

The Johannes Gutenberg-Universität Mainz, Germany, and the PRISMA⁺⁺ Cluster of Excellence have openings for a

PhD Position in Experimental Particle Physics

(67% TV-L EG 13)

and a

Post-doctoral Position in Experimental Particle Physics

(100% TV-L EG 13)

in the **SHiP group**, both to be filled immediately.

The **SHiP experiment at the CERN SPS** is being built to search for new long-lived, weakly interacting, and neutral particles at the upcoming beam-dump facility. The Mainz SHiP group is engaged in the development and construction of a calorimeter system with directional information and the liquid scintillator of the surrounding veto system, with the offered positions being within the calorimeter group. The SHiP calorimeter serves both as electromagnetic (ECAL) and hadronic calorimeter (HCAL) and is designed as scintillator sandwich calorimeter with SiPM read-out. The ECAL will contain more granular scintillators and additional high-precision layers for the measurement of shower directions. The successful applicants are expected to take leading roles in the **development of the SHiP ECAL/HCAL calorimeter** towards a technological prototype and the construction of the final detector. Emphasis is particularly placed on the front-end read-out electronics, simulation studies for the optimization of the final design, and the mechanical layout.

The position is part of the new Cluster of Excellence PRISMA⁺⁺, “Precision Physics, Fundamental Interactions and Structure of Matter“, which focuses on key questions concerning the fundamental constituents of matter and their implications for the physics of the Universe. It consists of experimental and theoretical research groups working together in the areas of astro-particle, high energy and hadron physics, and several other fields. In particular, we have a close collaboration with the PRISMA⁺⁺ Detector Laboratory.

Applicants for the PhD position are required to have a Master in Physics or an equivalent degree, applicants for the post-doctoral position should have a PhD in Physics or equivalent. Prior experience with particle detectors is desirable. German language skills are not required.

The Johannes Gutenberg-Universität Mainz aims at increasing the percentage of women in academic positions and strongly encourages women scientists to apply. The University is an equal opportunity employer and particularly welcomes applications from persons with disabilities.

Qualified candidates are requested to submit their application, including a cover letter, curriculum vitae, at least two names of referees and copies of degree certificates and transcripts to Dr. Rainer Wanke and Prof. Volker Büscher, Institute of Physics, JGU Mainz, 55099 Mainz, Germany (or via e-mail to wanke@uni-mainz.de and buescher@uni-mainz.de). The positions will remain open until filled.

Contacts:

Dr. Rainer Wanke (wanke@uni-mainz.de)
Prof. Volker Büscher (buescher@uni-mainz.de)
Institute of Physics
Johannes Gutenberg University Mainz
55099 Mainz, Germany