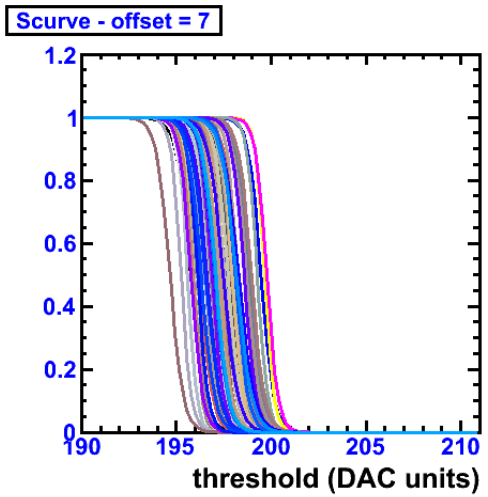
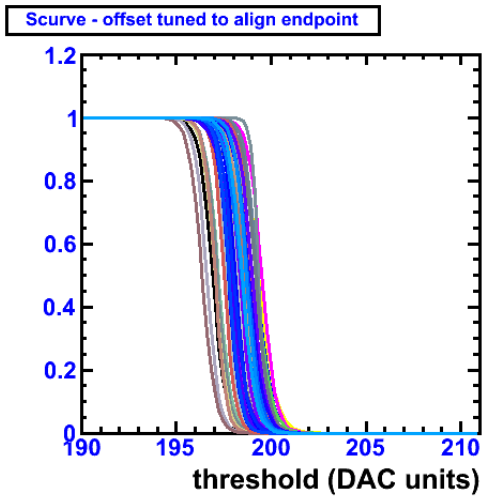
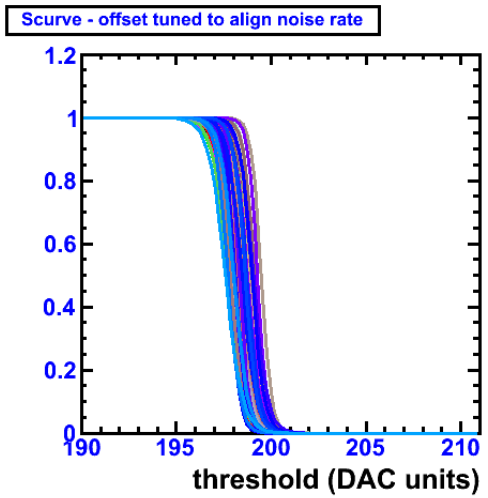
M2 prototype – chip settings – noise rate



Pedestals at different offsets (0,3,7,11,15)
→ offset map to align endpoint
+ thresholds



Pedestals with aligned endpoint
CAN DO BETTER



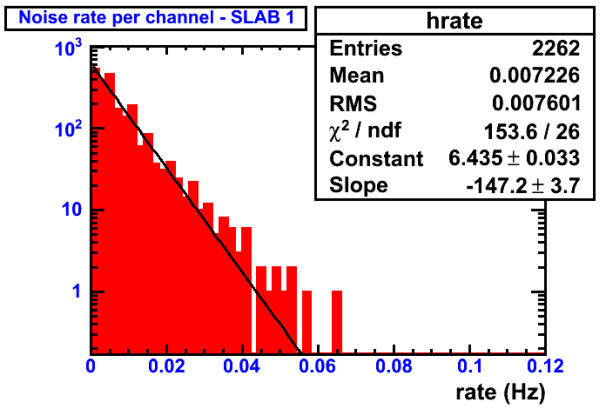
Pedestals with aligned noise rate

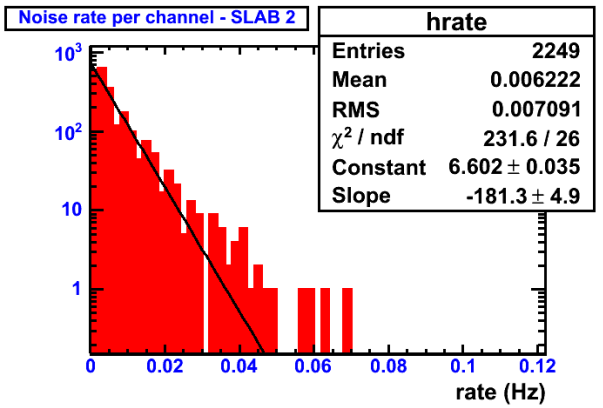
Average noise rate
~ 7 mHz / channel

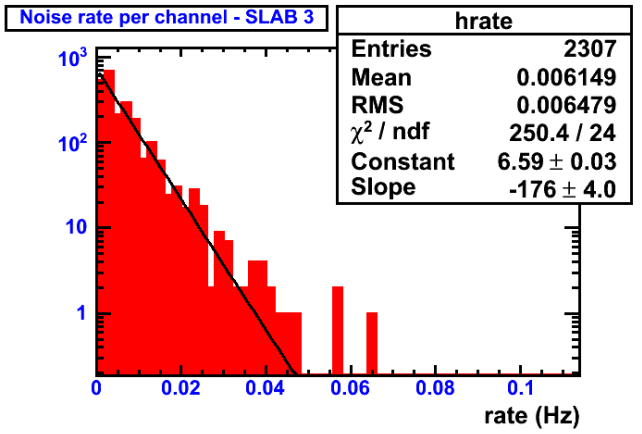
SLAB1	147 s
SLAB2	180 s
SLAB3	176 s

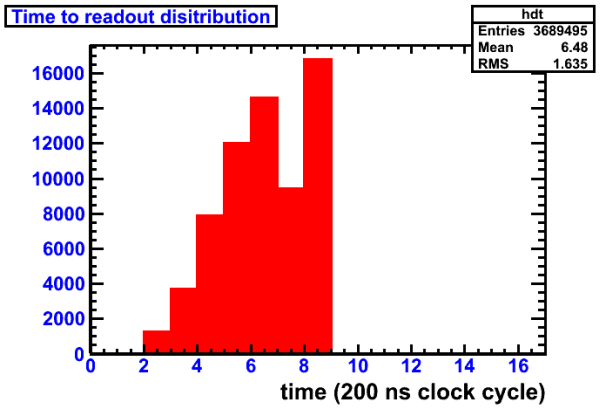
Noisy channel
0.5 per mil

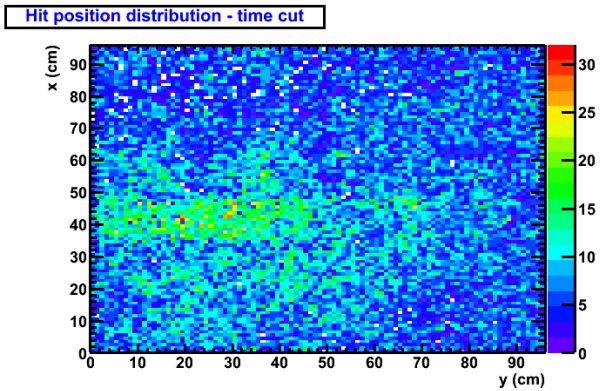
SLAB1	1
SLAB2	3
SLAB3	2

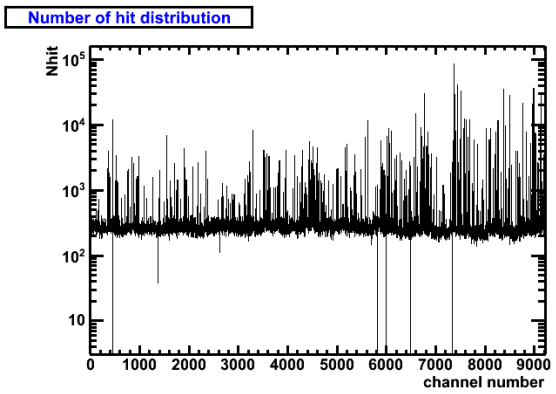


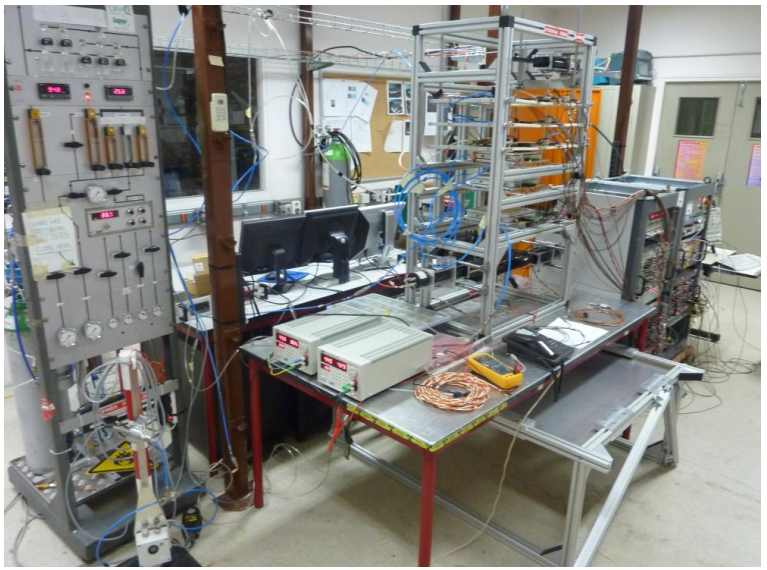












PM 1 + 2 + 3
Rate: 0.1 Hz
2617 triggers over last night

M2 prototype: (380, 530) V

M2 prototype status

Gas
Tightness OK
Flush 1 chamber volume per hour (3 l/h)

HV
Stable (no trip) at 380 V in premix
Not tested at higher HV

Chips
Threshold and offset set
Average noise rate of 7 mHz / channel

Readout
LabView m2 OK
Triggered RO OK
RAMFULL RO fails after ~100-200 RO
(problem comes from SLAB2)

Reconstruction OK

Telescope status

Gas
Tightness of strip chamber to be checked
1 gas line for pad chambers (0.1 l/h)
1 gas line for strip chambers (0.4 l/h)

HV
Pad chamber: stable at 420 V in premix
Filters being installed for strip chambers

Chips
9 Gassiplex boards
All pedestals look OK (50 ADC dispersion)
1 pad chamber does not see cosmics (b2.1 E)
No info yet for strip chambers

Readout
LabView m2 OK

Reconstruction
Strip chamber geometry not implemented yet
Can use pad geometry + some tricks in analysis

Test beam – August 2011 - SPS/H4
19 (-2 MD) days → 17 days

3/08 First day (no beam)

Installation & safety inspection
Debug and start DAQ (synchronisation, power-pulsing, RAMFULL)
Calibration m2 prototype (threshold settings and noise alignment)

4-9/08 Standalone period
9-22/08 Multi-user period

Beam profile (alignment)
HV scan (working point: 420 V or less? Drift field?)
Gas flow rate scan (start with 1 volume an hour)

Efficiency map
Wide beam + Pad telescope OR Narrow beam + Strip telescope
3000 trigger/pad – 20 Hz acquisition
→ 18 days for 9216 pads, not realistic
→ 1 complete ASU + some specific locations (edges, gas pipes...)

Correction of detector non-uniformity with channel offset

Operation in RAMFULL mode (trigger-less)
Measurement of beam profile and showers