Ph.D. Position (f/m) in Antimatter Physics
30 hours per week

The Stefan Meyer Institute for Subatomic Physics (www.oeaw.ac.at/smi) of the Austrian Academy of Sciences invites applications for a 3-year Ph.D. position on precision spectroscopy of hydrogen and antihydrogen with the subject

Development of positron beam and trap

A PhD candidate position is available from October 2020 in the new positron physics laboratory of the Stefan Meyer Institute. The candidate will work in Vienna constructing a new positron beam and trap, followed by an ion spectrometer.

Positrons are produced via the radioactive decay of sodium-22 and moderated by entering a neon ice to produce a low energy beam. As with electrons these can be magnetically guided from the source into other apparatus. Positrons in the beam are then accumulated in a buffer gas trap to produce pulses with a thermal energy spread. These pulses will then be collided with gases to investigate the formation of bound states of positronium (a quasi-stable hydrogenic atom consisting of a positron and an electron).

The candidate will be expected to perform simulations, undertake design work, construction, and operation of the new beam line as part of their duties. They will join the extremely active positron group at SMI headed by Dr Dan Murtagh which is also heavily involved with the ASACUSA Cusp collaboration at CERN.

Any experience of the following would be advantageous: positron physics, electron beams, time of flight spectroscopy, ultrahigh vacuum, gamma ray detection, channel electron multipliers, cryogenics, SIMION, Comsol, Python, C++, LabVIEW.

Offer

The successful candidate will receive contract for three years. The annual gross salary corresponding to the employment category W2 of the Academy of Sciences will be 30,878.40 € annually.

The SMI is situated near the city centre of Vienna and offers an excellent working environment. An open team culture welcomes the applicant.

Application

Please submit your application, copies of CV, master certificate, graded study records, a brief summary of previous research, and two letters of recommendation (including one from your master’s thesis supervisor) to smi@oeaw.ac.at no later than August 30st, 2020.

More information can be obtained from http://www.oeaw.ac.at/smi/jobs or by email Daniel.Murtagh@oeaw.ac.at

The Austrian Academy of Sciences is an equal opportunity employer.