

Job ID: HEPHY156PD222

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. HEPHY is offering a

POSTDOC POSITION (F*M)

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

(full-time, 40h per week)

Your tasks:

- Lead the development of a search for dark matter in scenarios with a long-lived co-annihilation partner and apply it to CMS Run 2 and 3 data
- Work with 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 novel data processing and analysis approaches
- Play a leading role in the subject within the CMS collaboration
- Supervise a PhD thesis on the subject

Your profile:

- PhD in experimental particle physics
- Ability to carry out an independent research program
- Excellent data analysis, computing and programming skills, notably C++ and Python
- Interest in, and experience with, 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
- An opportunity to live in Vienna, one of the world's highest living standard cities
- Regular travels to CERN and international conferences
- An annual gross salary of € 56.861,00, 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 mentioning Job ID HEPHY156PD222. Also, please, arrange for two recommendation letters to be sent to the same e-mail address. The application deadline is **December 31st, 2022**. 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.