



Contribution ID: 78

Type: **not specified**

Effect of annealing on charge collection with n-on p type silicon strip detectors irradiated with 24 GeV/c protons

Wednesday 29 November 2023 14:40 (20 minutes)

Extensive studies of effects of annealing at 60C on charge collection efficiency were made with miniature n in p type silicon strip detectors during development and production of sensors for ATLAS ITk strip detector. Measurements were made with Alibava system with electrons from Sr90 source with detectors irradiated with reactor neutrons and low energy protons. At not too high bias voltages typical annealing behavior was measured: beneficial effects of short term annealing was followed by a drop of charge collection efficiency at longer annealing times.

Recent measurements with detectors irradiated with 24 GeV protons in CERN IRRAD facility showed somewhat different behavior in which a drop of collected charge was observed after short term annealing. In this contribution first results of studies of this effect with charge collection and E-TCT measurements will be presented.

Authors: MANDIC, Igor (Jozef Stefan Institute (SI)); CINDRO, Vladimir (Jozef Stefan Institute (SI)); STRIP SENSOR COMMUNITY, ATLAS ITk

Presenter: MANDIC, Igor (Jozef Stefan Institute (SI))

Session Classification: Radiation damage general