Job Title: Postdoctoral Research Associate in Spallation Physics and Target Neutronics
Organization Name: P-27/LANSCE Weapons Physics

Overview
Located in northern New Mexico, Los Alamos National Laboratory (LANL) is a multidisciplinary research institution engaged in fundamental and applied science on behalf of national security. LANL enhances national security by ensuring the safety and reliability of the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction, and solving problems related to energy, environment, infrastructure, health, and global security.

Detailed Description
The Radiation Effects and Radiography team is supporting operations at the Los Alamos Neutron Science Center (LANSCE). The LANSCE user facility is a major experimental scientific facility at LANL. At the heart of LANSCE is a powerful linear accelerator that accelerates protons up to 84% the speed of light. The neutrons are generated by spallation reactions in targets made of tungsten metal, in the energy range of thermal to several hundreds of MeV. The LANSCE facility supplies proton and neutron beams used in a wide range of applications that help the nation maintain its leadership role in many areas of science and technology. The high-energy proton beams drive five user facilities available at LANSCE: Lujan Center, Weapons Neutron Research, Ultra Cold Neutron Source, Proton Radiography and Isotope Production Facility. The P-27 Radiation Effects and Radiography team is instrumental in the neutronics design of various spallation neutron sources, design of radiological shielding surrounding the neutron sources, optimization of neutron transport and reduction of backgrounds at experimental areas, and supports the day-to-day operations. The successful candidate will have an opportunity to work on the design of the next-generation spallation target supplying thermal and epithermal neutrons to a wide variety of instruments at Lujan Center and multi-purpose, versatile energy-spectrum fast neutrons to six different flight paths at the Weapons Neutron Research facility. With recent advances on developing Unified Spatial Metrology Network in our facility using laser driven systems, we are developing a holistic method of optimizing neutron beam production via implementing realistic, online beam diagnostic capabilities of protons and neutrons in one framework. It is expected that the postdoc will be working and collaborating with a diverse group of physicists and engineers in advancing experimental neutron physics capability and neutron transport technology.

Job Requirements
REQUIRED SKILLS:
- Ability to communicate and work effectively within a multidisciplinary team
- Demonstrated experience of working with Monte Carlo particle transport codes
- Experience in data analysis (experimental or simulations)
- Excellent writing and communication skills

DESIRED SKILLS:
- Previous experience with MCNP(X) or different particle transport code
- User-level familiarity with UNIX/Linux operating system
- Ability to engage in experimental as well as simulation work
- Experience with programming in C/C++ or Fortran
- Familiarity with scripting languages (e.g., BASH, Perl, Python)

EDUCATION: A Ph.D. in physics, engineering or closely related field earned within the last five years or soon to be completed is required.

Additional Details

NOTES TO APPLICANTS: Interested candidates must submit their applications (including CV and cover letter) using the online application system. For further technical information, please contact M. Mocko (mmocko@lanl.gov).

Pre-Employment Drug Test: The Laboratory requires successful applicants to complete a pre-employment drug test and maintains a substance abuse policy that includes random drug testing.

Candidates may be considered for a Director's Fellowship and outstanding candidates may be considered for the prestigious Marie Curie, Richard P. Feynman, J. Robert Oppenheimer, or Frederick Reines Fellowships.

For general information about the Postdoc Program refer to http://www.lanl.gov/careers/career-options/postdoctoral-research/index.php.

Equal Opportunity: Los Alamos National Laboratory is an equal opportunity employer and supports a diverse and inclusive workforce. We welcome and encourage applications from the broadest possible range of qualified candidates. The Laboratory is also committed to making our workplace accessible to individuals with disabilities and will provide reasonable accommodations, upon request, for individuals to participate in the application and hiring process. To request such an accommodation, please send an email to applyhelp@lanl.gov or call 1-505-665-5627.

Appointment Type: Postdoc

Area or Major: Physics

Posting Scope: External

Human Reliability Program: No

Clearance: No

Clearance Level: U