

Nineteenth Annual

Single Event Effects Symposium



PRELIMINARY CALL FOR PRESENTATIONS

This is the preliminary call for technical presentations for the 2010 Single Event Effects (SEE) Symposium. The meeting will be held on April 12-14, 2010 at the [Marriott Hotel in La Jolla, CA](#). We invite papers addressing all aspects of SEE in microelectronic and photonic devices, circuits, and systems. Topics include (but are not limited to):

- **Phenomena:** Upset, Transients, Latchup, Gate Rupture, Burnout, Destructive Effects in Bipolar Devices, Microdosimetric Effects, Dark Current.
- **Basic Mechanisms and Modeling:** Destructive and Non-Destructive Effects, Nanoscale Phenomena, Effect of Operating Speed, Charge Transport and Collection, Impact of Circuit and Environmental Parameters, including temperature and aging.
- **SEE Mitigation Methods Including Hardened by Design (HBD) and by Process:** Approaches for gaining SEE hardness in commercial devices.
- **Environments and Facilities:** Space, Atmospheric and Terrestrial environments. Heavy Ion, Proton, Neutron and Laser Test Facilities.
- **Operational Regimes and Performance Data:** Systems and Devices at LEO to Geosynchronous and Beyond, High Altitude Aircraft, and Terrestrial.
- **Electronic & Photonic Device Data, Techniques, and Diagnostics:** Memories, Latches, Analog Circuits, Microprocessors, FPGAs, Optocouplers, DC to DC Converters, Sensors, Commercial and Hardened Components, Data Capture Methods, and Data Analysis.
- **Systems:** Error Mitigation, Error Detection & Correction, Multi-core Processing, and Fault Tolerant Systems.
- **Event Rate Computation:** Analytic, Monte Carlo, Mixed-Level (Radiation Transport + SPICE, TCAD + SPICE, etc.)

Special consideration will be given to complex device testing and effect analysis.

All interested personnel are invited to send a one-page abstract by **February 19, 2010** to jonathan.a.pellish@nasa.gov. A voluntary submission to a Symposium Proceeding is also requested. Submissions may either be annotated charts or a short paper (≤ 6 pages) based on the presentation. When submitting an abstract, please notify us of your publishing intent. The SEE Symposium will be unclassified and welcomes international participation. Authors are responsible for obtaining clearances to present their work.

For information on having an industrial exhibit please contact Penny Meeker: pennym@us-semi.com.

The Symposium is supported by the Defense Threat Reduction Agency, the NASA Electronic Parts and Packaging Program, The Aerospace Corporation, the Naval Research Laboratory, and Vanderbilt University.

Registration opens on January 1, 2010

For more information please visit the SEE Symposium website:

<http://radhome.gsfc.nasa.gov/radhome/SEE/index.html>