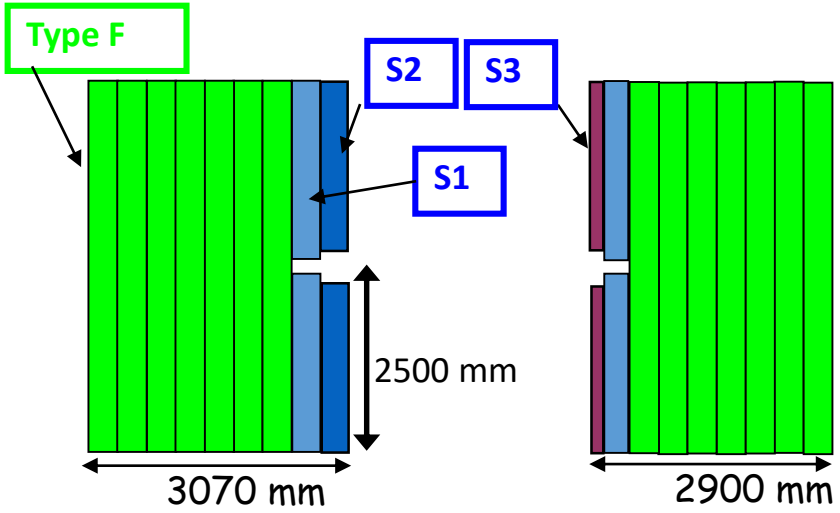
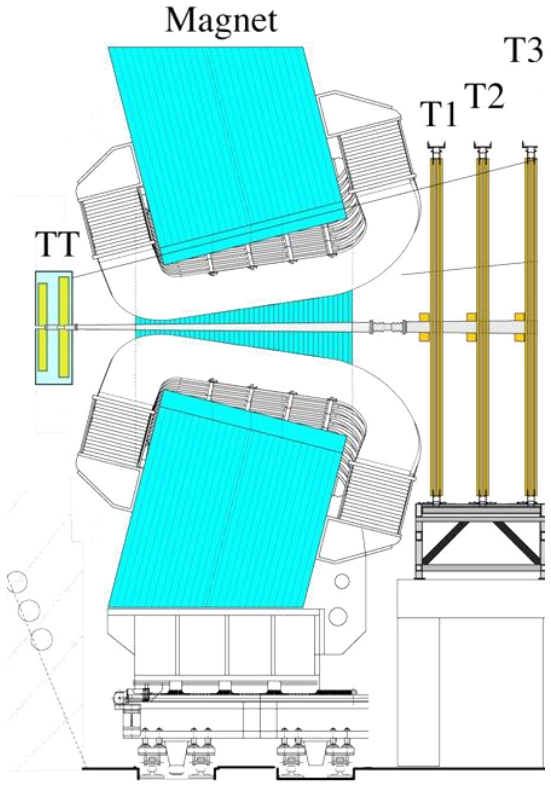
Task Force
OT CBM PANDA (Mtg. 4)
- News & Updates

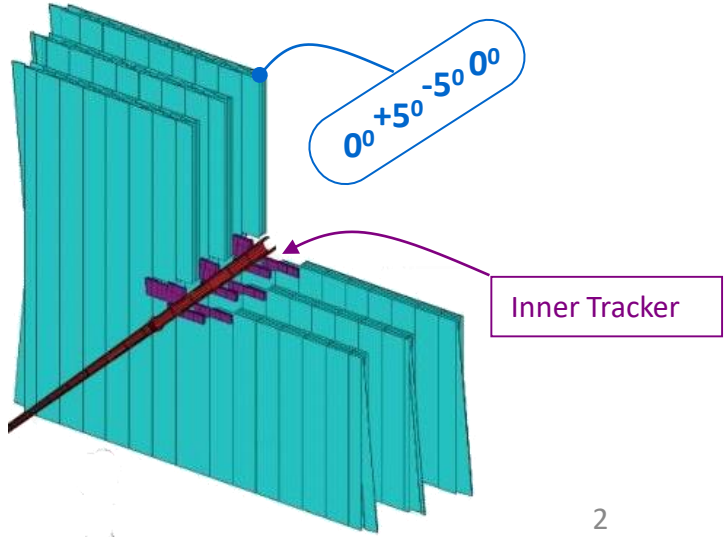
LHCb OT straw modules

The Outer Tracker consists of 3 stations T1, T2, T3 (~0.5m apart)

- Station
  - 2 support frames (C-frames) mounted vertically
    each C-frame with 2 layers of detector modules
  - Station =► 4 layers of modules with orientation 0^0,$+5^0$,-5^0,0^0
  - Every C-frame is in two halves that can be moved
    horizontally in and out around the beam pipe
- Layer
  - 14 type F modules; full height
  - 4 type S modules; half height outside the hot region







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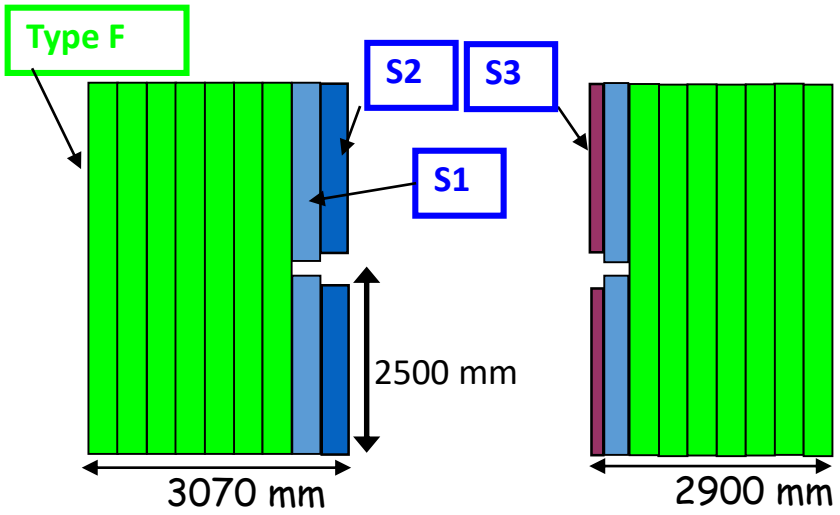

LHCb Operating conditions (*)

LHCb	OT
Operating conditions	
Total counting rate in the FT	50x10^7 tracks/s
Maximum counting rate per straw	5000 kHz
Maximum particle flux	200 kHz/cm^2
Maximum radiation dose in 10 years	
Maximum accumulated charge in 10 years	2.5 C/cm
Maximum current per straw	0.7 μA
Occupancy (at max. counting rate)	
Performance	
Discrimination threshold	4 fC
Position resolution per straw	180 μm
Momentum resolution (p range?)	0.4%

(*) Communications with N. Tuning (Nikhef/CERN)

Project: PASTA - PAnda STrAws

S1,S2,S3 modules in PANDA
@mCBM: Beam times 2025 started

Project: MUST - MUon Straws

F modules possibly in CBM
@Cave-C: Beam tests 2026/27