

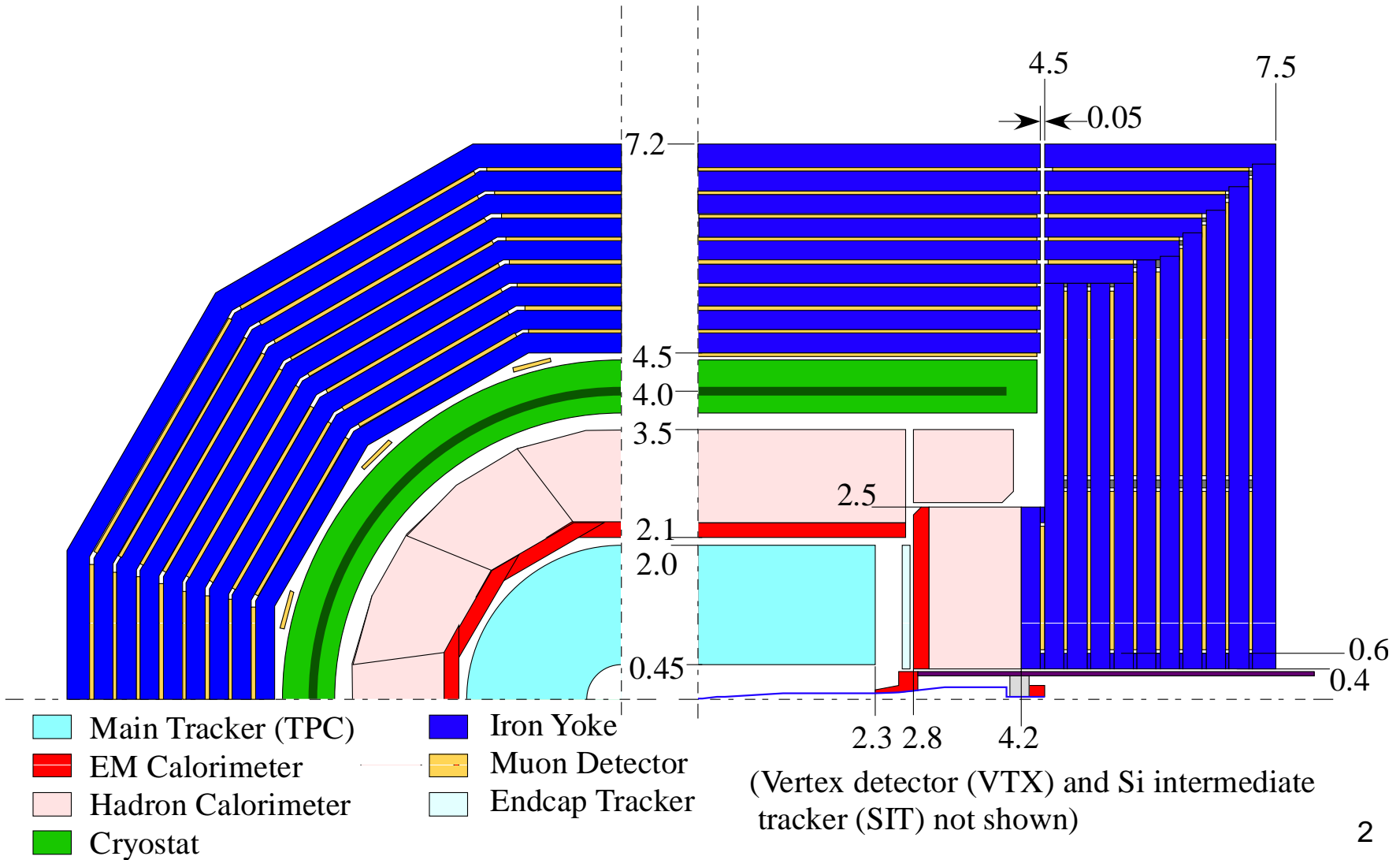
GLD detector assembly

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KEK

GLD design



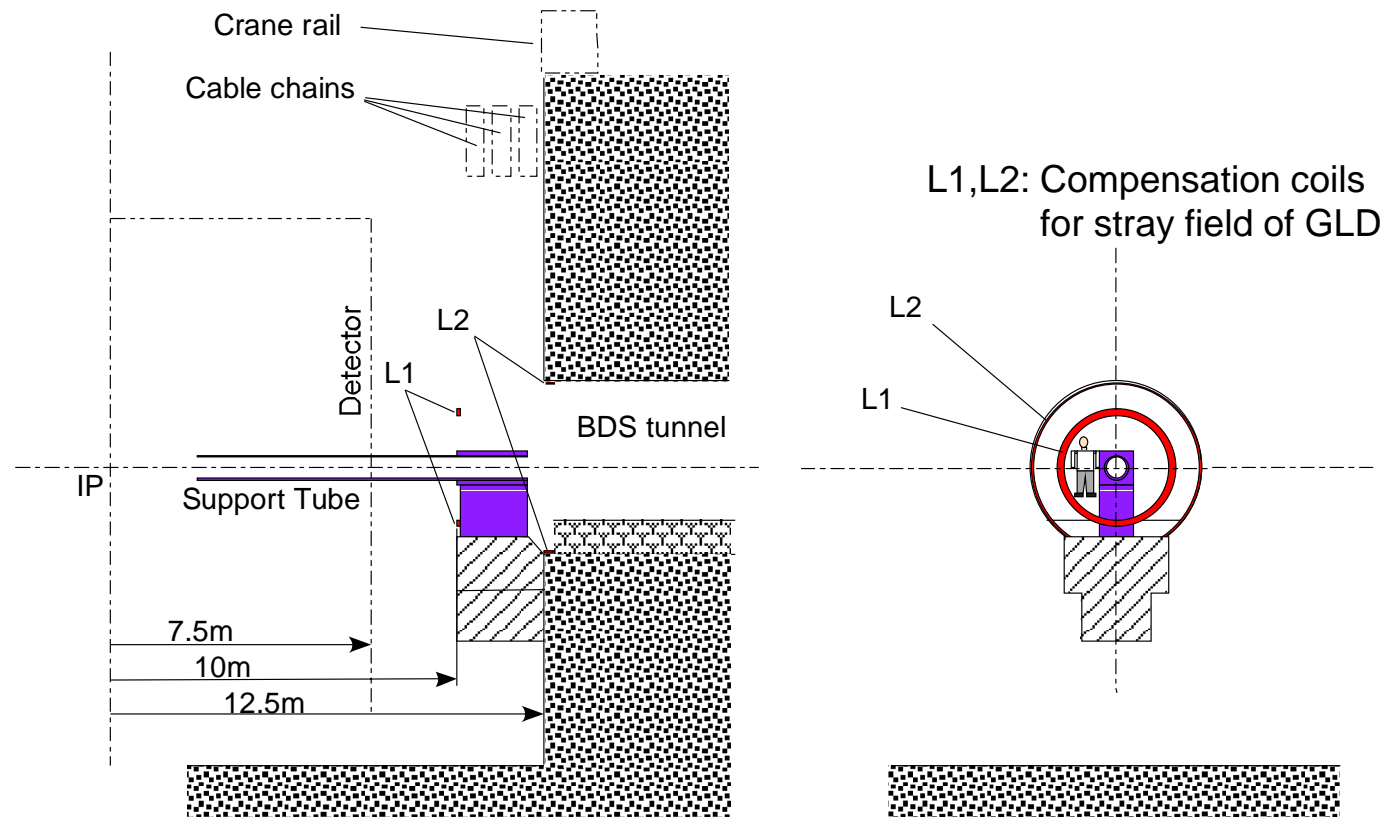
GLD mass

- Barrel part (Yoke+Sol.) > 6000
 - ➔ For CMS style assembly, it should be split into 5. Then, there will be many gaps which could give rise to large stray field
 - ➔ In present design, GLD barrel yoke is split in R- and ϕ -direction into 24 pieces
 - ➔ 400-t crane in the exp hall

Barrel	
Yoke	6090
Solenoid	330
CAL	1750
Endcap	
Yoke	3260x2
CAL	270x2
Total	15230

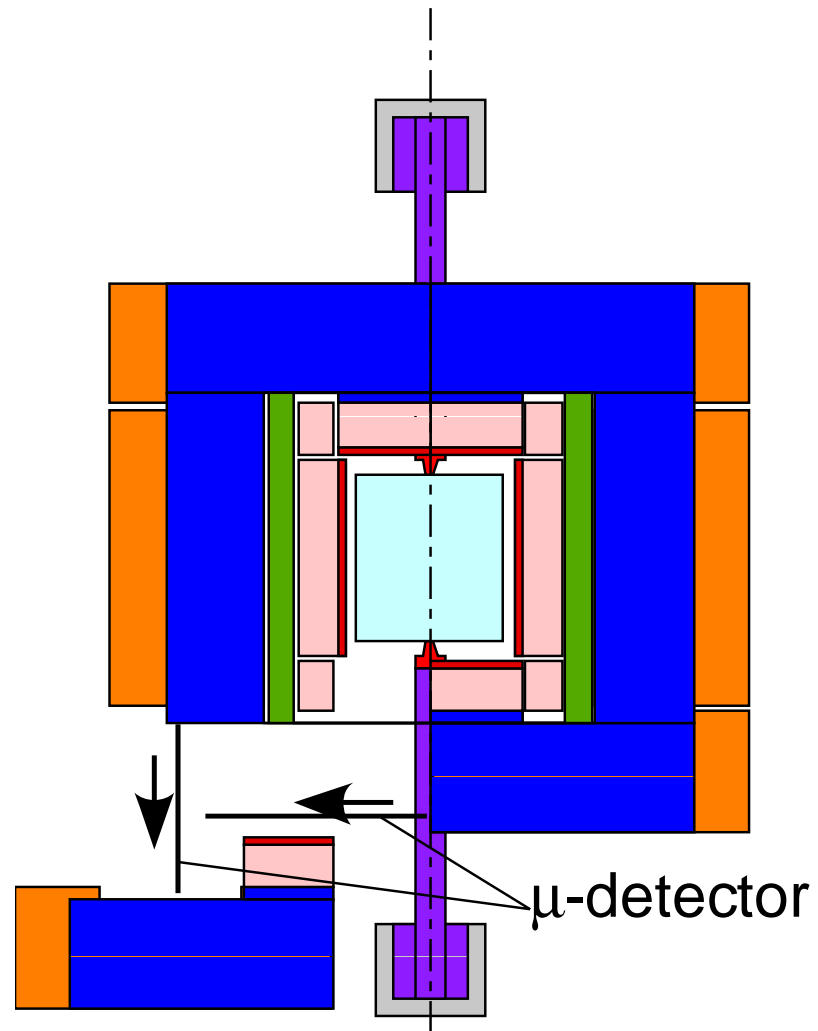
FD support

- Original plan (w/o push-pull)
 - FD magnets are put in support tubes
 - Support tubes are supported from the floor or from the wall by pillars



Endcap opening

- Each endcap is split into two
- Because endcap CAL sticks out into the solenoid, endcaps are moved in Z-direction, and then in X-direction to open

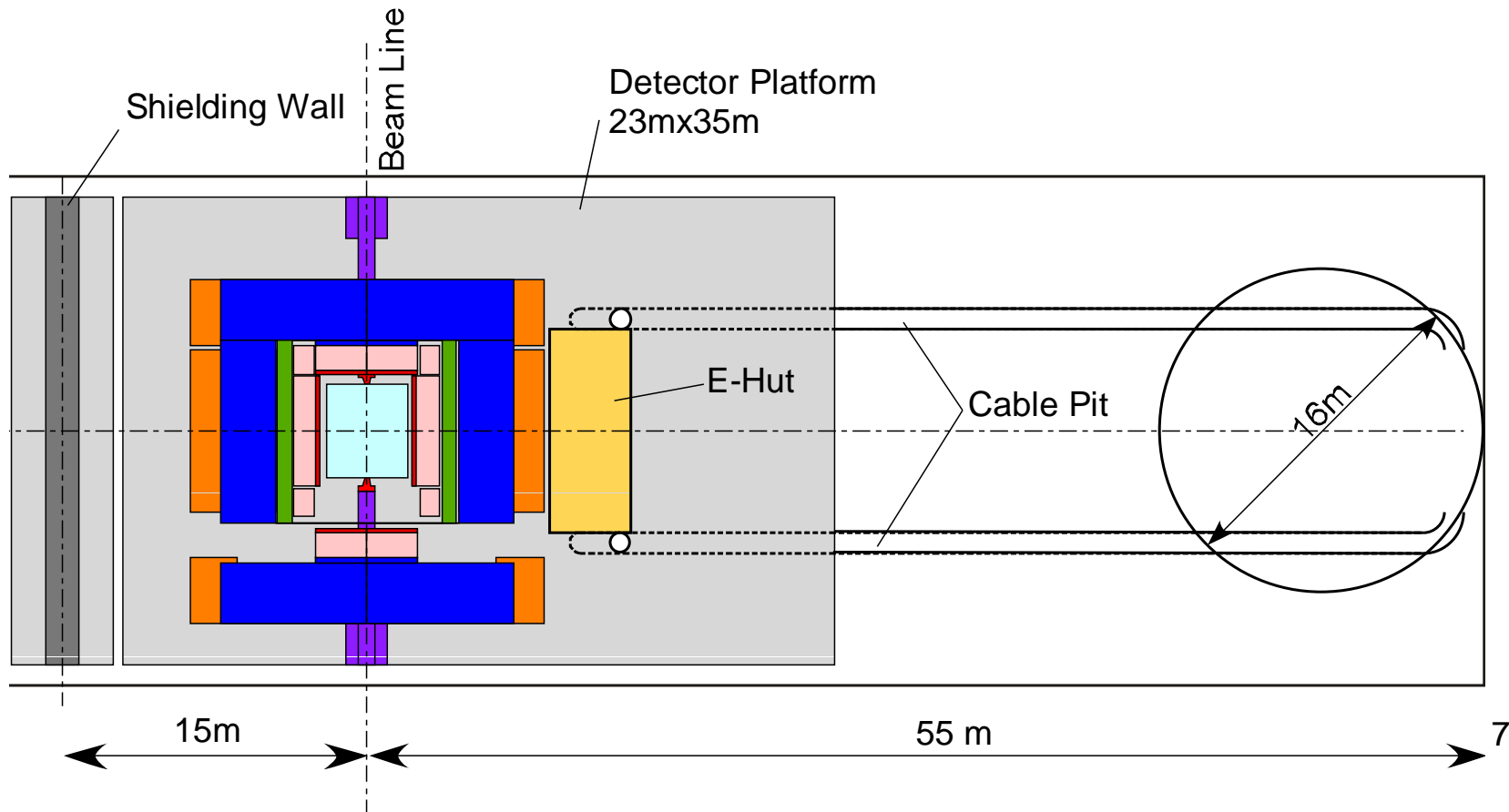


Push-pull

- There is no good idea on the GLD modification to make it compatible with the push-pull scheme
- However, almost same design as before can be used if
 - All detector segments and FD are put on a platform
 - BDS is cut upstream of QF1 (Z~11.5m) instead of between QD0 and QF1 when moving the platform (each detector has its own QD0 and QF1)

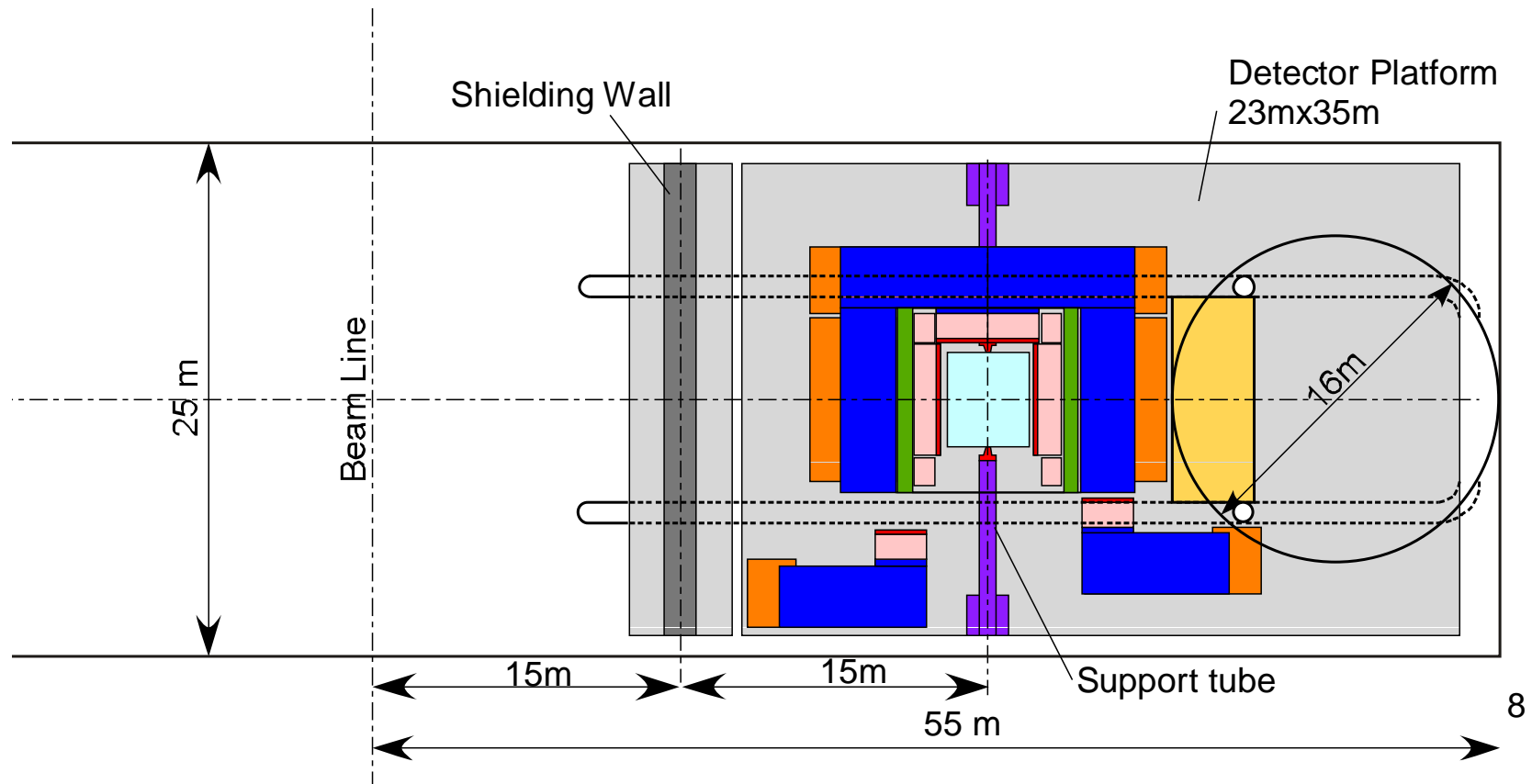
Push-pull

- One possible configuration
 - GLD in beam position



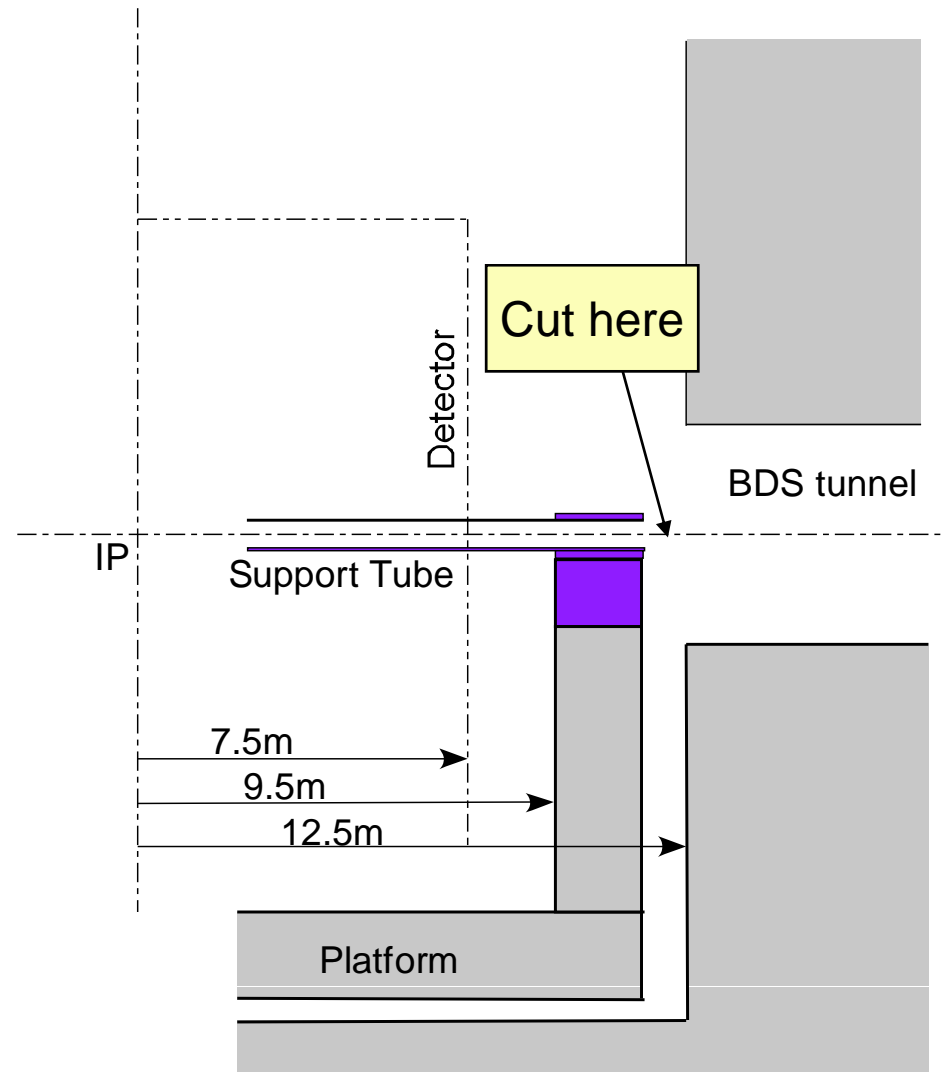
Push-pull

- GLD in garage position



Push-pull

- FD support



Future prospect

- GLD will make a common LOI with LDC
- New detector parameters will be discussed
- If the central values are selected ($B=3.5T$, $R_{CAL}=1.85m$), GLD will become somewhat smaller
- As a consequence, it may be possible to split the barrel part into three (each segment < 2000 ton) and CMS style splitting may be possible