

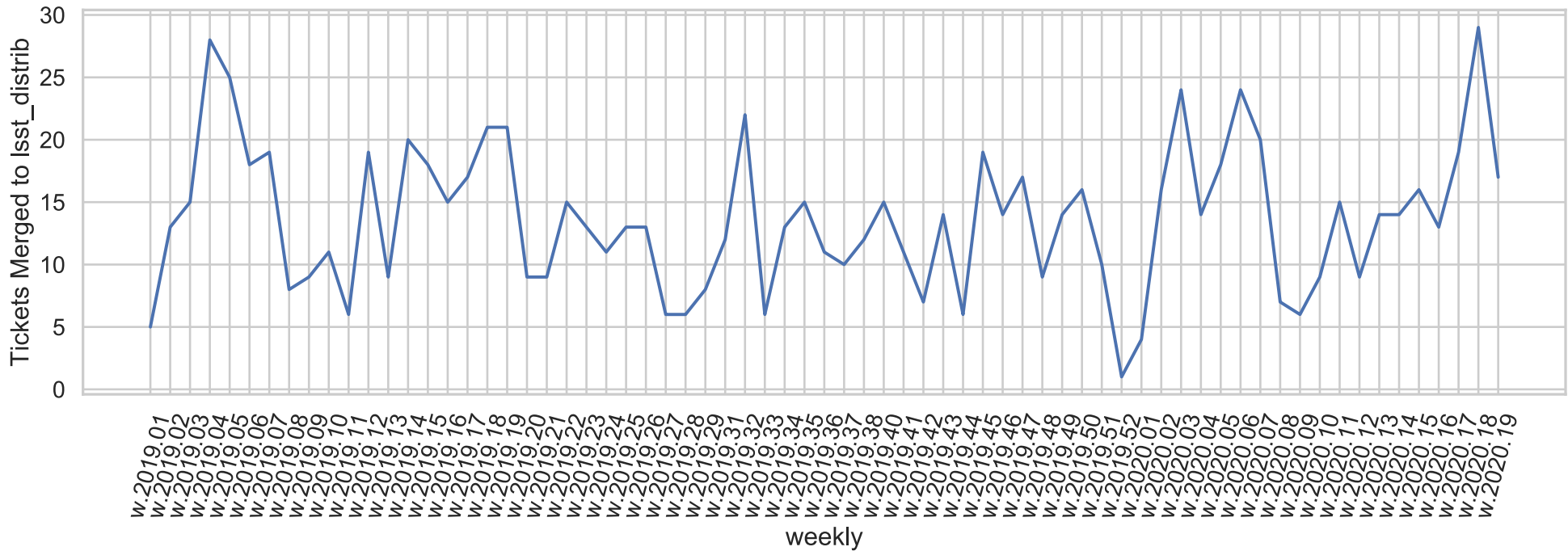
Rubin Observatory

Data Release Productions Plans F20a (Jun, Jul, Aug)

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While *not* a measure a productivity, tickets merged to Isst_distrib by DM have not dropped off since shelter-in-place



Data from https://lsst-web.ncsa.illinois.edu/~swinbank/changelog_weekly.html



What happened Mar, Apr, May?

- Algorithms workshop: taking stock, talks, plots, and stories from whole team.
- [Pre workshop analysis sprint demo](#) answered some burning questions:
 - How do Pan-STARRS IPP and The Stack outputs compare on HSC images?
 - Should we use PSF-Matched Templates for diffim?
 - Should we apply skyCorr before photometric calibration?
 - Causes of over-densities of sources?
 - Metrics for bright star wings?
 - ForcedSource vs ForcedDiaSource: what do the lightcurves of static objects look like in calexps vs difference images?
 - Can we recover scientifically useful photometry of stars in marginally-resolved nearby galaxies?
 - Add weak lensing rho-statics to pipe-analysis
- And then...back to building (from home)

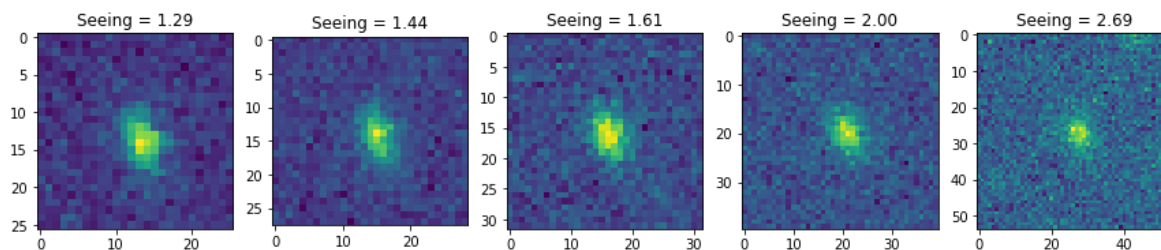
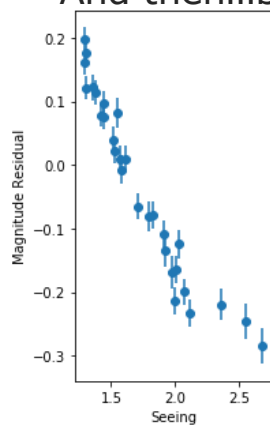
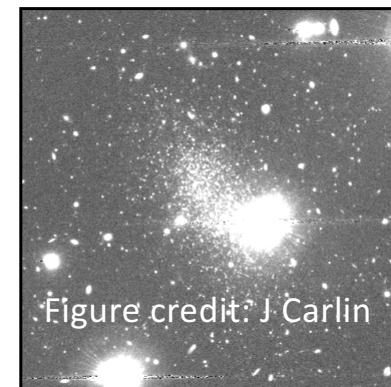
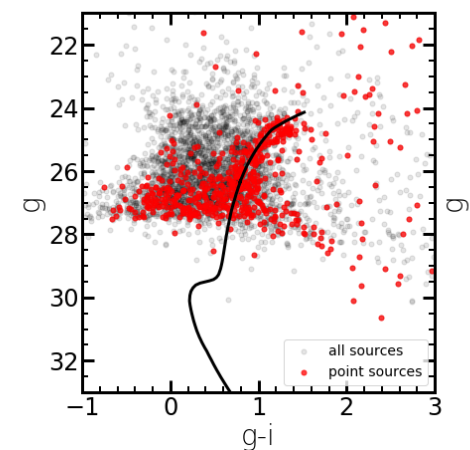
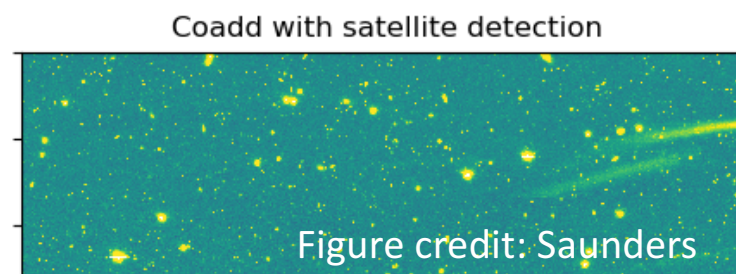
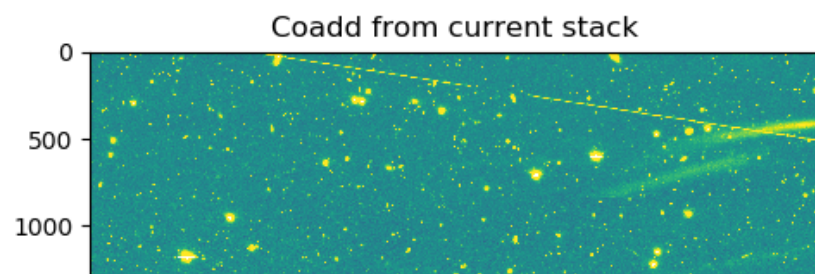
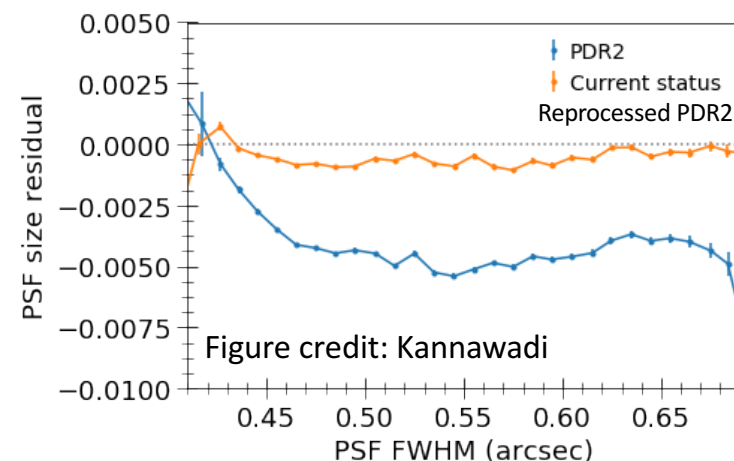


Figure credit: Saunders



What happened Mar, Apr, May?

- Morphological satellite masking (merge is pending third party packages) (*Saunders*)
 - Parquet Source Tables produced regularly in RC2s (*AlSayyad*)
 - Analysis to show discrepancy in size residuals between stars and PSF models appears went away (*Kannawadi*)
 - Prep pipe_analysis for gen3 conversion (*Reed*)
 - 33% runtime improvements on biggest blends with Scarlet (*Moolekamp*)
 - Started on bright star wing modeling with Infante-Sainz who visited March 1-12. (*Schmitz*)
- And more work in progress.



DRP **Measurement** Activities for F20a

- Galaxy colors by GaaP: PSF- and aperture-matched photometry (*Kannawadi*)
- Implement and test new improvements for galaxy modeling (*Taranu*)
- Robustness improvements for Scarlet (*Moolekamp*)

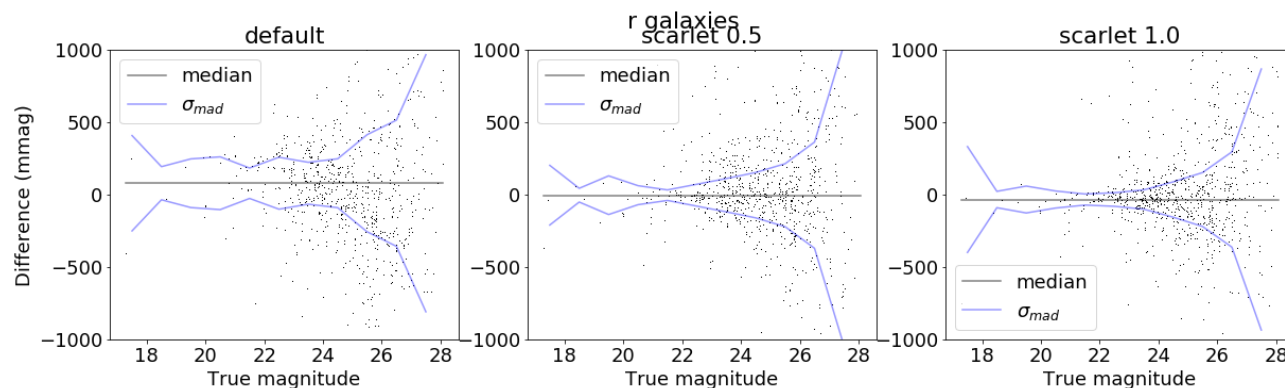


Image credit: Moolekamp

Input vs output galaxy mmag fakes injected into HSC data

DRP **Characterization/Calibration** Activities for F20a

- Comparison of jointcal and DES astrometry algorithm (*Saunders*)
- Integrate PIFF. Look out for a meas_extensions_piff (*Meyers + sprint later with Saunders/Schmitz*)
- Improve handling of instrumental background effects: amp-to-amp offsets. (*Kelvin*)
- ISR and gen 3 calibration products (*Waters*)



DRP **Science Validation** Activities for F20a

- Inject and analyze fake ultra-diffuse galaxies (*Reed/Kelvin*)
- Hackweek with AstroPy devs on AstroWidgets postponed, but talking to Eric T about scheduling a remote hackweek. (*Waters/Lust*)
- Add Metrics:
 - From fakes into Isst.verify/squash (*Reed*)
 - For background estimation into Isst.verify/squash(*Kelvin/Rykoff*)
- Continuation of QA drill down tooling described in QAWG (*Morton 15-20% FTE*) + Quansight
- + QA from the next full HSC data release
- We had a validation-heavy S20, this cycle will be a building heavy



DRP **Gen 3** Activities for F20a

- Toward feature parity with Gen2. Everything we need to run a RC2 with Gen3.
 - Quantum graph generation, liaison for batch production dev (Lust)
 - Convert fgcmcal (Rykoff)
 - Convert calibration product generation, PTC/BF-code/linearity to gen 3 (Waters)
 - gen3 /datasets registry (Bosch)
 - Finish converting pipe_analysis (Reed/MacArthur)
 - Finish converting transform Source/Object Table tasks to gen3 (AlSayyad)

