



Updates from the NASA Exoplanet Science Institute

Jessie Christiansen

Caltech/IPAC

ExoPAG 33 – January 3rd 2026



NExSci: NASA's ExEP Science Center

- Support the scientific community in their use of NASA missions to explore questions about the formation and evolution of planetary systems
- NExSci is the community-focused science center of NASA's Exoplanet Exploration Program
- Located on Caltech campus as part of IPAC





NExSci leadership changes

Chas Beichman has stepped down as NExSci Executive Director; David Ciardi is serving as Acting Executive Director



Aurora Kesseli and Meca Lynn are the new NASA Exoplanet Archive Deputy Science Lead and Deputy Engineering Lead



Tiffany Meshkat is now the Keck Observatory Archive Project Scientist



2025 Sagan Summer Workshop

Silver Jubilee – Exoplanet Demographics

- July 21-25, 2025
- How techniques from RV and transits to imaging, astrometry, and microlensing contribute to our understanding of exoplanet demographics
- Fully hybrid: 1611 total registrations (1313 remote and 298 in person)
- Video and PDFs of the talks available online
- Hands-on session material available online

<https://nexsci.caltech.edu/workshop/2025/>



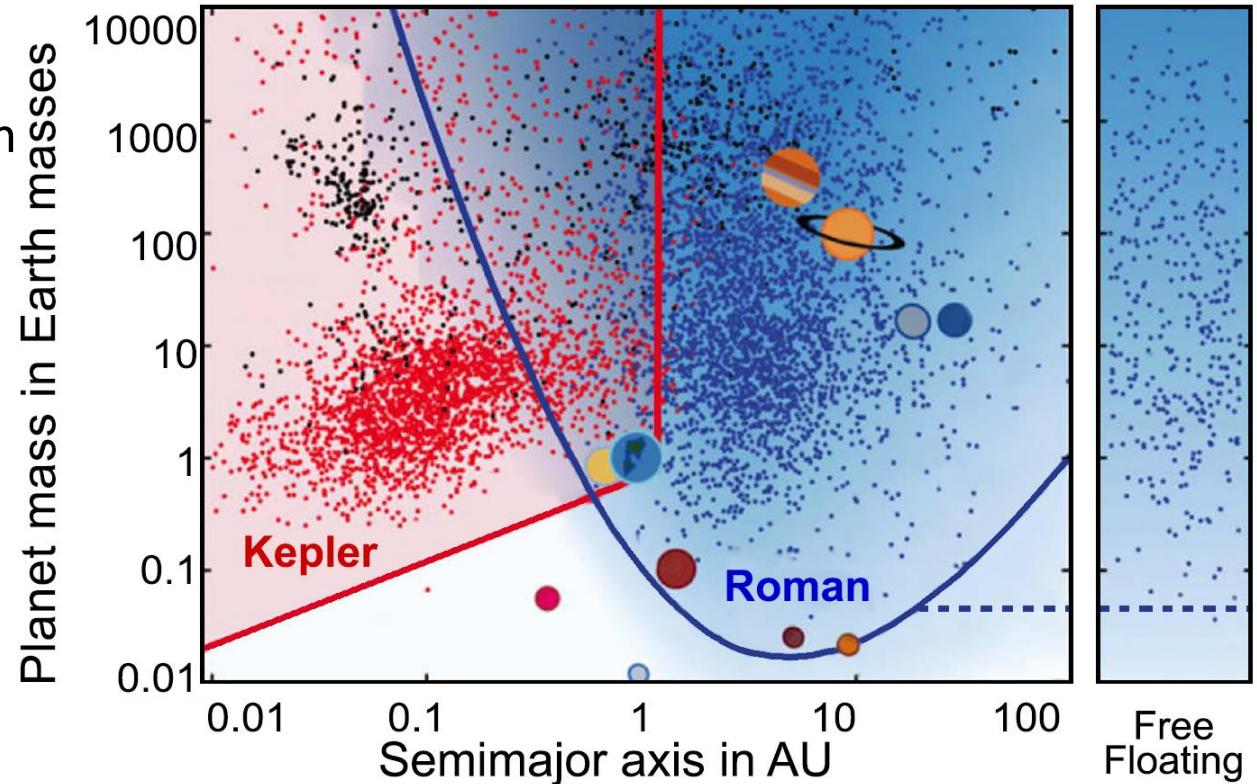
2026 Sagan Summer Workshop

Exoplanets with Roman Surveys: Microlensing and Transits – July 20-24, 2026

Important dates:

- **February 2:** Registration and travel support application sites available (no registration fees!)
- **March 5:** Deadline for travel support applications and recommendation letters
- **April 6:** Travel support decisions announced via email
- **May 20:** Deadline for NASA and JPL employees to forecast their attendance
- **Late June:** Deadline for Pasadena Hotel room reservations

<https://nexsci.caltech.edu/workshop/2026/>



Community Observing Resources

Community access to observing resources for exoplanets and more

Keck

- Supports strategic programs from all of astrophysics, solar system
- All instruments, both telescopes

NN-Explore

- WIYN
 - NEID (PRV and daily solar data);
<https://neid.ipac.caltech.edu/>
 - NESSI (HRI); WHIRC (NIR imaging/time series); HYRDRA (MOS)
- Gemini-North/South
 - 'Alopeke (North) and Zorro (South)
 - High resolution imaging speckle cameras

https://nexsci.caltech.edu/tools/obs_res.shtml





NASA Keck Time

2026B Proposals Due to NExSci March 12

- Supports all astrophysics and planetary science
- Keck Strategic Mission Support and HWO technology/precursor science proposals also solicited
- DAPR-compliant evaluations
- <https://nexsci.caltech.edu/missions/KSA/>



Joint JWST-NASA Keck Proposal Opportunity in Cycle 5

- Up to 10-15 nights could be allocated by JWST TAC (2026B and 2027A)
- Data from both observatories are required to meet the science goals
- <https://nexsci.caltech.edu/missions/KeckSolicitation/jwst-keck.shtml>

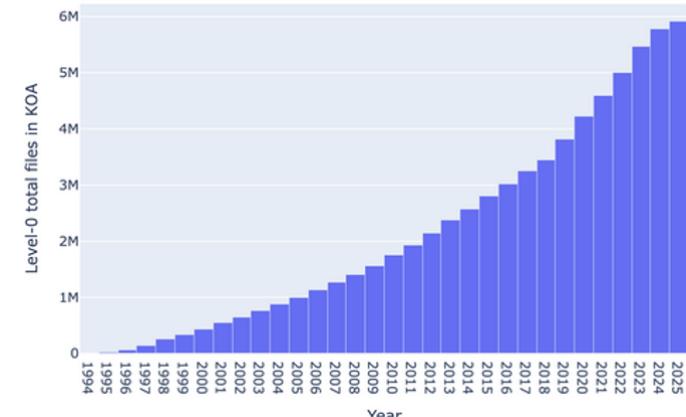
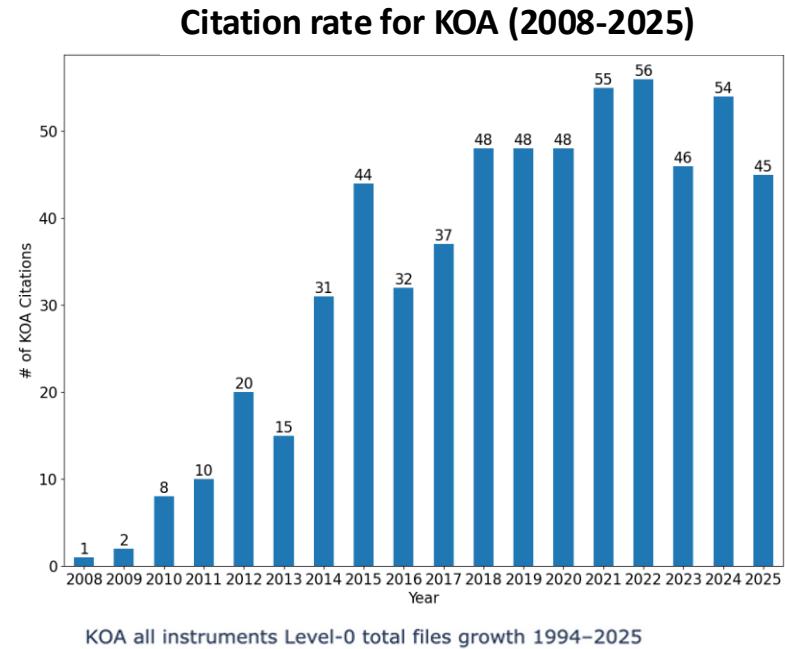


Keck Observatory Archive

- KOA ingests raw data from all Observatory instruments, quick look data from 5 instruments, science-ready data from 8 instruments
 - Pipeline-processed data from KPF and NIRES released by instrument teams
- Contributed data set [Development of the WFIRST Exoplanet Mass Measurement Method](#) (PI. D. Bennett)
- Peer reviewed papers citing KOA represent ~20% of the Observatory's science output
- DEIMOS slit mask tables (when available) are included in the Raw overview page and included with the Level 0 packaging
- Beta release of the [Data Discovery Service](#) and an associated Jupyter notebook, which offer queries of the entire archive in seconds
- Completed automation of user accounts at WMKO at and NExSci
- Preparing for ingestion of NIRC2 polarimetry data and SCALES data
- 115 NASA PIs have been notified about possible extensions since April 2, 2025; 4 total extensions approved

<https://koa.ipac.caltech.edu>

KOA is a collaboration between NExSci and the W. M. Keck Observatory



NEID Archive; LOST solar data

The **NEID Archive** contains L0-L2 data, including:

~25,000 stellar RVs

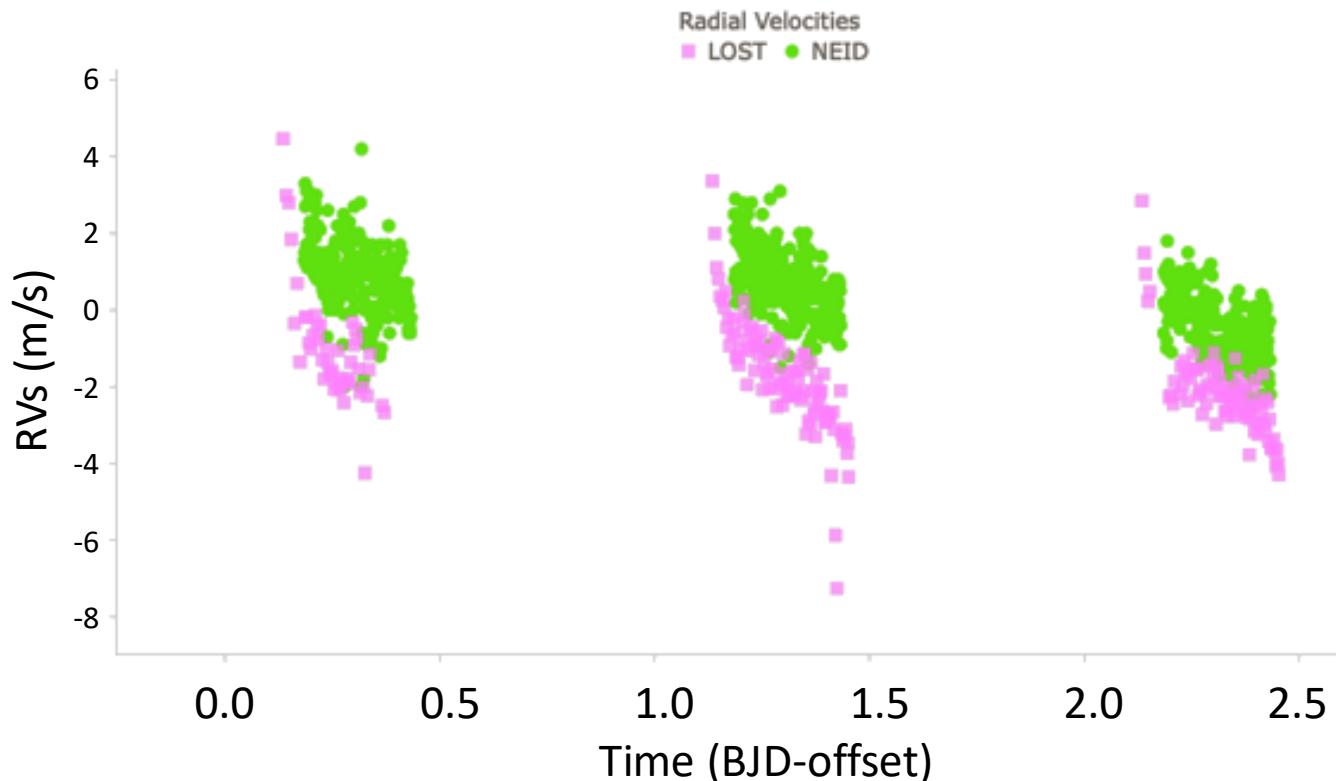
~286,000 solar RVs

<https://neid.ipac.caltech.edu/search.php>

Coming soon!

Lowell Observatory Solar Telescope
(solar feed to the EXPRES spectrograph
on the Lowell Discovery Telescope)
data

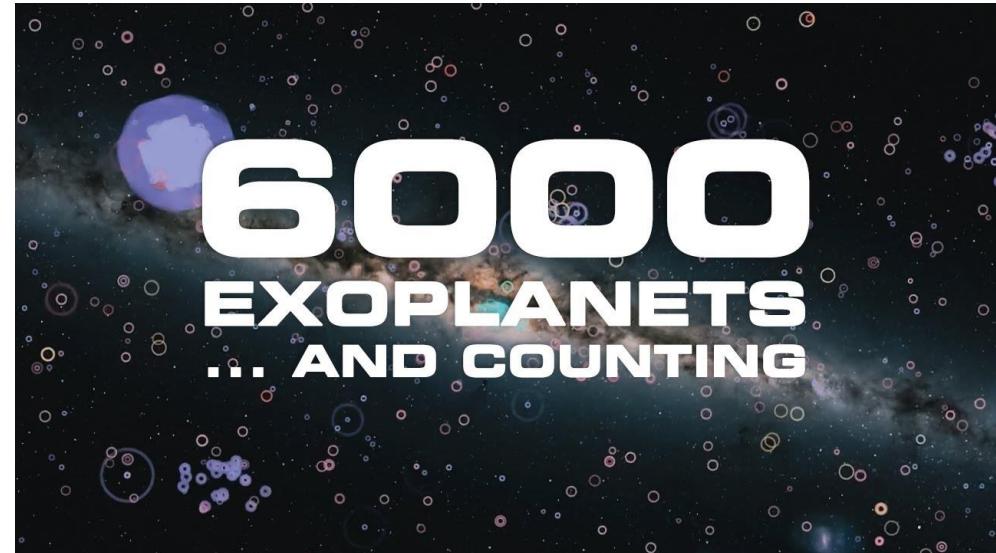
6500 solar RVs in hand, interface to be
released soon





NASA Exoplanet Archive

- Passed 6,000 confirmed exoplanets and 1,000 atmospheric spectra!
- New contributed datasets: ROME/REA Microlensing Survey of 8 million light curves from LCO, and the FDL INARA dataset of 3 million synthetic spectra of rocky planets
- Updated overview pages: expanded bibliographies, discovery data, and interactive functionality
- Preparing for Pandora! Launching early January, the NEA is the mission archive, and will host the Level 1-3 data products





Published Data Upload service

- NASA Exoplanet Archive now provides templates for users to upload published, peer-reviewed stellar and planet parameters to the archive for review
- Goal of improving accuracy and efficiency of ingesting data into the archive
- Support from AAS Journals for providing template/recommendations for use by authors
- Priority will be given to parameters for new planets; updated parameters for previous planets assessed case by case

NASA EXOPLANET ARCHIVE
NASA EXOPLANET SCIENCE INSTITUTE

Home About Us Data Tools Support Login

Upload Stellar and Planetary Parameters

On this page, you may submit a data file that adheres to the format in the template provided below to facilitate getting your accepted, peer-reviewed stellar and planetary parameters reviewed for addition to the NASA Exoplanet Archive quickly and accurately.

Currently, the template can be used to submit stellar and planetary data for any of the following types of planets:

- Newly discovered transiting and/or radial velocity planets.
- Previously announced transiting and/or radial velocity planets (i.e., those *currently in the NASA Exoplanet Archive*).

Priority will be given to newly discovered transiting and/or radial velocity planets. Please review the [first question in our FAQ](#) that provides the criteria for determining when parameters for previously announced transiting and radial velocity planets are added to the archive.

PREAMBLE

To make sure everything goes smoothly, your # NASA Exoplanet Archive template for reporting planet parameters for confirmed or unconfirmed planets detected by transit and/or radial velocity

All submissions are reviewed by archive staff. # Template Version 1.0 2025-09-09
This template was prepared by: [e.g. EXOFASTv2, allesfitter v1.2.9]

A staff member will respond within one business day.

NOTES:
Download the template.

Submission Requirements

- Use the `nasa_exoplanet_archive_param` # * indicates a required row; other rows can be removed or commented out as necessary accepted.
- You must have and be logged into a NASA account. # Each file represents one gravitationally-bound system (which can include multiple stars and planets).
- For consideration, the parameters must list stars and planets. # A paper must be included in the form below. # Each section has example rows (commented out) for guidance; they can be removed or commented out.
- The object (star and planet) names in the table must be left commented out. # All parameters under a 'st_name' or 'pl_name' row are considered to belong to the same object.
- Submit one file per gravitationally bound system. # Users are expected to take note of the units anticipated by this template.
- All three checkboxes must be checked if the system has more than one star, copy and paste the stellar parameters section multiple times, # just be sure to set the `host_star_flag` to 1 for the star/s that host the planets (two stars can have `host_star_flag` = 1 for circumbinary planets)

Login Required
Please [log in](#) to submit this form.

NAMING CONVENTIONS
Names for planets provided in this template must adhere to the accepted catalogs in the NASA Exoplanet Archive (see link below)
Accepted Catalogs: <https://exoplanetarchive.ipac.caltech.edu/applications/Inventory/search.html>
Planets requiring new catalog names to be defined (i.e. the first confirmed planet from a new survey) cannot be submitted using this template

PARAMETER DEFINITIONS
Uncertainties are assumed to be 1-sigma uncertainties
No specific planet parameter is required but at least one planet parameter must be specified
Planet parameters must be published in an accepted and refereed journal to be submitted with this template
Values, uncertainties, and precisions provided in this file MUST match the values, uncertainties, and precisions published in the accepted paper



ExoFOP

ExoFOP provides the exoplanet community with a venue for coordinating and sharing follow-up and precursor data for exoplanets, their host stars, and stars that might eventually be targets for future planet searches

- Over one million files uploaded! (1,054,793!)
- Pandora prime mission target list now added (alongside previous HWO and Ariel lists)
- Gaia DR3 IDs added to all targets
- New functionality allows initiation/update of planet candidates from any project, not just Kepler/K2/TESS

STARS

Go to Target: [?](#)

Find TIC IDs
Search the TESS Candidate Target List
Download the TESS Candidate Target List
Follow your favorite targets
TIC v8.2 release notes

PLANETS

List of TOIs 7,821
List of Community Candidates 3,894
List of KOIs 9,564
K2 Candidates (Exoplanet Archive)
K2C9 Microlensing (Exoplanet Archive)
Search TOIs
Saved Searches
Table Preferences

MISSION TARGETS [?](#)

Ariel TESS Candidates 436
Ariel Known Exoplanets 114
Ariel Known Exoplanet Host Stars 53
HWO/ExEP Precursor Targets 164
Pandora Targets 20

OBSERVATIONS

Imaging 34,977
Spectroscopy 33,091
Time Series 20,425
Stellar Companions 8,950
Table Preferences