

12th Course - Challenges in Radiation Damage and Radiation Protection during Design and Operation of Accelerator Facilities and Space Missions

Contribution ID: 16

Type: **not specified**

Damage to Electronics - SEE

Wednesday 25 October 2023 14:00 (1h 10m)

In addition to cumulative damage through ionizing and non-ionizing dose, stochastic effects induced by charge transients from directly or indirectly ionizing particles in electronic components can create upsets and failures which in turn can propagate through the circuit and equipment, leading to potentially critical system level faults. In this lecture, the basic mechanisms linked to SEE induction will be presented, associating them with the main environments of relevance for radiation effects on electronics. Moreover, several SEE types, both destructive and non-destructive, will be introduced in more detail, along with some insight on how they are tested against, including real case examples of SEE test campaign results.

Presenter: GARCIA ALIA, Ruben (CERN)