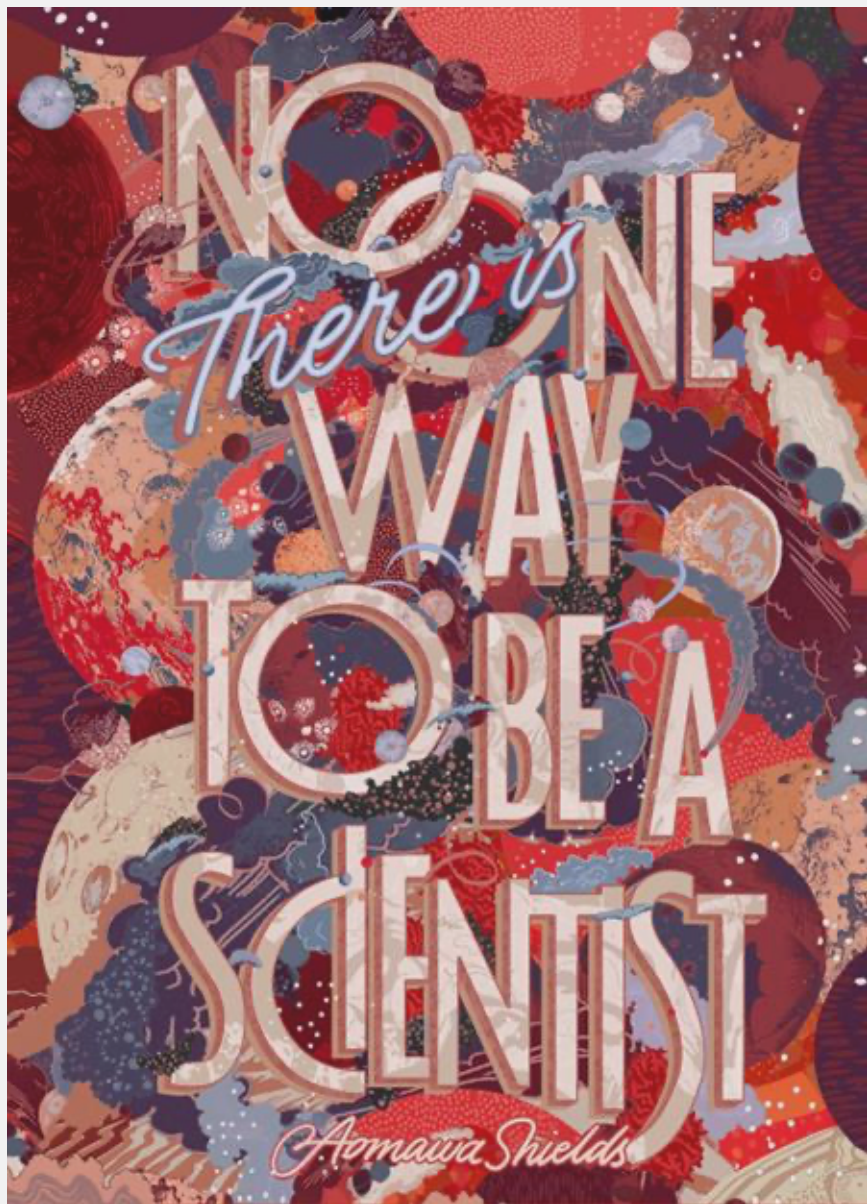
3:35pm

The Origins of Exoplanets with PRIMA

4:30pm

Welcome Gathering





assets.science.nasa.gov/content/dam/science/astro/programs/exep/images/Aomawa_Postcard_Digital.pdf

From Nancy Grace Roman:

“My career was quite unusual, so my main advice to someone interested in a career similar to my own is to remain open to change and new opportunities. I like to tell students that the jobs I took after my Ph.D. were not in existence only a few years before. New opportunities can open up for you in this ever-changing field.”



Anjali



Jo



Klaus



David



Jason



Alison

