

FFTS DETECTOR– CABINETS Services Interface

Interface Document: LN-MPIFR-FDR-INT-241		Issue: 1.1
Relevant Documents: LN-MPIFR-FDR-INT-205, LN-MPIA-FDR-INT-208, LN-MPIA-FDR-INT-407		
Brief Description: Location of the modules for the FFTS detector inside the cabinets and cabling		
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Interface Description

The FFTS Detector subsystem consists of different modules (see relevant documents). Some of them are located inside the cabinets. The modules for the FFTS detector are:

- (1) Power supply for the FFTS detector electronics and cabling
- (2) Temperature controller for the HAWAII-1 FFTS detector

Interface Specification

- (1) Power supply for the FFTS detector electronics

The power supply is provided by the MPIfR.

Physical size: 19" case, 84 HP (1 HP = horizontal pitch = 5.08 mm), 3 HE (1 HE = 44.45 mm), nominal depth: 280 mm

Electrical power consumption: 85 Watt

Heat dissipation: 70 Watt

One electrical cable connects the power supply with the FFTS detector electronics, mounted directly on the cryostat. This cable is provided by the MPIfR.

Max. cable length: 15 m

Cable diameter: 16 mm

Max. plug diameter: 55 mm

Min. curvature radius of the cable: 150 mm

Type of plugs: AMP MS3106A28-21PZ

One grounding cable connects the power supply with the FFTS detector electronics. This cable is provided by the MPIfR.

Max. cable length:	15 m
Cable diameter:	8 mm
Max. plug diameter:	20 mm
Min. curvature radius of the cable:	100 mm
Type of plugs:	eye and bolt connection

One fiber optics cable connects the power supply with the FFTS Detector Data Interface. It is used for a serial RS-232 communication. This cable is provided by the MPIfR.

Max. cable length:	uncritical
Cable diameter:	10 mm
Max. plug diameter:	25 mm
Min. curvature radius of the cable:	150 mm
Type of plugs:	SMA-MM

(2) Temperature controller for the HAWAII-1 FFTS detector

The HAWAII-1 FFTS detector is temperature controlled to achieve a constant operating temperature of about 80 K. The temperature controller is provided by the MPIA.

One electrical cable connects the temperature controller with the FFTS detector mount inside the cryostat. This cable is provided by the MPIfR.

Max. cable length:	15 m
Cable diameter:	10 mm
Max. plug diameter:	25 mm
Min. curvature radius of the cable:	100 mm
Type of plugs:	DT02H-14-19 SN

Special Requirements

None