THE OHIO STATE UNIVERSITY

Department of Physics

SPECIAL COLLOQUIUM

Tuesday, May 15, 2012

1:30 P. M. Robert Smith Seminar Room

1080 Physics Research Building

Chris Hirata

Cal Tech

"The Present and Future of Weak Lensing"

Weak gravitational lensing is a powerful tool to measure the matter distribution in the Universe. I will begin by discussing the subject of cosmic perturbations and the role that weak lensing has played in testing the paradigm of cosmic structure formation and the nature of dark energy. I will discuss why weak lensing observations have proven to be so difficult and prone to subtle systematic errors, and how some of these difficulties were overcome in the recent analyses of the Sloan Digital Sky Survey. Finally, I will describe the plans and systematic error mitigation strategies for future large weak lensing surveys.

RECEPTION AT 1:15 P.M. IN ATRIUM, PRB