Data Preview 2: Definition and planning

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1 Introduction

We pull together information from Jira and refer to other documents as needed to describe DP2 in more detail.

DP2 should be released to the community in 2026. This document discusses the contents and timing of DP2.

1.1 DP2 Scope

The goal of DP2, like DP1, is to give well processed commisioning data to the science community - not any new features in RSP etc.

1.1.1 Data

DP2 comprises data from LSSTCam on sky and RTN-011 gives an outline of DP2.

DP2 will contain data with ireasonable PSF and from a footprint where we have a resdonable number of visits with LSSTCam.

1.1.2 Science Platform

Science Platform functionality for DP2 is still focusing on good user experience and system scalability rather than full feature capability.

Similar capabilities that were not offered in DP1 will be offered in DP1. These are:

- Temporary table upload for Qserv

- User query history

- User query management (requires the new Qserv front end)

- RA/DEC cutouts across patch/tract boundaries

- HIPS for full focal plane images

- Additional data-link annotations

- Butler Client-server

- Visit table in Qserv

- Portal-accessible user WebDAV service

- User quotas

2   Planning

We have some milestones and epics leading up to DP2.

Label milestones and epics DP2 to have them appear

FIGURE 1: Data Preview 2 - plan

Open milestones are listed in Table 1.

Table 1: Milestones for Rubin Observatory Data Management and System Performance

Milestone	Jira ID	Rubin ID	Due Date	Level	Status	RubinTeam

2.1   Distributed processing

IN2P3 will be used for pilot runs taking much load of USDF.

2.2   Middleware

2.3   RSP

2.3.0.1   Qserv   User catalog loading.

2.4   Rucio

3   Processing

As always the goal is to generate a fully self-consistent data release for the scientists to publish papers on.

Mini runs will be done prior to the final production run prior to the pipelines freeze PREOPS-1666.

Who is piloting the DP1 campaign ? PFC ?

3.0.1   Policy committee

There are certain decisions which will need to be made are best handled in a smaller forum than the full leadership team. As fopr previous DPs this may include:

- Campaign polices

- Version of pipelines to use and patches which are needed

- Version of QA tooling which needs to run (and where/how to run it)

- Other operational considerations

Such decisions will be endorsed by DMLT but advised by a smaller committee more connected to the issues. The members will be the following (or their delegated representative):

- Hsin-Fang Chiang

- Tim Jenness

- Yusra AlSayyad

- Colin Slater

3.0.2 Science pipelines release

We have milestone PREOPS-1666 for the pipeline freeze. We can estimate already that this will be V25 of the pipelines and will be driven by the DP1 needs - not on a fixed date.

3.0.3 High level workflow of workflows

Anything to say about this here ?

4 Validation and Documentation

System performance will lead validation of the data for DP2.

4.1 Data release board

The data release board should be in place to ok the DP2 at selection and publication citertn-052.

A   Acknowledgements

B   References

[RTN-011], Guy, L.P., Bechtol, K., Bellm, E., et al., 2025, *Rubin Observatory Plans for an Early Science Program*, Technical Note RTN-011, NSF-DOE Vera C. Rubin Observatory, URL `https://rtn-011.lsst.io/`, doi:10.71929/rubin/2584021

C   Acronyms

Acronym	Description
AST	NSF Division of Astronomical Sciences
AURA	Association of Universities for Research in Astronomy
CCD	Charge-Coupled Device
DE-AC02	Department of Energy contract number prefix
DEC	Declination
DM	Data Management
DMLT	DM Leadership Team
DMS-REQ	Data Management System Requirements prefix
DP1	Data Preview 1
DP2	Data Preview 2
HIPS	use HiPS

IN2P3	Institut National de Physique Nucl√©aire et de Physique des Particules
LSST-DA	LSST Discovery Alliance
LSSTCam	LSST Science Camera
LVV	LSST Verification and Validation
PSF	Point Spread Function
PVI	Processed Visit Image
QA	Quality Assurance
RA	Rapid Analysis
RSP	Rubin Science Platform
RTN	Rubin Technical Note
SLAC	SLAC National Accelerator Laboratory
USDF	United States Data Facility