Type: Standard (20 min including discussion)

Radiation hardness studies of neutron and proton irradiated CMOS sensors fabricated in the ams H18 high voltage process

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High voltage CMOS detectors (HVCMOSv3), fabricated in the ams H18 high voltage process, with a substrate resistivity of $10\Omega \cdot$ cm were irradiated with 24 GeV/c protons up to a fluence of 7×10^{15} n_{eq}/cm^2 and thermal neutrons up to a fluence of 2×10^{16} n_{eq}/cm^2 . The detectors were characterized using edge-TCT. Both, the collected charge and the depletion depth increased after irradiation, showing a benefitial effect of irradiation on low resistivity silicon.

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