

# Test Beam Program for 2014

T. Alexopoulos, P. Iengo

# Availability of test beam at CERN

---

- ▶ SPS beam for users is expected to start on October 13th 2014. Beam stops on December 14.
- ▶ The new Gamma Irradiation Facility (GIF++) is expected to be available for users in fall 2014 (some delay possible due to safety rules)
- ▶ Tests to be performed before that dates must be done outside CERN.
- ▶ Do we need them?



# Tests on small (10x10) prototypes

---

- ▶ A number of additional tests on beam on small prototypes can be useful to study different working conditions of the detector:
  - ▶ Gas composition
  - ▶ Drift velocity
  - ▶ Working point
  - ▶ Etc. (see talk on Status and Plans for Data Analysis)
- ▶ These studies are not urgent → can wait for the SPS
- ▶ Easier to be performed on our standard test area in H6 from end of 2014 to 2015
- ▶ Possible additional tests in magnetic field with Goliath magnet or at H2
- ▶ No need to go somewhere else



# Tests on working quadruplets

---

- ▶ A number of 'mid-size' 'almost-final' working quadruplets will be available from beginning of 2014
  - ▶ Frascati, Saclay, CERN/Mainz
  - ▶ 1 of the CERN/Mainz chamber (MSW) will be installed on the Small Wheel in June 2014
- ▶ Chambers can be evaluated in labs (cosmics, X-rays)
- ▶ Do we need a more detailed study on beam?
  - ▶ the prototypes will be built with different methods and techniques, should we test them all in the same environment?
  - ▶ The CERN/Mainz chambers will have 2 resistive strip panels done with sputtering and 2 with screen printing. It is instructive to validate the difference with some precision
- ▶ The only possibility of testing these chambers on beam before the construction of Module-0 is going outside CERN. Time slot should be ~spring 2014
- ▶ Where?
  - ▶ LNF group has reserved a 2-week period at BTF end of February (still to be confirmed). Not the best beam condition: 500 MeV electrons; from the experience done in DESY the energy is too low at least for precise resolution studies
  - ▶ DESY. 5 GeV electrons, this time won't have the 'problem' of the magnet coil
  - ▶ PSI? Others?
- ▶ Do we need to do some high rate test with neutron or photons
- ▶ Where?



# Test on Module-0

---

- ▶ Four Module-0 will be available in second half of 2014
- ▶ Test on beam will be done at H6
- ▶ At least one Module-0 will be installed at GIF++ for a long term ageing test
- ▶ At least one Module-0 should also undergo intense high rate test with neutron or photons (also for measuring sensitivity to n and  $\gamma$  for final detectors)
- ▶ Where? Demokritos test site available at any time.

