

The research group of Prof. Scheidenberger, II. Institute of Physics at the Justus-Liebig-University Gießen offers within the project “*Mass measurements of exotic nuclei with TITAN at TRIUMF (Vancouver, Canada)*” a part-time position (66%) for a

Research associate / Doctoral student

The position is for a duration of three years. In agreement with the current legislation the position is remunerated according to “Entgeltgruppe 13 Tarifvertrag Hessen (TV-H)”.

The group of Prof. Scheidenberger studies exotic nuclei far off stability and their properties. These nuclei are synthesized in Nature in nuclear reactions during the burning phases of stars or in thermo-nuclear runaways during star explosions and neutron star mergers. These macroscopic environments are governed by the microscopic properties of short-lived nuclei. Therefore the latter are subject of intense research. In the laboratory, short-lived nuclei are produced and studied at accelerator facilities. A leading laboratory in the field of exotic nuclei is TRIUMF in Vancouver, Canada. The TITAN experiment (TRIUMF's Ion Trap for Atomic and Nuclear science) at TRIUMF enables unique experiments on exotic nuclei and fundamental interactions. Together with the TITAN collaboration, the group of Prof. Scheidenberger has developed and commissioned a multiple-reflection time-of-flight mass spectrometer (MR-TOF-MS) for experiments at TITAN and performed first quite successful measurements. Within the scope of the project, further direct mass measurements of exotic nuclei will be performed with the MR-TOF-MS and with the TITAN Penning trap, and technical upgrades will be implemented.

Opportunities:

The successful candidate will be involved in the research activities outlined above. This comprises the preparation, execution and analysis of precision mass measurements of exotic nuclei with the TITAN experiment as well as the implementation of technical upgrades of the TITAN MR-TOF-MS. The work will be performed predominantly at TRIUMF.

Requirements:

The successful candidate has successfully completed a scientific study of physics and obtained a diploma or Master of Science in physics or equivalent. Experience and excellent knowledge in experimental nuclear physics and analytical skills are expected. Experience in the field of mass spectrometry of exotic nuclei and technical skills are desirable. Computer literacy, good communication skills in the English language and the willingness to work in an international environment, including a multi-year stay at TRIUMF, are expected.

Justus Liebig University Giessen is seeking a larger percentage of women in academia; therefore, qualified female researchers are especially encouraged to apply. The university sees itself as a family-friendly university. Applicants with children are most welcome.

Please send your application stating the applications number IONAS-2020-4 with the usual documents until May 8th, 2020 to **Prof. Dr. Christoph Scheidenberger, II. Institute of Physics, Heinrich-Buff-Ring 16, D-35392 Giessen, Germany** or per Mail to ionas@physik.uni-giessen.de. Applications from disabled people of equal aptitude will be given preference. Please only submit copies of your application documents without document files or folders, as they cannot be returned after the application procedure is completed.