

The Dark Energy Survey

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The Dark Energy Survey will employ a powerful instrument, the Dark Energy Camera, and a state-of-the-art data management system on the improved Blanco 4-meter telescope at CTIO to probe the nature of dark energy and the cause of cosmic acceleration. The instrument includes a 520-Megapixel optical imager with red-sensitive CCDs covering a 3 square degree field of view and an active alignment system. Starting in 2012, using 525 nights over 5 years, the survey will image 300 million galaxies over 5000 square degrees to 24th magnitude and several thousand supernovae over a smaller area, using the grizY passbands. The 120-member international collaboration will use these data to probe dark energy using the galaxy cluster abundance, weak gravitational lensing, baryon acoustic oscillations, and supernovae and carry out studies of strong lensing, galaxy evolution, the structure of the Milky Way, and QSOs, among other topics. We will discuss the status of the project, the survey strategy and prospects for cosmological tests.

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