

= HD 217107 b =

HD 217107 b is an extrasolar planet approximately 64 light @-@ years away from Earth in the constellation of Pisces ( the Fish ) . The planet was discovered orbiting the star HD 217107 approximately every seven days , classifying the planet as a hot Jupiter . Because of the planet 's somewhat eccentric orbit , scientists were able to confirm another planet within the system ( HD 217107 c ) .

= = Discovery = =

As with the majority of extrasolar planet discoveries so far , it was found by detecting small variations in the radial velocity of the star it orbits , caused by the tug of its gravity . A study of the radial velocity of HD 217107 carried out in 1998 revealed that its motion along the line of sight varied over a 7 @.@ 1 day cycle . The period and amplitude of this variation indicated that it was caused by a planetary companion in orbit around the star , with a minimum mass slightly greater than that of Jupiter . The planet 's mean distance from the star is less than one fifth of Mercury 's distance from the Sun .

= = = Indication of second planet = = =

While most planets with orbital periods of less than 10 days have almost circular orbits , HD 217107 b has a somewhat eccentric orbit , and its discoverers hypothesized that this could be due to the gravitational influence of a second planet in the system at a distance of several astronomical units ( AU ) . Confirmation of the existence of a second planet , HD 217107 c , followed in 2005 .