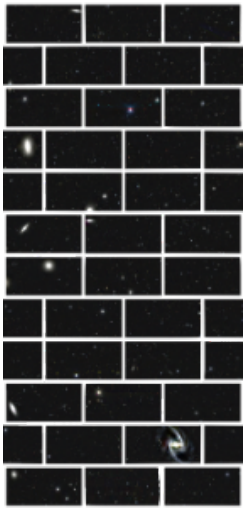
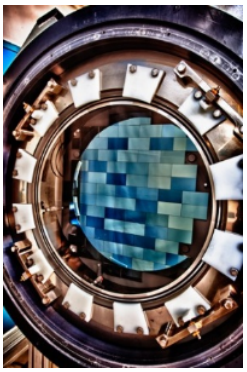
The Dark Energy Survey Data Management Project



DECam Exposure Section processed by DESDM



DECam

Blanco 4m

The Dark Energy Survey

The Dark Energy Survey (DES) is a 5000 square degree *grizY* survey of the Southern sky aimed at understanding the accelerating expansion rate of the universe using four complementary methods: weak gravitational lensing, galaxy cluster counts, baryon acoustic oscillations, and Type Ia supernovae. DES uses the new 3 square degree Dark Energy Camera (DECam) imager, a 570 Megapixel CCD camera installed at the prime focus of on the Blanco 4m telescope at the Cerro Tololo Interamerican Observatory in northern Chile. For about 100 nights per year, during the next five years, DES will scan the sky to perform a 5000 sq-degree wide field survey and 30 sq-degree supernova survey. Learn more on the main DES website.

Dark Energy Survey Data Management (DESDM) at NCSA

The Dark Energy Survey Data Management (DESDM) Project has developed and operates the DESDM system at the National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign. This system is used for the processing and calibration of the Dark Energy Survey (DES) data, and the DECam Community Pipeline, used by NOAO to process DECam data obtained by non-DES observers. Our mission is to process the raw data generated by the DECAM instrument at the CTIO observatory into science-ready data products. Initially, DESDM will serve these products to the collaboration, and then, after a proprietary period, to the public.

The Dark Energy Survey will make its data public in two ways. Survey Operations began on August 31, 2013. Reduced DECAM images will be available from NCSA a year after they are taken, starting in August, 2014. DESDM will also host two public data releases, one about midway through the survey, and a final release. These will include catalog data of greater scope than the catalogs produces by the Community Pipeline run by NOAO.

The Core DESDM Team at NCSA

- Donald Petravick, *Senior Project Manager and Principal Investigator*. *email*
- Gregory Daues, *Research Programmer*. *email*
- Douglas Friedel, *Research Programmer*. *email*
- Michelle Gower, *Senior Research Programmer*. *email*
- T. Andrew Manning, *Senior Research Programmer*. *email*
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- J.D. Maloney, *Storage Engineer*. *email*
- Felipe Menanteau, *Senior Research Scientist and Associate Research Professor of Astronomy*. *email www*
- Christopher Pond, *Senior Database Administrator*. *email*

Links

Not a member of DES and looking for public DES data? Go to the DES Data Release website. You can also register an account on the public DESaccess science gateway.

For Collaborators (all links but last two require login)

- **Find data from recent production**
- **Data Access FAQ**
- How to access DESDM data
- Data Documentation
- The EUPS User's guide and the The Impatient's Guide
- NCSA/Illinois Survey Science Group Meeting (DES & LSST)
- Have a Problem? Need something? Request help and more
- DES PR Materials, Color images, etc.

Announcements

- 01/19/2016 - SVA1 public release, available here
- 10/22/2014 - DESDM Software available via EUPS
- 10/17/2014 - Y1A1 pre-release completed. Documentation available here
- SVA1 released. Release documentation available here.

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