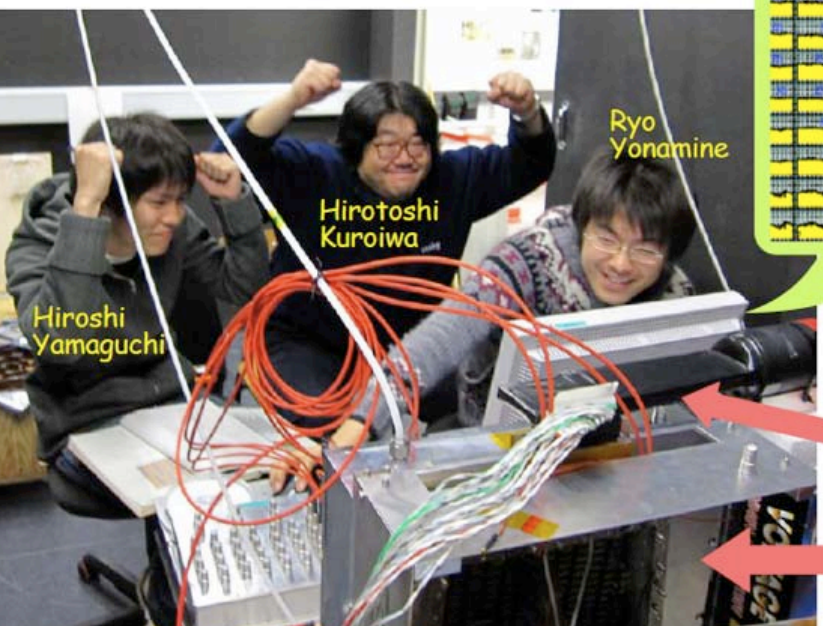
Status of GEM module

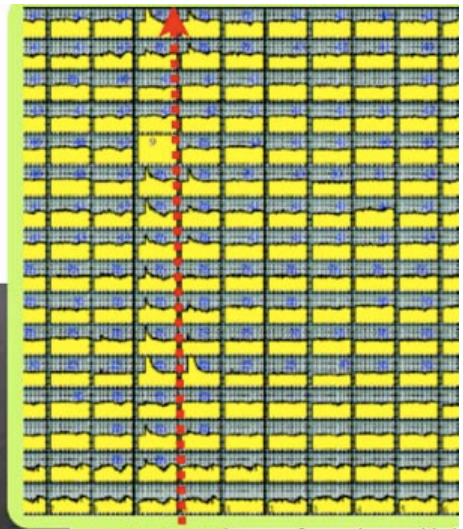
GEM module w/ local DAQ
exercise of module installation
offline monitor

note

numbering of module
numbering of layer(pad-row)
numbering of pad

The moment we found
the first Cosmic ray event
at DESY
YATTAH !!



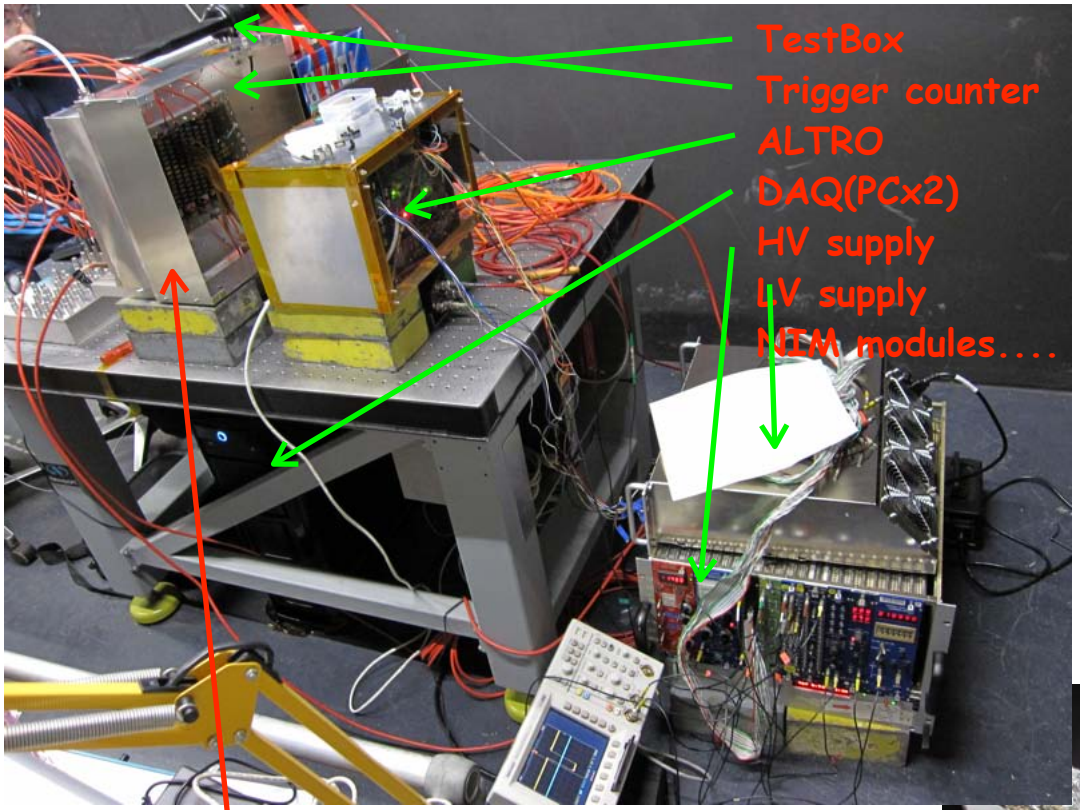


FADC dist. of each pad(x) row(y).

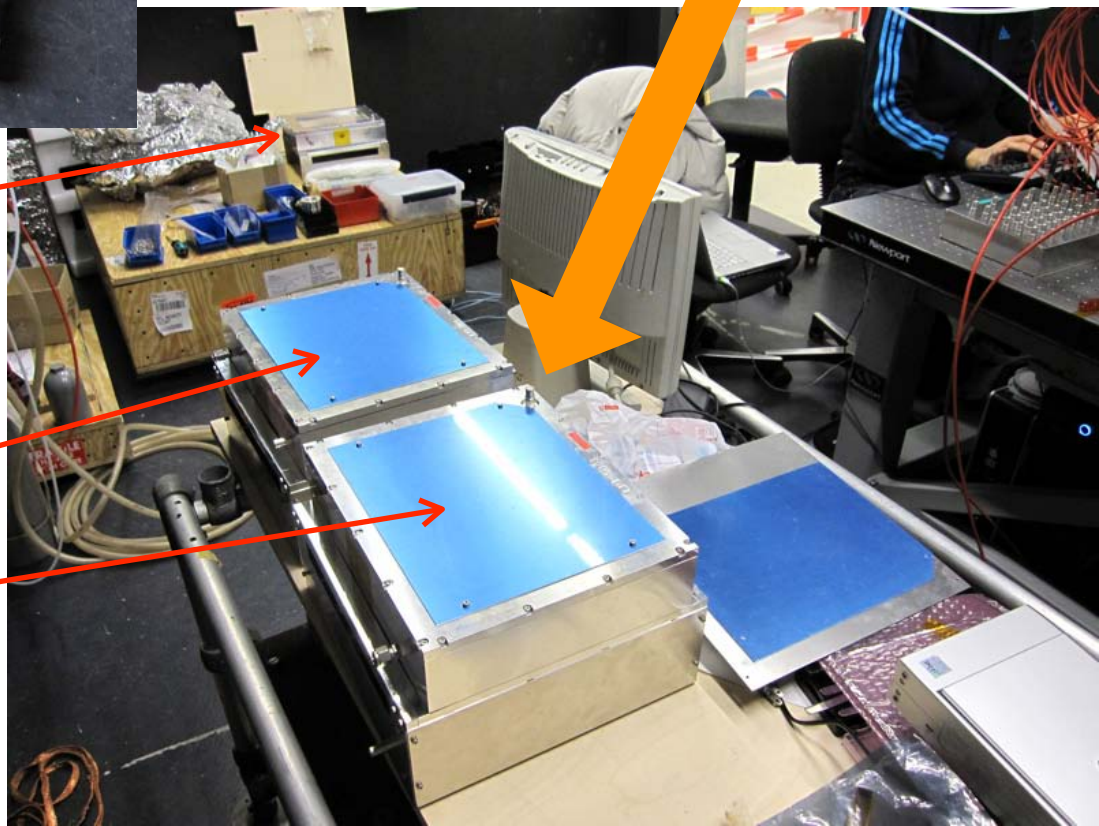
Trigger counter

GEM module with test box

Package from Japan



PCB from Tsinghua



GEM module #1
is ready to be installed

GEM module #2
on test with cosmic ray

GEM module #3

GEM module #4

3 spare GEMs
3 Gate GEMS

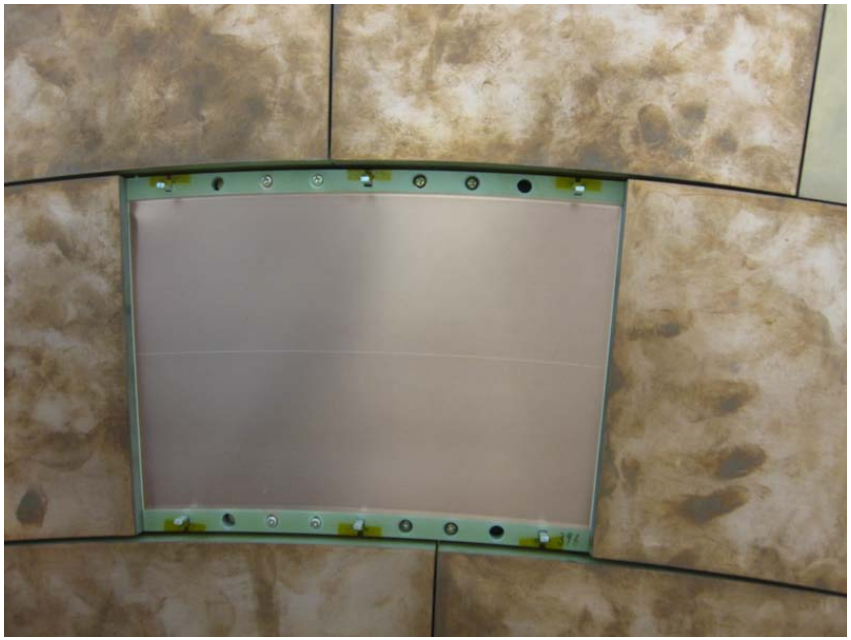
What we are testing before installation.

GEM is OK ? can be known from HV vs current

Cosmic ray data from ALTRO DAQ

we brought another pre/post amp. to see signal on Oscillo.

but it doesn't work with ALTRO at all due to digital noise



We don't use Gate GEM this time

How GEM module does fit into EP

!! Insulator is facing to drift region !!

!! There is 1cm GAP

between GEM surface and dummy surface

--> apply 7th grid V to recover this difference

Bunch of tiny connectors

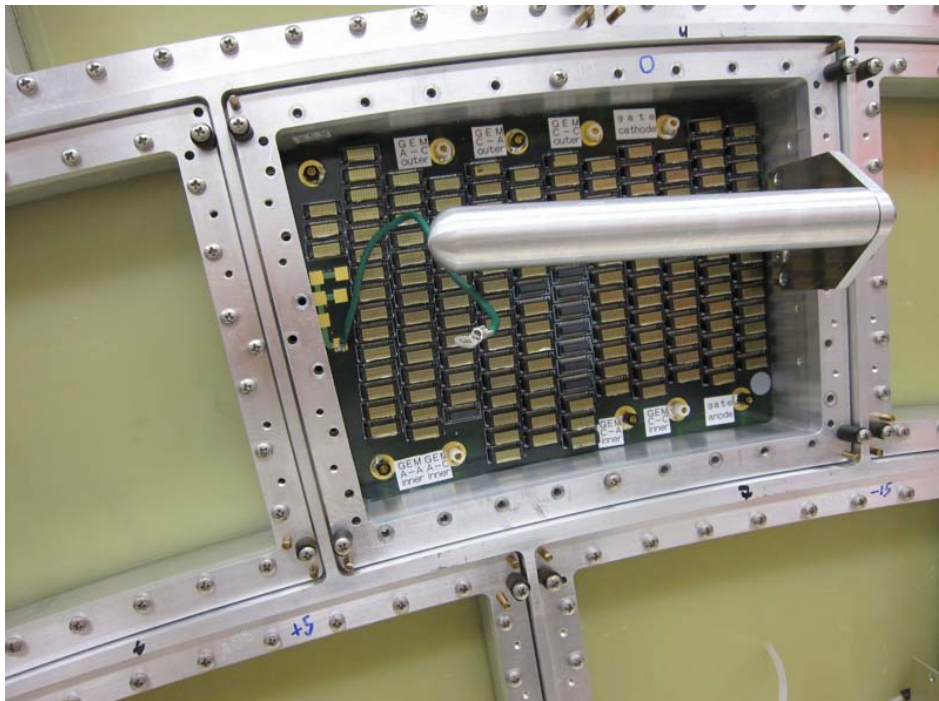
grounding connectors(receptacles) are

mounted on all unused connectors

10 connectors of HV

2 for a segment of GEM x 2segment x 2 layers

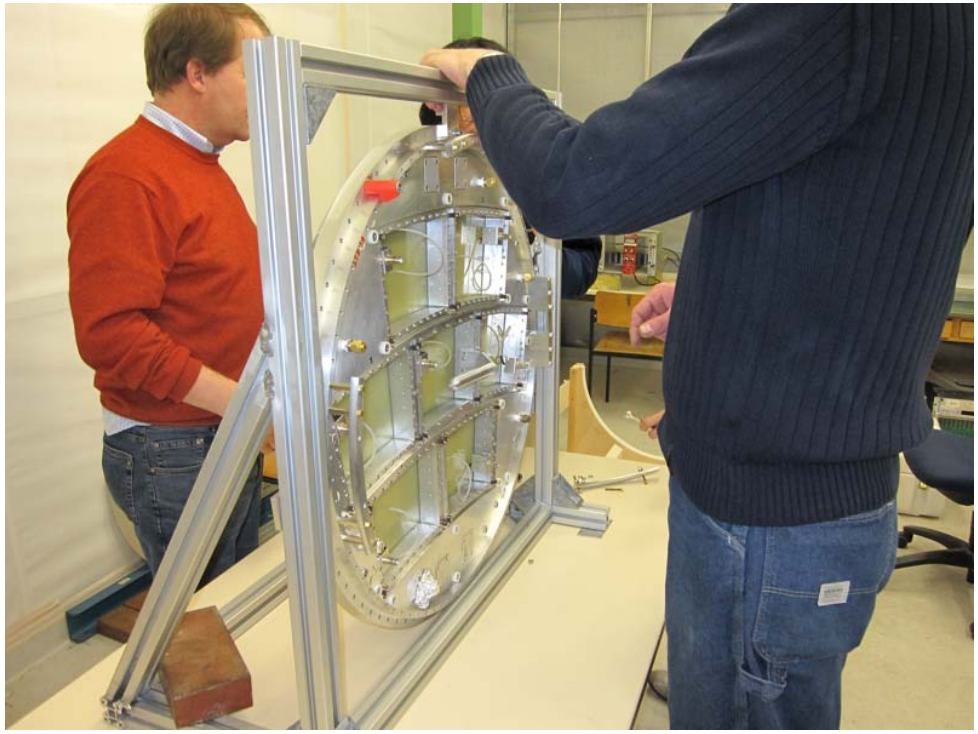
2 for GATE (unused this time)



exercise of module installation

Klaus and Volker prepared nice setup
for our exercise

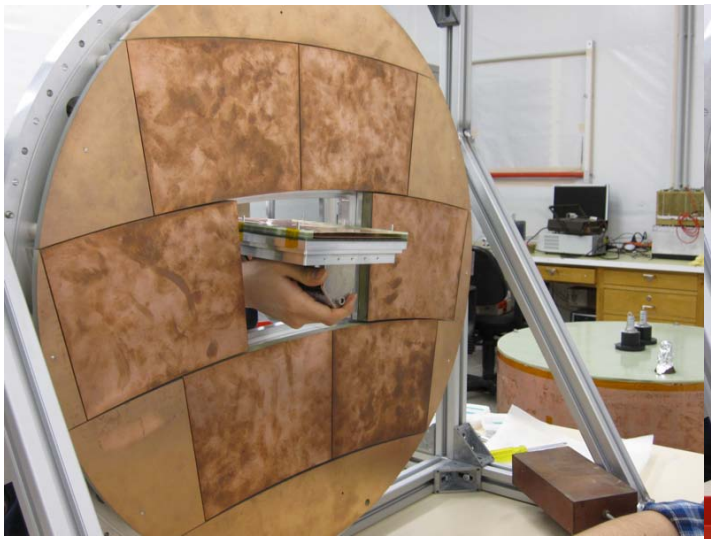
We started exercise of installation
with dummy module.



We also did practice with real module.

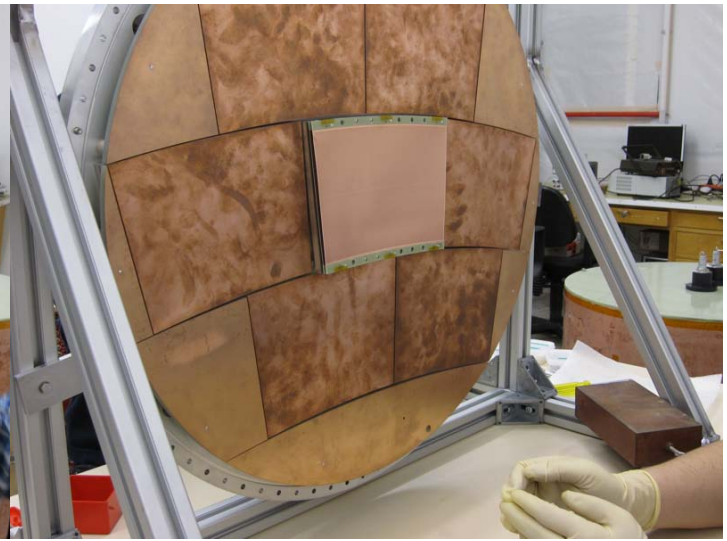
We made sure this module alive after practice!

put GEM module into "LP1"

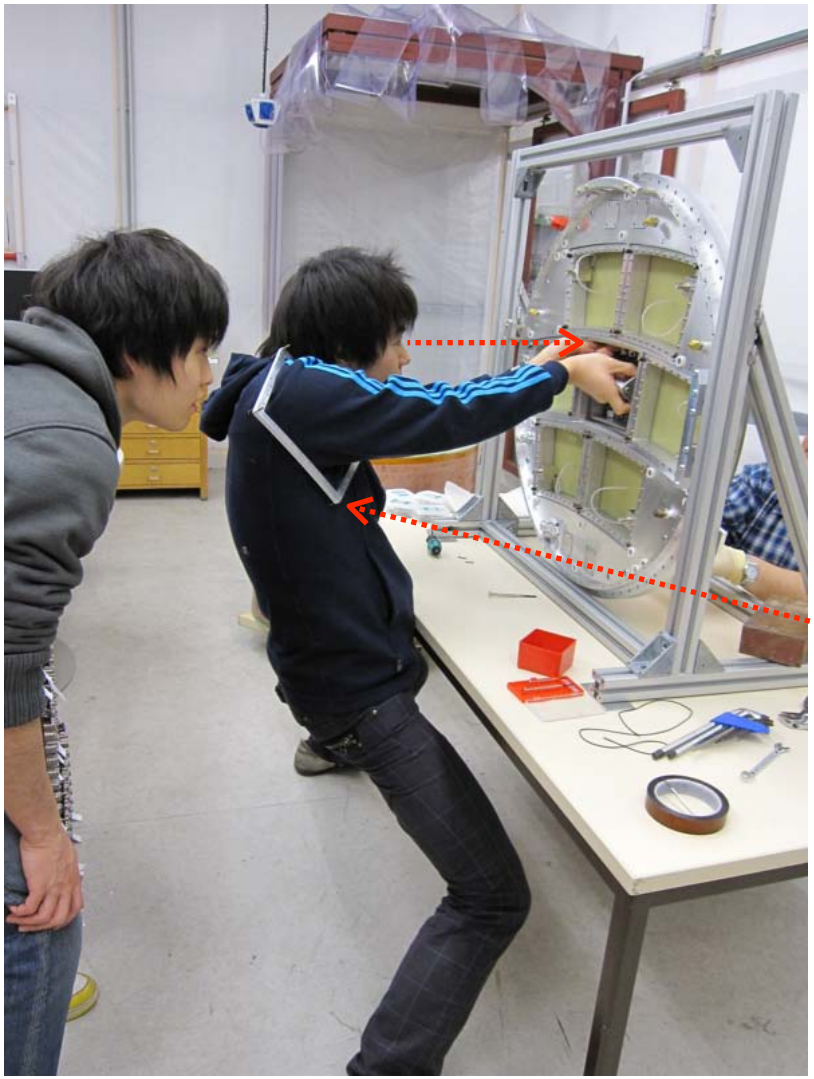


flip module right way

pull back to right position



Important tips ! when you install module into LP1



This is right stance !!

keep watching a distance of upper side of GEM to hole

eye level must be aligned to the same level

mounting bracket must be removed
when we install
(not like micromegas case !)

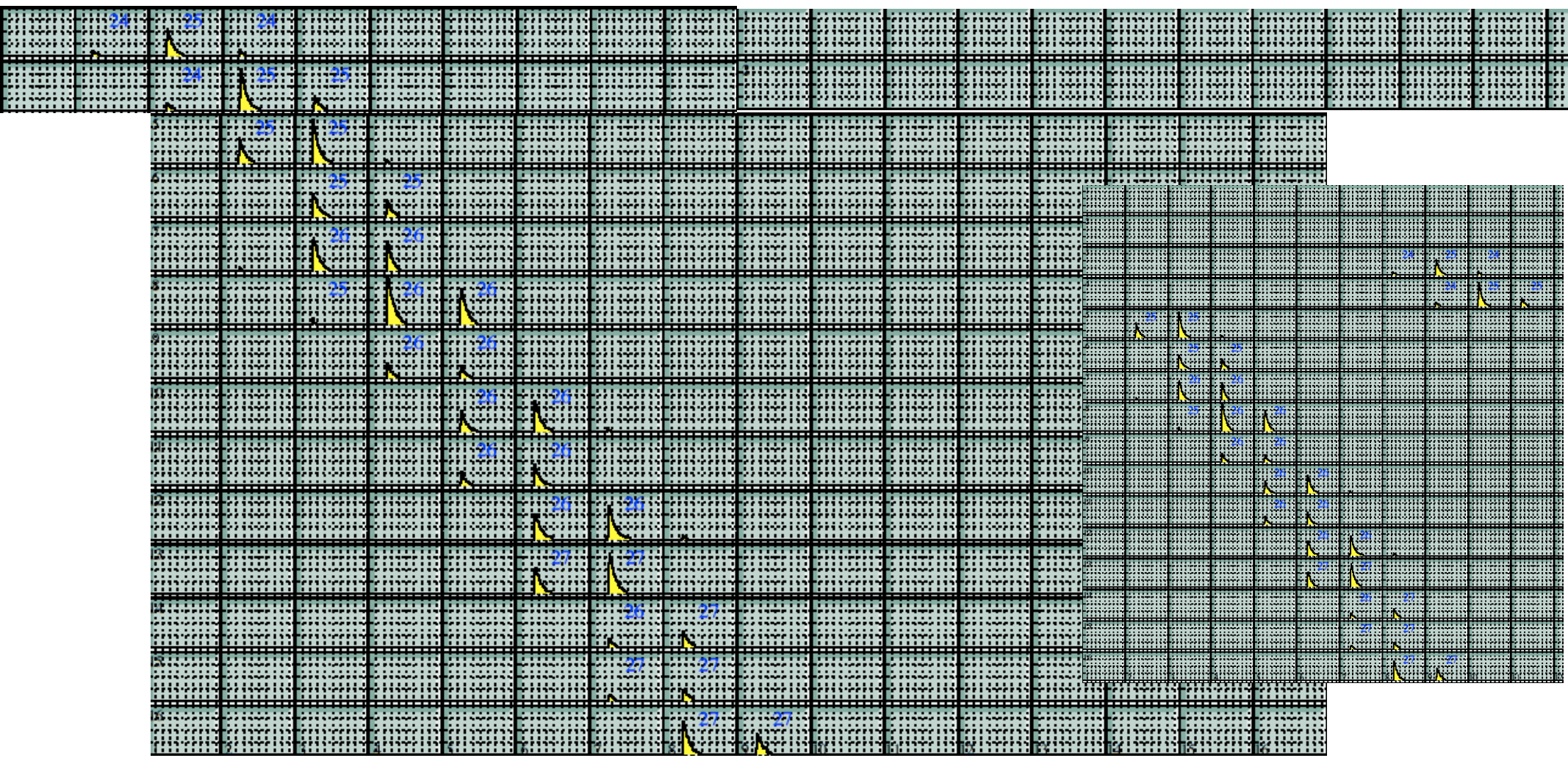
How cosmic ray data look like

2FEC available for local DAQ -> 8 connectors = 16 layers of 16 pad series

Offline quick monitor

each hist. corresponds to ADC-vs-time plot(flash ADC dist.) on each pad(~1x5 mm2)

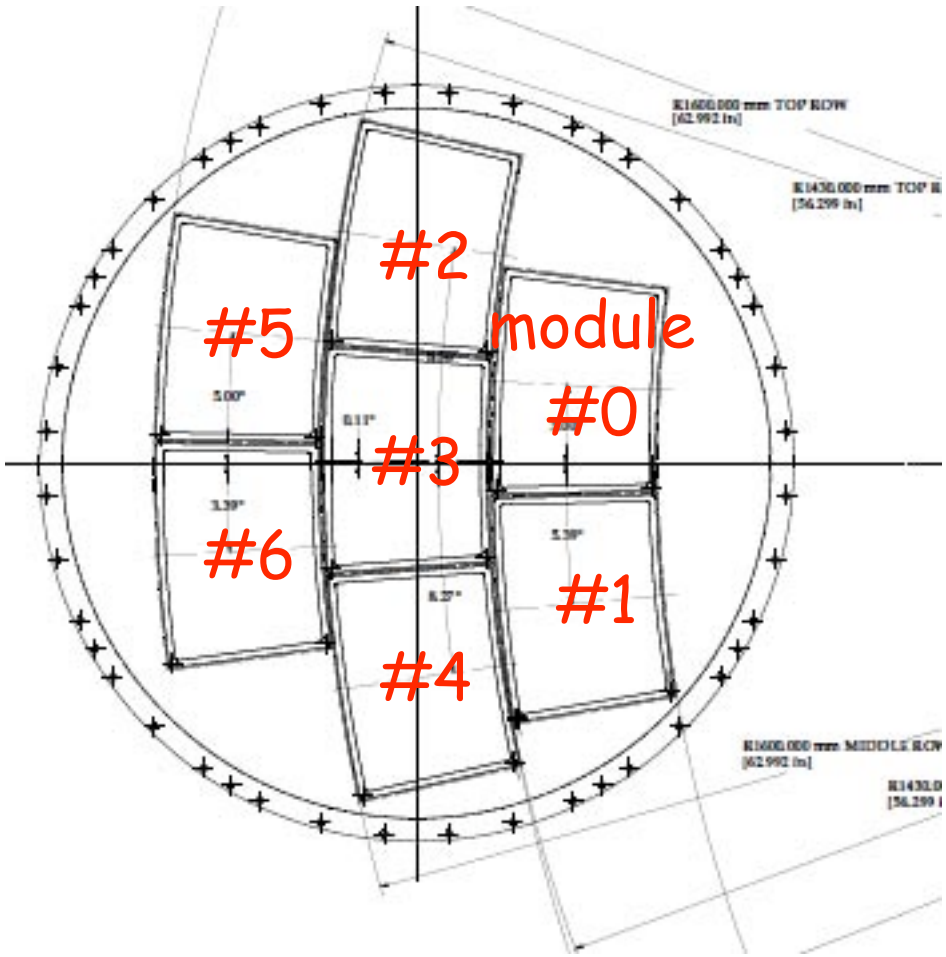
you would reconstruct track in your brain easily



numbering of module(?hole?)

view from outside of LP1

(from connector side of PCB)

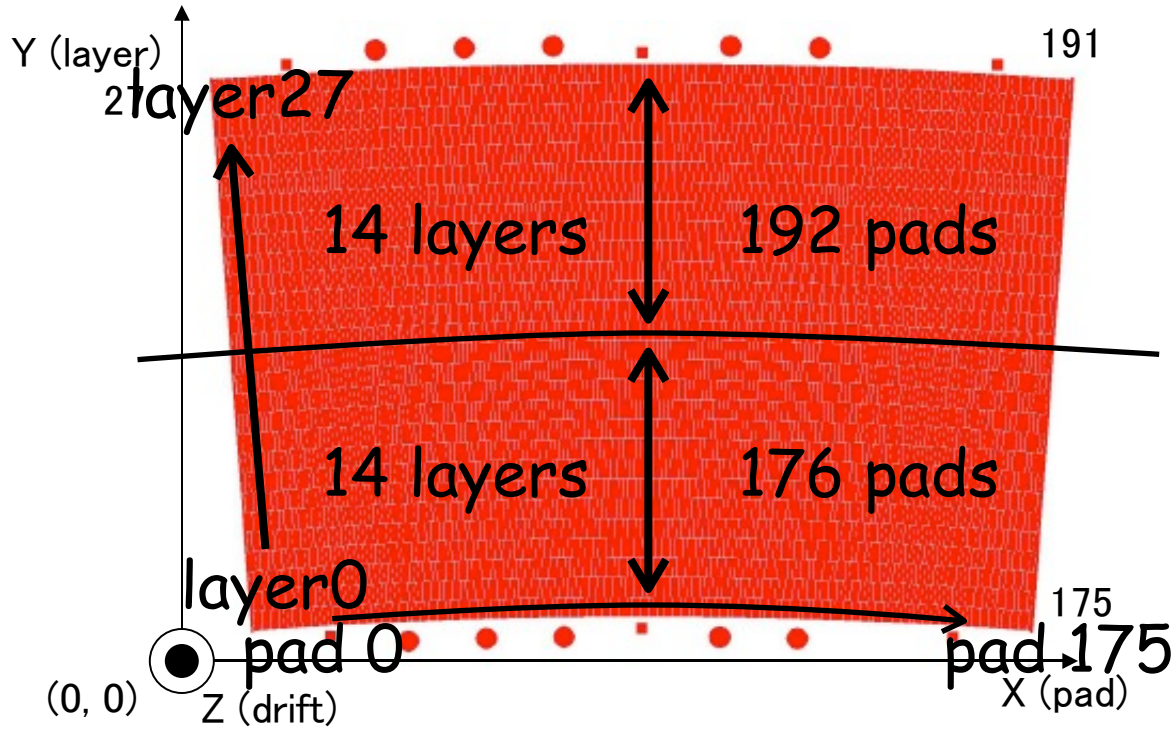


beam

numbering of layer(pad-row)
numbering of pad

Definition

- From front of pad plane



Latest status 2009/02/17

LP1: finish survey of EP side and Cathode ready

3 GEM modules are installed !!

LP1 moves to testbeam area today.