

Predavanja u HDMu:

The Large Synoptic Survey Telescope (LSST): the Greatest Movie of All Time is Coming Near You!

Professor Željko IVEZIĆ

University of Washington, Department of Astronomy, Seattle, Washington, USA and LSST

SAŽETAK

The Large Synoptic Survey Telescope (LSST, www.lsst.org) will deliver the most comprehensive astronomical optical sky survey ever undertaken. Starting in 2022, LSST will take panoramic images of the entire sky visible from its site in Chile twice each week for 10 years. The resulting hundred-petabyte imaging dataset, essentially a digital color movie of the night sky, will include close to 40 billion stars and galaxies and will be used for scientific investigations ranging from the properties of potentially hazardous asteroids that might collide with the Earth to cosmological characterizations of mysterious dark matter and dark energy. I will start with a brief overview of the LSST science drivers and system design, fully accessible to non-astronomers, describe the status of its construction, with emphasis on its engineering aspects, and then briefly touch on some Big Data research challenges that need to be tackled to make the best use of LSST data.