



Contribution ID: 18

Type: not specified

## Research and development of new radiation tolerant pixel Silicon sensors for the high-luminosity phase of the CMS experiment at LHC

The CMS experiment has a vast R&D program on silicon pixel sensors for the HL-LHC upgrades. In this talk we will focus on activities and results obtained with 100 and 130um thick planar pixel sensors produced by FBK, in the framework of a collaborative agreement with INFN. Pixel single-chip modules have been tested in the Fermilab Test Beam Facility before and after proton irradiation, during different test beam sessions spanning from December 2015 to November 2017. We will give a comprehensive review of results obtained up to now, with details on the data analysis, summarising the main findings and limits reached.

**Primary author:** ZUOLO, Davide (Universita & INFN, Milano-Bicocca (IT))

**Co-authors:** DALLA BETTA, Gian Franco (Universita degli Studi di Trento (IT)); DINARDO, Mauro (Universita & INFN, Milano-Bicocca (IT)); MESCHINI, Marco (Universita e INFN, Firenze (IT)); MORONI, Luigi (Universita & INFN, Milano-Bicocca (IT)); VILIANI, Lorenzo (Universita e INFN, Firenze (IT)); UPLEGGGER, Lorenzo (Fermi National Accelerator Lab. (US)); MESSINEO, Alberto (INFN Sezione di Pisa, Universita' e Scuola Normale Superiore, P)

**Presenter:** ZUOLO, Davide (Universita & INFN, Milano-Bicocca (IT))