

# QA Working Group

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*Large Synoptic Survey Telescope*

# Charge — LDM-622

- Providing developers of the LSST Science Pipelines with tooling and datasets which will enable them to identify, understand and resolve – or avoid altogether, where possible – algorithmic issues or pathologies.
- Defining procedures by which the Science Pipelines are verified to run on Data Facility-provided hardware at a scale appropriate to demonstrate their readiness for operations.
- Tracking progress relative to numerical algorithmic performance targets as defined in LSE-61 or other DM requirements documents.
- Tracking computational performance and enabling the rapid identification of performance regressions.

# Not Included

- Science validation activities, which will be separately coordinated by the DM Subsystem Scientist.
- Commissioning (although note that we do have Simon on the WG, who will make sure we don't wildly diverge from the interests of the Commissioning Team).
- Usability or other general-purpose improvements to the codebase (except insofar as they are required by the previous slide).
- Testing of other parts of the DM Subsystem deliverables, including but not limited to Data Facility systems, large scale databases, or the Science Platform, except insofar as their availability may be necessary to carry out QA tasks on the Science Pipelines.

# Deliverables

- In order of importance (as I see them):
  1. Deliver a coherent strategy for DM QA as it falls within the scope of this WG.
    - a. Provide a “big picture” vision of everything we need;
    - b. Map that against the tools & procedures we already have;
    - c. Identify where we need new tools, or to adjust the design we are currently working to.
  2. Provide detailed requirements documentation for the above;
  3. Provide detailed design documentation for the above.
- Points 2 & 3 can be delegated to successor WGs or individuals as required.

## Strategy

- WG split into three sub-groups focusing on separate areas of the problem space:
  - ▶ Drill down (Bellm, Fausti, Morton)
    - How do we unify qa\_explorer, lsst.verify & SQuaSH?
  - ▶ Pipeline debugging (Krughoff, MacArthur, Roby)
    - The future of lsstDebug, running pipelines at scale, image display, etc.
  - ▶ Unit, integration & large scale tests (Chiang & Swinbank)
    - How do we make test datasets available to developers, what jobs do we run in CI, how do we make sure the right metrics are available to SQuaSH for verification, etc.

# Schedule & Plans

- Period of Performance: May & June 2018.
- To end May:
  - Sub-WGs brainstorming, collecting use cases, writing narrative descriptions of their parts of the system.
- During early June:
  - Bring sub-WG brainstorming results together, build a coherent picture of where we're going.
  - Identify common components.
- During late June:
  - Produce design/requirements documentation for the components identified.