

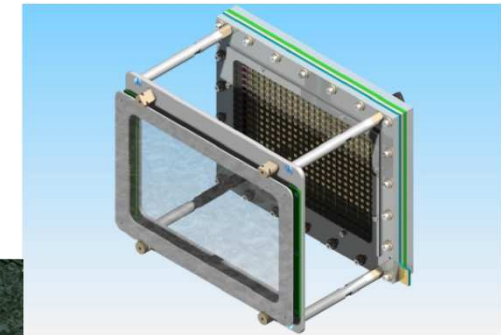
SED detectors for low energy heavy ion beam tracking

DemiSeD: A real size prototype of 2D wire chamber at low pressure

- Active area: **200x120 mm²**
- **20 μm** diameter anode wires in the middle of **3.2 mm** gap
- Anode divided in two parts for capacitance reduction
- **2D** pixellated cathode.
- 67(X)+47(Y) cathode strips with 3 mm pitch
- Strongback with 92.5 % transmission to ensure gap thickness homogeneity



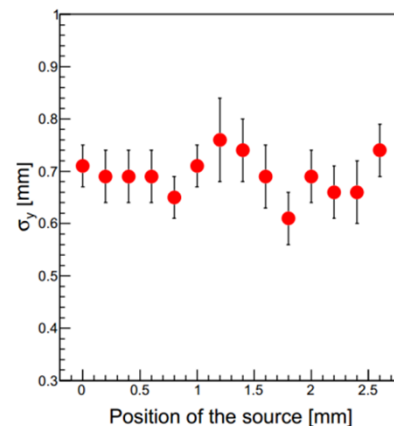
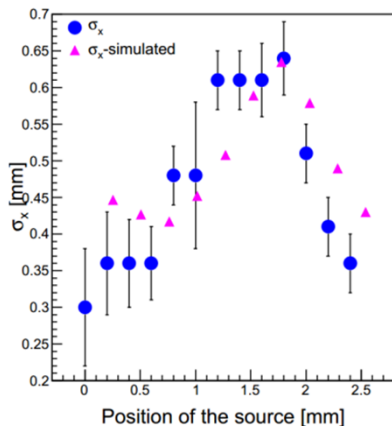
2D pixellated cathode



Real Size SeD prototype coupled to a thin emissive foil

Test and results with a ²⁵²Cf source in laboratory:

- The time and spatial resolutions obtained : $\sigma_t \approx 120$ ps and $\sigma_s \approx 0.6$ mm.
- Strong influence, on DemiSED spatial resolution, of the strongback. New strongback design in process .
- Study about the homogeneity of the spatial resolution over the surface detectors:



➤ It shows the dependence with the place where the electron clouds hits: the center of the strip or the interstrip.

Collaboration Work: GANIL-CEA-CNA