

Los Alamos National Laboratory

P-27 Experimental Nuclear Physics Postdoc

Vacancy Name: IRC57125

Online Application: <http://jobs.lanl.gov>

What You Will Do

The P-27 group in Physics Division is looking for postdoctoral candidates to work on direct and indirect measurements of neutron induced reactions. The successful candidate will perform measurements, analysis, and/or development with the suite of instruments located at the Los Alamos Neutron Science Center (LANSCE) or perform experiments at external National User Facilities in the US, including ATLAS at ANL, the NSCL at Michigan State, the Texas A&M University, or the University of Notre Dame. At LANSCE, the candidates will work with the Detector for Advanced Neutron Capture Experiments (DANCE), the Low-Energy (n,z) (LENZ) instrument, the Time Projection Chamber (TPC) and the SPIDER, and be actively involved in developing new instruments to take advantage of the unique time-of-flight neutron beams available at LANSCE. Through the collaboration with the Isotope Production Facility (IPF) in LANL, we perform neutron-induced reaction measurements on radioactive nuclei at LANSCE. Outside Los Alamos, the group is actively pursuing measurements studying the nuclear reactions in inverse kinematics.

Research areas in the group include studies of nuclear astrophysics (s-process, r-process, heavy element synthesis), nuclear structure (gamma-ray spectroscopy, level density, photon strength function), nuclear reactions, and studies of the fission process. The group is tightly coupled to the LANL Theory Division; nuclear physics and astrophysics theory groups as well as rad-hydro modeling teams in nuclear applications groups. The intense neutron spallation sources at LANSCE are used in much of this work and cover a neutron energy range from sub-thermal to 800 MeV.

A broad range of expertise and background is desired in the team, and there are multiple distinct projects that a successful candidate could pursue within the research disciplines of the team. There may be additional opportunities for collaborative work with scientists on the P-27 group or from other groups or divisions at LANL. Highly qualified applicants will be considered for Director's or Agnew National Security Postdoctoral Fellowships with exceptional candidates being considered for the prestigious Marie Curie, Richard P. Feynman, J. Robert Oppenheimer, or Frederick Reines Fellowships.

What You Will Need

Required Skills:

- Ph.D. with demonstrated scientific achievement in a relevant area of nuclear physics, nuclear chemistry, or related areas to support the current and future experimental physics program
- Demonstrated ability to carry out independent and collaborative research
- Demonstrated ability to communicate both technically and interpersonally both orally and in writing

Desired Skills:

- Experience in particle or gamma-ray detector development and/or implementation
- Experience with Monte Carlo based particle/gamma-ray simulation tools
- Experience with detector electronic hardware and/or data acquisition design and development
- Experience with nuclear reaction models
- Experience with stellar modeling and/or nucleosynthesis network tools

Education

A Ph.D. in Physics or a related field completed within the last five years or soon to be completed is required.

Notes to Applicants:

- In addition to applying on-line, please send a curriculum vitae, contact information for three references, and a cover letter summarizing relevant qualifications and research and career goals to Hye Young Lee (hylee@lanl.gov).
- 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, Frederick Reines or Harold Agnew Fellowships.
- For general information to the Postdoc Program go to: <http://www.lanl.gov/careers/career-options/postdoctoral-research/index.php>