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Rubin Observatory Operations

Charge to the Data Release Board

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Abstract

This document provides the charge to the Rubin Observatory Legacy Survey of Space and Time (LSST) Data Release Board (DRB), a Rubin Operations internal group responsible for the assessment of Rubin Observatory's schedule to make annual data releases.

Change Record

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Charge to the Data Release Board

1 Rationale

Production of the data release is a process that spans many months and requires a large investment of time, staff effort, and compute resources. These factors necessitate a policy-level system to ensure that the results of a DRP processing will maximize the scientific return from the data by determining an appropriate scope of inputs, software components and versions, and output products that will meet the needs of the science users.

This optimization is made challenging by the time required to produce a data release, which can make it impractical to redo significant amounts of the processing if problems are discovered late in the process. Therefore it is important that most decision-making take place at the start of the release process, since the ability to make changes later during the release process is significantly constrained. In the highly-constrained environment near the target release date, decisions regarding the release contents and the release schedule may have significant impact on both the science users and the observatory operational teams. The purpose of the DRB is to provide a mechanism for weighing these wide-ranging tradeoffs and deciding how the release should proceed.

2 Charge

The DRB is responsible for setting the scope, schedule, and resources available for the data release production. The DRB is expected to delegate daily management responsibility to a campaign committee, but retains the overall authority and responsibility for the release.

3 Composition

The DRB is chaired by the Head of Science, and includes associate directors of all departments.

4 Activities

The DRB meets at the start of the DRP process to decide on the input dataset, the initial pipelines version for precursor run testing, and the proposed schedule for processing and release. After an initial precursor processing is performed on a small subset of the data, a period of validation begins, and ends with proposals from the Verification and Validation team and Science Pipelines to either begin the full processing or make further changes to the plan. The DRB is responsible for approving the start of the full processing.

Once the production has begun, the process can continue according to the plan without further intervention by the DRB. Day-to-day operational management is conducted by a campaign committee, with representation from the technical teams involved in the production. This campaign committee meets frequently to carry out the campaign as planned by the DRB.

However, if issues arise during production that potentially impact the scope, schedule, or resource usage of the campaign, the campaign committee alerts the DRB, and the DRB decides on a best course of action. For example, this could be due to particular algorithms or table columns that are found to contain degraded results, unexpected delays in processing, or additional steps that are necessary to enable scientific use. Minor versions of these problems are expected and can often be resolved by the production teams and the campaign committee, but the DRB's input is critical when problems are significant enough that a schedule delay or additional compute resources would be required, or alternatively, the release of data with known caveats.

These mitigation activities can be time critical, and the DRB must be available to choose between possible mitigations on short timescales. Delays in decision making can rapidly use up schedule margin and cause a day-for-day delay in the release.

A References

B Acronyms

| Acronym | Description |
|---------|-----------------|
| DM | Data Management |