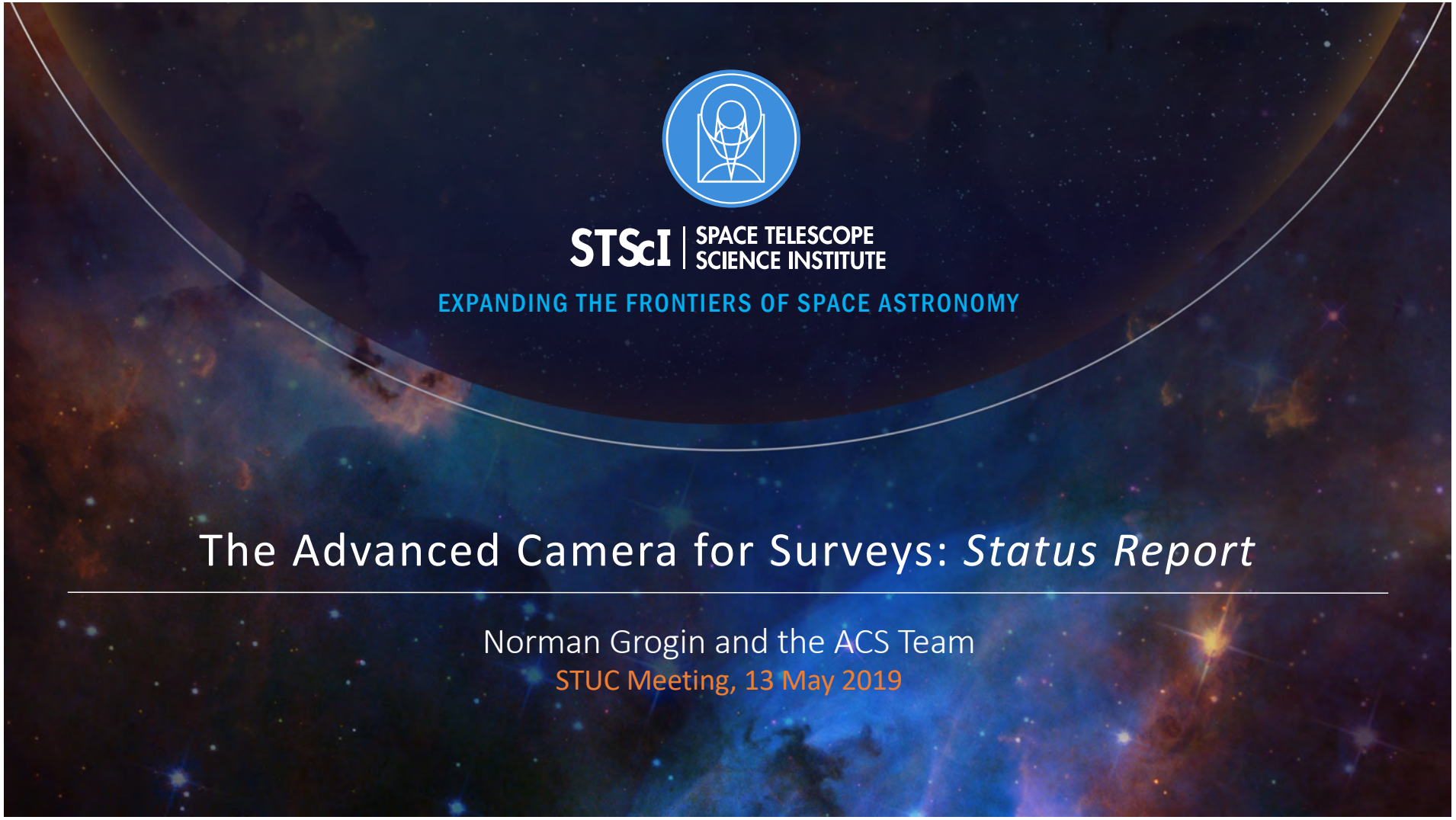


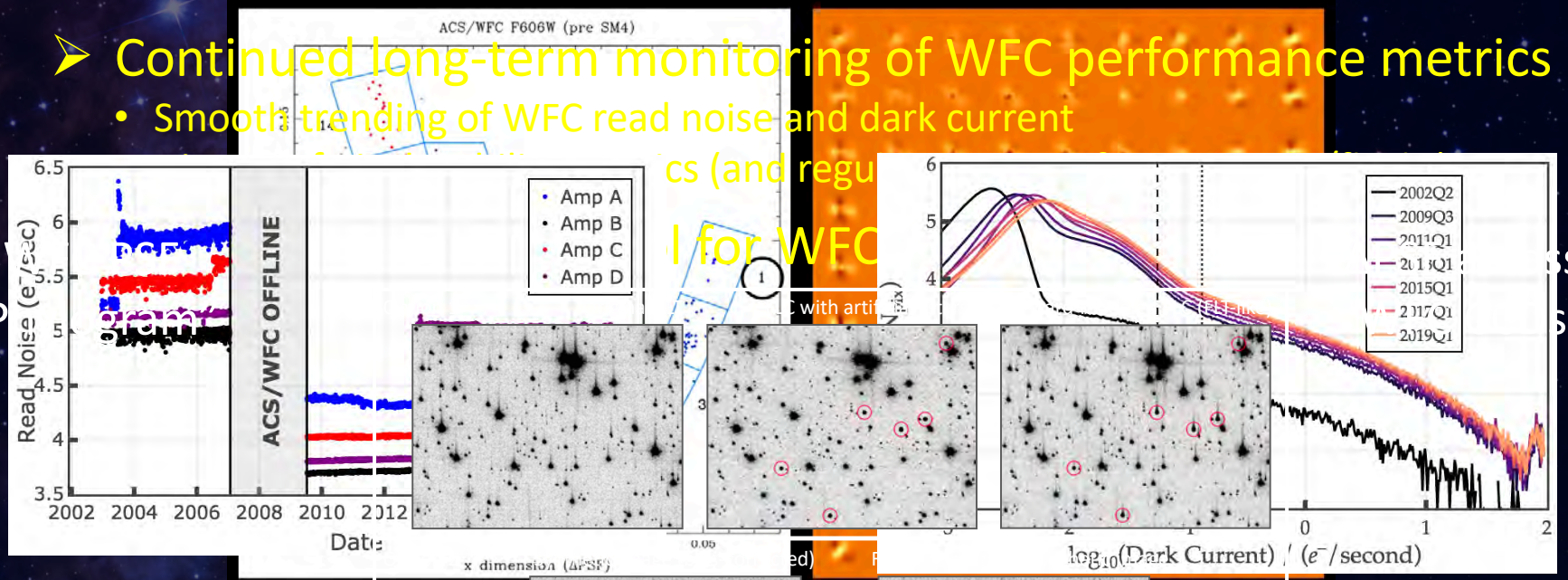
The Advanced Camera for Surveys: *Status Report*

Norman Grogin and the ACS Team

STUC Meeting, 13 May 2019

ACS: Recent Accomplishments

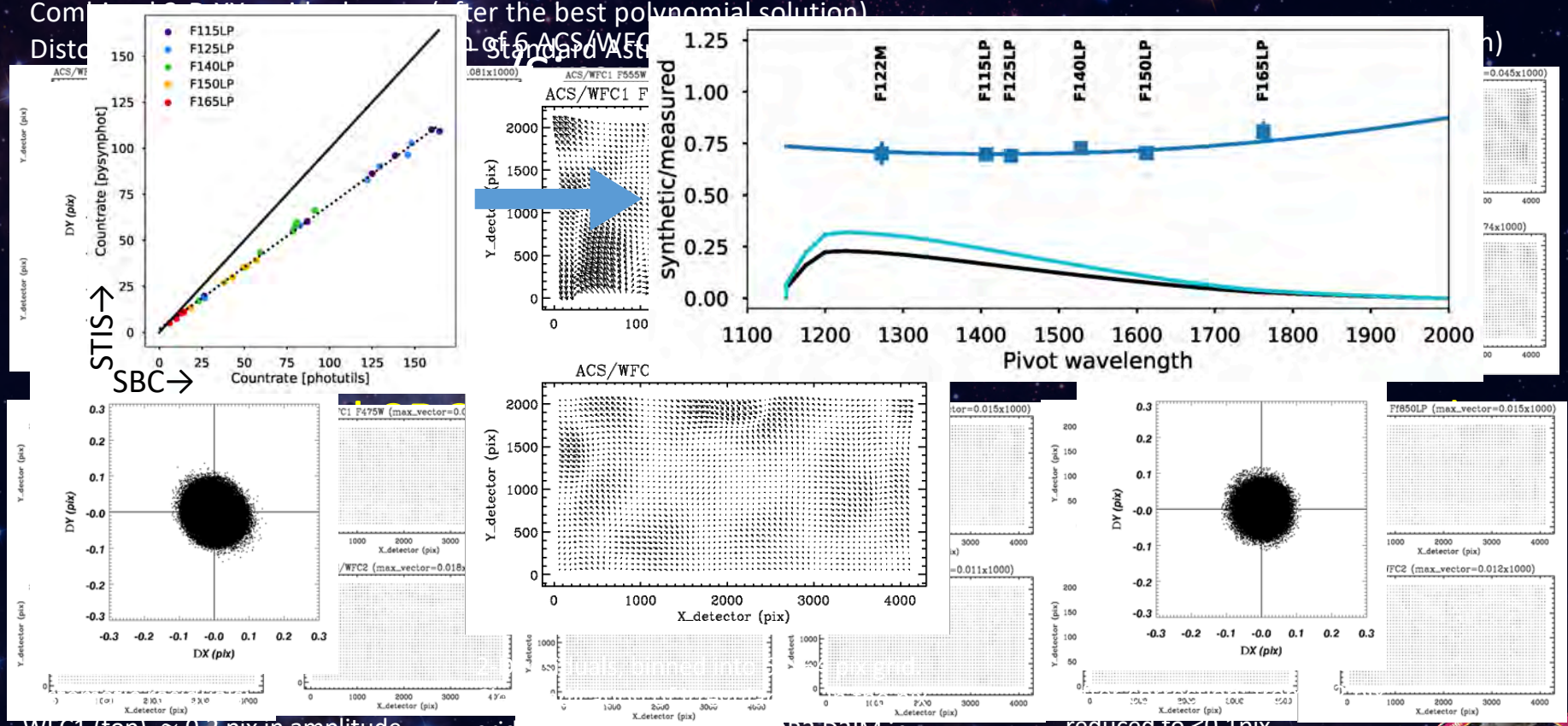
- Continued long-term monitoring of WFC performance metrics
  - Smooth trending of WFC read noise and dark current
- Modeling of empi SFs rary for GOs
  - Spatial and temp ACS



ACS: Current Work

Com ter the best polynomial solution)

Disto of 6 ACS/WFC Standard Ast n)



WFC1 (top) ≈ 0.2 pix in amplitude
WFC2 (bottom) < 0.1 pix

After all corrections: ~0.1 pix reduced to <0.02 pix RMS.

grid when using pre-GAIA-DR2 D2IM in CALACS pipeline (ISR 2015-06, V.K-P et al.)

reduced to <0.1pix.
From non-Gaussian to Gaussian

ACS: Future Work

- "High Dynamic Range" WFC Superdark
  - Selectively merging the 1000.5 sec and 0.5 sec calibration darks
  - Eliminates superdark saturated pixels and pixel-blooms
  - Vast majority of ACS WFC exposures are $\ll$1000 sec
- Major improvements to DARKCORR in CALACS
  - More robust DARKTIME calculation and usage (empirical overheads)
  - Combine HDR superdark with CCD full-well/bloom model
- Improved ERR handling with CTECORR & AstroDrizzle
- Incorporation of updated WFC L-flats (w/ 47 Tuc)
- Cyc26+ CAL program: ω Cen cross-cal with WFC3/UVIS

ACS: User Documentation

- ACS ISRs since the previous MSR: (Nov'18 – May'19)
  - 2018-08 : "Focus-diverse, empirical PSF models for the ACS/WFC"
  - 2018-09 : "ACS/WFC Parallel CTE from EPER Tests"
  - 2019-01 : "The ACS/WFC G800L Grism: I. Long-term Stability"
  - 2019-02 : "Post-SM4 ACS/WFC Bias I: The Read Noise History"
- ACS Instrument Handbook for Cycle 27 (Ryon et al.)
- ACS Space Telescope Analysis Newsletter (Jan'19)