

UW key player in LSST telescope project ranked tops by NRC

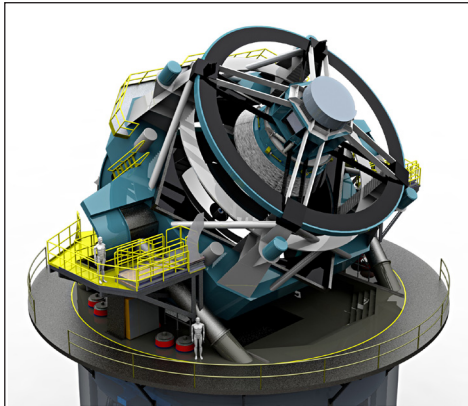
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The University of Washington is a key player in a telescope project ranked as a top priority by the National Research Council. The nod from the council could help speed funding for the Large Synoptic Survey Telescope (LSST).

"This will give the green light for the National Science Foundation leadership to get us the construction funding that we need in the next year or two," said Zeljko Ivezic, a UW astronomy professor and the system scientist for the telescope project.

The report lists the LSST as the top priority for large-scale, ground-based research initiatives priced in excess of \$135 million. The LSST is a wide-field optical survey telescope that would observe more than half the sky every four nights, and address diverse areas of study such as dark energy, supernovae, and time-variable phenomena. The 8.4-meter telescope would have a whopper of a camera: 3.2 billion pixels. The LSST will cost an estimated \$390 million by first light, about six years after the beginning of construction.

"Powerful new ways to observe the universe and bold ideas to understand it have created scientific opportunities without precedent," said Roger Blandford, chair of the committee that wrote



A 2010 rendering of the LSST, a proposed 8.4-meter ground-based telescope that will survey the entire visible sky deeply in multiple colors every week from a mountaintop in Chile. It will open a movie-like window on the universe and address some of the most pressing questions in astronomy and physics, while driving advances in data-intensive science and computing. Image credit: LSST Corporation / NOAO

the report and Luke Blossom Professor in the School of Humanities and Sciences at Stanford. "The program of research that we recommend will optimize the science return for future ground-based projects and space missions in a time of constrained budgets and limited resources."

Andrew Connolly, a UW associate professor of astronomy and the Large Synoptic Survey's image simulations scientist, said the project "will enable students and researchers in our depart-

ment to explore many unknowns, from the detection of stars at the edge of our own galaxy to the nature of the dark energy that drives the acceleration of our universe."

The telescope is to be built on Cerro Pachón, a nearly 9,000-foot peak in the Andes Mountains of northern Chile. Software innovator Charles Simonyi and Microsoft co-founder Bill Gates already have pledged substantial support for the project, which is planned to be funded as a public-private partnership. If federal funding comes in the next year or two, the telescope could begin operating in 2016 or 2017, Ivezic said.

Besides UW, other founding members of the project are the University of Arizona, the National Optical Astronomy Observatory, and the Research Corporation for Science Advancement. The telescope has been in planning stages for a decade and the founding members formed a corporation in 2003. Today there are more than 30 institutional members.

The report prioritizes activities based on their ability to advance science in key areas, and for the first time also takes into account factors such as risks in technical readiness, schedule, and cost.

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