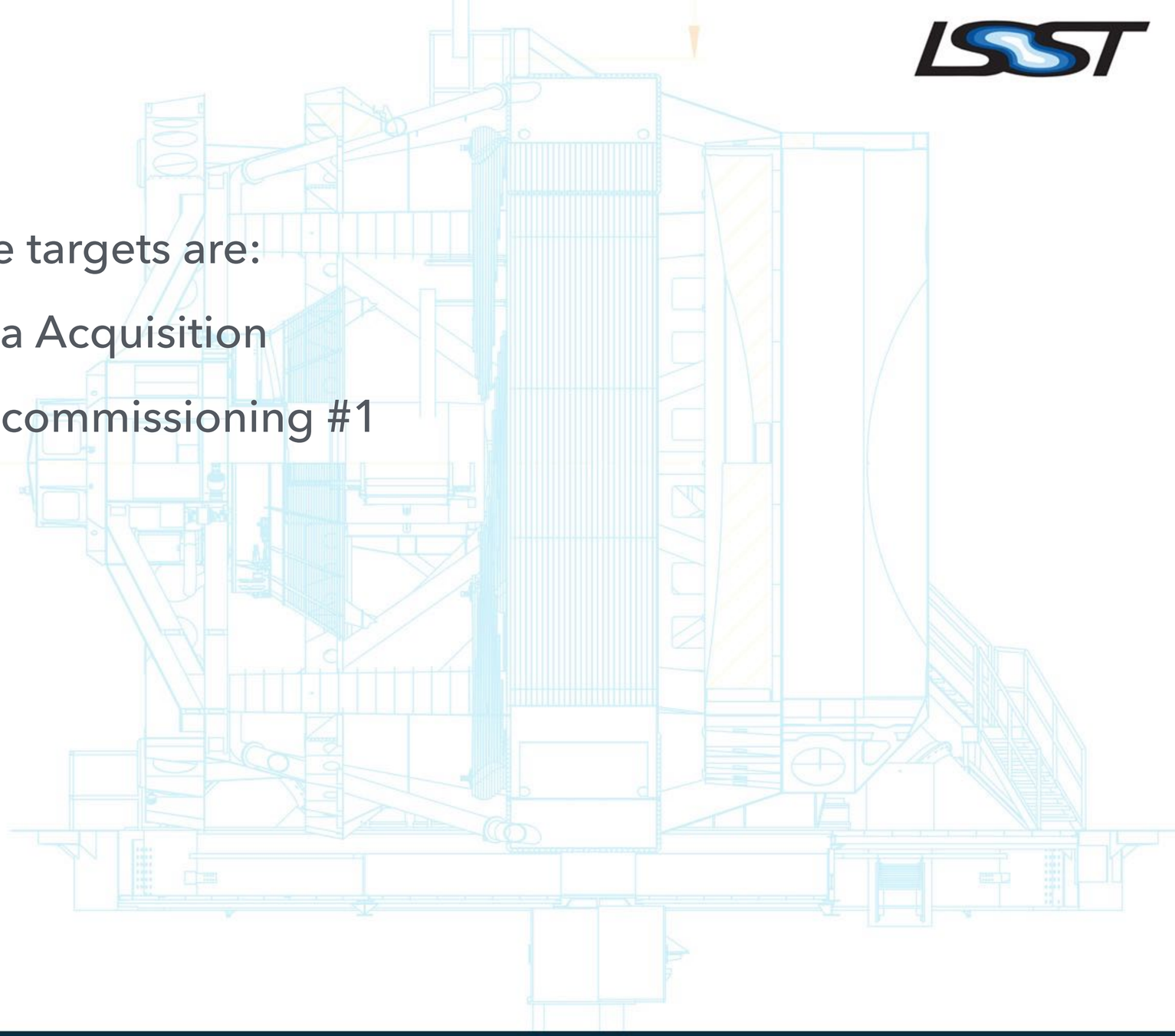
Science Pipelines

F18 Development Plans

Large Synoptic Survey Telescope

Key Milestones

- Major Science Pipelines milestone targets are:
  - LDM-503-08: Spectrograph Data Acquisition
  - LDM-503-09: Ops rehearsal for commissioning #1



LDM-503-08: Spectrograph Data Acquisition

- Primary spectrograph-relevant deliverable is the AuxTel spectrophotometric science pipeline payload.
- Schedule:
  - Working algorithms by late summer.
  - “Stackification” starting October 2018.
  - Complete pipeline in stack framework (ie, Gen 3 middleware) January 2019.
- Includes production of e.g. appropriate camera (obs) package supporting AuxTel.

LDM-503-08: Spectrograph Data Acquisition

- There are **14** pipelines L3 milestones relevant for this L2 milestone.
  - Refer to LDM-564 for details.
- Highlights include:
  - Jointcal operational in data release pipelines.
  - Brighter-fatter effect correction.
  - Full focal plane background & PSF estimation.
  - Initial multi-band deblending algorithm (ie, Scarlet deployed in the DRP system)
  - Coordinate transform tool for the CBP.
- We are on schedule to deliver ~all of these milestones.
  - But the Pipelines Science Leads & T/CAMs still have to flesh out the details of some of them.
  - And there are some, e.g. optical ghost model, which we might reconsider.

Other Work: Alert Production

- Ongoing activities in the AP group which do not target a scheduled milestone in late 2018:
  - Pressing to ramp up the end-to-end AP processing, including:
    - A larger variety of bigger, more heterogeneous datasets
    - Increasingly paying attention to the scientific quality of outputs
  - Continued work on the alert distribution system, likely focusing on filtering
  - Onboarding the new image differencing specialist, and returning focus to diffim algorithm development & implementation

Other Work: Data Release Production

- Ongoing activities in the DRP group which do not target a scheduled milestone in late 2018:
  - Likely continued involvement in middleware development, details TBC
  - Galaxy model fitting
  - Continue work on SRD-grade shear measurement on coadds
  - Considering deeper integration of new deblender outputs into measurement system
  - Collimated beam projector data processing