8th International Conference on Position Sensitive Detectors



Contribution ID: 38

Type: Oral Contribution

Silicon Carbide X-ray Detectors for Planetary Exploration

Wednesday 3 September 2008 14:30 (20 minutes)

Planetary exploration places high demands on instrumentation and presents some of the harshest operating environments including extreme thermal conditions, high radiation tolerance and low mass and power constraints. We present data on a novel detector, the Semi-Transparent SiC Schottky Diode (STSSD), which shows promising energy resolution (at 5.9 keV it was 1.5 keV Full Width at Half Maximum) at room temperature and good radiation tolerance for proton irradiation (~1013 cm-2, energy ~50 MeV). Future development of SiC detectors will lead to imaging spectroscopic arrays capable of meeting the stringent demands of future planetary exploration missions. We discuss the detector requirements necessary for use in the environment likely to be encountered in a mission to the Jovian system.

Author: Dr LEES, John

Presenter: Dr LEES, John

Session Classification: Applications in Space Science

Track Classification: Applications in Space Science