= HIP 13044 =

HIP 13044 is a red horizontal @-@ branch star about 2 @,@ 300 light years (700 pc) from Earth in the constellation Fornax . The star is part of the Helmi stream , a former dwarf galaxy that merged with the Milky Way between six and nine billion years ago . As a result , HIP 13044 circles the galactic center at a highly irregular orbit with respect to the galactic plane . HIP 13044 is slightly less massive than the Sun , but is approximately seven times its size . The star , which is estimated to be at least nine billion years old , has passed the red @-@ giant phase . The relatively fast rotation of the star may be due to having engulfed one or more planets during the red @-@ giant phase .

= = Observational history = =

A science team from the Max Planck Institute for Astronomy first observed HIP 13044 using Fiber @-@ fed Extended Range Optical Spectrograph (FEROS) at the European Southern Observatory 's La Silla Observatory in Chile . The first follow @-@ up led to the collection of 36 radial velocity measurements taken between September 2009 and July 2010 .

The team also used photometric data that had been passively collected by and publicly released into the archive of the SuperWASP collaboration , which had been observing the region where the star was located . In this data , HIP 13044 was found to oscillate ; the signal was blocked roughly every sixteen days . Analysis of the SuperWASP and FEROS data led to the supposed discovery of the planet HIP 13044 b , although this claim was later refuted .

= = Characteristics = =

HIP 13044 is an F @-@ type star located approximately 701 parsecs (2 @,@ 286 light years) away from Earth in the Helmi stream ? a group of low @-@ metallicity stars moving with large velocities relative to the Sun . The star follows an eccentric galactic orbit , with a distance from the galactic center ranging from 7 to 16 kiloparsecs . The orbit does not lie in the galactic plane , and can reach distances as high as 13 kpc above it . This indicates that it once was part of a satellite galaxy of the Milky Way that was disrupted 6 ? 9 billion years ago . The star itself is estimated to be at least nine billion years old .

HIP 13044 is fairly evolved star fusing helium in its core , and has therefore already passed the red @-@ giant phase of its evolution . It lies near the blue end of the red horizontal branch bordering the instability strip . Its surface temperature is about 6025 K and its radius is approximately 6 @.@ 7 solar radii . HIP 13044 's mass is estimated to be 0 @.@ 8 solar masses . Having a rotation period of 5 ? 6 days , HIP 13044 is a fast @-@ rotating star for its type . It is possible that this is because it has swallowed planets during its red @-@ giant phase .

HIP 13044 has an apparent magnitude of 9 @.@ 94 and cannot be seen with the unaided eye .

= = Claims of a planetary system = =

In 2010 , it was announced that a giant planet in a 16 @.@ 2 @-@ day orbit had been discovered by the radial velocity measurements . This would have had implications for planet formation in metal @-@ poor systems and survival of planets being engulfed by expanded giant stars . Subsequent analysis of the data revealed problems with the detection : for example an erroneous barycentric correction had been applied (the same error had also led to claims of planets around HIP 11952 that were subsequently refuted) . After applying the corrections , there is no evidence for a planet orbiting the star .