



Contribution ID: 57

Type: **Contribution Talk**

Hadron damage investigation of FBK and HPK Low Gain Avalanche Detectors

Wednesday, 30 November 2022 11:15 (20 minutes)

The upgrade of the current Large Hadron Collider (LHC) to the High Luminosity Large Hadron Collider (HL-LHC) will increase the luminosity of the LHC by a factor of 10. Therefore, fast timing detectors with high radiation tolerance are required. Low gain avalanche detectors (LGADs) are promising candidates with timing resolutions within tens of picoseconds. Hamamatsu Photonics K.K. (HPK) and Fondazione Bruno Kessler (FBK) LGADs have been irradiated with 400 and 500 MeV protons respectively at FNAL and LANL at several fluences up to 1.5×10^{15} . Characterization measurements of these devices including IV, CV and timing resolution measurements have been performed as a function of the dose received.

Primary authors: KRAMBERGER, Gregor (Jozef Stefan Institute); SI, Jiahe (University of New Mexico); SORENSON, Josef (University of New Mexico); HOEFERKAMP, Martin (University of New Mexico); SEIDEL, Sally (University of New Mexico)

Presenter: SI, Jiahe (University of New Mexico)

Session Classification: WG1: Solid State Detectors and ASICs

Track Classification: WG1: Solid State Detectors and ASICs