

Panel: Community Research Support Needs

Roeland van der Marel (STScI)

Calibration Needs, Analysis Tools, and Other Considerations

- Unique characteristics of WFIRST-AFTA
 - combination of survey and pointed observations in single mission
 - Many competing considerations in laying out optimum observing schedule
 - many key science questions require exquisite control of systematics
 - Stable telescope design
 - [Accurate calibrations](#)
 - large data volumes, diverse science questions
 - [New analysis tools](#)
- Calibration
 - Stability with position, time (shapes, photometry, astrometry,)
 - Self calibration (incl. reference libraries, training sets)
 - Calibration software
 - Community sharing

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- Analysis Tools
 - Mining “Big Data” (e.g., Abraham talk)
 - Existing tools may not scale to WFIRST-size data sets (catalog vs. pixel fits; GAIA, EUCLID experiences)
 - Coronagraph, grism, IFU
- Simulation Tools
 - Astronomical simulations
 - Instrument/telescope simulations (forward data-model comparisons)
- Supporting data from other facilities; e.g.
 - HST imaging (e.g., bulge; before WFIRST launch)
 - Radial velocity studies (exoplanet targets)
- Scheduling
 - Cadence critical for time domain science (incl. proper motions)
 - Coordination with other facilities