Study of the radiation field of the CTN Cobalt-60 irradiation facility

Objectivos
Perform a detailed study of the radiation field of the CTN Co-60 irradiation facility using the Geant4 simulation toolkit (C++).
Compare and validate the simulation results with dosymetric in-site measurements.
This characterization is of extreme importance for the planning of radiation testing of EEE components, materials and systems using these facilities.

The student shall:
- learn about radiation interactions with matter
- dosimetry
- Develop a Geant4 simulation model for the facilities
- Map the radiation field of the Co facility
- Validate the simulation results with in-site dosymetric data

Requisitos

Localização
LIP-Lisboa and CTN (Campus Tecnológico Nuclear)

Observações
Scope: Radiation Physics, Radiation effects, Geant4 simulation, Radiation testing of EEE components, materials and systems.

This work will be performed with the LIP "Space Radiation Environment and Effects Group" and with CTN and it will contribute to ongoing contracts with the European Space Agency (ESA).

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Cursos
MEFT