Cluster of Excellence
PRISMA+
Precision Physics,
Fundamental Interactions
and Structure of Matter

JOHANNES GUTENBERG
UNIVERSITÄT MAINZ

JG|U

The Cluster of Excellence PRISMA⁺ at Johannes Gutenberg University Mainz addresses fundamental questions about the nature of the building blocks of matter and their importance for the physics of the universe. The XENON group at the Institute of Physics has a long-standing history in the development of world-leading experiments in direct Dark Matter searches, is co-responsible for the novel neutron veto system of XENONnT based on a Gd-loaded water Cherenkov detector as well as its surrounding muon veto system, and is pursuing detector R&D towards a future DARWIN Observatory, based on a large liquid xenon TPC. We are looking to fill two

PhD Positions in Dark Matter Search with XENON and Detector R&D towards DARWIN

Successful applicants will take over responsibilities in the calibration and running of the neutron veto system for the XENONnT experiment and will engage in data analysis and simulations on XENONnT and/or develop novel technologies towards the DARWIN Observatory, supported by the PRISMA Detector Laboratory. Research visits to the LNGS underground laboratory in Italy will be part of the PhD. There are opportunities to become associated with the new graduate research school Particle Detectors at Mainz.

Qualification: Applicants must hold a qualifying degree in physics at the time of recruitment and should have experience in astroparticle physics or neighbouring fields. Experience in programming (python, C++) and data analysis or Monte Carlo simulations is advantageous. Prior experience in detector hardware would provide a head start for a development topic.

Salary and benefits are commensurate with public service (E 13 TV-L at 67%, ~2700€ gros). The initial appointment will be for 3 years.

Highly motivated candidates are requested to submit their application, including a cover letter stating their research interests, a CV, and copies of university certificates as a single pdf file via email to

jobs-grp-oberlack@uni-mainz.de

and should arrange for two letters of recommendation to be sent directly to the same address. Applications will be considered until the positions are filled. For full consideration please submit by **August 28, 2023**.

Contact & more information:
Prof. Dr. Uwe Oberlack — jobs-grp-oberlack@uni-mainz.de, www.etap.physik.uni-mainz.de/
PRISMA+ Excellence Cluster — www.prisma.uni-mainz.de/
Graduate School – Particle Detectors — particle-detectors.uni-mainz.de/
XENON experiment: — xenonexperiment.org/