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Kelt-3b Conclusions

→ CHEOPS observed this mysterious exoplanet on January 22, 2023 at 23:20 CET. Upon analyzing the data, we discovered that KELT-3b is unlikely to support life as it is too close to its star, causing an extremely high temperature at the surface, that makes the existence of liquid water and a high amount of radiation exposure that is harmful to life.

→ Compared to the planets in the solar system, KELT-3b has a larger radius and mass than any of the planets in the solar system. As it is much closer to its respective star than the planets in the solar system are to the sun, its orbital period is much shorter than those of the solar system planets, and its temperature is much higher than theirs. The density of this exoplanet is similar to that of Saturn, as both are gas planets, so it's probably composed of gases other than hydrogen and helium because KELT-3 is very similar to the sun (essentially composed of hydrogen and helium) and KELT-3b is an exoplanet near the star.

TOI-560c Conclusions

→ By analyzing TOI-560c data we come to the conclusion that it is possible to support organic molecules due to the fact that there are certain bacteria (extremophiles) on Earth that can withstand temperatures close to TOI-560c's temperature. Because the planet is close to its host star and its temperature is not that high (225 +/-15°C) and has a higher mass than the solar system rocky planets the existence of an atmosphere is also possible.

→ TOI-560c's size is much smaller when compared to the planets of the Solar System and its mass is bigger than Earth's but still relatively lower than the gas planets of the Solar System. In terms of distance to its star, TOI-560c is closer than any Solar System planet is close to the Sun and this results in a small orbital period (smaller than any Solar System planet). Its density is bigger than gas planets in the solar system and is comparable to Mars density while being smaller than the other rocky planets. Finally, when it comes to temperature, TOI-560c is hotter than solar system gas

planets and even the rocky planets (except Venus), which is a consequence of being close to its host star.

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