

# Thin LGADs characterization using Ion Beam Induced Charge (IBIC) and Time-resolved IBIC at the Centro Nacional de Aceleradores

*Tuesday 27 November 2018 11:40 (20 minutes)*

In this talk we will present the first results obtained within our RD50 project concerning the study of thin (50  $\mu\text{m}$ ) Low Gain Avalanche Detectors with four sectors.

Using a nuclear microprobe, with a lateral resolution of a few micrometers, we have analyzed the CCE homogeneity of the sensor and the behavior of the peripheral regions under proton irradiation. We will show the gain curve measured with protons at 3, 4 and 18 MeV and with an alpha source, and the experimental data will be compared with TCT results. In addition, crosstalk effects between different sectors have been observed using the scan system of the microbeam line. Finally, the transient signal of the induced carriers has been recorded at several voltages.

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