



Contribution ID: 52

Type: not specified

## Deterioration of detection and charge collection efficiencies for CMOS imagers in a 15 MeV proton beam

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Standard CMOS imagers are suitable for charged particle detection with high efficiency, thanks to the very high S/N ratio for MIPs, and being fabricated using advanced technological nodes (130 nm or less) are intrinsically resistant to radiation damage, at least in medium-high particle fluence environments.

The study of their behaviour is then useful to understand the current limitations of the use of such cheap devices for beam monitoring or single particle detection.

In this work, carried on within the AIDA project, we present the results on the variation of the detection and charge collection efficiencies of such detectors, damaged using the 14 MeV proton beam at INFN Laboratori Nazionali del Sud to a fluence up to  $10^{14}$  15 MeV protons/cm<sup>2</sup>, for Minimum Ionizing Particles.

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