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Exoplanet Characterization

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Abstract

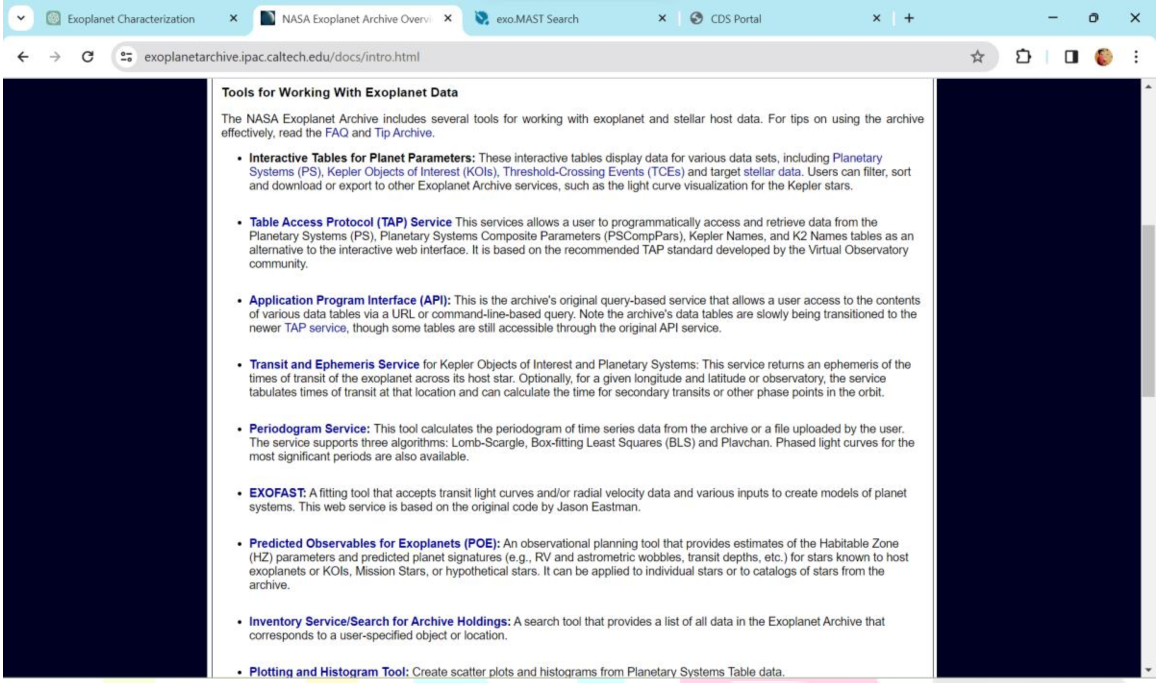
This project attempts to research and assemble database information about exoplanets, using multiple charts, statistics, and repositories to better comprehend their characterisation. We aim to identify patterns and trends within exoplanetary systems by analysing datasets from MAST, NASA Exo, and the CDS Portal. Our multidisciplinary approach aims to increase our understanding of exoplanet variety and creation mechanisms. By combining information from many sources, we want to contribute to the larger area of exoplanetary science and develop a better understanding of the universe. This study emphasises the necessity of multidisciplinary collaboration in understanding and characterising exoplanetary systems.

1. Introduction

The vastness of the cosmos has always captured the human imagination, inviting us to venture beyond the boundaries of our solar system. The study of exoplanets, which orbit stars other than our Sun, is one of the most interesting frontiers in modern astrophysics. This emerging subject not only broadens our grasp of the cosmic fabric, but it also raises fundamental issues regarding the possibility of life beyond Earth. In our pursuit of knowledge, we will start on a research adventure focusing on thorough exoplanet characterisation, utilising the extensive resources provided by the NASA Exoplanet Archive, MAST, and CDS Portal. The allure of exoplanets stems from their diversity, which challenges our assumptions about the types of planetary systems that populate the universe. Unravelling the mysteries of exoplanetary atmospheres, compositions, and orbital dynamics promises to reveal basic mechanisms governing planetary creation and development. Furthermore, the hunt for habitable exoplanets—those with characteristics conducive to life as we know it—feeds the imagination and rekindles the search for alien life. As we delve into this intricate area, our study aims to not only add to the growing body of exoplanetary knowledge, but also to build a greater appreciation for the universe's richness and beauty. The study of exoplanets is an important step towards comprehending our own location in the universe. Our study voyage takes us via the digital archives of NASA Exoplanet Archive, MAST, and CDS Portal, all of which contain a wealth of astronomical data. These archives act as portals to a plethora of information, providing a comprehensive perspective of exoplanetary systems detected by ground-based observatories and space-borne missions. The synergy between these repositories provides a comprehensive strategy, allowing us to cross-reference, integrate, and evaluate datasets, providing a strong basis. Our ultimate objective is to scientifically characterise exoplanets using essential metrics including mass, radius, atmosphere composition, and host star attributes. We want to discover trends, uncover connections, and give useful insights into the variety of exoplanetary systems by utilising the rich datasets managed by the NASA Exoplanet Archive, MAST, and CDS Portal. The research is not limited to specific planets, but also includes comparative evaluations that offer insight on the differences between Super-Earths, Hot Jupiters, Neptunians, and more. In the next chapters, we will describe our rigorous approach to data retrieval, integration, and analysis. We will look at how to clean and standardise datasets, as well as how to use statistical methods and visualisation tools to bring clarity to the complex interactions that exist in exoplanetary systems. We will address research difficulties via a transparent perspective, understanding the limits and biases inherent in the repositories we have selected. This study flow aims not only to push the boundaries of scientific knowledge, but also to arouse curiosity and amazement for the mysteries of the cosmos. As we explore the enormous celestial landscapes provided by NASA Exoplanet Archive, MAST, and CDS Portal, we embark on a journey of discovery, hoping to shed light on the enigmatic worlds beyond our solar system and contribute to our common understanding of our universe.

2. Data Retrieval Strategy

Our study is centred on strategically extracting relevant data from the large reservoirs of NASA Exoplanet Archive, MAST, and CDS Portal. As we begin on this data-driven adventure, our focus shifts to the sophisticated data retrieval capabilities, with a particular emphasis on NASA Exoplanet Archive's robust API (Application Programming Interface).
NASA's Exoplanet Archive serves as the beacon in the search for exoplanetary insights.

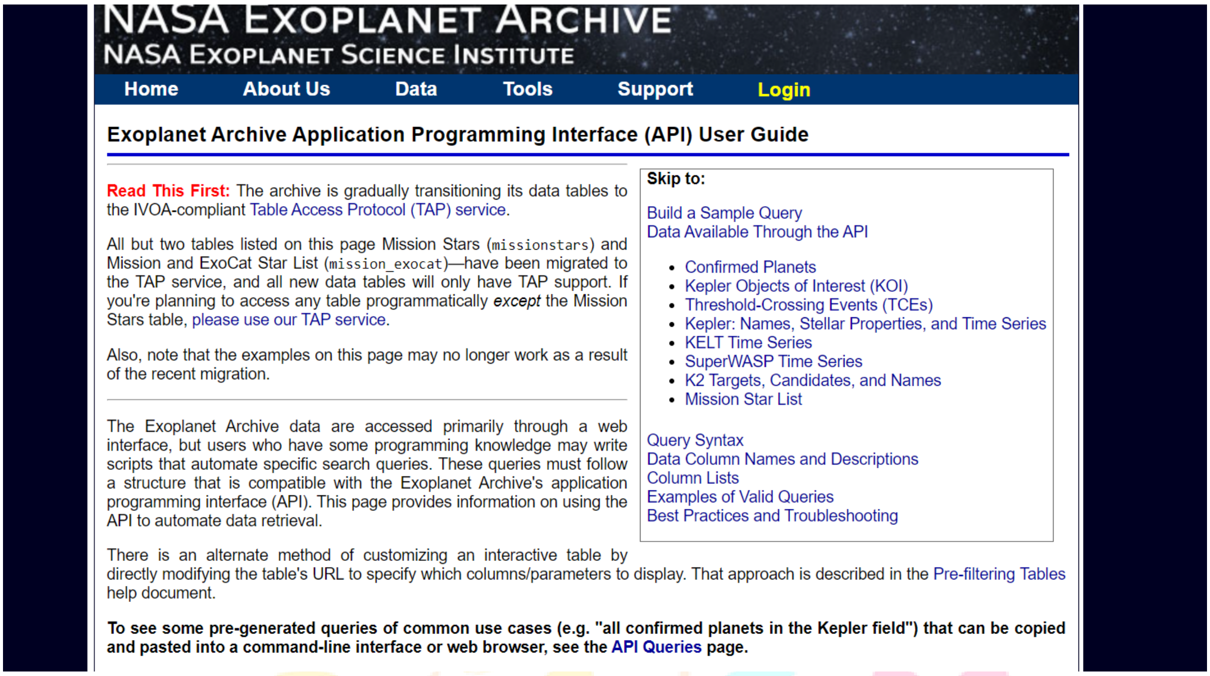


Tools for Working With Exoplanet Data

The NASA Exoplanet Archive includes several tools for working with exoplanet and stellar host data. For tips on using the archive effectively, read the FAQ and Tip Archive.

- **Interactive Tables for Planet Parameters:** These interactive tables display data for various data sets, including Planetary Systems (PS), Kepler Objects of Interest (KOIs), Threshold-Crossing Events (TCEs) and target stellar data. Users can filter, sort and download or export to other Exoplanet Archive services, such as the light curve visualization for the Kepler stars.
- **Table Access Protocol (TAP) Service** This services allows a user to programmatically access and retrieve data from the Planetary Systems (PS), Planetary Systems Composite Parameters (PSCompPars), Kepler Names, and K2 Names tables as an alternative to the interactive web interface. It is based on the recommended TAP standard developed by the Virtual Observatory community.
- **Application Program Interface (API):** This is the archive's original query-based service that allows a user access to the contents of various data tables via a URL or command-line-based query. Note the archive's data tables are slowly being transitioned to the newer TAP service, though some tables are still accessible through the original API service.
- **Transit and Ephemeris Service** for Kepler Objects of Interest and Planetary Systems: This service returns an ephemeris of the times of transit of the exoplanet across its host star. Optionally, for a given longitude and latitude or observatory, the service tabulates times of transit at that location and can calculate the time for secondary transits or other phase points in the orbit.
- **Periodogram Service:** This tool calculates the periodogram of time series data from the archive or a file uploaded by the user. The service supports three algorithms: Lomb-Scargle, Box-fitting Least Squares (BLS) and Plavchan. Phased light curves for the most significant periods are also available.
- **EXOFAST:** A fitting tool that accepts transit light curves and/or radial velocity data and various inputs to create models of planet systems. This web service is based on the original code by Jason Eastman.
- **Predicted Observables for Exoplanets (POE):** An observational planning tool that provides estimates of the Habitable Zone (HZ) parameters and predicted planet signatures (e.g., RV and astrometric wobbles, transit depths, etc.) for stars known to host exoplanets or KOIs, Mission Stars, or hypothetical stars. It can be applied to individual stars or to catalogs of stars from the archive.
- **Inventory Service/Search for Archive Holdings:** A search tool that provides a list of all data in the Exoplanet Archive that corresponds to a user-specified object or location.
- **Plotting and Histogram Tool:** Create scatter plots and histograms from Planetary Systems Table data.

With a large number of verified exoplanets and prospects, this library is an excellent resource for planetary characteristics, stellar attributes, and finding methods. Its user-friendly design offers a natural platform for exploration, but our study improves the experience by taking a deliberate API-centric approach. NASA Exoplanet Archive's API interface provides a dynamic mechanism for data retrieval. This powerful tool enables us to programmatically access and retrieve selected information, offering a degree of precision and efficiency that exceeds conventional approaches. By creating well-defined queries and using the API's structured endpoints, we can adjust our data retrieval technique to meet the specific needs of our research objectives. Our data retrieval method includes creating targeted queries to collect certain metrics of interest.



Exoplanet Archive Application Programming Interface (API) User Guide

Read This First: The archive is gradually transitioning its data tables to the IVOA-compliant Table Access Protocol (TAP) service.

All but two tables listed on this page Mission Stars (`missionstars`) and Mission and ExoCat Star List (`mission_exocat`)—have been migrated to the TAP service, and all new data tables will only have TAP support. If you're planning to access any table programmatically *except* the Mission Stars table, please use our TAP service.

Also, note that the examples on this page may no longer work as a result of the recent migration.

Skip to:

Build a Sample Query
Data Available Through the API

- Confirmed Planets
- Kepler Objects of Interest (KOI)
- Threshold-Crossing Events (TCEs)
- Kepler: Names, Stellar Properties, and Time Series
- KELT Time Series
- SuperWASP Time Series
- K2 Targets, Candidates, and Names
- Mission Star List

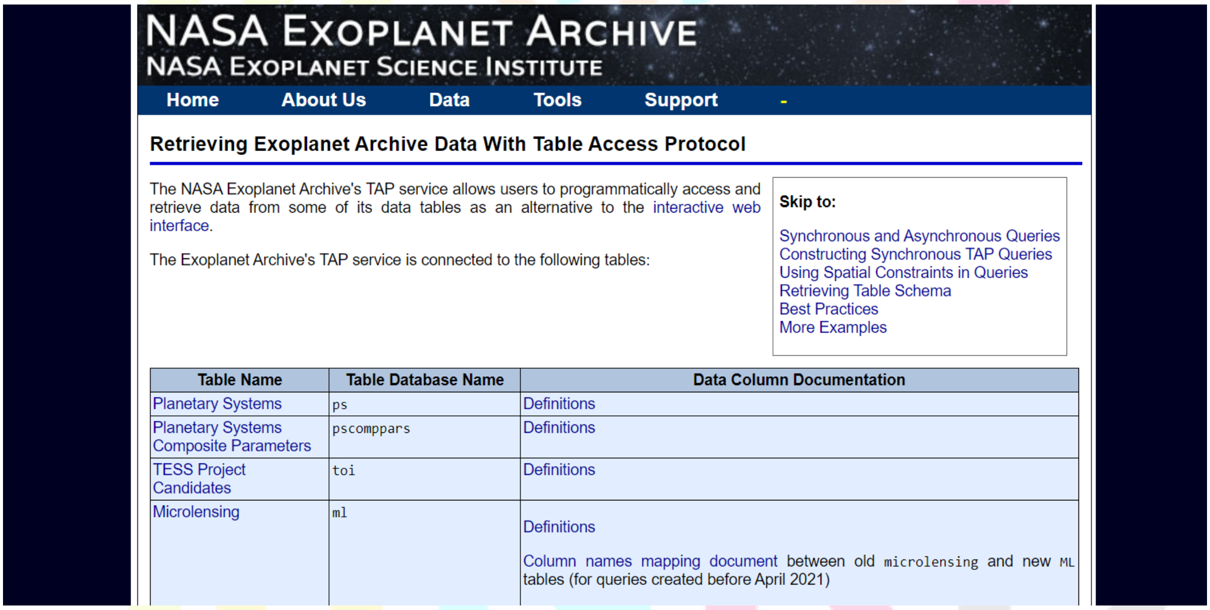
Query Syntax
Data Column Names and Descriptions
Column Lists
Examples of Valid Queries
Best Practices and Troubleshooting

The Exoplanet Archive data are accessed primarily through a web interface, but users who have some programming knowledge may write scripts that automate specific search queries. These queries must follow a structure that is compatible with the Exoplanet Archive's application programming interface (API). This page provides information on using the API to automate data retrieval.

There is an alternate method of customizing an interactive table by directly modifying the table's URL to specify which columns/parameters to display. That approach is described in the Pre-filtering Tables help document.

To see some pre-generated queries of common use cases (e.g. "all confirmed planets in the Kepler field") that can be copied and pasted into a command-line interface or web browser, see the API Queries page.

The NASA planetary Archive API allows us to carefully modify these queries to focus on essential parameters such as planetary mass, radius, orbital characteristics, and stellar attributes. We use the API's flexibility to browse the enormous exoplanetary dataset with granularity, ensuring that the retrieved information is consistent with the complexities of our study. The API's real-time updates improve the timeliness of our study.



Retrieving Exoplanet Archive Data With Table Access Protocol

The NASA Exoplanet Archive's TAP service allows users to programmatically access and retrieve data from some of its data tables as an alternative to the interactive web interface.

The Exoplanet Archive's TAP service is connected to the following tables:

Skip to:

Synchronous and Asynchronous Queries
Constructing Synchronous TAP Queries
Using Spatial Constraints in Queries
Retrieving Table Schema
Best Practices
More Examples

Table Name	Table Database Name	Data Column Documentation
Planetary Systems	`ps`	Definitions
Planetary Systems Composite Parameters	`pscomppars`	Definitions
TESS Project Candidates	`toi`	Definitions
Microlensing	`ml`	Definitions Column names mapping document between old `microlensing` and new `ML` tables (for queries created before April 2021)

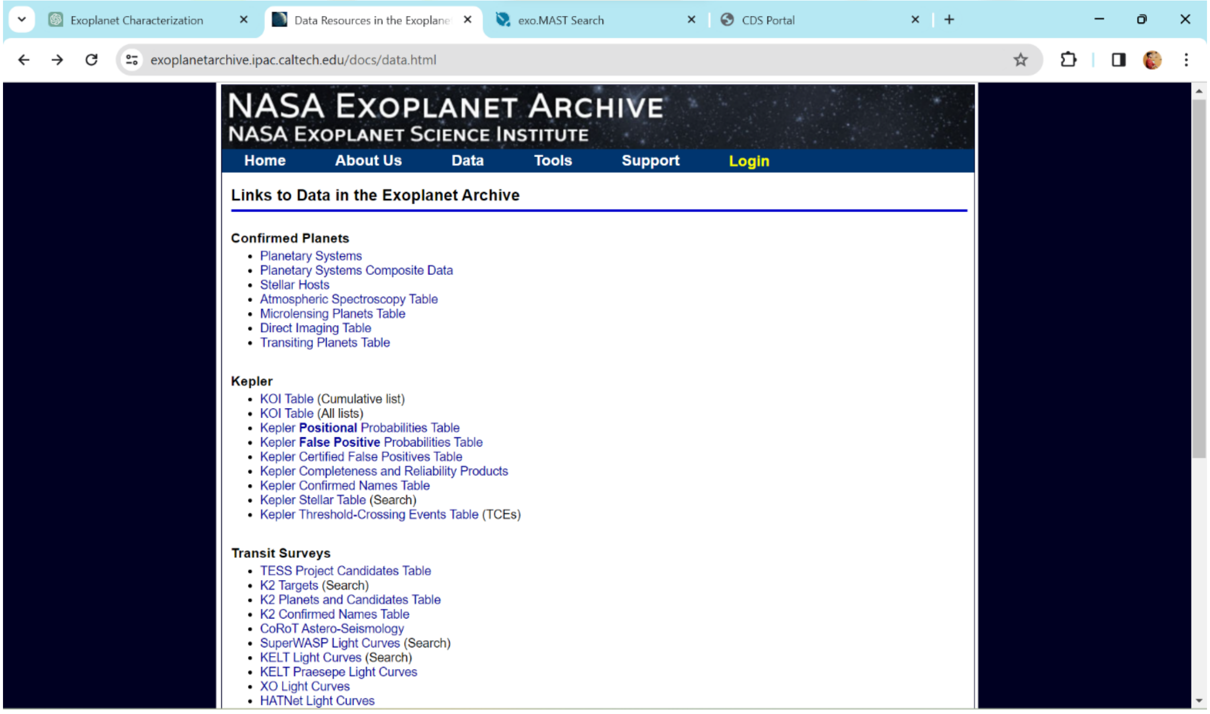
As new findings are uploaded to the archive, the API allows us to keep up to date with the newest data, ensuring that our analyses are based on the most recent and relevant information. This dynamic accessibility is a key component of our commitment to a thorough and up-to-date investigation of exoplanetary systems. In tandem with MAST and CDS Portal, including NASA Exoplanet Archive's API-driven data into our research framework adds to a more comprehensive knowledge of exoplanetary systems. The synergistic combination of ground-based and space-based data, along with the accuracy provided by API integration, enables us to tell a complex story about the many worlds circling stars beyond our solar system.

3. Theoretical Exploration : Exoplanet Interior Structure and Composition

Exoplanets' internal structure and composition are a fascinating mystery for both astronomers and planetary scientists. Theoretical models provide insights into the possible diversity of planetary interiors, which range from rocky planets to gas giants and unusual compositions outside our solar system. When developing theories on exoplanet inner structure, numerous major aspects impacting planetary differentiation and development must be taken into account. Planetary mass determines the gravitational forces that shape the distribution of components within a planet. Larger, more massive exoplanets are expected to have experienced dramatic differentiation, with denser components sinking into the core and lighter materials rising to the surface. Furthermore, the impact of planetary temperature and pressure gradients cannot be underestimated. High-pressure settings deep within a planet can cause phase changes and the development of novel materials like superionic ice or metallic hydrogen. To effectively forecast the internal structure and composition of exoplanets with varying masses and orbital configurations, theoretical models must account for these extreme situations. In addition, the role of volatile elements and volatiles in sculpting planetary interiors is the subject of ongoing theoretical investigation. Volatile-rich exoplanets, such as water worlds or volatile-rich super-Earths, may have seas or atmospheres made up of unusual molecules. Understanding the distribution and quantity of volatiles in exoplanets gives important information about their creation history and possible habitability. Theoretical studies of exoplanet internal structure take into account planetary dynamics and geological processes. Tidal forces, internal heating processes, and mantle convection all influence the dynamic development of planetary interiors. Theoretical models must account for these processes in order to correctly describe planetary thermal development, mantle dynamics, and surface geology across geological periods. Furthermore, research into exoplanet inner structure is strongly related to our knowledge of planetary origin and development. The theoretical frameworks for planetary accretion, core formation, and mantle differentiation give information on the processes that define the architecture of exoplanetary systems. Astronomers can uncover the secrets of exoplanets' cosmic beginnings by combining empirical limitations with theoretical hypotheses.

4. Unified Tapestry Across MAST, NASA Exoplanet Archive & CDS Portal

The heart of our study is not only the depth of data extraction, but also the creative integration of datasets. MAST, NASA Exoplanet Archive, and CDS Portal each provide a distinct view of astronomical data, and our strategy entails weaving these disparate threads into a coherent tapestry to acquire a thorough knowledge of exoplanetary systems.



Links to Data in the Exoplanet Archive

Confirmed Planets

- Planetary Systems
- Planetary Systems Composite Data
- Stellar Hosts
- Atmospheric Spectroscopy Table
- Microlensing Planets Table
- Direct Imaging Table
- Transiting Planets Table

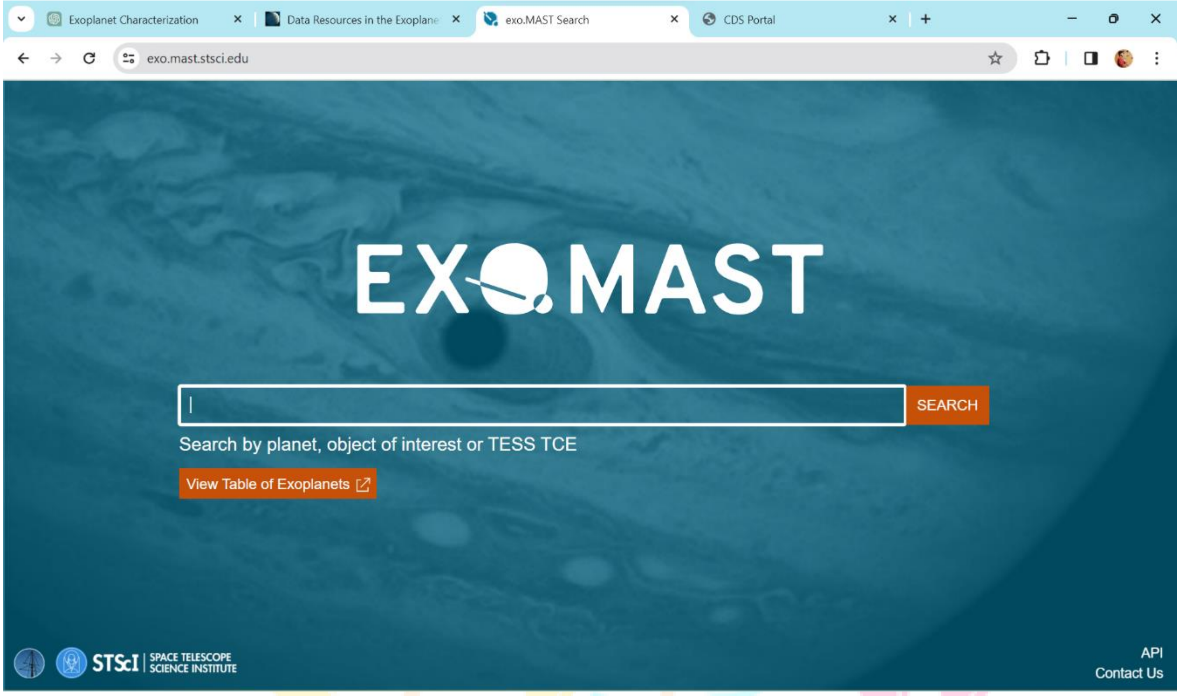
Kepler

- KOI Table (Cumulative list)
- KOI Table (All lists)
- Kepler **Positional** Probabilities Table
- Kepler **False Positive** Probabilities Table
- Kepler Certified False Positives Table
- Kepler Completeness and Reliability Products
- Kepler Confirmed Names Table
- Kepler Stellar Table (Search)
- Kepler Threshold-Crossing Events Table (TCEs)

Transit Surveys

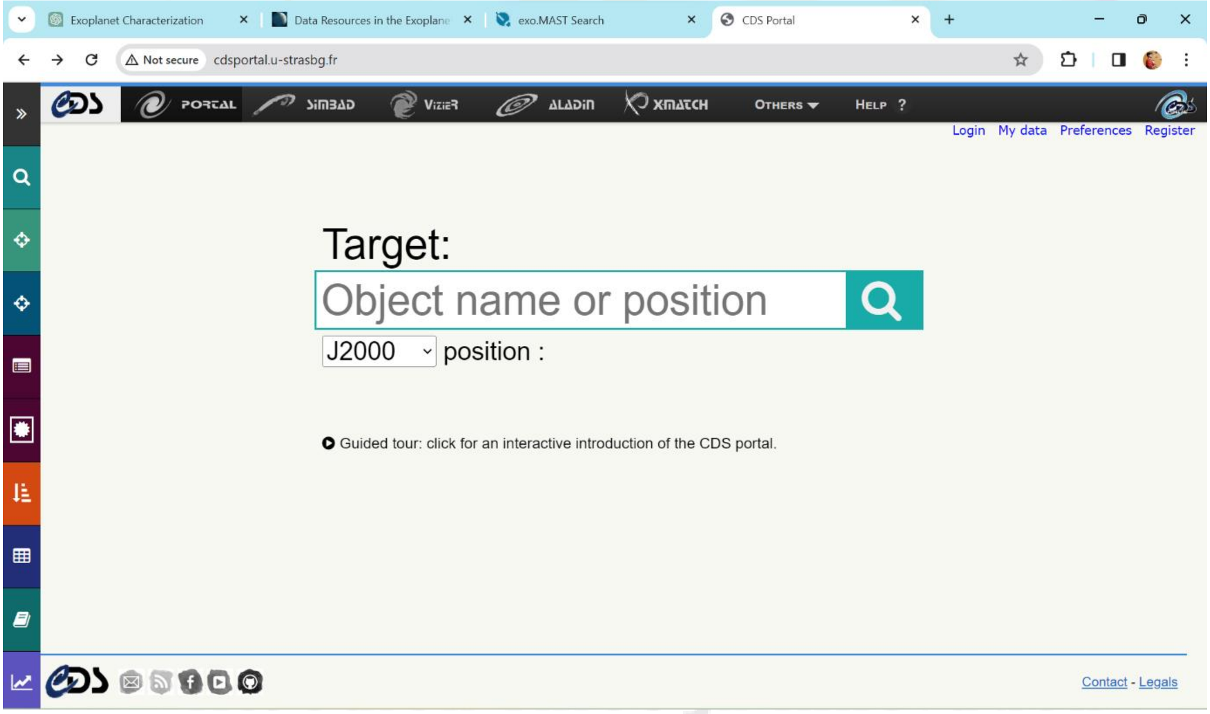
- TESS Project Candidates Table
- K2 Targets (Search)
- K2 Planets and Candidates Table
- K2 Confirmed Names Table
- CoRoT Astero-Seismology
- SuperWASP Light Curves (Search)
- KELT Light Curves (Search)
- KELT Praesepe Light Curves
- XO Light Curves
- HATNet Light Curves

The basis is built on the NASA Exoplanet Archive, which has a large database of verified exoplanets and prospects. Its painstakingly managed dataset, which includes planetary characteristics, stellar features, and multiple finding methods, is the focus of our study. We collect focused data using smart API-driven queries to ensure precision and relevancy in our investigation.



Search by planet, object of interest or TESS TCE

MAST, a repository for data from space observatories like Hubble, Kepler, and TESS, adds a cosmic component to our mission. It depicts the ethereal dance of exoplanets as seen from space, providing a unique viewpoint. Our data integration strategy combines ground-based observations from the NASA Exoplanet Archive with the ethereal views shown by space observatories in MAST. By cross-referencing datasets, we bridge the gap between terrestrial and celestial perspectives, resulting in a comprehensive picture of exoplanetary systems.

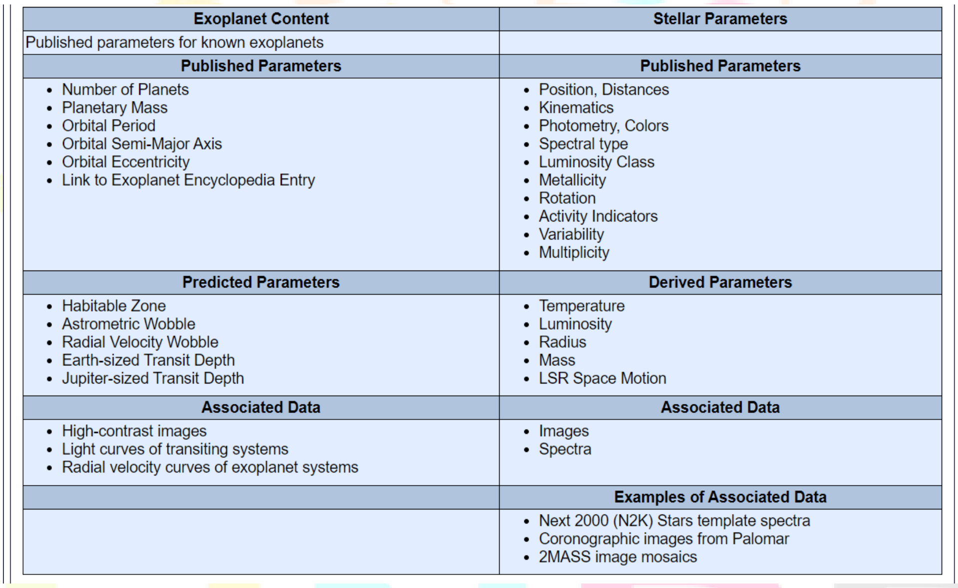


Guided tour: click for an interactive introduction of the CDS portal.

CDS Portal, a celestial library that provides a wide range of catalogues and surveys, expands our dataset. SIMBAD, hosted by CDS, serves as a stellar companion, offering extensive information on celestial objects outside our solar system. The integration entails combining exoplanet and host star data from the NASA Exoplanet Archive with CDS's larger astronomical context. This combination broadens the scope of our research, allowing us to investigate the interactions between exoplanetary systems and the larger cosmic environment. The comparability of datasets across various sites is critical. Exoplanet parameters like as mass, radius, and orbital characteristics provided from the NASA Exoplanet Archive are perfectly aligned with related MAST observations. The integration ensures a cohesive narrative by combining ground-based and space-borne views. CDS Portal adds to this story by situating our understanding of exoplanetary systems within a larger cosmic context, providing a relational framework for the myriad things that inhabit our universe. The completeness of our integrated collection demonstrates the different origins of astronomy data. We embrace the diversity of exoplanetary systems by bringing together data from ground-based observatories, space telescopes, and extensive catalogues. The use of multiple discovery methods, observational techniques, and catalogued information results in a well-rounded and nuanced investigation. As we continue on this path of data integration, we hope to build a cohesive narrative that captures the beauty and complexity of exoplanetary systems. The interaction of MAST, NASA Exoplanet Archive, and CDS Portal is the foundation of our study, providing a complete and linked understanding of celestial worlds outside our solar system.

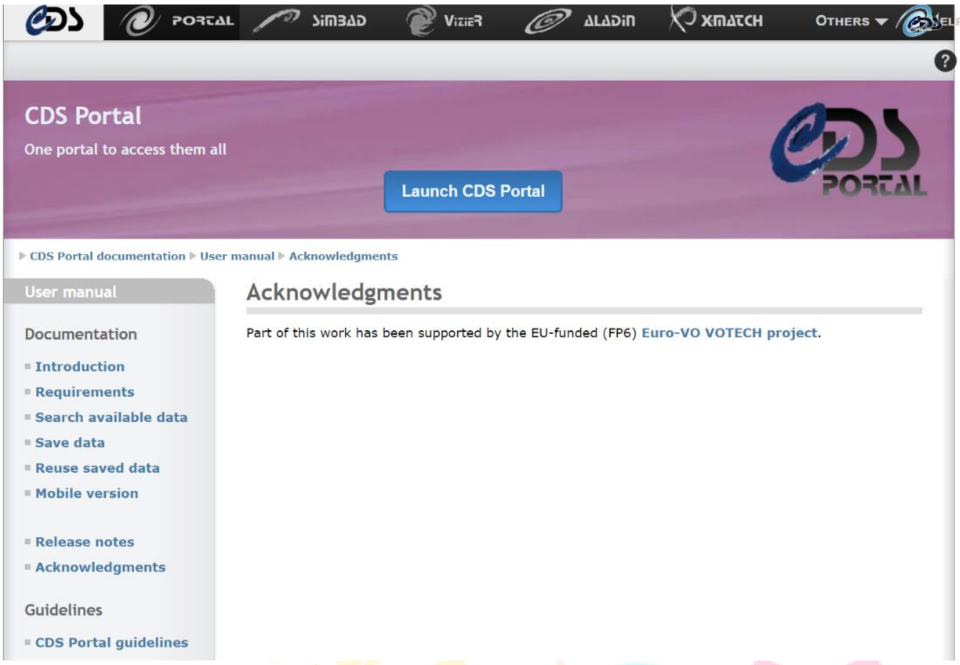
5. Data Standards

The coalescence of datasets from MAST, NASA Exoplanet Archive, and CDS Portal into a cohesive and dependable framework demands thorough data cleaning and standardization procedures. Each repository follows particular data standards, and our methodology entails harmonising these standards to enable a seamless and useful connection. To ensure uniformity throughout its enormous collection, the NASA Exoplanet Archive adheres to a set of well-defined data standards. Planetary mass, radius, and orbital parameters are all uniformly specified and labelled. Our data cleaning procedure includes reviewing entries for discrepancies, standardising units, and addressing missing values. By adhering to NASA's standardised norms, we improve the reliability and comparability of our dataset. MAST, as a repository for space telescope data, follows the criteria set by space agencies such as NASA and ESA. For example, FITS (Flexible Image Transport System) is a popular astronomical data format in MAST.



Exoplanet Content	**Stellar Parameters**
Published parameters for known exoplanets	
Published Parameters	**Published Parameters**
• Number of Planets • Planetary Mass • Orbital Period • Orbital Semi-Major Axis • Orbital Eccentricity • Link to Exoplanet Encyclopedia Entry	• Position, Distances • Kinematics • Photometry, Colors • Spectral type • Luminosity Class • Metallicity • Rotation • Activity Indicators • Variability • Multiplicity
Predicted Parameters	**Derived Parameters**
• Habitable Zone • Astrometric Wobble • Radial Velocity Wobble • Earth-sized Transit Depth • Jupiter-sized Transit Depth	• Temperature • Luminosity • Radius • Mass • LSR Space Motion
Associated Data	**Associated Data**
• High-contrast images • Light curves of transiting systems • Radial velocity curves of exoplanet systems	• Images • Spectra
	Examples of Associated Data
	• Next 2000 (N2K) Stars template spectra • Coronographic images from Palomar • 2MASS image mosaics

During the data cleaning step, we guarantee that observational data from various space telescopes is standardised to FITS for easy integration. Calibration standards are also used to verify that measurements are accurate. CDS Portal, which hosts a variety of astronomy catalogues and surveys, is committed to data interchange and standardisation. Catalogues inside CDS frequently correspond to recognised standards such as VOTable (Virtual Observatory Table), a popular XML-based format. In our data cleaning procedure, we align information from CDS with standardised formats, addressing any differences in unit standards. The problem is to provide relatability across these varied data standards. Our technique entails creating mapping mechanisms that transfer parameters from one standard to another, resulting in a continuous flow of information.



Acknowledgments

Part of this work has been supported by the EU-funded (FP6) Euro-VO VOTECH project.

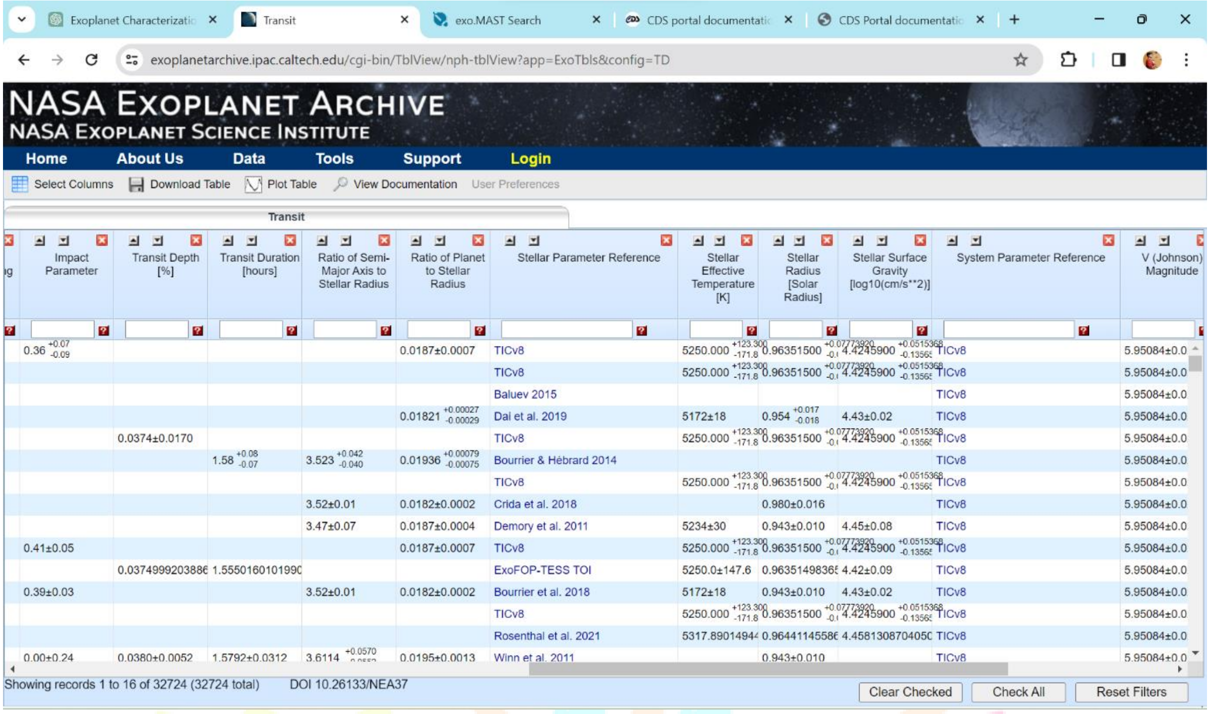
For example, reconciling CDS stellar characteristics with matching data in the NASA Exoplanet Archive entails mapping shared IDs and units. This guarantees that our integrated dataset remains coherent and accurate across several standards. Adherence to specified data standards provides uniformity while also contributing to the dataset's completeness. Standardised units and standards let us fill gaps and resolve missing values more efficiently. By adhering to the rules established by each source, we generate a dataset that is not only comprehensive but also easily interoperable with the larger astronomical community.

6. Theoretical Perspective : Exoplanet Habitability and Planetary Boundaries

The concept of habitability goes beyond our own planet and includes the circumstances required to host life on exoplanets throughout the cosmos. Theoretical frameworks for exoplanet habitability investigate the intricate interaction of planetary, solar, and environmental elements that impact the possibility of life beyond Earth. The concept of planetary boundaries, which define the limitations within which a planet may maintain stable and life-supporting circumstances, is central to exoplanet habitability theory. These boundaries are established by a complex balance of physical, chemical, and geological processes that govern the planet's temperature, surface conditions, and atmospheric composition. Theoretical perspectives on planetary habitability take into account a variety of elements, including the planet's distance from its star, atmospheric composition, and the presence of liquid water. The habitable zone, also known as the Goldilocks zone, is the region surrounding a star where circumstances are ideal for liquid water to exist on a planet's surface - a necessary component of life as we know it. Beyond the habitable zone, theoretical models investigate the possibility of other liveable settings, such as underground seas or air homes. Exoplanets with thick atmospheres or geothermal heat sources may have circumstances favourable to life under their surfaces, even if the surface is uninhabitable. Furthermore, theoretical studies of extraterrestrial habitability include the function of planetary feedback processes and environmental tipping points. Planetary boundaries define the limits of habitability, beyond which rapid variations in temperature or atmospheric composition might render the planet uninhabitable. Theoretical frameworks also address the topic of planetary resilience, which refers to a planet's ability to remain stable and liveable in the face of external disturbances or internal feedback. Understanding exoplanetary systems' resilience reveals information about their long-term sustainability as prospective environments for life. Furthermore, the study of extraterrestrial habitability is inextricably tied to our knowledge of astrobiology (the hunt for life beyond Earth). Theoretical ideas on exoplanet habitability guide the design of future space missions and observational operations targeted at discovering indicators of life on distant worlds.

7. Data Collected

Planetary Transits Table



Impact Parameter	Transit Depth [%]	Transit Duration [hours]	Ratio of Semi-Major Axis to Stellar Radius	Ratio of Planet to Stellar Radius	Stellar Parameter Reference	Stellar Effective Temperature [K]	Stellar Radius [Solar Radius]	Stellar Surface Gravity [log10(cm/s**2)]	System Parameter Reference	V (Johnson) Magnitude
$0.36^{+0.07}_{-0.09}$				0.0187±0.0007	TICv8	$5250.000^{+123.300}_{-171.8}$	$0.96351500^{+0.07773920}_{-0.0}$	$4.4245900^{+0.0515368}_{-0.13565}$	TICv8	5.95084±0.0
					TICv8	$5250.000^{+123.300}_{-171.8}$	$0.96351500^{+0.07773920}_{-0.0}$	$4.4245900^{+0.0515368}_{-0.13565}$	TICv8	5.95084±0.0
					Baluev 2015				TICv8	5.95084±0.0
				$0.01821^{+0.00027}_{-0.00029}$	Dai et al. 2019	5172±18	$0.954^{+0.017}_{-0.018}$	4.43±0.02	TICv8	5.95084±0.0
	0.0374±0.0170				TICv8	$5250.000^{+123.300}_{-171.8}$	$0.96351500^{+0.07773920}_{-0.0}$	$4.4245900^{+0.0515368}_{-0.13565}$	TICv8	5.95084±0.0
		$1.58^{+0.08}_{-0.07}$	$3.523^{+0.042}_{-0.040}$	$0.01936^{+0.00079}_{-0.00075}$	Bourrier & Hébrard 2014				TICv8	5.95084±0.0
					TICv8	$5250.000^{+123.300}_{-171.8}$	$0.96351500^{+0.07773920}_{-0.0}$	$4.4245900^{+0.0515368}_{-0.13565}$	TICv8	5.95084±0.0
			3.52±0.01	0.0182±0.0002	Crida et al. 2018		0.980±0.016		TICv8	5.95084±0.0
			3.47±0.07	0.0187±0.0004	Demory et al. 2011	5234±30	0.943±0.010	4.45±0.08	TICv8	5.95084±0.0
0.41±0.05				0.0187±0.0007	TICv8	$5250.000^{+123.300}_{-171.8}$	$0.96351500^{+0.07773920}_{-0.0}$	$4.4245900^{+0.0515368}_{-0.13565}$	TICv8	5.95084±0.0
	0.0374999203886	1.5550160101990			ExoFOP-TESS TOI	5250.0±147.6	0.9635149836	4.42±0.09	TICv8	5.95084±0.0
0.39±0.03			3.52±0.01	0.0182±0.0002	Bourrier et al. 2018	5172±18	0.943±0.010	4.43±0.02	TICv8	5.95084±0.0
					TICv8	$5250.000^{+123.300}_{-171.8}$	$0.96351500^{+0.07773920}_{-0.0}$	$4.4245900^{+0.0515368}_{-0.13565}$	TICv8	5.95084±0.0
					Rosenthal et al. 2021	5317.89014944	0.96441145586	4.4581308704050	TICv8	5.95084±0.0
0.00±0.24	0.0380±0.0052	1.5792±0.0312	$3.6114^{+0.0570}$	0.0195±0.0013	Winn et al. 2011		0.943±0.010		TICv8	5.95084±0.0

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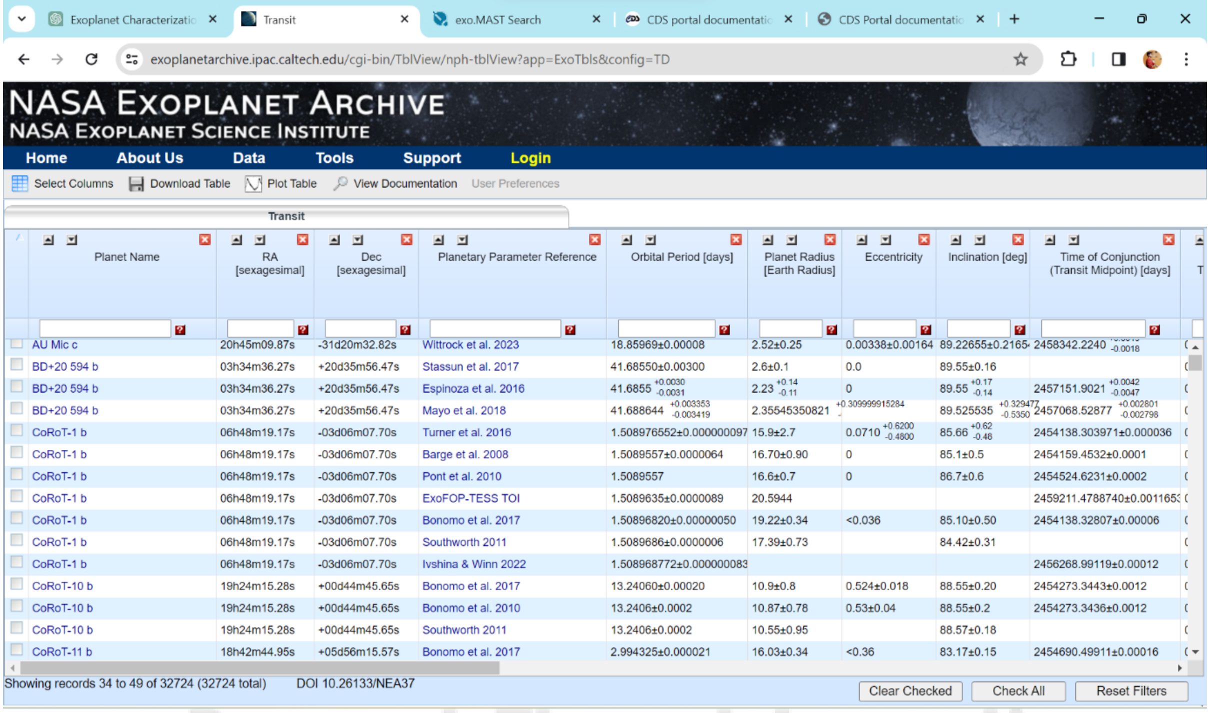
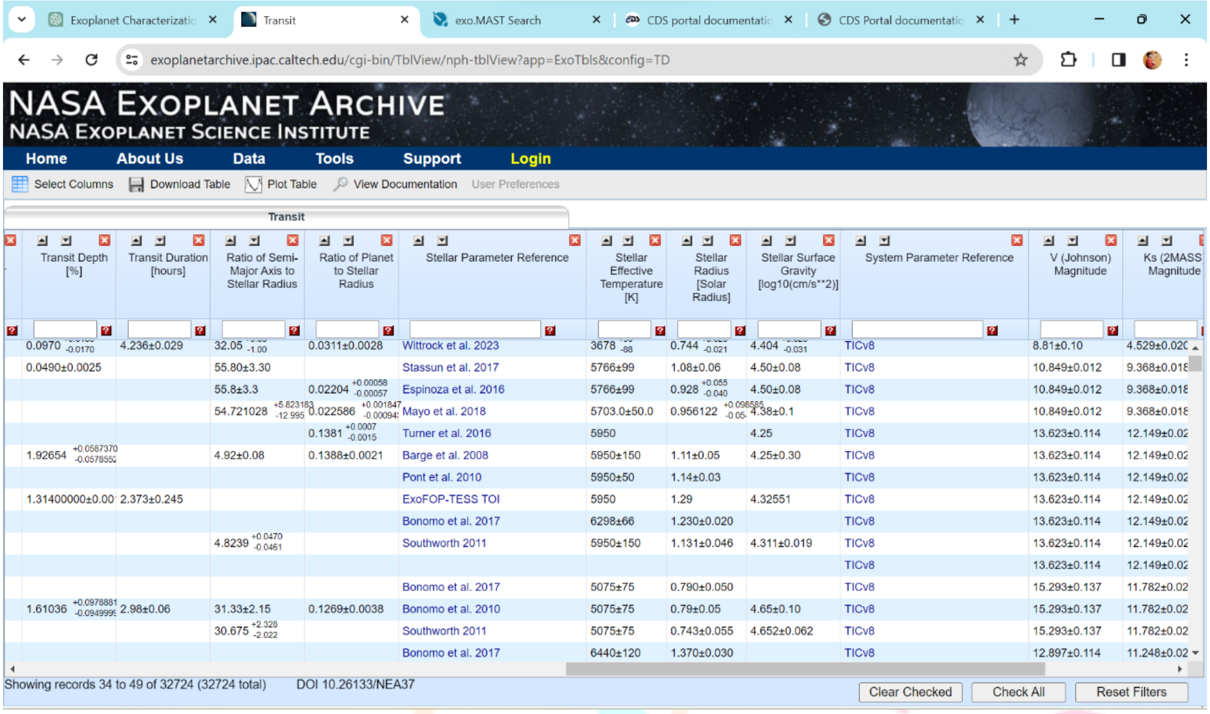


☐	Planet Name	RA [sexagesimal]	Dec [sexagesimal]	Planetary Parameter Reference	Orbital Period [days]	Planet Radius [Earth Radius]	Eccentricity	Inclination [deg]	Time of Conjunction (Transit Midpoint) [days]
☐	AU Mic c	20h45m09.87s	-31d20m32.82s	Wittrock et al. 2023	18.85969±0.00008	2.52±0.25	0.00338±0.00164	89.22655±0.2165	$2458342.2240_{-0.0018}$
☐	BD+20 594 b	03h34m36.27s	+20d35m56.47s	Stassun et al. 2017	41.68550±0.00300	2.6±0.1	0.0	89.55±0.16	
☐	BD+20 594 b	03h34m36.27s	+20d35m56.47s	Espinoza et al. 2016	$41.6855^{+0.0030}_{-0.0031}$	$2.23^{+0.14}_{-0.11}$	0	$89.55^{+0.17}_{-0.14}$	$2457151.9021^{+0.0042}_{-0.0047}$
☐	BD+20 594 b	03h34m36.27s	+20d35m56.47s	Mayo et al. 2018	$41.688644^{+0.003353}_{-0.003419}$	$2.35545350821^{+0.309999915284}$		$89.525535^{+0.329477}_{-0.5350}$	$2457068.52877^{+0.002801}_{-0.002798}$
☐	CoRoT-1 b	06h48m19.17s	-03d06m07.70s	Turner et al. 2016	1.508976552±0.000000097	15.9±2.7	$0.0710^{+0.6200}_{-0.4800}$	$85.66^{+0.62}_{-0.48}$	2454138.303971±0.000036
☐	CoRoT-1 b	06h48m19.17s	-03d06m07.70s	Barge et al. 2008	1.5089557±0.0000064	16.70±0.90	0	85.1±0.5	2454159.4532±0.0001
☐	CoRoT-1 b	06h48m19.17s	-03d06m07.70s	Pont et al. 2010	1.5089557	16.6±0.7	0	86.7±0.6	2454524.6231±0.0002
☐	CoRoT-1 b	06h48m19.17s	-03d06m07.70s	ExoFOP-TESS TOI	1.5089635±0.0000089	20.5944			2459211.4788740±0.0011653
☐	CoRoT-1 b	06h48m19.17s	-03d06m07.70s	Bonomo et al. 2017	1.50896820±0.00000050	19.22±0.34	<0.036	85.10±0.50	2454138.32807±0.00006
☐	CoRoT-1 b	06h48m19.17s	-03d06m07.70s	Southworth 2011	1.5089686±0.0000006	17.39±0.73		84.42±0.31	
☐	CoRoT-1 b	06h48m19.17s	-03d06m07.70s	Ivshina & Winn 2022	1.508968772±0.000000083				2456268.99119±0.00012
☐	CoRoT-10 b	19h24m15.28s	+00d44m45.65s	Bonomo et al. 2017	13.24060±0.00020	10.9±0.8	0.524±0.018	88.55±0.20	2454273.3443±0.0012
☐	CoRoT-10 b	19h24m15.28s	+00d44m45.65s	Bonomo et al. 2010	13.2406±0.0002	10.87±0.78	0.53±0.04	88.55±0.2	2454273.3436±0.0012
☐	CoRoT-10 b	19h24m15.28s	+00d44m45.65s	Southworth 2011	13.2406±0.0002	10.55±0.95		88.57±0.18	
☐	CoRoT-11 b	18h42m44.95s	+05d56m15.57s	Bonomo et al. 2017	2.994325±0.000021	16.03±0.34	<0.36	83.17±0.15	2454690.49911±0.00016

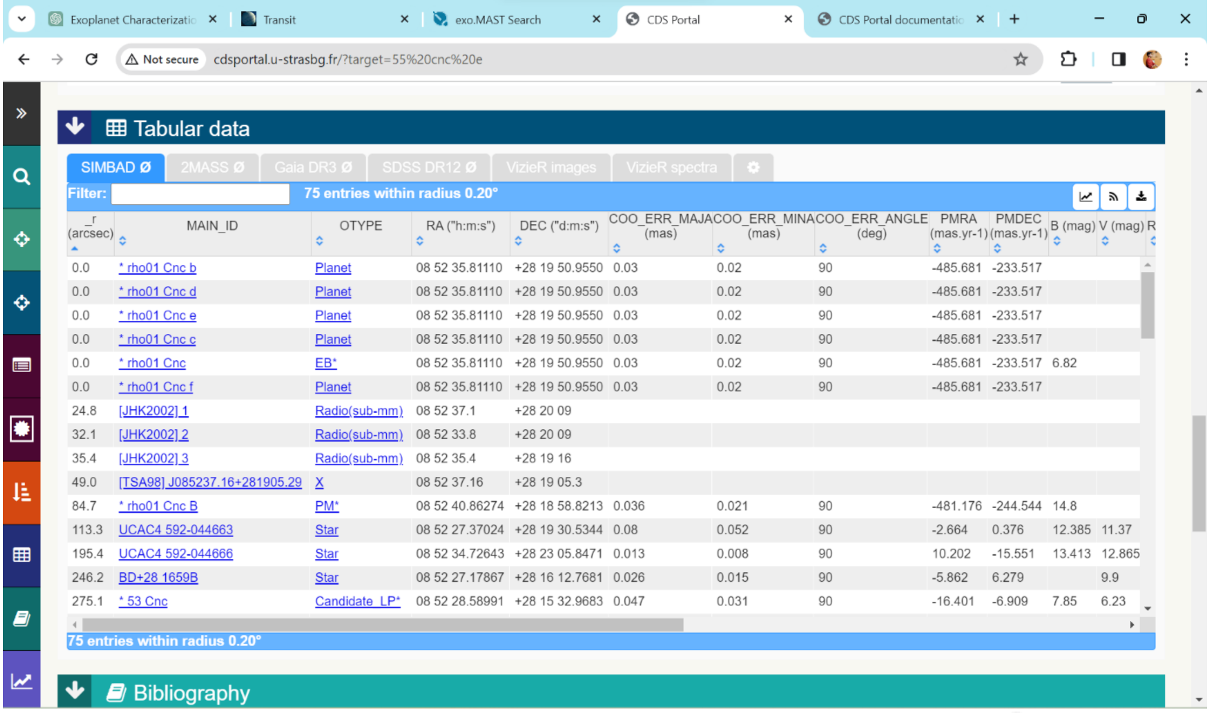
Showing records 34 to 49 of 32724 (32724 total) DOI 10.26133/NEA37



Transit Depth [%]	Transit Duration [hours]	Ratio of Semi-Major Axis to Stellar Radius	Ratio of Planet to Stellar Radius	Stellar Parameter Reference	Stellar Effective Temperature [K]	Stellar Radius [Solar Radius]	Stellar Surface Gravity [log10(cm/s**2)]	System Parameter Reference	V (Johnson) Magnitude	Ks (2MASS Magnitude
$0.0970_{-0.0170}$	4.236±0.029	$32.05_{-1.00}$	0.0311±0.0028	Wittrock et al. 2023	3678_{-88}	$0.744_{-0.021}$	$4.404_{-0.031}$	TICv8	8.81±0.10	4.529±0.020
0.0490±0.0025		55.80±3.30		Stassun et al. 2017	5766±99	1.08±0.06	4.50±0.08	TICv8	10.849±0.012	9.368±0.018
		55.8±3.3	$0.02204^{+0.00058}_{-0.00057}$	Espinoza et al. 2016	5766±99	$0.928^{+0.055}_{-0.040}$	4.50±0.08	TICv8	10.849±0.012	9.368±0.018
		$54.721028^{+5.823183}_{-12.995}$	$0.022586^{+0.001847}_{-0.00094}$	Mayo et al. 2018	5703.0±50.0	$0.956122^{+0.098585}_{-0.05}$	4.38±0.1	TICv8	10.849±0.012	9.368±0.018
			$0.1381^{+0.0007}_{-0.0015}$	Turner et al. 2016	5950		4.25	TICv8	13.623±0.114	12.149±0.02
$1.92654^{+0.0587370}_{-0.0578552}$		4.92±0.08	0.1388±0.0021	Barge et al. 2008	5950±150	1.11±0.05	4.25±0.30	TICv8	13.623±0.114	12.149±0.02
				Pont et al. 2010	5950±50	1.14±0.03		TICv8	13.623±0.114	12.149±0.02
1.31400000±0.00	2.373±0.245			ExoFOP-TESS TOI	5950	1.29	4.32551	TICv8	13.623±0.114	12.149±0.02
				Bonomo et al. 2017	6298±66	1.230±0.020		TICv8	13.623±0.114	12.149±0.02
		$4.8239^{+0.0470}_{-0.0461}$		Southworth 2011	5950±150	1.131±0.046	4.311±0.019	TICv8	13.623±0.114	12.149±0.02
								TICv8	13.623±0.114	12.149±0.02
				Bonomo et al. 2017	5075±75	0.790±0.050		TICv8	15.293±0.137	11.782±0.02
$1.61036^{+0.0978881}_{-0.094999}$	2.98±0.06	31.33±2.15	0.1269±0.0038	Bonomo et al. 2010	5075±75	0.79±0.05	4.65±0.10	TICv8	15.293±0.137	11.782±0.02
		$30.675^{+2.328}_{-2.022}$		Southworth 2011	5075±75	0.743±0.055	4.652±0.062	TICv8	15.293±0.137	11.782±0.02
				Bonomo et al. 2017	6440±120	1.370±0.030		TICv8	12.897±0.114	11.248±0.02

Showing records 34 to 49 of 32724 (32724 total) DOI 10.26133/NEA37

55 Cnc e from CDS Portal

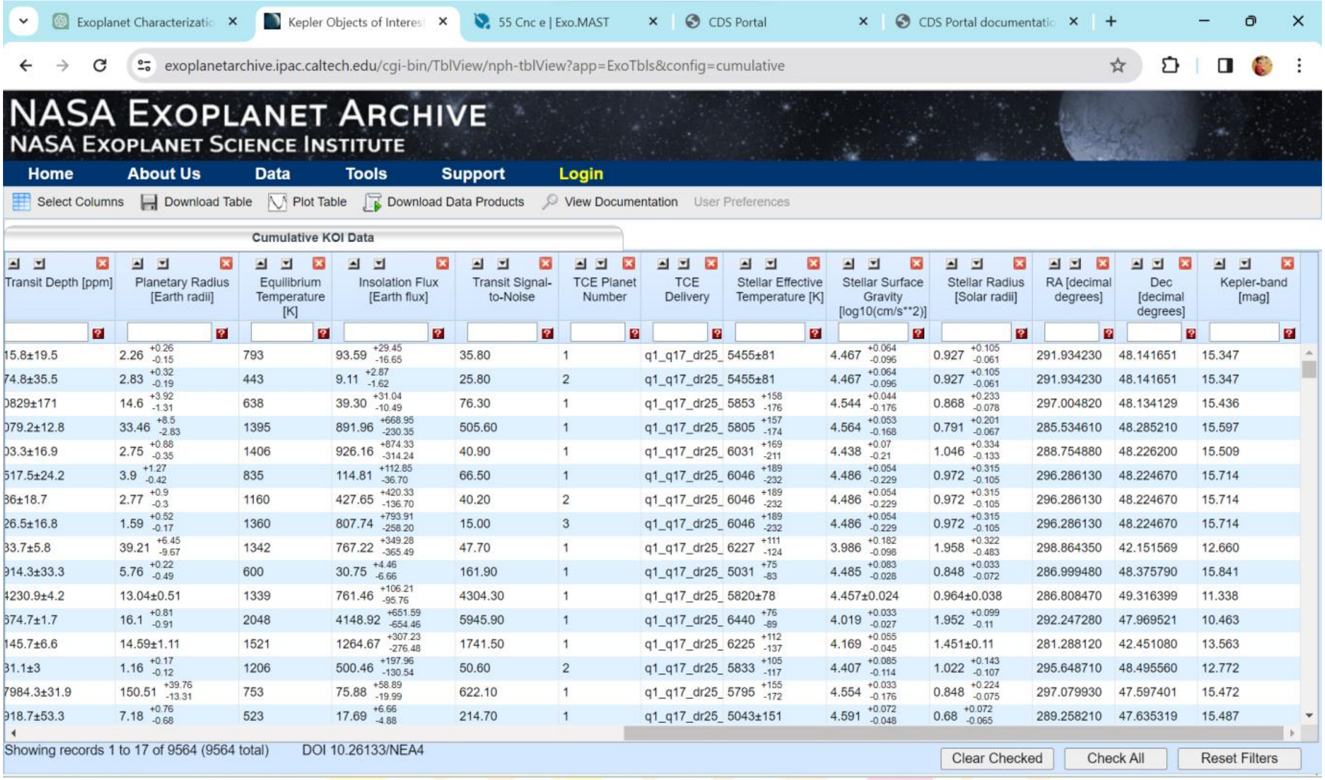


75 entries within radius 0.20°

_r (arcsec)	MAIN_ID	OTYPE	RA ("h:m:s")	DEC ("d:m:s")	COO_ERR_MAJA (mas)	COO_ERR_MINA (mas)	COO_ERR_ANGLE (deg)	PMRA (mas.yr-1)	PMDEC (mas.yr-1)	B (mag)	V (mag)
0.0	* rho01 Cnc b	Planet	08 52 35.81110	+28 19 50.9550	0.03	0.02	90	-485.681	-233.517		
0.0	* rho01 Cnc d	Planet	08 52 35.81110	+28 19 50.9550	0.03	0.02	90	-485.681	-233.517		
0.0	* rho01 Cnc e	Planet	08 52 35.81110	+28 19 50.9550	0.03	0.02	90	-485.681	-233.517		
0.0	* rho01 Cnc c	Planet	08 52 35.81110	+28 19 50.9550	0.03	0.02	90	-485.681	-233.517		
0.0	* rho01 Cnc	EB*	08 52 35.81110	+28 19 50.9550	0.03	0.02	90	-485.681	-233.517	6.82	
0.0	* rho01 Cnc f	Planet	08 52 35.81110	+28 19 50.9550	0.03	0.02	90	-485.681	-233.517		
24.8	[JHK2002] 1	Radio(sub-mm)	08 52 37.1	+28 20 09							
32.1	[JHK2002] 2	Radio(sub-mm)	08 52 33.8	+28 20 09							
35.4	[JHK2002] 3	Radio(sub-mm)	08 52 35.4	+28 19 16							
49.0	[TSA98] J085237.16+281905.29	X	08 52 37.16	+28 19 05.3							
84.7	* rho01 Cnc B	PM*	08 52 40.86274	+28 18 58.8213	0.036	0.021	90	-481.176	-244.544	14.8	
113.3	UCAC4 592-044663	Star	08 52 27.37024	+28 19 30.5344	0.08	0.052	90	-2.664	0.376	12.385	11.37
195.4	UCAC4 592-044666	Star	08 52 34.72643	+28 23 05.8471	0.013	0.008	90	10.202	-15.551	13.413	12.865
246.2	BD+28 1659B	Star	08 52 27.17867	+28 16 12.7681	0.026	0.015	90	-5.862	6.279		9.9
275.1	* 53 Cnc	Candidate_LP*	08 52 28.58991	+28 15 32.9683	0.047	0.031	90	-16.401	-6.909	7.85	6.23

75 entries within radius 0.20°

Cumulative Kepler Objects of Interest Table with confirmed sites



Cumulative KOI Data

Transit Depth [ppm]	Planetary Radius [Earth radii]	Equilibrium Temperature [K]	Insolation Flux [Earth flux]	Transit Signal-to-Noise	TCE Planet Number	TCE Delivery	Stellar Effective Temperature [K]	Stellar Surface Gravity [log10(cm/s**2)]	Stellar Radius [Solar radii]	RA [decimal degrees]	Dec [decimal degrees]	Kepler-band [mag]
15.8±19.5	$2.26^{+0.26}_{-0.15}$	793	$93.59^{+29.45}_{-16.65}$	35.80	1	q1_q17_dr25_	5455±81	$4.467^{+0.064}_{-0.096}$	$0.927^{+0.105}_{-0.061}$	291.934230	48.141651	15.347
74.8±35.5	$2.83^{+0.32}_{-0.19}$	443	$9.11^{+2.87}_{-1.62}$	25.80	2	q1_q17_dr25_	5455±81	$4.467^{+0.064}_{-0.096}$	$0.927^{+0.105}_{-0.061}$	291.934230	48.141651	15.347
0829±171	$14.6^{+3.92}_{-1.31}$	638	$39.30^{+31.04}_{-10.49}$	76.30	1	q1_q17_dr25_	5853^{+158}_{-176}	$4.544^{+0.044}_{-0.176}$	$0.868^{+0.233}_{-0.078}$	297.004820	48.134129	15.436
079.2±12.8	$33.46^{+8.5}_{-2.83}$	1395	$891.96^{+668.95}_{-230.35}$	505.60	1	q1_q17_dr25_	5805^{+157}_{-174}	$4.564^{+0.053}_{-0.168}$	$0.791^{+0.201}_{-0.067}$	285.534610	48.285210	15.597
03.3±16.9	$2.75^{+0.88}_{-0.35}$	1406	$926.16^{+874.33}_{-314.24}$	40.90	1	q1_q17_dr25_	6031^{+169}_{-211}	$4.438^{+0.07}_{-0.21}$	$1.046^{+0.334}_{-0.133}$	288.754880	48.226200	15.509
517.5±24.2	$3.9^{+1.27}_{-0.42}$	835	$114.81^{+112.85}_{-36.70}$	66.50	1	q1_q17_dr25_	6046^{+189}_{-232}	$4.486^{+0.054}_{-0.229}$	$0.972^{+0.315}_{-0.105}$	296.286130	48.224670	15.714
86±18.7	$2.77^{+0.9}_{-0.3}$	1160	$427.65^{+420.33}_{-136.70}$	40.20	2	q1_q17_dr25_	6046^{+189}_{-232}	$4.486^{+0.054}_{-0.229}$	$0.972^{+0.315}_{-0.105}$	296.286130	48.224670	15.714
26.5±16.8	$1.59^{+0.52}_{-0.17}$	1360	$807.74^{+793.91}_{-258.20}$	15.00	3	q1_q17_dr25_	6046^{+189}_{-232}	$4.486^{+0.054}_{-0.229}$	$0.972^{+0.315}_{-0.105}$	296.286130	48.224670	15.714
33.7±5.8	$39.21^{+6.45}_{-9.67}$	1342	$767.22^{+349.28}_{-365.49}$	47.70	1	q1_q17_dr25_	6227^{+111}_{-124}	$3.986^{+0.182}_{-0.098}$	$1.958^{+0.322}_{-0.483}$	298.864350	42.151569	12.660
914.3±33.3	$5.76^{+0.22}_{-0.49}$	600	$30.75^{+4.46}_{-6.66}$	161.90	1	q1_q17_dr25_	5031^{+75}_{-83}	$4.485^{+0.083}_{-0.028}$	$0.848^{+0.033}_{-0.072}$	286.999480	48.375790	15.841
4230.9±4.2	13.04±0.51	1339	$761.46^{+106.21}_{-95.76}$	4304.30	1	q1_q17_dr25_	5820±78	4.457±0.024	0.964±0.038	286.808470	49.316399	11.338
674.7±1.7	$16.1^{+0.81}_{-0.91}$	2048	$4148.92^{+651.59}_{-654.46}$	5945.90	1	q1_q17_dr25_	6440^{+76}_{-89}	$4.019^{+0.033}_{-0.027}$	$1.952^{+0.099}_{-0.11}$	292.247280	47.969521	10.463
145.7±6.6	14.59±1.11	1521	$1264.67^{+307.23}_{-276.48}$	1741.50	1	q1_q17_dr25_	6225^{+112}_{-137}	$4.169^{+0.055}_{-0.045}$	1.451±0.11	281.288120	42.451080	13.563
31.1±3	$1.16^{+0.17}_{-0.12}$	1206	$500.46^{+197.96}_{-130.54}$	50.60	2	q1_q17_dr25_	5833^{+105}_{-117}	$4.407^{+0.085}_{-0.114}$	$1.022^{+0.143}_{-0.107}$	295.648710	48.495560	12.772
7984.3±31.9	$150.51^{+39.76}_{-13.31}$	753	$75.88^{+58.89}_{-19.99}$	622.10	1	q1_q17_dr25_	5795^{+155}_{-172}	$4.554^{+0.033}_{-0.176}$	$0.848^{+0.224}_{-0.075}$	297.079930	47.597401	15.472
918.7±53.3	$7.18^{+0.76}_{-0.68}$	523	$17.69^{+6.66}_{-4.88}$	214.70	1	q1_q17_dr25_	5043±151	$4.591^{+0.072}_{-0.048}$	$0.68^{+0.072}_{-0.065}$	289.258210	47.635319	15.487

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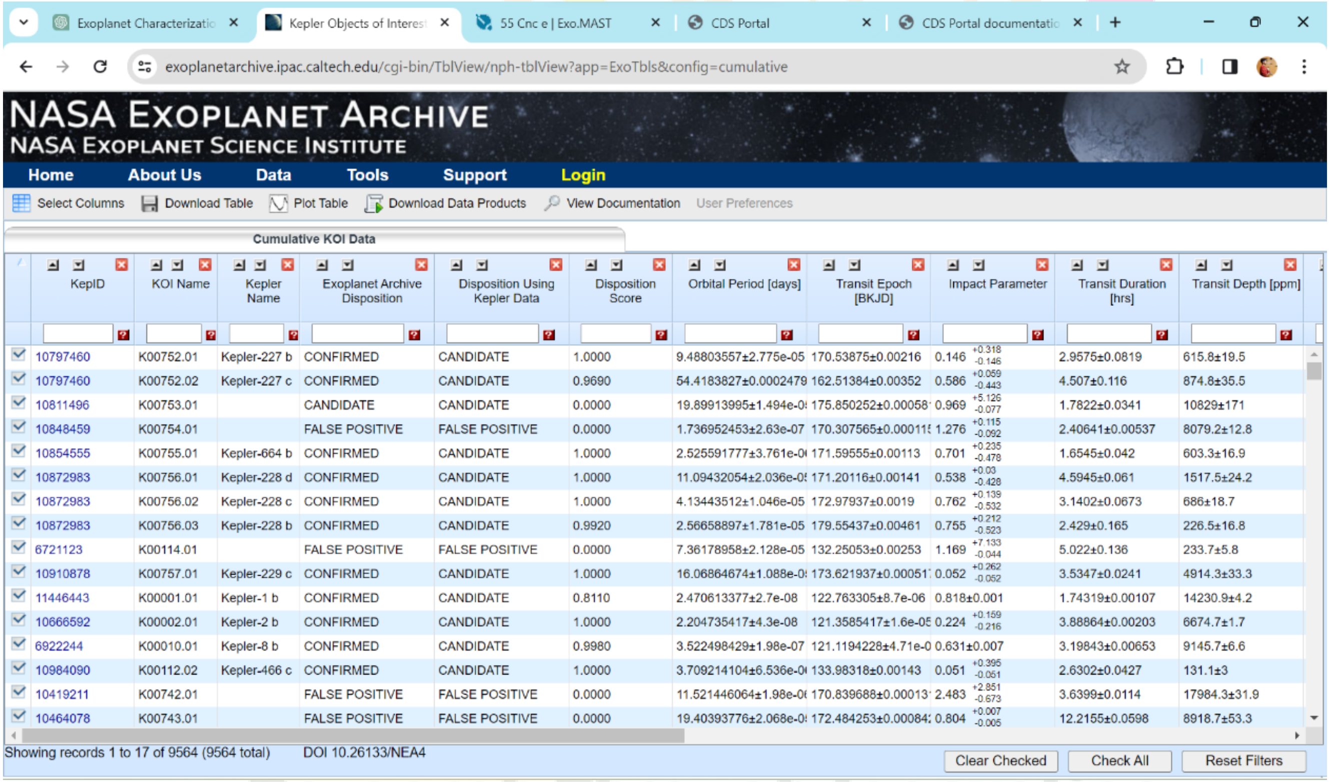
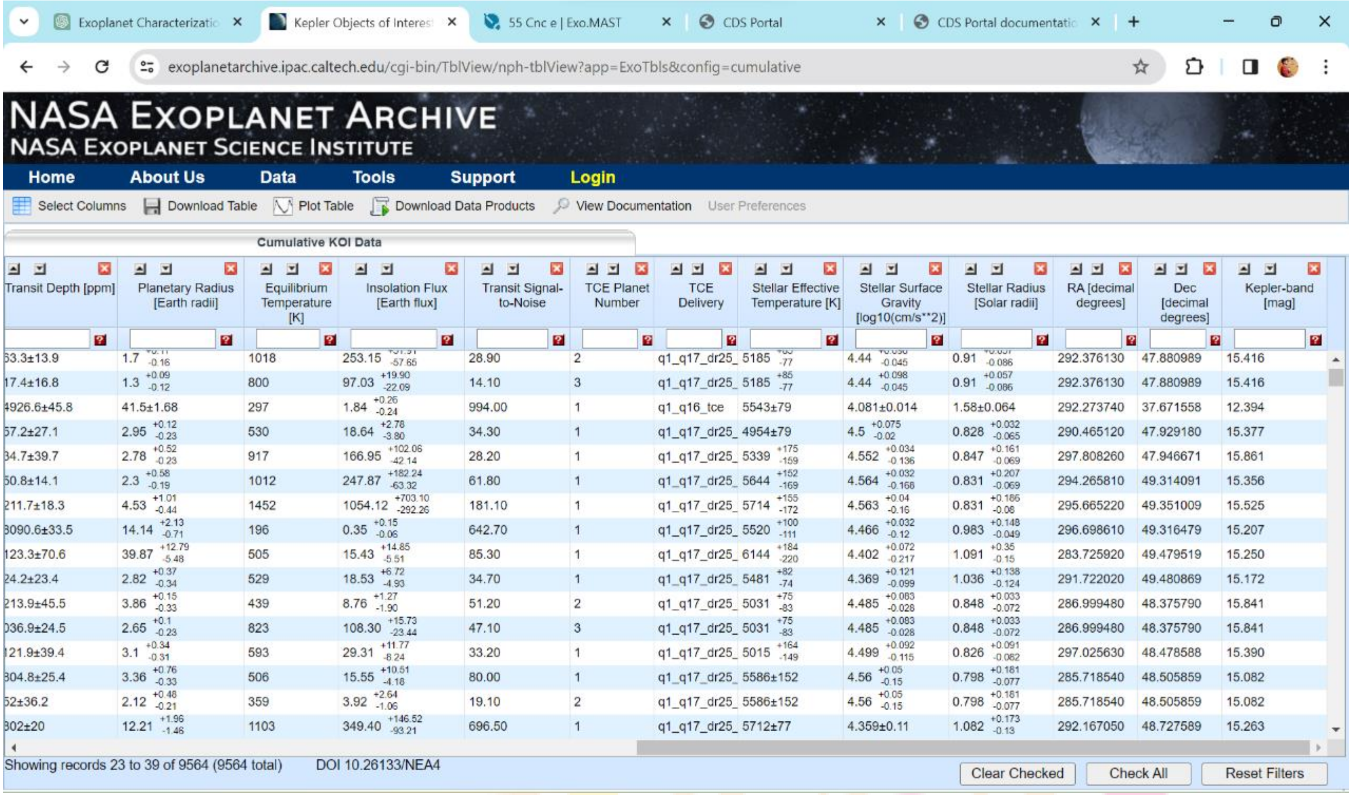


Cumulative KOI Data

	KepID	KOI Name	Kepler Name	Exoplanet Archive Disposition	Disposition Using Kepler Data	Disposition Score	Orbital Period [days]	Transit Epoch [BKJD]	Impact Parameter	Transit Duration [hrs]	Transit Depth [ppm]
☑	10797460	K00752.01	Kepler-227 b	CONFIRMED	CANDIDATE	1.0000	9.48803557±2.775e-05	170.53875±0.00216	$0.146^{+0.318}_{-0.146}$	2.9575±0.0819	615.8±19.5
☑	10797460	K00752.02	Kepler-227 c	CONFIRMED	CANDIDATE	0.9690	54.4183827±0.0002479	162.51384±0.00352	$0.586^{+0.059}_{-0.443}$	4.507±0.116	874.8±35.5
☑	10811496	K00753.01		CANDIDATE	CANDIDATE	0.0000	19.89913995±1.494e-0	175.850252±0.00058	$0.969^{+5.126}_{-0.077}$	1.7822±0.0341	10829±171
☑	10848459	K00754.01		FALSE POSITIVE	FALSE POSITIVE	0.0000	1.736952453±2.63e-07	170.307565±0.00011	$1.276^{+0.115}_{-0.092}$	2.40641±0.00537	8079.2±12.8
☑	10854555	K00755.01	Kepler-664 b	CONFIRMED	CANDIDATE	1.0000	2.525591777±3.761e-0	171.59555±0.00113	$0.701^{+0.235}_{-0.478}$	1.6545±0.042	603.3±16.9
☑	10872983	K00756.01	Kepler-228 d	CONFIRMED	CANDIDATE	1.0000	11.09432054±2.036e-0	171.20116±0.00141	$0.538^{+0.03}_{-0.428}$	4.5945±0.061	1517.5±24.2
☑	10872983	K00756.02	Kepler-228 c	CONFIRMED	CANDIDATE	1.0000	4.13443512±1.046e-05	172.97937±0.0019	$0.762^{+0.139}_{-0.532}$	3.1402±0.0673	686±18.7
☑	10872983	K00756.03	Kepler-228 b	CONFIRMED	CANDIDATE	0.9920	2.56658897±1.781e-05	179.55437±0.00461	$0.755^{+0.212}_{-0.523}$	2.429±0.165	226.5±16.8
☑	6721123	K00114.01		FALSE POSITIVE	FALSE POSITIVE	0.0000	7.36178958±2.128e-05	132.25053±0.00253	$1.169^{+7.133}_{-0.044}$	5.022±0.136	233.7±5.8
☑	10910878	K00757.01	Kepler-229 c	CONFIRMED	CANDIDATE	1.0000	16.06864674±1.088e-0	173.621937±0.00051	$0.052^{+0.262}_{-0.052}$	3.5347±0.0241	4914.3±33.3
☑	11446443	K00001.01	Kepler-1 b	CONFIRMED	CANDIDATE	0.8110	2.470613377±2.7e-08	122.763305±8.7e-06	0.818±0.001	1.74319±0.00107	14230.9±4.2
☑	10666592	K00002.01	Kepler-2 b	CONFIRMED	CANDIDATE	1.0000	2.204735417±4.3e-08	121.3585417±1.6e-05	$0.224^{+0.159}_{-0.216}$	3.88864±0.00203	6674.7±1.7
☑	6922244	K00010.01	Kepler-8 b	CONFIRMED	CANDIDATE	0.9980	3.522498429±1.98e-07	121.1194228±4.71e-0	0.631±0.007	3.19843±0.00653	9145.7±6.6
☑	10984090	K00112.02	Kepler-466 c	CONFIRMED	CANDIDATE	1.0000	3.709214104±6.536e-0	133.98318±0.00143	$0.051^{+0.395}_{-0.051}$	2.6302±0.0427	131.1±3
☑	10419211	K00742.01		FALSE POSITIVE	FALSE POSITIVE	0.0000	11.521446064±1.98e-0	170.839688±0.00013	$2.483^{+2.851}_{-0.673}$	3.6399±0.0114	17984.3±31.9
☑	10464078	K00743.01		FALSE POSITIVE	FALSE POSITIVE	0.0000	19.40393776±2.068e-0	172.484253±0.00084	$0.804^{+0.007}_{-0.005}$	12.2155±0.0598	8918.7±53.3

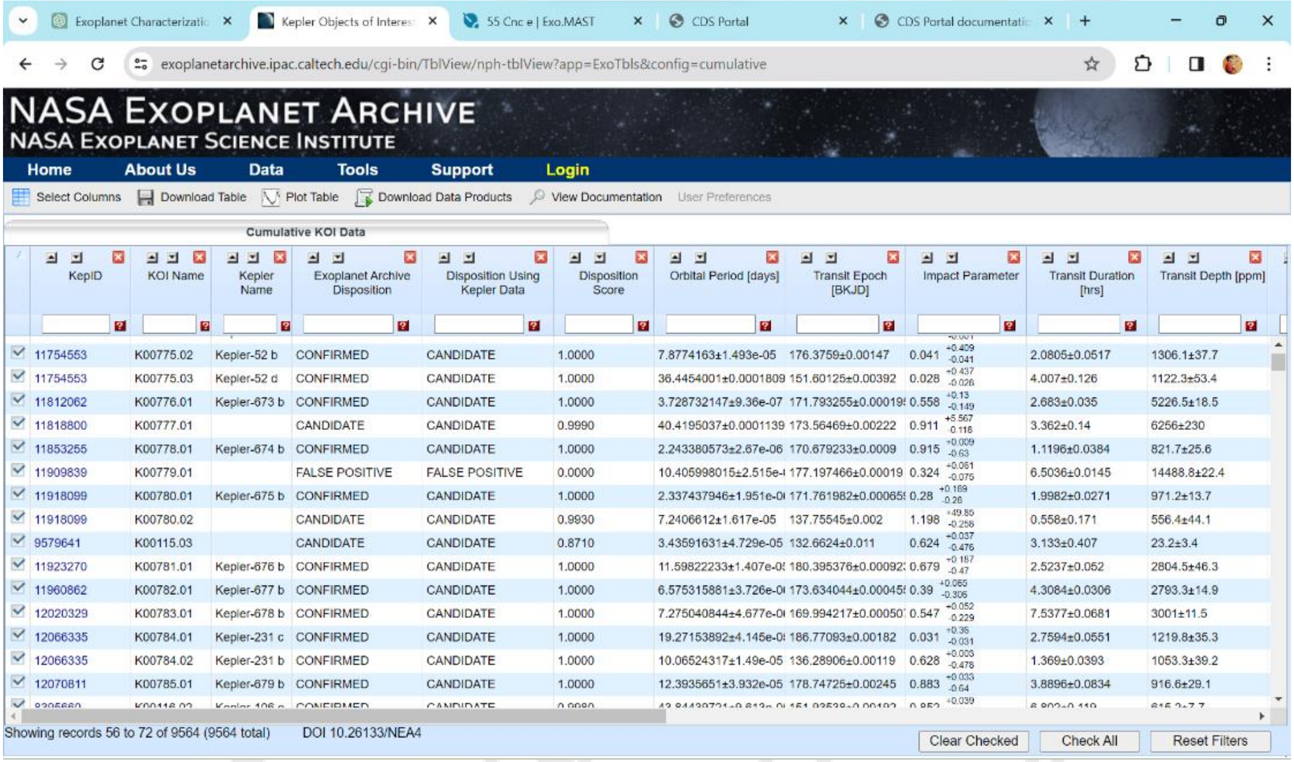
Showing records 1 to 17 of 9564 (9564 total) DOI 10.26133/NEA4



Cumulative KOI Data

Transit Depth [ppm]	Planetary Radius [Earth radii]	Equilibrium Temperature [K]	Insolation Flux [Earth flux]	Transit Signal-to-Noise	TCE Planet Number	TCE Delivery	Stellar Effective Temperature [K]	Stellar Surface Gravity [log10(cm/s**2)]	Stellar Radius [Solar radii]	RA [decimal degrees]	Dec [decimal degrees]	Kepler-band [mag]
53.3±13.9	$1.7^{+0.11}_{-0.16}$	1018	$253.15^{+51.91}_{-57.65}$	28.90	2	q1_q17_dr25_	5185^{+85}_{-77}	$4.44^{+0.098}_{-0.045}$	$0.91^{+0.057}_{-0.086}$	292.376130	47.880989	15.416
17.4±16.8	$1.3^{+0.09}_{-0.12}$	800	$97.03^{+19.90}_{-22.09}$	14.10	3	q1_q17_dr25_	5185^{+85}_{-77}	$4.44^{+0.098}_{-0.045}$	$0.91^{+0.057}_{-0.086}$	292.376130	47.880989	15.416
4926.6±45.8	41.5±1.68	297	$1.84^{+0.26}_{-0.24}$	994.00	1	q1_q16_tce	5543±79	4.081±0.014	1.58±0.064	292.273740	37.671558	12.394
57.2±27.1	$2.95^{+0.12}_{-0.23}$	530	$18.64^{+2.78}_{-3.80}$	34.30	1	q1_q17_dr25_	4954±79	$4.5^{+0.075}_{-0.02}$	$0.828^{+0.032}_{-0.065}$	290.465120	47.929180	15.377
34.7±39.7	$2.78^{+0.52}_{-0.23}$	917	$166.95^{+102.06}_{-42.14}$	28.20	1	q1_q17_dr25_	5339^{+175}_{-159}	$4.552^{+0.034}_{-0.136}$	$0.847^{+0.161}_{-0.069}$	297.808260	47.946671	15.861
50.8±14.1	$2.3^{+0.58}_{-0.19}$	1012	$247.87^{+182.24}_{-63.32}$	61.80	1	q1_q17_dr25_	5644^{+152}_{-169}	$4.564^{+0.032}_{-0.168}$	$0.831^{+0.207}_{-0.069}$	294.265810	49.314091	15.356
211.7±18.3	$4.53^{+1.01}_{-0.44}$	1452	$1054.12^{+703.10}_{-292.26}$	181.10	1	q1_q17_dr25_	5714^{+155}_{-172}	$4.563^{+0.04}_{-0.16}$	$0.831^{+0.186}_{-0.08}$	295.665220	49.351009	15.525
3090.6±33.5	$14.14^{+2.13}_{-0.71}$	196	$0.35^{+0.15}_{-0.06}$	642.70	1	q1_q17_dr25_	5520^{+100}_{-111}	$4.466^{+0.032}_{-0.12}$	$0.983^{+0.148}_{-0.049}$	296.698610	49.316479	15.207
123.3±70.6	$39.87^{+12.79}_{-5.48}$	505	$15.43^{+14.85}_{-5.51}$	85.30	1	q1_q17_dr25_	6144^{+184}_{-220}	$4.402^{+0.072}_{-0.217}$	$1.091^{+0.35}_{-0.15}$	283.725920	49.479519	15.250
24.2±23.4	$2.82^{+0.37}_{-0.34}$	529	$18.53^{+6.72}_{-4.93}$	34.70	1	q1_q17_dr25_	5481^{+82}_{-74}	$4.369^{+0.121}_{-0.099}$	$1.036^{+0.138}_{-0.124}$	291.722020	49.480869	15.172
213.9±45.5	$3.86^{+0.15}_{-0.33}$	439	$8.76^{+1.27}_{-1.90}$	51.20	2	q1_q17_dr25_	5031^{+75}_{-83}	$4.485^{+0.083}_{-0.028}$	$0.848^{+0.033}_{-0.072}$	286.999480	48.375790	15.841
036.9±24.5	$2.65^{+0.1}_{-0.23}$	823	$108.30^{+15.73}_{-23.44}$	47.10	3	q1_q17_dr25_	5031^{+75}_{-83}	$4.485^{+0.083}_{-0.028}$	$0.848^{+0.033}_{-0.072}$	286.999480	48.375790	15.841
121.9±39.4	$3.1^{+0.34}_{-0.31}$	593	$29.31^{+11.77}_{-8.24}$	33.20	1	q1_q17_dr25_	5015^{+164}_{-149}	$4.499^{+0.092}_{-0.115}$	$0.826^{+0.091}_{-0.082}$	297.025630	48.478588	15.390
304.8±25.4	$3.36^{+0.76}_{-0.33}$	506	$15.55^{+10.51}_{-4.18}$	80.00	1	q1_q17_dr25_	5586±152	$4.56^{+0.05}_{-0.15}$	$0.798^{+0.181}_{-0.077}$	285.718540	48.505859	15.082
52±36.2	$2.12^{+0.48}_{-0.21}$	359	$3.92^{+2.64}_{-1.06}$	19.10	2	q1_q17_dr25_	5586±152	$4.56^{+0.05}_{-0.15}$	$0.798^{+0.181}_{-0.077}$	285.718540	48.505859	15.082
302±20	$12.21^{+1.96}_{-1.46}$	1103	$349.40^{+146.52}_{-93.21}$	696.50	1	q1_q17_dr25_	5712±77	4.359±0.11	$1.082^{+0.173}_{-0.13}$	292.167050	48.727589	15.263

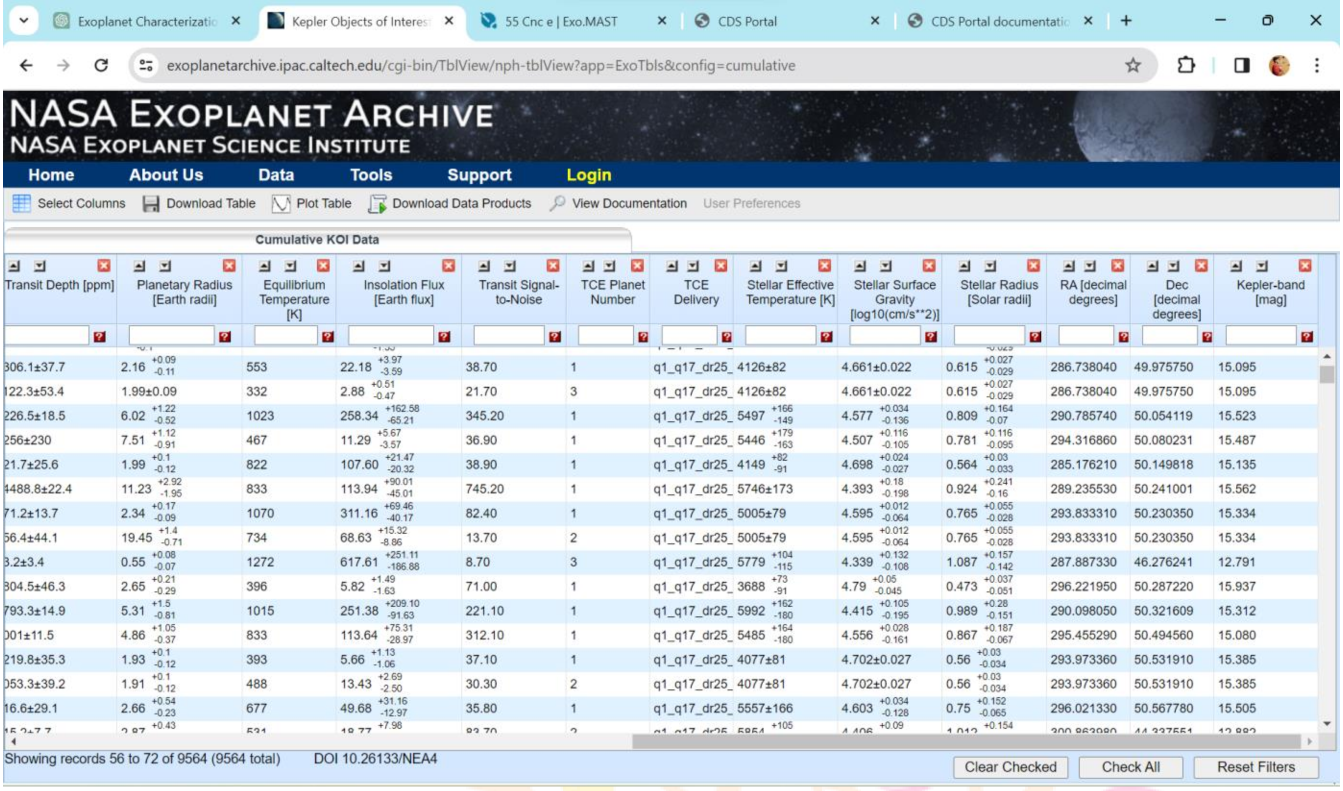
Showing records 23 to 39 of 9564 (9564 total) DOI 10.26133/NEA4



Cumulative KOI Data

	KepID	KOI Name	Kepler Name	Exoplanet Archive Disposition	Disposition Using Kepler Data	Disposition Score	Orbital Period [days]	Transit Epoch [BKJD]	Impact Parameter	Transit Duration [hrs]	Transit Depth [ppm]
☑	11754553	K00775.02	Kepler-52 b	CONFIRMED	CANDIDATE	1.0000	7.8774163±1.493e-05	176.3759±0.00147	$0.041^{+0.409}_{-0.041}$	2.0805±0.0517	1306.1±37.7
☑	11754553	K00775.03	Kepler-52 d	CONFIRMED	CANDIDATE	1.0000	36.4454001±0.0001809	151.60125±0.00392	$0.028^{+0.437}_{-0.028}$	4.007±0.126	1122.3±53.4
☑	11812062	K00776.01	Kepler-673 b	CONFIRMED	CANDIDATE	1.0000	3.728732147±9.36e-07	171.793255±0.00019	$0.558^{+0.13}_{-0.149}$	2.683±0.035	5226.5±18.5
☑	11818800	K00777.01		CANDIDATE	CANDIDATE	0.9990	40.4195037±0.0001139	173.56469±0.00222	$0.911^{+5.567}_{-0.118}$	3.362±0.14	6256±230
☑	11853255	K00778.01	Kepler-674 b	CONFIRMED	CANDIDATE	1.0000	2.243380573±2.67e-06	170.679233±0.0009	$0.915^{+0.009}_{-0.63}$	1.1196±0.0384	821.7±25.6
☑	11909839	K00779.01		FALSE POSITIVE	FALSE POSITIVE	0.0000	10.405998015±2.515e-	177.197466±0.00019	$0.324^{+0.061}_{-0.075}$	6.5036±0.0145	14488.8±22.4
☑	11918099	K00780.01	Kepler-675 b	CONFIRMED	CANDIDATE	1.0000	2.337437946±1.951e-0	171.761982±0.00065	$0.28^{+0.189}_{-0.28}$	1.9982±0.0271	971.2±13.7
☑	11918099	K00780.02		CANDIDATE	CANDIDATE	0.9930	7.2406612±1.617e-05	137.75545±0.002	$1.198^{+49.85}_{-0.258}$	0.558±0.171	556.4±44.1
☑	9579641	K00115.03		CANDIDATE	CANDIDATE	0.8710	3.43591631±4.729e-05	132.6624±0.011	$0.624^{+0.037}_{-0.476}$	3.133±0.407	23.2±3.4
☑	11923270	K00781.01	Kepler-676 b	CONFIRMED	CANDIDATE	1.0000	11.59822233±1.407e-0	180.395376±0.00092	$0.679^{+0.187}_{-0.47}$	2.5237±0.052	2804.5±46.3
☑	11960862	K00782.01	Kepler-677 b	CONFIRMED	CANDIDATE	1.0000	6.575315881±3.726e-0	173.634044±0.00045	$0.39^{+0.065}_{-0.306}$	4.3084±0.0306	2793.3±14.9
☑	12020329	K00783.01	Kepler-678 b	CONFIRMED	CANDIDATE	1.0000	7.275040844±4.677e-0	169.994217±0.00050	$0.547^{+0.052}_{-0.229}$	7.5377±0.0681	3001±11.5
☑	12066335	K00784.01	Kepler-231 c	CONFIRMED	CANDIDATE	1.0000	19.27153892±4.145e-0	186.77093±0.00182	$0.031^{+0.36}_{-0.031}$	2.7594±0.0551	1219.8±35.3
☑	12066335	K00784.02	Kepler-231 b	CONFIRMED	CANDIDATE	1.0000	10.06524317±1.49e-05	136.28906±0.00119	$0.628^{+0.003}_{-0.478}$	1.369±0.0393	1053.3±39.2
☑	12070811	K00785.01	Kepler-679 b	CONFIRMED	CANDIDATE	1.0000	12.3935651±3.932e-05	178.74725±0.00245	$0.883^{+0.033}_{-0.64}$	3.8896±0.0834	916.6±29.1

Showing records 56 to 72 of 9564 (9564 total) DOI 10.26133/NEA4



Cumulative KOI Data

Transit Depth [ppm]	Planetary Radius [Earth radii]	Equilibrium Temperature [K]	Insolation Flux [Earth flux]	Transit Signal-to-Noise	TCE Planet Number	TCE Delivery	Stellar Effective Temperature [K]	Stellar Surface Gravity [log10(cm/s**2)]	Stellar Radius [Solar radii]	RA [decimal degrees]	Dec [decimal degrees]	Kepler-band [mag]
306.1±37.7	$2.16^{+0.09}_{-0.11}$	553	$22.18^{+3.97}_{-3.59}$	38.70	1	q1_q17_dr25_	4126±82	4.661±0.022	$0.615^{+0.027}_{-0.029}$	286.738040	49.975750	15.095
122.3±53.4	1.99±0.09	332	$2.88^{+0.51}_{-0.47}$	21.70	3	q1_q17_dr25_	4126±82	4.661±0.022	$0.615^{+0.027}_{-0.029}$	286.738040	49.975750	15.095
226.5±18.5	$6.02^{+1.22}_{-0.52}$	1023	$258.34^{+162.58}_{-65.21}$	345.20	1	q1_q17_dr25_	5497^{+166}_{-149}	$4.577^{+0.034}_{-0.136}$	$0.809^{+0.164}_{-0.07}$	290.785740	50.054119	15.523
256±230	$7.51^{+1.12}_{-0.91}$	467	$11.29^{+5.67}_{-3.57}$	36.90	1	q1_q17_dr25_	5446^{+179}_{-163}	$4.507^{+0.116}_{-0.105}$	$0.781^{+0.116}_{-0.095}$	294.316860	50.080231	15.487
21.7±25.6	$1.99^{+0.1}_{-0.12}$	822	$107.60^{+21.47}_{-20.32}$	38.90	1	q1_q17_dr25_	4149^{+82}_{-91}	$4.698^{+0.024}_{-0.027}$	$0.564^{+0.03}_{-0.033}$	285.176210	50.149818	15.135
4488.8±22.4	$11.23^{+2.92}_{-1.95}$	833	$113.94^{+90.01}_{-45.01}$	745.20	1	q1_q17_dr25_	5746±173	$4.393^{+0.18}_{-0.198}$	$0.924^{+0.241}_{-0.16}$	289.235530	50.241001	15.562
71.2±13.7	$2.34^{+0.17}_{-0.09}$	1070	$311.16^{+69.46}_{-40.17}$	82.40	1	q1_q17_dr25_	5005±79	$4.595^{+0.012}_{-0.064}$	$0.765^{+0.055}_{-0.028}$	293.833310	50.230350	15.334
56.4±44.1	$19.45^{+1.4}_{-0.71}$	734	$68.63^{+15.32}_{-8.86}$	13.70	2	q1_q17_dr25_	5005±79	$4.595^{+0.012}_{-0.064}$	$0.765^{+0.055}_{-0.028}$	293.833310	50.230350	15.334
3.2±3.4	$0.55^{+0.08}_{-0.07}$	1272	$617.61^{+251.11}_{-186.88}$	8.70	3	q1_q17_dr25_	5779^{+104}_{-115}	$4.339^{+0.132}_{-0.108}$	$1.087^{+0.157}_{-0.142}$	287.887330	46.276241	12.791
304.5±46.3	$2.65^{+0.21}_{-0.29}$	396	$5.82^{+1.49}_{-1.63}$	71.00	1	q1_q17_dr25_	3688^{+73}_{-91}	$4.79^{+0.05}_{-0.045}$	$0.473^{+0.037}_{-0.051}$	296.221950	50.287220	15.937
793.3±14.9	$5.31^{+1.5}_{-0.81}$	1015	$251.38^{+209.10}_{-91.63}$	221.10	1	q1_q17_dr25_	5992^{+162}_{-180}	$4.415^{+0.105}_{-0.195}$	$0.989^{+0.28}_{-0.151}$	290.098050	50.321609	15.312
001±11.5	$4.86^{+1.05}_{-0.37}$	833	$113.64^{+75.31}_{-28.97}$	312.10	1	q1_q17_dr25_	5485^{+164}_{-180}	$4.556^{+0.028}_{-0.161}$	$0.867^{+0.187}_{-0.067}$	295.455290	50.494560	15.080
219.8±35.3	$1.93^{+0.1}_{-0.12}$	393	$5.66^{+1.13}_{-1.06}$	37.10	1	q1_q17_dr25_	4077±81	4.702±0.027	$0.56^{+0.03}_{-0.034}$	293.973360	50.531910	15.385
053.3±39.2	$1.91^{+0.1}_{-0.12}$	488	$13.43^{+2.69}_{-2.50}$	30.30	2	q1_q17_dr25_	4077±81	4.702±0.027	$0.56^{+0.03}_{-0.034}$	293.973360	50.531910	15.385
16.6±29.1	$2.66^{+0.54}_{-0.23}$	677	$49.68^{+31.16}_{-12.97}$	35.80	1	q1_q17_dr25_	5557±166	$4.603^{+0.034}_{-0.128}$	$0.75^{+0.152}_{-0.065}$	296.021330	50.567780	15.505

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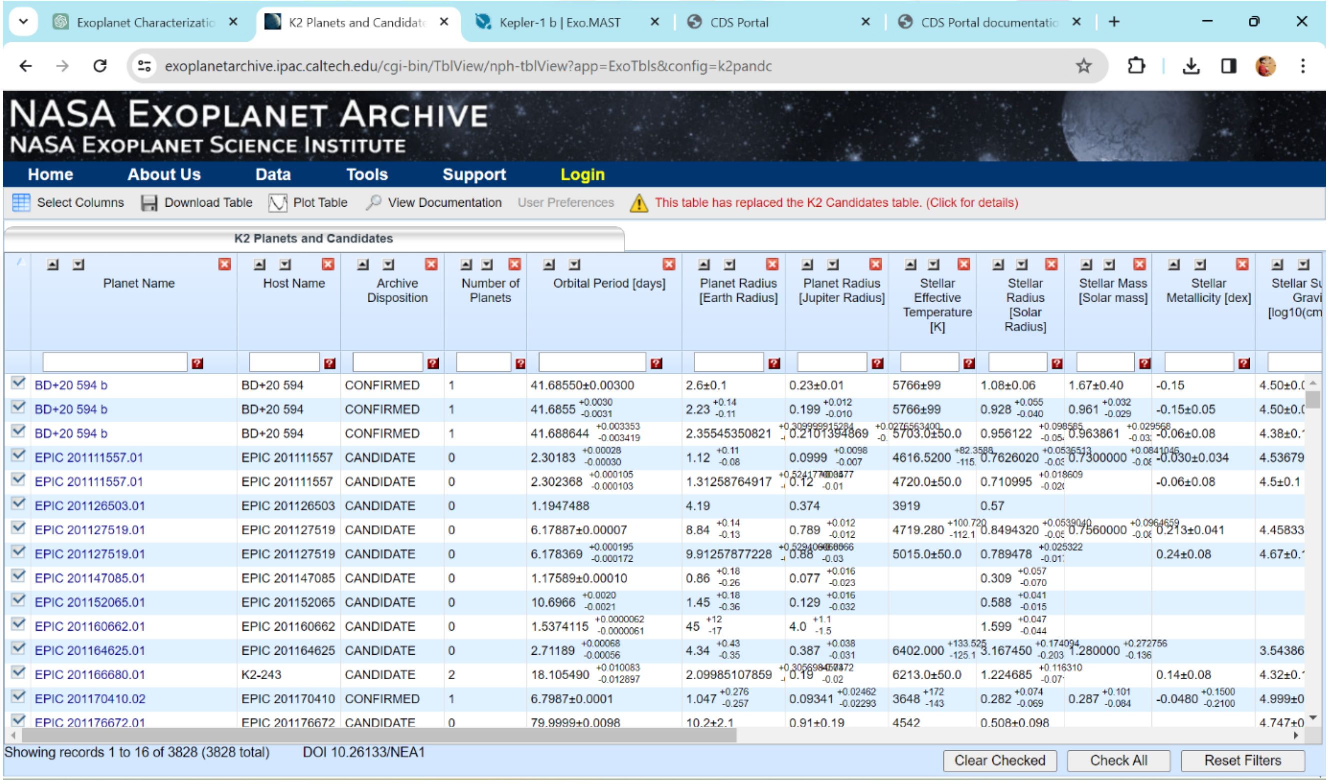
Targeted K2 Exoplanets



This table has replaced the K2 Candidates table. (Click for details)

K2 Planets and Candidates

	Planet Name	Host Name	Archive Disposition	Number of Planets	Orbital Period [days]	Planet Radius [Earth Radius]	Planet Radius [Jupiter Radius]	Stellar Effective Temperature [K]	Stellar Radius [Solar Radius]	Stellar Mass [Solar mass]	Stellar Metallicity [dex]	Stellar Su Gravi [log10(cm
☑	BD+20 594 b	BD+20 594	CONFIRMED	1	41.68550±0.00300	2.6±0.1	0.23±0.01	5766±99	1.08±0.06	1.67±0.40	-0.15	4.50±0.(
☑	BD+20 594 b	BD+20 594	CONFIRMED	1	$41.6855^{+0.0030}_{-0.0031}$	$2.23^{+0.14}_{-0.11}$	$0.199^{+0.012}_{-0.010}$	5766±99	$0.928^{+0.055}_{-0.040}$	$0.961^{+0.032}_{-0.029}$	-0.15±0.05	4.50±0.(
☑	BD+20 594 b	BD+20 594	CONFIRMED	1	$41.688644^{+0.003353}_{-0.003419}$	$2.35545350821^{+0.309999915284}$	$0.2101394869^{+0.0276563400}_{-0.}$	5703.0±50.0	$0.956122^{+0.098585}_{-0.05}$	$0.963861^{+0.029568}_{-0.03}$	-0.06±0.08	4.38±0.
☑	EPIC 201111557.01	EPIC 201111557	CANDIDATE	0	$2.30183^{+0.00028}_{-0.00030}$	$1.12^{+0.11}_{-0.08}$	$0.0999^{+0.0098}_{-0.007}$	$4616.5200^{+82.3588}_{-115.}$	$0.7626020^{+0.0536513}_{-0.03}$	$0.7300000^{+0.0841046}_{-0.08}$	-0.030±0.034	4.53679
☑	EPIC 201111557.01	EPIC 201111557	CANDIDATE	0	$2.302368^{+0.000105}_{-0.000103}$	$1.31258764917^{+0.524177}$	$0.12_{-0.01}$	4720.0±50.0	$0.710995^{+0.018609}_{-0.020}$		-0.06±0.08	4.5±0.1
☑	EPIC 201126503.01	EPIC 201126503	CANDIDATE	0	1.1947488	4.19	0.374	3919	0.57			
☑	EPIC 201127519.01	EPIC 201127519	CANDIDATE	0	6.17887±0.00007	$8.84^{+0.14}_{-0.13}$	$0.789^{+0.012}_{-0.012}$	$4719.280^{+100.720}_{-112.1}$	$0.8494320^{+0.0539040}_{-0.05}$	$0.7560000^{+0.0964659}_{-0.06}$	0.213±0.041	4.45833
☑	EPIC 201127519.01	EPIC 201127519	CANDIDATE	0	$6.178369^{+0.000195}_{-0.000172}$	$9.91257877228^{+0.5294096}$	$0.88_{-0.03}$	5015.0±50.0	$0.789478^{+0.025322}_{-0.01}$		0.24±0.08	4.67±0.
☑	EPIC 201147085.01	EPIC 201147085	CANDIDATE	0	1.17589±0.00010	$0.86^{+0.18}_{-0.26}$	$0.077^{+0.016}_{-0.023}$		$0.309^{+0.057}_{-0.070}$			
☑	EPIC 201152065.01	EPIC 201152065	CANDIDATE	0	$10.6966^{+0.0020}_{-0.0021}$	$1.45^{+0.18}_{-0.36}$	$0.129^{+0.016}_{-0.032}$		$0.588^{+0.041}_{-0.015}$			
☑	EPIC 201160662.01	EPIC 201160662	CANDIDATE	0	$1.5374115^{+0.0000062}_{-0.0000061}$	45^{+12}_{-17}	$4.0^{+1.1}_{-1.5}$		$1.599^{+0.047}_{-0.044}$			
☑	EPIC 201164625.01	EPIC 201164625	CANDIDATE	0	$2.71189^{+0.00068}_{-0.00056}$	$4.34^{+0.43}_{-0.35}$	$0.387^{+0.038}_{-0.031}$	$6402.000^{+133.525}_{-125.1}$	$3.167450^{+0.174094}_{-0.203}$	$1.280000^{+0.272756}_{-0.136}$		3.54386
☑	EPIC 201166680.01	K2-243	CANDIDATE	2	$18.105490^{+0.010083}_{-0.012897}$	$2.09985107859^{+0.305698}$	$0.19_{-0.02}$	6213.0±50.0	$1.224685^{+0.116310}_{-0.07}$		0.14±0.08	4.32±0.
☑	EPIC 201170410.02	EPIC 201170410	CONFIRMED	1	6.7987±0.0001	$1.047^{+0.276}_{-0.257}$	$0.09341^{+0.02462}_{-0.02293}$	3648^{+172}_{-143}	$0.282^{+0.074}_{-0.069}$	$0.287^{+0.101}_{-0.084}$	$-0.0480^{+0.1500}_{-0.2100}$	4.999±0
☑	EPIC 201176672.01	EPIC 201176672	CANDIDATE	0	79.9999±0.0098	10.2±2.1	0.91±0.19	4542	0.508±0.098			4.747±0

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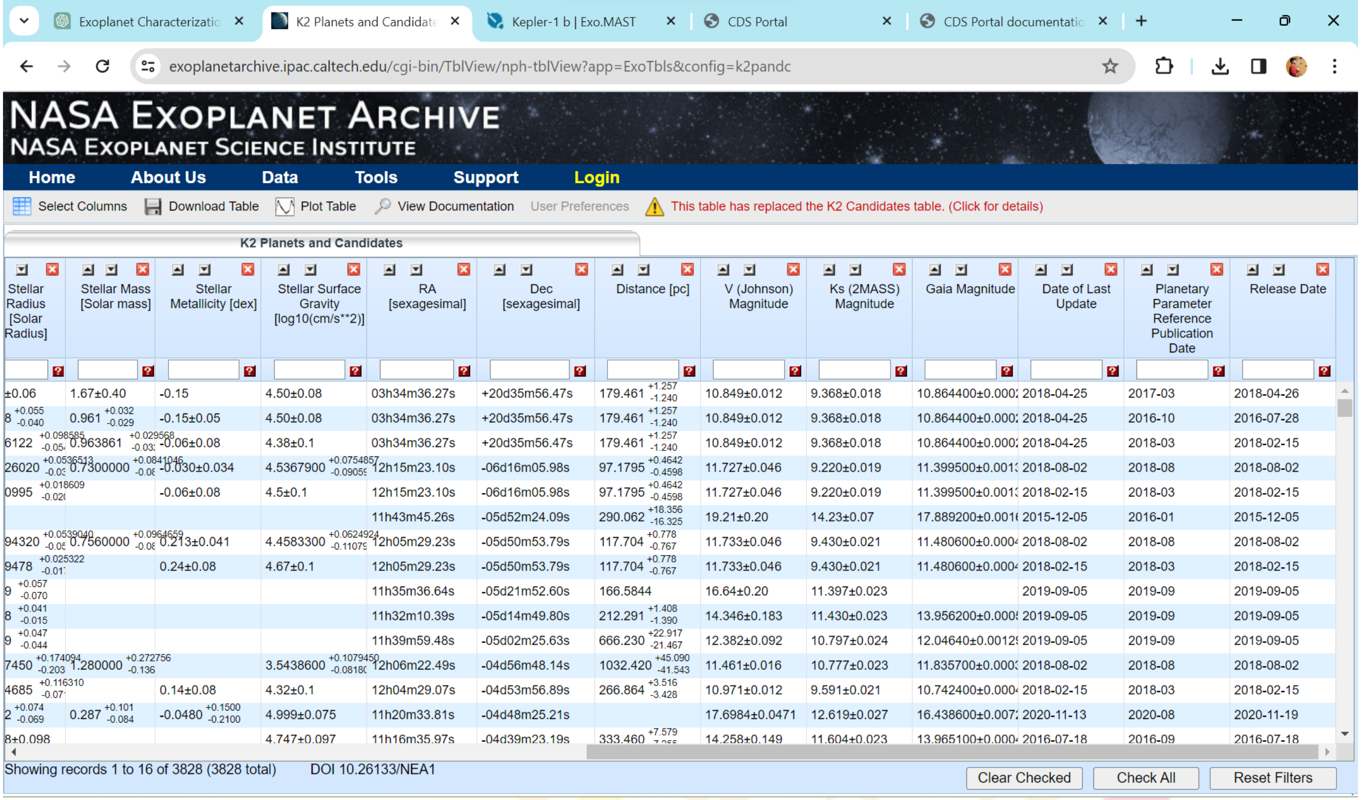

Stellar Radius [Solar Radius]	Stellar Mass [Solar mass]	Stellar Metallicity [dex]	Stellar Surface Gravity [log10(cm/s**2)]	RA [sexagesimal]	Dec [sexagesimal]	Distance [pc]	V (Johnson) Magnitude	Ks (2MASS) Magnitude	Gaia Magnitude	Date of Last Update	Planetary Parameter Reference Publication Date	Release Date
±0.06	1.67±0.40	-0.15	4.50±0.08	03h34m36.27s	+20d35m56.47s	$179.461^{+1.257}_{-1.240}$	10.849±0.012	9.368±0.018	10.864400±0.000	2018-04-25	2017-03	2018-04-26
$8^{+0.055}_{-0.040}$	$0.961^{+0.032}_{-0.029}$	-0.15±0.05	4.50±0.08	03h34m36.27s	+20d35m56.47s	$179.461^{+1.257}_{-1.240}$	10.849±0.012	9.368±0.018	10.864400±0.000	2018-04-25	2016-10	2016-07-28
$6122^{+0.098585}_{-0.05}$	$0.963861^{+0.029568}_{-0.03}$	-0.06±0.08	4.38±0.1	03h34m36.27s	+20d35m56.47s	$179.461^{+1.257}_{-1.240}$	10.849±0.012	9.368±0.018	10.864400±0.000	2018-04-25	2018-03	2018-02-15
$26020^{+0.0536513}_{-0.0}$	$0.7300000^{+0.0841046}_{-0.0}$	-0.030±0.034	$4.5367900^{+0.0754857}_{-0.0905}$	12h15m23.10s	-06d16m05.98s	$97.1795^{+0.4642}_{-0.4598}$	11.727±0.046	9.220±0.019	11.399500±0.001	2018-08-02	2018-08	2018-08-02
$0995^{+0.018609}_{-0.02}$		-0.06±0.08	4.5±0.1	12h15m23.10s	-06d16m05.98s	$97.1795^{+0.4642}_{-0.4598}$	11.727±0.046	9.220±0.019	11.399500±0.001	2018-02-15	2018-03	2018-02-15
				11h43m45.26s	-05d52m24.09s	$290.062^{+18.356}_{-16.325}$	19.21±0.20	14.23±0.07	17.889200±0.001	2015-12-05	2016-01	2015-12-05
$94320^{+0.0539040}_{-0.0}$	$0.7560000^{+0.0964659}_{-0.0}$	0.213±0.041	$4.4583300^{+0.0624924}_{-0.1107}$	12h05m29.23s	-05d50m53.79s	$117.704^{+0.778}_{-0.767}$	11.733±0.046	9.430±0.021	11.480600±0.000	2018-08-02	2018-08	2018-08-02
$9478^{+0.025322}_{-0.01}$		0.24±0.08	4.67±0.1	12h05m29.23s	-05d50m53.79s	$117.704^{+0.778}_{-0.767}$	11.733±0.046	9.430±0.021	11.480600±0.000	2018-02-15	2018-03	2018-02-15
$9^{+0.057}_{-0.070}$				11h35m36.64s	-05d21m52.60s	166.5844	16.64±0.20	11.397±0.023		2019-09-05	2019-09	2019-09-05
$8^{+0.041}_{-0.015}$				11h32m10.39s	-05d14m49.80s	$212.291^{+1.408}_{-1.390}$	14.346±0.183	11.430±0.023	13.956200±0.000	2019-09-05	2019-09	2019-09-05
$9^{+0.047}_{-0.044}$				11h39m59.48s	-05d02m25.63s	$666.230^{+22.917}_{-21.467}$	12.382±0.092	10.797±0.024	12.04640±0.0012	2019-09-05	2019-09	2019-09-05
$7450^{+0.174094}_{-0.203}$	$1.280000^{+0.272756}_{-0.136}$		$3.5438600^{+0.1079450}_{-0.0818}$	12h06m22.49s	-04d56m48.14s	$1032.420^{+45.090}_{-41.543}$	11.461±0.016	10.777±0.023	11.835700±0.000	2018-08-02	2018-08	2018-08-02
$4685^{+0.116310}_{-0.07}$		0.14±0.08	4.32±0.1	12h04m29.07s	-04d53m56.89s	$266.864^{+3.516}_{-3.428}$	10.971±0.012	9.591±0.021	10.742400±0.000	2018-02-15	2018-03	2018-02-15
$2^{+0.074}_{-0.069}$	$0.287^{+0.101}_{-0.084}$	$-0.0480^{+0.1500}_{-0.2100}$	4.999±0.075	11h20m33.81s	-04d48m25.21s		17.6984±0.0471	12.619±0.027	16.438600±0.007	2020-11-13	2020-08	2020-11-19
8±0.098			4.747±0.097	11h16m35.97s	-04d39m23.19s	$333.460^{+7.579}$	14.258±0.149	11.604±0.023	13.965100±0.000	2016-07-18	2016-09	2016-07-18

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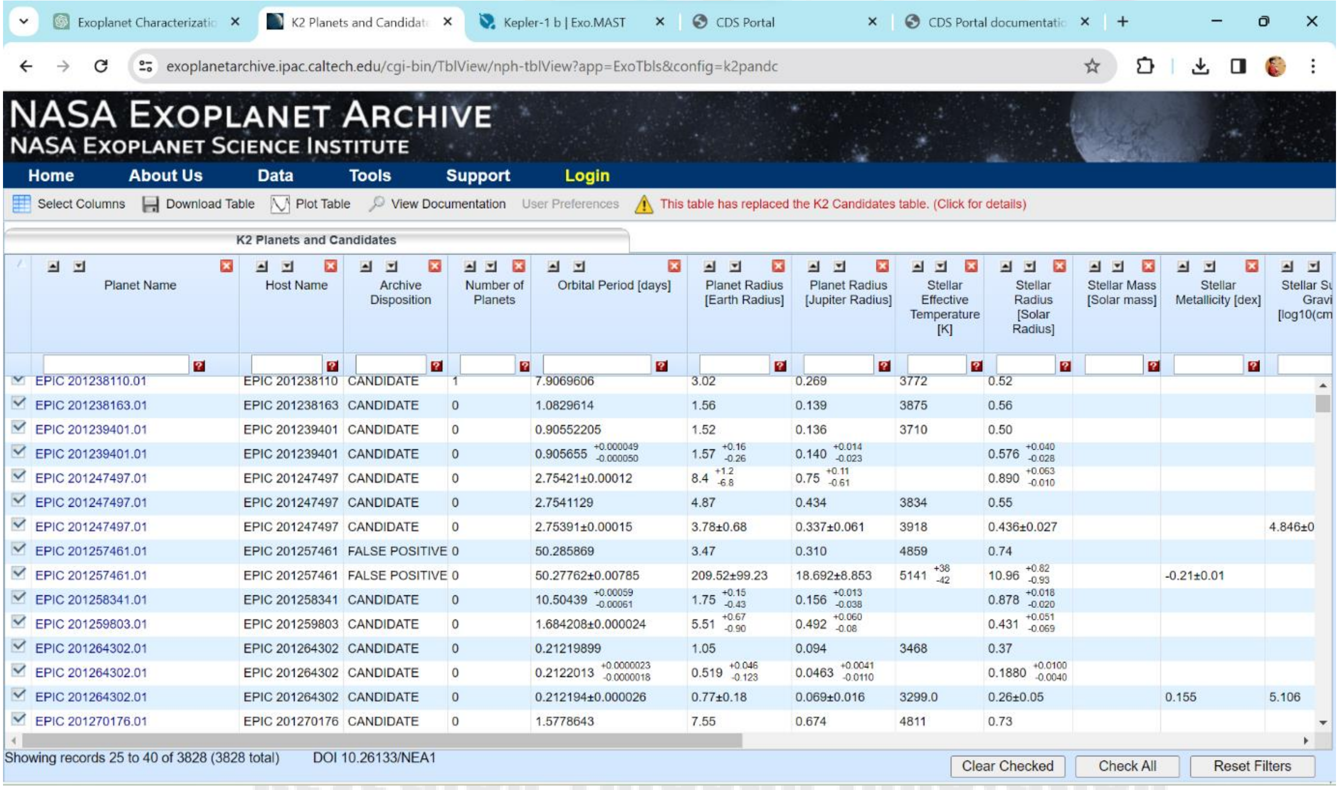
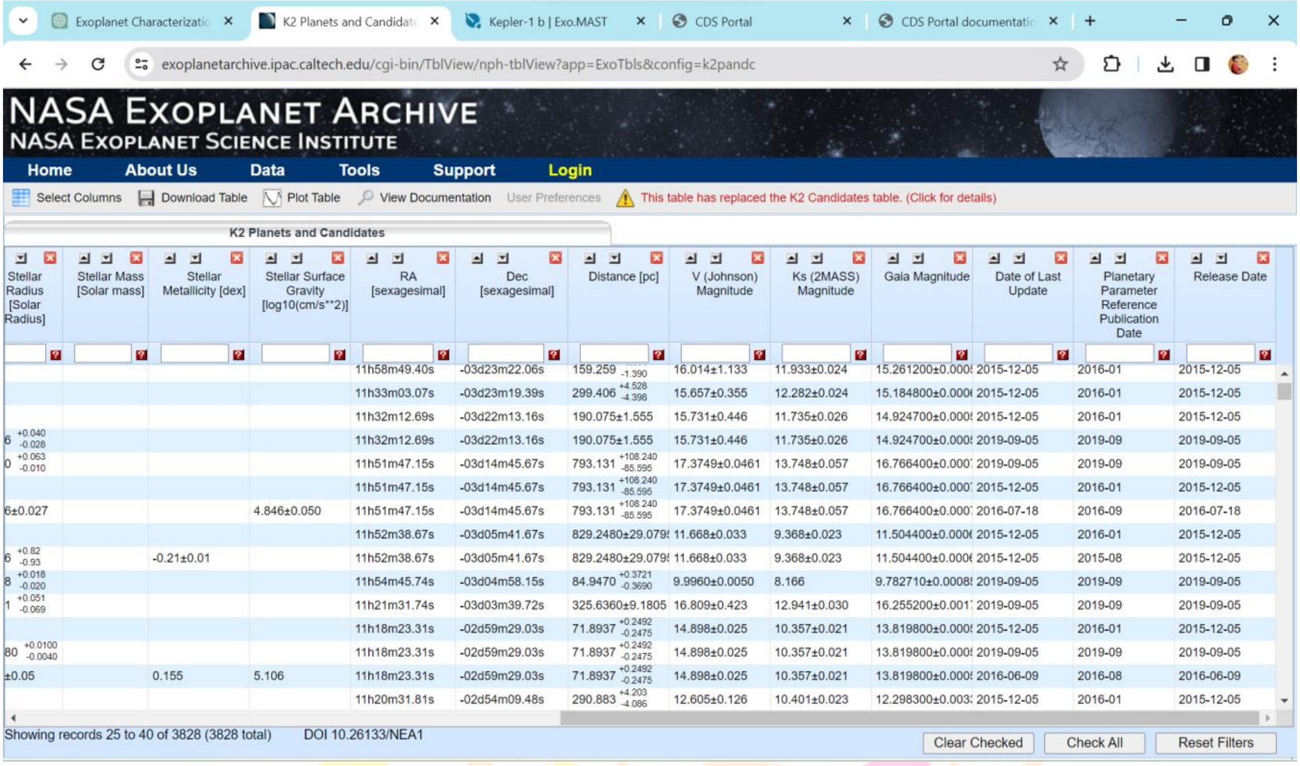


	Planet Name	Host Name	Archive Disposition	Number of Planets	Orbital Period [days]	Planet Radius [Earth Radius]	Planet Radius [Jupiter Radius]	Stellar Effective Temperature [K]	Stellar Radius [Solar Radius]	Stellar Mass [Solar mass]	Stellar Metallicity [dex]	Stellar Su Gravi [log10(cm
☑	EPIC 201238110.01	EPIC 201238110	CANDIDATE	1	7.9069606	3.02	0.269	3772	0.52			
☑	EPIC 201238163.01	EPIC 201238163	CANDIDATE	0	1.0829614	1.56	0.139	3875	0.56			
☑	EPIC 201239401.01	EPIC 201239401	CANDIDATE	0	0.90552205	1.52	0.136	3710	0.50			
☑	EPIC 201239401.01	EPIC 201239401	CANDIDATE	0	$0.905655^{+0.000049}_{-0.000050}$	$1.57^{+0.16}_{-0.26}$	$0.140^{+0.014}_{-0.023}$		$0.576^{+0.040}_{-0.028}$			
☑	EPIC 201247497.01	EPIC 201247497	CANDIDATE	0	2.75421±0.00012	$8.4^{+1.2}_{-6.8}$	$0.75^{+0.11}_{-0.61}$		$0.890^{+0.063}_{-0.010}$			
☑	EPIC 201247497.01	EPIC 201247497	CANDIDATE	0	2.7541129	4.87	0.434	3834	0.55			
☑	EPIC 201247497.01	EPIC 201247497	CANDIDATE	0	2.75391±0.00015	3.78±0.68	0.337±0.061	3918	0.436±0.027			4.846±0
☑	EPIC 201257461.01	EPIC 201257461	FALSE POSITIVE	0	50.285869	3.47	0.310	4859	0.74			
☑	EPIC 201257461.01	EPIC 201257461	FALSE POSITIVE	0	50.27762±0.00785	209.52±99.23	18.692±8.853	5141^{+38}_{-42}	$10.96^{+0.82}_{-0.93}$		-0.21±0.01	
☑	EPIC 201258341.01	EPIC 201258341	CANDIDATE	0	$10.50439^{+0.00059}_{-0.00061}$	$1.75^{+0.15}_{-0.43}$	$0.156^{+0.013}_{-0.038}$		$0.878^{+0.018}_{-0.020}$			
☑	EPIC 201259803.01	EPIC 201259803	CANDIDATE	0	1.684208±0.000024	$5.51^{+0.67}_{-0.90}$	$0.492^{+0.060}_{-0.08}$		$0.431^{+0.051}_{-0.069}$			
☑	EPIC 201264302.01	EPIC 201264302	CANDIDATE	0	0.21219899	1.05	0.094	3468	0.37			
☑	EPIC 201264302.01	EPIC 201264302	CANDIDATE	0	$0.2122013^{+0.0000023}_{-0.0000018}$	$0.519^{+0.046}_{-0.123}$	$0.0463^{+0.0041}_{-0.0110}$		$0.1880^{+0.0100}_{-0.0040}$			
☑	EPIC 201264302.01	EPIC 201264302	CANDIDATE	0	0.212194±0.000026	0.77±0.18	0.069±0.016	3299.0	0.26±0.05		0.155	5.106
☑	EPIC 201270176.01	EPIC 201270176	CANDIDATE	0	1.5778643	7.55	0.674	4811	0.73			

Showing records 25 to 40 of 3828 (3828 total)   DOI 10.26133/NEA1



This table has replaced the K2 Candidates table. (Click for details)

K2 Planets and Candidates

Stellar Radius [Solar Radius]	Stellar Mass [Solar mass]	Stellar Metallicity [dex]	Stellar Surface Gravity [log10(cm/s**2)]	RA [sexagesimal]	Dec [sexagesimal]	Distance [pc]	V (Johnson) Magnitude	Ks (2MASS) Magnitude	Gaia Magnitude	Date of Last Update	Planetary Parameter Reference Publication Date	Release Date
				11h58m49.40s	-03d23m22.06s	159.259 $_{-1.390}$	16.014±1.133	11.933±0.024	15.261200±0.000	2015-12-05	2016-01	2015-12-05
				11h33m03.07s	-03d23m19.39s	$299.406^{+4.528}_{-4.398}$	15.657±0.355	12.282±0.024	15.184800±0.000	2015-12-05	2016-01	2015-12-05
				11h32m12.69s	-03d22m13.16s	190.075±1.555	15.731±0.446	11.735±0.026	14.924700±0.000	2015-12-05	2016-01	2015-12-05
$6^{+0.040}_{-0.028}$				11h32m12.69s	-03d22m13.16s	190.075±1.555	15.731±0.446	11.735±0.026	14.924700±0.000	2019-09-05	2019-09	2019-09-05
$0^{+0.063}_{-0.010}$				11h51m47.15s	-03d14m45.67s	$793.131^{+108.240}_{-85.595}$	17.3749±0.0461	13.748±0.057	16.766400±0.000	2019-09-05	2019-09	2019-09-05
				11h51m47.15s	-03d14m45.67s	$793.131^{+108.240}_{-85.595}$	17.3749±0.0461	13.748±0.057	16.766400±0.000	2015-12-05	2016-01	2015-12-05
6±0.027			4.846±0.050	11h51m47.15s	-03d14m45.67s	$793.131^{+108.240}_{-85.595}$	17.3749±0.0461	13.748±0.057	16.766400±0.000	2016-07-18	2016-09	2016-07-18
				11h52m38.67s	-03d05m41.67s	829.2480±29.079	11.668±0.033	9.368±0.023	11.504400±0.000	2015-12-05	2016-01	2015-12-05
$6^{+0.82}_{-0.93}$		-0.21±0.01		11h52m38.67s	-03d05m41.67s	829.2480±29.079	11.668±0.033	9.368±0.023	11.504400±0.000	2015-12-05	2015-08	2015-12-05
$8^{+0.018}_{-0.020}$				11h54m45.74s	-03d04m58.15s	$84.9470^{+0.3721}_{-0.3690}$	9.9960±0.0050	8.166	9.782710±0.0008	2019-09-05	2019-09	2019-09-05
$1^{+0.051}_{-0.069}$				11h21m31.74s	-03d03m39.72s	325.6360±9.1805	16.809±0.423	12.941±0.030	16.255200±0.001	2019-09-05	2019-09	2019-09-05
				11h18m23.31s	-02d59m29.03s	$71.8937^{+0.2492}_{-0.2475}$	14.898±0.025	10.357±0.021	13.819800±0.000	2015-12-05	2016-01	2015-12-05
$80^{+0.0100}_{-0.0040}$				11h18m23.31s	-02d59m29.03s	$71.8937^{+0.2492}_{-0.2475}$	14.898±0.025	10.357±0.021	13.819800±0.000	2019-09-05	2019-09	2019-09-05
±0.05		0.155	5.106	11h18m23.31s	-02d59m29.03s	$71.8937^{+0.2492}_{-0.2475}$	14.898±0.025	10.357±0.021	13.819800±0.000	2016-06-09	2016-08	2016-06-09
				11h20m31.81s	-02d54m09.48s	$290.883^{+4.203}_{-4.086}$	12.605±0.126	10.401±0.023	12.298300±0.003	2015-12-05	2016-01	2015-12-05

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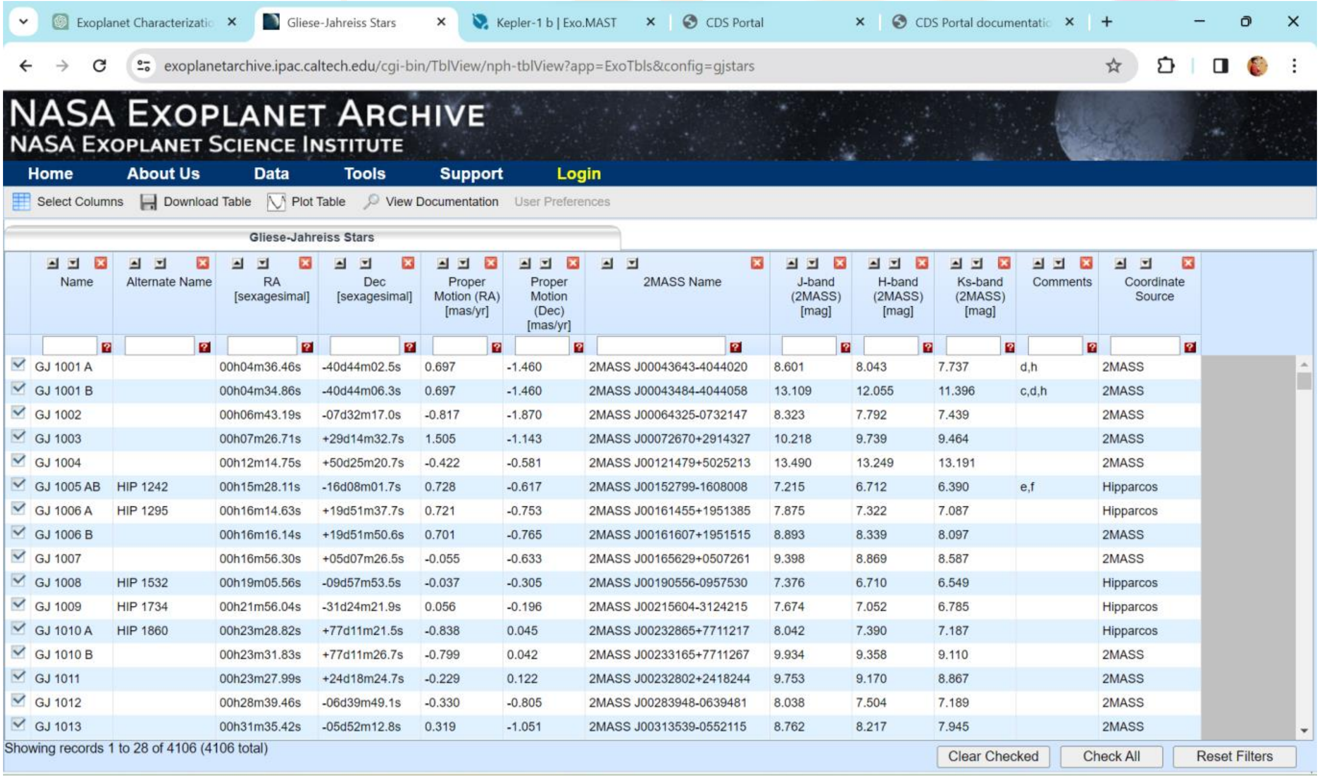
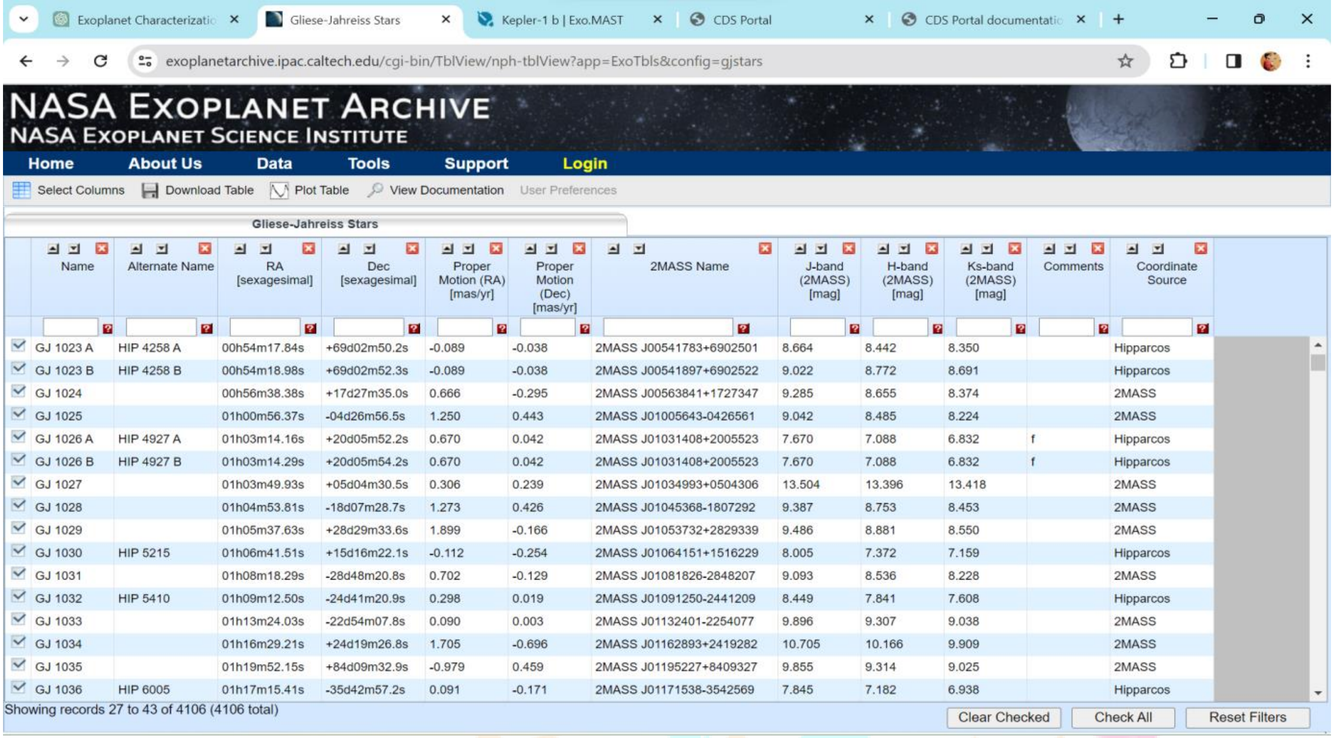
Gliese-Jahreiss Stars



Gliese-Jahreiss Stars

	Name	Alternate Name	RA [sexagesimal]	Dec [sexagesimal]	Proper Motion (RA) [mas/yr]	Proper Motion (Dec) [mas/yr]	2MASS Name	J-band (2MASS) [mag]	H-band (2MASS) [mag]	Ks-band (2MASS) [mag]	Comments	Coordinate Source
☑	GJ 1001 A		00h04m36.46s	-40d44m02.5s	0.697	-1.460	2MASS J00043643-4044020	8.601	8.043	7.737	d,h	2MASS
☑	GJ 1001 B		00h04m34.86s	-40d44m06.3s	0.697	-1.460	2MASS J00043484-4044058	13.109	12.055	11.396	c,d,h	2MASS
☑	GJ 1002		00h06m43.19s	-07d32m17.0s	-0.817	-1.870	2MASS J00064325-0732147	8.323	7.792	7.439		2MASS
☑	GJ 1003		00h07m26.71s	+29d14m32.7s	1.505	-1.143	2MASS J00072670+2914327	10.218	9.739	9.464		2MASS
☑	GJ 1004		00h12m14.75s	+50d25m20.7s	-0.422	-0.581	2MASS J00121479+5025213	13.490	13.249	13.191		2MASS
☑	GJ 1005 AB	HIP 1242	00h15m28.11s	-16d08m01.7s	0.728	-0.617	2MASS J00152799-1608008	7.215	6.712	6.390	e,f	Hipparcos
☑	GJ 1006 A	HIP 1295	00h16m14.63s	+19d51m37.7s	0.721	-0.753	2MASS J00161455+1951385	7.875	7.322	7.087		Hipparcos
☑	GJ 1006 B		00h16m16.14s	+19d51m50.6s	0.701	-0.765	2MASS J00161607+1951515	8.893	8.339	8.097		2MASS
☑	GJ 1007		00h16m56.30s	+05d07m26.5s	-0.055	-0.633	2MASS J00165629+0507261	9.398	8.869	8.587		2MASS
☑	GJ 1008	HIP 1532	00h19m05.56s	-09d57m53.5s	-0.037	-0.305	2MASS J00190556-0957530	7.376	6.710	6.549		Hipparcos
☑	GJ 1009	HIP 1734	00h21m56.04s	-31d24m21.9s	0.056	-0.196	2MASS J00215604-3124215	7.674	7.052	6.785		Hipparcos
☑	GJ 1010 A	HIP 1860	00h23m28.82s	+77d11m21.5s	-0.838	0.045	2MASS J00232865+7711217	8.042	7.390	7.187		Hipparcos
☑	GJ 1010 B		00h23m31.83s	+77d11m26.7s	-0.799	0.042	2MASS J00233165+7711267	9.934	9.358	9.110		2MASS
☑	GJ 1011		00h23m27.99s	+24d18m24.7s	-0.229	0.122	2MASS J00232802+2418244	9.753	9.170	8.867		2MASS
☑	GJ 1012		00h28m39.46s	-06d39m49.1s	-0.330	-0.805	2MASS J00283948-0639481	8.038	7.504	7.189		2MASS
☑	GJ 1013		00h31m35.42s	-05d52m12.8s	0.319	-1.051	2MASS J00313539-0552115	8.762	8.217	7.945		2MASS

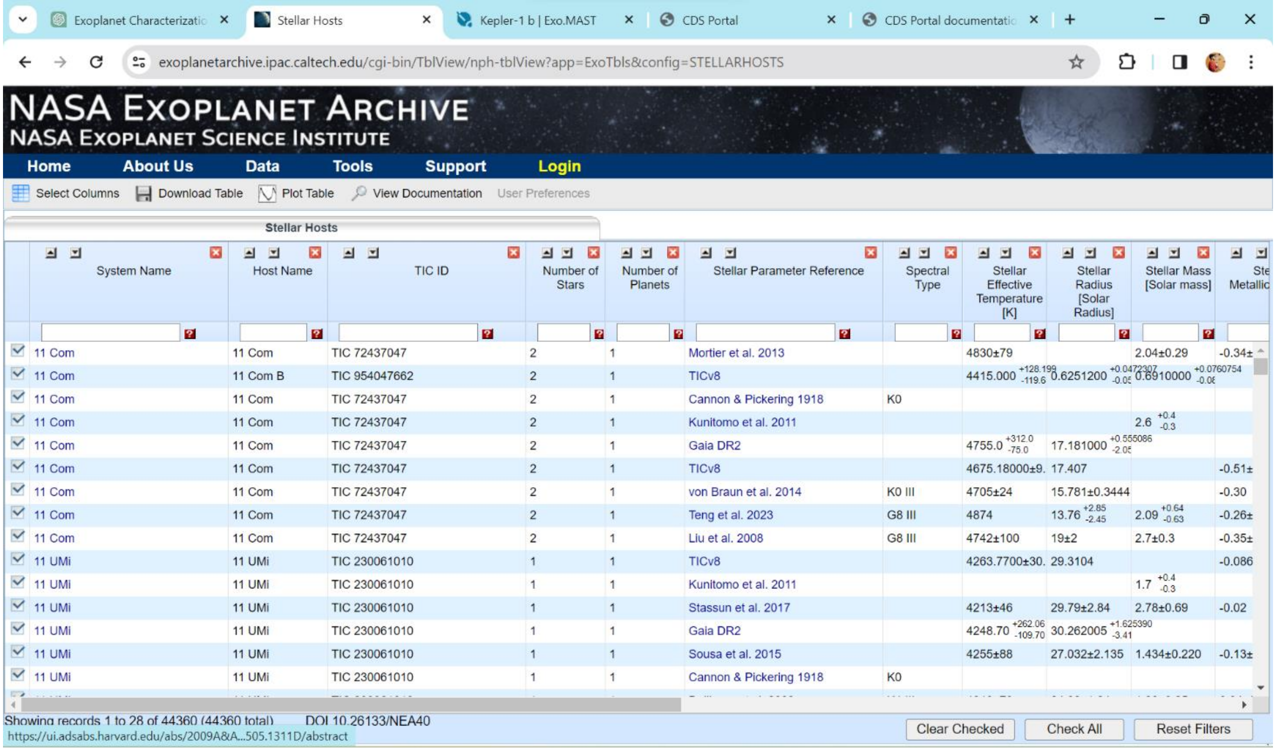
Showing records 1 to 28 of 4106 (4106 total)



	Name	Alternate Name	RA [sexagesimal]	Dec [sexagesimal]	Proper Motion (RA) [mas/yr]	Proper Motion (Dec) [mas/yr]	2MASS Name	J-band (2MASS) [mag]	H-band (2MASS) [mag]	Ks-band (2MASS) [mag]	Comments	Coordinate Source
☑	GJ 1023 A	HIP 4258 A	00h54m17.84s	+69d02m50.2s	-0.089	-0.038	2MASS J00541783+6902501	8.664	8.442	8.350		Hipparcos
☑	GJ 1023 B	HIP 4258 B	00h54m18.98s	+69d02m52.3s	-0.089	-0.038	2MASS J00541897+6902522	9.022	8.772	8.691		Hipparcos
☑	GJ 1024		00h56m38.38s	+17d27m35.0s	0.666	-0.295	2MASS J00563841+1727347	9.285	8.655	8.374		2MASS
☑	GJ 1025		01h00m56.37s	-04d26m56.5s	1.250	0.443	2MASS J01005643-0426561	9.042	8.485	8.224		2MASS
☑	GJ 1026 A	HIP 4927 A	01h03m14.16s	+20d05m52.2s	0.670	0.042	2MASS J01031408+2005523	7.670	7.088	6.832	f	Hipparcos
☑	GJ 1026 B	HIP 4927 B	01h03m14.29s	+20d05m54.2s	0.670	0.042	2MASS J01031408+2005523	7.670	7.088	6.832	f	Hipparcos
☑	GJ 1027		01h03m49.93s	+05d04m30.5s	0.306	0.239	2MASS J01034993+0504306	13.504	13.396	13.418		2MASS
☑	GJ 1028		01h04m53.81s	-18d07m28.7s	1.273	0.426	2MASS J01045368-1807292	9.387	8.753	8.453		2MASS
☑	GJ 1029		01h05m37.63s	+28d29m33.6s	1.899	-0.166	2MASS J01053732+2829339	9.486	8.881	8.550		2MASS
☑	GJ 1030	HIP 5215	01h06m41.51s	+15d16m22.1s	-0.112	-0.254	2MASS J01064151+1516229	8.005	7.372	7.159		Hipparcos
☑	GJ 1031		01h08m18.29s	-28d48m20.8s	0.702	-0.129	2MASS J01081826-2848207	9.093	8.536	8.228		2MASS
☑	GJ 1032	HIP 5410	01h09m12.50s	-24d41m20.9s	0.298	0.019	2MASS J01091250-2441209	8.449	7.841	7.608		Hipparcos
☑	GJ 1033		01h13m24.03s	-22d54m07.8s	0.090	0.003	2MASS J01132401-2254077	9.896	9.307	9.038		2MASS
☑	GJ 1034		01h16m29.21s	+24d19m26.8s	1.705	-0.696	2MASS J01162893+2419282	10.705	10.166	9.909		2MASS
☑	GJ 1035		01h19m52.15s	+84d09m32.9s	-0.979	0.459	2MASS J01195227+8409327	9.855	9.314	9.025		2MASS
☑	GJ 1036	HIP 6005	01h17m15.41s	-35d42m57.2s	0.091	-0.171	2MASS J01171538-3542569	7.845	7.182	6.938		Hipparcos

Showing records 27 to 43 of 4106 (4106 total)

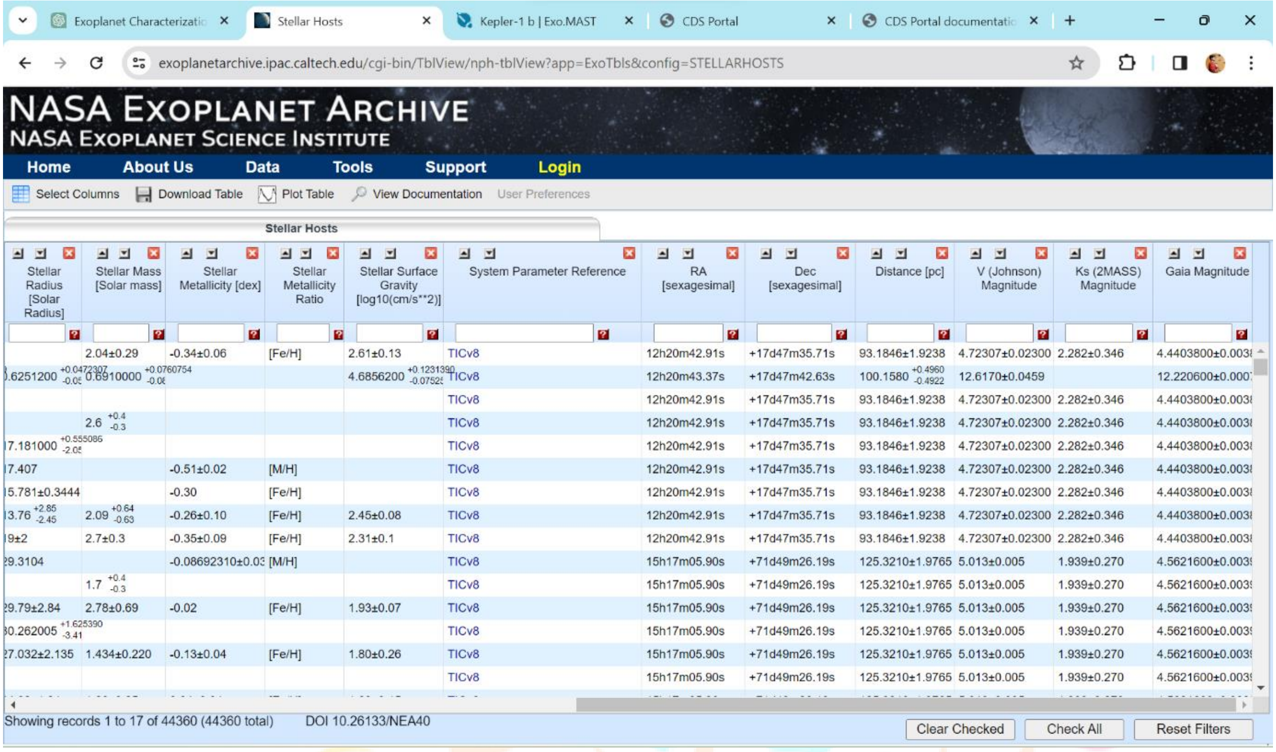
Stellar Hosts Table



	System Name	Host Name	TIC ID	Number of Stars	Number of Planets	Stellar Parameter Reference	Spectral Type	Stellar Effective Temperature [K]	Stellar Radius [Solar Radius]	Stellar Mass [Solar mass]	Ste Metallic
☑	11 Com	11 Com	TIC 72437047	2	1	Mortier et al. 2013		4830±79		2.04±0.29	-0.34±
☑	11 Com	11 Com B	TIC 954047662	2	1	TICv8		$4415.000^{+128.199}_{-119.6}$	$0.6251200^{+0.0472307}_{-0.05}$	$0.6910000^{+0.0760754}_{-0.08}$	
☑	11 Com	11 Com	TIC 72437047	2	1	Cannon & Pickering 1918	K0				
☑	11 Com	11 Com	TIC 72437047	2	1	Kunitomo et al. 2011				$2.6^{+0.4}_{-0.3}$	
☑	11 Com	11 Com	TIC 72437047	2	1	Gaia DR2		$4755.0^{+312.0}_{-75.0}$	$17.181000^{+0.555086}_{-2.05}$		
☑	11 Com	11 Com	TIC 72437047	2	1	TICv8		4675.18000±9.	17.407		-0.51±
☑	11 Com	11 Com	TIC 72437047	2	1	von Braun et al. 2014	K0 III	4705±24	15.781±0.3444		-0.30
☑	11 Com	11 Com	TIC 72437047	2	1	Teng et al. 2023	G8 III	4874	$13.76^{+2.85}_{-2.45}$	$2.09^{+0.64}_{-0.63}$	-0.26±
☑	11 Com	11 Com	TIC 72437047	2	1	Liu et al. 2008	G8 III	4742±100	19±2	2.7±0.3	-0.35±
☑	11 UMi	11 UMi	TIC 230061010	1	1	TICv8		4263.7700±30.	29.3104		-0.086
☑	11 UMi	11 UMi	TIC 230061010	1	1	Kunitomo et al. 2011				$1.7^{+0.4}_{-0.3}$	
☑	11 UMi	11 UMi	TIC 230061010	1	1	Stassun et al. 2017		4213±46	29.79±2.84	2.78±0.69	-0.02
☑	11 UMi	11 UMi	TIC 230061010	1	1	Gaia DR2		$4248.70^{+262.06}_{-109.70}$	$30.262005^{+1.625390}_{-3.41}$		
☑	11 UMi	11 UMi	TIC 230061010	1	1	Sousa et al. 2015		4255±88	27.032±2.135	1.434±0.220	-0.13±
☑	11 UMi	11 UMi	TIC 230061010	1	1	Cannon & Pickering 1918	K0				

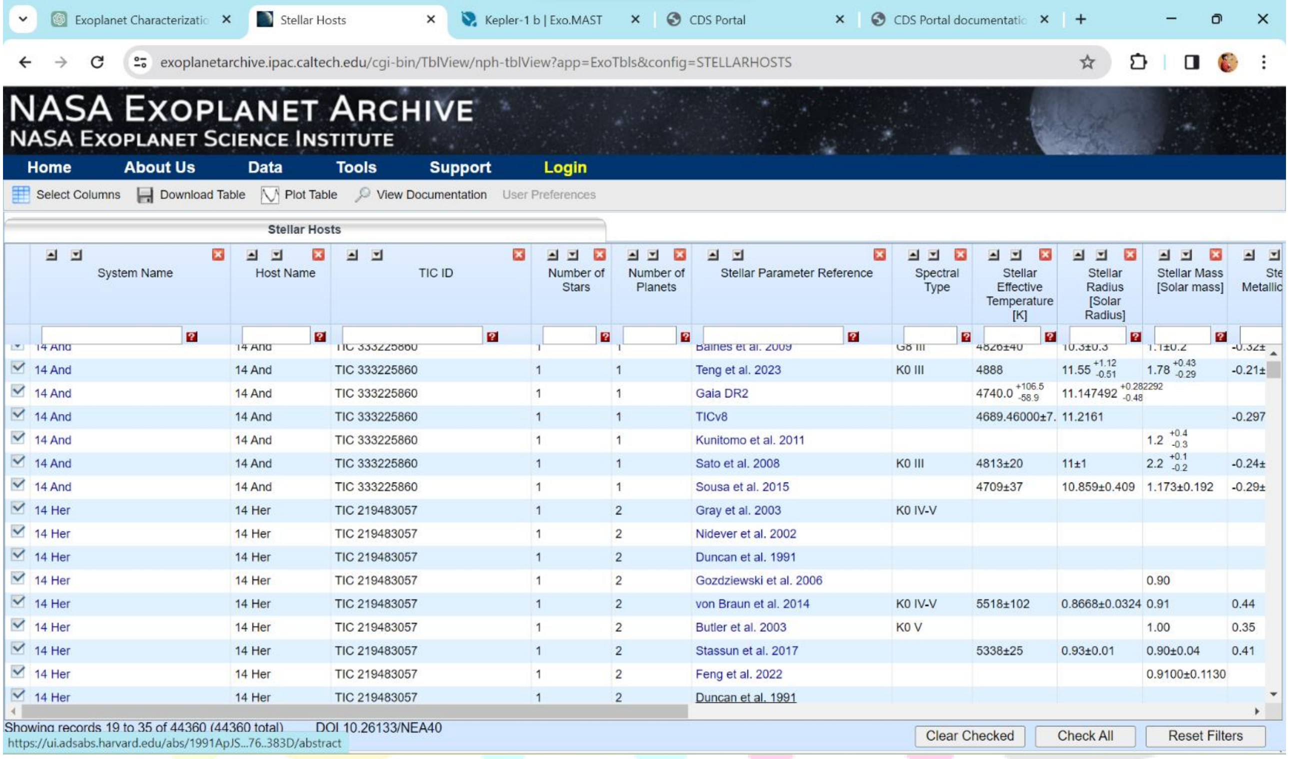
Showing records 1 to 28 of 44360 (44360 total) DOI 10.26133/NEA40

https://ui.adsabs.harvard.edu/abs/2009A&A...505.1311D/abstract



Stellar Radius [Solar Radius]	Stellar Mass [Solar mass]	Stellar Metallicity [dex]	Stellar Metallicity Ratio	Stellar Surface Gravity [log10(cm/s**2)]	System Parameter Reference	RA [sexagesimal]	Dec [sexagesimal]	Distance [pc]	V (Johnson) Magnitude	Ks (2MASS) Magnitude	Gaia Magnitude
	2.04±0.29	-0.34±0.06	[Fe/H]	2.61±0.13	TICv8	12h20m42.91s	+17d47m35.71s	93.1846±1.9238	4.72307±0.02300	2.282±0.346	4.4403800±0.003
$.6251200^{+0.0472307}_{-0.05}$	$0.6910000^{+0.0760754}_{-0.0}$			$4.6856200^{+0.1231390}_{-0.0752}$	TICv8	12h20m43.37s	+17d47m42.63s	$100.1580^{+0.4960}_{-0.4922}$	12.6170±0.0459		12.220600±0.000
					TICv8	12h20m42.91s	+17d47m35.71s	93.1846±1.9238	4.72307±0.02300	2.282±0.346	4.4403800±0.003
	$2.6^{+0.4}_{-0.3}$				TICv8	12h20m42.91s	+17d47m35.71s	93.1846±1.9238	4.72307±0.02300	2.282±0.346	4.4403800±0.003
$7.181000^{+0.555086}_{-2.05}$					TICv8	12h20m42.91s	+17d47m35.71s	93.1846±1.9238	4.72307±0.02300	2.282±0.346	4.4403800±0.003
7.407		-0.51±0.02	[M/H]		TICv8	12h20m42.91s	+17d47m35.71s	93.1846±1.9238	4.72307±0.02300	2.282±0.346	4.4403800±0.003
5.781±0.3444		-0.30	[Fe/H]		TICv8	12h20m42.91s	+17d47m35.71s	93.1846±1.9238	4.72307±0.02300	2.282±0.346	4.4403800±0.003
$3.76^{+2.85}_{-2.45}$	$2.09^{+0.64}_{-0.63}$	-0.26±0.10	[Fe/H]	2.45±0.08	TICv8	12h20m42.91s	+17d47m35.71s	93.1846±1.9238	4.72307±0.02300	2.282±0.346	4.4403800±0.003
9±2	2.7±0.3	-0.35±0.09	[Fe/H]	2.31±0.1	TICv8	12h20m42.91s	+17d47m35.71s	93.1846±1.9238	4.72307±0.02300	2.282±0.346	4.4403800±0.003
9.3104		-0.08692310±0.0	[M/H]		TICv8	15h17m05.90s	+71d49m26.19s	125.3210±1.9765	5.013±0.005	1.939±0.270	4.5621600±0.003
	$1.7^{+0.4}_{-0.3}$				TICv8	15h17m05.90s	+71d49m26.19s	125.3210±1.9765	5.013±0.005	1.939±0.270	4.5621600±0.003
9.79±2.84	2.78±0.69	-0.02	[Fe/H]	1.93±0.07	TICv8	15h17m05.90s	+71d49m26.19s	125.3210±1.9765	5.013±0.005	1.939±0.270	4.5621600±0.003
$0.262005^{+1.625390}_{-3.41}$					TICv8	15h17m05.90s	+71d49m26.19s	125.3210±1.9765	5.013±0.005	1.939±0.270	4.5621600±0.003
7.032±2.135	1.434±0.220	-0.13±0.04	[Fe/H]	1.80±0.26	TICv8	15h17m05.90s	+71d49m26.19s	125.3210±1.9765	5.013±0.005	1.939±0.270	4.5621600±0.003
					TICv8	15h17m05.90s	+71d49m26.19s	125.3210±1.9765	5.013±0.005	1.939±0.270	4.5621600±0.003

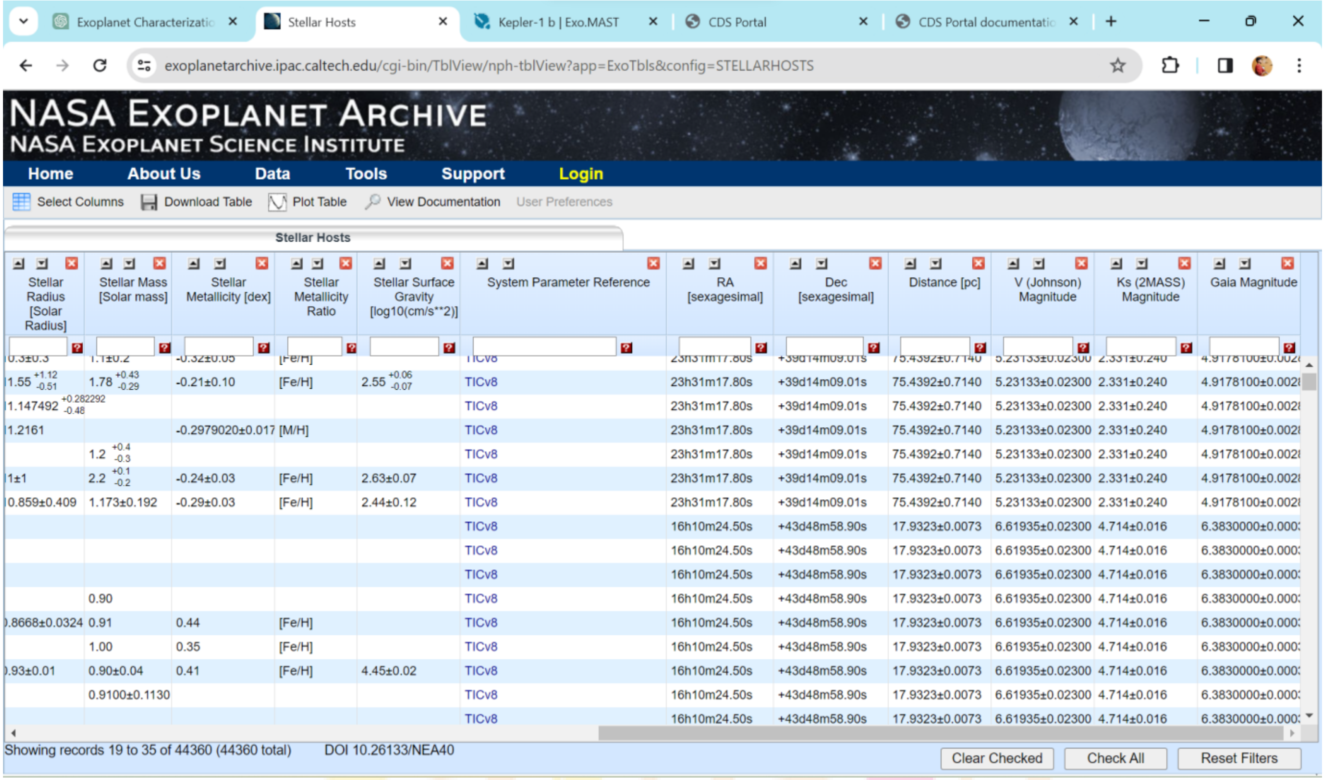
Showing records 1 to 17 of 44360 (44360 total) DOI 10.26133/NEA40



	System Name	Host Name	TIC ID	Number of Stars	Number of Planets	Stellar Parameter Reference	Spectral Type	Stellar Effective Temperature [K]	Stellar Radius [Solar Radius]	Stellar Mass [Solar mass]	Ste Metallic
☑	14 And	14 And	TIC 333225860	1	1	Baines et al. 2009	G8 III	4826±40	10.3±0.3	1.1±0.2	-0.32±
☑	14 And	14 And	TIC 333225860	1	1	Teng et al. 2023	K0 III	4888	$11.55^{+1.12}_{-0.51}$	$1.78^{+0.43}_{-0.29}$	-0.21±
☑	14 And	14 And	TIC 333225860	1	1	Gaia DR2		$4740.0^{+106.5}_{-58.9}$	$11.147492^{+0.282292}_{-0.48}$		
☑	14 And	14 And	TIC 333225860	1	1	TICv8		4689.46000±7.	11.2161		-0.297
☑	14 And	14 And	TIC 333225860	1	1	Kunitomo et al. 2011				$1.2^{+0.4}_{-0.3}$	
☑	14 And	14 And	TIC 333225860	1	1	Sato et al. 2008	K0 III	4813±20	11±1	$2.2^{+0.1}_{-0.2}$	-0.24±
☑	14 And	14 And	TIC 333225860	1	1	Sousa et al. 2015		4709±37	10.859±0.409	1.173±0.192	-0.29±
☑	14 Her	14 Her	TIC 219483057	1	2	Gray et al. 2003	K0 IV-V				
☑	14 Her	14 Her	TIC 219483057	1	2	Nidever et al. 2002					
☑	14 Her	14 Her	TIC 219483057	1	2	Duncan et al. 1991					
☑	14 Her	14 Her	TIC 219483057	1	2	Gozdziewski et al. 2006				0.90	
☑	14 Her	14 Her	TIC 219483057	1	2	von Braun et al. 2014	K0 IV-V	5518±102	0.8668±0.0324	0.91	0.44
☑	14 Her	14 Her	TIC 219483057	1	2	Butler et al. 2003	K0 V			1.00	0.35
☑	14 Her	14 Her	TIC 219483057	1	2	Stassun et al. 2017		5338±25	0.93±0.01	0.90±0.04	0.41
☑	14 Her	14 Her	TIC 219483057	1	2	Feng et al. 2022				0.9100±0.1130	
☑	14 Her	14 Her	TIC 219483057	1	2	Duncan et al. 1991					

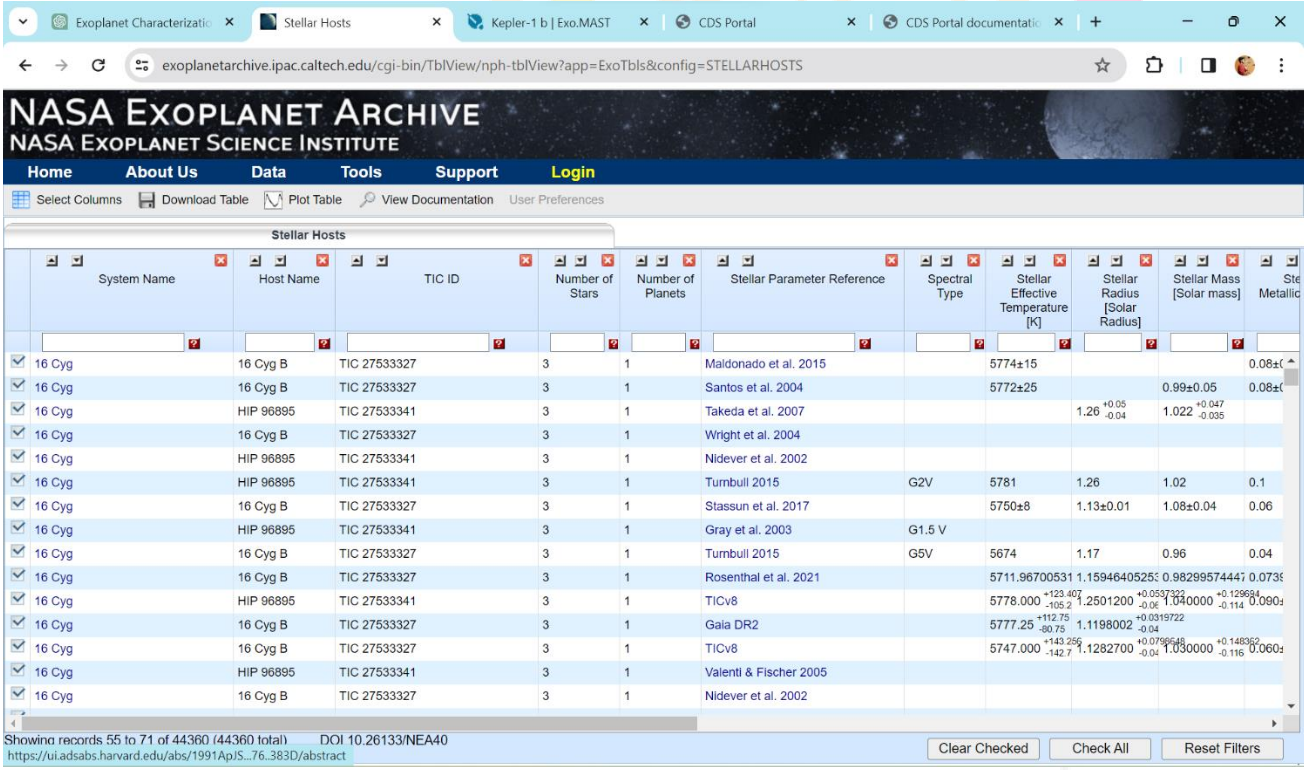
Showing records 19 to 35 of 44360 (44360 total) DOI 10.26133/NEA40

https://ui.adsabs.harvard.edu/abs/1991ApJS...76..383D/abstract



Stellar Radius [Solar Radius]	Stellar Mass [Solar mass]	Stellar Metallicity [dex]	Stellar Metallicity Ratio	Stellar Surface Gravity [log10(cm/s**2)]	System Parameter Reference	RA [sexagesimal]	Dec [sexagesimal]	Distance [pc]	V (Johnson) Magnitude	Ks (2MASS) Magnitude	Gaia Magnitude
0.3±0.3	1.1±0.2	-0.32±0.05	[Fe/H]		TICv8	23h31m17.80s	+39d14m09.01s	75.4392±0.7140	5.23133±0.02300	2.331±0.240	4.9178100±0.002
$1.55^{+1.12}_{-0.51}$	$1.78^{+0.43}_{-0.29}$	-0.21±0.10	[Fe/H]	$2.55^{+0.06}_{-0.07}$	TICv8	23h31m17.80s	+39d14m09.01s	75.4392±0.7140	5.23133±0.02300	2.331±0.240	4.9178100±0.002
$1.147492^{+0.282292}_{-0.48}$					TICv8	23h31m17.80s	+39d14m09.01s	75.4392±0.7140	5.23133±0.02300	2.331±0.240	4.9178100±0.002
1.2161		-0.2979020±0.017	[M/H]		TICv8	23h31m17.80s	+39d14m09.01s	75.4392±0.7140	5.23133±0.02300	2.331±0.240	4.9178100±0.002
	$1.2^{+0.4}_{-0.3}$				TICv8	23h31m17.80s	+39d14m09.01s	75.4392±0.7140	5.23133±0.02300	2.331±0.240	4.9178100±0.002
1±1	$2.2^{+0.1}_{-0.2}$	-0.24±0.03	[Fe/H]	2.63±0.07	TICv8	23h31m17.80s	+39d14m09.01s	75.4392±0.7140	5.23133±0.02300	2.331±0.240	4.9178100±0.002
0.859±0.409	1.173±0.192	-0.29±0.03	[Fe/H]	2.44±0.12	TICv8	23h31m17.80s	+39d14m09.01s	75.4392±0.7140	5.23133±0.02300	2.331±0.240	4.9178100±0.002
					TICv8	16h10m24.50s	+43d48m58.90s	17.9323±0.0073	6.61935±0.02300	4.714±0.016	6.3830000±0.000
					TICv8	16h10m24.50s	+43d48m58.90s	17.9323±0.0073	6.61935±0.02300	4.714±0.016	6.3830000±0.000
					TICv8	16h10m24.50s	+43d48m58.90s	17.9323±0.0073	6.61935±0.02300	4.714±0.016	6.3830000±0.000
	0.90				TICv8	16h10m24.50s	+43d48m58.90s	17.9323±0.0073	6.61935±0.02300	4.714±0.016	6.3830000±0.000
.8668±0.0324	0.91	0.44	[Fe/H]		TICv8	16h10m24.50s	+43d48m58.90s	17.9323±0.0073	6.61935±0.02300	4.714±0.016	6.3830000±0.000
	1.00	0.35	[Fe/H]		TICv8	16h10m24.50s	+43d48m58.90s	17.9323±0.0073	6.61935±0.02300	4.714±0.016	6.3830000±0.000
.93±0.01	0.90±0.04	0.41	[Fe/H]	4.45±0.02	TICv8	16h10m24.50s	+43d48m58.90s	17.9323±0.0073	6.61935±0.02300	4.714±0.016	6.3830000±0.000
	0.9100±0.1130				TICv8	16h10m24.50s	+43d48m58.90s	17.9323±0.0073	6.61935±0.02300	4.714±0.016	6.3830000±0.000
					TICv8	16h10m24.50s	+43d48m58.90s	17.9323±0.0073	6.61935±0.02300	4.714±0.016	6.3830000±0.000

Showing records 19 to 35 of 44360 (44360 total) DOI 10.26133/NEA40

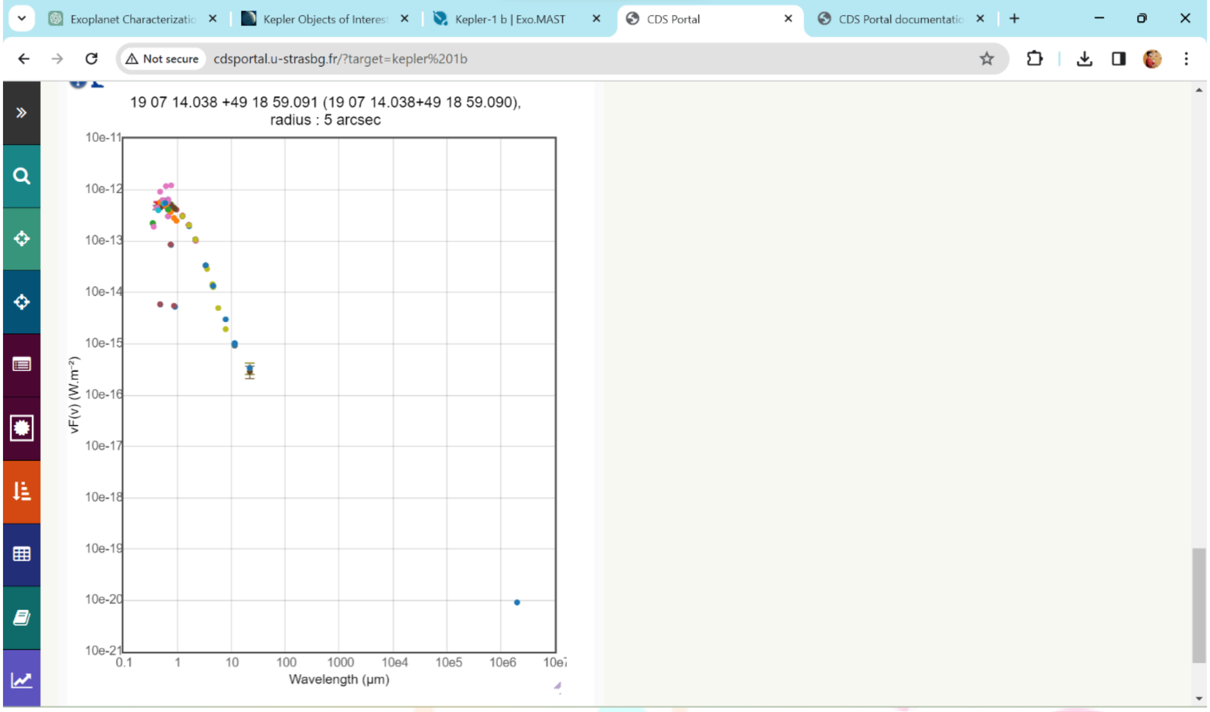


	System Name	Host Name	TIC ID	Number of Stars	Number of Planets	Stellar Parameter Reference	Spectral Type	Stellar Effective Temperature [K]	Stellar Radius [Solar Radius]	Stellar Mass [Solar mass]	Ste Metallic
☑	16 Cyg	16 Cyg B	TIC 27533327	3	1	Maldonado et al. 2015		5774±15			0.08±
☑	16 Cyg	16 Cyg B	TIC 27533327	3	1	Santos et al. 2004		5772±25		0.99±0.05	0.08±
☑	16 Cyg	HIP 96895	TIC 27533341	3	1	Takeda et al. 2007			$1.26^{+0.05}_{-0.04}$	$1.022^{+0.047}_{-0.035}$	
☑	16 Cyg	16 Cyg B	TIC 27533327	3	1	Wright et al. 2004					
☑	16 Cyg	HIP 96895	TIC 27533341	3	1	Nidever et al. 2002					
☑	16 Cyg	HIP 96895	TIC 27533341	3	1	Turnbull 2015	G2V	5781	1.26	1.02	0.1
☑	16 Cyg	16 Cyg B	TIC 27533327	3	1	Stassun et al. 2017		5750±8	1.13±0.01	1.08±0.04	0.06
☑	16 Cyg	HIP 96895	TIC 27533341	3	1	Gray et al. 2003	G1.5 V				
☑	16 Cyg	16 Cyg B	TIC 27533327	3	1	Turnbull 2015	G5V	5674	1.17	0.96	0.04
☑	16 Cyg	16 Cyg B	TIC 27533327	3	1	Rosenthal et al. 2021		5711.96700531	1.1594640525	0.9829957444	0.073
☑	16 Cyg	HIP 96895	TIC 27533341	3	1	TICv8		$5778.000^{+123.407}_{-105.2}$	$1.2501200^{+0.0537322}_{-0.06}$	$1.040000^{+0.129694}_{-0.114}$	0.090±
☑	16 Cyg	16 Cyg B	TIC 27533327	3	1	Gaia DR2		$5777.25^{+112.75}_{-80.75}$	$1.1198002^{+0.0319722}_{-0.04}$		
☑	16 Cyg	16 Cyg B	TIC 27533327	3	1	TICv8		$5747.000^{+143.256}_{-142.7}$	$1.1282700^{+0.0798648}_{-0.04}$	$1.030000^{+0.148362}_{-0.116}$	0.060±
☑	16 Cyg	HIP 96895	TIC 27533341	3	1	Valenti & Fischer 2005					
☑	16 Cyg	16 Cyg B	TIC 27533327	3	1	Nidever et al. 2002					

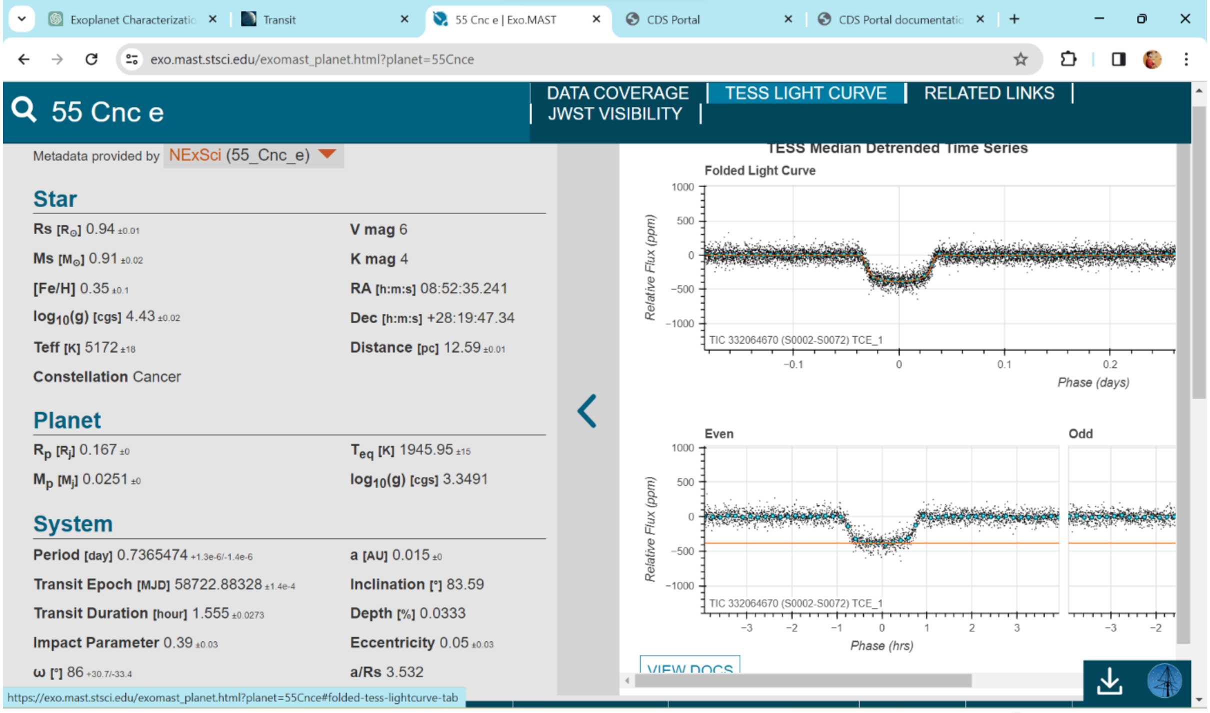
Showing records 55 to 71 of 44360 (44360 total) DOI 10.26133/NEA40

8. Visualization

Kepler 1b Photometric Points



55 Cnc e from MAST



Metadata provided by NExSci (55_Cnc_e)

Star

Rs [R⊙] 0.94 ±0.01
Ms [M⊙] 0.91 ±0.02
[Fe/H] 0.35 ±0.1
$\log_{10}$(g) [cgs] 4.43 ±0.02
Teff [K] 5172 ±18
Constellation Cancer
V mag 6
K mag 4
RA [h:m:s] 08:52:35.241
Dec [h:m:s] +28:19:47.34
Distance [pc] 12.59 ±0.01

Planet

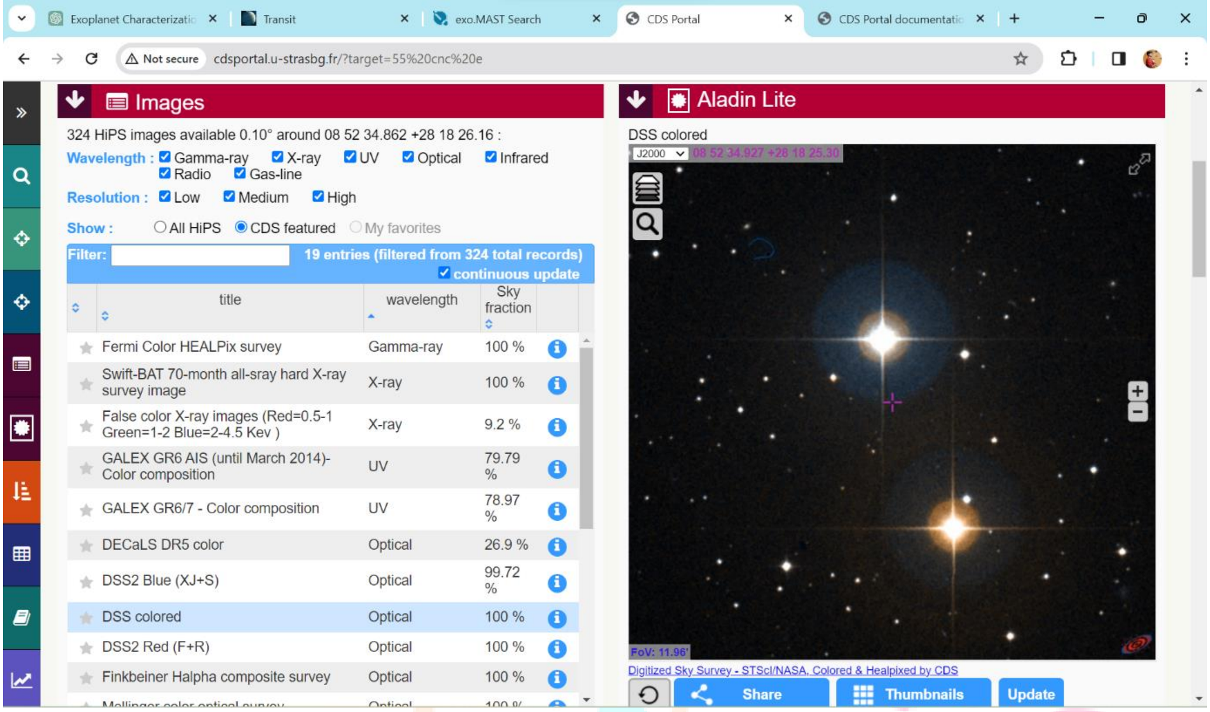
R_p [Rj] 0.167 ±0
M_p [Mj] 0.0251 ±0
T_{eq} [K] 1945.95 ±15
$\log_{10}$(g) [cgs] 3.3491

System

Period [day] 0.7365474 +1.3e-6/-1.4e-6
Transit Epoch [MJD] 58722.88328 ±1.4e-4
Transit Duration [hour] 1.555 ±0.0273
Impact Parameter 0.39 ±0.03
ω [°] 86 +30.7/-33.4
a [AU] 0.015 ±0
Inclination [°] 83.59
Depth [%] 0.0333
Eccentricity 0.05 ±0.03
a/Rs 3.532

https://exo.mast.stsci.edu/exomast_planet.html?planet=55Cnce#folded-tess-lightcurve-tab

55 Cnc e visulaised , images reposited and Photometric Points



324 HiPS images available 0.10° around 08 52 34.862 +28 18 26.16 :

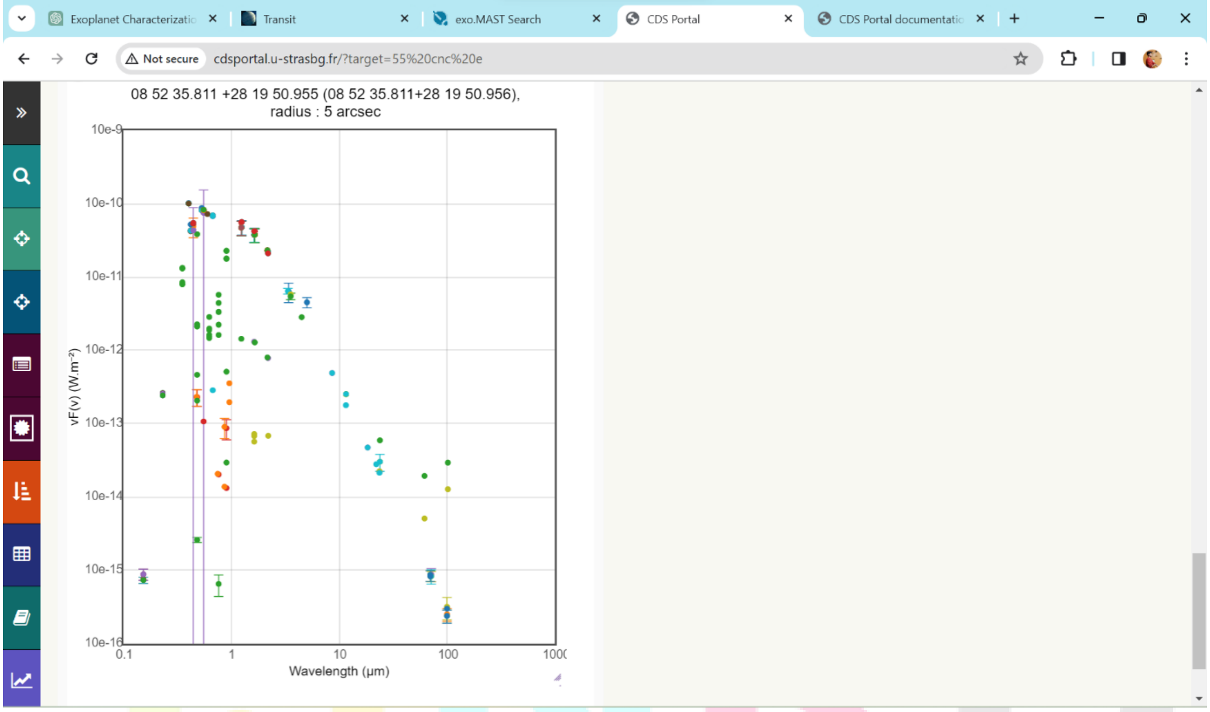
Wavelength : ☑ Gamma-ray ☑ X-ray ☑ UV ☑ Optical ☑ Infrared ☑ Radio ☑ Gas-line

Resolution : ☑ Low ☑ Medium ☑ High

Show : ○ All HiPS ● CDS featured ○ My favorites

Filter: 19 entries (filtered from 324 total records) ☑ continuous update

title	wavelength	Sky fraction
Fermi Color HEALPix survey	Gamma-ray	100 %
Swift-BAT 70-month all-sray hard X-ray survey image	X-ray	100 %
False color X-ray images (Red=0.5-1 Green=1-2 Blue=2-4.5 Kev)	X-ray	9.2 %
GALEX GR6 AIS (until March 2014)- Color composition	UV	79.79 %
GALEX GR6/7 - Color composition	UV	78.97 %
DECaLS DR5 color	Optical	26.9 %
DSS2 Blue (XJ+S)	Optical	99.72 %
DSS colored	Optical	100 %
DSS2 Red (F+R)	Optical	100 %
Finkbeiner Halpha composite survey	Optical	100 %



Kelper 10b

Metadata provided by NExSci (Kepler-10_b)

Star

Rs [R☉] 1.06 ±0.01	**V mag** 11
Ms [M☉] 0.91 ±0.02	**K mag** 9.5
[Fe/H] -0.15 ±0.04	**RA** [h:m:s] 19:02:43.032
log₁₀(g) [cgs] 4.34 ±0	**Dec** [h:m:s] +50:14:29.34
Teff [K] 5708 ±28	**Distance** [pc] 185.51 ±0.81
Constellation Draco	

Planet

R_p [Rj] 0.131 ±0	T_{eq} [K] 2183.08 ±16
M_p [Mj] 0.0103 ±0	$\log_{10}(g)$ [cgs] 3.1708

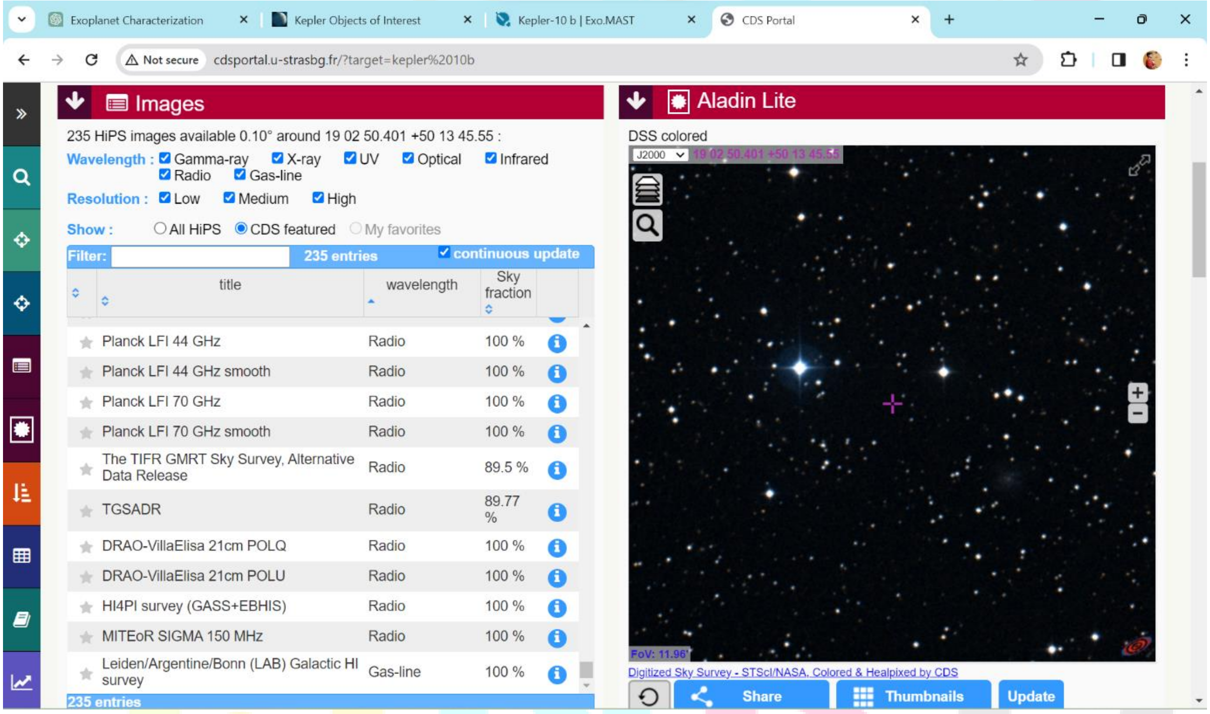
System

Period [day] 0.8374907 ±2e-7	**a** [AU] 0.017 ±0
Transit Epoch [MJD] 54964.07513 ±5e-5	**Inclination** [°] 84.15
Transit Duration [hour] 1.811 +0.0064/-0.0036	**Depth** [%] 0.0161
Impact Parameter 0.34 +0.07/-0.08	**Eccentricity** 0 +0.16/-0.06
ω [°] null	**a/Rs** 3.418

Estimated Atmospheric Relative SNRs

1.5 Micron Emission	0.0144
5 Micron Emission	0.0044
Kmag Transmission	0.0191

https://exo.mast.stsci.edu/exomast_planet.html?planet=Kepler10b#kepler-lightcurve-tab



235 HiPS images available 0.10° around 19 02 50.401 +50 13 45.55 :

Wavelength : ☑ Gamma-ray ☑ X-ray ☑ UV ☑ Optical ☑ Infrared ☑ Radio ☑ Gas-line

Resolution : ☑ Low ☑ Medium ☑ High

Show : ○ All HiPS ● CDS featured ○ My favorites

Filter: 235 entries ☑ continuous update

title	wavelength	Sky fraction
Planck LFI 44 GHz	Radio	100 %
Planck LFI 44 GHz smooth	Radio	100 %
Planck LFI 70 GHz	Radio	100 %
Planck LFI 70 GHz smooth	Radio	100 %
The TIFR GMRT Sky Survey, Alternative Data Release	Radio	89.5 %
TGSADR	Radio	89.77 %
DRAO-VillaElisa 21cm POLQ	Radio	100 %
DRAO-VillaElisa 21cm POLU	Radio	100 %
HI4PI survey (GASS+EBHIS)	Radio	100 %
MITEoR SIGMA 150 MHz	Radio	100 %
Leiden/Argentine/Bonn (LAB) Galactic HI survey	Gas-line	100 %

235 entries

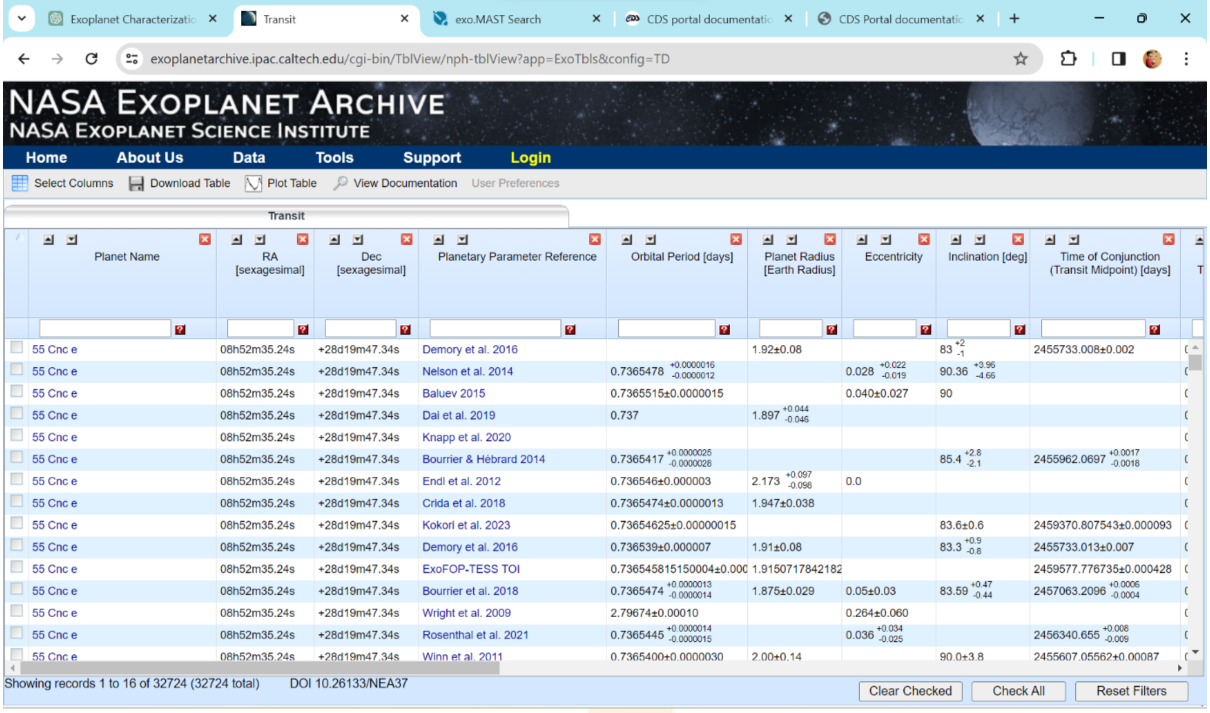
Digitized Sky Survey - STScI/NASA. Colored & Healpixed by CDS

9. Findings and Interpretations

The extensive dataset collected from multiple sources including KOI (Kepler Object of Interest) tables, K2 target lists, stellar host catalogs, and specific exoplanet datasets such as Kepler-1b and Kepler-10b, has yielded profound insights into the rich tapestry of exoplanetary systems. Analysis of the KOI tables has unveiled a plethora of potential exoplanet candidates meticulously cataloged by the Kepler mission, each entry brimming with critical parameters such as orbital period, transit duration, and planetary radius. Delving into the K2 target lists has expanded our purview beyond the original Kepler field, presenting new vistas for observation and exploration, and broadening our comprehension of exoplanet demographics. Furthermore, meticulous scrutiny of stellar host catalogs has provided invaluable contextual information regarding the properties and characteristics of host stars, from spectral type to metallicity, furnishing a backdrop against which the enigmatic dance of exoplanetary formation unfolds. Our in-depth analysis of individual exoplanets, such as Kepler-1b and Kepler-10b, has offered a window into the intricate tapestry of planetary properties, unveiling nuances in mass, radius, and atmospheric composition, thus elucidating the myriad facets of exoplanetary diversity. In essence, the findings derived from this comprehensive dataset serve as a cornerstone in the edifice of exoplanetary science, enriching our understanding of planetary demographics, formation mechanisms, and evolutionary pathways, while charting a course for future exploration and discovery in the celestial expanse beyond.

10.Theoretical Insights : Some Important Features of the Project

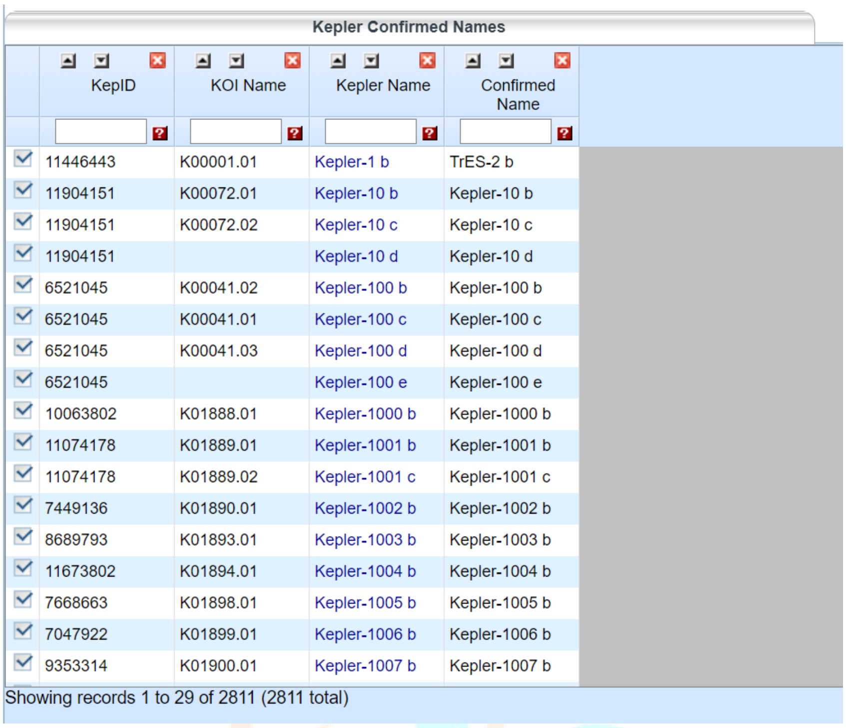
Transit surveys are observational efforts designed to identify exoplanets by tracking the periodic dimming of a star's light when a planet passes in front of it, or transits, from the observer's perspective. These surveys use ground-based telescopes outfitted with sensitive photometric detectors to monitor a large number of stars at the same time. Notable transit surveys include the Wide-Angle Search for Planets (WASP), the Hungarian Automated Telescope Network (HATNet), and the Kilodegree Extremely Little Telescope (KELT). Transit surveys have successfully discovered hundreds of exoplanets of all sizes and orbital arrangements, offering vital insights into the diversity of planetary systems in the galaxy.



	Planet Name	RA [sexagesimal]	Dec [sexagesimal]	Planetary Parameter Reference	Orbital Period [days]	Planet Radius [Earth Radius]	Eccentricity	Inclination [deg]	Time of Conjunction (Transit Midpoint) [days]
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Demory et al. 2016		1.92±0.08		83^{+2}_{-1}	2455733.008±0.002
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Nelson et al. 2014	$0.7365478^{+0.0000016}_{-0.0000012}$		$0.028^{+0.022}_{-0.019}$	$90.36^{+3.96}_{-4.66}$	
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Baluev 2015	0.7365515±0.0000015		0.040±0.027	90	
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Dai et al. 2019	0.737	$1.897^{+0.044}_{-0.046}$			
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Knapp et al. 2020					
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Bourrier & Hébrard 2014	$0.7365417^{+0.0000025}_{-0.0000028}$			$85.4^{+2.8}_{-2.1}$	$2455962.0697^{+0.0017}_{-0.0018}$
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Endl et al. 2012	0.736546±0.000003	$2.173^{+0.097}_{-0.096}$	0.0		
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Crida et al. 2018	0.7365474±0.0000013	1.947±0.038			
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Kokori et al. 2023	0.73654625±0.00000015			83.6±0.6	2459370.807543±0.000093
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Demory et al. 2016	0.736539±0.000007	1.91±0.08		$83.3^{+0.9}_{-0.8}$	2455733.013±0.007
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	ExoFOP-TESS TOI	0.736545815150004±0.000	1.9150717842182			2459577.776735±0.000428
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Bourrier et al. 2018	$0.7365474^{+0.0000013}_{-0.0000014}$	1.875±0.029	0.05±0.03	$83.59^{+0.47}_{-0.44}$	$2457063.2096^{+0.0006}_{-0.0004}$
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Wright et al. 2009	2.79674±0.00010		0.264±0.060		
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Rosenthal et al. 2021	$0.7365445^{+0.0000014}_{-0.0000015}$		$0.036^{+0.034}_{-0.025}$		$2456340.655^{+0.008}_{-0.009}$
☐	55 Cnc e	08h52m35.24s	+28d19m47.34s	Winn et al. 2011	0.7365400±0.0000030	2.00±0.14		90.0±3.8	2455607.05562±0.00087

Showing records 1 to 16 of 32724 (32724 total) DOI 10.26133/NEA37

The Kepler space telescope transformed exoplanetary science with its remarkable precision and sensitivity in finding exoplanet transits. NASA launched Kepler in 2009 to monitor over 150,000 stars in a fixed field of view in the constellations Cygnus and Lyra, detecting minuscule changes in illumination produced by orbiting planets. Kepler's original mission concluded in 2013, but its legacy lives on through its extended mission, K2, and the immense amount of data it has contributed to the scientific community. Kepler's findings include a wide range of exoplanets, from rocky terrestrial worlds to gas giants, as well as insights about the abundance and variety of planetary systems in the Milky Way galaxy.

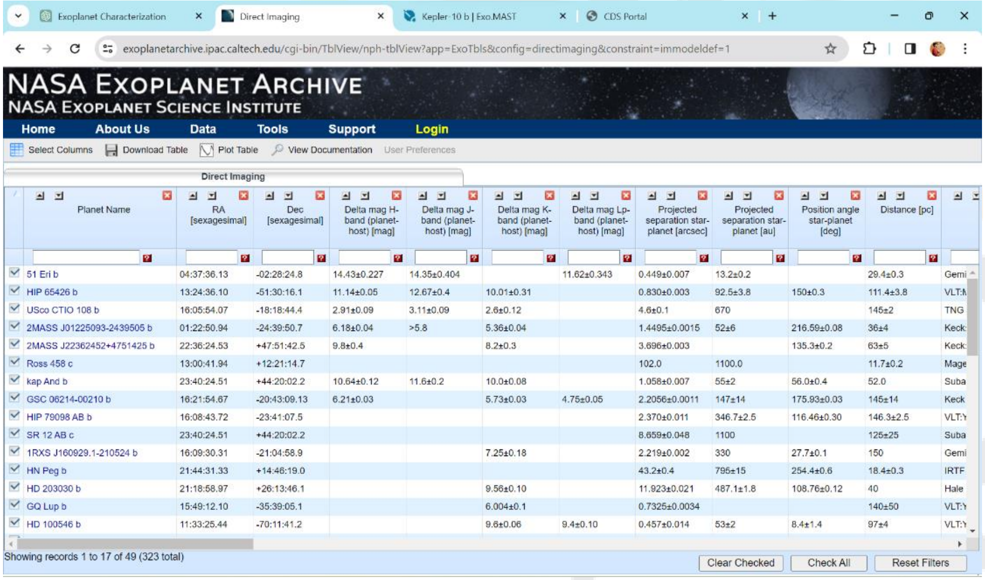


Kepler Confirmed Names

	KepID	KOI Name	Kepler Name	Confirmed Name
☑	11446443	K00001.01	Kepler-1 b	TrES-2 b
☑	11904151	K00072.01	Kepler-10 b	Kepler-10 b
☑	11904151	K00072.02	Kepler-10 c	Kepler-10 c
☑	11904151		Kepler-10 d	Kepler-10 d
☑	6521045	K00041.02	Kepler-100 b	Kepler-100 b
☑	6521045	K00041.01	Kepler-100 c	Kepler-100 c
☑	6521045	K00041.03	Kepler-100 d	Kepler-100 d
☑	6521045		Kepler-100 e	Kepler-100 e
☑	10063802	K01888.01	Kepler-1000 b	Kepler-1000 b
☑	11074178	K01889.01	Kepler-1001 b	Kepler-1001 b
☑	11074178	K01889.02	Kepler-1001 c	Kepler-1001 c
☑	7449136	K01890.01	Kepler-1002 b	Kepler-1002 b
☑	8689793	K01893.01	Kepler-1003 b	Kepler-1003 b
☑	11673802	K01894.01	Kepler-1004 b	Kepler-1004 b
☑	7668663	K01898.01	Kepler-1005 b	Kepler-1005 b
☑	7047922	K01899.01	Kepler-1006 b	Kepler-1006 b
☑	9353314	K01900.01	Kepler-1007 b	Kepler-1007 b

Showing records 1 to 29 of 2811 (2811 total)

Direct imaging is the process of taking direct photographs of exoplanets rather than inferring their presence through indirect means like as transit or radial velocity measurements. This approach demands powerful gear capable of filtering out a star's blinding brilliance in order to discern the dim light emitted by circling planets. Direct imaging is particularly successful for finding big, young exoplanets that orbit at great distances from their host stars, such as those found in planetary systems' outer regions. Notable direct imaging projects include the Gemini Planet Imager (GPI), the Subaru Coronagraphic Extreme Adaptive Optics (SCExAO) system, and the future James Webb Space Telescope. Direct imaging provides vital insights into the atmospheres, compositions, and orbital properties of exoplanets, complementing other detection methods and extending our understanding of planets.

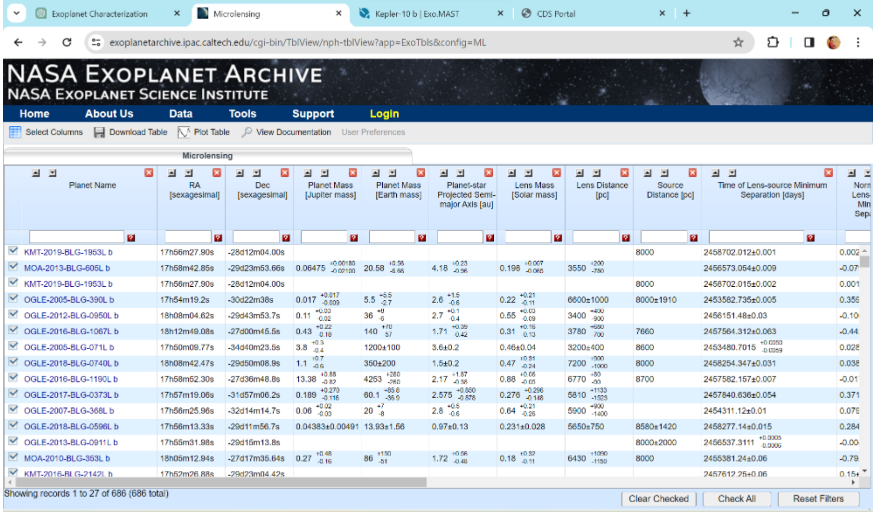


Direct Imaging

	Planet Name	RA [sexagesimal]	Dec [sexagesimal]	Delta mag H-band (planet-host) [mag]	Delta mag J-band (planet-host) [mag]	Delta mag K-band (planet-host) [mag]	Delta mag Lp-band (planet-host) [mag]	Projected separation star-planet [arcsec]	Projected separation star-planet [au]	Position angle star-planet [deg]	Distance [pc]	
☑	51 Eri b	04:37:36.13	-02:28:24.8	14.43±0.227	14.35±0.404		11.62±0.343	0.449±0.007	13.2±0.2		29.4±0.3	Gemi
☑	HIP 65426 b	13:24:36.10	-51:30:16.1	11.14±0.05	12.67±0.4	10.01±0.31		0.830±0.003	92.5±3.8	150±0.3	111.4±3.8	VLT:
☑	USco CTIO 108 b	16:05:54.07	-18:18:44.4	2.91±0.09	3.11±0.09	2.6±0.12		4.6±0.1	670		145±2	TNG
☑	2MASS J01225093-2439505 b	01:22:50.94	-24:39:50.7	6.18±0.04	>5.8	5.36±0.04		1.4495±0.0015	52±6	216.59±0.08	36±4	Keck:
☑	2MASS J22362452+4751425 b	22:36:24.53	+47:51:42.5	9.8±0.4		8.2±0.3		3.696±0.003		135.3±0.2	63±5	Keck:
☑	Ross 458 c	13:00:41.94	+12:21:14.7					102.0	1100.0		11.7±0.2	Mage
☑	kap And b	23:40:24.51	+44:20:02.2	10.64±0.12	11.6±0.2	10.0±0.08		1.058±0.007	55±2	56.0±0.4	52.0	Suba
☑	GSC 06214-00210 b	16:21:54.67	-20:43:09.13	6.21±0.03		5.73±0.03	4.75±0.05	2.2056±0.0011	147±14	175.93±0.03	145±14	Keck
☑	HIP 79098 AB b	16:08:43.72	-23:41:07.5					2.370±0.011	346.7±2.5	116.46±0.30	146.3±2.5	VLT:
☑	SR 12 AB c	23:40:24.51	+44:20:02.2					8.659±0.048	1100		125±25	Suba
☑	1RXS J160929.1-210524 b	16:09:30.31	-21:04:58.9			7.25±0.18		2.219±0.002	330	27.7±0.1	150	Gemi
☑	HN Peg b	21:44:31.33	+14:46:19.0					43.2±0.4	795±15	254.4±0.6	18.4±0.3	IRTF
☑	HD 203030 b	21:18:58.97	+26:13:46.1			9.56±0.10		11.923±0.021	487.1±1.8	108.76±0.12	40	Hale
☑	GQ Lup b	15:49:12.10	-35:39:05.1			6.004±0.1		0.7325±0.0034			140±50	VLT:
☑	HD 100546 b	11:33:25.44	-70:11:41.2			9.6±0.06	9.4±0.10	0.457±0.014	53±2	8.4±1.4	97±4	VLT:

Showing records 1 to 17 of 49 (323 total)

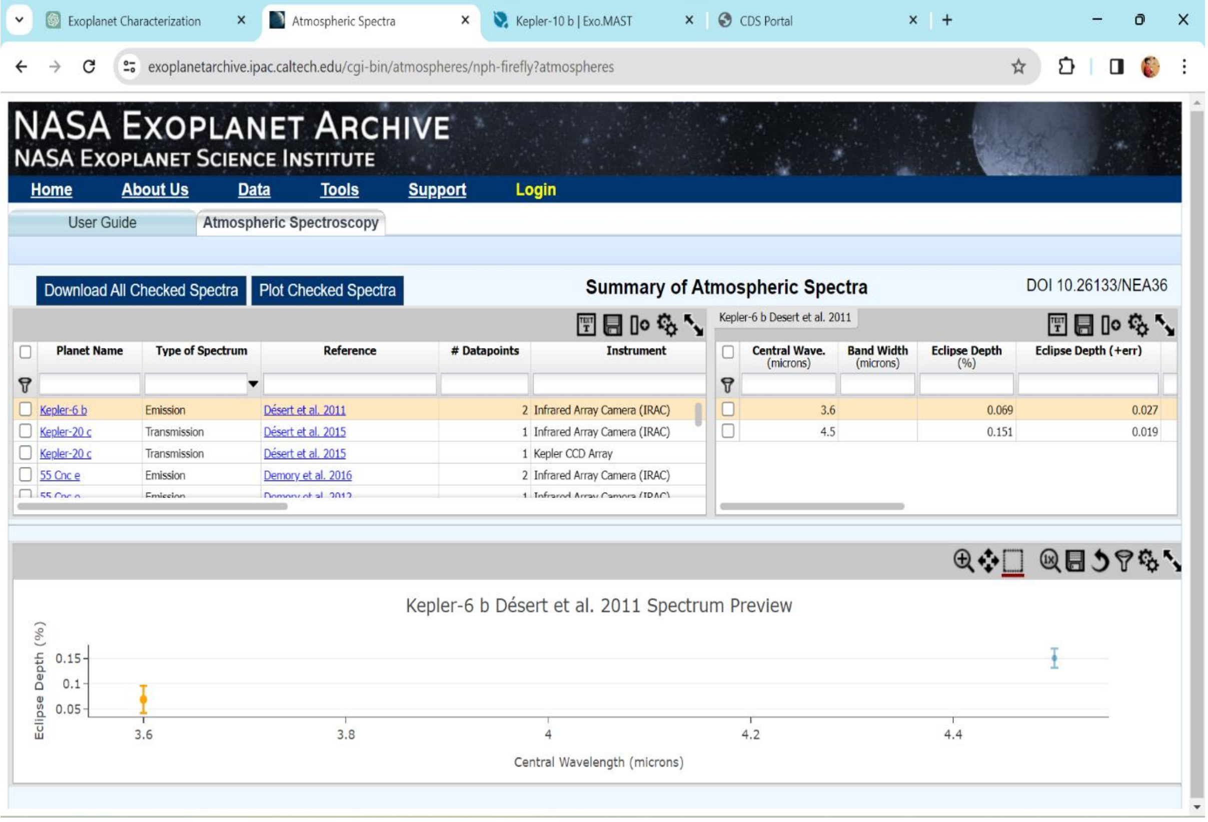
Microlensing happens when a foreground object's gravitational field bends and amplifies light from a distant background source, such as a star or galaxy. If the foreground object contains a planet, the gravitational microlensing event will show typical deviations from a smooth light curve, indicating the planet's presence. Microlensing surveys, such as the Optical Gravitational Lensing Experiment (OGLE) and the Microlensing Observations in Astrophysics (MOA) collaboration, watch millions of stars in the Milky Way bulge and galactic disc in search of these transitory phenomena. Microlensing is very sensitive to planets at large distances from their host stars, making it an effective technique for discovering cold, distant exoplanets that other methods cannot detect.



	Planet Name	RA [sexagesimal]	Dec [sexagesimal]	Planet Mass [Jupiter mass]	Planet Mass [Earth mass]	Planet-star Projected Semi-major Axis [au]	Lens Mass [Solar mass]	Lens Distance [pc]	Source Distance [pc]	Time of Lens-source Minimum Separation [days]	Norm Lens- Min Sep
☑	KMT-2019-BLG-1953L b	17h56m27.90s	-28d12m04.00s						8000	2458702.012±0.001	0.002
☑	MOA-2013-BLG-605L b	17h58m42.85s	-29d23m53.66s	$0.06475^{+0.00180}_{-0.02100}$	$20.58^{+0.56}_{-6.66}$	$4.18^{+0.23}_{-0.96}$	$0.198^{+0.007}_{-0.066}$	3550^{+200}_{-780}		2456573.054±0.009	-0.07
☑	KMT-2019-BLG-1953L b	17h56m27.90s	-28d12m04.00s						8000	2458702.015±0.002	0.001
☑	OGLE-2005-BLG-390L b	17h54m19.2s	-30d22m38s	$0.017^{+0.017}_{-0.009}$	$5.5^{+5.5}_{-2.7}$	$2.6^{+1.5}_{-0.6}$	$0.22^{+0.21}_{-0.11}$	6600±1000	8000±1910	2453582.735±0.005	0.35
☑	OGLE-2012-BLG-0950L b	18h08m04.62s	-29d43m53.7s	$0.11^{+0.03}_{-0.02}$	36^{+9}_{-6}	$2.7^{+0.1}_{-0.4}$	$0.55^{+0.03}_{-0.09}$	3400^{+400}_{-900}		2456151.48±0.03	-0.10
☑	OGLE-2016-BLG-1067L b	18h12m49.08s	-27d00m45.5s	$0.43^{+0.22}_{-0.18}$	140^{+70}_{-57}	$1.71^{+0.39}_{-0.42}$	$0.31^{+0.16}_{-0.13}$	3780^{+690}_{-700}	7660	2457564.312±0.063	-0.44
☑	OGLE-2005-BLG-071L b	17h50m09.77s	-34d40m23.5s	$3.8^{+0.3}_{-0.4}$	1200±100	3.6±0.2	0.46±0.04	3200±400	8600	$2453480.7015^{+0.0050}_{-0.0059}$	0.028
☑	OGLE-2018-BLG-0740L b	18h08m42.47s	-29d50m08.9s	$1.1^{+0.7}_{-0.6}$	350±200	1.5±0.2	$0.47^{+0.31}_{-0.24}$	7200^{+900}_{-1000}	8000	2458254.347±0.031	0.038
☑	OGLE-2016-BLG-1190L b	17h58m52.30s	-27d36m48.8s	$13.38^{+0.88}_{-0.82}$	4253^{+280}_{-260}	$2.17^{+1.87}_{-0.38}$	$0.88^{+0.06}_{-0.05}$	6770^{+80}_{-90}	8700	2457582.157±0.007	-0.01
☑	OGLE-2017-BLG-0373L b	17h57m19.06s	-31d57m06.2s	$0.189^{+0.270}_{-0.116}$	$60.1^{+85.8}_{-36.9}$	$2.575^{+0.850}_{-0.878}$	$0.276^{+0.296}_{-0.148}$	5810^{+1133}_{-1523}		2457840.636±0.054	0.371
☑	OGLE-2007-BLG-368L b	17h56m25.96s	-32d14m14.7s	$0.06^{+0.02}_{-0.03}$	20^{+7}_{-8}	$2.8^{+0.5}_{-0.6}$	$0.64^{+0.21}_{-0.26}$	5900^{+900}_{-1400}		2454311.12±0.01	0.07
☑	OGLE-2018-BLG-0596L b	17h56m13.33s	-29d11m56.7s	0.04383±0.00491	13.93±1.56	0.97±0.13	0.231±0.028	5650±750	8580±1420	2458277.14±0.015	0.284
☑	OGLE-2013-BLG-0911L b	17h55m31.98s	-29d15m13.8s						8000±2000	$2456537.3111^{+0.0005}_{-0.0006}$	-0.00
☑	MOA-2010-BLG-353L b	18h05m12.94s	-27d17m35.64s	$0.27^{+0.48}_{-0.16}$	86^{+150}_{-51}	$1.72^{+0.56}_{-0.48}$	$0.18^{+0.32}_{-0.11}$	6430^{+1090}_{-1150}	8000	2455381.24±0.06	-0.79
☑	KMT-2016-BLG-2142L b	17h52m26.88s	-29d23m04.42s							2457612.25±0.06	0.15+

Showing records 1 to 27 of 686 (686 total)

Atmospheric spectroscopy is the study of light from a star as it travels through an exoplanet's atmosphere during transit. Astronomers can determine the spectral signatures of gases in an exoplanet's atmosphere, such as water vapour, methane, and carbon dioxide, by breaking down the starlight into its component wavelengths. These spectral patterns reveal important information on the composition, temperature, and dynamics of exoplanetary atmospheres, as well as the possibility of habitability and biosignatures. Atmospheric spectroscopy is often carried out with high-resolution spectrographs on ground-based telescopes or space-based observatories, such as the Hubble Space Telescope (HST) and the future James Webb Space Telescope. This approach gives a unique view into the atmospheric parameters of exoplanets and shows potential for identifying evidence of life.



Summary of Atmospheric Spectra

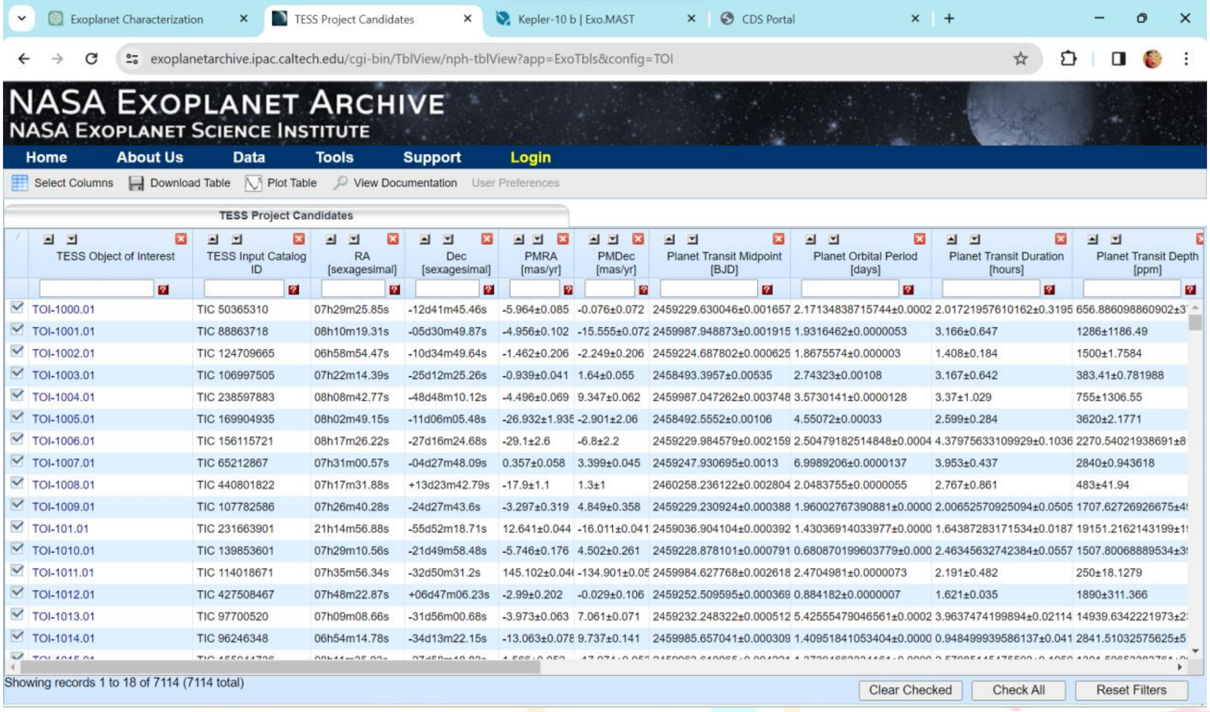
DOI 10.26133/NEA36

☐	Planet Name	Type of Spectrum	Reference	# Datapoints	Instrument
☐	Kepler-6 b	Emission	Désert et al. 2011	2	Infrared Array Camera (IRAC)
☐	Kepler-20 c	Transmission	Désert et al. 2015	1	Infrared Array Camera (IRAC)
☐	Kepler-20 c	Transmission	Désert et al. 2015	1	Kepler CCD Array
☐	55 Cnc e	Emission	Demory et al. 2016	2	Infrared Array Camera (IRAC)
☐	55 Cnc e	Emission	Demory et al. 2012	1	Infrared Array Camera (IRAC)

☐	Central Wave. (microns)	Band Width (microns)	Eclipse Depth (%)	Eclipse Depth (+err)
☐	3.6		0.069	0.027
☐	4.5		0.151	0.019

0

The Transiting Exoplanet Survey Satellite (TESS) is a NASA space telescope launched in 2018 with the primary goal of conducting an all-sky survey to find exoplanets orbiting the closest and brightest stars. TESS examines huge areas of the sky for lengthy periods of time, looking for the telltale dips in brightness created by transiting exoplanets. TESS's distinct observational method, which concentrates on nearby stars and bright targets, allows it to find a wide spectrum of exoplanets, including rocky planets in the habitable zones of their host stars. TESS has already produced major discoveries, including a large number of new exoplanet candidates as well as insights into the distribution and variety of planetary systems in the solar neighbourhood. TESS continues to revolutionise the world of exoplanetary science and pave way of future discoveries with upcoming missions such as JWST & WFRIST .



TESS Project Candidates

	TESS Object of Interest	TESS Input Catalog ID	RA [sexagesimal]	Dec [sexagesimal]	PMRA [mas/yr]	PMDec [mas/yr]	Planet Transit Midpoint [BJD]	Planet Orbital Period [days]	Planet Transit Duration [hours]	Planet Transit Depth [ppm]
☑	TOI-1000.01	TIC 50365310	07h29m25.85s	-12d41m45.46s	-5.964±0.085	-0.076±0.072	2459229.630046±0.001657	2.17134838715744±0.0002	2.01721957610162±0.3195	656.886098860902±3
☑	TOI-1001.01	TIC 88863718	08h10m19.31s	-05d30m49.87s	-4.956±0.102	-15.555±0.072	2459987.948873±0.001915	1.9316462±0.0000053	3.166±0.647	1286±1186.49
☑	TOI-1002.01	TIC 124709665	06h58m54.47s	-10d34m49.64s	-1.462±0.206	-2.249±0.206	2459224.687802±0.000625	1.8675574±0.000003	1.408±0.184	1500±1.7584
☑	TOI-1003.01	TIC 106997505	07h22m14.39s	-25d12m25.26s	-0.939±0.041	1.64±0.055	2458493.3957±0.00535	2.74323±0.00108	3.167±0.642	383.41±0.781988
☑	TOI-1004.01	TIC 238597883	08h08m42.77s	-48d48m10.12s	-4.496±0.069	9.347±0.062	2459987.047262±0.003748	3.5730141±0.0000128	3.37±1.029	755±1306.55
☑	TOI-1005.01	TIC 169904935	08h02m49.15s	-11d06m05.48s	-26.932±1.935	-2.901±2.06	2458492.5552±0.00106	4.55072±0.00033	2.599±0.284	3620±2.1771
☑	TOI-1006.01	TIC 156115721	08h17m26.22s	-27d16m24.68s	-29.1±2.6	-6.8±2.2	2459229.984579±0.002159	2.50479182514848±0.0004	4.37975633109929±0.1036	2270.54021938691±8
☑	TOI-1007.01	TIC 65212867	07h31m00.57s	-04d27m48.09s	0.357±0.058	3.399±0.045	2459247.930695±0.0013	6.9989206±0.0000137	3.953±0.437	2840±0.943618
☑	TOI-1008.01	TIC 440801822	07h17m31.88s	+13d23m42.79s	-17.9±1.1	1.3±1	2460258.236122±0.002804	2.0483755±0.0000055	2.767±0.861	483±41.94
☑	TOI-1009.01	TIC 107782586	07h26m40.28s	-24d27m43.6s	-3.297±0.319	4.849±0.358	2459229.230924±0.000388	1.96002767390881±0.0000	2.00652570925094±0.0505	1707.62726926675±4
☑	TOI-101.01	TIC 231663901	21h14m56.88s	-55d52m18.71s	12.641±0.044	-16.011±0.041	2459036.904104±0.000392	1.43036914033977±0.0000	1.64387283171534±0.0187	19151.2162143199±1
☑	TOI-1010.01	TIC 139853601	07h29m10.56s	-21d49m58.48s	-5.746±0.176	4.502±0.261	2459228.878101±0.000791	0.680870199603779±0.000	2.46345632742384±0.0557	1507.80068889534±3
☑	TOI-1011.01	TIC 114018671	07h35m56.34s	-32d50m31.2s	145.102±0.04	-134.901±0.05	2459984.627768±0.002618	2.4704981±0.0000073	2.191±0.482	250±18.1279
☑	TOI-1012.01	TIC 427508467	07h48m22.87s	+06d47m06.23s	-2.99±0.202	-0.029±0.106	2459252.509595±0.000369	0.884182±0.0000007	1.621±0.035	1890±311.366
☑	TOI-1013.01	TIC 97700520	07h09m08.66s	-31d56m00.68s	-3.973±0.063	7.061±0.071	2459232.248322±0.000512	5.42555479046561±0.0002	3.9637474199894±0.02114	14939.634221973±2
☑	TOI-1014.01	TIC 96246348	06h54m14.78s	-34d13m22.15s	-13.063±0.078	9.737±0.141	2459985.657041±0.000309	1.40951841053404±0.0000	0.948499939586137±0.041	2841.51032575625±5

Showing records 1 to 18 of 7114 (7114 total)

11.Challenges and Limitations Faced

One of the key issues stems from the inherent uncertainty of observational data. Ground-based telescopes, space telescopes, and catalogues from various sources add to the dataset's richness while also introducing errors. Using different observational techniques, calibration methodologies, and data reporting standards might lead to anomalies that hinder the integration process. To address these discrepancies, thorough investigation is required, as well as the creation of strong anomaly detection and correction algorithms. The cosmic ballet of exoplanetary observations isn't always complete, and missing data is a major concern. Some exoplanets may have sparse observational records, resulting in gaps in important properties. The difficulty comes in determining if the lack of data is due to observational limits, temporary occurrences, or data processing concerns. Imputing missing values without creating bias takes careful study and, in some cases, coordination with the larger scientific community. Data standards in astronomical data repositories vary greatly. NASA Exoplanet Archive, MAST, and CDS Portal all follow certain protocols and formats. Aligning and standardising data from these various sources becomes a complicated challenge. Creating mapping mechanisms to transfer parameters from one standard to another is a complex process that needs ongoing changes as new standards arise and old ones evolve. The universe is dynamic, and discoveries happen in real time. Space missions provide fresh data, ground-based observatories provide innovative insights, and catalogues are continually updated. Navigating this changing environment while preserving the temporal integrity of the dataset is a huge issue. Real-time updates from repositories create time sensitivity, requiring a balance between the requirement for recent data and stability for meaningful analysis. The overwhelming amount of astronomy data requires enormous processing resources. Processing massive datasets, performing complicated analysis, and applying machine learning algorithms for predictive modelling all require computing complexity. Balancing the requirement for high-performance computing against actual resource restrictions becomes a complex task. Efficient algorithms and parallel processing approaches are critical for increasing computing efficiency while maintaining analytical depth. The quest of knowledge brings ethical issues to the forefront. Addressing possible biases in the dataset, whether caused by observational limits or data processing decisions, is an important component of responsible research. Striking for representativeness across varied exoplanetary systems and guaranteeing inclusion in studies necessitates meticulous inspection and a dedication to transparency in research procedures. Exoplanet characterisation is intrinsically multidisciplinary, involving knowledge of astronomy, data science, and computer approaches. Bridging the boundaries between these fields can be difficult, particularly when converting astronomical details into data science approaches. Effective communication and collaboration among astronomers, astrophysicists, and data scientists is required to negotiate the multidisciplinary nature of exoplanet research. The cosmic ballet of exoplanetary systems occasionally shocks us with unexpected events and groundbreaking findings. While scientifically fascinating, these unanticipated events pose hurdles for categorization, interpretation, and incorporation into existing databases. Adapting to these cosmic surprises necessitates a quick response and a willingness to accept the unexpected. Another problem is to translate sophisticated astronomical data into insights that are accessible and understood to a wide audience. Effective scientific communication tactics are required to explain the complexities of exoplanet classification to a wider audience, which includes politicians, educators, and the general public. Finding a balance between scientific rigour and accessibility is critical for generating wider appreciation and understanding. As we go along the cosmic frontier of exoplanet characterisation, these issues become not simply hurdles, but also possibilities for innovation and discovery. The search for information outside our solar system necessitates resilience, adaptation, and a collaborative mindset. By confronting these issues straight on, our study seeks to contribute not just to scientific knowledge of exoplanetary systems, but also to a larger discussion about the complexities of exploring the universe. In confronting these problems, we recognise the dynamic and developing nature of our cosmic endeavour, which is motivated by the desire to uncover the secrets of celestial bodies orbiting faraway stars.

12.Theoretical Explanation : Exoplanet Eccentricity and Orbital Resonances

Exoplanetary orbits have complicated dynamics that are impacted by a variety of causes, including eccentricity fluctuations and orbital resonances. In this theoretical inquiry, we dig into the interesting field of orbital dynamics, looking at the origin, stability, and repercussions of eccentric orbits and resonant configurations in exoplanetary systems. Eccentric orbits, which deviate from a complete circle, are common among exoplanetary systems. According to theoretical models, eccentric orbits can result from gravitational disturbances during planet formation, such as interactions with neighbouring planets or the gravitational impact of passing stars. Exoplanetary systems change dynamically throughout time, and eccentric orbits may be further influenced by tidal pressures, secular interactions, and resonance effects. Orbital resonances occur when the orbital periods of two or more planets match in a simple integer ratio, such as 2:1 or 3:2. These resonant arrangements can produce complicated dynamical phenomena such as resonant trapping, orbital migration, and stability islands in the phase space of orbital parameters. According to theoretical models, resonant interactions have an important role in determining the architecture of exoplanetary systems, impacting orbital element distribution and planetary orbit stability over long timeframes. Eccentric orbits and orbital resonances are closely related to the process of planetary migration, in which planets experience radial or angular displacements in their orbits as a result of gravitational interactions with neighbouring bodies or the protoplanetary disc. According to theoretical research, resonant interactions can either accelerate or prevent planetary migration, depending on the resonance configuration and the relative masses of the participating planets. Understanding the interaction of eccentricity fluctuations, resonant dynamics, and planetary migration is critical for determining the origin and development of exoplanetary systems. Eccentric orbits and orbital resonances provide different observational fingerprints that may be discovered using a variety of methods, including radial velocity measurements, transit time deviations, and dynamical simulations. Theoretical models anticipate typical patterns in exoplanet orbital parameters within resonant chains, such as period commensurabilities and orbital element libration. Astronomers can use these observational fingerprints to infer the presence of resonant configurations and restrict the dynamical history of exoplanetary systems.

13.Future Directions the Project Could Potentially Trail

As we pioneer exoplanet characterization research, the cosmic tapestry of possibilities develops, offering tantalising potential for future exploration. The difficulties experienced during the present phase of our endeavour not only illustrate the complexities of the universe, but also open the way for novel approaches that promise to push the frontiers of our understanding. Here, we highlight potential prospects for our study that might take us to new cosmic frontiers and advance the science of exoplanet characterisation. Our present study is built on the synergy of ground-based observations and spaceborne missions. Looking forward, the integration of multi-wavelength data has enormous promise. Incorporating data at radio, infrared, optical, and ultraviolet wavelengths can reveal previously unknown elements of exoplanetary atmospheres, compositions, and host star properties. This holistic approach would give a more complete knowledge of the complex interactions between exoplanets and their cosmic environs. The computational challenges encountered during this experiment pave the way for improved machine learning applications in exoplanet characterisation. Developing improved algorithms for pattern identification, anomaly detection, and predictive modelling can greatly improve our capacity to analyse complicated datasets. Machine learning algorithms trained on varied datasets may reveal minor connections, hastening the rate of discovery in the ever-expanding field of exoplanets. The dynamic character of the universe needs a move to real-time observational missions. Collaboration with current and forthcoming satellite missions, ground-based observatories, and transient surveys might make it easier to collect real-time data. This real-time technique would enable researchers to record fleeting phenomena, respond to unanticipated events, and continually update the dataset. Real-time observational missions might provide unparalleled agility to exoplanet characterisation studies. Given the multidisciplinary nature of exoplanet characterisation, future initiatives should prioritise stronger interactions between astrophysicists and data scientists. Bridging the gap between astronomical knowledge and modern data science approaches might open up new possibilities for data interpretation. Joint efforts to create innovative algorithms, analytical tools, and visualisation approaches targeted for exoplanet research might significantly increase the project's effect. The study of exoplanetary atmospheres remains a fascinating area. Future research might focus on improving atmospheric analysis tools, digging into spectroscopic data to uncover chemical composition, temperature gradients, and potential signals of habitability. Researchers might conduct a thorough investigation of the atmospheres of several exoplanetary candidates using advances in spectroscopy and computer modelling. Harnessing the potential of citizen scientists can be a game changer for the project. Citizen science programmes incorporating people from all backgrounds might help to validate data, identify anomalies, and possibly find new phenomena. Platforms that allow the public to explore exoplanetary datasets democratise research while also amplifying the collective intelligence devoted to unravelling the mysteries of the universe. While our current study focuses on habitability measurements, future possibilities may include an extension of these criteria. Incorporating other parameters like magnetic field strength, stellar radiation fluctuation, and planetary magnetic protection might help us better comprehend exoplanetary habitability. This complex methodology would help to provide a more complete assessment of the possible habitability of distant worlds. Participating in global virtual observatory efforts has the potential to increase the effect of exoplanet characterisation research. Collaborative initiatives utilising platforms like as the Virtual Observatory (VO) can help the international astronomy community share datasets, methodology, and insights more easily. This integrated strategy assures that advances in exoplanet research draw on a worldwide pool of expertise and various observational viewpoints. The temporal development of exoplanetary systems is a somewhat unknown topic. Long-term monitoring programmes, which allow for the study of planetary systems over long periods of time, might be part of future directions. This technique would reveal differences in planetary characteristics, orbital dynamics, and possible atmosphere changes. Long-term monitoring efforts would provide essential information on the dynamic dynamics of exoplanetary systems. The project's influence goes beyond the scientific sphere, providing several opportunities for educational outreach and public participation. Future directions should include attempts to spread the enthusiasm of exoplanet characterisation to a wider audience. Educational programmes, public talks, and interactive platforms can help to bridge the gap between cutting-edge science and public comprehension, encouraging a larger appreciation for the wonders of the cosmos.

14.Conclusion

As we journey through the cosmic worlds of exoplanet characterisation, the completion of our study endeavour signifies not the finish, but rather the beginning of a new era of discovery. The journey via NASA Exoplanet Archive, MAST, and CDS Portal has been a cosmic ballet, showcasing the complexities of distant worlds and the difficulties involved in solving their secrets. In this last section, we reflect on the voyage, the insights acquired, and the significant consequences that extend beyond the confines of our solar system. Our study adventure began with a desire to unravel the cosmic fabric of exoplanetary systems. NASA Exoplanet Archive records gave a large canvas with a variety of colours representing planetary masses, radii, orbital dynamics, and star partners. MAST produced the ethereal brushstrokes, which depict the dance of exoplanets through the lens of space observatories. CDS Portal, a celestial library, provided further context, linking our understanding of exoplanetary systems to the larger cosmic tale. The research expedition was not without its cosmic challenges. We overcame the challenges of data discrepancies, missing records, and varying data standards. Computational complexities necessitated novel solutions, while ethical issues highlighted the responsibility inherent in scientific discovery. Each problem became a chance for progress, instilling ingenuity and resilience in the face of uncertainty.

The collaborative spirit of astronomers and data scientists crossed academic barriers, illustrating the value of interdisciplinary synergy. The repositories' user interfaces, which were initially complex landscapes, transformed into manageable terrains via familiarity and adaptation. The hardships we faced embellished the story of our cosmic voyage, changing impediments into stepping stones to new realms. As we near the end of this phase, our focus shifts to future horizons and undiscovered territory. The combination of multi-wavelength data, powerful machine learning algorithms, and real-time observational missions encourages us to dive further into the dynamics of exoplanetary systems. Interdisciplinary partnerships, educational outreach, and efforts including virtual observatories pave the way for a more inclusive and globally linked study of space. Enhanced atmospheric characterisation, long-term monitoring projects, and citizen scientific participation all promise to reveal layers of cosmic mysteries that were previously concealed from view. Habitability measures are evolving to reflect a more comprehensive knowledge of the circumstances that allow life to exist outside of our planet. The trip does not end here; it continues into the limitless realm of possibilities waiting to be discovered. As we contemplate on the cosmic journey of exoplanet classification, it becomes clear that our study undertaking is only a prelude to a larger story. The stories of exoplanetary systems are still being written, with each dataset, observation, and discovery adding another chapter to the cosmic drama. The problems we faced serve as landmarks, leading future explorers through the maze of astronomical data, instilling resilience, and encouraging creativity. Our dedication to transparency and open science is unwavering. The datasets and approaches used serve as lighthouses for anyone looking to navigate comparable cosmic terrain. The project's reach goes beyond the scientific community, including educators, students, and fans eager to take part in the unfolding drama of the universe. The democratisation of scientific discovery leaves an enduring legacy, inviting all to partake in the wonders of exoplanet characterization. As we come to the end of this chapter in our cosmic journey, we express thanks to the universe itself. Our cosmic partners include celestial bodies in faraway orbits, stars that enliven the cosmic canvas, and planets that beg us to fathom their mysteries. The libraries, databases, and platforms that made our investigation possible are portals to knowledge, beckoning us to peek into the depths of the cosmos. In this last act, we stand at the brink of the unknown, fuelled by curiosity, guided by scientific inquiry principles, and inspired by the limitless possibilities that await us. The cosmic voyage of exoplanet classification, however defined by hurdles, is a monument to the persistence of human discovery and the voracious curiosity that drives us into the cosmic expanse.