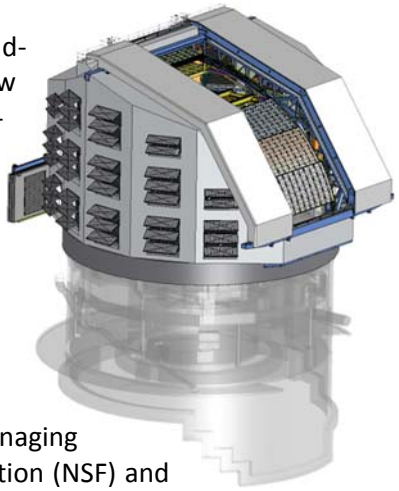
Summary Status for August 2015

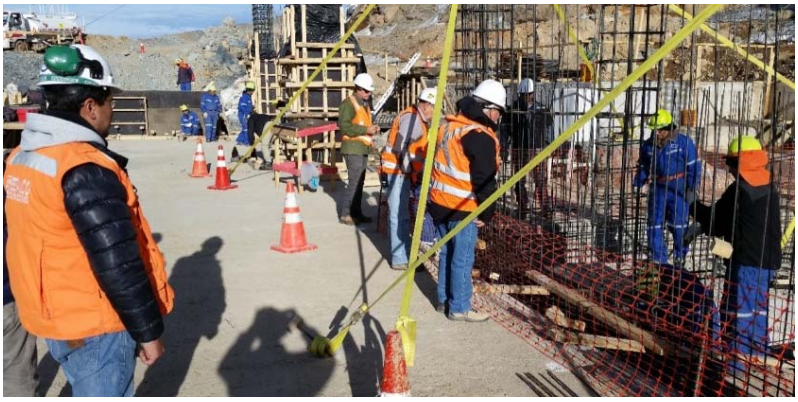


The Large Synoptic Survey Telescope (LSST) will be a large-aperture, wide-field, ground-based facility designed to obtain sequential images of the entire visible sky every few nights. From its home on Cerro Pachón in northern Chile, the LSST will conduct a 10-year survey that will deliver a 200 petabyte set of images and data products that will address some of the most pressing questions about the structure and evolution of the universe and the objects in it, including:

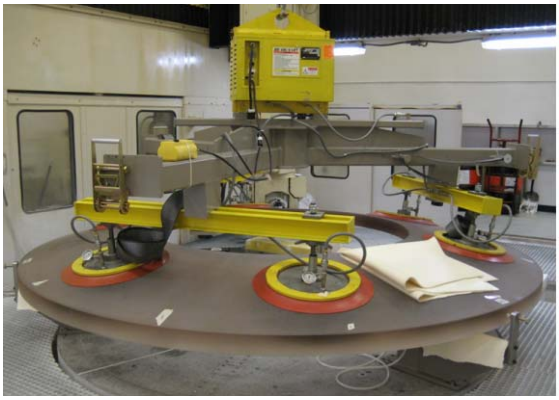
- Understanding Dark Matter and Dark Energy
- Hazardous Asteroids and the Remote Solar System
- The Transient Optical Sky
- The Formation and Structure of the Milky Way

The LSST Project Office (LSSTPO), an independent AURA center, is responsible for managing the LSST construction project – a partnership between the National Science Foundation (NSF) and the U.S. Department of Energy (DOE). At the end of construction, the LSST project will have delivered an 8.4-meter aperture telescope; all required support facilities; a 3.2-gigapixel camera; a supercomputing and data storage facility in La Serena, Chile; offices for Chile-based staff; and a data archive center at the National Center for Supercomputing Applications at the University of Illinois in Urbana-Champaign. As lead agency, the NSF funds the LSSTPO and is responsible for the telescope and site facilities, the data management system, and the education and public outreach infrastructure. The DOE, through a consortium of national laboratories led by SLAC National Accelerator Laboratory, is responsible for providing the camera. Through the LSSTPO, the LSST construction project is managed as a single coordinated effort.

Selected Highlights of Progress in August 2015:



Construction site managers supervise the safe placing of rebar for the summit facility foundation columns on the Cerro Pachón site. Managers wear orange or red vests with white hard hats; workers wear blue overalls and yellow hard hats. Note that housekeeping is excellent on the construction site.



The secondary mirror (M2) being lowered onto a support body to begin measurement of the optical surface.

- The DOE Energy Systems Acquisition Advisory Board (ESAAB) approved the Camera subsystem's construction start 27 August. The decision followed the team's successful completion of the Critical Decision 3 (CD-3) Review 4-6 August at Brookhaven National Laboratory (BNL).
- The LSST Project Office (LSSTPO) held the LSST2015 Project and Community Workshop 16-20 August in Bremerton, WA. The annual all hands meeting gathers together LSST's distributed team members to advance the technical work of the Project and to interact with the broader scientific community.

Summary Status for August 2015

- M2 (secondary mirror) Cell Assembly vendor Harris (formerly Exelis) began the optical fabrication portion of the effort by removing the mirror from it shipping container and placing it on the necessary support equipment. The next step will be to take initial surface profile measurements.
- There was a seven-day suspension of Summit Facility construction activities due to a winter storm, but excavation and foundation support remedies have continued. General contractor Besalco is nearing completion of the lower level of concrete to provide fill to the summit foundation and footings.
- The semi-annual LSST Safety Council meeting was held 18 August and focused on the design and hazard analysis of the Camera. The three-member council was impressed with the team and work done to date. Also, the Summit Site Safety Health and Environmental Plan (LPM-114) was formally approved via the LSST change control process in August. This plan takes effect when the Summit control is returned to the Project.
- Two LSST Data Management Scientists participated in a meeting "Synoptic Surveys: Boutique & Experiments" at Caltech 28-29 August. They reported that the potential value of LSST image processing software on astronomical community is huge. This report provided further motivation for making the LSST software framework documented and user friendly.
- The Base Facility Architectural and Engineering Services contract was awarded to Andes Arquitectos Asociados. They were one of eight qualified bids to complete the La Serena work for a combined LSST, AURA, and NOAO (CTIO) package.
- August E-News was distributed on 6 August 2015 and posted at http://lsst.org/news/enews, reaching about 3,000 individual email addresses, including all project team members.

Financial Summary - August 2015	NSF	DOE
Total Project Cost	$473M	$168M
Budget Cost Work Performed	$42.4M	$46.5M
Percent Complete	11%	36%
Cumulative CPI	1.05	1.03
Cumulative SPI	0.93	0.93
Remaining Contingency	$78M	$31M

Financial Status 31 August:

- NSF has authorized $107M; In addition to work accomplished, $61.4M more is encumbered in contracts.

Schedule Status 31 August:

- The NSF Project has a -$3.4M schedule variance due to slower hiring, and changes in large contract payment plans. The schedule performance index of 0.93 continues to improve each month as schedules are further developed and remedies implemented. All critical path items are progressing as necessary to meet schedule.
- The Project continues to have 13 months float and remains on schedule for October 2022 Survey Start.

Contingency and Issue Management:

- The Camera team continues to work with Sensor vendors on schedule issues. Initial deliveries are scheduled later in 2015 and all mitigations continue to be available.
- Weather issues have caused seven lost days on site that Besalco and LSST are working on recovering through parallel efforts. The Telescope mount design work is expected to reach sufficient design maturity for long lead purchasing after a design review in late September. A detailed schedule will be available at that time that is expected to recover delays in the design effort.
- Both sides of the Project have healthy contingency levels: 22% and 35% of remaining work for the NSF and DOE respectively.