



NN-EXPLORE Update

for ExoPAG 23

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NN-EXPLORE is the joint NASA-NSF Exoplanet Observational Research program.



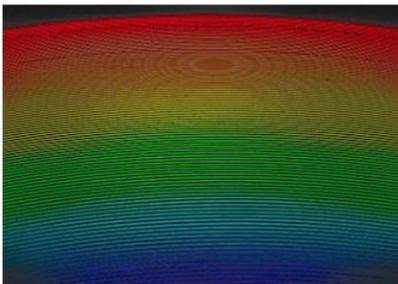
WIYN/NEID and Guest Observing (GO)

The NEID spectrograph is being commissioned on the 3.5-meter WIYN telescope on Kitt Peak, Arizona with opportunities for guest observing on WIYN.



Southern RV Observing Opportunities

Radial velocity observing time in the southern hemisphere is available for US institutions on SMARTS/Chiron, AAT/Veloce and MINERVA-Australis.



NASA-NSF EPRV Initiative

NASA is pursuing a new Initiative in Extreme Precision Radial Velocity (EPRV)

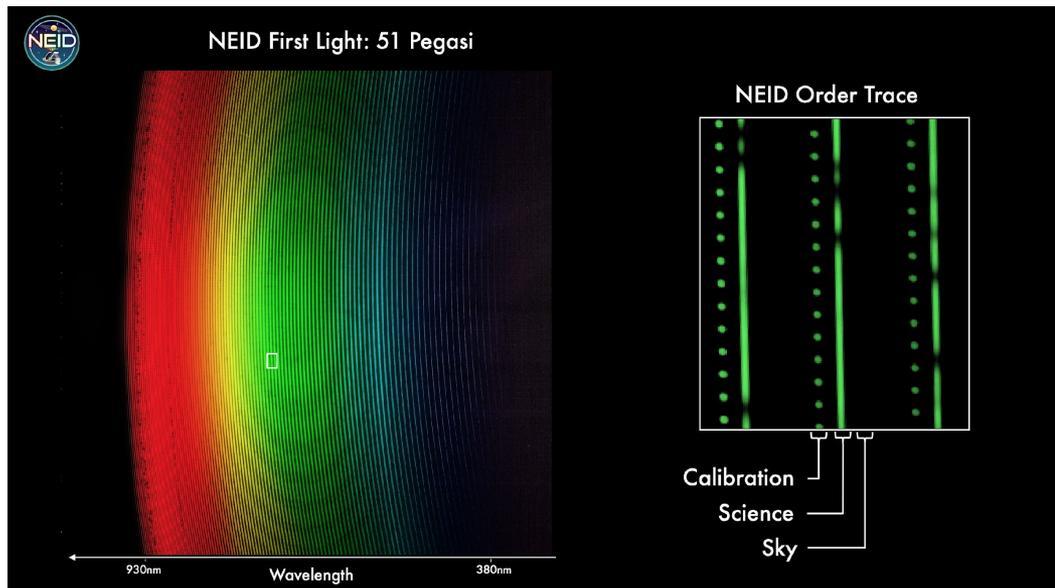
More information: <https://exoplanets.nasa.gov/exep/NNExplore/>

NEID Status



ExoPlanet Exploration Program

- NEID Instrument and Port Adapter commissioning delayed by the pandemic, but resumed 2020-11-30.
- Shared-risk science began 2020-12-11.
- Hours of solar data collected daily, soon to be regularly delivered to the NExSci community archive.
- The Operational Readiness Review (ORR) scheduled for 2021-03-30.



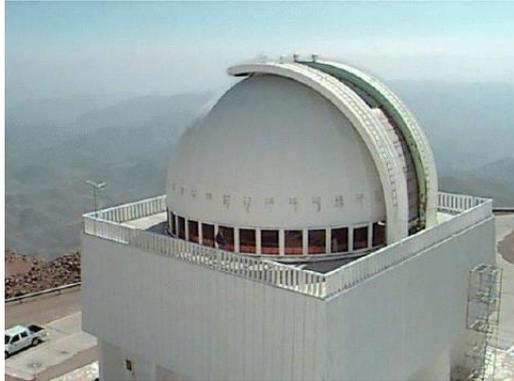
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Southern Radial Velocity



ExoPlanet Exploration Program

NASA has time available on southern hemisphere observatories for US astronomers.



SMARTS/Chiron



AAT/Veloce



MINERVA-Australis

Facility	2019A	2019B	2020A	2020B	2021A	2021B	2022A	2022B	2023A
SMARTS/Chiron	392 hrs	407 hrs	80 hours	280 hrs	300 hrs	300 hrs			
AAT/Veloce		5 nights	5 nights			7 nights*	8 nights*	7 nights*	8 nights*
MINERVA-Australis				300 hrs	300 hrs	300 hrs	300 hrs	300 hrs	300 hrs

*Contingent on pipeline

For proposal information: <http://ast.noao.edu/observing/proposal-info>

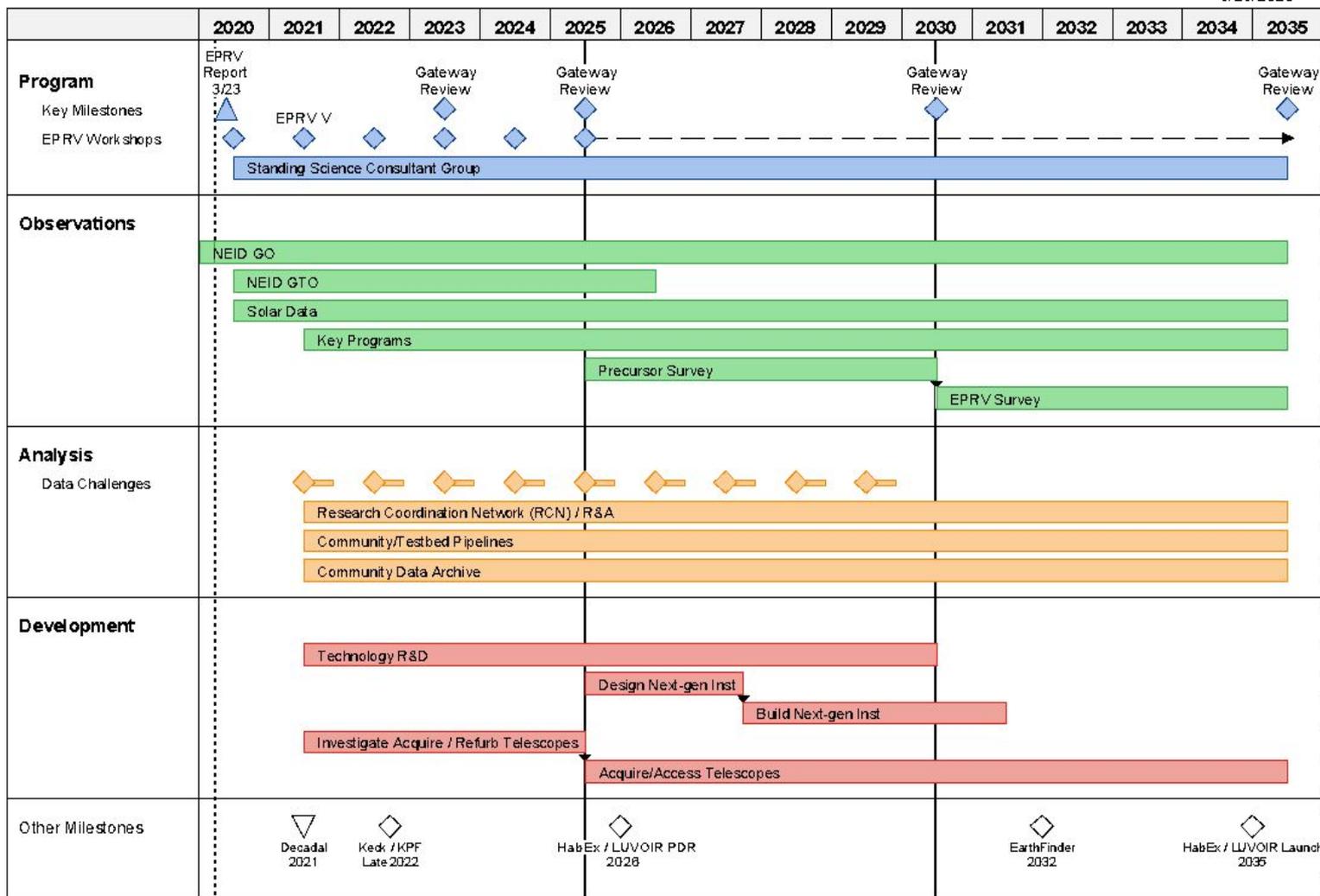
- National Academies Exoplanet Science Strategy:
 - "NASA and NSF should establish a strategic initiative in extremely precise radial velocities (EPRVs) to develop methods and facilities for measuring the masses of temperate terrestrial planets orbiting Sun-like stars."
- Formed an EPRV working group of international experts.
 - Eight sub-groups (Science, Error Budget, Instrumentation, Stellar Variability, Strategies, Analytics, Resource Evaluation and Tellurics)
 - Three face-to-face workshops (St. Louis, New York, Washington)
 - Dozens of teleconferences
- Developed an EPRV Initiative recommended plan and presented it to NASA and NSF on 2020-03-24.
 - See: https://exoplanets.nasa.gov/internal_resources/1556/

EPRV Initiative Notional Plan



ExoPlanet Exploration Program

3/23/2020



EPRV Initiative – First Moves



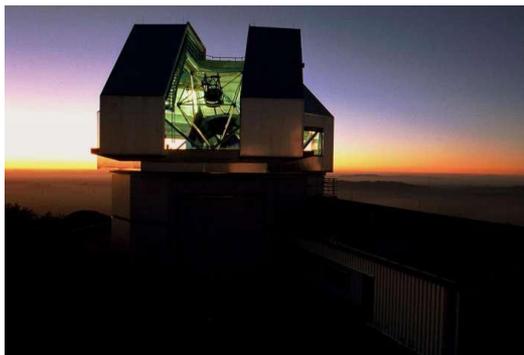
ExoPlanet Exploration Program

- EPRV ROSES Solicitation D.17
 - 2-year proposals
 - \$1.75M available
 - Step-1 proposals submitted; Step-2 proposals due 2021-01-28
<https://nspires.nasaprs.com/external/solicitations/summary/init.do?sollid={8BEF2D63-6E33-C28A-B68B-8EF929B90D74}&path=open>
- PRV data in the NExSci community archive.
 - NEID solar data collected daily and released through the NExSci community archive.
 - NEID standard stars to be released starting after ORR (2021-03-30).
 - EXPRES solar data expected in FY2022.
- EPRV Research Coordination Network (RCN)
 - To be initiated with the first EPRV solicitation awards (Spring 2021).
- Following ASTRO2020 release, will be requesting augmented support (over-guideline funding request) from NASA.

NASA High-Resolution Speckle Interferometric Imaging Program



ExoPlanet Exploration Program



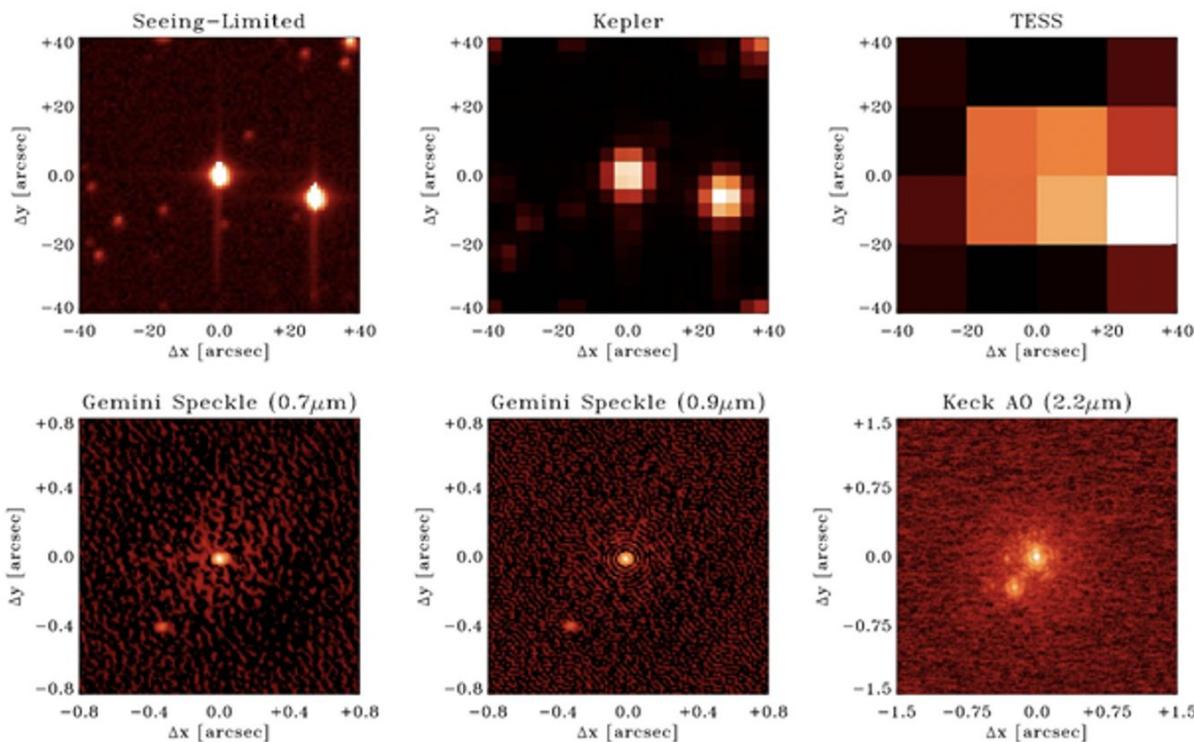
WIYN/NESSI



Gemini-North/Alopeke



Gemini-South/Zorro



S. B. Howell, et. al., submitted.

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