

# Micromegas Test beam issues

Tasks list

# Test beam

- H6 test beam periods in 2012
  - 1. period: 26 July – 8 August
  - 2. period: 22 Oct – 5 Nov
- H2 ???
  - Possibility to use beam 28 May – 4 June
  - Magnetic field 0 – 3 Tesla, main user
- Test beams in 2013/14
  - No beams at CERN
  - Possibility at DESY (electrons  $\leq 6$  GeV, rates:  $\leq 1$  kHz/cm<sup>2</sup>)
  - Frascati, BNL, Protvino, ... ?
  - Gamma and/or neutron exposures
- Chamber test set ups in labs
  - Cosmic rays test stand(s)
  - Other ....

# Task list – organization

- Test beam organization (NTU Athens ?)
  - Setup of programme
  - Shift organization
  - Shift instructions
  - Book-keeping
- Data preparation & analysis
  - Processing of raw MM & BAT (Si telescope) data files
  - Data quality monitoring & data selection
  - Analysis
    - APV25 data
    - VMM1 data
      - TPC mode
      - Trigger

# Task list – set up

- Hardware
  - Chambers
    - Eight 10 x 10 cm<sup>2</sup> chambers with 0.4 mm strip pitch (single coordinate) (CERN + BNL) - ordered
    - Four 10 x 10 cm<sup>2</sup> chambers with 0.5 mm strip pitch (xy coordinate) -- ?? (CERN + ??) – not yet ordered
    - Four 10 x 10 cm<sup>2</sup> chambers with 0.25 mm strip pitch (xy coordinate) ?? – not yet ordered
    - 1 x 1 m<sup>2</sup> chamber (made of two 0.5 x 1.24 m<sup>2</sup> boards on Al carrier plate) (CERN) - ordered
  - Chamber support with rotation features for eight chambers (Freiburg)
  - HV system (CERN, NTUA for monitoring)
  - Gas (CERN)
  - BAT (CERN)
  - Scintillator trigger (NTU Athens?)
- Electronics
  - SRS system (Arizona/CERN/?)
  - APV25 hybrid cards (CERN)
  - VMM1
    - hybrid cards (BNL + Arizona)
    - SRS ADC card (Arizona)
  - FPGA evaluation board (NTU Athens)
  - Other electronics for trigger and  $\mu$ TPC evaluation?
  - DAQ system (CERN) – do we need two systems (2 SRS and PCs?)