

## Los Alamos National Laboratory Experimental Nuclear Physics Postdoc

**Vacancy Name: IRC75040**

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

### What You Will Do

The P-27 group in Physics division is looking for postdoctoral candidates to work in the Nuclear Data (ND) and Astrophysics and Structure (NAS) Teams on direct and indirect measurements of neutron induced reactions. The successful candidate will perform measurements and analysis at the Los Alamos Neutron Science Center (LANSCE) or external charged particle and rare isotope beam facilities. There are additional opportunities to develop the suite of instruments located at LANSCE and part of P-27's external measurement programs. At LANSCE, tools include the Low-Energy (n,Z) (LENZ) instrument, the SPecrometer for Ion DEtermination Research (SPIDER), the Device for Indirect Capture Experiments on Radionuclides (DICER), the fission Time-Projection-Chamber (TPC), the Detector for Advanced Neutron Capture Experiments (DANCE), and the Chi-Nu Prompt Fission Neutron Instrument. The teams are actively involved in developing new instruments to take advantage of the unique time-of-flight neutron beams made available at LANSCE with stable and unstable nuclei. Outside Los Alamos, we actively pursue measurements studying the underlying nuclear physics to infer nuclear reaction rates for short-lived nuclei.

Research areas in the group include studies of nuclear reactions (resonance analysis using R-matrix, compound nuclear reactions), the fission physics (cross section, fragments, prompt fission neutrons and gammas), nuclear astrophysics (s-process, r-process, heavy element synthesis), and nuclear structure (gamma-ray spectroscopy, level density, photon strength function). The teams are tightly coupled to the LANL T-2 nuclear physics and astrophysics theory group as well as rad-hydro modeling and transport teams in CCS-2, XCP, and XTD. The successful candidate(s) will have opportunities to contribute to multiple distinct projects and engage in collaborative work with scientists both within P-27 as well as other groups or divisions at LANL.

We are looking to hire three qualified candidates, one for each of the three projects listed below; LENZ (<https://lansce.lanl.gov/facilities/wnr/flight-paths/fp-15R/index.php>), SPIDER (<https://lansce.lanl.gov/facilities/lujan/instruments/fp-12/index.php>), and DICER (<https://lansce.lanl.gov/facilities/lujan/instruments/fp-13/index.php>). Project details can be found in the webpage links.

### What You Will Need

#### Required Skills:

- Ph.D. in a relevant area of nuclear physics, particle physics, astrophysics, nuclear engineering, or related areas to support the current and future experimental physics program
- Ability to carry out independent and collaborative research
- Ability to communicate both technically and interpersonally both orally and in writing

## Desired Skill

- 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

## 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, a cover letter summarizing relevant qualifications, research, and career goals, and arrange for three letters of recommendation to be sent to Hye Young Lee ([hylee@lanl.gov](mailto:hylee@lanl.gov)).
- Highly qualified candidates may 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.
- For general information on the LANL Postdoc Program, go to:  
<https://www.lanl.gov/careers/career-options/postdoctoral-research/postdoc-program/index.php>