

Training Opportunity for Belgian Trainees

Reference	Title	Duty Station
BE-2021-TEC-QEC	SEE (Single Event Effect) test and reliability analysis on COTS devices	ESTEC
<p>Overview of the mission: The Radiation hardness Assurance and Component Analysis Section is one of three sections of the Technical Reliability and Quality Division in the Product Assurance and Safety Department. The main responsibility area of the section is to provide direct and indirect engineering support to ESA projects and European Industry. The section is active in the fields of EEE component radiation effects and reliability assessment. The activities of the section are strongly laboratory oriented and the team is responsible for the day-to-day operation of the Division. component laboratory. The section is responsible for covering all EEE component related RHA matters (except Radiation Environment and shielding analysis) in support of ESA space missions and ESA R&D activities.</p>		
<p>Overview of the field of activity proposed: SEE (Single Event Effect) test and reliability analysis on COTS devices Analysis of long term reliability of electronic devices irradiated at UCL Louvain-la-Neuve (Be)</p> <p>The field of activities will be on the development of basic knowledge of component engineering, product assurance principles and analysis and simulation of radiation effects on EEE components.</p> <p>In particular, support to the preparation of radiation tests campaigns including developing test set-up and subsequent data analysis on EEE components focusing in particular on COTs devices, with emphasis on SEE to be performed at UCL CYCLONE Heavy Ion Facility, the cyclotron of Louvain-la-Neuve (Be) able to accelerate different types of ions which are used for the characterization of electronic components.</p> <p>Reliability assessment of COTs devices submitted to Heavy Ions testing: Effects of SEL (Single Event Latch-up), High Current Events and Single Event Functional Interrupt on long term reliability of the parts.</p> <p>Operation and development of best industrial practices on the use of pulse laser test to simulate the effect of space radiation on microelectronics devices.</p> <p>Contribution to standardization activities leading to the improvement of the existing Single Event Effects testing guidelines and test method.</p>		
<p>Required education and skills:</p> <ul style="list-style-type: none"> • Master's degree in a technical or scientific discipline • Good interpersonal and communication skills • Ability to work in a multi-cultural environment, both independently and as part of a team • Fluency in English and/or French, the working languages of the Agency 		