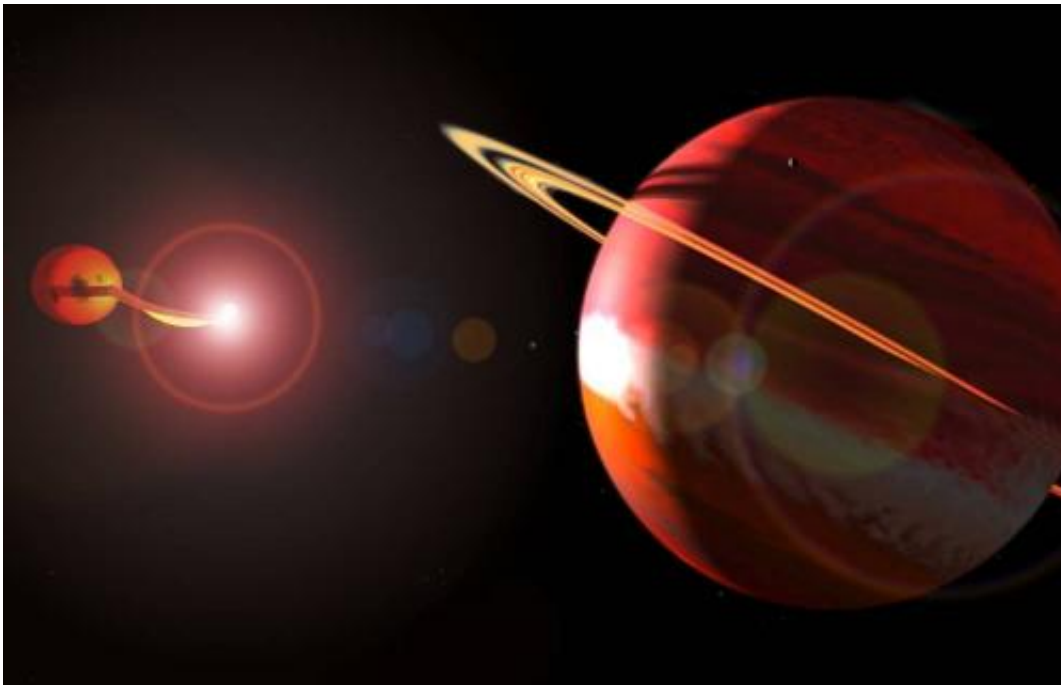


New planetary system has South African astronomers doing a double take

June 15 2011, By Tammy Plotner



Credit: Artist impression (c) SAAO

Double your pleasure... Double your fun... Double twin planets found orbiting a double sun! Are you ready for the weird, true and freaky? Then check out what Drs. Stephen Potter and Encarni Romero-Colmenero from the South African Astronomical Observatory (SAAO) and their colleagues have found. It would appear there's evidence pointing towards the existence of a double planetary system where a pair of giants are at home orbiting a binary star.

Known in polite social circles as UZ Fornacis, this eclipsing double star is anything but a friendly environment for a solar system. Because the pair orbits so closely, the white dwarf never stops collecting material from its red dwarf companion. This steady flow gets superheated to millions of degrees and produces copious amounts of deadly x-rays. This pair of twin stars are so small they would fit within the radius of our [Sun](#) and orbit each other within a period of hours. Because of their eclipsing nature, Dr. Potter and his collaborators were quick to notice that the periodic timing wasn't regular. This evidence led them to theorize a pair of planets needed to be present to account for the wobble and to infer that the masses of the two planets must be at least 6 and 8 times that of Jupiter and take 16 and 5 years respectively to orbit the two stars.

“The two planet model can provide realistic solutions but it does not quite capture all of the eclipse times measurements. A highly eccentric orbit for the outer planet would fit the data nicely, but we find that such a solution would be unstable” says Potter, et al. ” It is also possible that the periodicities are driven by some combination of both mechanisms. Further observations of this system are encouraged.”

This discovery was made possible by new SAAO and Southern African Large Telescope (SALT) observations combined with archival data spanning 27 years, gathered from multiple observatories and satellites.

More information: [www.sao.ac.za/no_cache/public ...
ws/news/article/199/](http://www.sao.ac.za/no_cache/public_ws/news/article/199/)

Source: [Universe Today](#)

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