

# sRPC: an RPC based on resistive MPGD technology

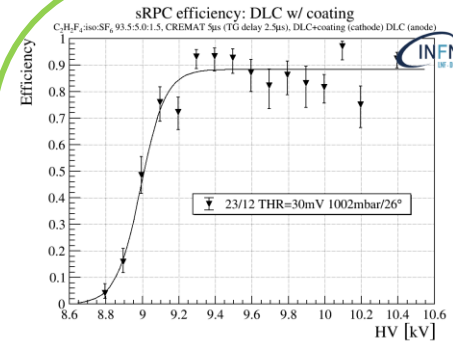
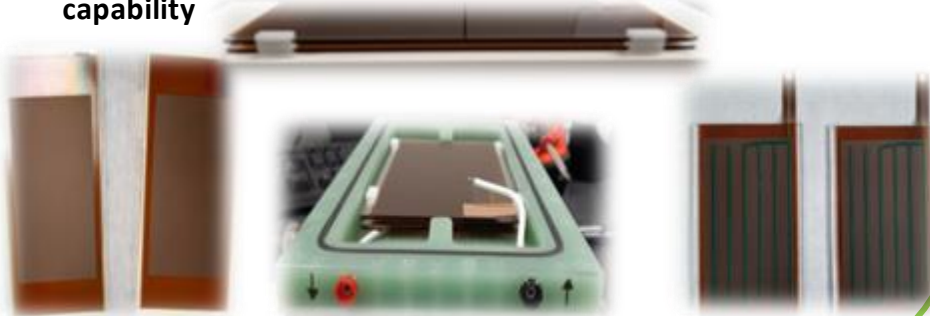
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## Classical RPC

- bulk resistivity electrodes
- recovery time proportional to volume resistivity and electrode thickness

## Surface-RPC

- surface resistivity electrodes manufactured with sputtering techniques of Diamond-Like-Carbon on flexible supports (scalable and cost-effective technology)
- electrodes with a surface resistivity in a very wide range,  $0.001 \div 10 \text{ G}\Omega/\square$
- high density current evacuation schemes, (similar to those used for  $\mu$ -RWELL), can be implemented to achieve high rate capability

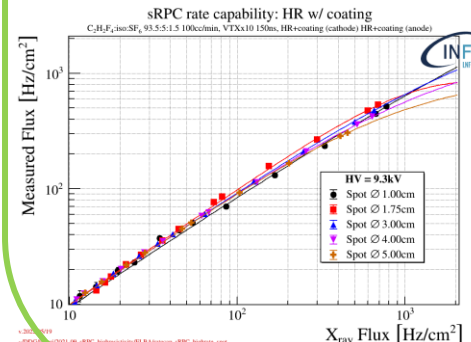
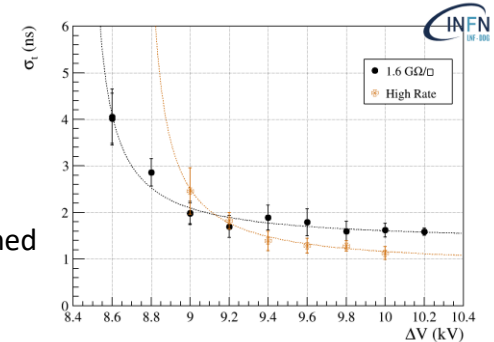


## Time resolution

Typical  $\sim 1 \text{ ns}$  time resolution obtained with different sRPC prototypes

## High stability

$>1 \text{ kV}$  wide operating voltage achieved with cathode passivation



## High-rate layout

- Conductive grid: ground pitch  $\sim 1 \text{ cm}$ , DLC resistivity  $\sim 7 \text{ G}\Omega/\square$
- Optimizing ground-pitch & reducing surface resistivity a rate capability  $> 20 \text{ kHz/cm}^2$  with m.i.p should be easily achievable