Job ID: HEPHY109DOC220

The Institute of High Energy Physics (HEPHY) of the Austrian Academy of Sciences (OeAW), Austria's leading non-university research and science institution, is offering a

PhD Student Position (f*m)

(part-time, 30h per week)

to join the Belle II group research activities.

HEPHY has a long tradition of participation in both the Belle and the Belle II experiments and plays a leading role in the operation of the Belle II Vertex Detector as well as in physics studies including but not limited to semileptonic B decays and dark sector physics.

The position will be funded as part of the newly established ERC StG group InterLeptons under the grant agreement 947006 with European Research Council of the EU commission.

The successful candidate will work in the context of dark sector physics with data collected at the Belle II experiment and specifically will take a leading role in the search for invisible decays of a light Z' boson in the reaction e+e- → μ+μ- Z'. The group has already played a leading role in the analysis of the commissioning data that led to the first Belle II physics publication.

Another task is to lead all the main aspects of the measurement with particular attention to properly suppress backgrounds and identify the signal, via the implementation of ad hoc machine and deep learning algorithms such as deep neural networks. The candidate will be invited to carry out a dissertation project, which is compatible with the research area of the institute.

Your profile:

- Master degree in physics and documented knowledge of particle physics
- Experience in the analysis of data of high energy physics experiments
- Documented knowledge of machine learning
- Willingness to contribute to the operation of the Belle II experiment (remotely or in person when applicable)
- Experience in studies of triggers, in dark sector physics or experience at the Belle or Belle II experiment would be an advantage

We offer an annual gross salary of € 30.878,40 according to the collective agreement of the Austrian Academy of Sciences (OeAW), a dynamic and young research environment in the world's most livable city and the possibility of scientific and personal growth via dedicated support and training.

Please send your application including one page motivation letter, two letters of recommendation to be sent to same email address, a recent CV, via e-mail to gianluca.inguglia@oeaw.ac.at (mentioning Job ID: HEPHY109DOC220) **no later than October 31, 2020.**

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.