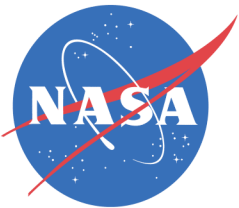


Vanderbilt NEPP/DTRA Tasks for 2007



2007 NEPP Grant

- Task #1: Development and validation of Geant4 radiation transport and device response models for space applications
 - MRED update - Bob Weller
 - Geant4 nuclear physics issues - Marcus Mendenhall
 - Monte Carlo Based SEU Rate Predictions (Leveraged) - Kevin Warren
 - Simulation of SEU Cross-Sections Using MRED Under Conditions of Limited Device Information - Jean-Marie Lauenstien
 - Terrestrial applications of MRED - (Leveraged) Kevin Warren
 - CREME-MC website (RHESE Funded effort)
- Task #3: VU/ISDE will continue to develop a basic understanding of the mechanisms for inducing SEU/SETs in HBTs.
 - Generalized SiGe HBT Event Rate Predictions Using MRED - Jonny Pellish

2007 NEPP Grant

- Task #2: The effects of ion-induced charge collection in ultra-scaled CMOS technologies (130 nm and below)
 - The Effects of Angle of Incidence and Temperature on Latchup in 65nm Technology - John Hutson
 - Increased rate of multiple bit upset at large angles of incidence - Alan Tipton
 - Assessing Alpha Particle and Neutron Induced Single Event Transient Vulnerability in a 90 nm CMOS Technology (Leveraged) - Matt Gadlage (Balaji Narasimham)
 - Moving Single-Event Mechanism Testing and Analysis into the Time-Domain - Jonny Pellish
- Task #4: Radiation effects in imagers
 - Distribution of Proton-Induced Transients in Silicon Focal Plane Arrays- Christina Howe (Nathaniel Dodds)