



Contribution ID: 149

Type: Poster

【381】 Qualification of the Radiation-Hard Electron Monitor (RADEM) for ESA JUICE mission

Wednesday 28 August 2019 19:14 (1 minute)

RADEM is a radiation monitor developed for ESA JUICE mission to icy moon of Jupiter: Ganymede, Callisto and Europa. Instrument contains of set of detectors optimized to measure electrons, protons, heavy ions and angular distributions of incoming radiation.

Assembling and qualification of Si-diode sensors for RADEM as well as test campaign of its Engineering Model were carried out at PSI. Various measurements successfully confirmed quality of the sensors in accordance to mission requirements. EM instrument was exposed to different radiation types at PSI exposure facilities. Detectors were tested with electrons and protons at different energies and fluxes.

Detailed Monte Carlo simulations and modelling runs were started to verify instrument responses and provide calibration factors for spectra unfolding algorithms.

Primary author: SOCHA, Patryk (PSI)

Co-authors: HAJDAS, Wojtek (Paul Scherrer Institut PSI); MARCINKOWSKI, Radosław (PSI - Paul Scherrer Institut); EGGER, Jo Ann (PSI); GRUCHOLA, Salome (PSI); GONÇALVES, Patrícia (LIP); PINTO, Marco (LIP); MARQUES, Arlindo (EFACEC); PINTO, Costa; SOUSA, Tiago (EFACEC); MATOS, Rui (EFACEC); LOURENÇO, Ivo (EFACEC)

Presenter: SOCHA, Patryk (PSI)

Session Classification: Poster Session

Track Classification: Nuclear, Particle- and Astrophysics (TASK)