DP0.2 Known Issues and Major Changes vs DP0.1

DP0.1 was run with pipelines version v19.0.0 w_2019_46
DP0.2 was run with pipelines version v23.0.0 w_2021_40

With 2 releases per year, there was 2 years of development between versions used:
Release notes can be found for the past 2 years at: https://pipelines.lsst.io/releases/index.html

The major changes include:

- Generation 3 middleware
- Difference Imaging Analysis (DIA) Pipeline
- Native transformation of parquet tables to the standard data model: https://dm.lsst.org/sdm_schemas/browser/
- Scarlet for deblending on coadd measurement and major change in columns that build up `**detect_isPrimary**`
- Streak masking during coaddition
- Addition of sky objects in Object Tables and sky sources Source Tables.
- GAAP columns in the Object table for galaxy colors
- Updated the thresholds for per detector visit-level PSF quality safeguards for inclusion in coadds (

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). This is to ensure detectors with "bad" PSF model fits do not get included in the coadd. Specifically, we set the following for LSSTCam-imSim:
  - maxEllipResidual = 0.0045 (default is 0.007)
  - maxScaledSizeScatter = 0.006 (default is 0.009)
- Single Frame Configs:
  - Used chebyshev polynomial order for background fitting = 1 and no SkyCorrection
  - Source selection for measurePsf in `charImage`: `charImage.measurePsf.starSelector["objectSize"].signalToNoiseMin = 50`
    * Compare https://github.com/lsst/obs_lsst/blob/dc2/run2.2/config/imsim/processCcd.py with https://github.com/lsst/obs_lsst/blob/v23.0.x/config/imsim/characterizeImage.py and https://github.com/lsst/obs_lsst/blob/v23.0.x/config/imsim/calibrate.py
  - Added a delta-magnitude (source vs. reference) rejection to astrometry fitting task (

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)
  - Added a maximum mean offset threshold for the SFM astrometry fit to be considered a "success" (

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). This safeguards against detectors whose fit did converge but had high on-sky scatter from getting into the coadds.
- + Survey Property Maps

Known Issues:

- No Forced Photometry on the goodSeeingCoadd templates: aka "light curve zeropoints."

- Deprecation warnings in logs for PSF.computeShape() deprecation (

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)
  - RFC-796
- ComputeShape(defaultPosition) on template errors on imageDifference Task (

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- Underestimated variance planes in patch overlaps of templates (

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