

Session D: Photonics

Chair: M. Alvarez and B. Brichard

D-1 Dose rate and static/dynamic bias effects on CCDs.

Emma Martin, Jean-Pierre David, Thierry Nuns : ONERA
Olivier Gilard, Mathieu Boutillier, Antoine Penquer : CNES

Dark current evolution in Co60-irradiated CCDs is studied in various static and dynamic bias conditions. Results have demonstrated the impact of the sensor operational conditions and dose rate. On-ground results are compared to in-flight data.

D-2 Simulations of High Energy Electron-Induced Transients in a Shielded Focal Plane Array.

Elizabeth Auden, Robert Weller, Marcus Mendenhall, Robert Reed, Ron Schrimpf, Michael King, Nathaniel Dodds : Vanderbilt University
Makoto Asai : SLAC

Monte Carlo simulations of a shielded focal plane array demonstrate energy deposition in individual pixels exceeding 0.1 MeV when 100 MeV electrons incident upon a 10 cm aluminum spherical shell produce electromagnetic cascades.

D-3 Comparison of the Radiation Sensitivity of Fiber Bragg Gratings made by Four Different Manufacturers.

Stefan Hoeffgen, Henning Henschel, Jochen Kuhnhehn, Udo Weinand : Fraunhofer
Christophe Caucheteur : Faculté Polytechnique de Mons
Dan Grobnic, Stephen Mihailov : Communication Research Center

The radiation sensitivity of type I FBGs written by four different manufacturers with different UV or IR lasers in two different Ge-doped H2 loaded and unloaded fibers was investigated. The measured peak shifts agreed quite

Posters for Session D

- PD-1 Single Event Upset studies on a 0.20um FD-SOI monolithic pixel sensor.**
Serena Mattiazzo, Dario Biselo, Piero Giubilato, Devis Pantano, Nicola Pozzobon,
Luca Silvestrin, Mario Tessaro : INFN and University of Padova
Marco Battaglia : SCIPP, University of California Santa Cruz and with Lawrence
Berkeley National Laboratory
Devis Contrarato, Peter Denes : Lawrence Berkeley National Laboratory

Monolithic Pixel Detectors on a Fully Depleted SOI technology are currently under development. A preliminary Single Event Upset measurement was performed on the last chip developed in a 0.20um technology, for different substrate depletion.

- PD-2 Modelling neutron interactions and charge collection in the Imaging Single-Event Effects Monitor.**
Xiao Xiao Cai, Simon Platt : University of Central Lancashire

An enhanced model of our Imaging Single-Event Effects Monitor (ISEEM) is described with validation against experimental data from irradiation in neutron beams. Quantified discrepancies between simulated and experimental results are close to measurement uncertainties.