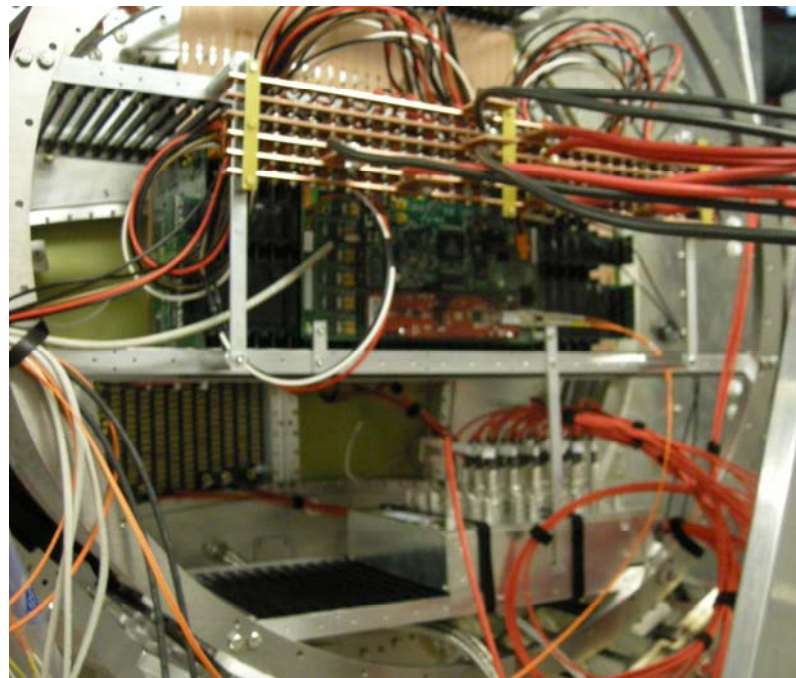
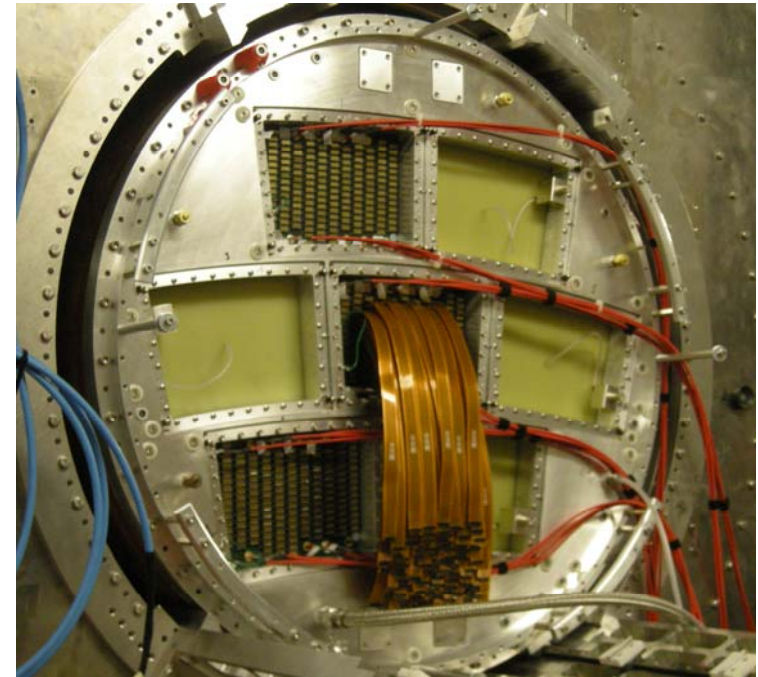


# Status GEM Module

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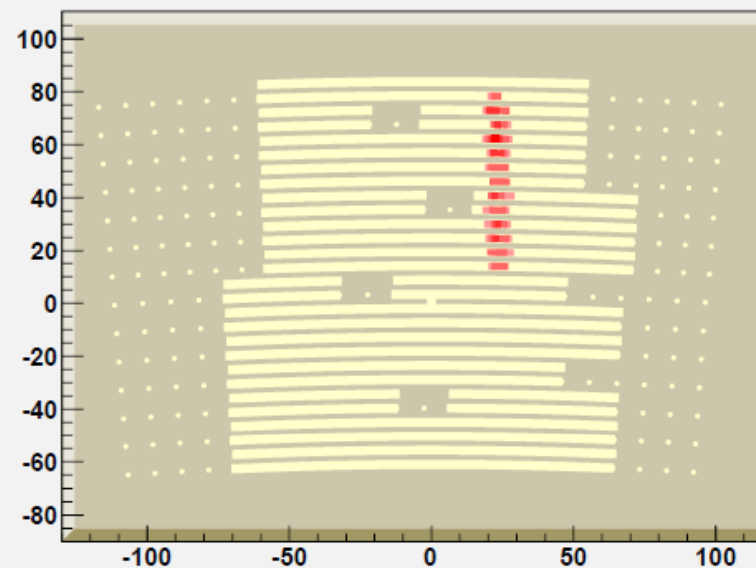
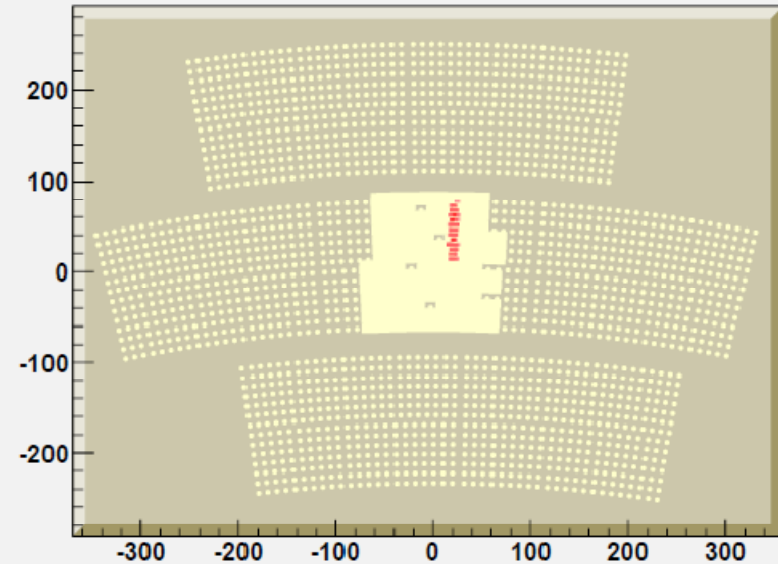
# LP1 GEM Test

- 3 GEM modules installation
  - Concentration ALTRO  
3200ch. to central modules
  - Cosmic test



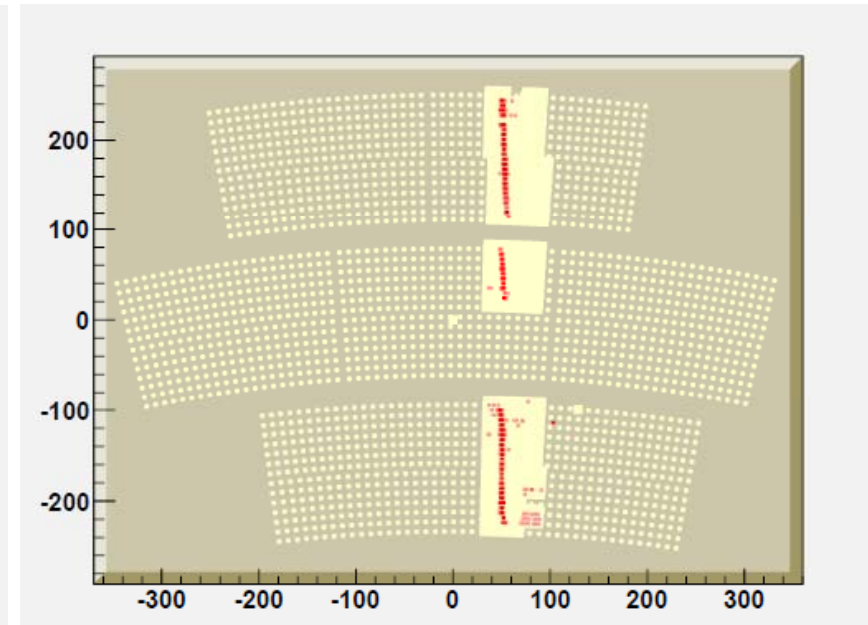
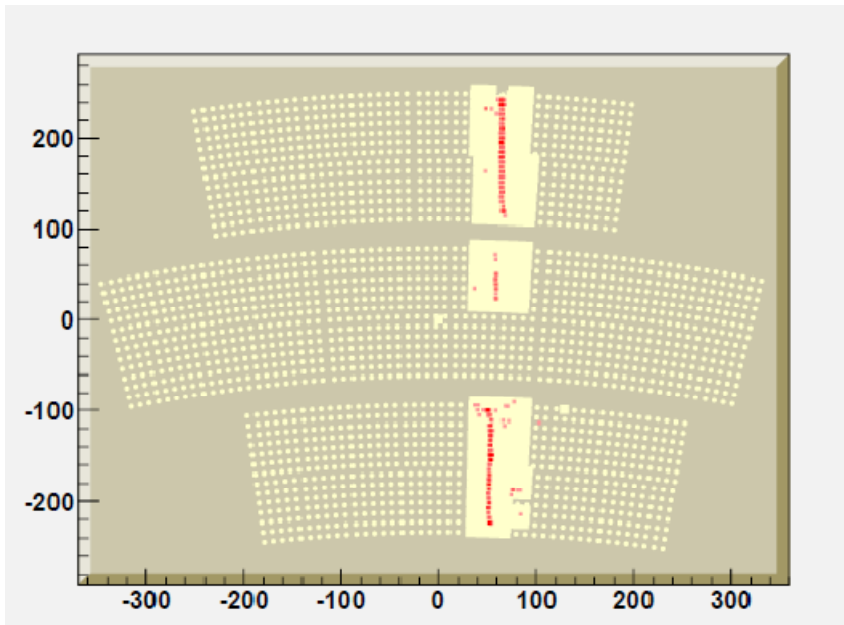
# Cosmic test w/ 1 module

- Event display
  - cannot see signal at lower half of part
  - disconnect GEM and electrode of inside TPC
- At installation or moving TPC ?



# Beam test w/ 3 modules at 1T

- Event display
  - dead channel
  - some distortion ?
  - mapping is not correct ?



Almost  
O.K.

- Take beam data at  $B = 1$  T with 3 modules at 5 GeV
  - ALTRO parameter
    - pre = 3 time bin, post = 7 time bin, shaper = on, shaping time = 120 ns
    - Gain = 27, threshold = 4
  - Drift distance dependence with zero suppression
    - 70, 100, 150, 200, 300, 400, 500 [mm]
  - Drift distance dependence with non-zero suppression
    - 70, 100, 150, 200, 300, 400, 500 [mm]
  - ALTRO shaper dependence at 150, 200, 300 [mm]
    - shaping time 30, 60, 90 [ns], shaper off
  
- Take beam data at  $B = 0$  T
  - Drift distance dependence w zero suppression
    - 70, 100, 150, 200, 300, 400, 500 [mm]

20000 events

$\phi$  4.5°

5000 events

$\phi$  4.5°

20000 events

$\phi$  4.5°

option

20000 events

$\phi$  4.5°