PSB Finemet Cavities LS2
Rack Space Request

4 June 2015 M.Haase
FINEMET RACK NEEDS

Power supplies, Controls and RF part for one Cavity

PLC one per Period
FINEMET RACK NEEDS

- In total we need 39 racks for 12 Cavities
- 24 Racks for the power supplies
- 12 Racks for the control and monitor chassis and RF pre-driver, splitter and combiner
- 3 Racks for the INTERLOCK (PLC)
Problem: VOLTAGE DROP

- Especially for the Period 7L1 the distance from BRF1 to the Ring is too long ca. 100m, (power lost in cable ~18%).

- Different Solutions:

- Installing the Racks for the Power Supplies in BRF2 distance to the ring ~70m (power lost in cable ~13%)
  or
- Installing the Racks for the Power Supplies in BAT distance to the ring ~40m (power lost in cable ~7%)

- For the Period 10L1 the distance from BRF1 to the Ring is ~60m (power lost in cable ~11%)

- Perhaps we can also find a place in the BAT (~40m)

- For the Period 13L1 the distance from BRF1 to the Ring is about 40m

- **Cable length must be checked by Georgi**
BRF 2 Layout today

INTERLOCK
PATCH PANEL
MONITOR ING
LOW LEVEL
P.S. 35V DC
P.S. 7V TUNING
20V POWER SUPPLY
TUNING
TRANSITOR BANK
TUNING
HAVakhf
INTERLOCK

6kV POWER SUPPLY
6kV POWER SUPPLY
6kV POWER SUPPLY
6kV POWER SUPPLY

RING 1
RING 2
RING 3
RING 4

DRAFT
Cables for the FINEMET Power Supplies
48 Cables 5 x 35mm² UCB5SJ to 7L1
48 Cables MCA24 to BRF1
8 Cables NE12 to BRF1
(Without 400V AC Cables)
BRF 1 Layout today
BRF 1 Layout LS2

Control / RF and Interlock
7L1

Control / RF and Interlock
10L1 and 13L1

Power Supplies for 10L1 and 13L1
Booster 361/1

Access to Period 13

From BRF1 to 13L1 ~ 41m

Access to Period 10

From BRF1 to 10L1 ~ 61m

FINEMET P.S. 10L1
Space for 8 Racks?
From BAT to 10L1 ~ 38m

Access to Period 7

From BRF2 to 7L1 ~ 70m

FINEMET P.S. 7L1
Space for 8 Racks?
From BAT to 7L1 ~ 38m

From BRF1 to 13L1 ~ 41m

Access to Period 13
LHC Injectors Upgrade

THANK YOU FOR YOUR ATTENTION!