

Space Environment and Effects Section

Contracts Final Presentation 19-20 Feb. 2004

1. Title of the presentation

A Software Tool Prototype to Simulate Displacement Damage Effects

2. Speaker

Klaus Thiel, Nuclear Chemistry Department, University of Cologne

3. Abstract

In order to simplify space qualification of new electronic devices for space mission purposes, a software simulation tool employing modules of the GEANT4 and SPENVIS toolkits is being developed. The tool shall calculate displacement damage effects in semiconductors due to non-ionising energy loss (NIEL) and give an estimate of the expected performance degradation of electronic components during a given mission. The final prototype version of the simulation tool and first results are presented.