

ORNL Publications

External Publication

Job Posting Title

Postdoctoral Research Associate – Advanced Targetry for Radioactive Ion Beam Measurements / NB50686349

Posted Date

09/04/2018

End Posting Date

10/04/2018

Purpose

We are seeking a Postdoctoral Research Associate who will play an integral role in the design, implementation, and commissioning of a gas jet target for the HELIOS solenoidal spectrometer. This position resides in the Experimental Astrophysics Group in the Physics Division (PD), Physical Sciences Directorate (PSD) at Oak Ridge National Laboratory (ORNL).

OVERVIEW:

Under the supervision of Dr. Kelly Chipps and working closely with collaborators at Argonne National Laboratory, the successful candidate will work to design, implement, and commission a gas jet target for the HELIOS solenoidal spectrometer. The adaptation of a gas jet target to a solenoidal spectrometer presents unique challenges, which the successful candidate will address through the use of custom component design, gas flow and reaction particle kinematics modeling, supervision of component fabrication, installation and testing of system components, and commissioning of a combined system. The successful candidate will also have the opportunity to participate in and/or lead other activities of the group.

Major Duties/Responsibilities

- Design appropriate system components and assess through modeling and testing
- Construct a prototype gas jet target system and demonstrate operational parameters
- Develop and implement a plan to install a gas jet system in HELIOS
- Develop and implement appropriate commissioning requirements for the gas jet system in HELIOS
- Lead the first commissioning and physics measurements with the system using stable and radioactive beams from ATLAS
- Present and report research results and publish scientific results in peer-reviewed journals in a timely manner
- Ensure compliance with environment, safety, health and quality program requirements
- Maintain strong dedication to the implementation and perpetuation of values and ethics

Qualifications Required

BASIC QUALIFICATIONS:

- A PhD in Physics or a related discipline completed within the last five years

PREFERRED QUALIFICATIONS:

- Knowledge of standard nuclear physics data acquisition and analysis codes such as ROOT, MIDAS, etc

- Familiarity with vacuum systems
- Familiarity with charged particle detection systems
- Ability to work independently and as part of a multi-institutional team

OTHER INFORMATION:

Applicants cannot have received their Ph.D. more than five years prior to the date of application and must complete all degree requirements before starting their appointment. The appointment length will be up to 24 months with the potential for extension. Initial appointments and extensions are subject to performance and availability of funding.

Please provide a list of publications when applying for this position. Three letters of reference are required and can be uploaded to your profile or emailed directly to PSDrecruit@ornl.gov. Please include the title of the position in the subject line.

Work Directions and Interfaces

Position reports to the Physics Division and interfaces with administrative staff, managers and visitors to ORNL.

This position will remain open for a minimum of 5 days after which it will close when a qualified candidate is identified and/or hired.

We accept Word(.doc, .docx), Excel(.xls, .xlsx), PowerPoint(.ppt, .pptx), Adobe(.pdf), Rich Text Format(.rtf), HTML(.htm, .html) and text files(.txt) up to 2MB in size. Resumes from third party vendors will not be accepted; these resumes will be deleted and the candidates submitted will not be considered for employment.

If you have trouble applying for a position, please email ORNLRecruiting@ornl.gov.

Notice: If the position requires a Security Clearance, reviews and tests for the absence of any illegal drug as defined in 10 CFR 707.4 will be conducted by the employer and a background investigation by the Federal government may be required to obtain an access authorization prior to employment and subsequent reinvestigations may be required.

If the position is covered by the Counterintelligence Evaluation Program regulations at 10 CFR 709, a counterintelligence evaluation may include a counterintelligence-scope polygraph examination.

ORNL is an equal opportunity employer. All qualified applicants, including individuals with disabilities and protected veterans, are encouraged to apply. UT-Battelle is an E-Verify Employer.