

AT-TPC Meeting 22/4/2009

AT-TPC Prototype Chamber Status  
&  
Electronics

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# Prototype Chamber Status

Two sheets of GEMs (10x10 cm<sup>2</sup>) were mounted.

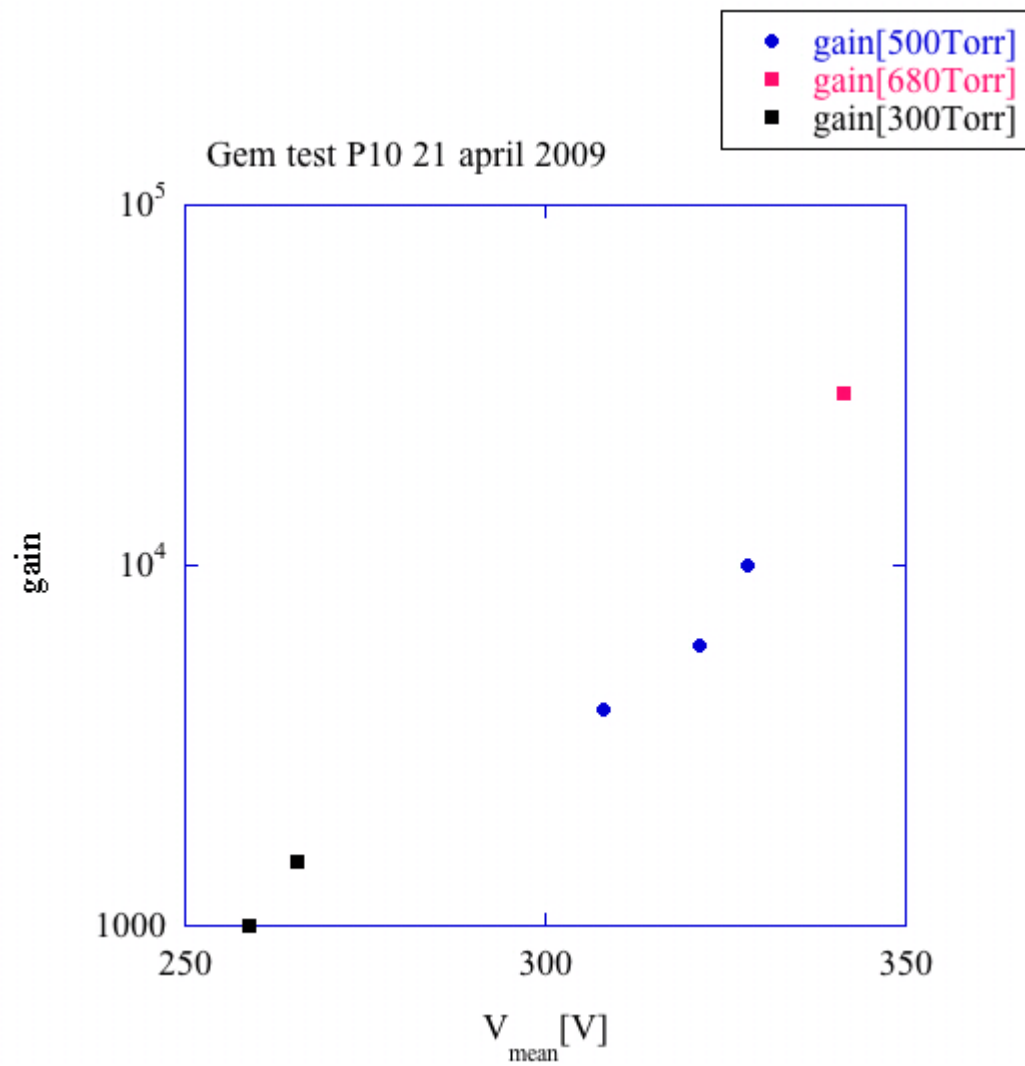
## 1. Leak test

- Vacuum level  $\sim 0.1$  Torr with a rotary pump
- $\sim + 0.5$  Torr/30 min (with switching off the rotary)
- $\sim 10^{-8}$  cc/sec (with He leak detector)
  - No large leak sources
- Nylon outgass → Same order of pressure increase

## 2. HV + P10 (0.5 ~ 1.0 atm) + <sup>55</sup>Fe(6 keV X-ray)

- Signal was observed.
- Gain vs GEM differential voltage
  - $g = \sim 10^4$  at nominal voltage
  - The dependence is roughly consistent with a literature

# Prototype Chamber Status



# Electronics

1. FemStuc (T2K reading electronics)
  - CEA-Saclay
  - F. Druillole & E. Pollacco will arrive and install the system during 2-5th of June.

## Next step & Todo

Options;

1. Test the GEM with flammable gases (isobutane, H).
  - Safety issues (1<sup>st</sup> meeting in next week ?)
2. Develop the localization procedure (GEM+P10)
  - Read-out circuit
3. Test the Micromegas (P10)
  - Installation of the detector