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Development of a new technology for the next generation of 3D Pixel Sensors for HL-LHC within the INFN (ATLAS-CMS) R&D program in collaboration with FBK.

Thursday 19 February 2015 09:25 (20 minutes)

We report on the joint INFN ATLAS-CMS R&D program, in collaboration with FBK, aimed at the development of pixel sensors for the phase 2 upgrade of the LHC (HL-LHC).
In this talk we describe the development of the main technological steps allowing for the fabrication of a new generation of Si 3D pixel detectors with small pixel and thin active thickness. In particular, we report on the results of the process tests carried out at FBK in order to optimize the etching by DRIE and the filling (at least partial) with poly-Si of narrow (5 micron) columnar electrodes.

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