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2024 Exoplanet Archive News

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For the current news, see the Exoplanet Archive News page. For other news archives by year, see the 2023, 2022, 2021, 2020, 2019, 2018, 2017, 2016, 2015, 2014, 2013, and 2011-12 archives.

For a compilation of periodic tips that have appeared in past news items, see the Tip Archive.

To view only the most recently added planets and updated parameters (default and non-default), see this pre-filtered and pre-sorted interactive table.

February 29, 2024

Know Thy Star: Introducing the New Stellar Hosts Table

Our newest interactive table, Stellar Hosts, provides a single access point to all stellar parameters of stars in systems with confirmed planets that are in the Exoplanet Archive. With this interface, you may browse stellar parameters of planetary systems that are in our Planetary Systems and Planetary Systems Composite tables, as well as stellar parameters that were previously only available on some System Overview pages (for example, the alf Cen page).

The Planetary Systems tables contain stellar parameters that correspond to planetary solutions, or planetary parameters published together as a set. But, many host stars, and their stellar companions, have stellar parameters determined separately from planetary solutions. Previously, these stellar solutions have only been available on the System Overview pages, so the new Stellar Hosts Table provides a consolidated view to these data. Note that the table does not yet include stellar parameters for stars hosting planetary candidates.

Stellar Hosts is similar to our other web-based, interactive tables, and includes our newest plotting feature for instant histogram and scatter plots (see our Jan. 18, 2024 news item for details). It's also supported by our Table Access Protocol (TAP) service. To set up a new query, consult our TAP User Guide and the table's data column definitions.

Once you've had a chance to try out the new table, let us know what you think!

February 23, 2024

Exoplanet Data by the Numbers

This week's release has some impressive numbers, specifically:

1. **14**: New planets!
2. **449**: Planets with updated ephemerides from ExoClock III!
3. **165**: New parameter sets for confirmed planets!
4. **1**: New JWST transmission spectrum for WASP-96 b!

The new planets are HD 134606 b, c, d, e, & f, TOI-238 b & c, TOI-1386 b & c, TOI-1751 b, Kepler-48 f, Kepler-100 e, and Kepler-139 d & e. Click on their names to go directly to their System Overview pages, or browse all system parameters in the archive (including this week's new sets) with the Planetary Systems and Planetary Systems Composite tables.

The new ephemerides, consisting of orbital periods and mid-transit times, have been integrated into our Planetary Systems tables, System Overview pages, and the Transit and Ephemeris Service.

To view and work with the new WASP-96 b spectrum, check out the Atmospheric Spectroscopy Table.

February 8, 2024

Two New Planets and Multi-spectra Plotting

We've updated the Atmospheric Spectroscopy Table to enable users to overplot multiple spectra. Users may now plot spectra of the same planet taken with multiple instruments at the same time, or compare spectra of different planets to identify key similarities or differences. Try it out and let us know what you think!
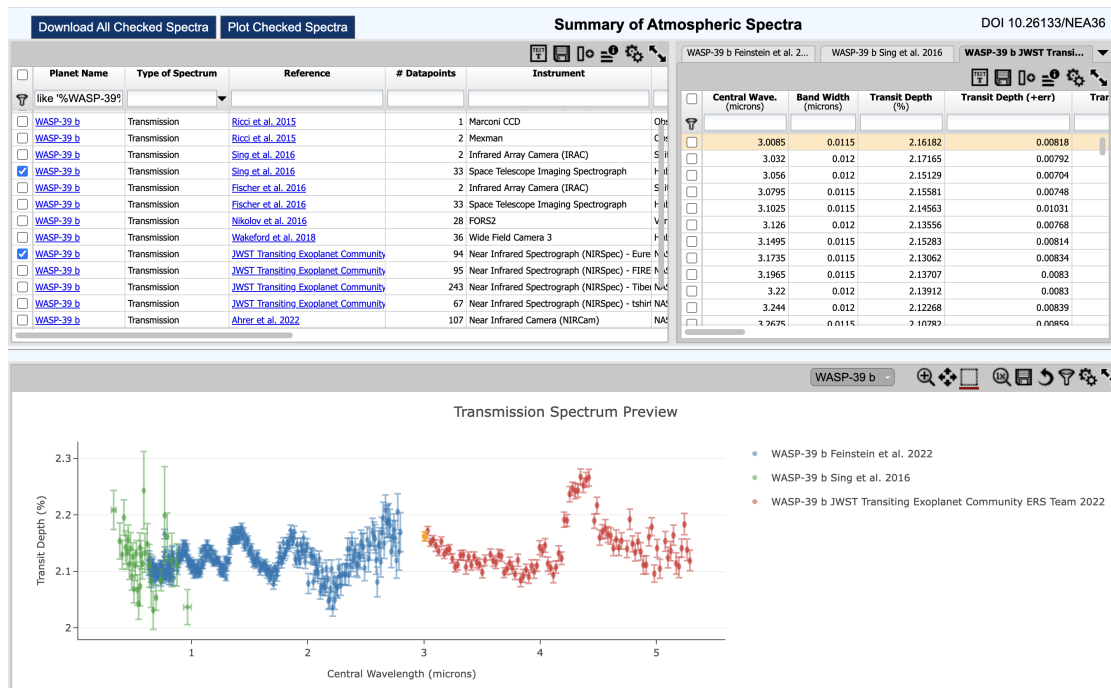
We've also added two new planets, both of which are TOI confirmations of super-Earths around M dwarf stars: Wolf-327 b and TOI-2266 b. The new planet parameters can be accessed from their System Overview pages, the Planetary Systems Table, and the Planetary Systems Composite Table.

Finally, we have added a new parameter set for HIP 75056 A b, which sets its mass to > 30 M_J and above our mass cut-off. HIP 75056 A b parameters can still be seen in its System Overview page, but it no longer appears in the Planetary Systems tables and now has a status of False Positive Planet.

January 25, 2024

Three New Planets and New Spectra for 12 Planets

This week, we've added spectra for 12 planets to the Atmospheric Spectroscopy Table, including new spectra taken by JWST for super-Earths GJ 367 b and GJ 1132 b. Both JWST spectra rule out the probability of the super-Earths having large, hydrogen-dominated atmospheres. The other new spectra are for the planets HAT-P-19 b, HAT-P-51 b, HAT-P-55 b, HAT-P-65 b, HAT-P-26 b, HAT-P-12 b, HD 209458 b, WASP-6 b, WASP-17 b, and WASP-39 b.

We have also added three new microlensing planets, KMT-2018-BLG-0885 b, KMT-2019-BLG-0297 b, and KMT-2019-BLG-0335 b. Access the new data in the system overview pages, the Planetary Systems Table, or the Planetary Systems Composite Table. Additional microlensing-specific parameters are also available in the Microlensing Planets Table.

News panel image credit: NASA/JPL-Caltech

January 18, 2024

Quicker and Easier Exoplanet Data Plots

We've made it even easier to make scatter plots and histograms with Planetary Systems data, with a new built-in and interactive feature that generates plots ready for publication, presentation, and data exploration.

To access the feature:

1. Go to the Planetary Systems (PS) or Planetary Systems Composite Data (PSCompPars) table.
2. Filter the table to display only the data you want to plot. (If needed, consult the Interactive Table User Guide's Sorting and Filtering Data section.)
3. Click the **Plot Table** button and then select **Histogram Plot** or **Scatter Plot** from the drop-down list. The plot will open in a new browser tab.

For more information, see the ExoPlots User Guide.

This new feature is currently in Beta release, so there may be brief performance issues while we work on improvements and additional features. Please let us know how it works for you (or doesn't) and if you encounter any issues through our Helpdesk.

More TAP-supported Tables

As part of our continued adoption of the IVOA's Table Access Protocol (TAP) standard, we've migrated the following Kepler and K2 data sets from the archive's old API service to the newer TAP service:

- **K2 Targets**: `k2targets`

- **Kepler Stellar**, including distinct access for the following deliveries: `keplerstellar`, `q1_q12_ks`, `q1_q16_ks`, `q1_q17_dr24_ks`, `q1_q17_dr25_ks`, `q1_q17_dr25_sup_ks`

- **Kepler Time Series**: `keplertimeseries`

- **Kepler Threshhold-Crossing Events**, including distinct access for the following deliveries: `q1_q12_tce`, `q1_q16_tce`, `q1_q17_dr24_tce`, `q1_q17_dr25_tce`

- **Kepler Objects-of-Interest (KOI)**, including distinct access for the following deliveries: `cumulative`, `q1_q6_koi`, `q1_q8_koi`, `q1_q12_koi`, `q1_q16_koi`, `q1_q17_dr24_koi`, `q1_q17_dr25_koi`, `q1_q17_dr25_sup_koi`

The old API support for these tables will be discontinued in the near future, so please convert any existing API queries to TAP queries, and use TAP for all new queries (see documentation here).

January 10, 2024

Ringing in the New Year With Three Planets

Our first release for 2024 features HD 63433 d—the closest, young, Earth-sized planet discovered to date! According to the discovery paper, this planet is located ~22 parsecs from Earth and is the smallest confirmed planet with an age less than 500 Myr. Check out the archive's HD 63433 System Overview page and read the NASA media release for details.

Two additional planets added this week are OGLE-2019-BLG-1180L b and KMT-2021-BLG-1770L b. The planets have been added to the Planetary Systems Table and its companion table the Planetary Systems Composite Table, where you can view, filter, sort, and download data. Their data are also available in our Microlensing Planets table.

News panel image credit: NASA/Ames/JPL-Caltech/T. Pyle

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