



2019-GEE-A5-FGIV-011511

**FGIV – Scientist - Exploratory Research Project  
Alpha spectrometry through time of flight  
(A-TOF)**

<p><b>Position for:</b> <b>FG IV Scientist</b></p>	<p>As the science and knowledge service of the Commission, the mission of DG Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.</p> <p>The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at <a href="http://ec.europa.eu/jrc/">http://ec.europa.eu/jrc/</a></p> <p>The JRC offers a vacancy for a Contract Agent within the Exploratory Research Project A-TOF (Alpha spectrometry through time of flight).</p> <p>The JRC Exploratory Research Programme (ER) is a strategic initiative characterised by ideas that might lead to novel results to qualitatively enrich current JRC scientific work.</p> <p>The ER Project A-TOF will design and construct an experimental set-up to measure the energy of alpha particles by time-of-flight. The set-up will include a source chamber and long flight tube under vacuum, a focussing magnet system, a start and stop detector and electronics to record time differences. The stop detector will be moveable over an SI-traceable distance for calibration purposes. The project aims at obtaining an energy resolution of a few keV, thus providing reference data sets on alpha emission energies and probabilities in nuclear decay, which can be used by other organisations.</p> <p>The successful candidate will be in charge of:</p> <ul style="list-style-type: none"><li>• Carrying out all aspects of the A-TOF project, in collaboration with internal and external experts;</li><li>• Design the set-up, perform model calculations;</li><li>• Acquire the necessary components and construct the device;</li><li>• Implement/test/optimize the method;</li><li>• Dissemination/publication of results.</li></ul> <p>Qualifications:</p> <ul style="list-style-type: none"><li>• Completed university studies of at least three years attested by a diploma and at least five years professional experience in a field relevant to the position, alternatively a doctoral diploma in physics or engineering or related field;</li><li>• Extensive knowledge/experience in nuclear physics is essential;</li><li>• Broad knowledge in the area of experimental techniques is essential;</li><li>• Knowledge of time-of-flight measurements, beam optics, magnetic fields, nuclear detectors, electronics, digital data acquisition is an advantage;</li><li>• Solid record of research activities relevant for the post including publications in international peer-reviewed journals is an advantage;</li><li>• Good oral and written communication skills in English (B2) are essential, knowledge of other languages is an</li></ul>
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