

Physics Department Colloquium

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Title: Investigating the Formation of Exotic Extrasolar Planets

Abstract: The Kepler space mission has discovered thousands of potential planets orbiting other stars and has set the stage for in-depth studies of different types of planets. I will present observations of some Kepler planet candidates conducted with the Gran Telescopio Canarias, one of the largest telescopes in the world. The observations reveal whether or not a planet candidate is considered to be a real planet, or if it is instead a "false positive" (which is not a planet but some other astrophysical system like an eclipsing binary star). This is important for studying the overall population of planets discovered by Kepler, because we need to know how many of these planets are likely real. I will focus especially on a so-called "desert" in the distribution of known planets, where there appears to be no known planets with intermediate sizes and short orbital periods. The planet candidates in my study are located in or around this "desert", and characterizing such objects allows us to better understand the formation processes of exotic planets that orbit very close to their host star.

Date: Friday, February 20, 2015

Time: 12:30 PM

Where: Science Complex, P-117

