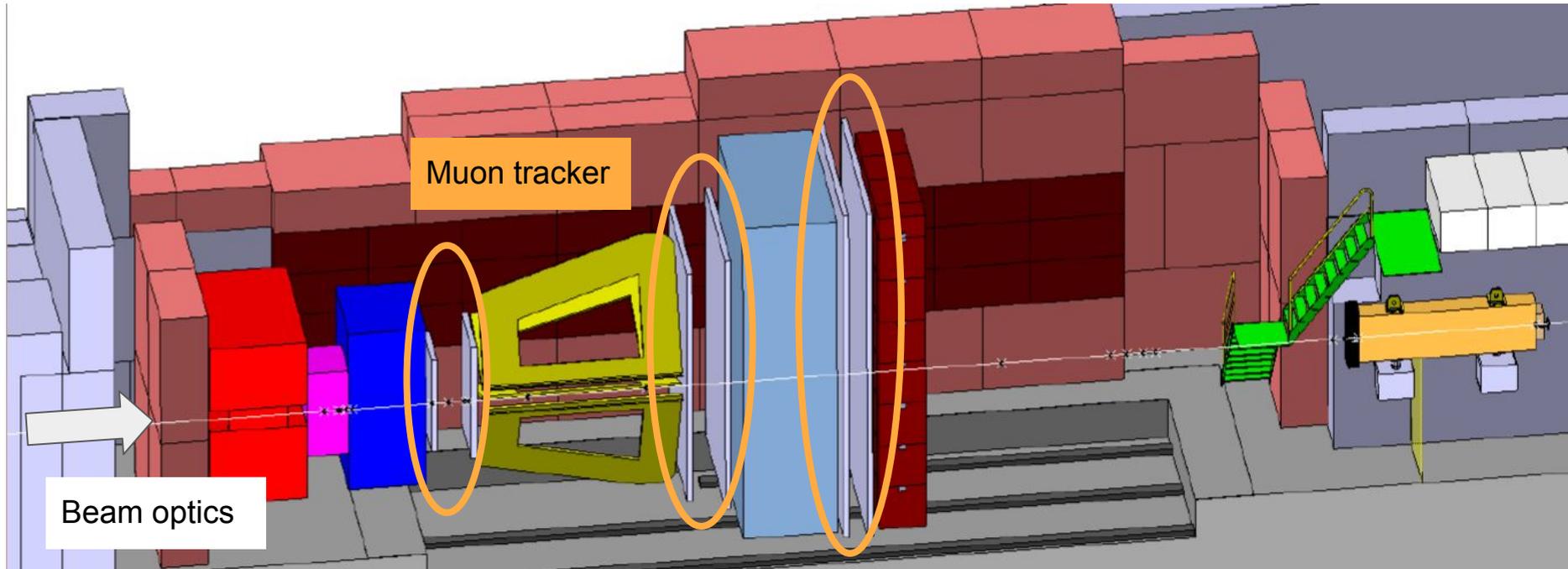


NA60+ plans - H8 user meeting

- ❑ Allocated beam period(s)
 - ❑ Hadrons → 28/9 - 5/11 (but see last slide)
 - ❑ Pb ions → 28/11 - 9/12 , 150 A GeV + 13 A GeV

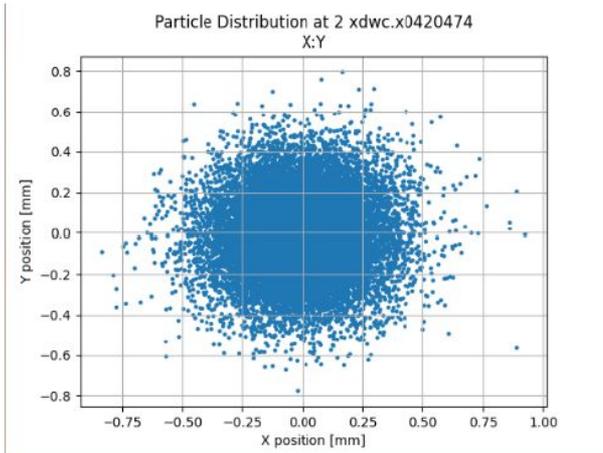
- ❑ Aims of the beam tests
 - ❑ Test prototype for muon tracker
 - ❑ Test Pb beam optics



Test of the Pb-beam optics

NA60+ needs a collimated beam from low (~ 30 A GeV) to top SPS energy
Studies of new optics carried out in 2021 (Alex)

| Parameter in zone 138 | 160 GeV/c | 30 GeV/c |
|--------------------------|-----------|----------|
| σ_x (mm) | 0.19 | 0.33 |
| σ_y (mm) | 0.19 | 0.36 |
| Transmission from T4 (%) | 32.43 | 23.5 |



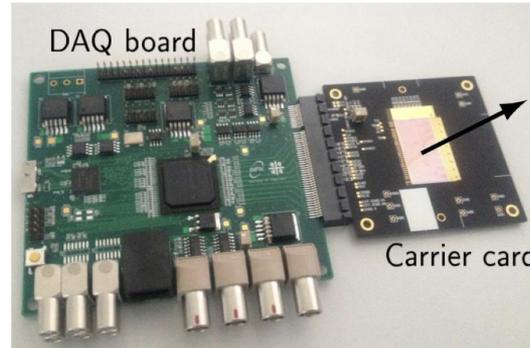
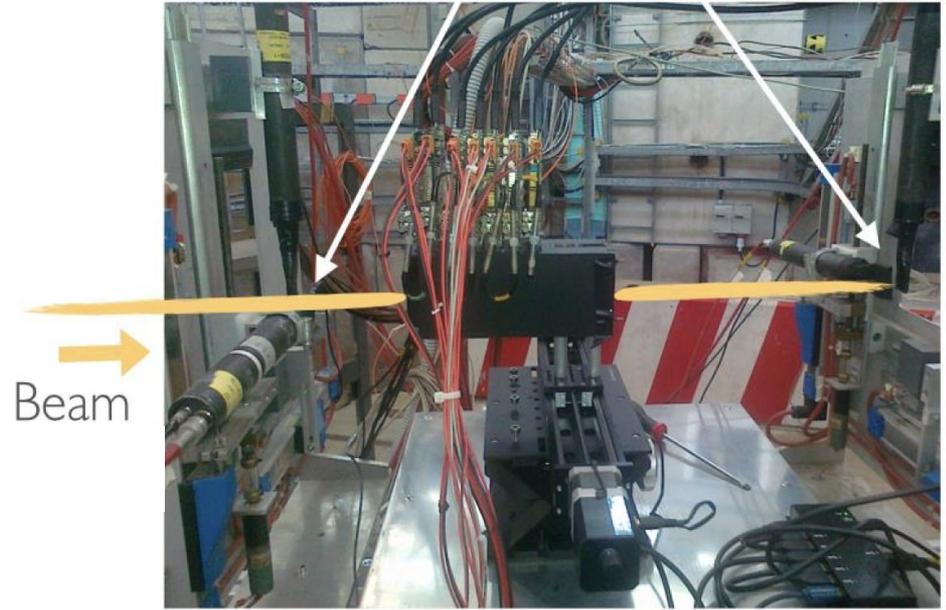
Perform a test in the PPE138 zone, foreseen for experiment installation, using a telescope of pixel detectors located at the target position

Use as low a beam intensity as needed for a meaningful test of the optics ($< 10^4/s$?)

Test of the Pb-beam optics

Scintillators (available in the PPE138 zone?)

Use a telescope of ALPIDE sensors (7 planes), to be borrowed by ALICE → contacts in progress
Moveable table needed



- USB based daq board
- Connected to a carrier hosting ALPIDE
- I/O ports for external trigger/busy

- Laptop in the zone for DAQ
- Connected via Ethernet connection to the counting room

Setup for muon tracker tests

1. The setup will contain the tracking telescope with three GEM stations & detector under test & three scintillators for the beam trigger.
2. Its dimensions are 100x60x60 cm.
3. The moveable X&Y table is required.
4. All gas detectors will operate with non flammable gas mixture of Ar/CO₂ (70:30).
5. The CAEN HV mainframe & long HV (8 cables) & Ethernet cables (1 cable) from counting room to the zone is preferable option for us.
6. The powered NIM crate is a desired option.
7. The low intensity (up to 1 kHz per spill) pion beam is a preferable option.
8. The standard beam energy setting of 180 GeV for H8 is fine for us.

