

**Test beam request in the context of
developing a**

Micromegas TPC for Fast Tracking and Nuclear Applications

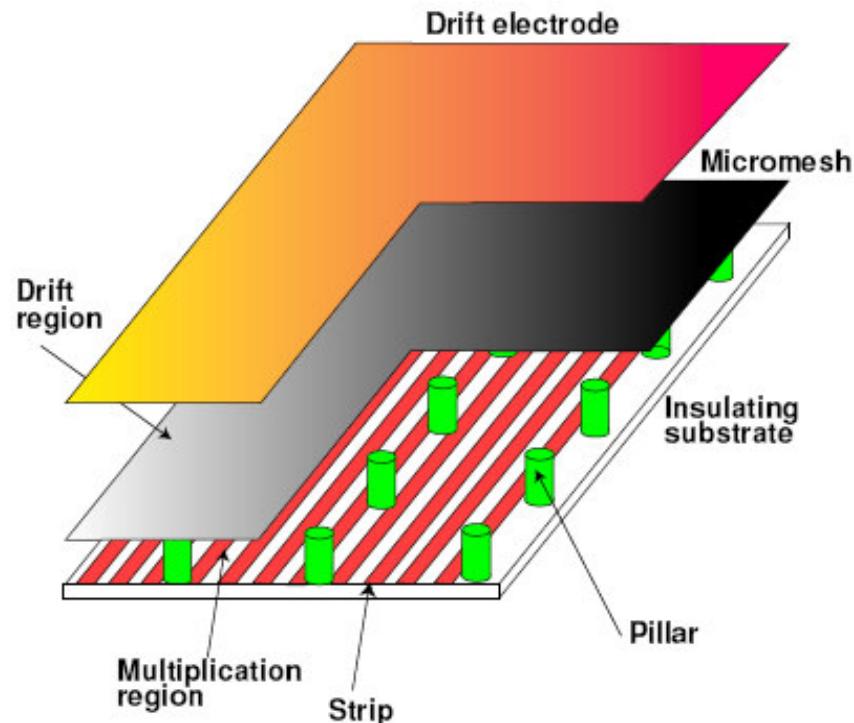
**A Saclay – Demokritos
Collaboration**

**George Fanourakis
on behalf of:**

**Saclay (S. Panebianco, T. Papaevangelou, I. Giomataris,
D. Dore, F. Druillole et al.)**

**Demokritos (T. Geralis, T. Lagoyannis, M. Axiotis,
G. Daskalakis, G. Fanourakis, S. Charissopoulos)**

Micromegas - Layout



Using:

(initially)

X-strip readout board, 96 strips of 250 micron pitch, 10 cm long

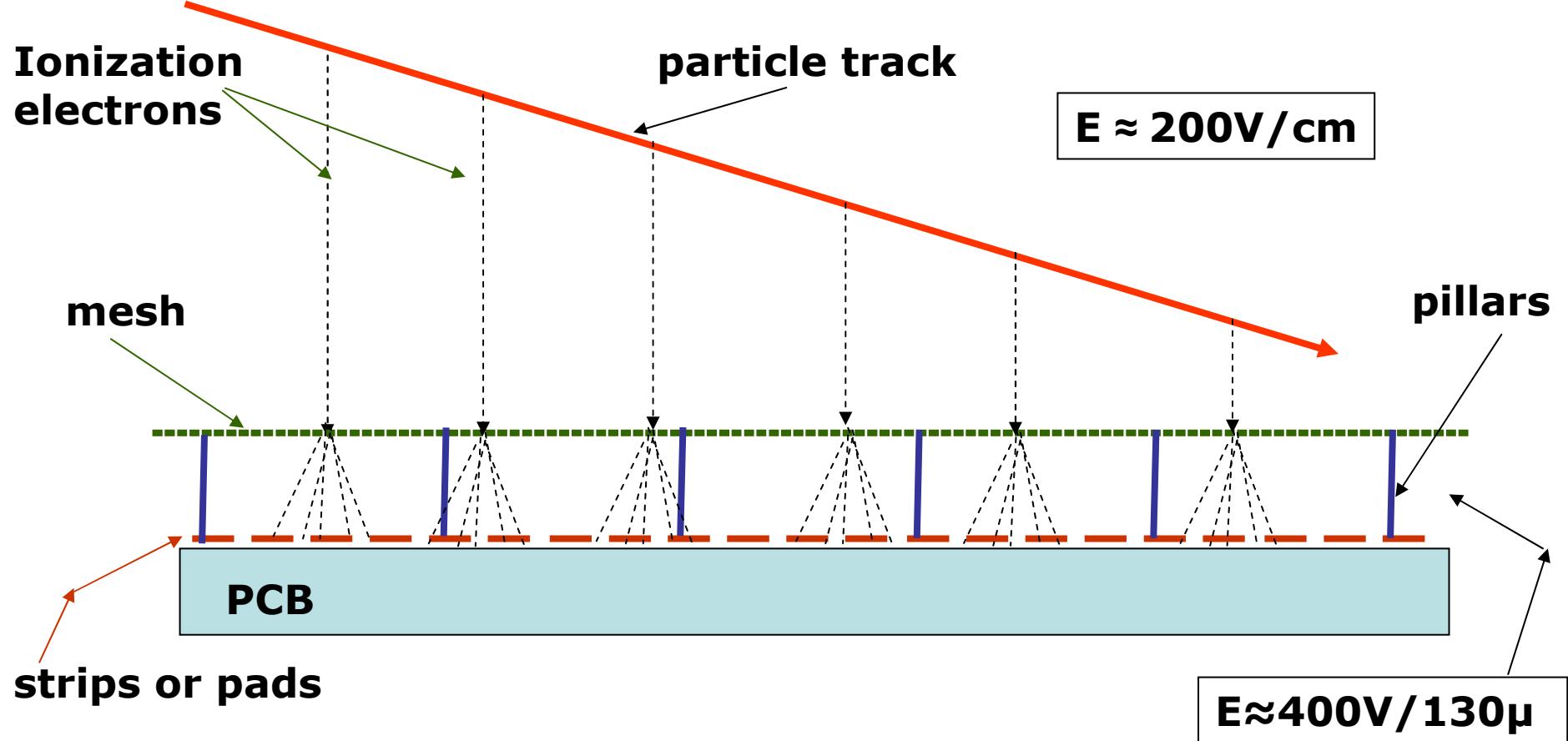
and

(finally)

- **X-Y strip readout board**
- **r- Φ strip board**

Drift length: 6-8 cm

The Micromegas TPC principle of operation



The frame



The drift window

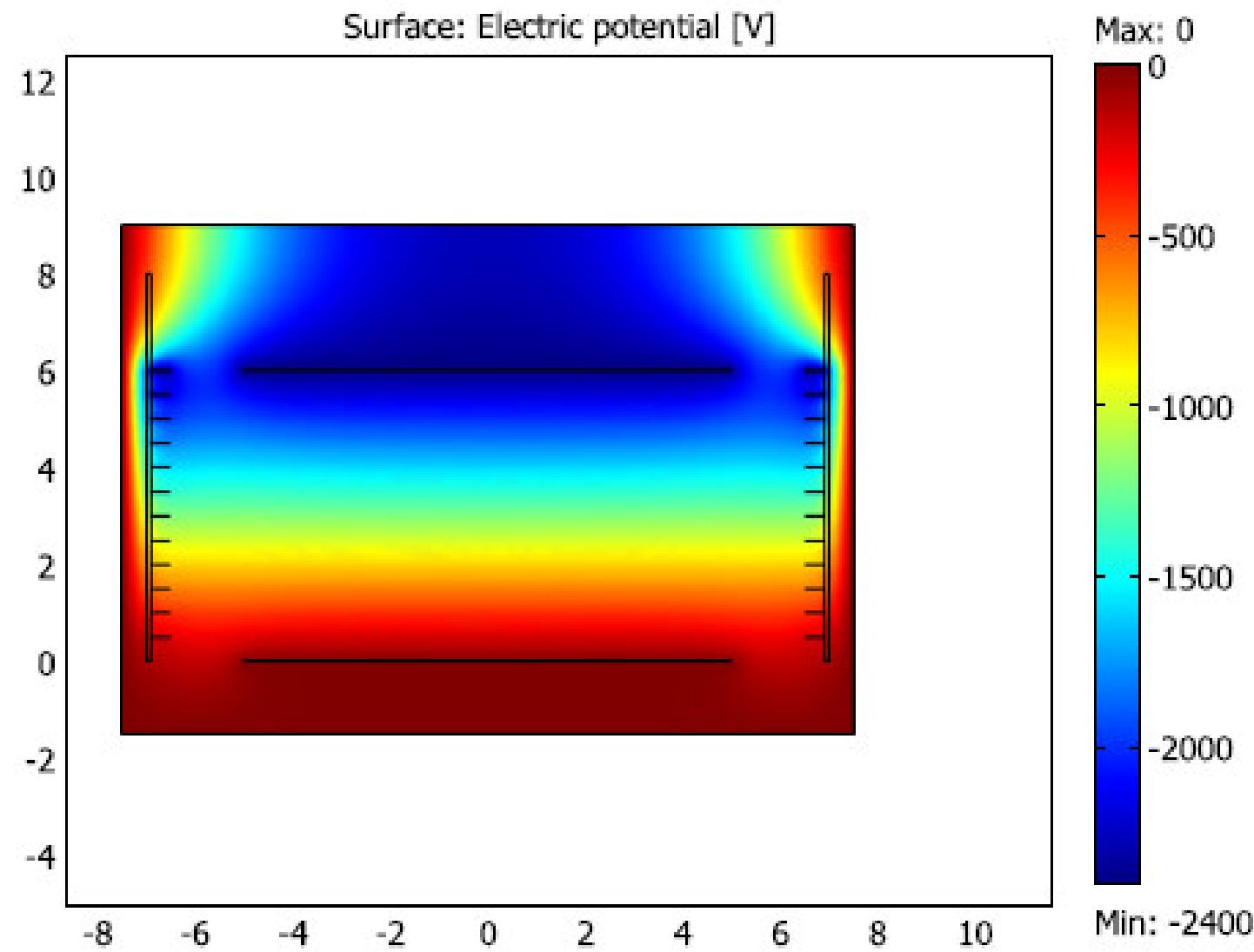


The field shaper

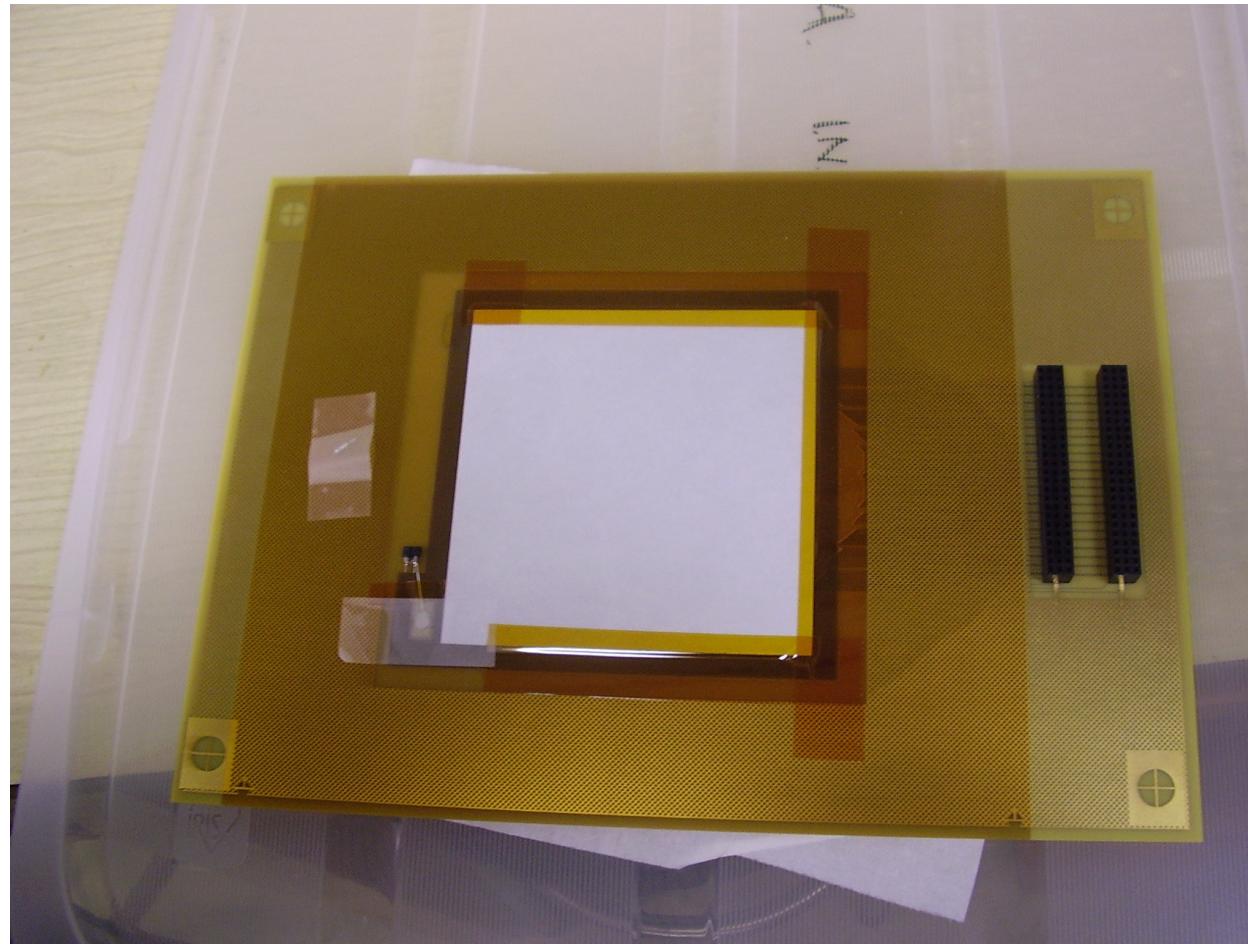


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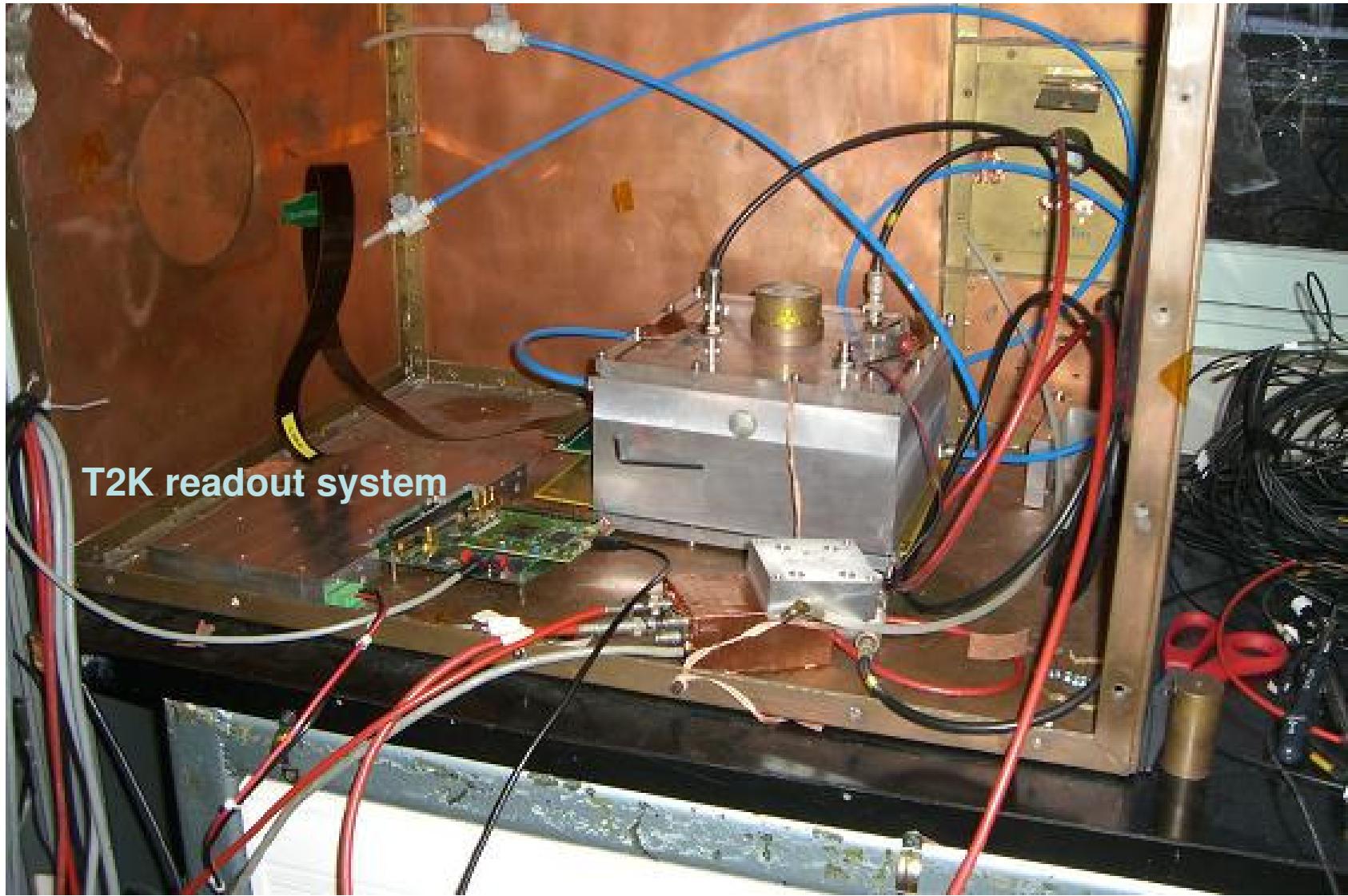
Field simulation (10 rings out of 32)



The readout board (Saclay-CERN)

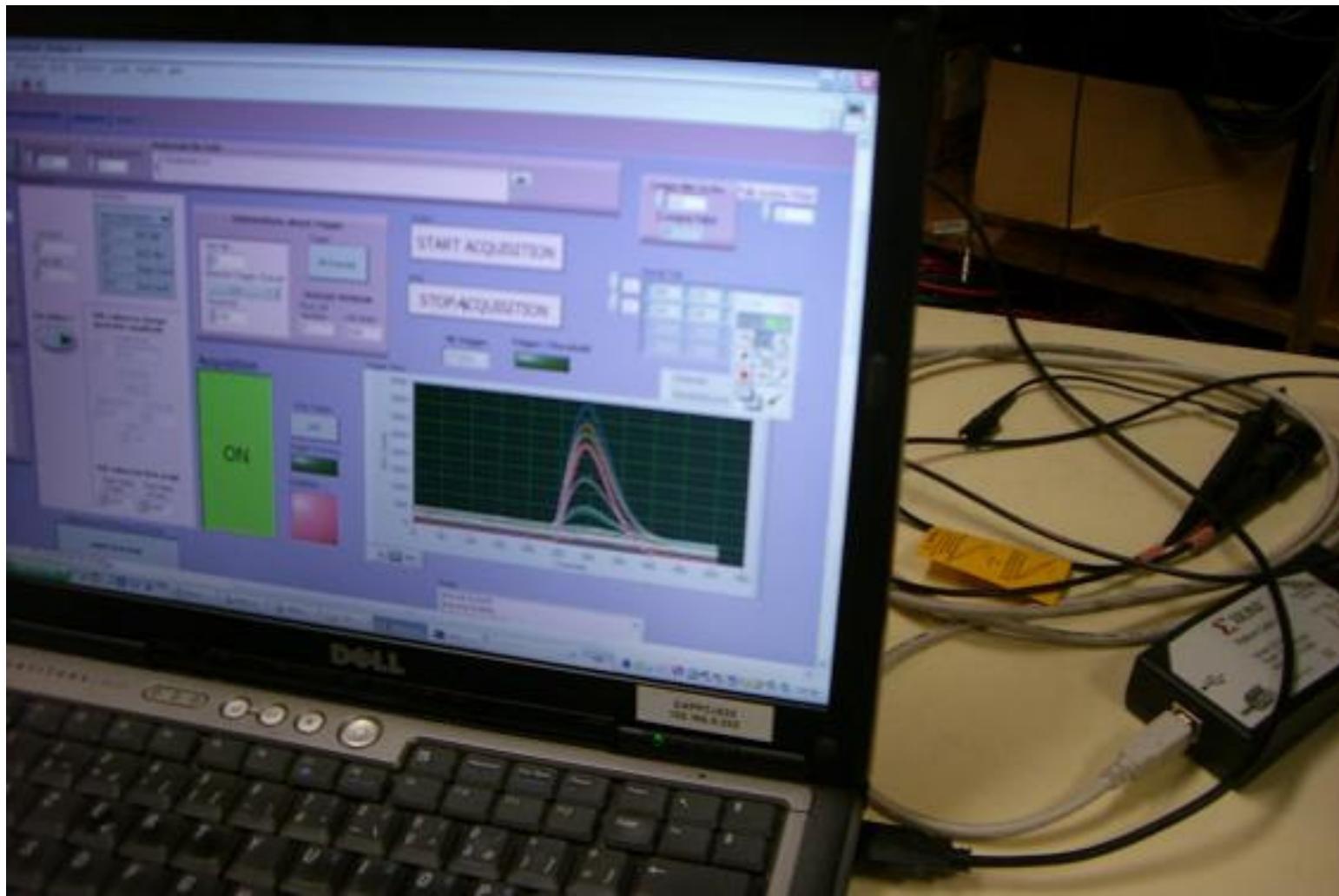


The installation at SEDI (Saclay) lab



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Using Saclay (T2K) DAQ



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Typical event of an alpha source (Th228) in Argon-(10%)Isobutane mixed gas detector

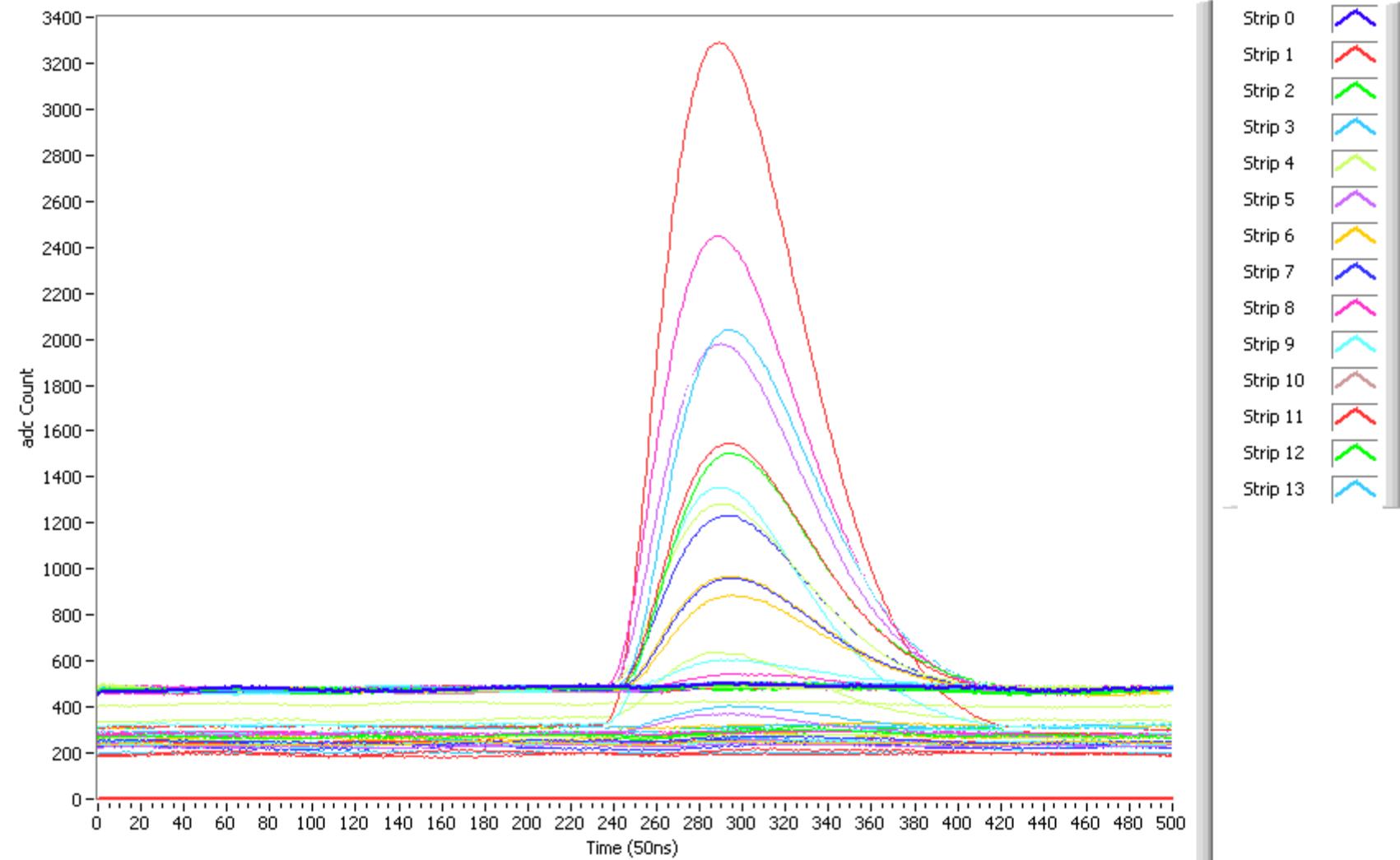
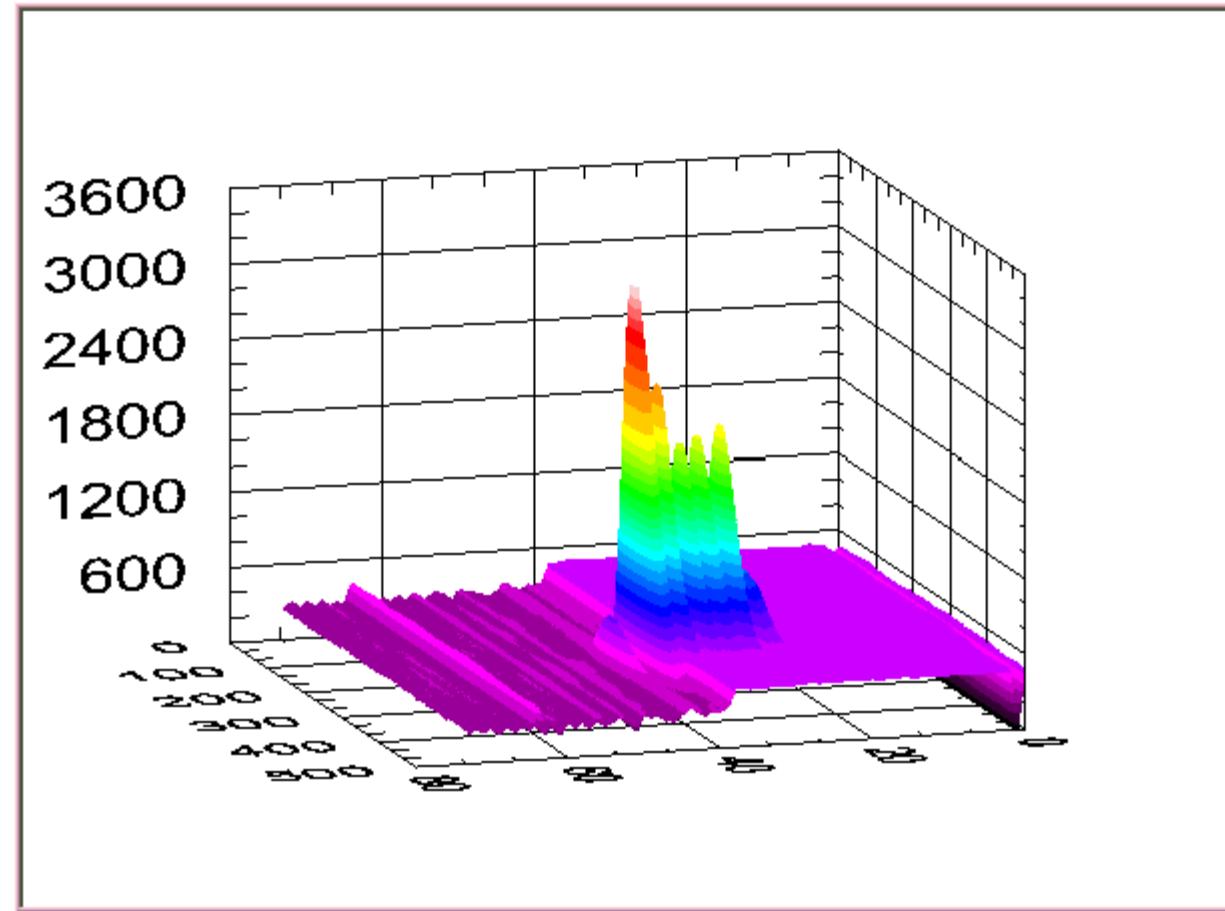


Image 3D event



Request for RD51 test beam

Need test-beam time for tests:

- **with beam inside the Goliath magnet**
- **tests with sources (no beam) inside the Goliath magnet**

Time required for the next test beam available

- **One week during RD51 test-beam**
- **One week outside RD51 test-beam (just the use of Goliath) with radioactive sources.**