

Los Alamos National Laboratory

Job Title: Scientist 2/3

Organization Name: P-3/ Nuclear & Particle Physics and Applications

Functional Job Title: Experimental Nuclear Physics Scientist

Vacancy Name: [IRC91271](#)

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

This position will be filled at either the Scientist 2 or 3 level (roughly equivalent to a tenure-track faculty or a tenured faculty at a university), depending on the skills of the selected candidate. Additional job responsibilities (outlined below) will be assigned if the candidate is hired at the higher level.

What You Will Do

The Nuclear & Particle Physics and Applications Group (P-3) in Physics Division is searching for a Scientist to strengthen the group's research portfolio. 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, studies of the fission outputs, and related topics. The teams closely collaborate with the LANL T-2 theoretical nuclear physics team, the LANL Isotope Production Facility for developing short-lived isotopes, and astrophysics theory group as well as rad-hydro modeling teams in CCS-2, XCP, and XTD. 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. Currently, the P-3 instrument suite at LANSCE includes the Detector for Advanced Neutron Capture Experiments (DANCE), the Low-Energy (n,Z) (LENZ) instrument, the Device for Indirect Capture Experiments on Radionuclides (DICER), the Chi-Nu Prompt Fission Neutron Instrument, the fission Time Projection Chamber (TPC), and the SPectrometer for Ion DEtermination Research (SPIDER). The teams are actively involved in developing new instruments to take advantage of the unique time-of-flight neutron beams made available at LANSCE. In addition, we collaborate with multiple organizations to develop and field next generation diagnostics at the Nevada National Security Site. Outside Los Alamos, we actively pursue measurements studying the underlying nuclear physics to infer nuclear reaction rates for short-lived nuclei.

A successful candidate could pursue any research direction within the current research disciplines of the group, or in related areas, with appropriate funding. There may be additional opportunities for collaborative work with scientists from other groups or divisions at LANL.

Scientist 2 (\$94,100 - \$155,700):

Responsibilities will include, but are not limited to:

- Perform fully functioning and self-sufficient experiments to understand the behavior of atomic nuclei or their applications
- Contribute to the completion of milestones on multiple projects and/or specific programmatic objectives
- Recommend and/or determine technical approaches for obtaining solutions
- Demonstrate effective networking with peers across an organization, and/or the institution
- Mentor students, postdocs, and junior staff in technical and professional growth

Scientist 3 (\$113,100 - \$190,900):

In addition to the responsibilities listed above, the Scientist 3 would be expected to:

- Design, execute, analyze, and interpret experiments to understand the behavior of atomic nuclei or their applications
- Lead technical decision making and direction at the project level
- Build effective teams and enhance the technical and professional skills of junior scientists, postdocs, and students
- Develop and advance LANSCE-relevant nuclear science campaigns for the National Nuclear Security Administration's Science-based Stockpile Stewardship program and/or the nuclear physics community

What You Need

Minimum Job Requirements:

Scientist 2:

- Demonstrated scientific achievement in a relevant area of experimental nuclear physics, neutron physics, astrophysics, nuclear engineering, or related areas to support the current and future experimental physics program at LANL
- Demonstrated ability to carry out independent and collaborative research
- Experience in leading experimental efforts or collaborations
- Demonstrated ability to communicate both technically and interpersonally, both orally and in writing
- Established record of contributing to or leading peer-reviewed publications

Scientist 3:

In addition to the requirements listed above, the Scientist 3 must demonstrate:

- Ability to lead the design, execution, analysis, and interpretation of experiments and engage in technical decision making and direction at the project level
- Success building effective teams and mentoring junior scientists, postdocs, and students

Desired Qualifications:

- Familiarity and experience in national and international nuclear data needs and evaluations, particularly with respect to neutron-induced reactions
- Experience in particle, neutron 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 and success in mentoring students, postdocs, and/or junior scientists
- Ability to obtain a US "Q" clearance, which normally requires US citizenship

Education/Experience for Scientist 2: Position requires a minimum of a Bachelor's degree in Physics from an accredited college and university and 4 years of related experience. A Ph.D. is preferred with post-doctoral research experience.

Education/Experience for Scientist 3: Position requires a minimum of a Master's degree in Physics from an accredited college or university and 6 years of relevant experience or an equivalent combination of education and experience directly related to the occupation. A Ph.D. is preferred with a post-doctoral appointment and 3 additional years of research experience.

Note to Applicants

In addition to applying on-line, please send (1) a curriculum vitae, (2) a cover letter summarizing relevant qualifications, (3) a research statement (Max. 2 pages), and (4) arrange for three letters of recommendation to be sent to Hye Young Lee (hylee@lanl.gov).

Where You Will Work

Located in beautiful northern New Mexico, Los Alamos National Laboratory (LANL) is a multidisciplinary research institution engaged in strategic science on behalf of national security. Our generous benefits package includes:

- PPO or High Deductible medical insurance with the same large nationwide network
- Dental and vision insurance
- Free basic life and disability insurance
- Paid maternity and parental leave
- Award-winning 401(k) (6% matching plus 3.5% annually)
- Learning opportunities and tuition assistance
- Flexible schedules and time off (paid sick, vacation, and holidays)
- Onsite gyms and wellness programs
- Extensive relocation packages (outside a 50 mile radius)