CyMBaL – Gas requirements

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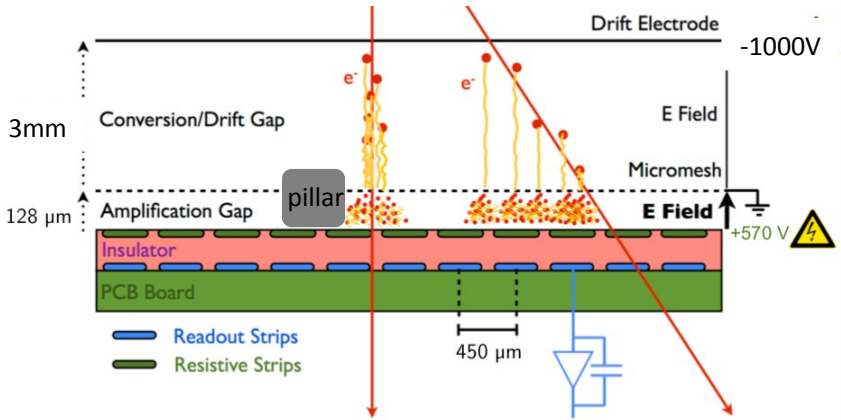
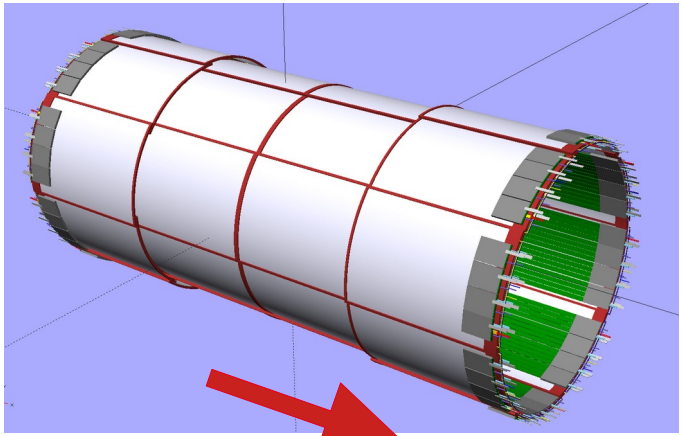
- *Emplacement logotypes financeurs/partenaires*

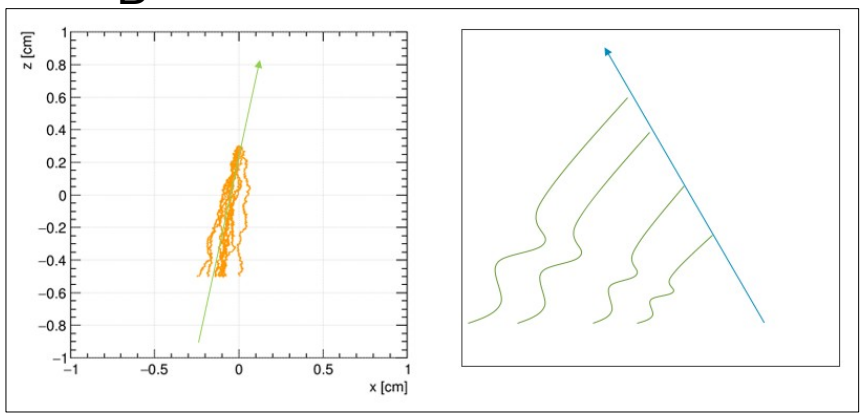
CyMBaL – Micromegas

- Resistive Micromegas
- 3 mm conversion gap
- Single amplification stage
  - Larger Ar fraction
  - Strong quencher, isobutane
- Working in 1.7 T
- Lorentz angle affect cluster size and transparency





$$\tan(\theta_L) = \omega\tau = \frac{v_D B}{E}$$



Effects depends on the sign of the charged particle

Lorentz angle

- Simulations using Magboltz (thorough Garfield++)
- Ar:iC_4H_{10} 95:5 mixture have lower drift velocities than Ar:CO_2 80:20, i.e. smaller Lorentz angles
- To keep the Lorentz angle ~ 20 deg, Vdrift
  - ~1kV/3mm Ar:iC_4H_{10} *(safer)*
  - ~1.6kV/3mm Ar:CO_2
- Ar:iC_4H_{10}:CO_2 95:3:2 (NSW gas) similar behavior as Ar:iC_4H_{10} 95:5