

ADVANCING AMERICA *through* TECHNOLOGY TRANSFER

SLAC NATIONAL ACCELERATOR LABORATORY

TRANSFORMING OUR UNDERSTANDING
of the UNIVERSE

LARGE SYNOPTIC SURVEY TELESCOPE CAMERA

SURVEYING *the* **NIGHT SKY**
for **INSIGHTS** *into the* **COSMOS**

SLAC

U.S. DEPARTMENT OF
ENERGY

Office of
TECHNOLOGY TRANSITIONS



To boldly go where no camera has gone before?

The largest digital camera ever constructed for optical astronomy will survey the night sky for 10 years, catalog 17 billion stars and 20 billion galaxies, generate millions of gigabytes of data and the largest non-proprietary dataset in the world, and bring together a collaborative international community.

SLAC National Accelerator Laboratory is playing key roles in the tremendous public-private partnership that is building the Large Synoptic Survey Telescope (LSST), including leading the construction of the massive LSST camera. The LSST's unprecedented dataset promises to yield discoveries into the nature of dark energy, dark matter, galaxy formation, and many other fundamental science questions, as well as enthrall a new generation to discover solutions to beyond-the-horizon challenges in data science.



SLAC at a Glance

SLAC National Accelerator Laboratory's origins trace to the rolling hills west of Palo Alto where in 1962 an extraordinary feat of imagination, brainpower, and collaboration resulted in the world's longest particle accelerator and the inception of a unique scientific partnership with Stanford University. Credited with discovering fundamental building blocks of matter and creating the first website in North America, SLAC continues to open new windows to the natural world and build a brighter future through scientific discovery.

U.S. Department of Energy National Laboratories

The 17 U.S. Department of Energy (DOE) National Laboratories comprise a preeminent federal research system that executes long-term government scientific and technological missions, often with complex security, safety, project management, or other operational challenges. The National Laboratory system produces the scientific research needed to develop national energy policy and solutions allowing DOE to be one of the largest supporters of technology transfer in the federal government.

Technology Transitions

The mission of the Office of Technology Transitions (OTT) is to expand the commercial impact of the DOE's research and development portfolio to advance the economic, energy, and national security interests of the Nation. The office develops the Department's policy and vision for expanding the commercial impact of its research investments, and streamlines information and access to DOE's National Labs and sites to foster partnerships that will move innovations from the labs into the marketplace.

www.energy.gov/technologytransitions

LSST's astronomical catalog will surpass existing catalogs thousands of times over

Technology

The LSST camera will weigh 6,000 lb and covers near UV to IR wavelengths with over 3 billion pixels per image.

Data

Generating millions of gigabytes of data over a decade presents challenges that will spark discoveries and solutions.

Collaboration

A large team of scientists and engineers at a number of institutions across the U.S. and abroad are collaborating to build LSST, with funding from the National Science Foundation and DOE.

Contact Us

The scientific discovery highlighted on this poster is just one of DOE's many successes advancing America.

Learn more about available resources and partnering opportunities with the National Labs by visiting:

www.energy.gov/technologytransitions

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