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# 国台学术报告 NAOC COLLOQUIUM

2014年 第28次 / Number 28 2014

**Time: Tuesday 2:30PM, July 01 Location: A601 NAOC**

## The MINERVA Project: Small exoplanets from small telescopes

**Robert Wittenmyer (University of NSW)**



Dr. Rob Wittenmyer is a Senior Lecturer at UNSW Australia. His team is active in radial-velocity searches for planets in Jupiter-like orbits (Anglo-Australian Planet Search) and planets orbiting evolved stars (Pan-Pacific PLANet Search). He is a PI on the MINERVA project which will intensively monitor the brightest stars for the smallest planets starting in late 2014. Wittenmyer is also exploring the dynamics of multi-planet systems, as well as the planet-debris disk connection.

### Abstract

The Kepler mission has shown that small planets are extremely common. It is likely that nearly every star in the sky hosts at least one rocky planet. We just need to look hard enough - but this requires vast amounts of telescope time. The way forward is to own the telescope. MINERVA (MINIature Exoplanet Radial Velocity Array) is a dedicated exoplanet observatory with the primary goal of discovering rocky, Earth-like planets orbiting in

the habitable zone of bright, nearby stars. We have joined with Harvard, Caltech, Penn State, and Montana to build the 4-telescope MINERVA array, to be sited at Mt Hopkins in Arizona, USA. Full science operations will begin by 2015 January with all four telescopes and a stabilised spectrograph capable of high-precision Doppler velocity measurements. We will observe the 80 nearest, brightest, Sun-like stars every night for at least five years. Detailed simulations of the target list and survey strategy lead us to expect  $12 \pm 3$  new low-mass planets, with  $3 \pm 1$  in the habitable zone.

### Project MINERVA

Small Exoplanets from Small Telescopes



*All are welcome! Tea, coffee, biscuits will be served at 2:15 P.M.*