

Update on Surface Studies of n-on-p Silicon Strip Sensors after irradiation to HL-LHC fluences: Prague status

Tuesday 23 June 2015 16:50 (20 minutes)

Surface properties of ATLAS12 n-on-p silicon sensors developed for the upgrade of the strip tracker of the ATLAS experiment were evaluated before and after irradiation. Different types of end-cap and barrel mini sensors were irradiated by gamma and protons at different irradiation sites. Influence of different sensor geometries, wafer resistivities and types of PTP structures on sensor stability and inter-strip properties was studied up to fluence $1E16$ neq/cm².

Summary

It was verified that different geometries of end-cap and barrel sensors do not influence their stability; the sensors should provide acceptable strip isolation up to proton fluence $3E15$ neq/cm².

Author: MIKESTIKOVA, Marcela (Acad. of Sciences of the Czech Rep. (CZ))

Co-authors: STASTNY, Jan (Acad. of Sciences of the Czech Rep. (CZ)); KOTEK, Zdenek (Acad. of Sciences of the Czech Rep. (CZ))

Presenter: MIKESTIKOVA, Marcela (Acad. of Sciences of the Czech Rep. (CZ))

Session Classification: Test beams and lab tests