= HD 28185 =

HD 28185 is a yellow dwarf star similar to our Sun located about 138 light @-@ years away from Earth in the constellation Eridanus . The designation HD 28185 refers to its entry in the Henry Draper catalogue . The star is known to possess one long @-@ period extrasolar planet .

= = Distance and visibility = =

According to measurements from the Hipparcos astrometric satellite , HD 28185 has a parallax of 23 @.@ 62 milliarcseconds , which corresponds to a distance of 42 parsecs (138 light @-@ years) . Since the star is located further than 25 parsecs from Earth , it is not listed in the Gliese Catalogue of Nearby Stars . With an apparent magnitude of 7 @.@ 81 , the star is not visible with the naked eye , though it can be seen using binoculars .

= = Stellar characteristics = =

HD 28185 is similar to our Sun in terms of mass , radius , and luminosity . The star is on the main sequence and is generating energy by fusing hydrogen in its core . The spectral type of G5V implies HD 28185 is cooler than the Sun . Like the majority of extrasolar planet host stars , HD 28185 is metal @-@ rich relative to the Sun , containing around 173 % of the solar abundance of iron . The star rotates slower than the Sun , with a period of around 30 days , compared to 25 @.@ 4 days for the Sun .

Based on the star 's chromospheric activity , HD 28185 is estimated to have an age of around 2 @,@ 900 million years . On the other hand , evolutionary models give an age of around 7 @,@ 500 million years and a mass 0 @.@ 99 times that of our Sun . The higher luminosity and longer rotation period favour an older age for the star .

= = Planetary system = =

In 2001 an extrasolar planet similar in size to Jupiter designated HD 28185 b was discovered in orbit around the star with a period of 1 @.@ 04 years . Unlike many long @-@ period extrasolar planets , it has a low orbital eccentricity . The planet experiences similar insolation to Earth , which has led to speculations about the possibilities for habitable moons . In addition , numerical simulations suggest that low @-@ mass planets located in the gas giant 's Trojan points would be stable for long periods . The planet 's existence was independently confirmed by the Magellan Planet Search Program in 2008 .

The star also shows evidence of a long @-@ term radial velocity trend , which may indicate the presence of an additional outer companion .