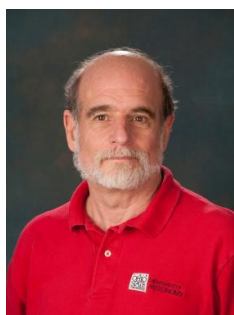


# 国台学术报告 NAOC COLLOQUIUM

2012 年 第 32 次 / Number 32, 2012

**TIME: Wednesday, 3:00 PM, June 13, 2012**    **LOCATION: A601 NAOC**

## Microlensing Planets: A controlled Scientific Experiment Drawn From Absolute Chaos



**Prof. Andrew Gould (The Ohio State University)**

Andrew Gould is professor of Astronomy at the Department of Astronomy, Ohio State University. He is the Thomas Jefferson Professor for Discovery and Space Exploration, Distinguished Professor of Mathematical and Physical Sciences, and the University Distinguished Scholar. He obtained Ph.D. in Physics at Stanford University in 1988.

His research interests are gravitational microlensing, planet discovery and characterization and identifying & measuring dark matter.

### Abstract

Microlensing planet searches have discovered a total of 20 , including the first two Jupiter-Saturn like systems and the only 5 "cold Neptunes" yet detected. The discovery process is almost unbelievably chaotic, with the so-called "high-magnification events" being the most chaotic. I show, nevertheless, that the high-magnification subsample constitutes a "controlled experiment", which enables rigorous statistical analysis, yielding important new clues to planetary architecture. I also discuss the current transition to "second generation" microlensing experiments, which is already yielding important new discoveries, and will in the future explore domains of planet parameter space not probed by any other method.



*All are welcome! Tea, coffee, biscuits will be served at 2:45 P.M.*

You are welcome to nominate speakers to Shude Mao ([shude.mao@gmail.com](mailto:shude.mao@gmail.com)), Licai Deng ([licai@bao.ac.cn](mailto:licai@bao.ac.cn)), Xuelei Chen ([xuelei@cosmology.bao.ac.cn](mailto:xuelei@cosmology.bao.ac.cn)).