

Our five weeks at CERN

Week	Description
May 20-27	Partial assembly & pre-commissioning
May 27 - June 3	Final assembly & SPS run (aka commissioning)
June 3 - 10	SPS -> PS transition; re-assessment of the PS run goals
June 10 - 24(27)	Re-assembly, PS run (main part of the beam test), dis-assembly

- Objectives of these four distinct periods are obviously different
- Goals are clear in principle; details will depend on the previous period(s)
- May make sense to mostly focus on the upcoming periods?

Goal candidate topics for the beam test overall

- HRPPD performance in a particle beam
 - Single photons, flashes in a window, timing
- Direct N_{pe} measurement (aerogel, filter, HRPPD QE)
- Cherenkov angle resolution; comparison with Monte-Carlo

- π/K separation from low momenta to 7+ GeV/c
- e/ π separation at low momenta

- FCFD-related studies
- Mirrors (conical, pyramid, co-bonding vs plain lexan?)
- Laser monitoring system
 - Live demonstration; delay calibration, at a bare minimum (ideally, using a PiLas laser)

The week of May 20-27

- Alexander, Martin, Preet @ CERN
 - Access procedures, trainings, safety protocols, dosimeters, logistics, etc
 - Communication with local CERN colleagues and dRICH team

- Unpack the boxes to the extent needed before Bob & Co come a week later
 - Assess what is missing / damaged / forgotten / needs to be brought in suitcases next week

- Set up computing infrastructure
 - Local network(s), DAQ PC, online monitoring computing, Control Room -> installation area
- DAQ hardware
 - Restore configuration used in 2-198, with a NIM logic adjusted to SPS run
 - VME crate reset procedure

The week of May 20-27

- Online monitoring tools
 - VNC, tracker & imaging panels, GECO, HRPPD #5 plots, beam line instrumentation
- Digitizer s/n 81 -> repair; get a spare one from CAEN (and a 2nd VME bridge)
- Get a third rack-mounted HV power supply from CERN El.Pool?
- Finalize V1742 configuration, calibrations, mapping, etc
- Have offline / near online reconstruction codes in a usable state
- Assemble all five HRPPDs
- Assemble aerogel box
- Pre-assemble the 8020 chassis, identify possible conflicts

The week of May 20-27

- Clarify CO₂ & nitrogen connections
 - Can we test GEM chambers in some way, or do it a week later?
- Scintillating counters?
- See the DESY table installed (hopefully)
 - Learn how to operate it; decide on the actual chassis, DAQ PC, LV module location
- Check the 19" rack location, verify cable run
- Learn beam line Cherenkov counter infrastructure, cabling, latency

- Finalize RCDAQ script
 - Record Velmex stage positions, beam line conditions (?), perhaps DESY table offsets, etc

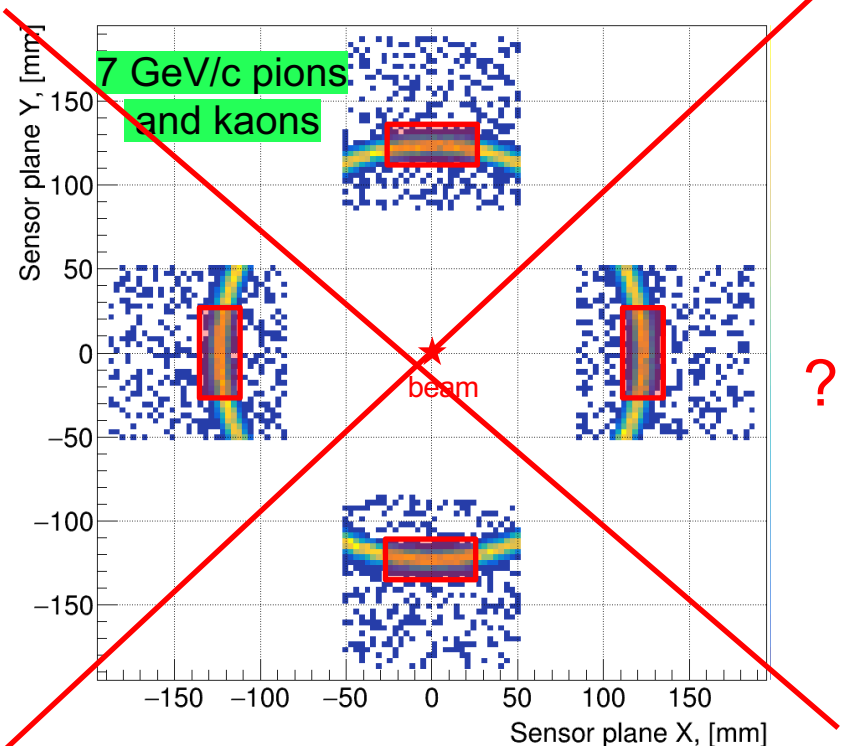
- Data transfer to SCDF

The week of May 20-27

- Book safety readiness review, patrol training, ..?
 - Assume that Brian and Bob take care about this from remote

- Electrical connections (110V vs 230V)

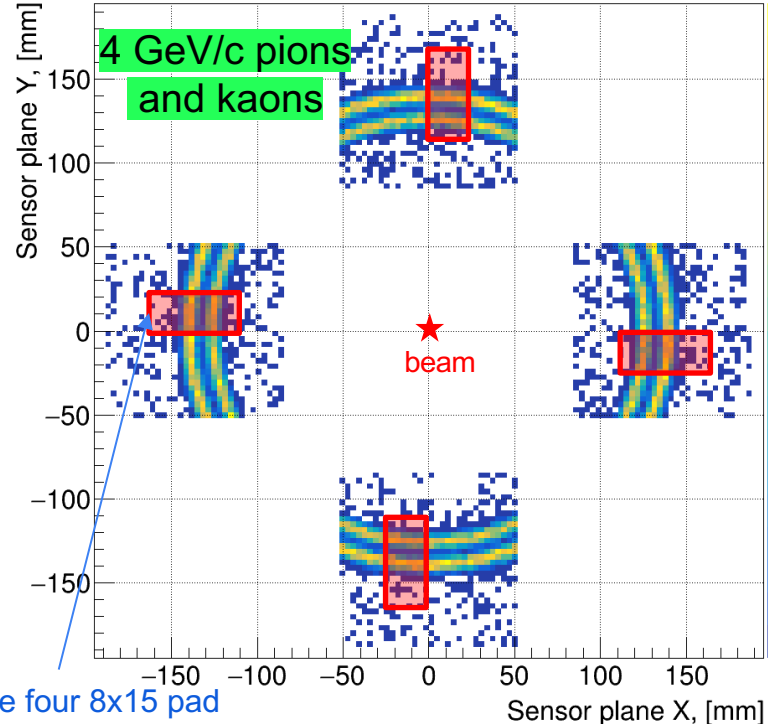
Stick to a small azimuthal acceptance configuration?



“SPS acceptance”

(~1/4 azimuthally; saturated rings; ~403mm exp. volume)

?



“PS acceptance”

(2x smaller acceptance; π/K ; ~453mm exp. volume)

Will be four 8x15 pad areas for imaging?

Also, sacrifice the last row of pads (32 total) to equip a 6x6-4 pad area of HRPPD #5?