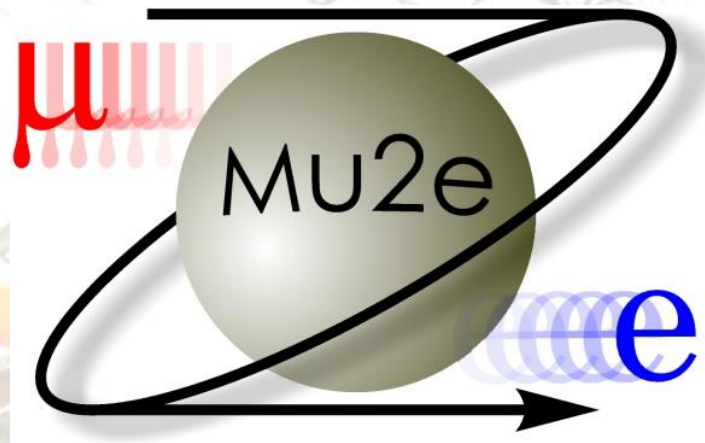




Electromagnetic Calorimeter

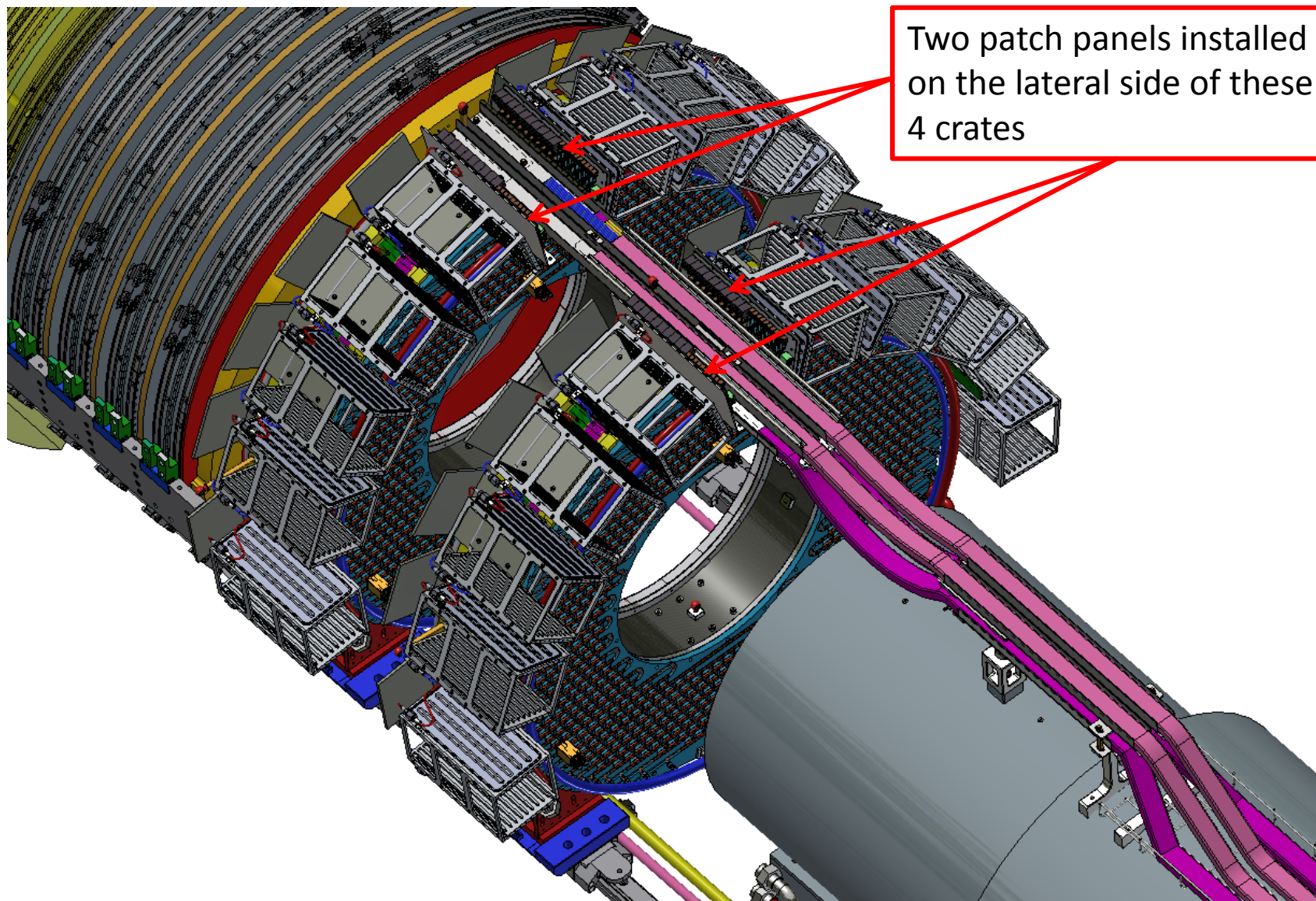
- Electrical Services -

SUMMARY

Electrical Services:

- HV;
- LV;
- TDAQ;
- Laser;
- Grounding Connection;
- Cable trays and supports.

Electrical Services: HV and LV cables



Electrical Services: HV and LV cables

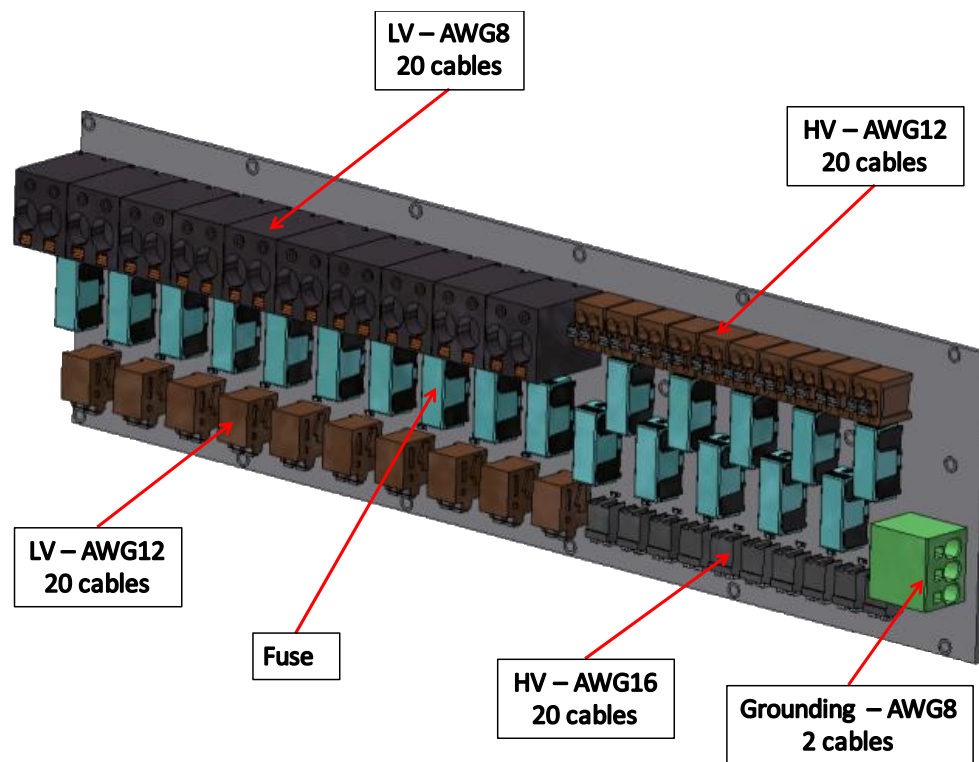
Distribution along the disks:

LV

- 2 IN lines $[+/-]$ LV (28 V), 10 A each, AWG 8 cables.
- 2 OUT lines $[+/-]$ LV (28 V), AWG 12 cables (drop less than < 30 mV).

HV

- 2 IN lines $[+/-]$ HV (200 V), 500 mA each, AWG 12 cables.
- 2 OUT lines $[+/-]$ HV (200 V), AWG 16 cables (negligible drop).

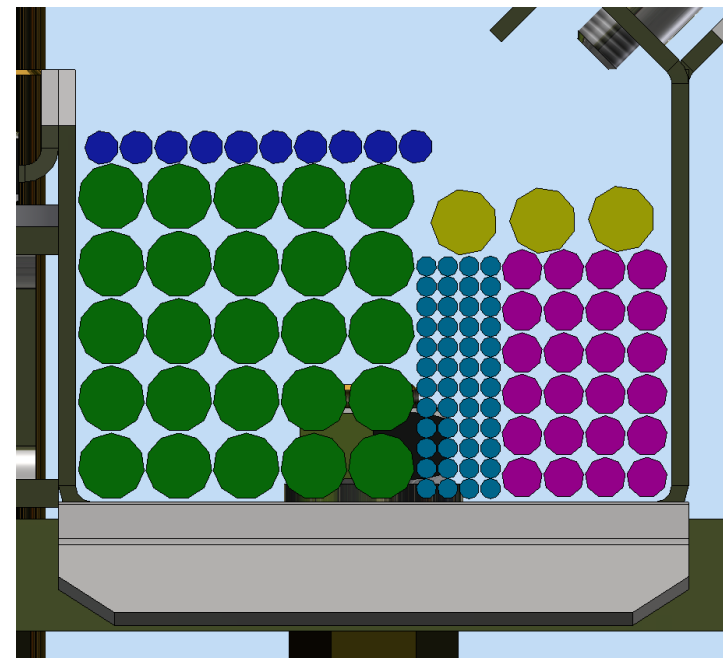
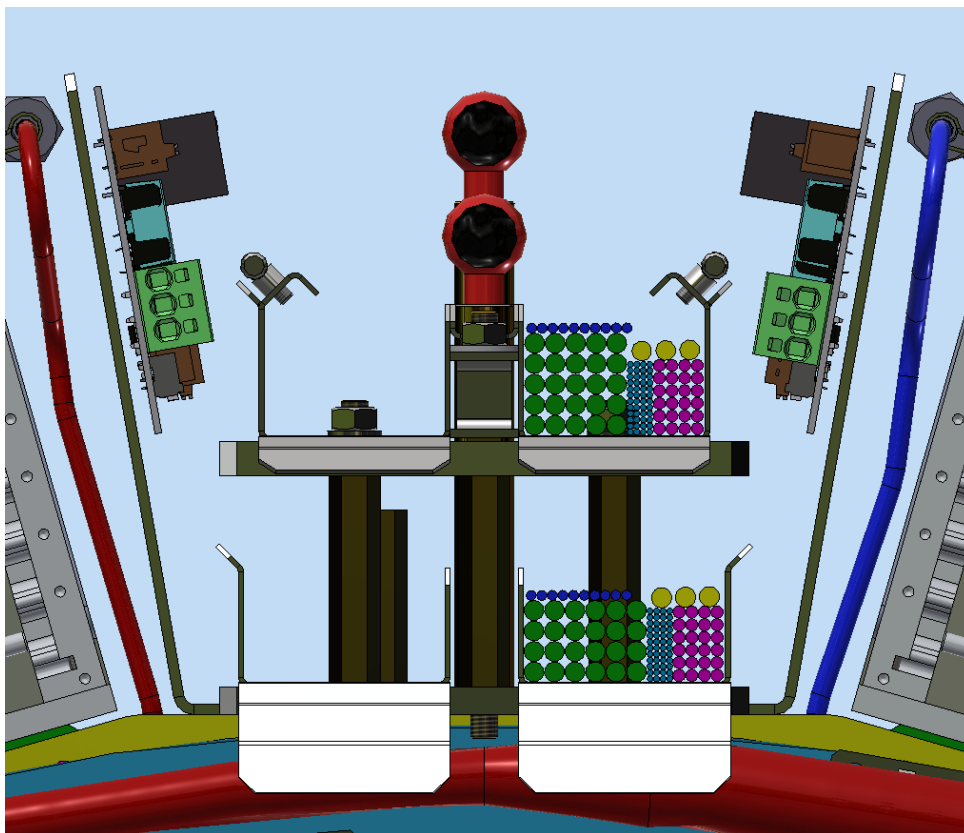


Electrical Services: HV and LV cables

			Cable/disk	Type	Nominal Diameter	Measured Diameter	Weight
Crate	Front (Source Side)	LV	20 DX Side + 20 SX Side	AWG12	3.6 mm	3.1 mm	0.039 Kg/m
	Back (FEE Side)	HV	20 DX Side + 20 SX Side	AWG16	2.65 mm	2.1 mm	0.017 Kg/m
Main Power Lines		LV	20 DX Side + 20 SX Side	AWG8	5.9 mm	5.3 mm	0.101 Kg/m
		spare	4 DX Side + 4 SX Side				
		HV	20 DX Side + 20 SX Side	AWG12	3.6 mm	3.1 mm	0.039 Kg/m
		spare	4 DX Side + 4 SX Side				
Sens			40 DX Side + 40 SX Side	AWG22	1.8 mm		0.006 Kg/m
		spare	8 DX Side + 8 SX Side				
Grounding			3 DX Side + 3 SX Side	AWG8	5.9 mm	5.3 mm	0.101 kg/m

		Cable/disk	Type	Nominal Diameter	Measured Diameter	Weight
Laser Fibers	Front (source side)	2 DX Side + 2 SX Side		2 mm		
	spare	1 DX Side + 1 SX Side		2 mm		
TDAQ Fibers	Main Fibers (Arrivano da fuori)	10 DX Side + 10 SX Side	multi-fibers (12 fibers)	3 mm		

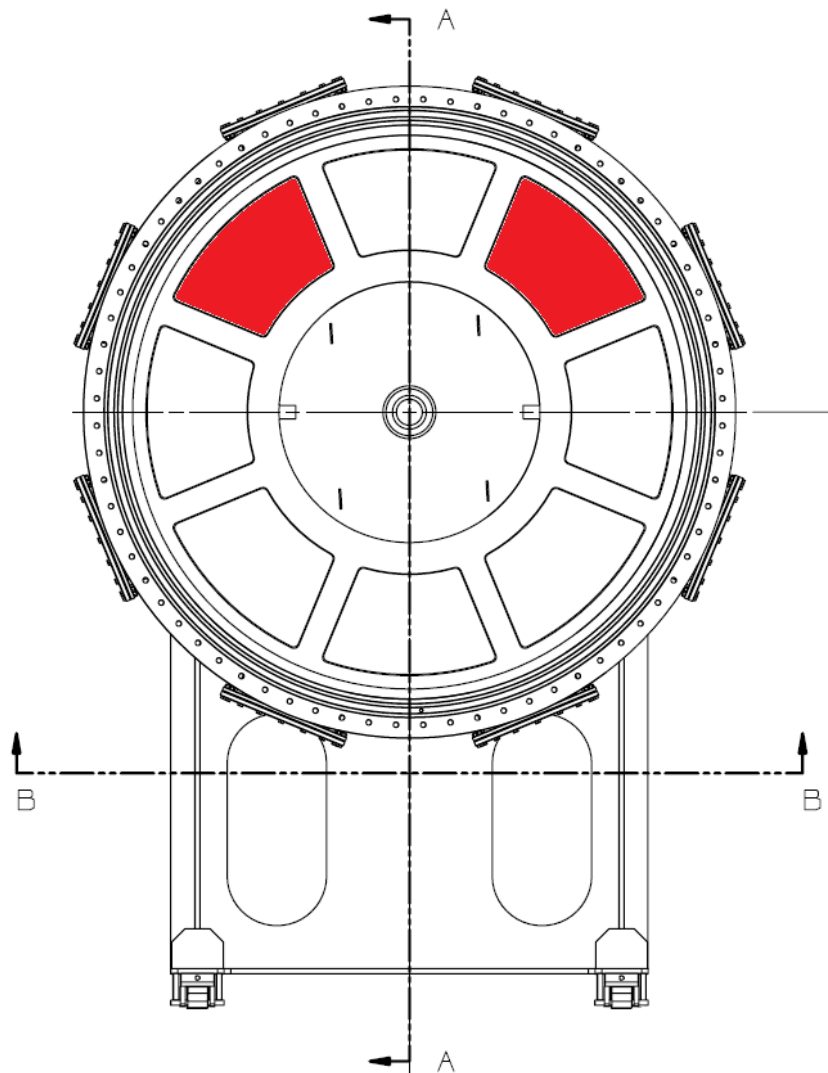
Electrical Services: HV and LV cables



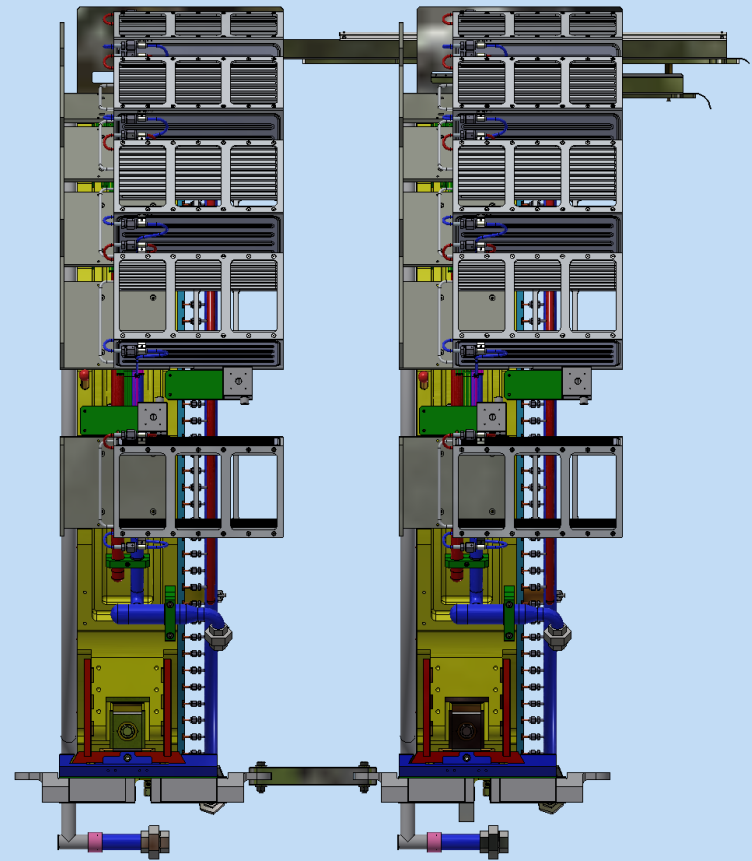
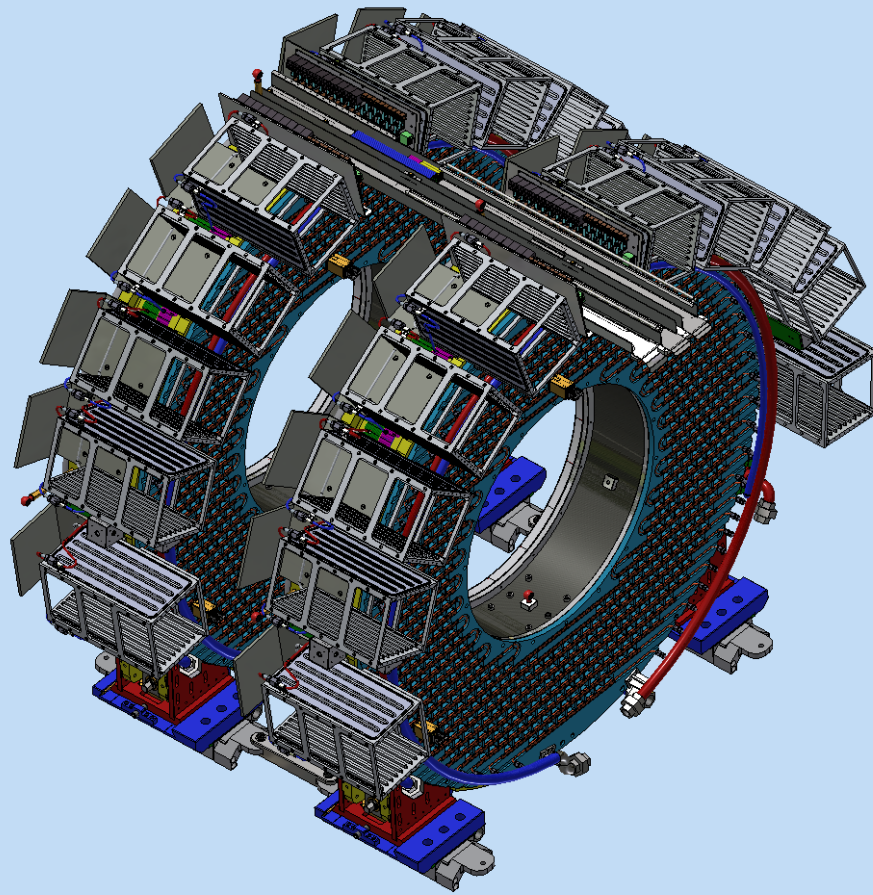
Main Power Lines	LV	20 / Side	AWG8	5.9 mm	5.3 mm	0.101 Kg/m	1500 mm	3.03 kg
	HV	20 /Side	AWG12	3.6 mm	3.1 mm	0.039 Kg/m	1500 mm	1.17 kg
Sens		40 /Side	AWG22	1.8 mm		0.006 Kg/m	1500 mm	0.36 kg
Grounding		3/Side	AWG8	5.9 mm	5.3 mm	0.101 kg/m	1500 mm	0..30
Total Weight								4.86 kg

Electrical Services: HV and LV cables

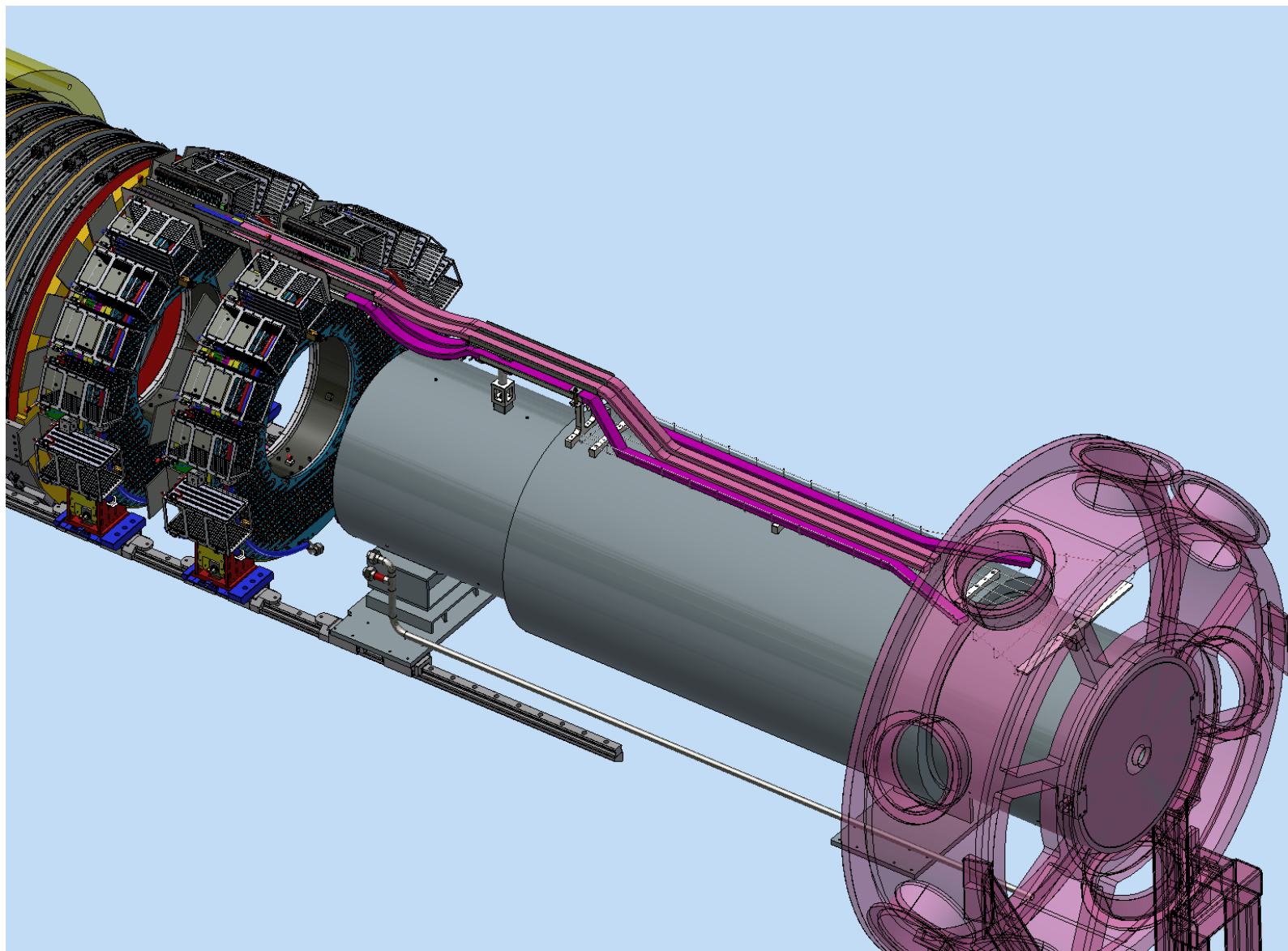
Our proposal is to use 2 sectors of the IFB for the optical fibers and cables.



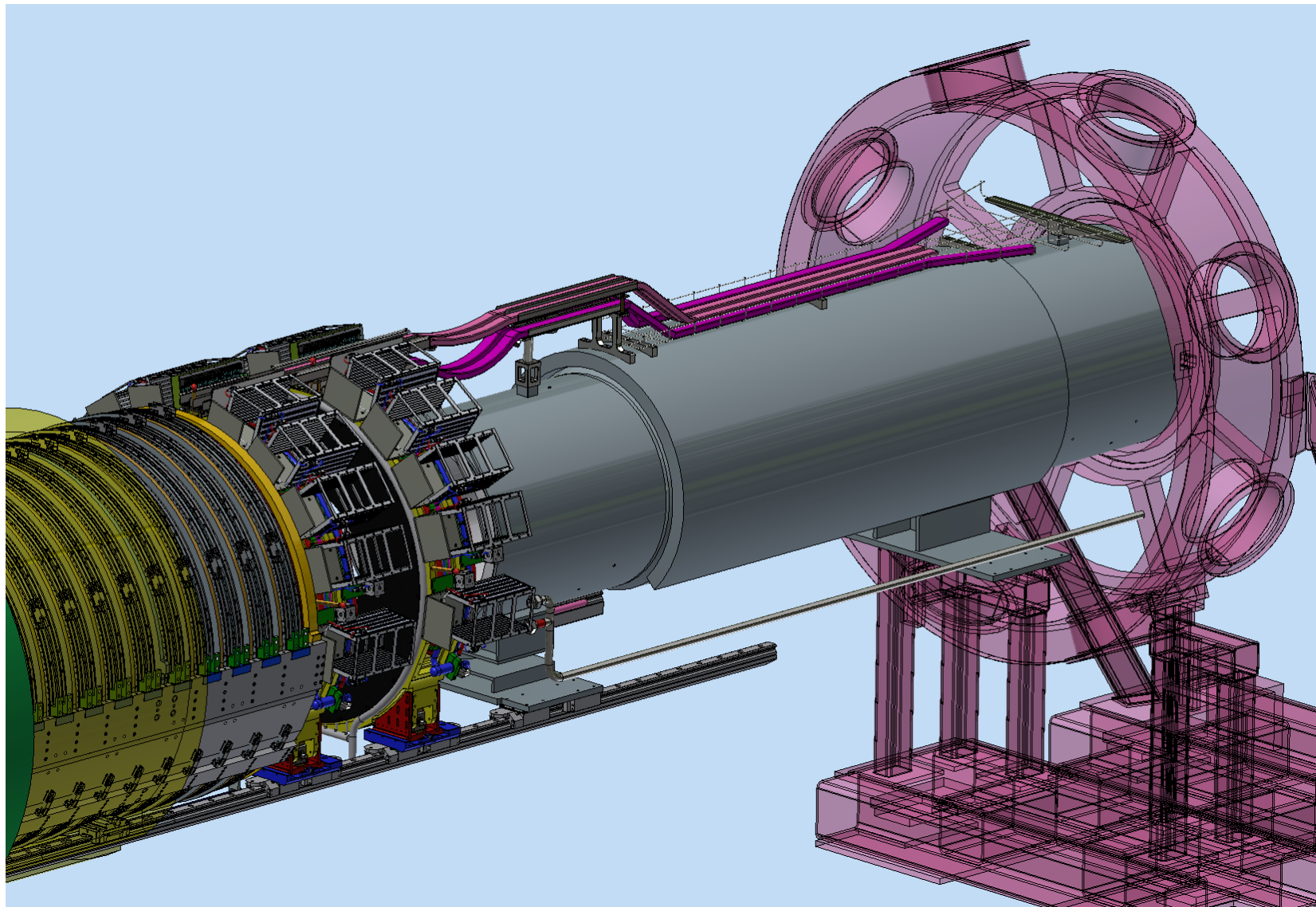
Electrical Services: HV and LV cables



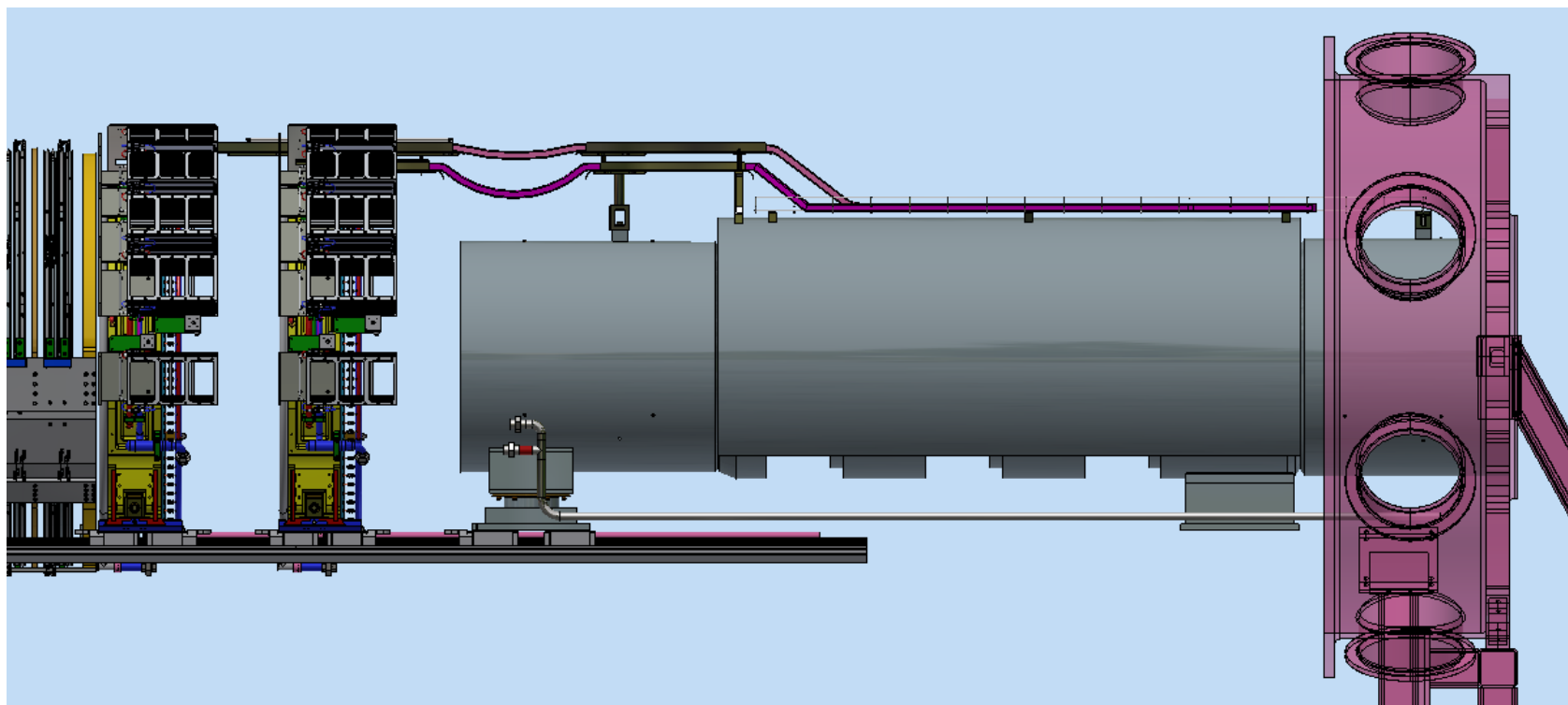
Electrical Services: HV and LV cables



Electrical Services: HV and LV cables



Electrical Services: HV and LV cables



Electrical Services: HV and LV cables

