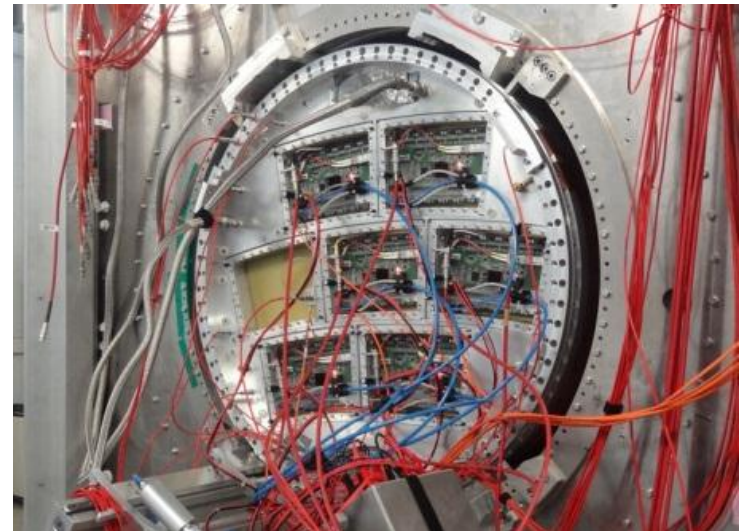
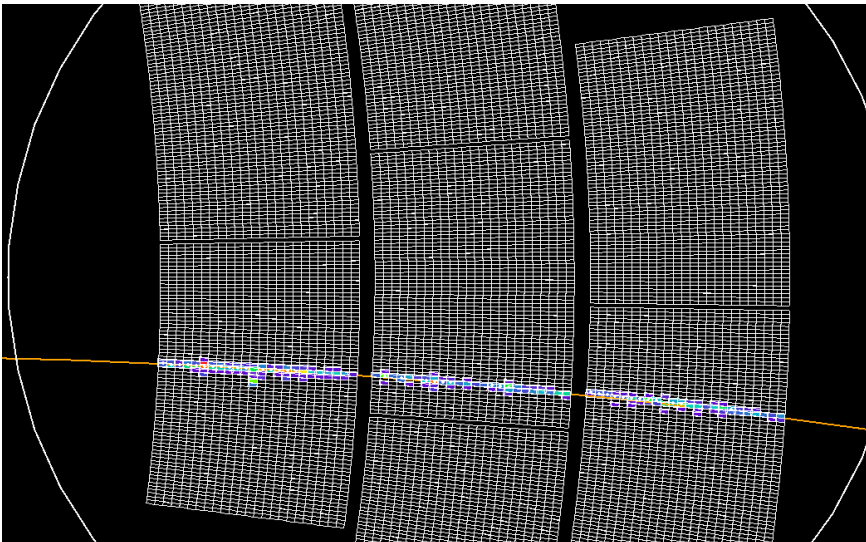


Wide-frame view on Saclay LCTPC activities

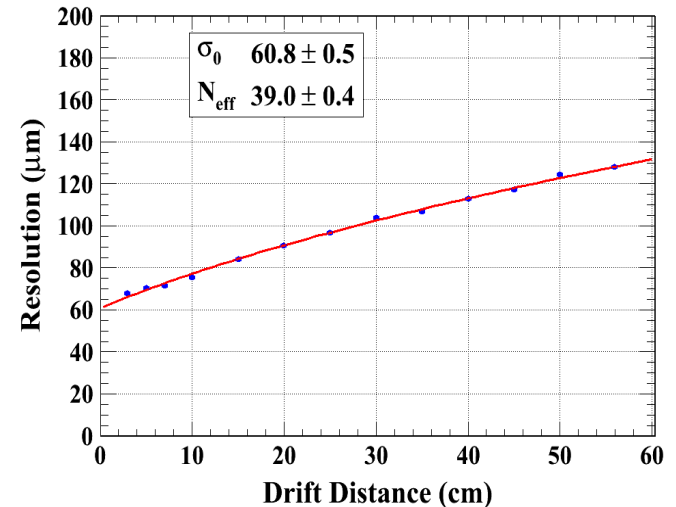
P. Colas

- 2008-2011 : single-module tests of Micromegas panels with resistive anode. Selection of the resistive bulk technique with Carbon-loaded kapton.
- 2011 : first tests of a fully integrated module
- 2012 : in July, pilot run with 6 modules

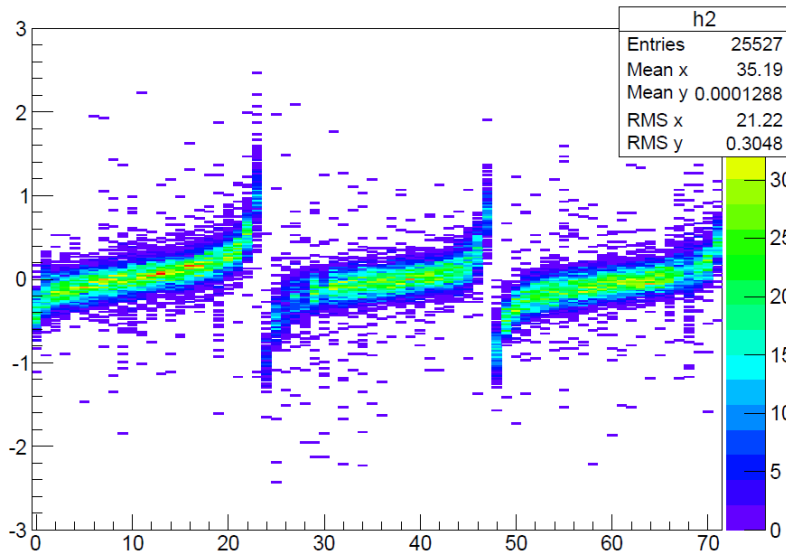


Results

single-module
60 micron resolution at
 $z=0$ with 3mm pads

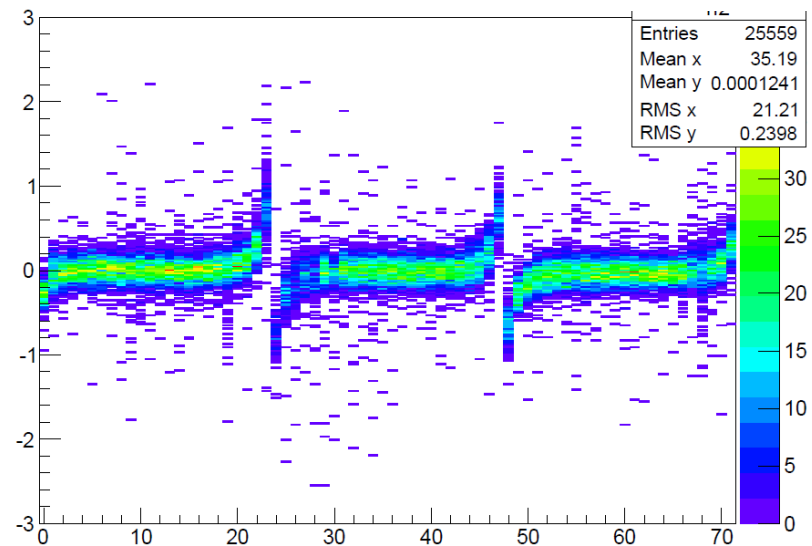


Multi-module (x residual in mm)



Row Number: $3 \times 24 = 72$ Displacement in mm

(a): Before alignment



(b): After alignment

$\delta\phi = 2.9, 2.1$ and 2.2 mrad

$\delta x = 47 \mu\text{m}, -43 \mu\text{m}$ and $-52 \mu\text{m}$

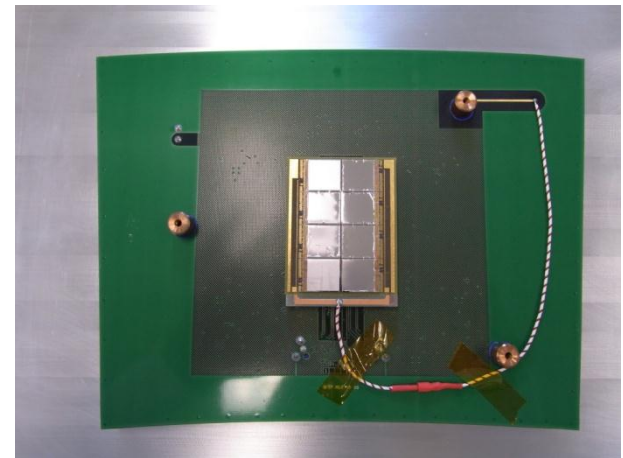
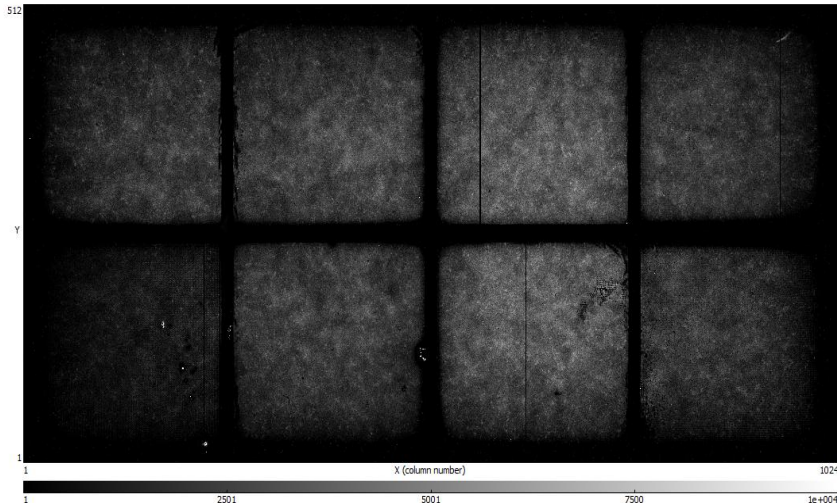
GDsP

A lot of interest : CMS muon chambers, ALICE dimuon chambers, ALICE TPC, LC TPC, but 75% of the group concentrate on a crash program for LS1 implementation of a prototype

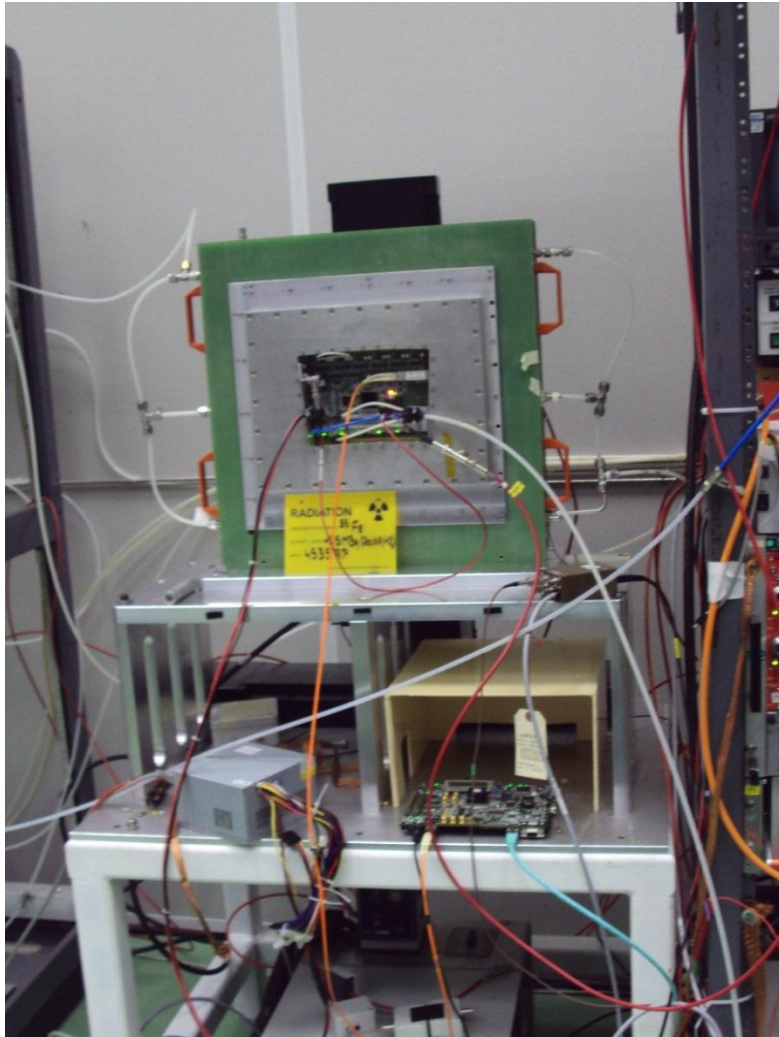
- For the amplifier part, silicon to be submitted next month.
- LCTPC meeting on this soon

Octopuce

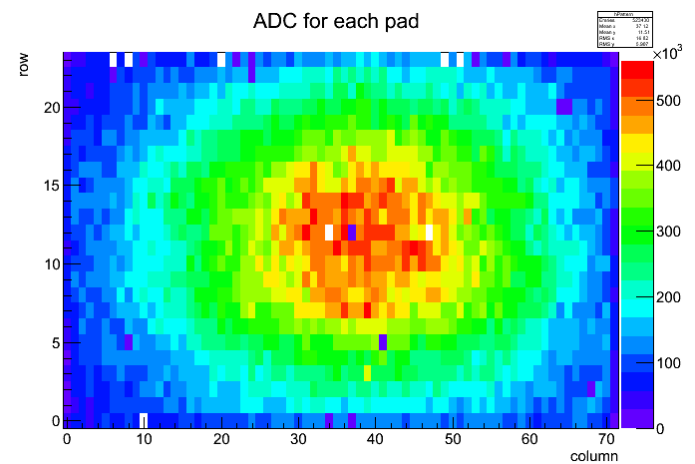
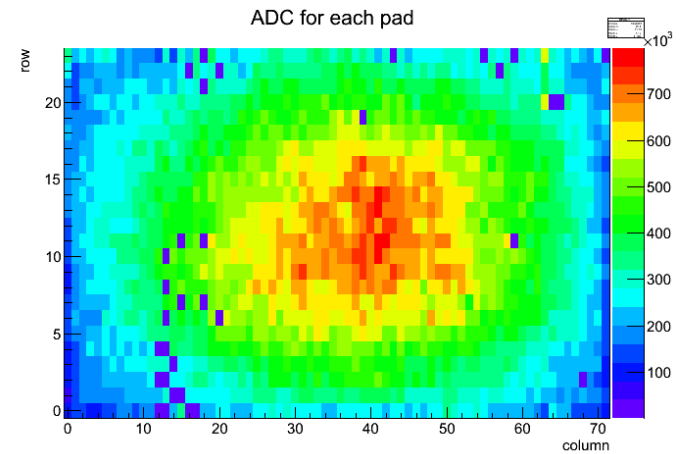
- Data analysis (from December 2010 DESY run, TimePix+MUROS) presented at LCWS Arlington (M. Titov) and RD51 (A. Chaus)
- Next Octopuce detector in preparation.



Test bench



Use a ^{55}Fe source to scan, calibrate, study uniformity, E resol, disconnected channels



Projects

- Perform Feb. 2013 tests and continue analysis
- Adapt the 2pCO₂ cooling
- Try a single module with a new technology (Piggy-back, ceramics with ruthenium oxide resistive coverlay)
- Test a large module with smaller pads
- Perform power-pulsing tests
- Measure effect of an 'ion sheet' produced by a UV lamp, and a gating grid.
- Saclay delivered more than 250 presentations since 2001

<http://irfu.cea.fr/Spp/ILC-TPC/home/talks/>

- All this in collaboration
 - Carleton, Bruxelles, Kolkata,... for pads
 - RD51 and AIDA for general studies
 - Nikhef for octopuce
 - KEK, Tsinghua, DESY for software and analysis, etc...