



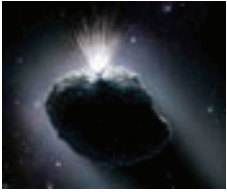
Pictorial Atlas of Deep Impact (& EPOXI) Instrument Thermal Telemetry Points

Donald Hampton

29 Jan, 2008

ITAR approved on 4 Feb 2008

(See the signoff form at the end of this document)



Introduction



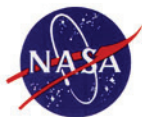
- Thermal telemetry on the DI instruments is divided between those recorded by the instruments themselves and those recorded by the thermal control subsystems of the spacecraft
 - Those collected by the S/C thermal subsystem have AMMOS telemetry IDs that begin with a “T”
 - Those collected by the instruments have AMMOS telemetry IDs that begin with an “I”
 - Some instrument telemetry points are also included in image headers. I have listed the FITS file header keywords for those telemetry points that are included in the image headers - They are indicated either by table headings, or with square brackets, e.g. “[KEYWORD]”
- All of the temperature sensors are described in detail in the instrument thermal SER DI-INST-THR-030. Most of the figures in this presentation are taken from this report.
 - All of the sensors listed in tables 2-1, 2-2 and 2-3 are shown in the figures of this document.



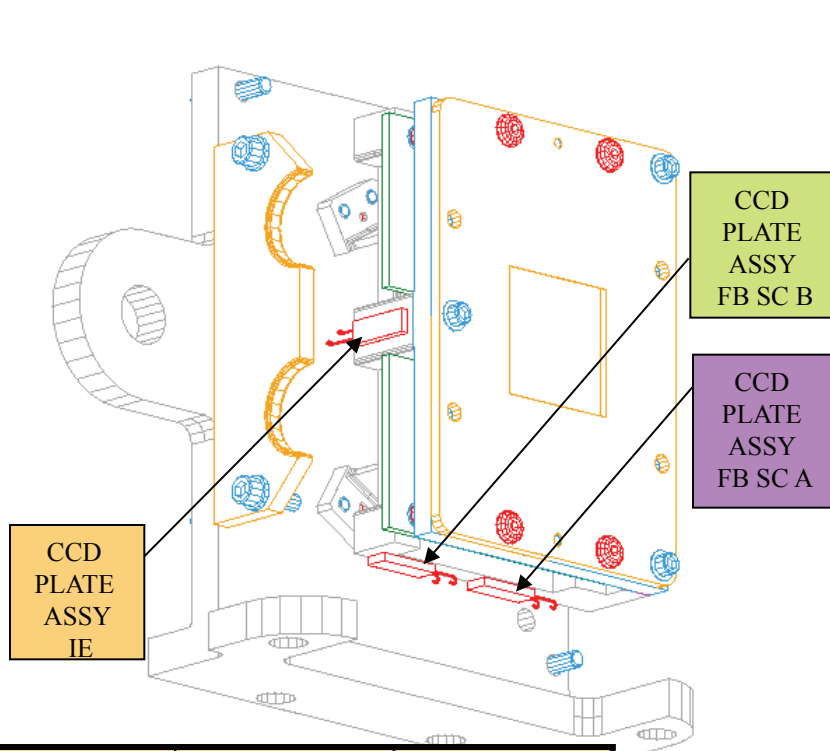
Format and Arrangement



- The instruments are presented in order - HRI, MRI then ITS
- In the case of the CCD assembly, the CCD pre-amplifiers and the electronics boxes, the placement of the sensors is similar, so for these there is a single slide
- Note for the S/C temperature sensor on the instrument electronics boxes, the planned temperature sensor internal to the box was electronically incompatible with the S/C sampling circuit. Thus, a sensor was mounted on the outside of the box, near the mounting flanges. The exact position is not available at this time, so the position shown on page 6 is approximate.



CCD Assembly



Instrument	Flyby S/C Sensor # TIB-B	AMMOS Telemetry ID
HRI	TS109	T-1793
MRI	TS112	T-1797
ITS	TS130	T-1801

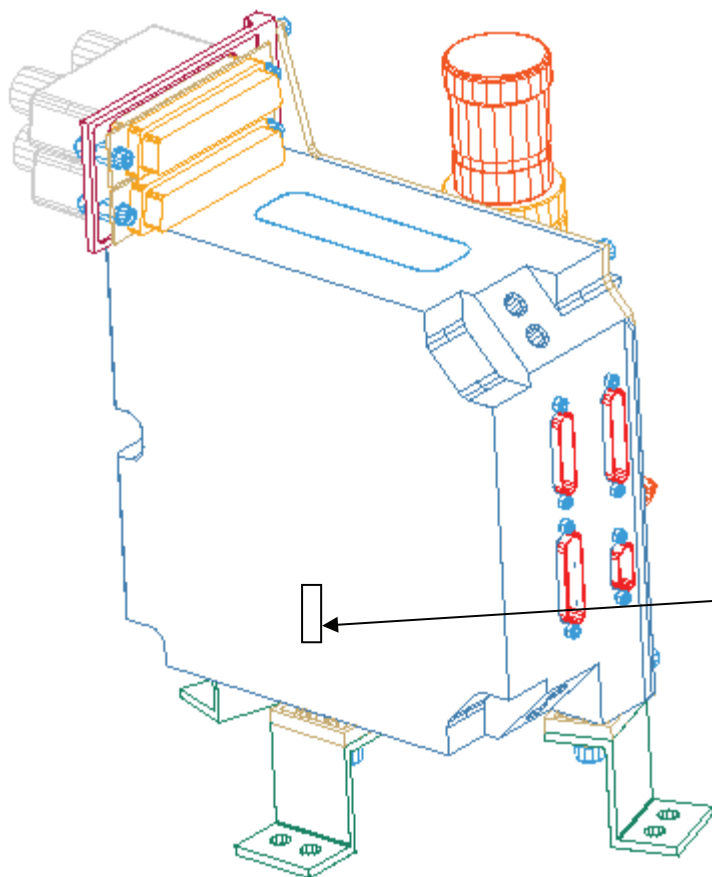
Instrument	Flyby S/C Sensor # TIB-A	AMMOS Telemetry ID
HRI	TS103	T-0296
MRI	TS106	T-0284

Instrument	Impactor Sensor #	AMMOS Telemetry ID
ITS	I_TS49	T-2285

Instrument	Instrument Sensor #	AMMOS telemetry ID	FITS Header Keyword
HRI	PTS1	I-0233	CCDT
MRI	PTS11	I-1233	CCDT
ITS	PTS21	I-2233	CCDT



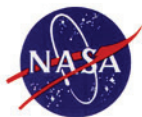
Pre-Amp Box



Instrument	TIB	Flyby S/C Sensor #	AMMOS Telemetry ID
HRI	A	TS107	T-0303
MRI	B	TS113	T-1805
ITS	N/A	N/A	N/A

PRE-AMP BOX

Instrument	Instrument Sensor #	AMMOS Telemetry ID	FITS Header Keyword
HRI	AD590PAMP	I-0231	CCDPRET
MRI	AD590PAMP	I-1231	CCDPRET
ITS	AD590PAMP	I-2231	CCDPRET

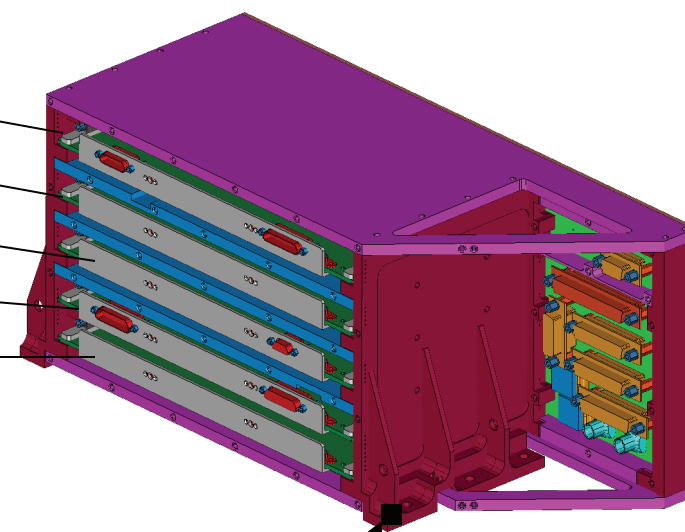


Electronics Boxes



Instrument Electronics AD590 Temperature sensors
 Specific placement differs from board to board.

Board	HRI	MRI	ITS	FITS Header Keyword
IR Sig. Proc.	I-0225	N/A	N/A	IR590T
Low Volt. Power Supply	I-0229	I-1229	I-2229	LVPS590T
CCD Sig. Proc.	I-0223	I-1223	I-2223	CCD590T
Mech/Telem	I-0227	I-1227	I-2227	N/A
Inst. Controller	I-0221	I-1221	I-2221	IC590T

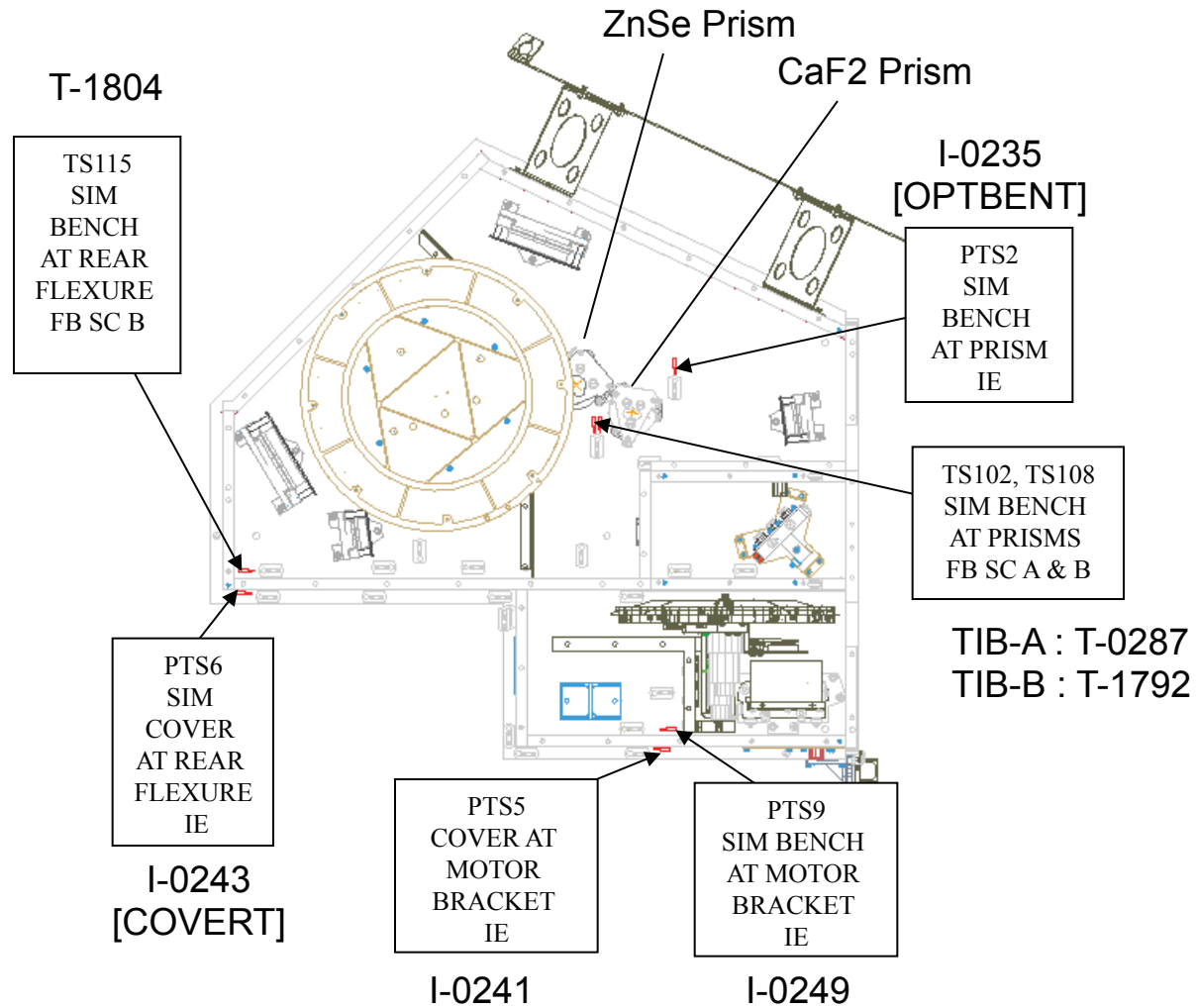


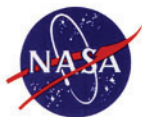
Instrument	S/C Sensor ID	TIB	Telemetry ID
HRI	TS116	A	T-0327
MRI	TS117	B	T-1819
ITS	N/A	N/A	N/A

ELECTRONICS BOX
 FB SC A & B

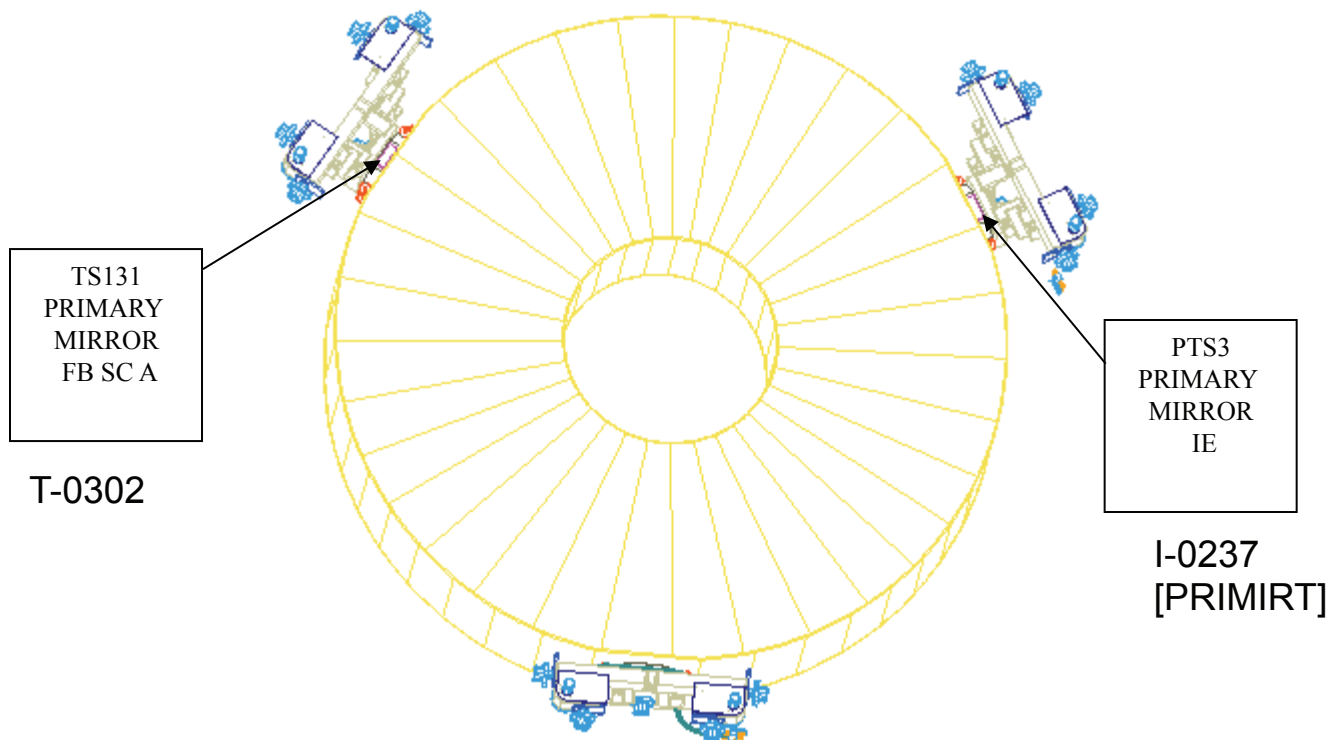


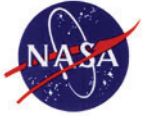
HRI SIM Bench



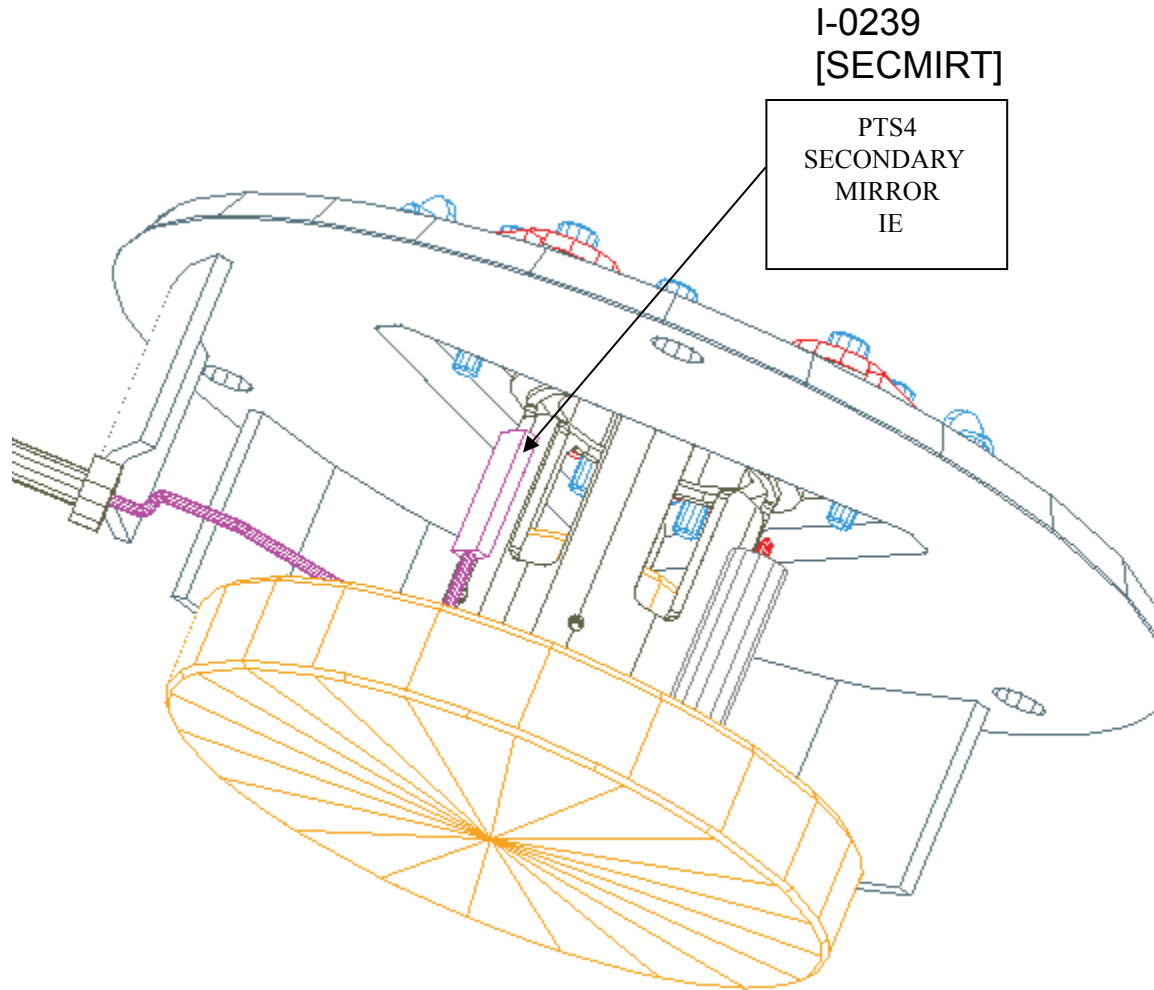


HRI Primary Mirror



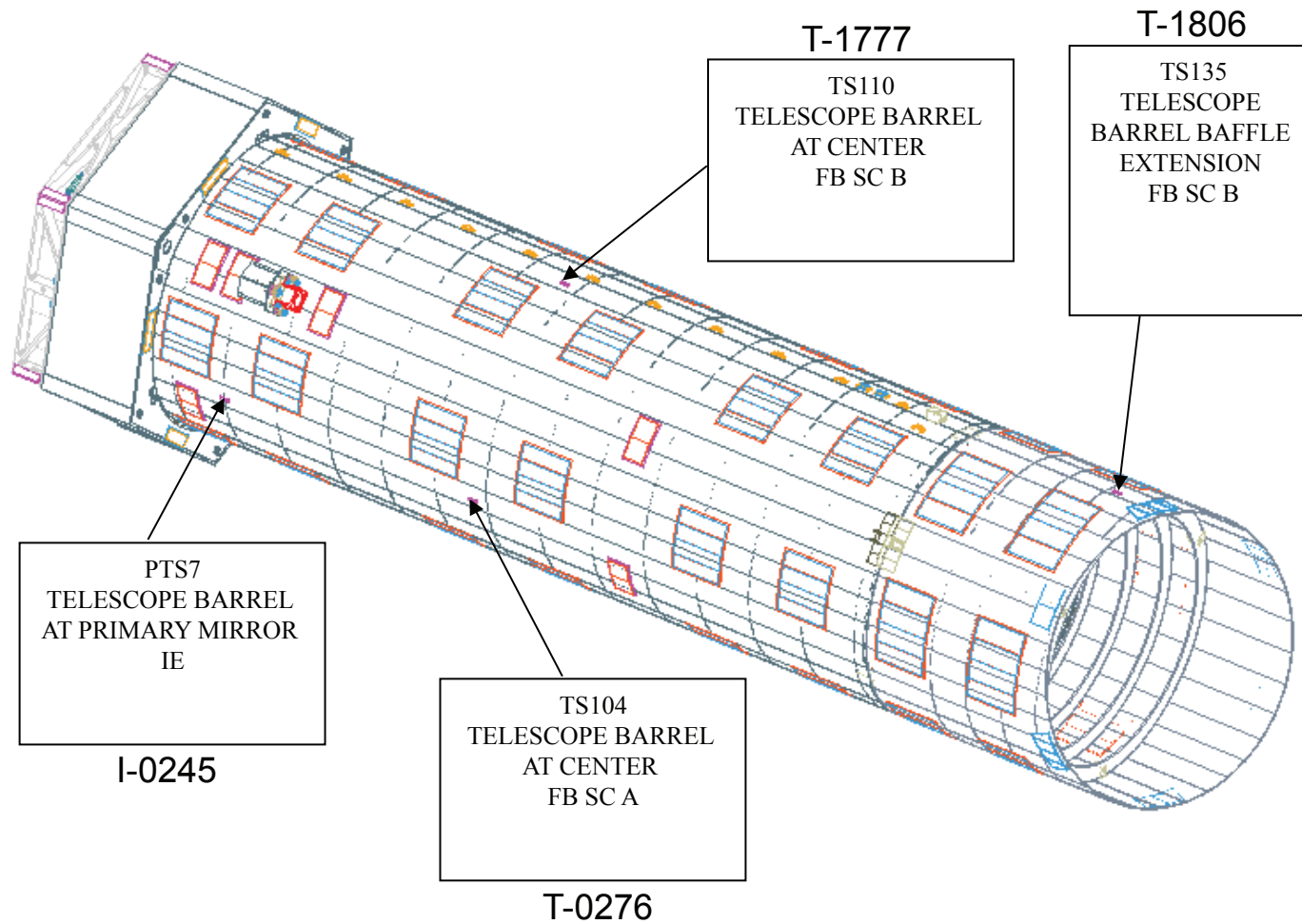


HRI Secondary Mirror



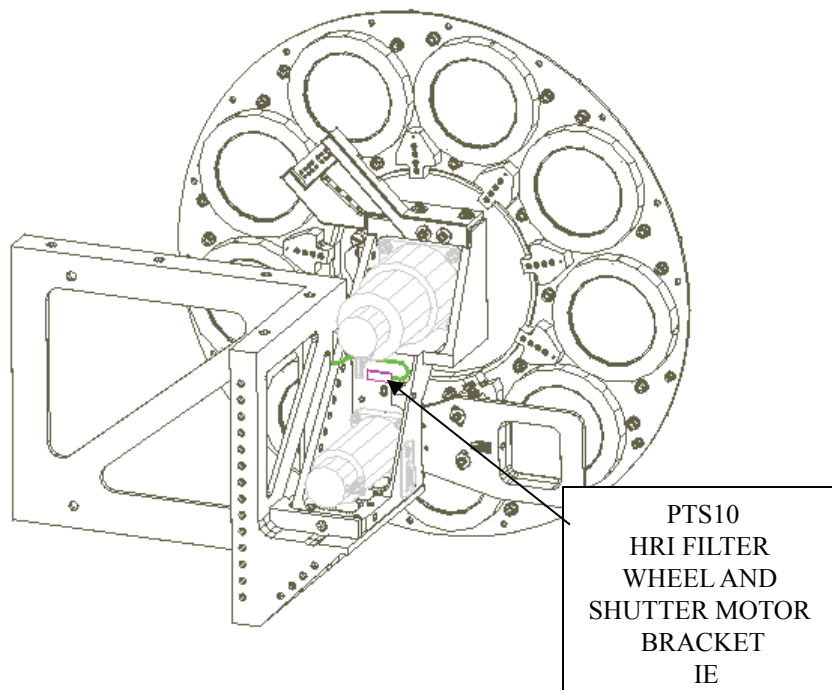


HRI Telescope Barrel

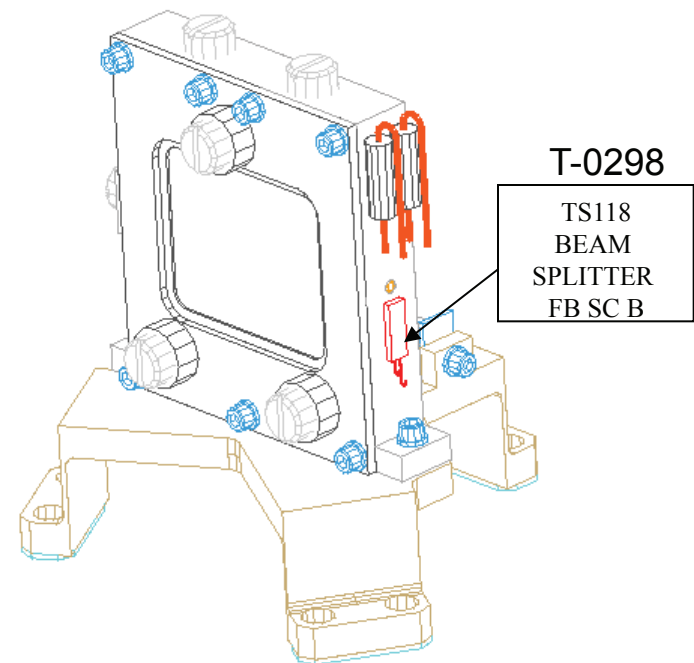


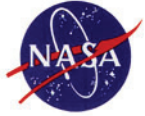


HRI Filter Wheel and Beamsplitter

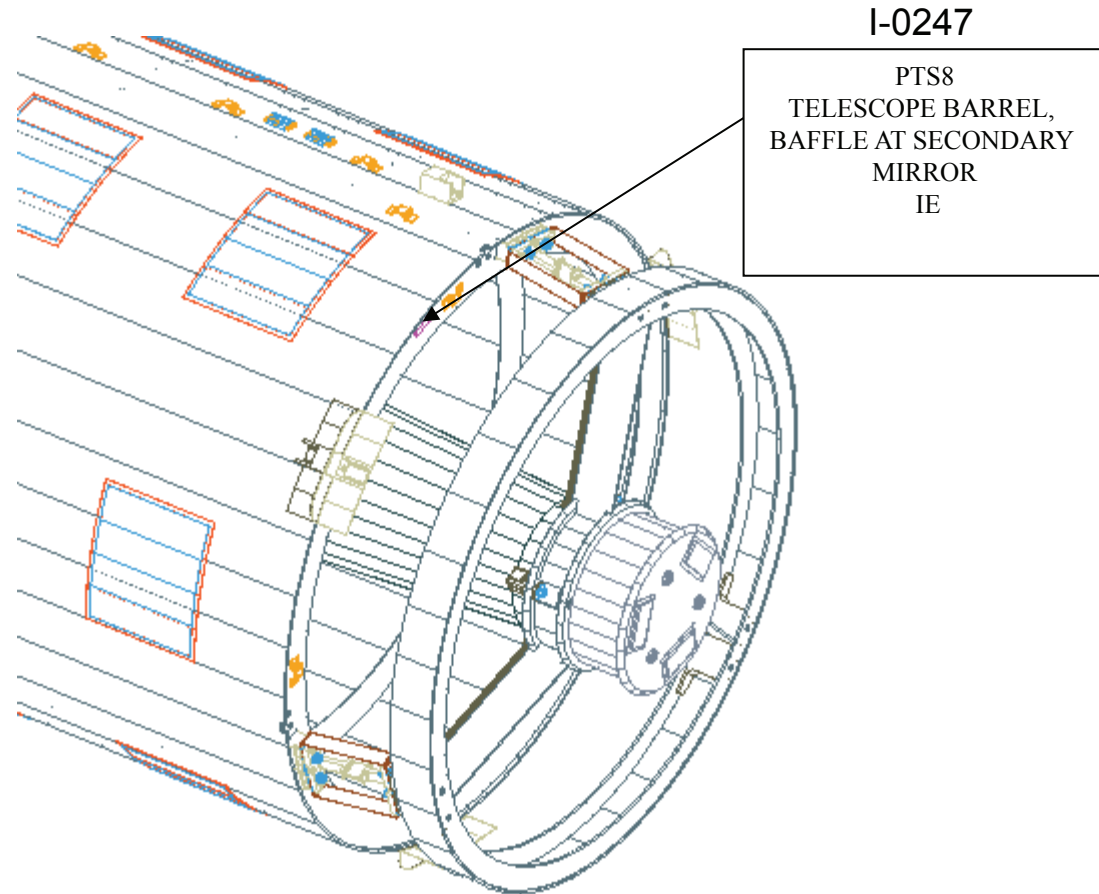


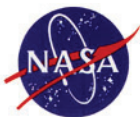
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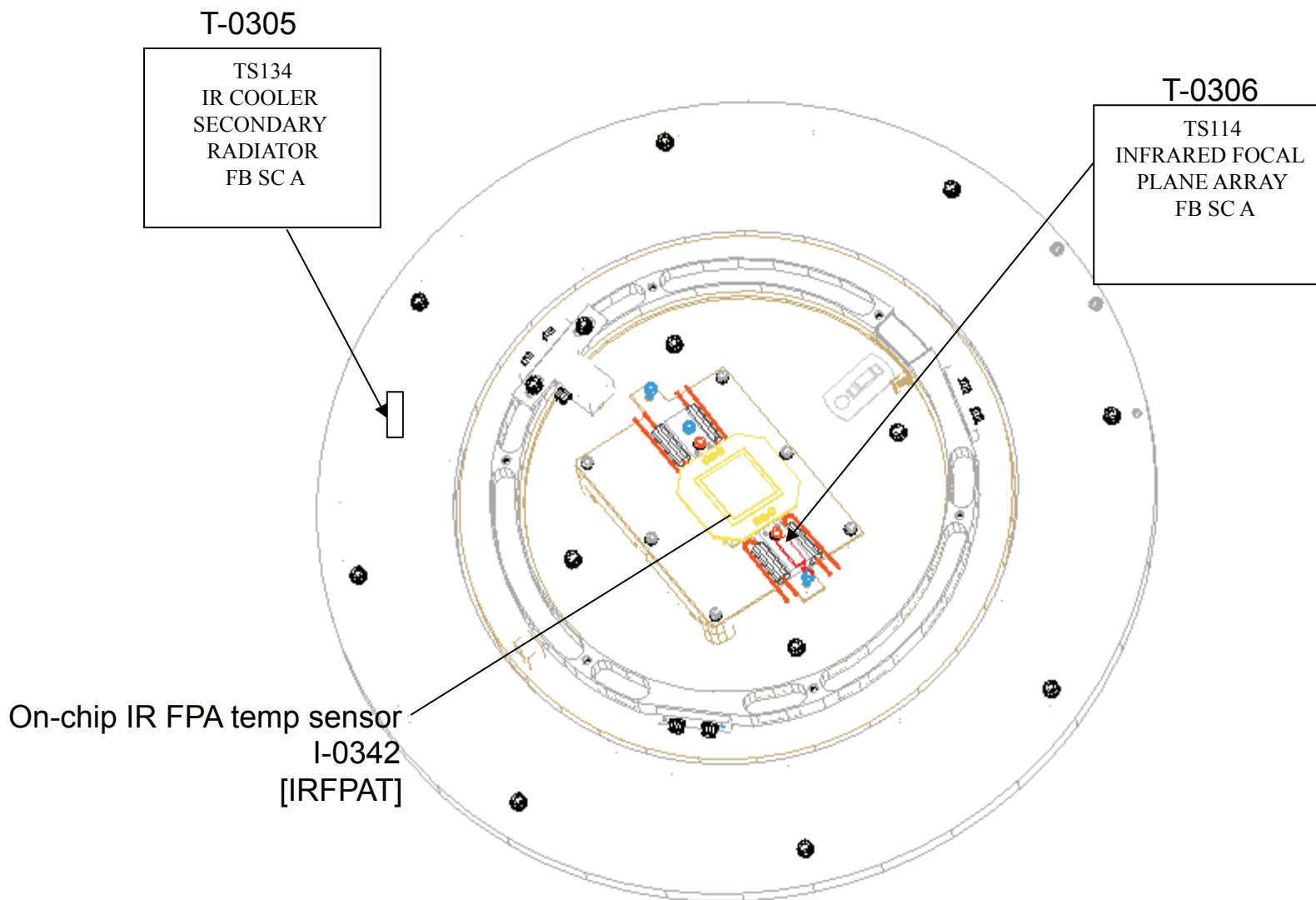


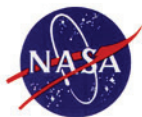
HRI Telescope @ Secondary



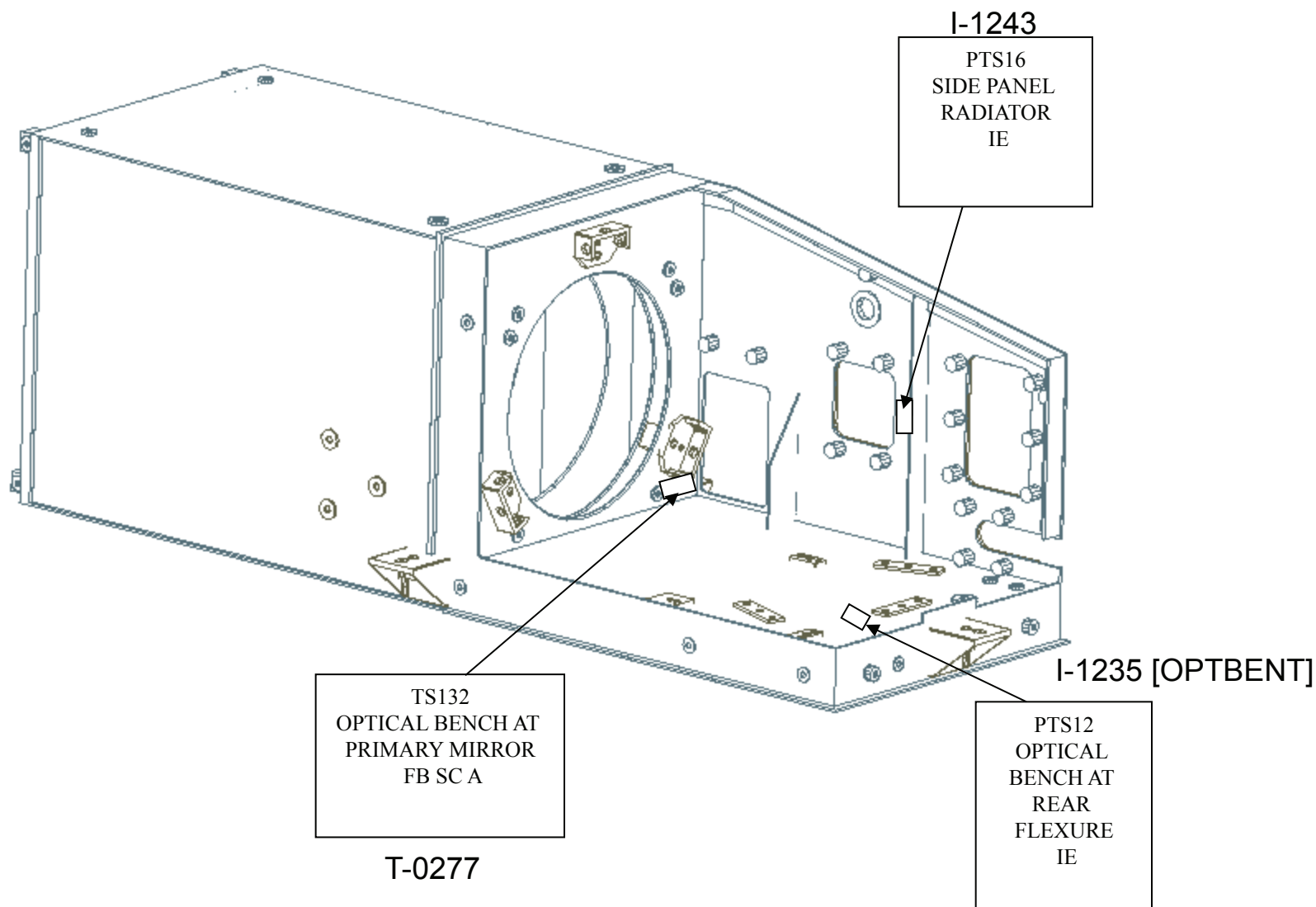


IR Detector Primary and Secondary Radiator



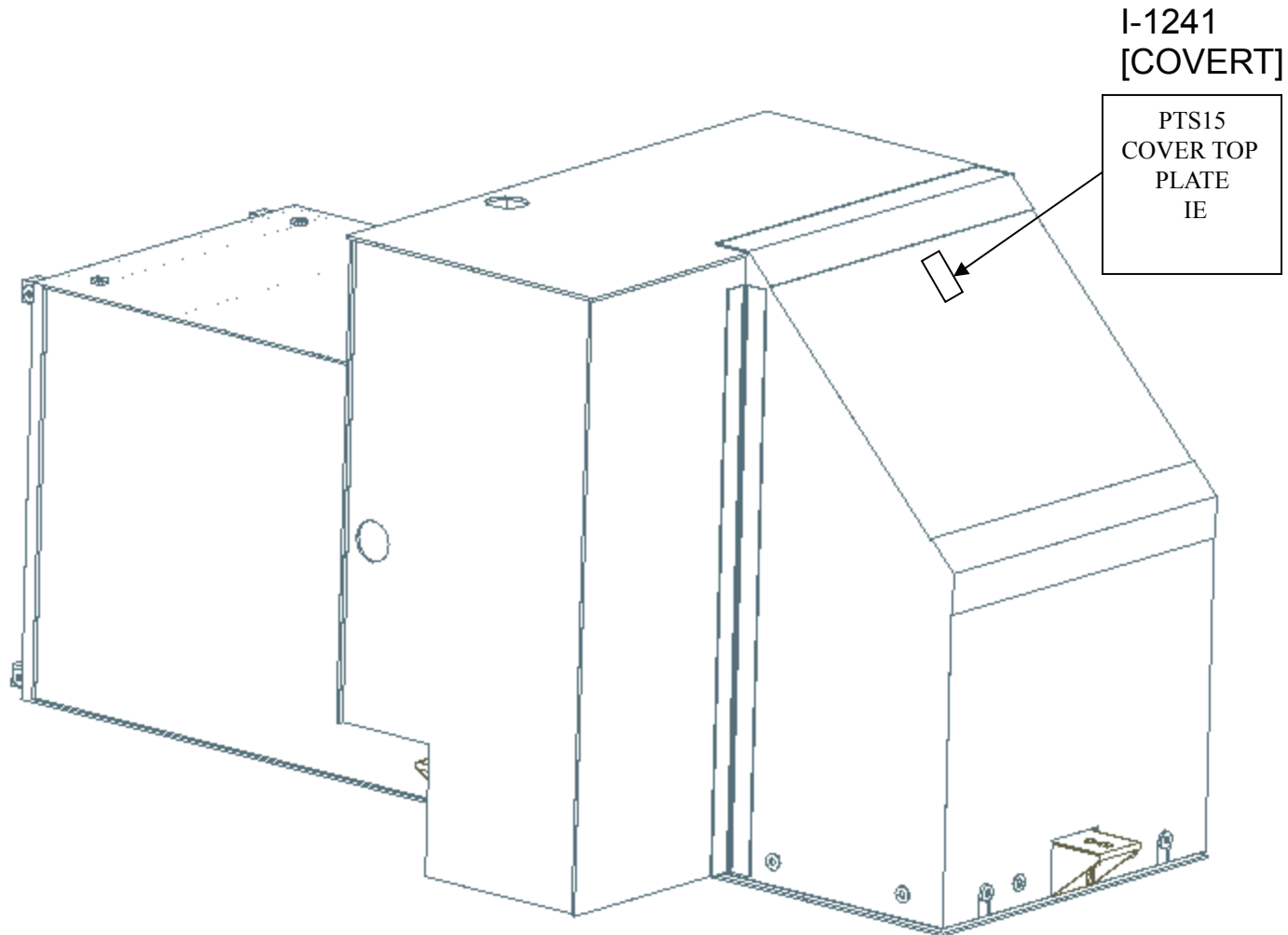


MRI Interior Structure



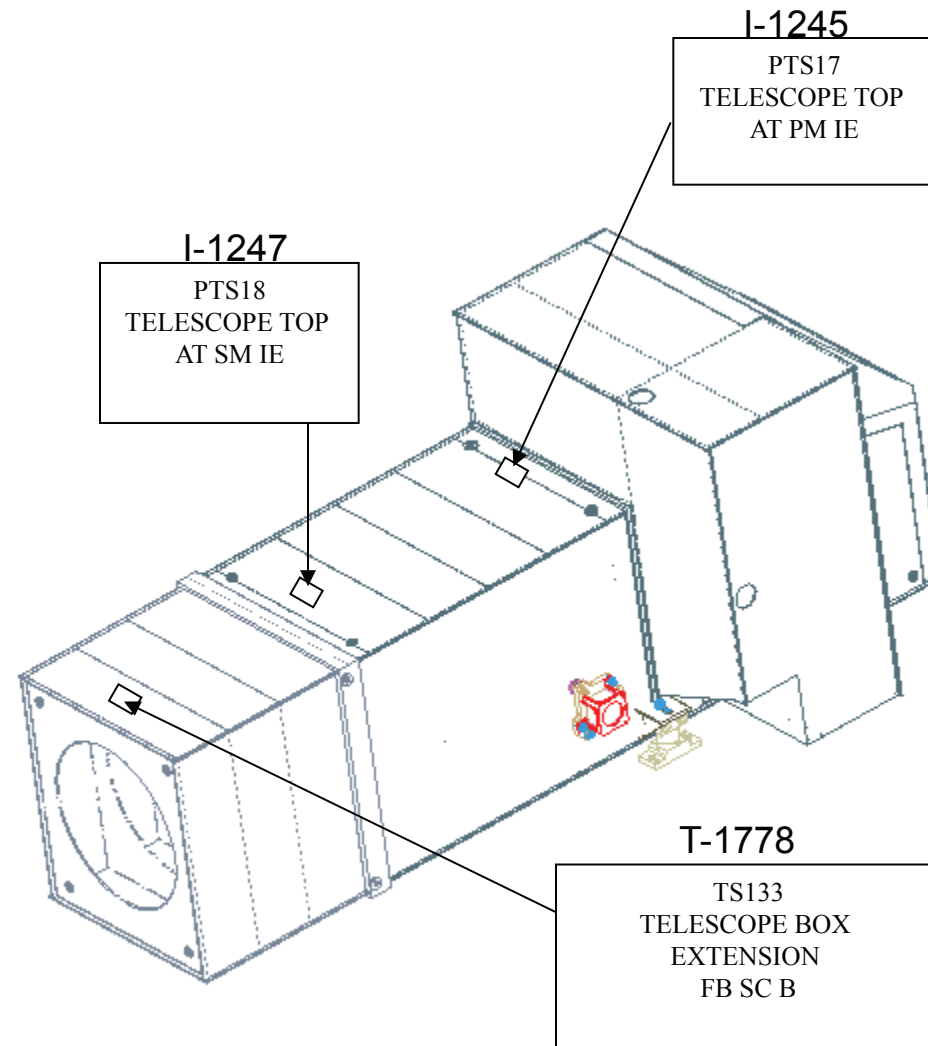


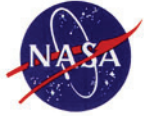
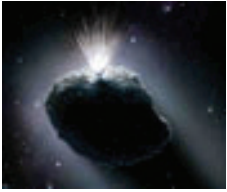
MRI Exterior Structure 1 of 3



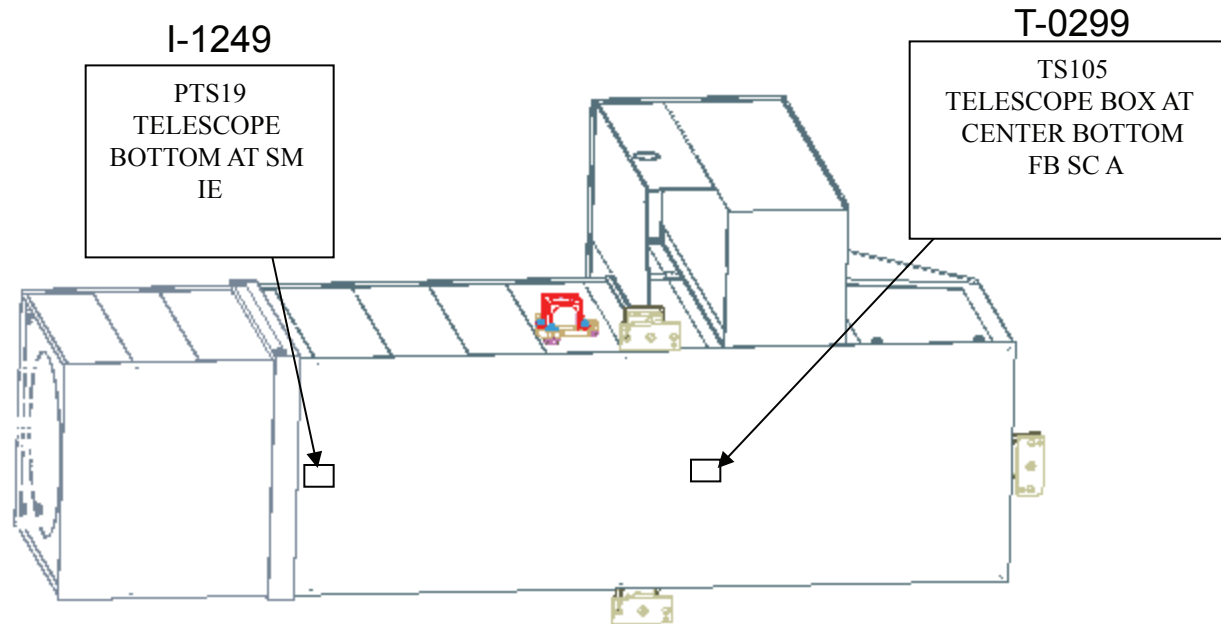


MRI Exterior Structure 2 of 3



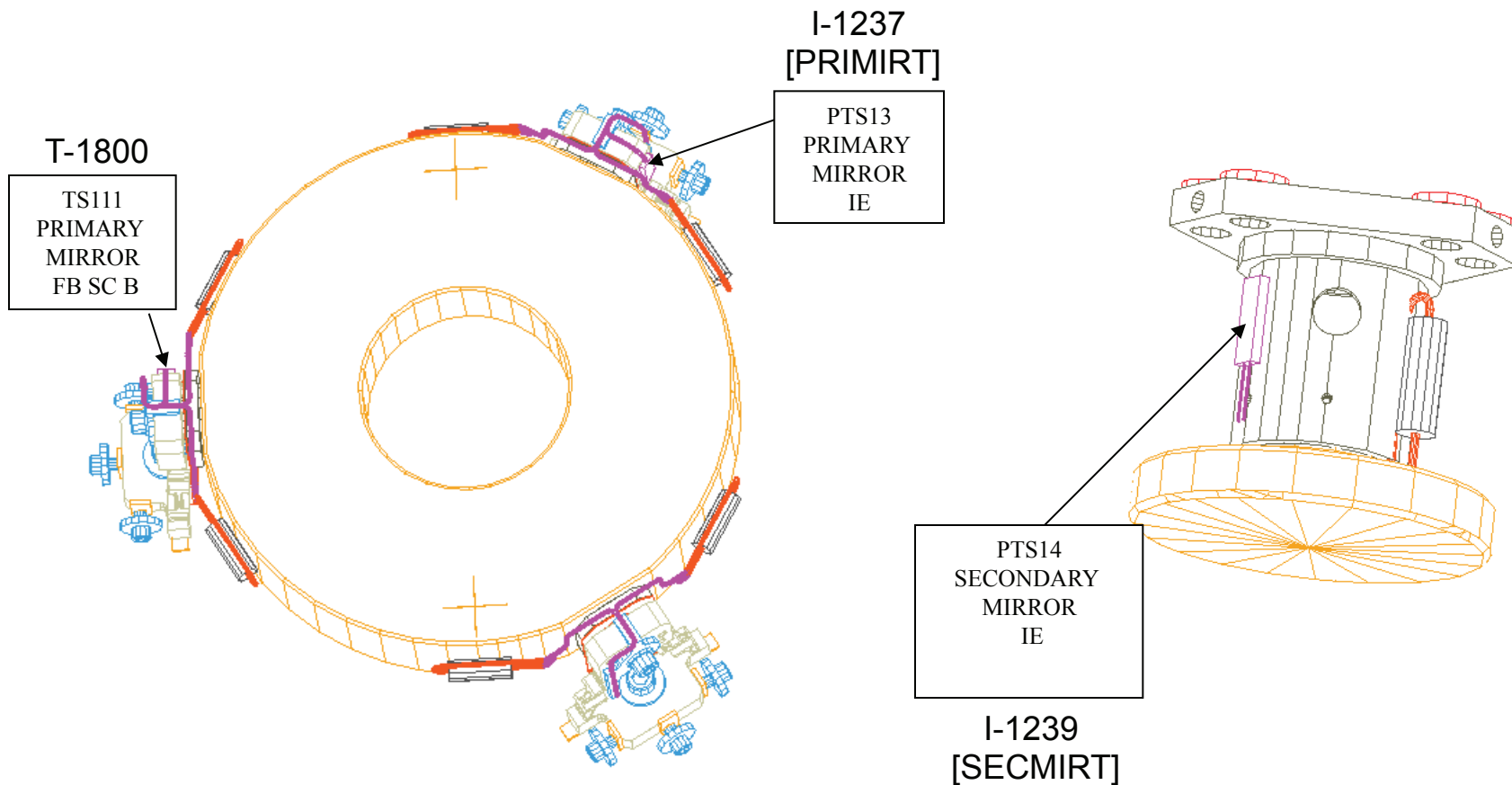


MRI Exterior Structure 2 of 3



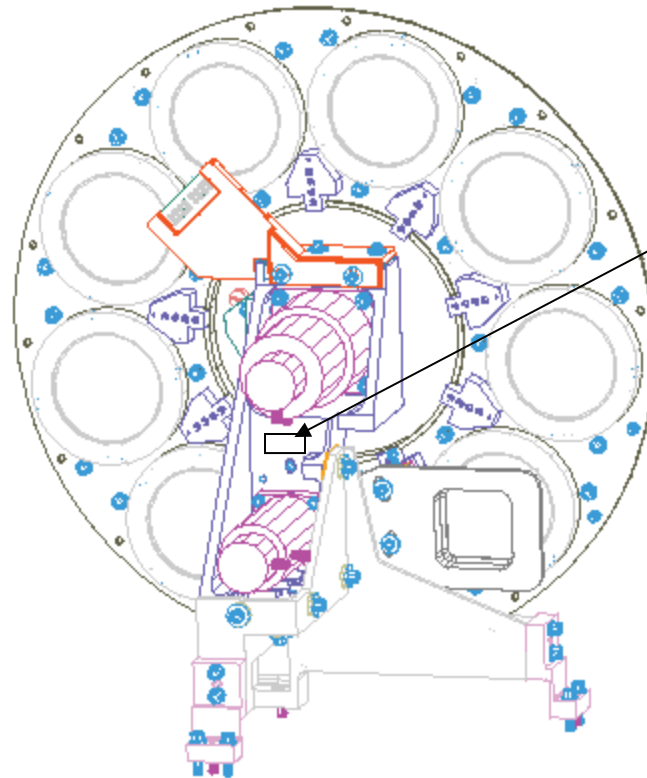


MRI Primary & Secondary Mirrors





MRI Filter Wheel

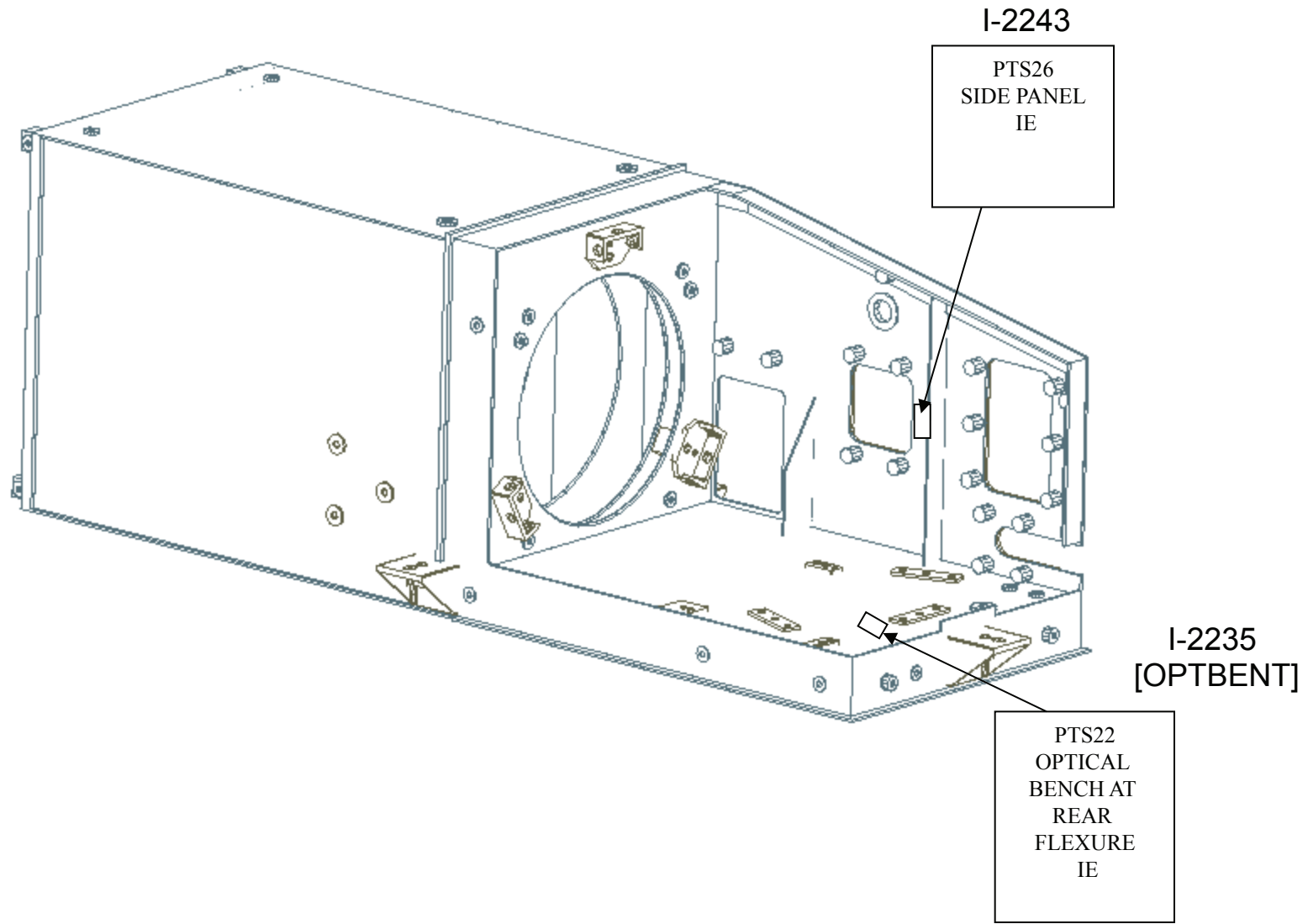


I-1251

PTS20
FILTER WHEEL
AND SHUTTER
MOTOR BRACKET
IE

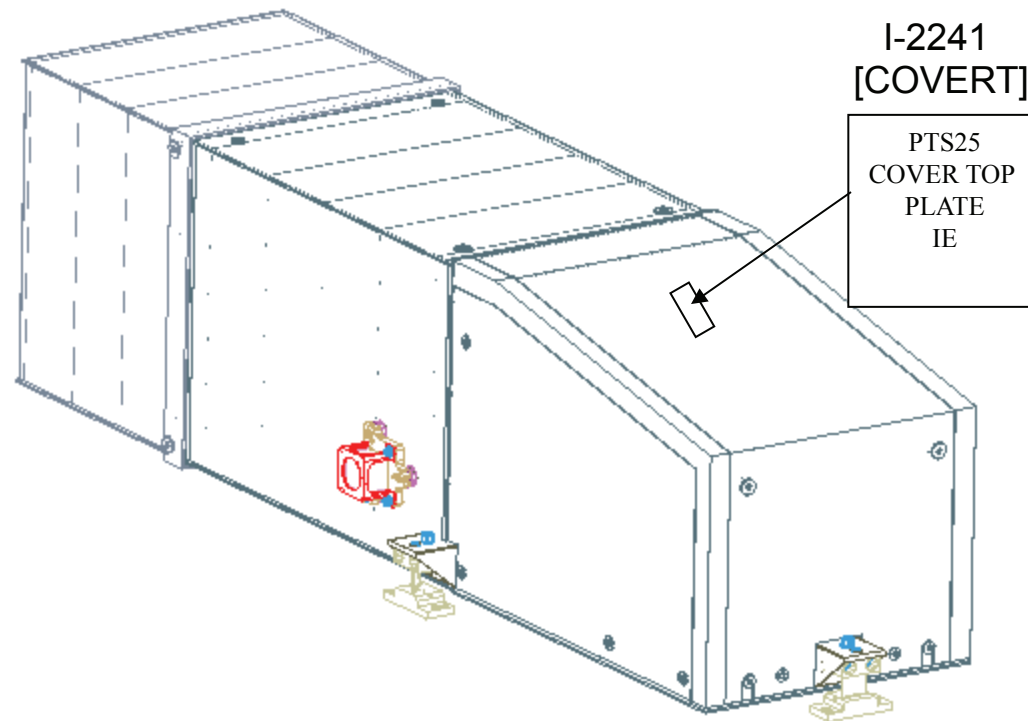


ITS Internal Structure



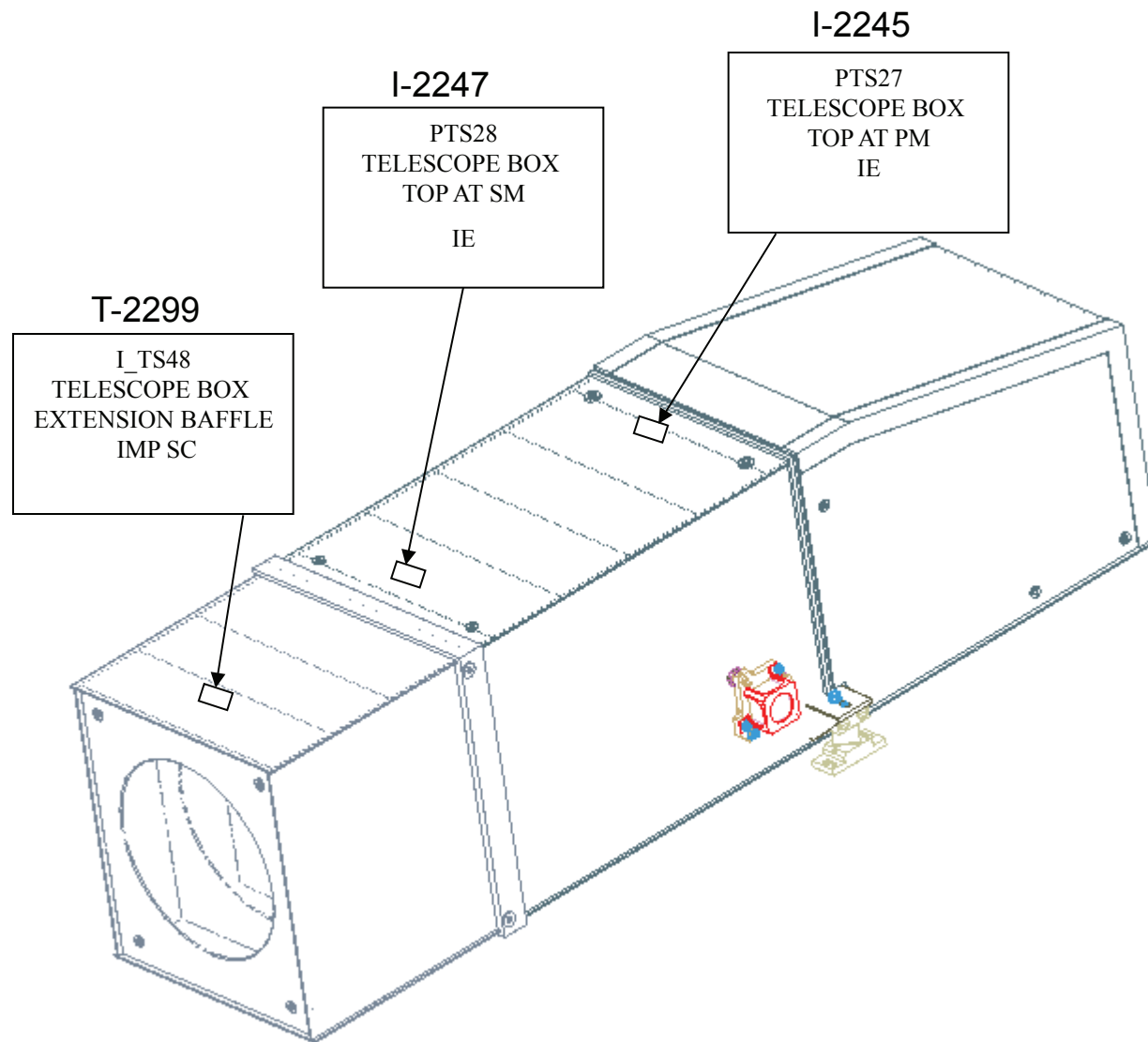


ITS External Structure 1 of 3



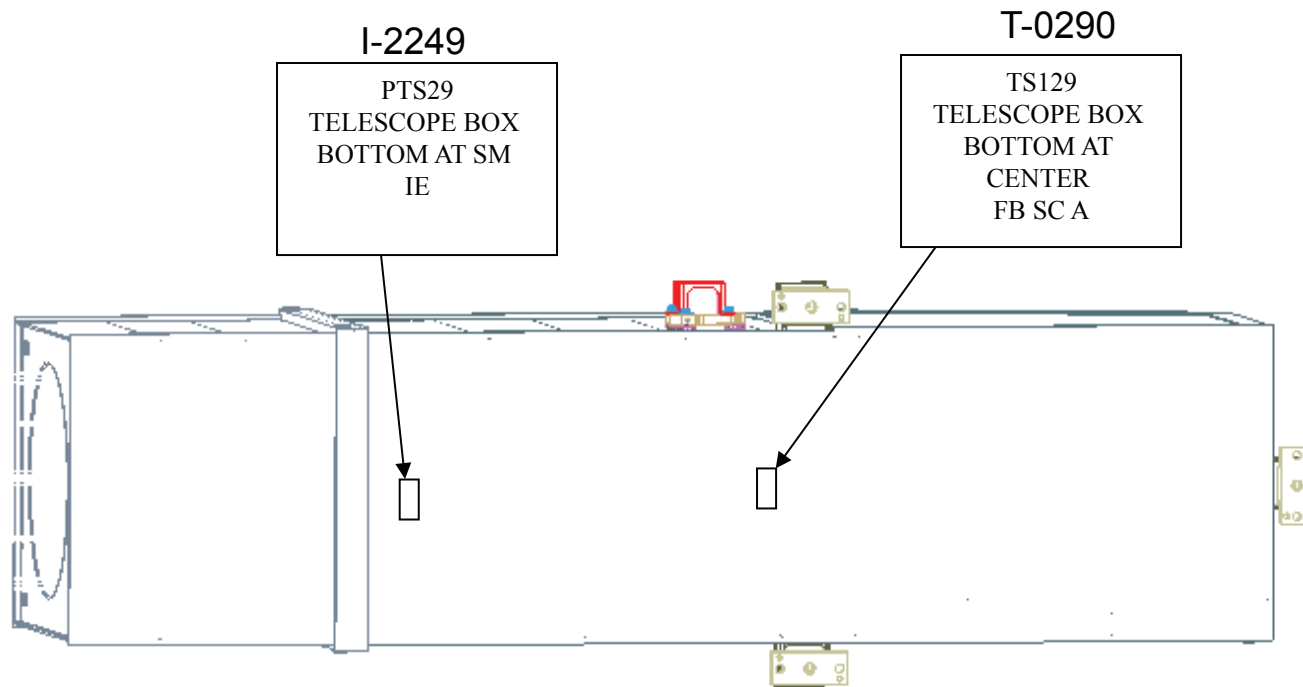


ITS External Structure 2 of 3



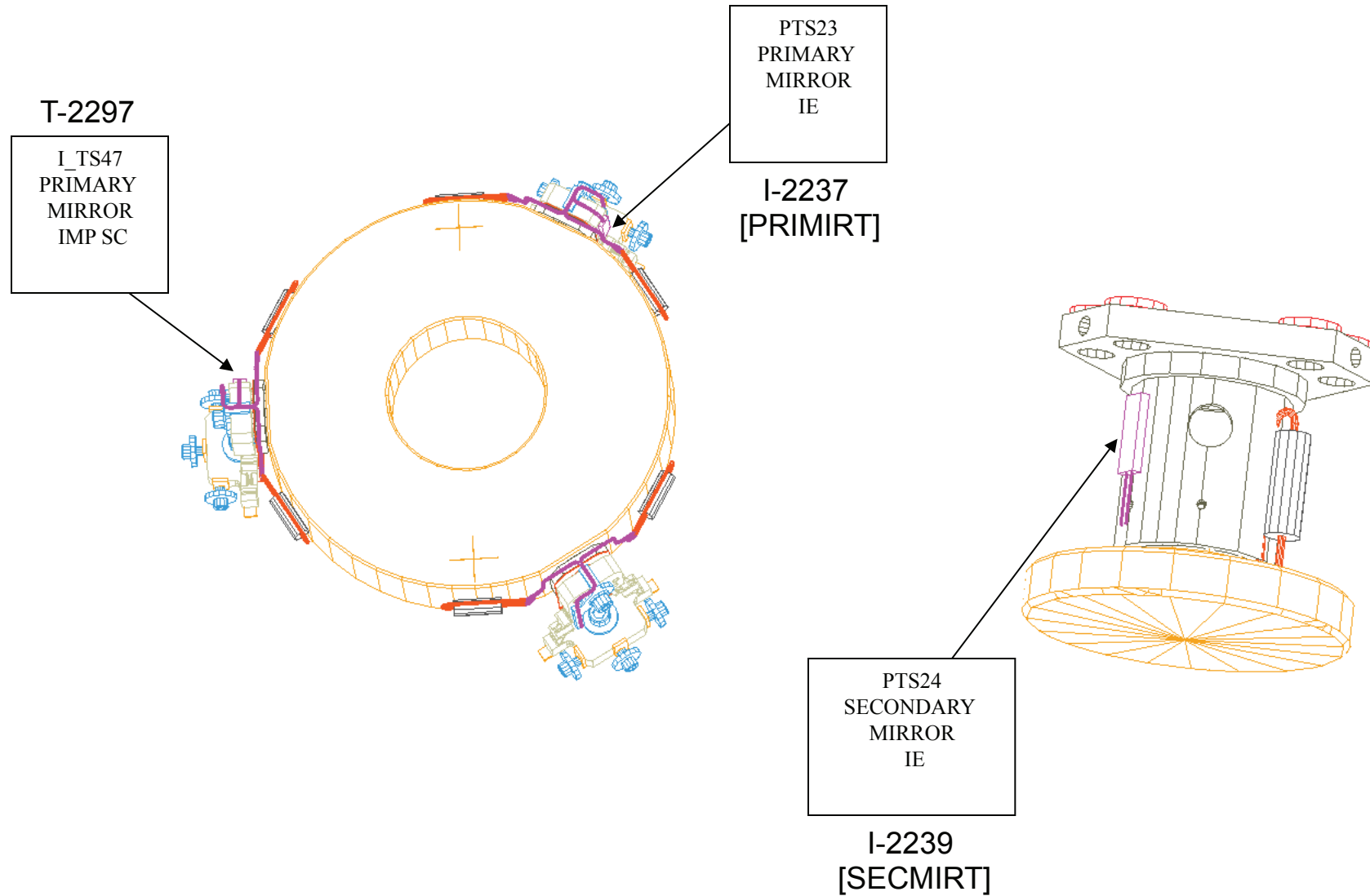


ITS External Structure 3 of 3



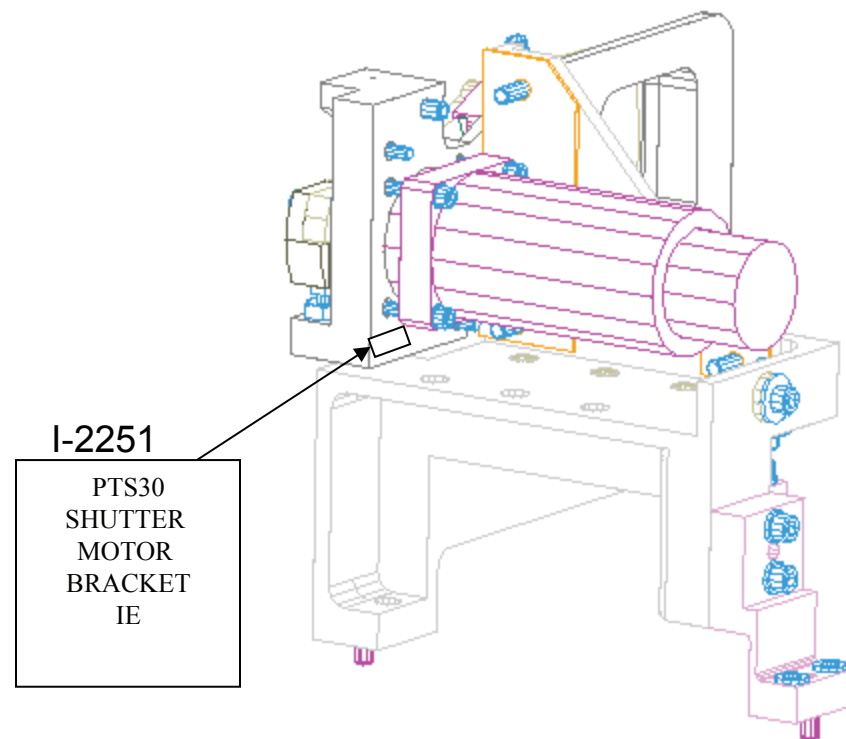


ITS Primary & Secondary Mirrors





ITS Shutter





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Alfred B. Schultz, Code 690.1 *Alfred B. Schultz* Feb 4, 2008
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