Science Pipelines S18 Plans

John Swinbank
Deputy DM Project Manager

DMLT Face-to-Face Meeting
2017-11-03

Outline

Plans for S18

Requests of Other Teams

Alert Production

- Continue fleshing out the end-to-end pipeline; handle a wider variety of cameras and datasets, and expand the metric set used for testing.
- Detailed design and performance reviews of the DCR mitigation strategy, together with stack integration and a refereed publication.
- Further at-scale testing of the alert distribution system, and a focus on nailing down both the requirements for and the technical approach to alert filtering.
- Following the replacement of meas_mosaic, detailed design work and review in preparation for further Jointcal development.
- Lead execution of the LDM-503-5 (Alert Distribution Validation) milestone.

Data Release Production

- Continue deblender development, focusing on lessons learned from large-scale processing of HSC datasets.
- Start development of tools for understanding survey depth and efficiency (selection maps).
- Further investigation of how advanced coaddition techniques can enable shear measurement without MultiFit.
- Start work on galaxy model fitting: this will be a multi-cycle project, but we aim to deliver our first simple prototypes during this cycle.
- Lead implementation effort for the new Butler.

Science Leadership

- Develop test specifcations for nightly, annual and calibration products productions.
- Detailed definition (in terms of test specifiation) of all relevant L2 and L3 milestones.
- Refine requirements documentation, in particular with a focus on the alert stream and mini-broker.
- Lead design review process for important components: DCR, Jointcal, alert distribution, etc.

Outline

Plans for S18

Requests of Other Teams

Requests of Other Teams

- Continued regular HSC reprocessing at NCSA. [LDF]
- Database ingest of HSC reprocessing in support of QA use cases. [DAX]
- Science platform / Jupyter notebook availability in support of Pipelines debugging and QA use cases. [SQuaRE, LDF]
- Understand the SuperTask development schedule, including the ability to run SuperTask-based batch processing. [DAX, LDF]
- Database-backed `afw::table` persistence. [DAX]
- Alert distribution test instance hosting. [LDF]
- Better understanding of the `lsst.verify` / SQuaSH system and input to its development (e.g., a design review). [SQuaRE]
- Input from other stakeholders into designing the alert distribution and filtering system. [Arch, DAX, LDF, SUIT]