



Co-Op Final Report



SIRTF / CTA Thermal Vacuum Test Science Instrument Ground Support Cables

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Technical Co-Op I
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SIRTF Overview

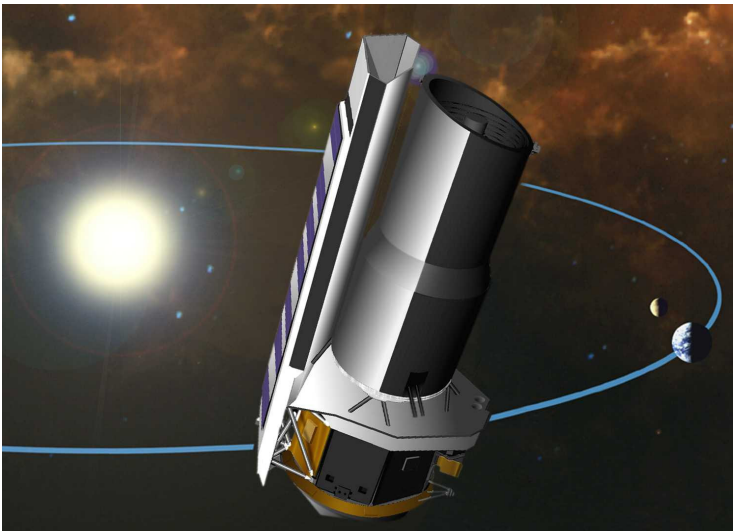
SIRTF
SPACE INFRARED TELESCOPE FACILITY

Space
Infra-
Red
Telescope
Facility

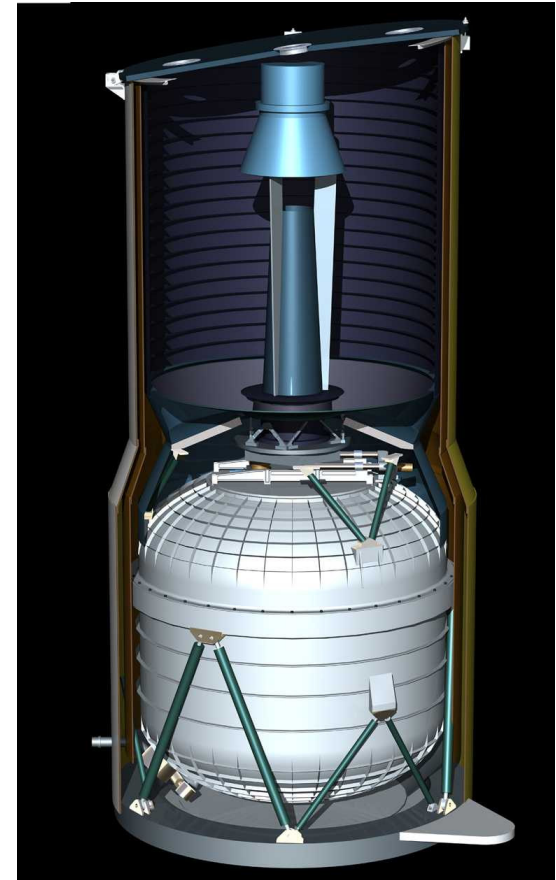


85 cm Primary Mirror

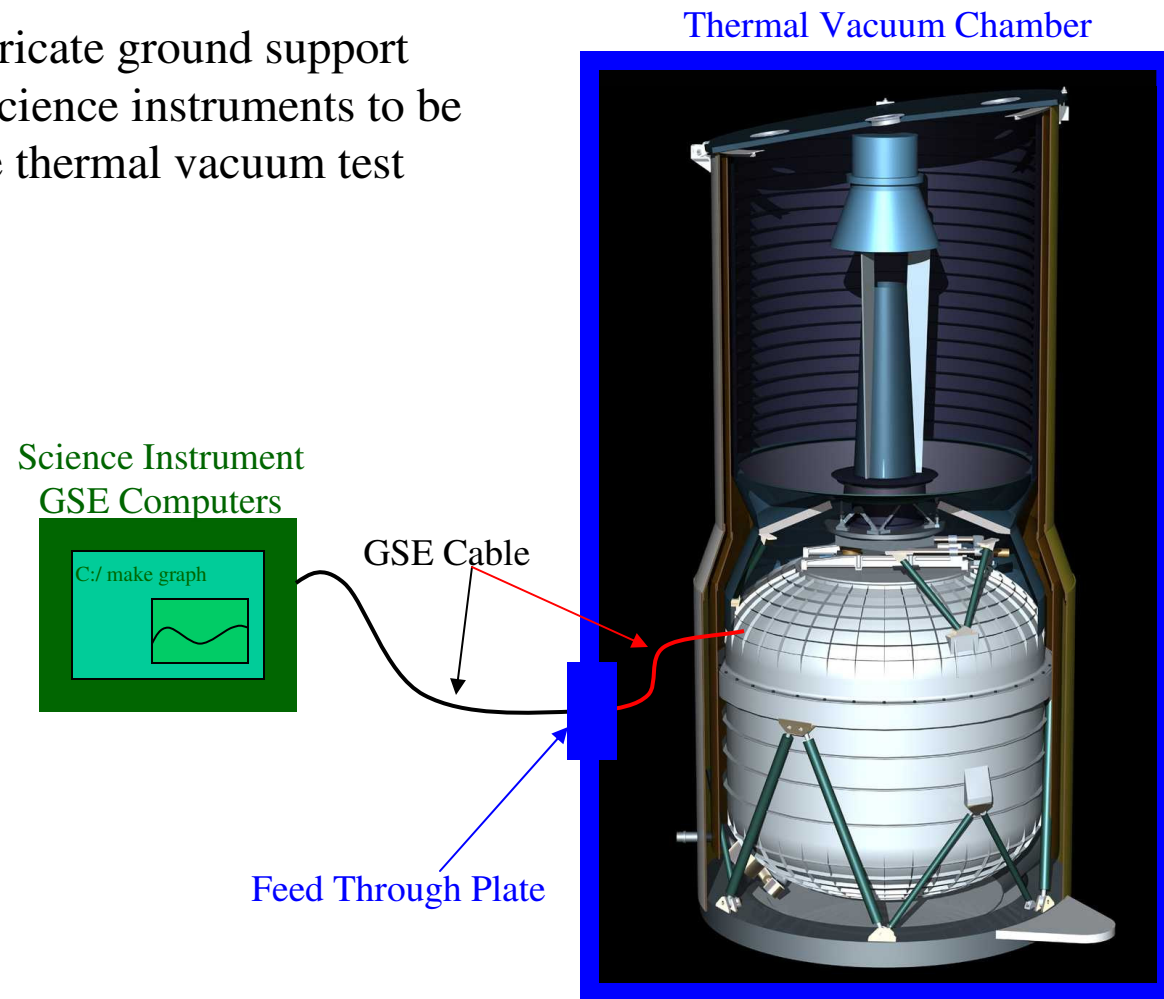
Earth-Trailing Heliocentric Orbit



BATC's Contribution
Cryogenic Telescope Assembly



Design and fabricate ground support cables for the science instruments to be used during the thermal vacuum test





Project Breakdown

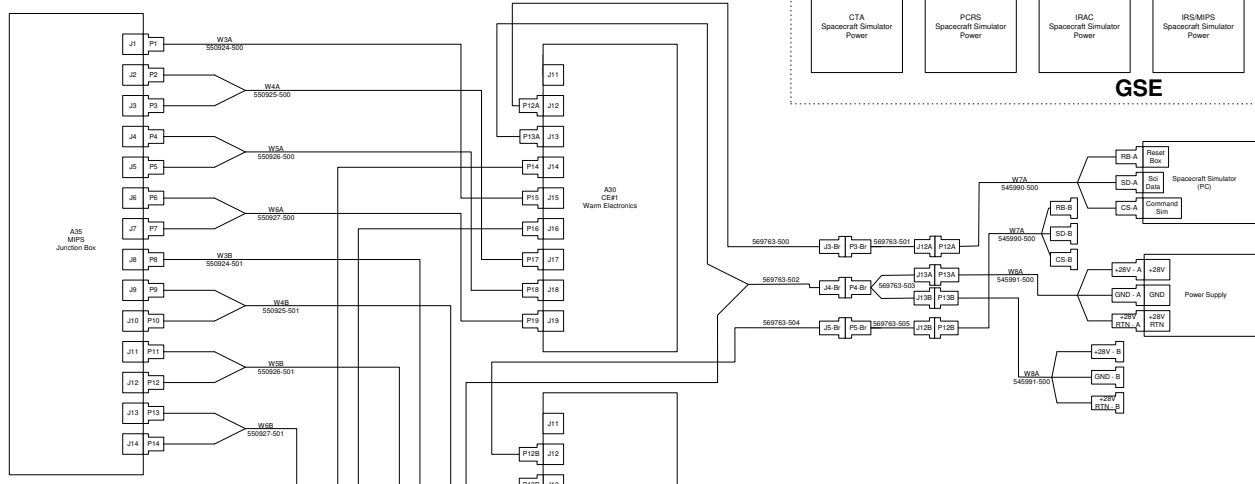
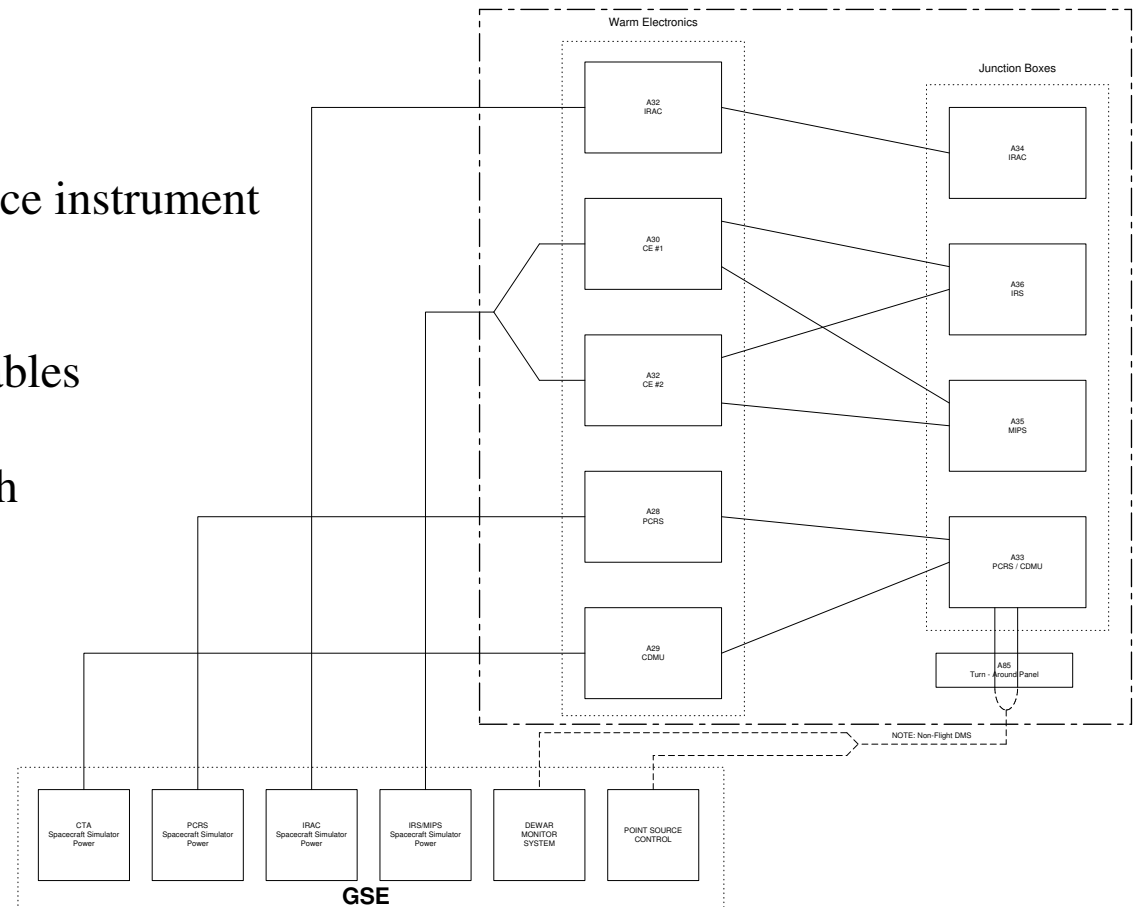
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1. Diagram layout of science instrument GSE cables
2. Design GSE feed through cables for thermal vacuum test
3. Assist production in cable fabrication
4. Assist during installation of science instrument GSE cables





- Collect and review released science instrument cable drawings
- Make block diagram of known cables
- Add thermal vacuum feed through cables to block diagram

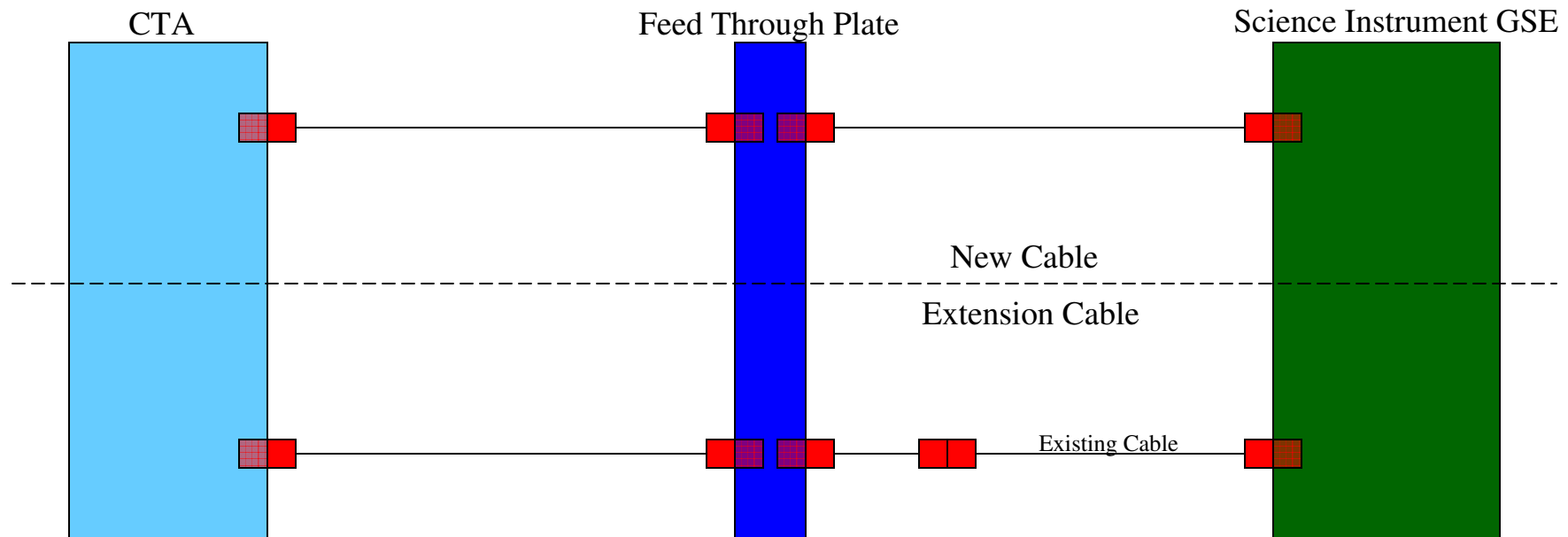




Design Thermal Vacuum Feed Through Cables **SIRTF**

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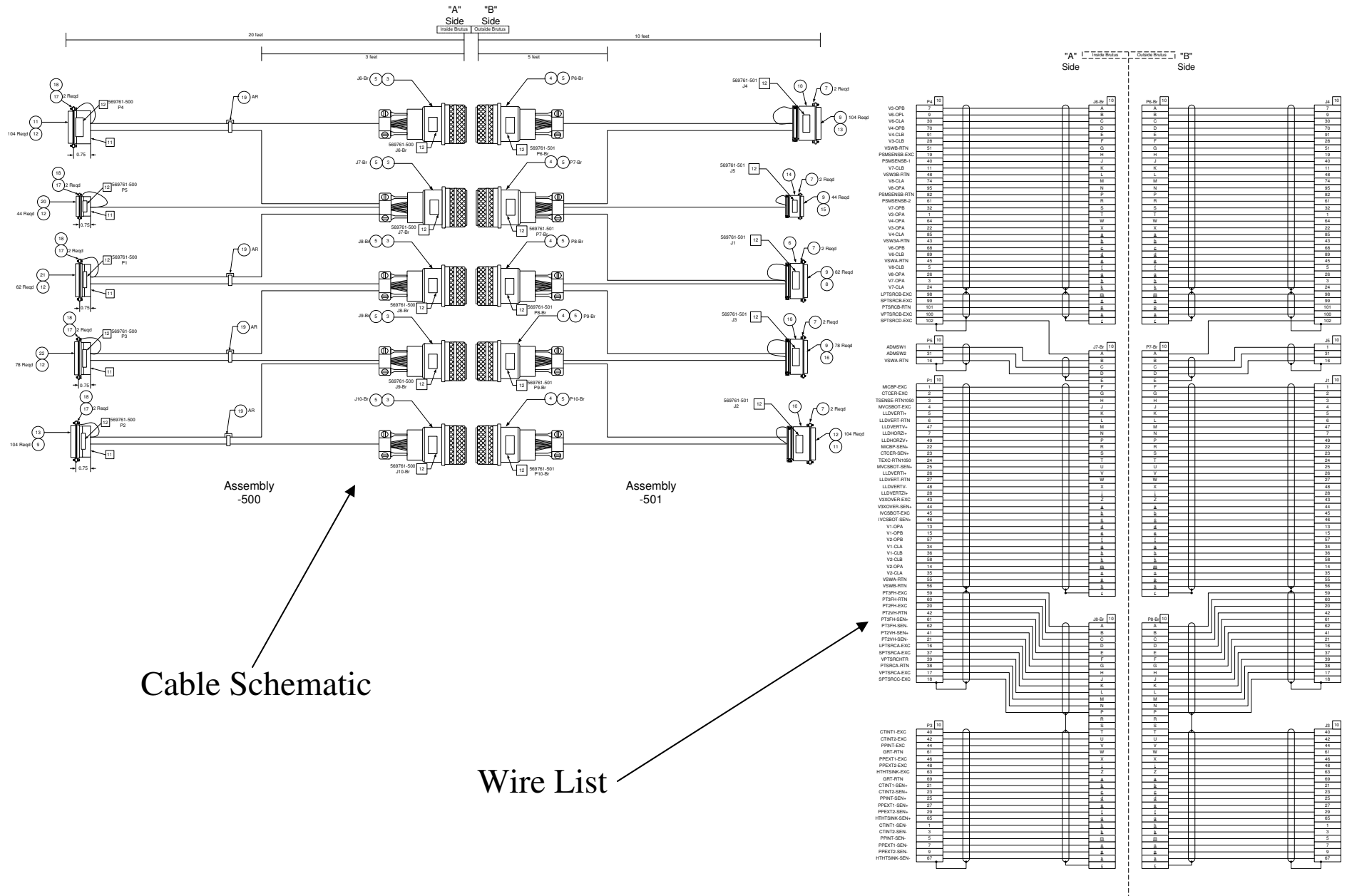
- Review drawings for GSE cables currently in use
- Decide which cables will be remade and which will have extension cable made
- Arrange wires in cables into bundles no greater than 37
(The thermal vacuum feed through connectors have 37 pins)
- Draft current GSE cables with 37 pin connector in the middle





Cable Schematic

Wire List



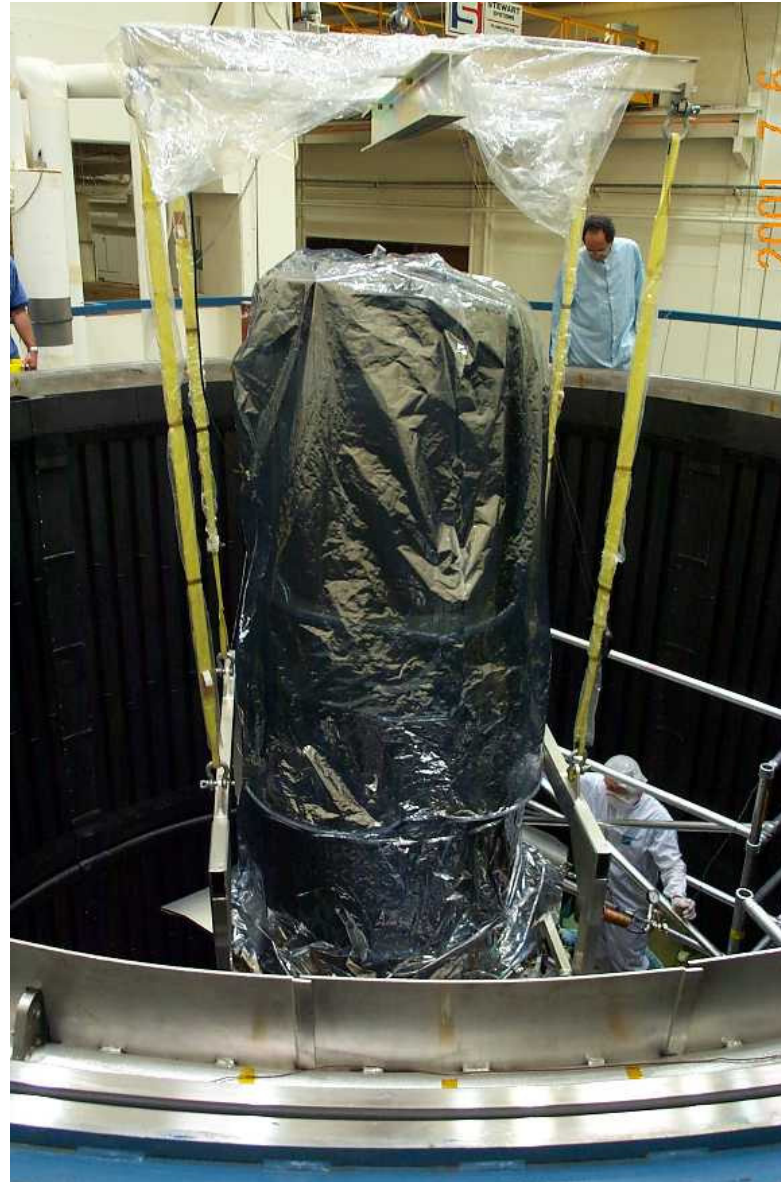
- Collect parts
- Modify production specifications on drawings to meet time requirements
- Clarify and correct drafting errors
- Release drawings





Assist During Installation

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Life After Science Instrument GSE Cables



- Designed multiple GSE cables for the optical and cryogenics equipment
- Laid out the science instrument GSE in the BRUTUS area
- Installed temperature sensors to monitoring during the thermal vacuum test
- Assisted the optical test team with initial setup/testing



Thanks

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Mentor

Jim Good

Functional Manager

Andrea Chavez

Human Resources

Suzanne Delchamps

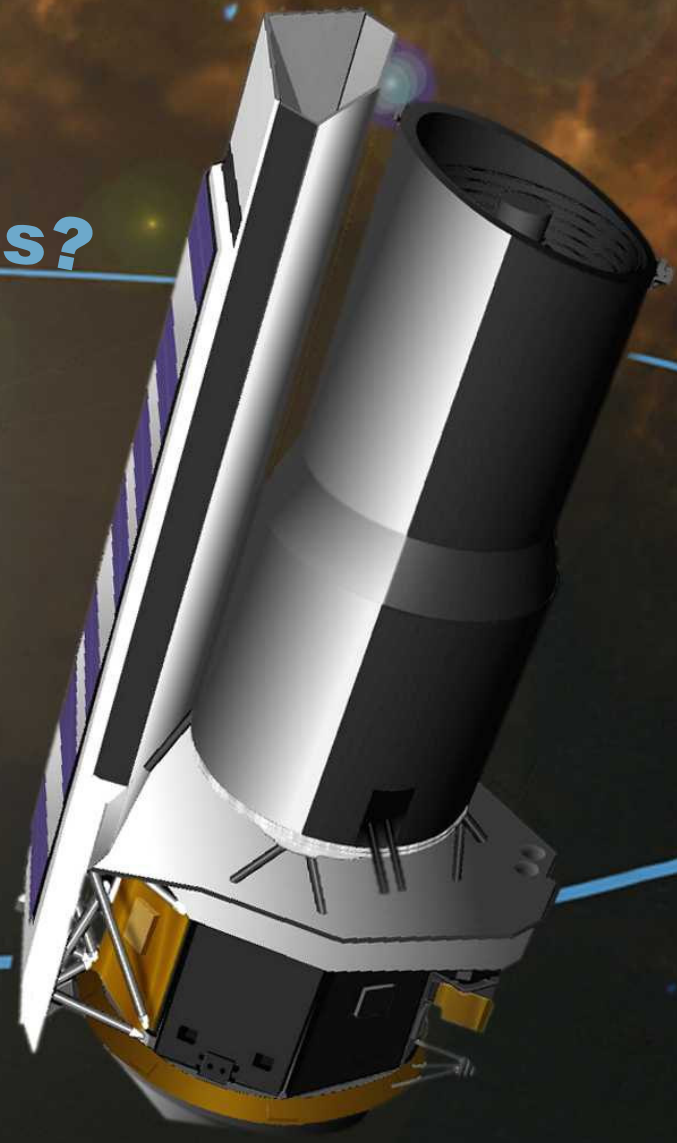
Jacqueline Decker

Helping Hand

Mike Mann

Phil Quigley

Any Questions?



C. Lachata