

Neutron irradiation for p-type sensors. Detector characterization with ALIBAVA system

Thursday, 4 June 2009 10:05 (20 minutes)

This work describes the characterization of p-type microstrip detectors from two different manufacturers, Hamamatsu and CNM carried out at IFIC-Valencia. The sensors have been irradiated with neutrons at several fluences. In order to evaluate the macroscopic radiation damage, IV and charge collection measurements have been carried out by means of a radioactive source setup as well as by an infrared laser illumination. The sensors have been readout with the ALIBAVA system. It is a compact and a portable system which contains two front-end readout chips (Beetle chip) to acquire the detector signals. One of the advantages of the ALIBAVA system is that it uses LHC speed electronics. Another advantage is that it allows performing a pulse by pulse and strip by strip analysis.

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Session Classification: Full detector systems