Large Area GEM Detectors for Muon Tomography: Activities at CERN
Quick summary

• We (mainly Amilkar) have 3 more detectors assembled to make it 6 total (see pictures next slides)
• We prepared 6 HV divider board, solder the resistors, cleaning and coating for protection. 3 already assembled to 3 detectors (GEM foils strips soldered to the board, see pictures)
• Got the DAQ system in place and start testing both the LabView code and the VME modules (sequencer, C-RAMs etc …)
• Launch the production of the Panasonic-Samtec adapters
• We damaged 5 foils (2 detectors) and are trying to recover them with the help of Rui
6 Assembled GEM Detectors

3 first assembled GEMS (06/09):
- Panasonic connectors (06/09)
- Gas connectors and tube (06/09)
- HV boards with soldered GEM foils (10/09)
Ready for X ray source test (thursday)

3 more assembled GEMS (10/09):
- No Panasonic connectors yet
- Gas connectors and tube (10/09)
- HV boards, foils not soldered yet (10/09)
Mounted HV board

Close view of segmented foil strips soldered on the HV board, with the HV connectors

Back plane of a chamber showing the resistor divider for the HV and the mechanical attachment of the board on the detectors
The VME based DAQ

Sharing the VME rack with RD51 test beam group

Our setup

Controller

Sequencer V551

Fiber optic cable to the Labview PC

8 CRAMs V550
To do this week (and next week?)

• Ship assembly part for 2 detectors to Florida Tech (Tuesday ...)
• Solder the HV to the 3 new chambers (Tuesday)
• Start testing the 3 first chambers under Fe55 and Xray
  • (Wednesday, Thursday …)
• Send the 3 new chambers to the PCB to solder the P5KS
  
  We need to buy more Panasonic connectors
• Make progress in the Labview code debugging and DAQ testing
• Check with Rui if he manage to recover the 5 damage foils
  • If so, will assembly one more triple GEM and one double GEM
• Change my flight to stay one more week here to complete the job