

Job ID: SMI074DOC120

The Stefan Meyer Institute for Subatomic Physics (SMI), of the Austrian Academy of Sciences (OeAW), Austria's leading non non-university research and science institution, is offering a new

PHD STUDENT POSITION (F*M) in Antimatter Physics
(part-time, 30h per week)

for a 3-year period to carry out research within a PhD thesis in 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).

Your tasks:

- You will be expected to perform simulations, undertake design work, construction, and operation of the new beam line as part of their duties
- You 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

Your profile:

- Master's degree (or equivalent) in physics or a related field
- 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

We Offer:

- The SMI is situated near the city centre of Vienna and offers an excellent working environment.
- An open team culture welcomes the applicant
- an annual gross salary of € 30.878,40 corresponding to the salary scheme of the Academy of Sciences (OeAW),

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 (mentioning Job ID: SMI074DOC120) **no later than August 31, 2020**.

More information can be obtained from [SMI Jobs](#) or by email Daniel.Murtagh@oeaw.ac.at.

The Austrian Academy of Sciences (OeAW) pursues a non-discriminatory employment policy and values equal opportunities, as well as diversity. The OeAW lays special emphasis on increasing the number of women in senior and in academic positions. Given equal qualifications, preference will be given to female applicants.