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Reference number: Cat. 20.2 D05-NP

Research Project Title	PhD: Transmission and capture cross-section measurements on enriched tungsten samples at GELINA
Project Description	<p>The Joint Research Centre in Geel, Belgium, operates a 150 MeV electron linear accelerator serving as a white neutron source for high-resolution neutron time-of-flight measurements. The Neutron Physics unit offers advanced and comprehensive training in nuclear physics and engineering through cross-disciplinary research based on neutron physics applications.</p> <p>This project aims at improving the cross-section data in the resolved and unresolved resonance region for tungsten isotopes. Improved resonance parameters will be deduced from high resolution total and capture cross-section measurements at GELINA.</p> <p>The specific tasks of the job are:</p> <ul style="list-style-type: none"> - total and capture cross-section measurement at GELINA applying the time-of-flight technique - processing of the experimental data to deduce transmission factors and capture yields - resonance shape analysis to deduce resonance parameters in the resolved resonance region - application of statistical nuclear reaction models to deduce average resonance parameters and average cross sections in the unresolved resonance region <p><u>Selection criteria:</u></p> <p>The ideal candidate has a university (master) degree in nuclear physics. The applicant should have a solid background in nuclear physics and a good experience with radiation detectors and related electronics as well as some theoretical aspects of nuclear physics. Experience in the use of scintillators and application of the time-of-flight technique is an asset.</p>
Duration (min. 12 months-max. 36 months)	Up to 36 months
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How to apply	Please consult the job pages of the JRC-IRMM website for instructions to apply: http://irmm.jrc.ec.europa.eu/jobs/ Note: only applications received by <u>postal mail</u> , using the form on the IRMM website will be considered.