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## The Dark Energy Camera - A new Instrument for the Dark Energy Survey

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The Dark Energy Survey (DES) is a next generation optical survey aimed at understanding the expansion rate of the universe using four complementary methods: weak gravitational lensing, galaxy cluster counts, baryon acoustic oscillations, and Type Ia supernovae. To perform the survey, the DES Collaboration is building the Dark Energy Camera (DECam), a 3 square degree, 520 Megapixel CCD camera which will be mounted at the prime focus of the Blanco 4-meter telescope at the Cerro Tololo Inter-American Observatory. The survey will cover 5000 square-degrees of the southern galactic cap with 5 filters (g, r, i, z, Y). DECam will be comprised of 74 250 micron thick fully depleted CCDs: 62 2k x 4k CCDs for imaging and 12 2k x 2k CCDs for guiding and focus. Construction of DECam is nearing completion. In order to verify that the camera meets technical specifications for the Dark Energy Survey and to reduce the time required to commission the instrument on the telescope, we have constructed a full sized "Telescope Simulator" and are performing full system testing and integration prior to shipping to CTIO. An overview of the DECam design and the status of the construction and integration tests will be presented

### Summary

The Dark Energy Camera is a new 520 Megapixel wide field imager for the Dark Energy Survey. In this presentation we will highlight some of the key design elements of this new instrument and discuss performance tests and our plans for commissioning which will begin this fall.

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