

Job ID: HEPHY023DOC223

The Institute for High Energy Physics ([HEPHY](#)) of the Austrian Academy of Sciences ([OeAW](#)), Austria's leading non-university research and science institution, performs a rich experimental particle physics research program participating in accelerator and non-accelerator-based experiments. The institute has significant involvements in Compact Muon Solenoid (CMS) experiment at CERN, the Belle II experiment at KEK, several direct Dark Matter search experiments and R&D on particle detectors with applications in medical imaging. In this context, HEPHY is offering a

PHD STUDENT POSITION (F/M/X)

on a search for long-lived particles in CMS using machine learning techniques

(part-time, 30h per week)

Your tasks:

- Analyze data collected by the CMS experiment at LHC
- Participate in a design of a novel search for dark matter in currently unexplored experimental manifestations
- Probe unconventional experimental signatures, such as long-lived particle decays and low-momentum objects including development and optimization of their reconstruction and identification
- Make use of innovative data processing and analysis approaches including development and application of advanced machine learning algorithms

Your profile:

- Master in the field of experimental particle physics at the time of the appointment
- An excellent research record and experience in performing analyses in a large international collaboration
- Solid computing and programming skills, notably C++ and Python
- Experience or interest in modern machine learning techniques
- Capability to work in an international environment
- Solid communication skills and full English language proficiency

Our offer:

- Work in a lively and constructive research environment collaborating with international experts in the field
- Membership in the CMS collaboration, participation in working meetings, interaction with other CMS teams
- Position is located in Vienna, one of the cities with world's highest living standard
- Regular travels to CERN and international conferences
- An annual gross salary of € 34.507,20, according to the salary scheme of the Austrian Science Fund ([FWF](#))
- The position is offered for a period of three years

We invite you to send your application with a CV, a statement of research interests, and a list of publications you significantly contributed to, by e-mail to ivan.mikulec@oeaw.ac.at with a copy to hephy-office@oeaw.ac.at specifying in the subject the Job ID HEPHY023DOC223. Also, please, arrange for two recommendation letters to be sent to the same e-mail address. The application deadline is **March 31st, 2023**. Applications will be considered until the position is filled.

The Austrian Academy of Sciences (OeAW) pursues a non-discriminatory employment policy and values equal opportunities, as well as diversity. Individuals from underrepresented groups are particularly encouraged to apply.