# Descriptions From: <https://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#id_col>

# Koi

Kepler Objecs of Interest: A KOI is a target identified by the Kepler Project that displays at least one transit-like sequence within Kepler time-series photometry that appears to be of astrophysical origin and initially consistent with a planetary transit hypothesis.

# koi\_disposition

Table Label: Exoplanet Archive Disposition

Description: The category of this KOI from the Exoplanet Archive. Current values are CANDIDATE, FALSE POSITIVE, NOT DISPOSITIONED or CONFIRMED. All KOIs marked as CONFIRMED are also listed in the Exoplanet Archive Confirmed Planet table. Designations of CANDIDATE, FALSE POSITIVE, and NOT DISPOSITIONED are taken from the [Disposition Using Kepler Data](https://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#pdisposition).

# koi\_fpflag\_nt

Table Label: Not Transit-Like Flag

Description: A KOI whose light curve is not consistent with that of a transiting planet. This includes, but is not limited to, instrumental artifacts, non-eclipsing variable stars, and spurious (very low SNR) detections.

# koi\_fpflag\_ss

Table Label: Stellar Eclipse Flag

Description: A KOI that is observed to have a significant secondary event, transit shape, or out-of-eclipse variability, which indicates that the transit-like event is most likely caused by an eclipsing binary. However, self-luminous, hot Jupiters with a visible secondary eclipse will also have this flag set, but with a disposition of PC.

# koi\_fpflag\_co

Table Label: Centroid Offset Flag

Description: The source of the signal is from a nearby star, as inferred by measuring the centroid location of the image both in and out of transit, or by the strength of the transit signal in the target's outer (halo) pixels as compared to the transit signal from the pixels in the optimal (or core) aperture.

# koi\_fpflag\_ec

Table Label: Ephemeris Match Indicates Contamination Flag

Description: The KOI shares the same period and epoch as another object and is judged to be the result of flux contamination in the aperture or electronic crosstalk.

# koi\_period

Table Label: Orbital Period (days)

Description: The interval between consecutive planetary transits.

# koi\_period\_err1

Table Label: Uncertainty

Description: positive +

# koi\_period\_err2

Table Label: Uncertainty

Description: negative -

# koi\_time0bk

Table Label: Transit Epoch (BJD - 2,454,833.0)

Description: The time corresponding to the center of the first detected transit in Barycentric Julian Day (BJD) minus a constant offset of 2,454,833.0 days. The offset corresponds to 12:00 on Jan 1, 2009 UTC.

# koi\_time0bk\_err1

Table Label: Uncertainty

Description: positive +

# koi\_time0bk\_err2

Table Label: Uncertainty

Description: negative –

# koi\_impact

Table Label: Impact Parameter

Description: The sky-projected distance between the center of the stellar disc and the center of the planet disc at conjunction, normalized by the stellar radius.

# koi\_impact\_err1

Table Label: Uncertainty

Description: positive +

# koi\_impact\_err2

Table Label: Uncertainty

Description: negative –

# koi\_duration

Table Label: Transit Duration (hours)

Description: The duration of the observed transits. Duration is measured from first contact between the planet and star until last contact. Contact times are typically computed from a best-fit model produced by a [Mandel-Agol (2002)](https://ui.adsabs.harvard.edu/abs/2002ApJ...580L.171M) model fit to a multi-quarter Kepler light curve, assuming a linear orbital ephemeris.

# koi\_duration\_err1

Table Label: Uncertainty

Description: positive +

# koi\_duration\_err2

Table Label: Uncertainty

Description: negative –

# koi\_depth

Table Label: Transit Depth (parts per million)

Description: The fraction of stellar flux lost at the minimum of the planetary transit. Transit depths are typically computed from a best-fit model produced by a [Mandel-Agol (2002)](https://ui.adsabs.harvard.edu/abs/2002ApJ...580L.171M) model fit to a multi-quarter Kepler light curve, assuming a linear orbital ephemeris

# koi\_depth\_err1

Table Label: Uncertainty

Description: positive +

# koi\_depth\_err2

Table Label: Uncertainty

Description: negative –

# koi\_prad

Table Label: Planetary Radius (Earth radii)

Description: The radius of the planet. Planetary radius is the product of the planet star radius ratio and the stellar radius.

# koi\_prad\_err1

Table Label: Uncertainty

Description: positive +

# koi\_prad\_err2

Table Label: Uncertainty

Description: negative –

# koi\_teq

Table Label: Equilibrium Temperature (Kelvin)

Description: Approximation for the temperature of the planet. The calculation of equilibrium temperature assumes a) thermodynamic equilibrium between the incident stellar flux and the radiated heat from the planet, b) a Bond albedo (the fraction of total power incident upon the planet scattered back into space) of 0.3, c) the planet and star are blackbodies, and d) the heat is evenly distributed between the day and night sides of the planet.

# koi\_insol

Table Label: Insolation Flux [Earth flux]

Description: Insolation flux is another way to give the equilibrium temperature. It depends on the stellar parameters (specifically the stellar radius and temperature), and on the semi-major axis of the planet. It's given in units relative to those measured for the Earth from the Sun.

# koi\_insol\_err1

Table Label: Uncertainty

Description: positive +

# koi\_insol\_err2

Table Label: Uncertainty

Description: negative –

# koi\_model\_snr

Table Label: Transit Signal-to-Noise

Description: Transit depth normalized by the mean uncertainty in the flux during the transits.

# koi\_tce\_plnt\_num

Table Label: TCE Planet Number

Description: TCE Planet Number federated to the KOI.

# koi\_steff

Table Label: Stellar Effective Temperature (Kelvin)

Description: The photospheric temperature of the star.

# koi\_steff\_err1

Table Label: Uncertainty

Description: positive +

# koi\_steff\_err2

Table Label: Uncertainty

Description: negative –

# koi\_slogg

Table Label: Stellar Surface Gravity (log10(cm s-2)

Description: The base-10 logarithm of the acceleration due to gravity at the surface of the star.

# koi\_slogg\_err1

Table Label: Uncertainty

Description: positive +

# koi\_slogg\_err2

Table Label: Uncertainty

Description: negative –

# koi\_srad

Table Label: Stellar Radius (solar radii)

Description: The photospheric radius of the star

# koi\_srad\_err1

Table Label: Uncertainty

Description: positive +

# koi\_srad\_err2

Table Label: Uncertainty

Description: negative -

# ra

Table Label: RA (deg)

Description: KIC Right Ascension – KIC: Kepler Input catalog

# dec

Table Label: Dec (deg)

Description: KIC Declination

# koi\_kepmag

Table Label: Kepler-band (mag)

Description: Kepler-band (mag)