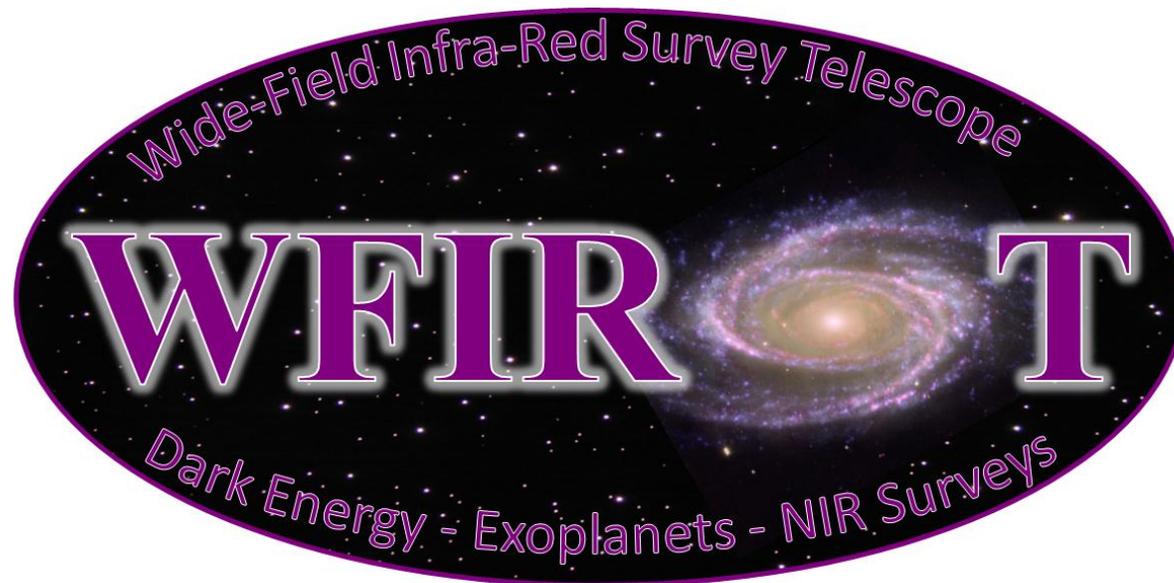


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AFTA - Wide-Field Infrared Survey Telescope



Project Overview

Kevin Grady

July 29-30, 2014

Study Team Overview (1 of 3)

- Efforts focused on a final design cycle (#5) which will be the basis of the final study report in January 2015, coronagraph technology activities, and IR detector fabrication & test.
- Budget: FY15 budget remain uncertain until budget or CR passed.
- IR detectors
 - All banded array detectors fabricated and most have been tested.
 - Extensive testing of detectors and data analysis at GSFC Detector Characterization Lab (DCL).
 - Selected recipe for the first full detector array from the first two sub-lots. The second full detector recipe decision is about a month away.
 - Performance testing of the detectors to continue this year.
- Continuing design and fabrication of widefield grism and element wheel opto-mechanical assemblies.

Study Team Overview (2 of 3)

- Widefield electronics design proceeding.
- Detector mosaic plates in fabrication for full array testing.
- Initiated widefield opto-mechanical engineering prototypes of grism and element wheel.
- Significant effort assessing options for mechanical interface between instruments and telescope aft metering structure.
- Continuing telescope efforts to assess impacts of operating the telescope at colder than design temperature.
- Completed first technology plan milestone; preps for HL and SP HCIT testing; refining coronagraph reference concept including mass reduction.

Study Team Overview (3 of 3)

- Pointing simulation under development.
 - Models added: Mode shapes (Cycle 3), reaction wheel disturbance torque, HGA motor disturbance torque, CAD model, cryocooler disturbance, FGS windowing and centroiding
 - In work: FGS acquisition process definition, fuel slosh model
- Continuing science requirements development.
 - Level 1 initial draft completed.
 - Level 2 (SRD) effort kicked-off.
- Developed operations concept overview.
- Design cycle #4 integrated modelling assessments
 - Widefield and coronagraph observing cases being examined.
- Initiated science center activities at IPAC and STScI.
- Initiated efforts to update total mission life-cycle cost.



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chart A-12 as of 6/25 2:20p

WFIRST-AFTA Study Schedule 2013 - 2014

