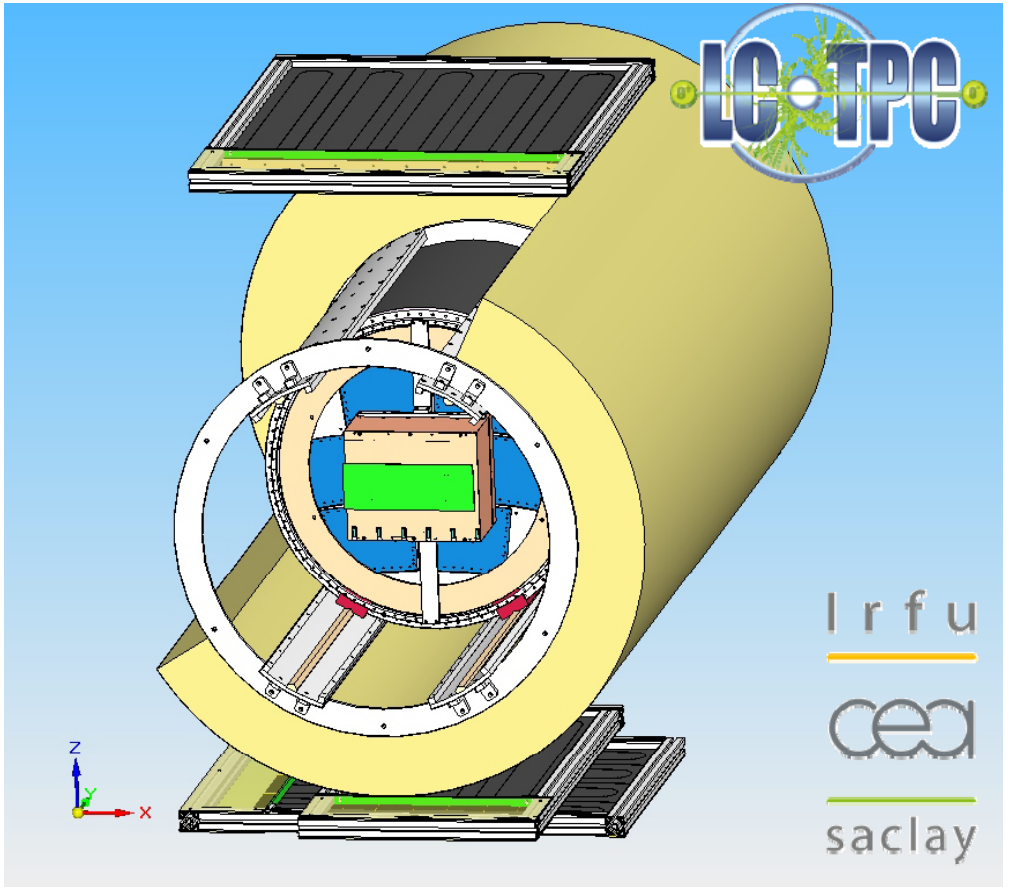
# TPC Large Prototype Micromegas panels

D. Attié, P. Colas, E. Delagnes, M. Dixit, A. Giganon, M. Riallot, F. Senée, S. Turnbull


**Micromegas Large Prototype panels**

**Installation at DESY**

**Preparing for beam tests**

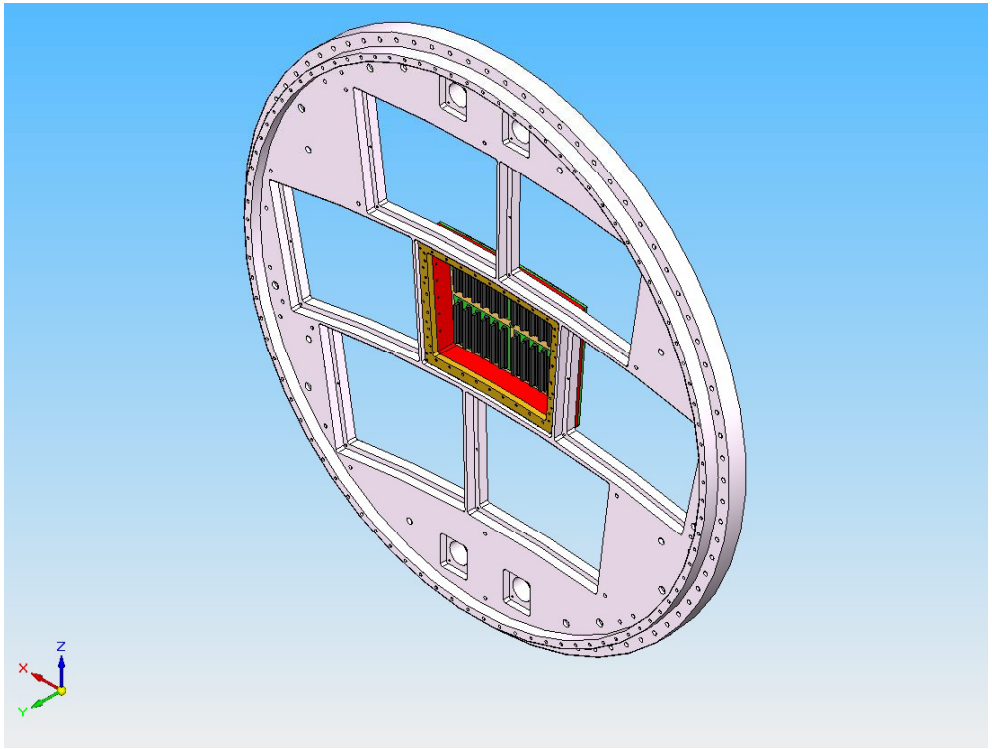


Panels: in 2008-2009: 1 panel at a time in the centre of the detector.

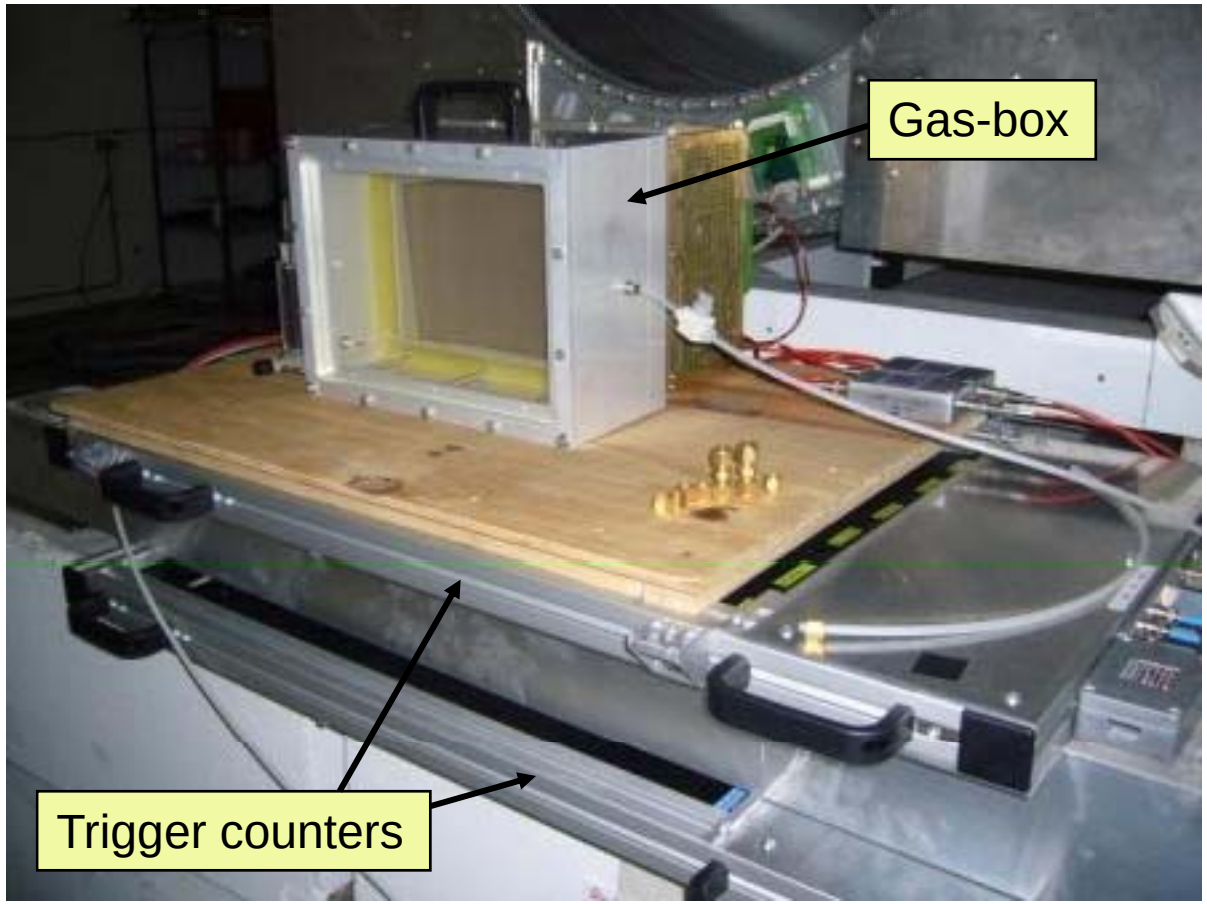
Start with standard pads

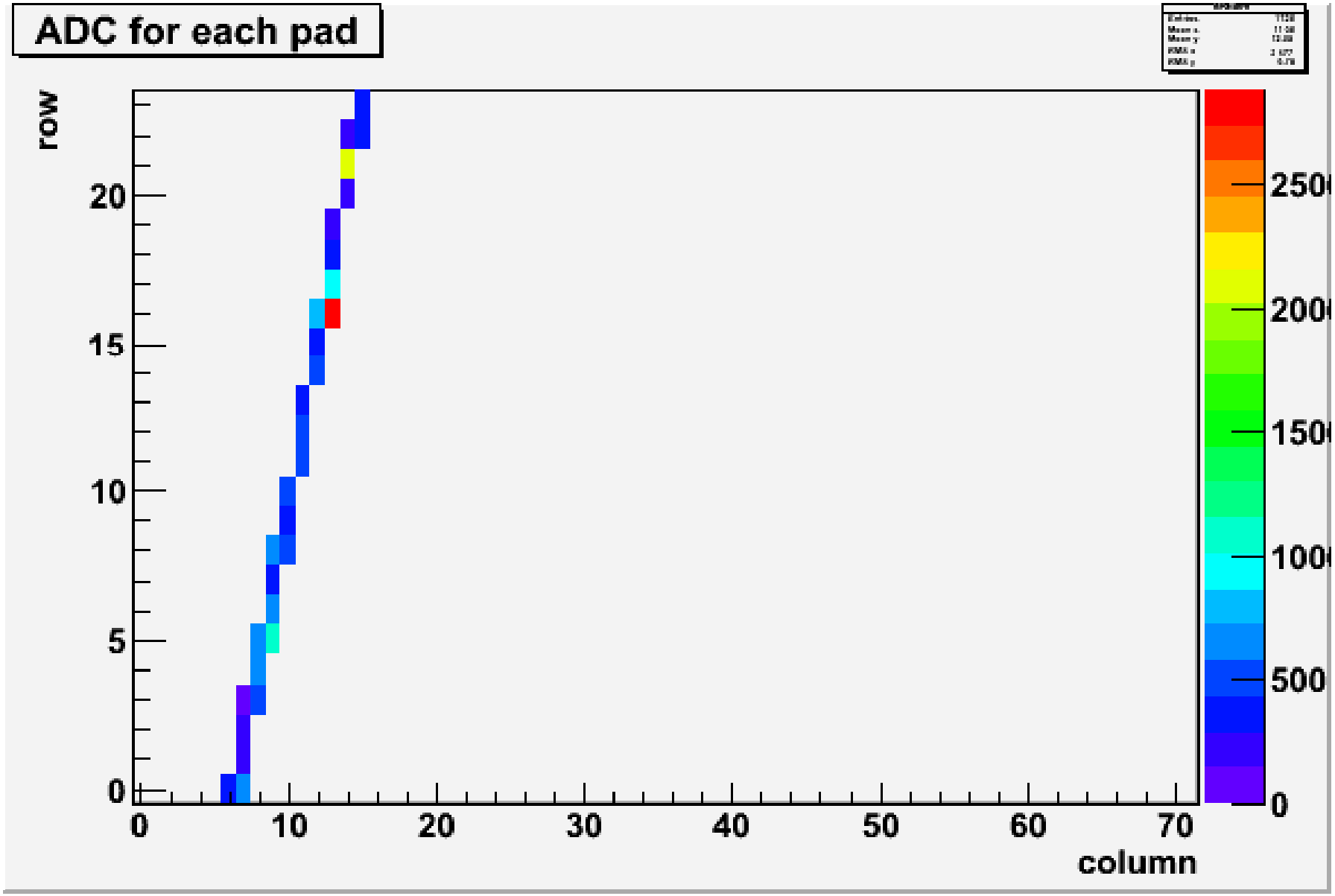
Continue (second half of November) with a resistive panel.

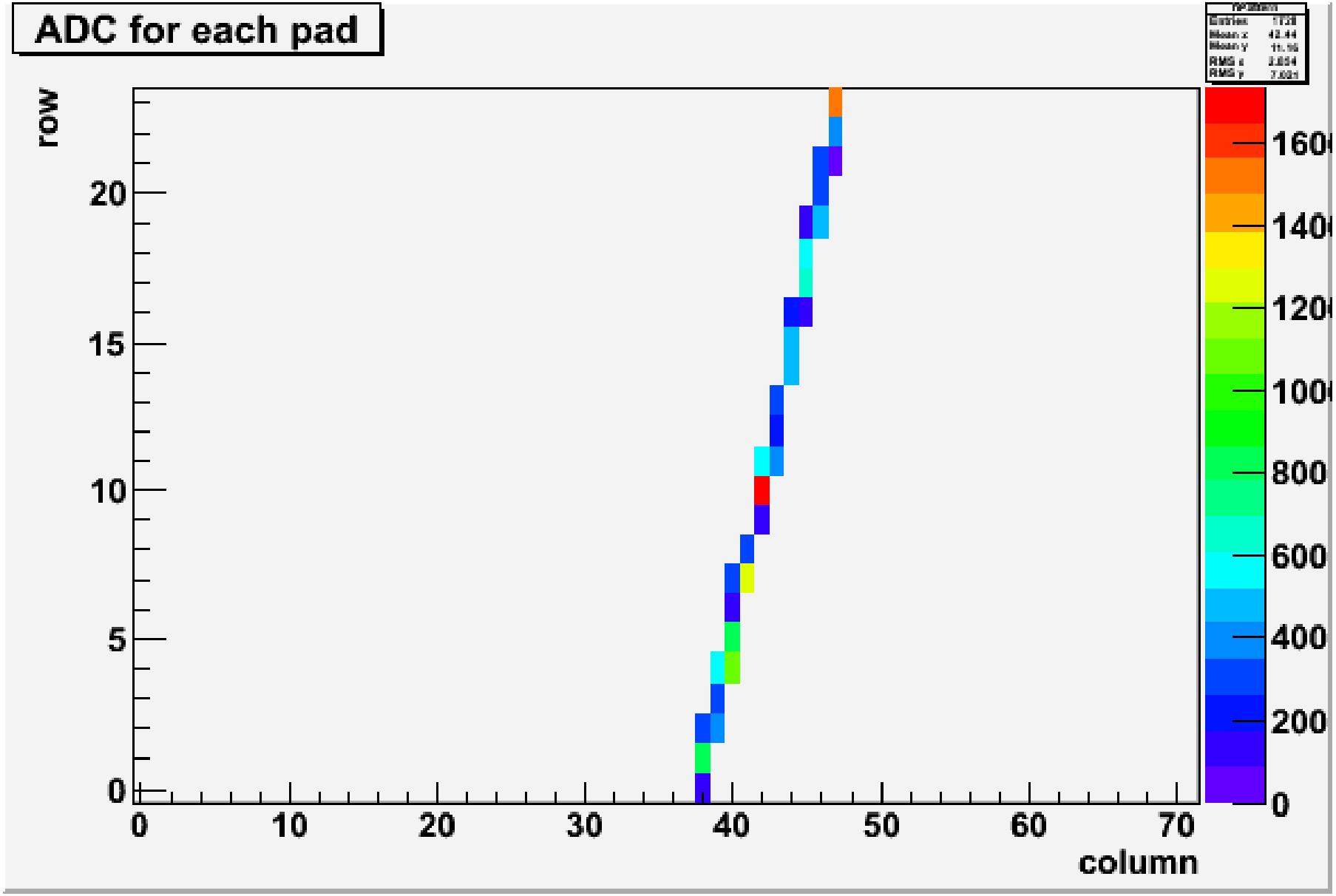
Others are dummy. Also plans for trying a multichip InGrid+TimePix panel.



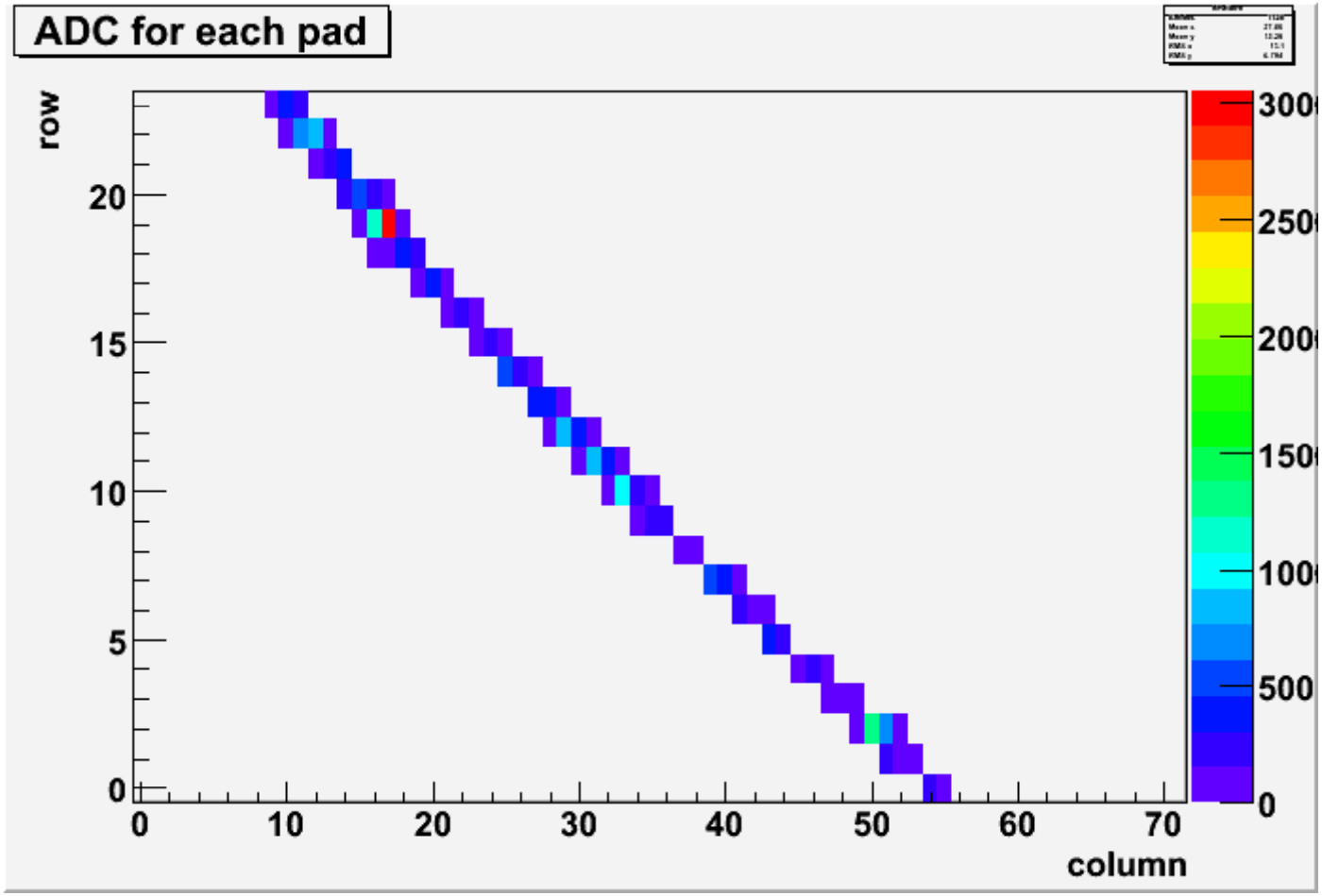
# In-situ TEST at DESY

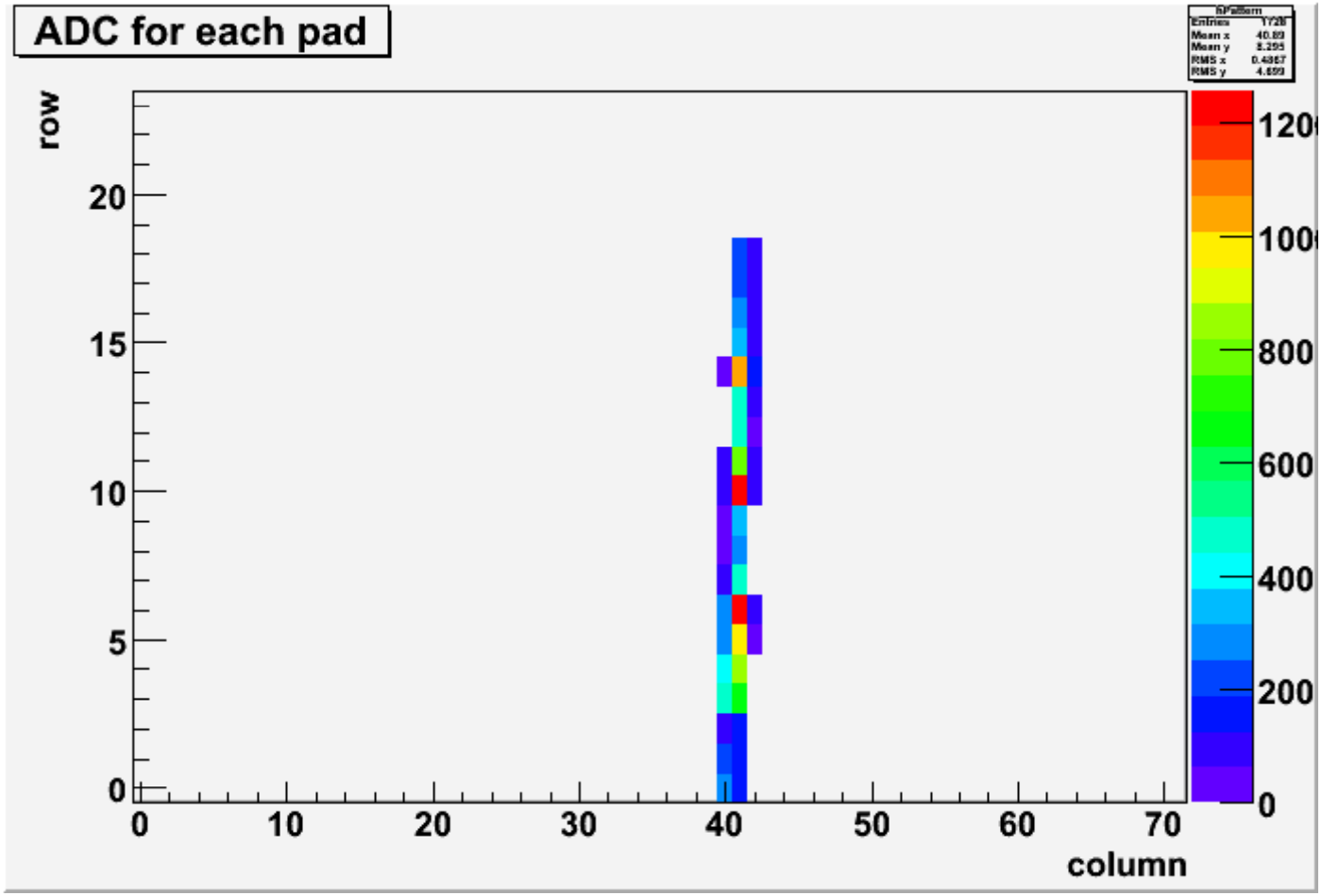


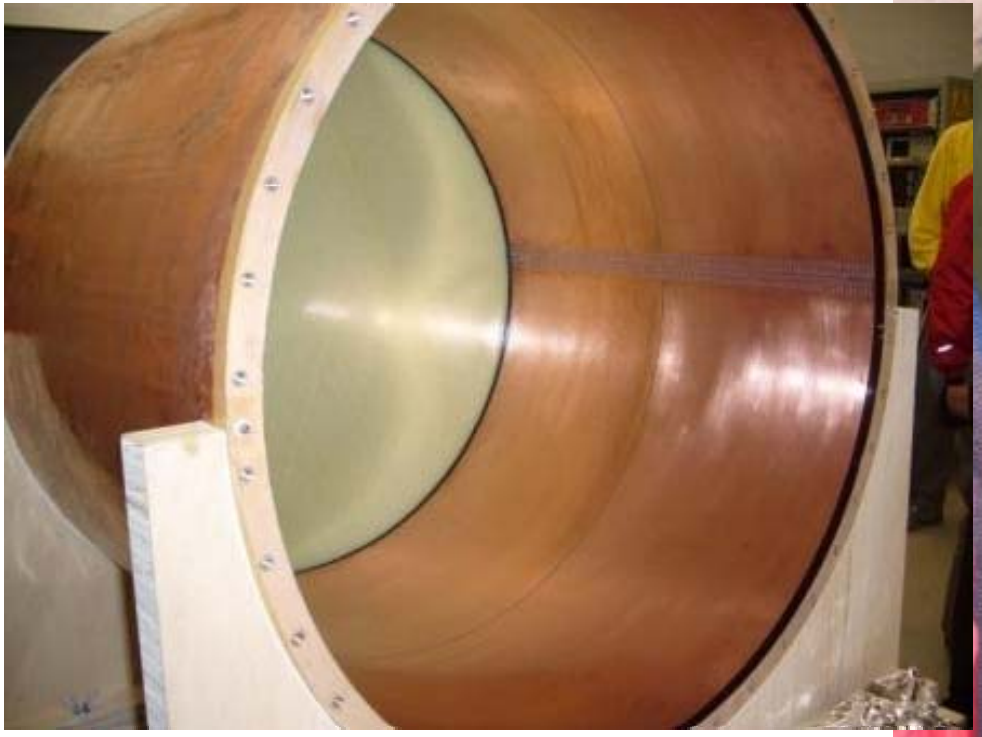

ADC for each pad
row
0
5
10
15
20
0
10
20
30
40
50
60
70
column
0
500
1000
1500
2000
2500


ADC for each pad
row
column
0
5
10
15
20
0
10
20
30
40
50
60
70
0
200
400
600
800
100
120
140
160

# New detector with resistive foil in the gas box


ADC for each pad
row
column
0
5
10
15
20
0
10
20
30
40
50
60
70
0
500
100
150
200
250
300


ADC for each pad
row
20
15
10
5
0
0
10
20
30
40
50
60
70
column
120
100
800
600
400
200
0



- Took data with P5 gas with standard pads on October 2 and 3 at 50 MHz sampling rate, and 200ns peaking time.
- Tested the whole chain again on October 27, and switched to the new module (with C-loaded kapton resistive foil) in the test box (took about 2 hours)
- Took data since October 27 with P5
  - 50 MHz sampling rate, 200 ns peaking time
  - 100 MHz sampling rate, 200 ns peaking time
  - 50 MHz sampling rate, 400 ns peaking time
- Switched now to T2K gas (Ar/CF4/isobutane:95:3:2)

# plans


Take beam data in the magnet in the period of weeks 46-47-48 (+1 or 2?)

- Install and commission beam trigger (today)
- Mount standard panel + 6 dummies on the endplate
- Finalize and connect cathode
- Cool down magnet
- See how to set HV (1st ring to 360-370 V)
- Order gas : 25 bar per bottle, 1 bottle for 18 hours at 60 l/h, 1 bottle in 55 hours at 20 l/h.
- Add bubbler
- Excite magnet on November 10
- Then start beam data taking and analysis
- switch to resistive anode week 47