Carnegie Mellon University
Department of Physics

McWilliams Center for Cosmology

Colloquium

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4:30 pm
Doherty Hall A 301D

"The Large Synoptic Survey Telescope"

Abstract:

The Large Synoptic Survey Telescope (LSST) will be a large-aperture, wide-field ground-based telescope designed to survey half of the entire sky every few nights in six visible color bands. As such, it will enable a broad range of complementary scientific investigations ranging from studies of small moving bodies in the solar system to the structure and evolution of the entire universe. This project was the highest-ranked large new ground-based facility in the national academy's decadal Survey of astronomy and astrophysics released last year, and it has recently made good progress moving forward into development as a joint program funded by the National Science Foundation and the Department of Energy. I will briefly review the basic elements of the LSST design, and then discuss the many ways in which this facility can contribute to our understanding of the nature of dark energy, one of the greatest mysteries in cosmology and fundamental physics.