



Surveying the Accelerating Universe with Supernovae

Prof. Saurabh W. Jha

Professor of Physics and Astronomy
Rutgers, the State University of New Jersey

Wednesday

September 27

4:00 P.M.

Rm 118 NSH

Exploding white dwarf stars, called type Ia supernovae (SN Ia), are exquisite tools with which to measure cosmological distances and survey the Universe. SN Ia played a starring role in discovering and understanding the dark energy that drives the acceleration of cosmic expansion. I will describe current cosmological applications of SN Ia and future prospects with upcoming flagship projects like LSST and WFIRST. The utility of SN Ia as distance indicators is limited by our lack of detailed physical understanding of these explosions. I will show how new observations and new kinds of supernovae are allowing us to build a better picture of what is exploding, and how.