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Status and first results of the "RD50 TI-LGAD" Project

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Trench-Isolated LGAD (TI-LGAD) is a novel LGAD design where the standard inter-pixel isolating structure has been replaced with a trench, physically etched in the silicon and filled with a dielectric material.

The "RD50 TI-LGAD" project aimed at exploiting this new technology for the production of pixelated detectors with pixel and strip pitches down to 50 μm .

In the project framework, FBK produced a batch of TI-LGADs, where many different technological and layout splits have been tested. In this contribution, we will present the parametric and functional characterization of the produced samples and discuss the following characterization activities that will be carried out by the partner institutes.

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