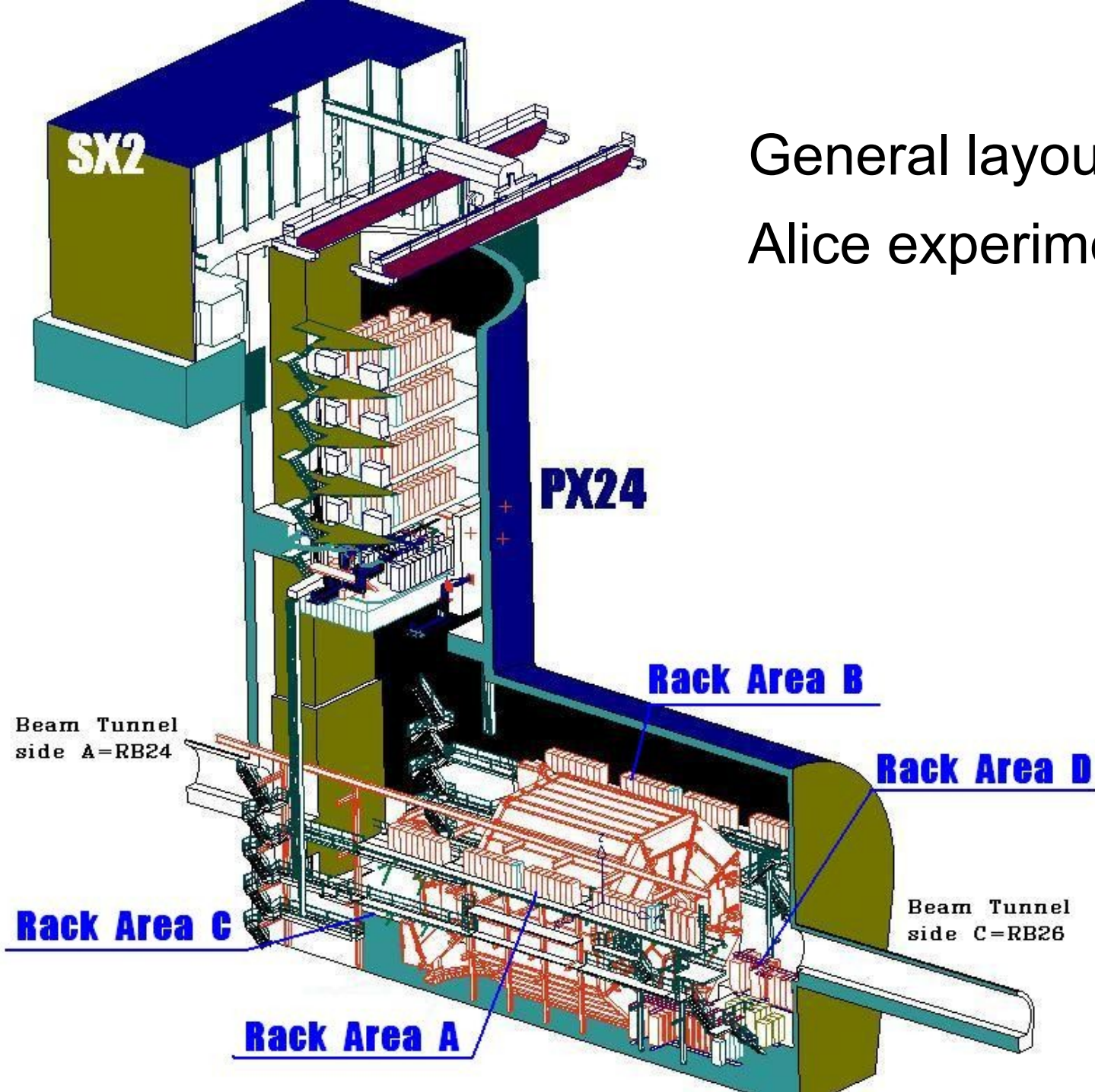
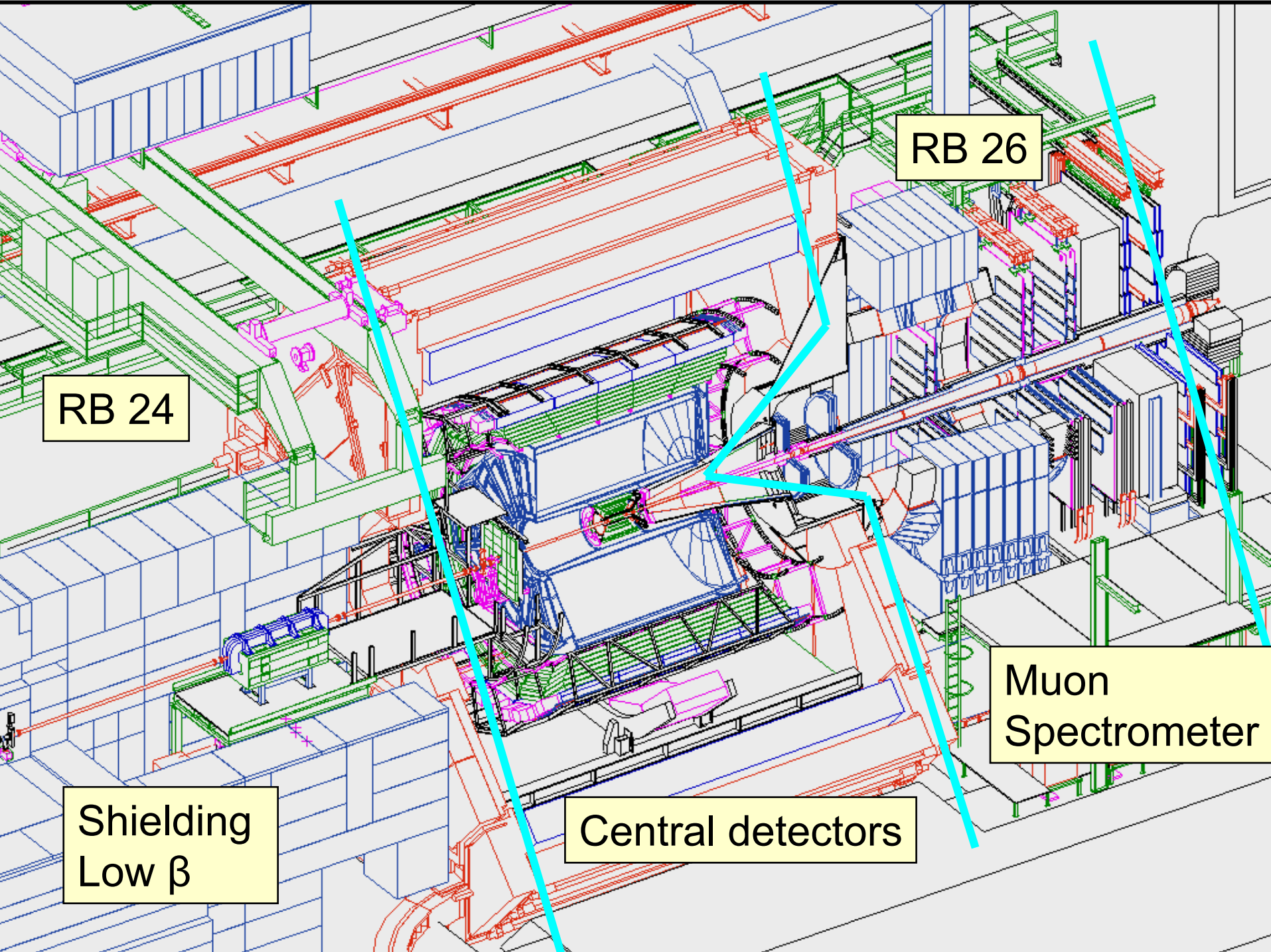


Radiation Monitoring in Alice experimental area

- Active dosimetry, in the $\mu\text{Sv/h}$ range, for personnel protection purpose, by ionizing chambers (by SC-RP)
- Beam abort system (2 'fast' monitors)
- Active dosimetry, in the mGy/h range, for components survey.
- Passive dosimetry, in the (multi-)Gy/y, also for components survey.

General layout of Alice experimental area





RB 24

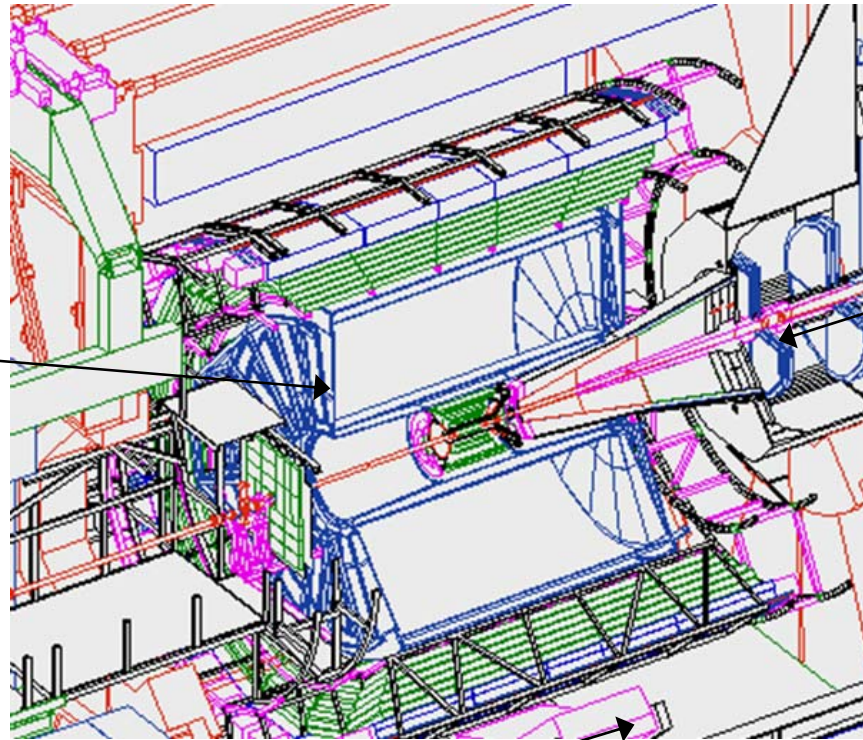
RB 26

Muon Spectrometer

Central detectors

Shielding Low β

Calculated yearly doses and fluences (A.Morsch)

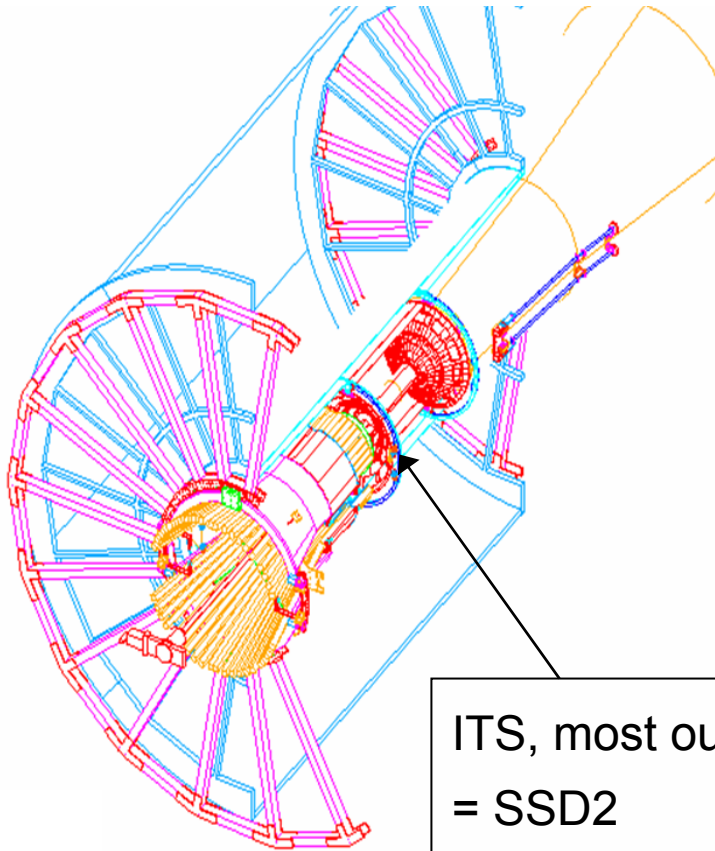


TPC electronics
~ 1 Gy/y +
1e10 h/cm²

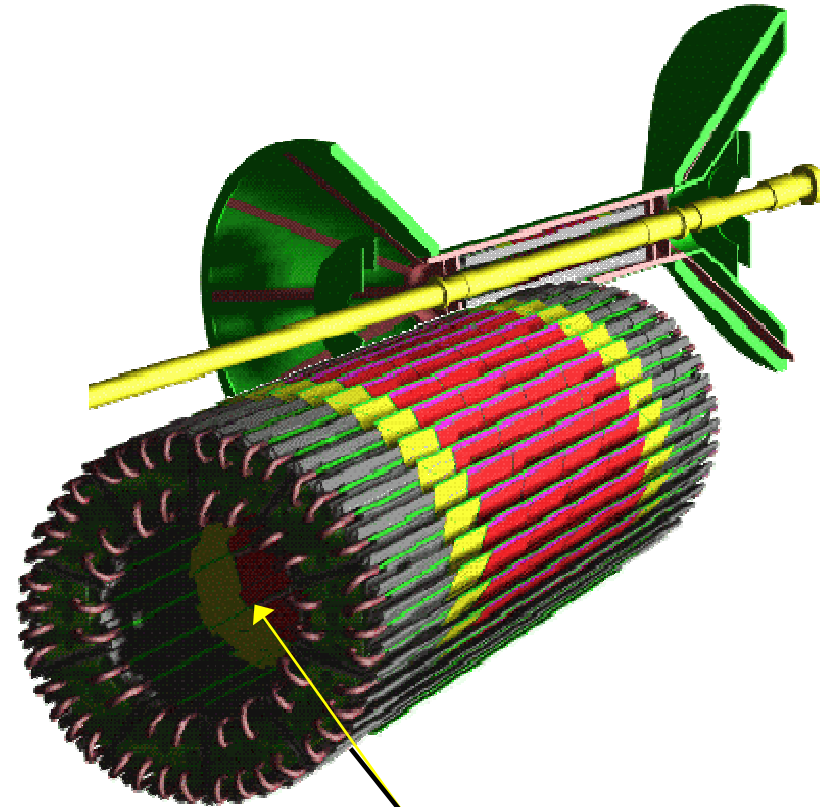
First muon chambers
~ 1 Gy/y +
5e10 h/cm²

PHOS : 50 mGy/y + 3e9 h/cm²

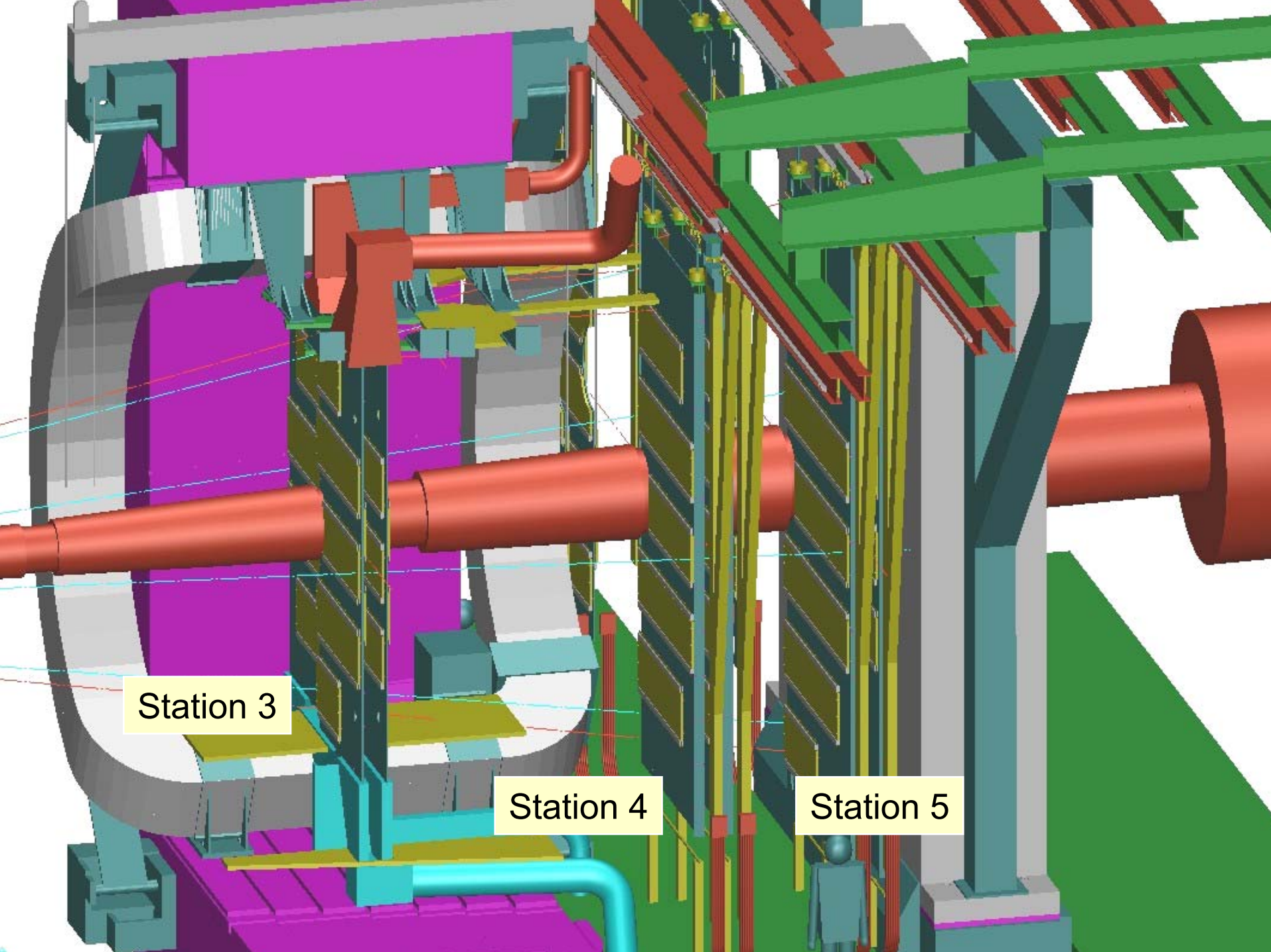
Calculated yearly doses and fluences (A.Morsch)



ITS, most outer layer
= SSD2
~ 3 Gy/y +
4e10 h/cm²



ITS, most inner layer
= SPD1
~ 200 Gy/y +
3e12 h/cm²

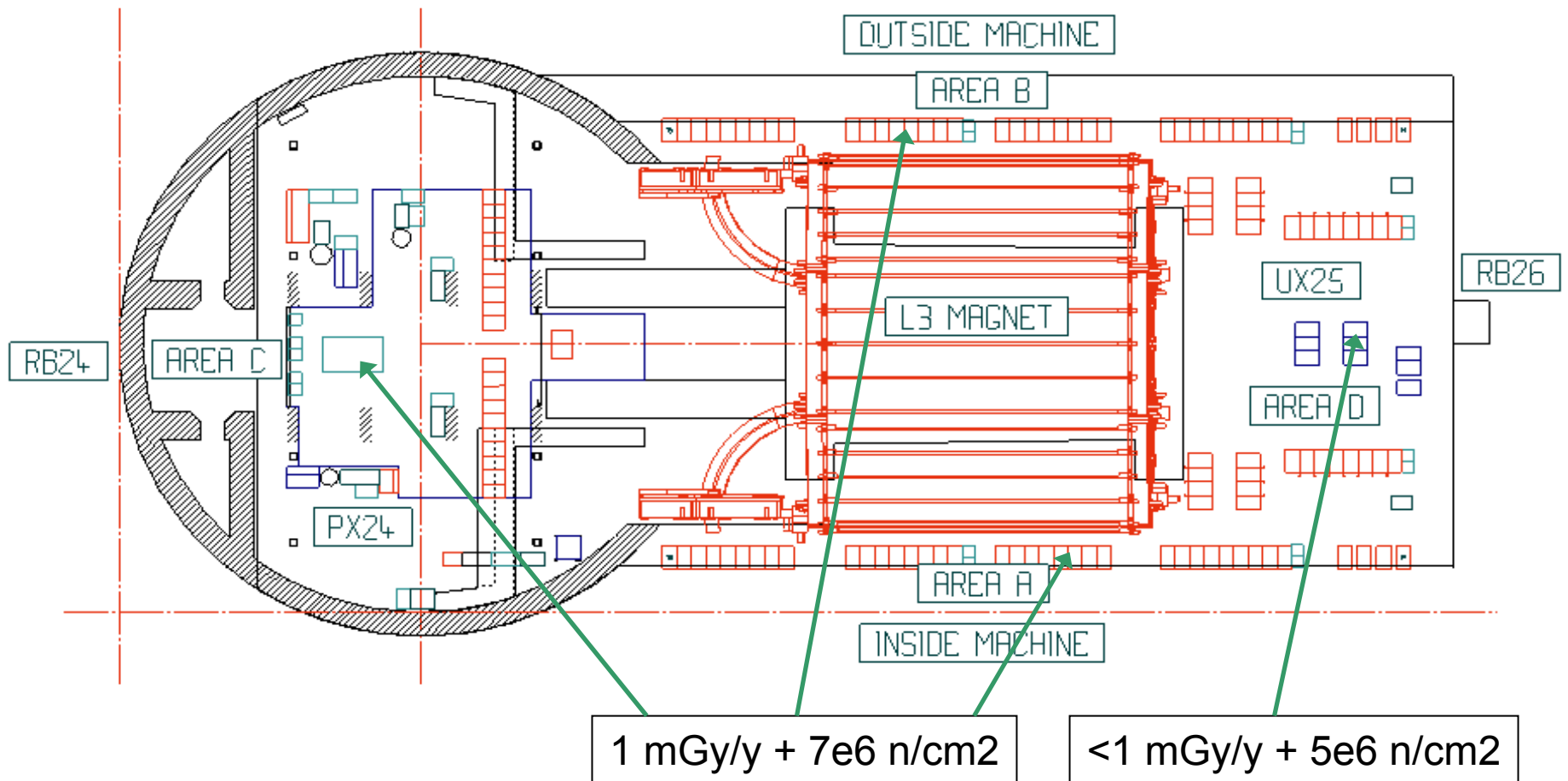


Station 3

Station 4

Station 5

Location of electronic racks and yearly calculated doses (A. Morsch)



Request for active monitors:

Place	dose/y	flux/y	Type	No
SPD1	200	3e11		
SDD2	26	2e10		
TPC	10	1e10	?	6
TRD+TOF	0.1	3e9	?	4
HMPID+PHOS	0.05	2e9	?	4
μ electr.	0.5	6e10	?	6
Racks	0.001	7e6	?	10

Request for passive dosimeters:

Place	Y.dose	Y.fluence	Type	No
SPD1	200	3e11	?	4
SDD2	26	2e10	?	4
TPC	10	1e10	TLD	4
TRD+TOF	0.1	3e9	TLD	4
HMPID+PHOS	0.05	2e9	TLD	4
μ electr.	0.5	6e10	TLD	10
Racks	0.001	7e6	TLD	10

Constrains for dosimetry:

In general for active monitor: **cabling must be defined by the end of this month (March'05) !**

ITS Very little space, accessibility

FEE in L3 Restricted access ~ok

μ electr. Confined space, but ~ok

+ Magnetic field = 0.5 T

Racks Easy access, $B \sim 0.02$ T