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Data Columns in the K2 Planets and Candidates Table

The following table lists all of the data columns in the K2 Planets and Candidate Table (k2pandc) that can be accessed through the interactive table and the archive's Table Access Protocol (TAP) service.

Some definitions include more specific information:

- Uncertainties (positive and negative)
- Limits

Positional Information comes from the EPIC Catalog. Photometry and color data comes from the EPIC, 2MASS, and WISE catalogs.

† Default column: these columns display in the interactive table when the table is first loaded, and when **Reset Filters** is clicked.

Digital Object Identifier

If you use archive data or services for your research, please include the following Digital Object Identifier (DOI) as part of your acknowledgment:

DOI 10.26133/NEA19

See Acknowledging the Archive for dataset-specific language. See the full list of NASA Exoplanet Archive DOIs for other data sets and services.

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Names

Database Column Name	Column Label	Description
pl_name†	Planet Name	Exoplanet Archive default name for confirmed planets
hostname†	Host Name	Stellar name most commonly used in the literature
pl_letter	Planet Letter	Letter assigned to the planetary component of a planetary system
k2_name	K2 ID	Name assigned by the Exoplanet Archive for planets discovered by K2
epic_hostname	EPIC Name	Name of the star as given by the EPIC Catalog
hd_name	HD ID	Name of the star as given by the Henry Draper Catalog
hip_name	HIP ID	Name of the star as given by the Hipparcos Catalog

tic_id	TESS Input Catalog ID	Name of the star as given by the TESS Input Catalog
gaia_id	Gaia DR2 ID	Name of the star as given by the Gaia Catalog
default_flag†	Default Parameter Set	Boolean flag indicating whether given set of planet parameters has been selected as default (1=yes, 0=no)
disposition†	Archive Disposition	Disposition updated by the Exoplanet Archive. Current values are CANDIDATE, FALSE POSITIVE [CANDIDATE], and CONFIRMED, and REFUTED [PLANET]. All candidates marked as CONFIRMED are also listed in the Exoplanet Archive Planetary Systems table.
disp_refname†	Archive Disposition Reference	Reference name for publication from which the Archive Disposition is drawn.

[†] Default column: These columns display in the interactive table when the table is first loaded, and when Reset Filters is clicked.

System Composition

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Database Column Name	Table Label	Description
sy_snum†	Number of Stars	Number of gravitationally bound stars in the planetary system
sy_pnum†	Number of Planets	Number of confirmed planets in the planetary system
sy_mnum	Number of Moons	Number of moons in the planetary system
cb_flag	Circumbinary Flag	Flag indicating whether the planet orbits a binary system (1=yes, 0=no)

[†] **Default column:** These columns display in the interactive table when the table is first loaded, and when **Reset Filters** is clicked.

Planet Discovery

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Database Column Name	Table Label	Description
discoverymethod†	Discovery Method	Method by which the confirmed planet or candidate was first identified
disc_year†	Discovery Year	Year the confirmed planet or candidate was discovered
disc_refname	Discovery Reference	Reference name for discovery publication
disc_pubdate	Discovery Publication Date	Publication Date of the confirmed planet or candidate discovery referee publication
disc_locale	Discovery Locale	Location of observation of confirmed planet or candidate discovery (Ground or Space)
disc_facility†	Discovery Facility	Name of facility of confirmed planet or candidate discovery observations
disc_telescope	Discovery Telescope	Name of telescope of confirmed planet or candidate discovery observations
disc_instrument	Discovery Instrument	Name of instrument of confirmed planet or candidate discovery observations

[†] **Default column:** These columns display in the interactive table when the table is first loaded, and when **Reset Filters** is clicked.

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Detections

Database Column Name	Table Label	Description
rv_flag	_	Flag indicating if the planet host star exhibits radial velocity variations due to the planet (1=yes, 0=no)
pul_flag	,	Boolean flag indicating if the planet host star exhibits pulsar timing variations due to the planet (1=yes, 0=no)
ptv_flag		Boolean flag indicating if the planet host star exhibits pulsation timing variations due to the planet (1=yes, 0=no)

tran_flag	Detected by Transits	Flag indicating if the planet transits its host star (1=yes, 0=no)
ast_flag	Detected by Astrometric Variations	Flag indicating if the planet host star exhibits astrometrical variations due to the planet (1=yes, 0=no)
obm_flag	Detected by Orbital Brightness Modulations	Flag indicating whether the planet exhibits orbital modulations on the phase curve (1=yes, 0=no)
micro_flag	Detected by Microlensing	Boolean flag indicating if the planetary system acted as a lens during an observed microlensing event (1=yes, 0=no)
etv_flag	Detected by Eclipse Timing Variations	Flag indicating whether a circumbinary planet that orbits an eclipsing binary induces eclipse timing variations (ETVs) in the binary pair (1=yes, 0=no)
ima_flag	Detected by Imaging	Flag indicating if the planet has been observed via imaging techniques (1=yes, 0=no)
dkin_flag	Detection by Disk Kinematics	Boolean flag indicating if the presence of the planet was inferred due to its kinematic influence on the protoplanetary disk of its host star (1=yes, 0=no)
soltype†	Solution Type	Disposition of planet according to given planet parameter set
pl_controv_flag†	Controversial Flag	Flag indicating whether the confirmation status of a planet has been questioned in the published literature (1=yes, 0=no)

[†] **Default column:** These columns display in the interactive table when the table is first loaded, and when **Reset Filters** is clicked.

Planet Parameters

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Database Column Name	Table Label	Description	Uncertainties Column (positive +) (negative -)	Limit Column
pl_refname†	Planetary Parameter Reference	Reference of publication used for given planet parameter set		
pl_orbper†	Orbital Period [days]	Time the candidate takes to make a complete orbit around the host star or system.	(+) pl_orbpererr1 (-) pl_orbpererr2	pl_orbperlim
pl_orbsmax†	Orbit Semi-Major Axis [au]	The longest radius of an elliptic orbit, or, for exoplanets detected via gravitational microlensing or direct imaging, the projected separation in the plane of the sky	(+) pl_orbsmaxerr1 (-) pl_orbsmaxerr2	pl_orbsmaxlim
pl_rade†	Candidate Radius [Earth radii]	Length of a line segment from the center of the candidate to its surface, measured in units of radius of the Earth.	(+) pl_radeerr1 (-) pl_radeerr2	pl_radelim
pl_radj†	Candidate Radius [Jupiter radii]	Length of a line segment from the center of the candidate to its surface, measured in units of radius of Jupiter.	(+) pl_radjerr1 (-) pl_radjerr2	pl_radjlim
pl_masse	Planet Mass [Earth Mass]	Amount of matter contained in the planet,	(+) pl_masseerr1 (-) pl_masseerr2	pl_masselim
pl_massj	Planet Mass [Jupiter Mass]	Amount of matter contained in the planet, measured in units of masses of Jupiter	(+) pl_massjerr1 (-) pl_massjerr2	pl_massjlim
pl_msinie	Planet Mass*sin(i) [Earth Mass]	Minimum mass of a planet as measured by radial velocity, measured in units of masses of the Earth	(+) pl_msinieerr1 (-) pl_msinieerr2	pl_msinielim
pl_msinij	Planet Mass*sin(i) [Jupiter Mass]	Minimum mass of a planet as measured by radial velocity, measured in units of masses of Jupiter	(+) pl_msinijerr1 (-) pl_msinijerr2	pl_msinijlim
pl_cmasse	Planet Mass*sin(i)/sin(i) [Earth Mass]	A calculated quantity indicating the quotient of the lower limit of the measured planet mass, denoted as its mass times the sine of its inclination, and the sine of its inclination, measured in units of the mass of the Earth. This is specified for references in which the inclination is provided as well as the planet mass limit, but the true mass is not reported.	(+) pl_cmasseerr1 (-) pl_cmasseerr2	pl_cmasselim
pl_cmassj	Planet Mass*sin(i)/sin(i) [Jupiter Mass]	A calculated quantity indicating the quotient of the lower limit of the measured planet mass, denoted as its mass times the sine of its inclination, and the sine of its inclination, measured in units of the mass of Jupiter. This is specified for references in which the inclination is	(+) pl_cmassjerr1 (-) pl_cmassjerr2	pl_cmassjlim

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		provided as well as the planet mass limit, but the true mass is not reported.		
pl_bmasse†	Planet Mass or Mass*sin(i) [Earth Mass]	Best planet mass estimate available, in order of preference: Mass, M*sin(i)/sin(i), or M*sin(i), depending on availability,	(+) pl_bmasseerr1 (-) pl_bmasseerr2	pl_bmasselim
pl_bmassj†	Planet Mass or Mass*sin(i) [Jupiter Mass]	Best planet mass estimate available, in order of preference: Mass, M*sin(i)/sin(i), or M*sin(i), depending on availability, and measured in Jupiter masses	(+) pl_bmassjerr1 (-) pl_bmassjerr2	pl_bmassjlim
ol_bmassprov†	Planet Mass or Mass*sin(i) Provenance	Provenance of the measurement of the best mass.		
pl_dens	Planet Density [g/cm**3]	Amount of mass per unit of volume of the planet	(+) pl_denserr1 (-) pl_denserr2	pl_denslim
pl_orbeccen†	Eccentricity	Amount by which the orbit of the planet deviates from a perfect circle	(+) pl_orbeccenerr1 (-) pl_orbeccenerr2	pl_orbeccenlim
pl_insol†	Insolation Flux [Earth Flux]	Insolation flux is another way to give the equilibrium temperature. It's given in units relative to those measured for the Earth from the Sun.	(+) pl_insolerr1 (-) pl_insolerr2	pl_insollim
pl_eqt†	Equilibrium Temperature [K]	The equilibrium temperature of the candidate as modeled by a black body heated only by its host star, or for directly imaged candidates, the effective temperature of the candidate required to match the measured luminosity if the candidate were a black body.	(+) pl_eqterr1 (-) pl_eqterr2	pl_eqtlim
pl_orbincl	Inclination [deg]	Angular distance of the orbital plane from the line of sight.	(+) pl_orbinclerr1 (-) pl_orbinclerr2	pl_orbincllim
pl_tranmid	Time of Conjunction (Transit Midpoint) [days]	The time given by the average of the time the candidate begins to cross the stellar limb and the time the candidate finishes crossing the stellar limb.	(+) pl_tranmiderr1 (-) pl_tranmiderr2	pl_tranmidlim
pl_tsystemref	Time Reference Frame and Standard	Time system basis for temporal and orbital parameters		
ttv_flag†	Data show Transit Timing Variations	Flag indicating if the planet orbit exhibits transit timing variations from another planet in the system (1=yes, 0=no). Note: Non-transiting planets discovered via the transit timing variations of another planet in the system will not have their TTV flag set, since they do not themselves demonstrate TTVs.		
pl_imppar	Impact Parameter	The sky-projected distance between the center of the stellar disc and the center of the candidate disc at conjunction, normalized by the stellar radius.	(+) pl_impparerr1 (-) pl_impparerr2	pl_impparlim
pl_trandep	Transit Depth [%]	The size of the relative flux decrement caused by the orbiting body transiting in front of the star	(+) pl_trandeperr1 (-) pl_trandeperr2	pl_trandeplim
pl_trandur	Transit Duration [hours]	The length of time from the moment the candidate begins to cross the stellar limb to the moment the candidate finishes crossing the stellar limb.	(+) pl_trandurerr1 (-) pl_trandurerr2	pl_trandurlim
pl_ratdor	Ratio of Distance to Stellar Radius	Ratio of Semi-Major Axis to Stellar Radius	(+) pl_ratdorperr1 (-) pl_ratdorerr2	pl_ratdorlim
pl_ratror	Ratio of Planet to Stellar Radius	Ratio of Candidate to Stellar Radius	(+) pl_ratrorerr1 (-) pl_ratrorerr2	pl_ratrorlim
pl_occdep	Occultation Depth [%]	Depth of occultation of secondary eclipse	(+) pl_occdeperr1 (-) pl_occdeperr2	pl_occdeplim
pl_orbtper	Epoch of Periastron [deg]	The time of the planet's periastron passage	(+) pl_orbtpererr1 (-) pl_orbtpererr2	pl_orbtperlim
pl_orblper	Argument of Periastron [deg]	The angular separation between the orbit's ascending node and periastron. Note: there are a varying conventions in the exoplanet literature regarding argument of periastron (or periapsis). For example, some publications refer the planet's orbit, others to the host star's reflex orbit, which	(+) pl_orblpererr1 (-) pl_orblpererr2	pl_orblperlim

		differs by 180 deg. The values in the Exoplanet Archive are not corrected to a standardized system, but are asreported for each publication.		
pl_rvamp	Radial Velocity Amplitude [m/s]	Half the peak-to-peak amplitude of variability in the stellar radial velocity	(+) pl_rvamperr1 (-) pl_rvamperr2	pl_rvamplim
pl_projobliq	Projected Obliquity [deg]	The angle between the angular momentum vector of the rotation of the host star and the angular momentum vector of the orbit of the planet, projected into the plane of the sky. Depending on the choice of coordinate system, projected obliquity is represented in the literature as either lambda (λ) or beta (β), where λ is defined as the negative of β (i.e., λ = - β). Since λ is reported more often than β , all values of β have been converted to λ .	(+) pl_projobliqerr1 (-) pl_projobliqerr2	pl_projobliqlim
pl_trueobliq	True Obliquity [deg]	The angle between the angular momentum vector of the rotation of the host star and the angular momentum vector of the orbit of the planet	(+) pl_trueobliqerr1 (-) pl_trueobliqerr2	pl_trueobliqlim

[†] **Default column:** These columns display in the interactive table when the table is first loaded, and when **Reset Filters** is clicked.

Stellar Data Top

Database Column Name	Table Label	Description	Uncertainties Column (positive +) (negative -)	Limit Column
st_refname†	Stellar Parameter Reference	Reference of publication used for given stellar parameter set		
st_spectype†	Spectral Type	Classification of the star based on their spectral characteristics following the Morgan-Keenan system		
st_teff†	Effective Temperature [K]	Temperature of the star as modeled by a black body emitting the same total amount of electromagnetic radiation	(+) st_tefferr1 (-) st_tefferr2	st_tefflim
st_rad†	Stellar Radius [Solar radii]	Length of a line segment from the center of the star to its surface, measured in units of radius of the Sun.	(+) st_raderr1 (-) st_raderr2	st_radlim
st_mass†	Stellar Mass [Solar mass]	Amount of matter contained in the star, measured in units of masses of the Sun	(+) st_masserr1 (-) st_masserr2	st_masslim
st_met†	Stellar Metallicity [dex]	Measurement of the metal content of the photosphere of the star as compared to the hydrogen content	(+) st_meterr1 (-) st_meterr2	st_metlim
st_metratio	Metallicity Ratio	Ratio for the Metallicity Value ([Fe/H] denotes iron abundance, [M/H] refers to a general metal content)		
st_lum	Stellar Luminosity [log(Solar)]	Amount of energy emitted by a star per unit time, measured in units of solar luminosities	(+) st_lumerr1 (-) st_lumerr2	st_lumlim
st_logg†	Stellar Surface Gravity	Gravitational acceleration experienced at the stellar surface	(+) st_loggerr1 (-) st_loggerr2	st_logglim
st_age	Stellar Age [Gyr]	The age of the host star	(+) st_ageerr1 (-) st_ageerr2	st_agelim
st_dens	Stellar Density [g/cm**3]	Amount of mass per unit of volume of the star	(+) st_denserr1 (-) st_denserr2	st_denslim
st_vsin	Rotational Velocity v*sin(i) [km/s]	Rotational velocity at the equator of the star multiplied by the sine of the inclination.	(+) st_vsinerr1 (-) st_vsinerr2	st_vsinlim
st_rotp	Stellar Rotational Period [days]	The time required for the planet host star to complete one rotation, assuming it is a solid body	(+) st_rotperr1 (-) st_rotperr2	st_rotplim
st_radv	Systemic Radial Velocity [km/s]	Velocity of the star in the direction of the line of sight	(+) st_radverr1 (-) st_radverr2	st_radvlim

[†] Default column: These columns display in the interactive table when the table is first loaded, and when Reset Filters is clicked.

System Data To

Database Column Name	Table Label	Description	Uncertainties Column (positive +) (negative -)
sy_refname†	System Parameter Reference	Reference of publication used for given system parameter set	
sy_pm	Total Proper Motion [mas/yr]	Angular change in position over time as seen from the center of mass of the Solar System	(+) sy_pmerr1 (-) sy_pmerr2
sy_pmra	Proper Motion (RA) [mas/yr]	Angular change in right ascension over time as seen from the center of mass of the Solar System	(+) sy_pmraerr1 (-) sy_pmraerr2
sy_pmdec	Proper Motion (Dec) [mas/yr]	Angular change in declination over time as seen from the center of mass of the Solar System	(+) sy_pmdecerr1 (-) sy_pmdecerr2
sy_dist†	Distance [pc]	Distance to the planetary system in units of parsecs	(+) sy_disterr1 (-) sy_disterr2
sy_plx	Parallax [mas]	Difference in the angular position of a star as measured at two opposite positions within the Earth's orbit	(+) sy_plxerr1 (-) sy_plxerr2
pl_nnotes	Number of Notes	Number of Notes associated with the planet. View all notes in the object's System Overview page.	
k2_campaigns	K2 Campaigns	The specific K2 campaigns in which the K2 target was observed	
k2_campaigns_num	Number of K2 Campaigns	The number of K2 campaigns in which the K2 target was observed	

[†] **Default column:** These columns display in the interactive table when the table is first loaded, and when **Reset Filters** is clicked.

Position (Subset of System Data)

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Database Column Name	Table Label	Description	Uncertainties Column (positive +) (negative -)
rastr†	RA [sexagesimal]	Right Ascension of the planetary system in sexagesimal format	
decstr†	Dec [sexagesimal]	Declination of the planetary system in sexagesimal notation	
ra	RA [decimal]	Right Ascension of the planetary system in decimal degrees	(+) raerr1 (-) raerr2
dec	Dec [decimal]	Declination of the planetary system in decimal degrees	(+) decerr1 (-) decerr2
glat	Galactic Latitude [deg]	Galactic latitude of the planetary system in units of decimal degrees	(+) glaterr1 (-) glaterr2
glon	Galactic Longitude [deg]	Galactic longitude of the planetary system in units of decimal degrees	(+) glonerr1 (-) glonerr2
elat	Ecliptic Latitude [deg]	Ecliptic latitude of the planetary system in units of decimal degrees	(+) elaterr1 (-) elaterr2
elon	Ecliptic Longitude [deg]	Ecliptic longitude of the planetary system in units of decimal degrees	(+) elonerr1 (-) elonerr2

[†] **Default column:** These columns display in the interactive table when the table is first loaded, and when **Reset Filters** is clicked.

Photometry (Subset of System Data)

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Database Column Name	Table Label	Description	Uncertainties Column (positive +) (negative -)
sy_bmag		Brightness of the host star as measured using the B (Johnson) band in units of magnitudes	(+) sy_bmagerr1 (-) sy_bmagerr2

	[mag]		
sy_vmag†	V-band (Johnson) [mag]	Brightness of the host star as measured using the V (Johnson) band in units of magnitudes	(+) sy_vmagerr1 (-) sy_vmagerr2
sy_jmag	J-band (2MASS) [mag]	Brightness of the host star as measured using the J (2MASS) band in units of magnitudes	(+) sy_jmagerr1 (-) sy_jmagerr2
sy_hmag	H-band (2MASS) [mag]	Brightness of the host star as measured using the H (2MASS) band in units of magnitudes	(+) sy_hmagerr1 (-) sy_hmagerr2
st_kmag†	Ks-band (2MASS) [mag]	Brightness of the host star as measured using the K (2MASS) band in units of magnitudes	(+) sy_kmagerr1 (-) sy_kmagerr2
st_umag	u-band (Sloan) [mag]	Brightness of the host star as measured using the u (Sloan) band in units of magnitudes	(+) sy_umagerr1 (-) sy_umagerr2
sy_gmag	g-band (Sloan) [mag]	Brightness of the host star as measured using the g (Sloan) band in units of magnitudes	(+) sy_gmagerr1 (-) sy_gmagerr2
sy_rmag	r-band (Sloan) [mag]	Brightness of the host star as measured using the r (Sloan) band in units of magnitudes	(+) sy_rmagerr1 (-) sy_rmagerr2
sy_imag	i-band (Sloan) [mag]	Brightness of the host star as measured using the i (Sloan) band in units of magnitudes	(+) sy_imagerr1 (-) sy_imagerr2
sy_zmag	z-band (Sloan) [mag]	Brightness of the host star as measured using the z (Sloan) band in units of magnitudes	(+) sy_zmagerr1 (-) sy_zmagerr2
sy_w1mag	WISE 3.4um [mag]	Brightness of the host star as measured using the 3.4um (WISE) band in units of magnitudes	(+) sy_w1magerr1 (-) sy_w1magerr2
sy_w2mag	WISE 4.6um [mag]	Brightness of the host star as measured using the 4.6um (WISE) band in units of magnitudes	(+) sy_w2magerr1 (-) sy_w2magerr2
sy_w3mag	WISE 12.um [mag]	Brightness of the host star as measured using the 12.um (WISE) band in units of magnitudes	(+) sy_w3magerr1 (-) sy_w3magerr2
sy_w4mag	WISE 22.um [mag]	Brightness of the host star as measured using the 22.um (WISE) band in units of magnitudes	(+) sy_w4magerr1 (-) sy_w4magerr2
sy_gaiamag†	Gaia Magnitude	Brightness of the host star as measuring using the Gaia band in units of magnitudes. Objects matched to Gaia using the Hipparcos or 2MASS IDs provided in Gaia DR2.	(+) sy_gaiamagerr1 (-) sy_gaiamagerr2
sy_icmag	I (Cousins) Magnitude	Brightness of the host star as measured using the I (Cousins) band in units of magnitudes	(+) sy_icmagerr1 (-) sy_icmagerr2
sy_tmag	TESS Magnitude	Brightness of the host star as measured using the TESS bandpass, in units of magnitudes	(+) sy_tmagerr1 (-) sy_tmagerr2
sy_kepmag†	Kepler-band [mag]	Brightness of the host star as measured using the Kepler-band in units of magnitudes.	(+) sy_kepmagerr1 (-) sy_kepmagerr2

[†] **Default column:** These columns display in the interactive table when the table is first loaded, and when **Reset Filters** is clicked.

Dates (Subset of System Data)

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Database Column Name	Column Label	Description
rowupdate†	Date of Last Update	Date of last update of the planet parameters
pl_pubdate†	Planetary Parameter Reference Publication Date	Date of the publication of the given planet parameter set
releasedate†	Release Date	Date that the given planet parameter set was publicly released by the NASA Exoplanet Archive

[†] **Default column:** These columns display in the interactive table when the table is first loaded, and when **Reset Filters** is clicked.

Additional Data

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The parameters in this section are displayed when the interactive table is first loaded, when **Reset Filters** is clicked, or when a TAP query when all default columns are retrieved, but do not fit in any of the other categories listed on this page. All default columns on this page are noted with a \dagger .

Database Column Name	Column Label	Description
st_nphot	Number of Photometry Time Series	Number of photometric time series records, including planet transit light curves, general transit light curves, and amateur light curves
st_nrvc	Number of Radial Velocity Time Series	Number of literature radial velocity curves available for this star in the NASA Exoplanet Archive
st_nspec	Number of Stellar Spectra Measurements	Number of literature spectra available for this star in the NASA Exoplanet Archive
pl_nespec	Number of Eclipse Spectroscopy Measurements	Number of literature eclipse spectrum measurements for this planet in the NASA Exoplanet Archive
pl_ntranspec	Number of Transmission Spectroscopy Measurements	Number of literature transmission spectrum measurements for this planet in the NASA Exoplanet Archive
pl_ndispec	Number of Direct Imaging Spectroscopy Measurements	Number of literature direct imaging spectrum measurements for this planet in the NASA Exoplanet Archive

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