

COLLOQUIUM

The Dark Energy Survey: the Movie

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4:00 p.m. - Ramsey Auditorium

This public colloquium will center on a showing of a documentary film made by independent Spanish film maker Alex Muntada about cosmic surveys and the laws of physics, with primary focus on the Dark Energy Survey. The Nobel Prize for Physics in 2011 was awarded for the discovery in the late 1990s that the expansion of the Universe is speeding up. Yet the physical origin of cosmic acceleration remains a mystery. The Dark Energy Survey is aiming to address the question: why is the expansion speeding up? Is it the result of a mysterious dark energy that makes up 70% of the Universe or does it require a change in our understanding of gravity on cosmic scales? To answer these questions, the Dark Energy Survey collaboration built a powerful, 570-megapixel camera for the Blanco 4-meter telescope at Cerro Tololo Inter-American Observatory in the Andes mountains of Chile and is using it to carry out a five-year survey of 300 million galaxies and thousands of supernovae. The film, which was shot on location in Chile, Barcelona, and New York, will discuss the context for and aims of the survey and features interviews with several Fermilab scientists on the project who will be on hand after the showing to answer questions from the audience.