

 <p><b>DESIGN REVIEW PLAN/REPORT</b></p>	Document #	Date	Status
	<b>LPM-XXX</b>	December 18, 2013	Draft 5
	Decision Authority <b>George Angeli</b> SE Manager	<b>William Gressler</b> T & S Manager	
Subsystem LSST Systems Engineering			
<b>Title of the Review</b>	<b>LSST Operations Simulator (OpSim) Review</b>		
<b>Type of Review:</b> Technical Review			
<b>WBS: LSST 06C.01</b>			
<b>Presented By:</b>	Abhijit Saha Steve Ridgeway Francisco Delgado Kem Cook Lynne Jones Srinivasan Chandrasekharan Cathy Petry	<b>Review Date:</b> February 4-5, 2014	
<b>Review Committee :</b>	Roc Cutri (IPAC/Caltech) - Chair Mark Johnston (JPL) Michael Droettboom (STSci) Eric Neilsen (Fermi Lab) Philip Pinto (University of Arizona)		
<b>Review Materials &amp; Supporting Documents:</b>	TBD		

### Change History

Revision	Effective Date	Description of Change
Draft 1	October 24, 2013	Initial release
Draft 2	October 29, 2013	Edited charge
Draft 3	November 3, 2013	Further edits to the charge
Draft 4	November 6, 2013	Minor edits
Draft 5	December 18, 2013	The Review Committee and the review dates are confirmed

## **Charge to the Committee:**

The Committee is asked to evaluate the status of the LSST Operations Simulator (OpSim) and its computational core, which is conceptually identical to the Scheduler component of the Observatory Control System (OCS). While the Scheduler is an LSST construction deliverable, OpSim is a tool to

- (i) Facilitate performance estimates and early design verification, before the telescope can be operated in its real environment, taking real sky images;
- (ii) Enable engineering trade studies during detailed design, construction, and commissioning;
- (iii) Assist early exploration of potential LSST science; and
- (iv) Enable the development and validation of the LSST Scheduler.

The Review Committee is welcome to comment on any aspect of the presented information, but is asked in particular to respond to the following questions in their report.

1. Are the requirements for the Operations Simulator understood at a level appropriate to guide its development into the construction phase of the project (including the level of fidelity required)?
2. Are there possible design elements and system constraints that affect the survey cadence that have been overlooked?
3. Are the OpSim inputs adequate and representative of the expected operational environment for LSST?
4. Is the software architecture of OpSim sufficient to explore a wide range of scheduling algorithms and observing modes?
5. Is the suite of post processing tools (both existing and in development, taken together) adequate to evaluate simulations for their performance with regards to science priorities?
6. Do the outputs from OpSim represent a reasonable prediction of the expected sequence of observations from LSST for a given set of science priorities?
7. Are the development plans for OpSim, including the proposed timeline and allocated resources credible given the requirement that a validated OCS Scheduler be delivered by the start of commissioning in 2019?

At the conclusion of the review, the Review Committee is requested to provide verbal exit briefing to convey high priority recommendations and comments.

The LSST project also requests that the committee provide a written report within two weeks after the review. The report should present the consensus of the Committee's objective findings, subjective comments, and high priority recommendations. An appendix may be included in the report to record any comments and recommendations from individual Committee members who are not represented by the consensus remarks.

**COMMITTEE REPORT**

TBD

**TEAM RESPONSE (OPTIONAL)**

TBD