

# 国台学术报告 NAOC COLLOQUIUM

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**TIME: Wednesday, 10:15 AM, June 06, 2012**      **LOCATION: A601 NAOC**

## SH0ES: absolute calibration of the luminosity of type Ia SNe and cosmological implications



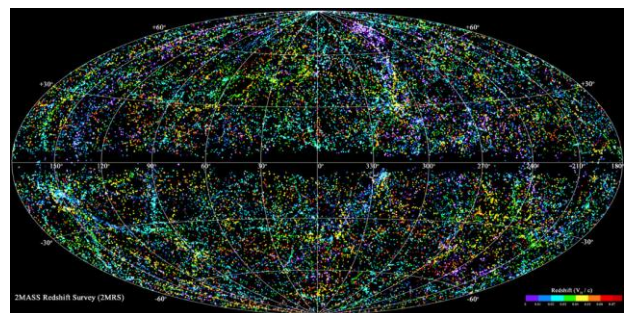
**Prof. Lucas M. Macri (Texas A&M University)**

Dr. Lucas M. Macri is an assistant professor at Physics and Astronomy Department of Texas A&M University since 2008. His research interests are a) extragalactic distance scale: Cepheid variables, detached eclipsing binaries, SNe Ia; b) Massive time-series photometry: stellar variability & exoplanet searches; c) large-scale structure and flows: redshift and peculiar velocity surveys. He got Hubble & Goldberg Post-doctoral Fellow at National Optical Astronomy Observatory, Tucson, AZ from 2002 to 2008. He pursued his Ph.D. in Astronomy at Harvard Smithsonian Center for Astrophysics, Cambridge, MA with thesis advisor of Prof. John Huchra from 1995 to 2002.

### Abstract

I will review the results of the SH0ES program (PI: A. Riess), which has recently obtained an absolute calibration of the luminosity of type Ia SNe via Cepheid variables and determined the value of  $H_0$  with a total

uncertainty of 3%. This provides important additional constraints on several cosmological parameters, such as the equation of state of dark energy and the number of neutrino species. I will also discuss future steps that may enable a determination of  $H_0$  to 1%.



*All are welcome! Tea, coffee, biscuits will be served at 10:00 A.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)).