By: Gabriel Gache, Science News Editor

Hottest Exo-Planet Ever Found

Atmospheric temperatures exceed 2730 K

Orbiting its parent star from a distance of only 5.6 million kilometers, the HAT-P-7b is only the latest exo-planet discovered in our galaxy and, at the same time, the hottest planet ever found. HAT-P-7b was detected by an array of small telescopes owned by the HATNet project and is located about a thousand light years away from Earth. If Earth were to lie so close to Sun, the daily energy received from our star would increase about 3400 times, boiling all the water on the surface in few seconds. The parent star of the system is a F6 main sequence bright star with a mass of 1.5 times that of our Sun and a radius of 1.84 times the solar radius; it is orbited by a planet weighing 1.78 times the mass of Jupiter and with a radius of 1.36 that of Jupiter, from a distance less than one-tenth of that between planet Mercury and the Sun. According to Rober Noyes from the Harvard-Smithsonian Center for Astrophysics in Cambridge, if the theory related to solar energy atmospheric distribution is correct, than the sunny side of HAT-P-7b could experience temperatures up to 2460 degrees Celsius or higher. The fact that the star is very bright would enable ground based telescopes to make detailed observations during the next eclipse, in order to compare the current models of what would happened to the atmosphere of a planet the size of Jupiter when placed so close to its parent star. HATNET project participants also reveal that the HAT-P-7b planet is in the field of the future Kepler mission, thus it will also have an opportunity to study not only the primary transit through the front of the star and secondary eclipse observations, but also to make asteroseismologic measurements, in the case they will be possible.

Copyright (c) 2001-2008 Softpedia. All rights reserved. Softpedia™ and Softpedia™ logo are registered trademarks of SoftNews NET SRL.