



KELT-3b



Fast Facts:

TYPE

Hot Jupiter

RADIUS OF THE PLANET

16.83 in units of Earth radii

MASS OF THE PLANET

$617 \pm 105 M_{\text{EARTH}}$

ORBITAL PERIOD

2.70339 days

DISTANCE TO HOST STAR

1.16 AU

DENSITY

Less than Jupiter

DISCOVERED

2012 by the KELT survey

CHARACTERISTICS

puffy and gaseous

COMPOSITION

It is made of gases.

TEMPERATURE

$1643^{+87}_{-89} \text{ } ^\circ\text{C}$

Known as **KELT-3b**, the third exoplanet found by the KELT survey, this exoplanet is unlike anything we have seen in our Solar System.

Cheops observed this mysterious exoplanet on the **22 January 2023** at **23:20 CET**. By analysing the data, we have discovered that KELT-3b is...

KELT-3b has a radius of 16.83 in Earth radii. It is 1.16 AU away from its host star and has a density less than Jupiter's. It was discovered in 2012 by the KELT survey. It is primarily made of gas and it is known as a Hot Jupiter, as it orbits very close to its host star and has a similar size to the planet of Jupiter. It takes 2.7 days to orbit its host star. KELT-3b is in the Leo constellation and is 690 light years away from our solar system.

In comparison to the planets in the Solar System, KELT-3b...

KELT-3b takes a much shorter time to orbit its host star in comparison to the planets in our Solar System. The closest planet to the sun, Mercury, has an orbital period of 88 days, while KELT-3b has an orbital period of 2.7 days, which shows how much closer KELT-3b is to its host star. It is less dense than Jupiter and is very gaseous.

KELT-3 is a sun like star 690 light years away from Earth in the Leo constellation. KELT-3 is slightly bigger than our Sun.

Mass of the star = $1.96 \pm 0.50 M_{\text{sun}}$

Radius of the star = $1.70 \pm 0.12 R_{\text{sun}}$



TOI - 560c



TOI- 560c
CASE FILE

Fast Facts:

TYPE

Mini-Neptune

RADIUS OF THE PLANET

2.383 earth radii

MASS OF THE PLANET

0.70^{+1.80} M_{EARTH}

ORBITAL PERIOD

18.8797 days

DISTANCE TO HOST STAR

0.12 AU

DENSITY

3.95

DISCOVERED

2021 by the TESS survey

CHARACTERISTICS

believed to be similar to Neptune

COMPOSITION

Gaseous, hydrogen & helium gases

TEMPERATURE

225 ± 15 °C

Compared to KELT-3b, TOI-560c is almost tropical, though it is still hundreds of degrees Celsius warmer than the Earth.

Cheops observed this mysterious exoplanet on the **23 January 2023 at 13:12 CET**. By analysing this data we have discovered that TOI 560c is...

TOI-560c is an exoplanet which is classed as a mini-Neptune. It has a mass of 9.7 earths and is a bit smaller than Neptune in size. It has a density of 3.95 g/cm³. It was discovered in 2021 with the TESS survey. The temperature of this planet is about 225 degrees Celsius. It has an orbital period of about 18.88 days, which is immensely short compared to the distances of planets from our star, the sun, in our solar system. It is in the Neptune-like Exoplanets category. For any exoplanet to fit this grouping, it must be in between 4-10 in earths.

In comparison to the planets in the Solar System, TOI-560c...

TOI-560c is an exoplanet. When we first came across some basic facts about the planet, we understood that it is a very hot one as its temperatures can exceed mind-bending values. Venus' temperature of 475 degrees Celsius can, however, throw TOI-560c's temperature out of the game as they both have hot temperatures but both values have a huge difference in between them. But the exoplanet is wildly compared with Neptune as it is in the Mini Neptune category. Neptune is also a gas giant that contains hydrogen and helium in its atmosphere. But because of its class "Mini Neptune", it is considered to be less massive than the cold ice/gas giant. It is also much closer to TOI-560(which is its host star) than Mercury is to our sun, as inferred from its incredibly quick orbital period of 18.88 days.

TOI-560, also known as HD 73583, is a small orange-red star in the Hydra constellation, around 103 light years away from Earth. TOI-560 is smaller and cooler than our Sun. Besides TOI-560c, there is a second planet orbiting this star, TOI-560b.

Mass of the star = 0.73 ± 0.02 M_{Sun}

Radius of the star = 0.65 ± 0.02 R_{Sun}