



For the first ten years of operation, Vera C. Rubin Observatory will perform the Rubin Observatory Legacy Survey of Space and Time (LSST), using the Rubin Observatory LSST Camera and the Simonyi Survey Telescope.

COST:

Total annual operations costs are roughly \$72M averaged over 10 years of the Legacy Survey of Space and Time.

STAFFING:

Rubin Operations will require approximately 162 full time employees (FTEs) at the start of the survey with additional support for some services from SLAC and NOIRLab, and approximately 151 FTEs in steady-state. Steady-state operations in FY27 will require 53 FTEs working in the Observatory Operations department primarily in Chile at the summit and/or base facility. 56 FTEs will be in the Data Production department with responsibility to produce and support access to all Rubin LSST data products, 7 FTEs will support Education and Public Outreach (EPO), 22 FTEs will comprise the System Performance department, and the remaining FTEs will work in the Director's department.

IN-KIND CONTRIBUTIONS:

Rubin is seeking in-kind contributions from international groups to support operations in exchange for data access, and ability to use Rubin data and publish results from Rubin data identical to US and Chilean scientists. Invitations to contribute were sent in October 2019 to internationals with extant Memorandums Of Agreement (MOAs) with the LSST Corporation. Since 2019, Rubin has worked with the international groups who submitted LOIs to develop the planned contributions into a full in-kind program. As of January 2022, the program has been approved by the Rubin Management Board and AURA, SLAC, and DOE are working on developing data rights agreements with each program for final review by NSF and DOE.

DATA PRODUCTS:

Prompt data products - generated from difference image analysis to be used for for transients, variables, and moving objects. These include alerts with 60-second latency, source catalogs updated within 24 hours, and images available with 80-hour latency. Source catalogs include lightcurves and variability information from both the direct and difference images.

Data Release data products - made available annually as the result of coherent processing of the entire science data set to date, to be used for both static-sky and time-domain objects. These include calibrated individual and deeply coadded images; deblended source measurements of positions, fluxes, and shapes; all-sky survey property maps; and a uniform reprocessing of the Prompt data products.

User Generated data products - originating from and controlled by the community. These products are created and may be stored using Rubin-provided APIs. At least 10% of the Rubin LSST Data Management total capacity is allocated for User Generated data product storage and user-dedicated processing.

DATA ACCESS:

Reference is the Rubin Observatory data rights policy, RDO-013 (ls.st/RDO-013).

The proprietary period for Rubin LSST data and data products is two years. Within that time, only Rubin Users can use the data. All US and Chilean scientists, Rubin Builders, and individuals with approved in-kind agreements naming foreign members (Principal Investigators with junior associates) are Rubin LSST Users. Rubin data and data releases become public after two years. The mode of supplying the access to the public data is not yet defined.

Rubin Users enjoy data access, that is, the ability to access proprietary Rubin LSST data as well as services through the US or Chilean Data Access Centers such as an account, access to APIs, compute resources, and help desk services.

Rubin Users have the ability to possess the proprietary data and to publish journal articles containing or based on proprietary data. All data products for EPO are non-proprietary and therefore available to all, regardless of Rubin Observatory User status as are the prompt alerts made nightly.

Rubin Observatory Users have access to proprietary data and access to tools and resources.

Everyone worldwide can use EPO Data as well as all Science Data after the two-year proprietary period.

