

# Progresses in LGAD simulation and comparison with experimental data from UFSD2, the new 50-micron production at FBK

*Tuesday 21 November 2017 15:20 (20 minutes)*

This talk aims to present extensive comparisons between measurements and numerical simulations about the UFSD2 recent production of Low-Gain Avalanche Detectors (LGAD) fabricated by FBK in Trento.

In particular, the methodological study on avalanche models and their calibration we introduced at the previous RD50 meeting, in Kraków, will be applied to the new batch of 50 micron detectors, which include four gain layer configurations: Boron, Boron with Carbon, Gallium and Gallium with Carbon.

By discussing the results we will show that an accurate simulation procedure, coupled to the use of modeling parameters coming from the experimental analysis, can provide a robust tool able to predict the behavior of irradiated/non-irradiated LGAD sensors in terms of gain and leakage current. This simulation is at the basis of designing next UFSD3 production at FBK.

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