

At the Karlsruhe Institute of Technology,  
Institute for Nuclear Physics,



## **1 doctoral position**

in the field of

### **high-energy astroparticle physics**

is to be filled as soon as possible. Applications are invited for a PhD student position in astroparticle physics at the Karlsruhe Institute of Technology, with special focus on the analysis of data of the Pierre Auger Observatory. The position is set in the framework of a *Helmholtz International Research Group*, which is a joint effort together with Universidad Nacional de San Martin, UNSAM, Buenos Aires, Argentina. Qualified candidates are expected to target the double degree at KIT and UNSAM and to work for a substantial part of the PhD programme at UNSAM.

The topic of the PhD thesis is dedicated to the *analysis of muon measurements* performed in coincidence with the particle and fluorescence detectors of the Pierre Auger Observatory. Particular focus will be put on the determination of the mass of cosmic rays and on the development of novel analysis techniques. It will significantly improve the analysis techniques and knowledge of air showers, and help to solve the unknown origin of the highest-energy particles.

**Qualification:** Applicants must hold a qualifying degree in physics (master degree) at the time of recruitment. Experience in modern programming languages, in particular C++ and Python, is highly welcome. Further information is available from Dr. Markus Roth, [Markus.Roth@kit.edu](mailto:Markus.Roth@kit.edu), Tel. +49-721-608-23870.

**Additional Information:** The position is limited to three years; remuneration is based on Tarifvertrag des öffentlichen Dienstes and specific Ph.D. student conditions. KIT pursues a gender equality policy. Women are therefore particularly encouraged to apply. If qualified, handicapped applicants will be preferred.

**Application:** Applications should include a curriculum vitae, a list of publications, a list of undergraduate and graduate courses taken (with grades), applicable certificates and 2 letters of recommendation, sent by the author directly to the email address given below. Full consideration will be given to applications arriving before 15 October 2017. Applications arriving after the given deadline will be considered until the position is filled.

**Contact:** Please combine all information in one single pdf file, and send your application (in English or German) until 15 October 2017 electronically to [Markus.Roth@kit.edu](mailto:Markus.Roth@kit.edu).