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Talk 5: Radiation hardness testing (SEE): Challenges and Perspectives

Thursday 13 June 2024 15:35 (20 minutes)

Abstract:

Space market evolution towards more flexible, agile and integrated systems, such as SmallSats or satellite constellations, is pushing the use of more complex EEE parts.
Newspace market particularly accelerated the introduction, in space units, of COTS devices, i.e. components not designed to endure space environment constraints, generating, in fact, a strong demand to evaluate parts behavior against radiation induced effects. Characterization of EEE parts against protons and heavy ions induced effects is indeed crucial for space systems.
The purpose of this talk is to give an overview of the current and future trends in EEE parts testing and related test methodology, highlighting the challenges we are facing with current facilities, including parts preparation, beam time availability, energies, etc., and to give some perspectives to meet these needs.

CV:

Radiation effects engineer, he has a PhD in Electronics from the University of Toulouse, France. He joined the Single Event Effects Lab of ALTER France in 2014. He has a solid experience in SEE testing of EEE components covering analog and digital devices. He is author and co-author of several IEEE papers in the radiation effects on electronic devices field. Recently, two of his papers were awarded for the best Data Workshop paper at RADECS 2022 conference.

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Session Classification: Session 6: Protons and Heavy ions: The User's Perspective