

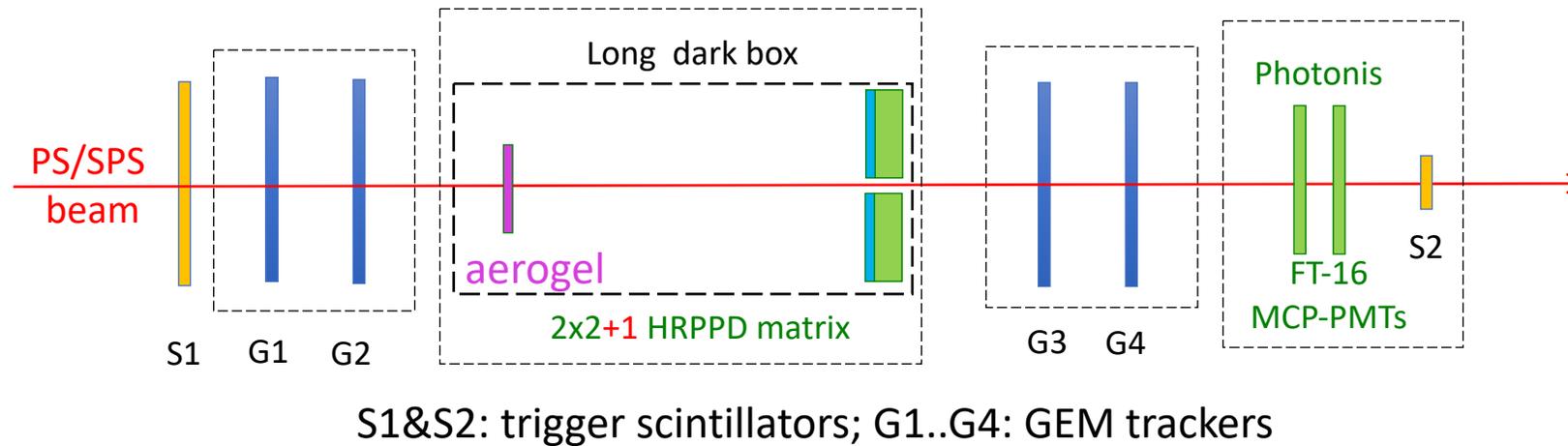
pfRICH beam test(s) at CERN SPS / PS in 2026

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pfRICH DSC meeting, March 5, 2026

Update on the hardware configuration

- Will try to eliminate one of the dark boxes
- Will place both reference MCP-PMTs and a small trigger counter on a single moveable platform
- To keep all three small-acceptance elements in the beam for a remote XY-adjustment of the HRPPD matrix



- Aerogel + filter assembly will be mounted on a Z-stage as well
 - To be able to adjust the ring image diameter
- VME crates with DRS4 electronics will be permanently mounted on the same 8020 frame
 - Well, because our signal cables are just too short

Miscellaneous activities

- Start HRPPD shipment paperwork now
 - HRPPDs #15, #16, #17, #23 (EIC) + #27 (contributed by David Jaffe / Yifan Jin)
 - HRPPD #25 will be an emergency spare (thank to our Trieste colleagues)
- Missing MCX adapters will be ordered this week
 - This is our only “Long Lead” item
 - Will try to buy three missing Velmex translation stages on a credit card
- Secured mechanical tech time (Bill Lenz) to assemble the 8020 frame and other pieces
- Got an agreement to 3D print custom HRPPD enclosures & other parts in a timely fashion
 - As well as ordered more resin & support material
- Martin has just assembled a monster DAQ PC for this campaign
 - 5 GHz multi-core CPU, 64GB RAM, nVME system disk, 4x8TB RAID, etc

Miscellaneous activities

- DREAM electronics for the GEMs needs to be re-animated + RCDAQ driver verified to work
- All sixteen digitizers need to be integrated in a single working setup (together with the DREAM)
 - It would not hurt to re-animate my RCDAQ accelerator plugin to speed data taking up
 - DRS4 timing calibrations (a standing item on my TODO list since years)?
- Instrumented spots on all five HRPPDs should better be scanned / verified to work in advance
 - High enough QE, gain uniformity, low noise, etc
- Need to get aerogel tile(s) from Temple and make some sort of support for them
 - May be useful to identify a “good” few cm size spot in advance
- Mirrors (both pyramid and conical samples)?
 - Will require an additional support structure
- Online monitoring & offline reconstruction software!