

# Planet with three suns challenges astronomers

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In a scenario out of "Star Wars," astronomers have detected a planet outside our solar system with not one, but three suns, a finding that challenges astronomers' theories of planetary formation.

The planet, a gas giant slightly larger than Jupiter, orbits the main star of a triple-star system known as HD 188753 in the constellation Cygnus ("The Swan").

The stellar trio and its planet are about 149 light-years from Earth and about as close to each other as our sun is to Saturn, U.S. scientists reported Thursday in the current edition of the journal *Nature*.

A light-year is about 6 trillion miles, the distance light travels in a year.

If you stood on the planet's surface, you would see three suns in sky, although its orbit centers around the main yellow star among the trio. The larger of the other two suns would be orange and the smaller would be red, astronomers at California Institute of Technology said in a statement.

An artists' rendering of the planet and three stars, as seen from a hypothetical moon, is available at [here](#) [2].

The new finding could upset existing theories that planets usually form out of gas and dust circling a single star, and could lead scientists to look in new places for planets.

"The implication is that there are more planets out there than we thought," the commentary said.

Caltech astronomer Maciej Konacki, who wrote the research article, refers to the new type of planets as "Tatooine planets," because of the similarity to Luke Skywalker's view of his home planet by the same name, with its multiple suns, in the original "Star Wars" film.

The fact that a planet can even exist in a multiple-star system is amazing in itself, according to Konacki. Binary and multiple stars are quite common in the solar neighborhood, and in fact outnumber single stars by some 20 percent.

But so far, most extrasolar planets -- those discovered outside our planetary system -- have been detected by watching for a characteristic wobble in the stars their orbit, reflecting the gravitation pull the planets exert on their suns.

This method is less effective for binary and multiple star systems, and existing theories said planets were unlikely to form in this kind of environment.

Konacki found a new way to identify planets by measuring velocities of all bodies in a binary or multiple star system.

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