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## Characterization of DSSSD using a microbeam

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Double Sided Silicon Strip Detectors are highly segmented detectors. They are widely used in nuclear physics thanks to their large area and high granularity. The segmentation of Silicon strip detectors is obtained by means of a  $\text{SiO}_2$  insulating layer (interstrip) interposed between adjacent strips. It is known in literature that ionizing particles hitting the detector in proximity of an interstrip gap can generate signals of reduced amplitudes or with an inverted polarity, thus reducing the overall efficiency for the full energy reconstruction. In order to study the detector behavior for events corresponding to particles entering the detector in the interstrip gap (both for ohmic and junction side), signals of positive and negative polarity were acquired at the same time. We will present the results of a complete characterization of DSSSD detectors by using Li and O beams as well by irradiating the interstrip regions with a proton microbeam. The use of the microbeam allowed to clearly correlate the response of the detector with the point of impact of the incoming particle onto the detector surface. Moreover results concerning the efficiency for full energy reconstruction for different ions (H, Li and O), bombarding energies and detector polarization voltages will be presented and discussed.

**Presenter:** TORRESI, Domenico (PD)

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