THURSDAY COLLOQUIUM

Department of Physics, Tsinghua University

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Title Supernovae as Probes of Dark Energy

Speaker **Greg Aldering**

Lawrence Berkeley National Lab

Venue **ZhengYu-Tong Lecture Hall**
&Date **16:00, April 14, 2011**

Abstract:

The use of Type Ia supernovae as distance indicators led to the startling discovery of the accelerating expansion of the Universe more than a decade ago. Large 2nd generation surveys have significantly increased the size and quality of the very distant supernova sample. However, the critical nearby reference sample still suffers problems when employed for cosmology. In this talk I will discuss recent progress in measuring the dark energy equation of state with both distant and nearby supernova, with an emphasis on the Nearby Supernova Factory (SNfactory), which second phase is starting with Tsinghua Center for Astrophysics as a major partner.

Introduction to the Speaker

Greg Aldering is an American astronomer, currently with the University of California, Lawrence Berkeley National Laboratory. His interests center on cosmology, including measurement of the cosmological parameters, the exploration of the nature of the "dark energy" and the large-scale distribution of matter in the universe. His current cosmological studies focus on the use of Type Ia supernovae as tools for determining the cosmological parameters, through his participation in the Supernova Cosmology Project. He is now the primary investigator of the Nearby Supernova Factory experiment, and is also a co-investigator on the Supernova / Acceleration Probe. While an undergraduate student at the Massachusetts Institute of Technology (1980–1983), he discovered a few asteroids. He has so far classified some 266 supernovae, and is one of the co-discoverers of SN 2002bk.