

# Rubin Observatory

## DM Science F20B Retrospective and S21A Plans

Leanne Guy

DMLT vF2F

2020-11-17/18



- Faro package for computing performance metrics at scale (validate\_drp replacement) implementation complete. Acceptance testing on G3 HSC RC2 (release to pipelines) dataset in progress– [DM-22295](#)
- Science Pipelines Version 20.0.0 acceptance testing complete: : [DMTR-261](#)
  - 14 newly-verified test cases corresponding to 9 unique fully verified DMSR requirements and 2 partially verified.
- Plan to verify remaining P1a/b requirements mapping to Milestones and ORs drafted

- Crowded fields processing – prototyping ongoing – [DM-21313](#)
- Host galaxy associations for DIAObjects – to provide more scientifically useful associations between DIAObjects and Objects in particular between transients and their host galaxies – [DM-23683](#), [RFC-695](#)
- Time series features to compute – ongoing – [DM-19592](#)
- Serving photometric redshifts – ongoing – [DM-6367](#). Roadmap for engaging the community presented.
- Detection efficiencies for Difference Images – ongoing – [DM-19308](#)

- Support to the [LSST enabling science 2020 broker workshop](#) (community organized follow on to the Rubin Community Broker workshop)
- Continue to support to the science collaborations through liaisons and a stack-club roster
- DMTN-155: Interim Model for Community Support – to relieve pressure on DM staff providing support and provide a transition to the operations-era model for community engagement

- DMSR / DPDD updates (RFC-709, -710) completed to bring DMSR/DPDD in line with DRP plans.
- RFC-610 Major updates to the Solar System Processing implemented in DPDD
- DMTN-153 drafted by Wil and Colin, describes the SDM goals, implementation and procedures, linking the SDM with the DPDD.
- Hsin-Fang Chiang continued with ingesting Hyper Suprime-Cam Object tables (RC2) into Qserv.

DM construction time as of FY21 (2020-10-01):

- Leanne : 50% (AD System Performance)
- Colin: 25% (25% V&V) (50% LSST, 50% Research Scientist at UW)
- Melissa: 50% (50% CET)
- Jeff: 75% (25% CET)
- Hsin-Fang: 75% (25% DP)
- Institutional science leads mostly 75% (time split 50/50 with PO responsibilities)

- With a significant fraction of DM-SST members' time now on ops, the construction workload must be adjusted / refocused
- Focus on delivering the DMS as per requirements (DMSR)
  - Make sure V&V is in place, incl. tools, processes, methods, etc
  - Carry out verification as per schedule and prioritization in DMSR
- Gap analysis – identify missed or underspecified requirements that prevent us from delivering construction
  - E.g alert database, requirements exist but a more detailed specification is needed
- Defer operations-focused goals, improvements, longer term studies that are not required to deliver construction to operations
  - e.g community engagement activities - best effort in construction but a key operations goal

- Current ongoing studies:
  - Serving photometric redshifts
  - Crowded field processing
  - Host galaxy associations for DIAObjects
  - Time series features to compute
  - Public interface for querying time series
  - Detection efficiencies
- SST will conduct a [prioritization exercise](#) to determine what must be delivered in construction and what forms part of a longer term strategy into operations to inform work on future science studies



- Faro metric measurement package release and implementation of remaining KPMs
- Gen3 acceptance testing (see this meeting)
- Define the test plan for the RSP service of data resulting from an end-to-end test exercising the flow from data processing to RSP release, LDM-503-14a
- Science Pipelines Version 21.0.0 acceptance testing started
- Detailed plans for P1a and Pb1 verification completion, connection to milestones, test plans, DMTN-158

- Highest priority is to match DPDD with what the science pipelines produce.
- Continue work on automation of SDM standardisation through to qserv ingest
- DPDD reformatting will be pushed to (pre-)operations and will evolve with every DR.
- Construction papers

- DMTN-155 -- Please follow these guidelines and help us to build up content in the Community Forum
- Stack-club and SC liaisons will continue
- Pre-operations Community Engagement team picking up a lot of the community interaction work.