Los Alamos National Laboratory
P-27 Detector Specialist as Research Technologist 3

Vacancy Name: IRC63437

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

What You Will Do

The P-27 group in Physics Division is looking for a detector specialist to work on direct and indirect measurements of neutron induced reactions. The successful candidate will assist P-27 scientists in performing experiments and developing the suite of instruments located at the Los Alamos Neutron Science Center (LANSCE). These instruments include the Detector for Advanced Neutron Capture Experiments (DANCE), the Low-Energy (n,z) (LENZ) instrument, the Time Projection Chamber (TPC), Chi-Nu and SPIDER. The selected candidate will 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 nuclear reactions in inverse kinematics.
Research areas in the group include studies of nuclear reactions, nuclear structure, studies of the fission process, and nuclear astrophysics. 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.

What You Will Need

Minimum Job Requirements:

1. 4-year degree in physics, engineering, or a related field
2. Experience participating in nuclear physics experiments as part of an experimental team
3. Experience on both mechanical and electronic systems used in experimental physics facilities
4. 5+ year experience in nuclear detector systems design, testing, installation and maintenance
5. Experience with machine tools, fabrication of parts, and CAD software

Desired skills

1. An advanced knowledge of both mechanical and electronic systems including developing designs, prototyping systems, and evaluating performance
2. Experience in operating and troubleshooting different types of charged particle, neutron and gamma-ray detectors such as ionization chambers, silicon detectors, microchannel plates, inorganic scintillators, etc.
3. Strong background in designing, developing, and characterizing performance related to nuclear science experiments
4. Experience with magnetic spectrometers used in nuclear physics experiments

5. 5+ year experience with mechanical design tools, including stress analysis
6. Design and operation of high vacuum systems, including design and implementation of controls and interlocks
7. Integrated design of automated system using motors, interface, encoders, and controllers
8. Experience in electronic signal systems, including shielding design and signal conditioning
9. Experience in the design and implementation of remote hardware control
10. Experience in R&D project management or leadership
11. History of contributions to R&D project proposals at the contributor or co-investigator level
12. Ability to obtain a Q clearance

Notes to Applicants: In addition to a resume or CV, each applicant should submit a cover letter describing his/her experience and skills in terms of the job requirements. Applicants should arrange to send three letters of recommendation to Hye Young Lee (hylee@lanl.gov). For further technical information, please contact Hye Young Lee at hylee@lanl.gov.

Essential Job Functions (can perform with or without reasonable accommodation):
Reading vision; ability to hear and relay spoken instructions and alarms; walking; climbing stairs; climbing ladders; crawling, twisting the trunk or back; balancing; applying torque with hands or arms; working alone; work in radiation areas

Additional Details:

Clearance Q: Applicants selected will be subject to a Federal background investigation and must meet eligibility requirements* for access to classified matter.
*Eligibility requirements: To obtain a clearance, an individual must be at least 18 years of age; U.S. citizenship is required except in very limited circumstances. See DOE Order 472.2 for additional information.

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

Regular position: Term status Laboratory employees applying for regular-status positions are converted to regular status.

Equal Opportunity: Los Alamos National Laboratory is an equal opportunity employer and supports a diverse and inclusive workforce. All employment practices are based on qualification and merit, without regards to race, color, national origin, ancestry, religion, age, sex, gender identity, sexual orientation or preference, marital status or spousal affiliation, physical or mental disability, medical conditions, pregnancy, status as a protected veteran, genetic information, or citizenship within the limits imposed by federal laws and regulations. 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 1-505-665-4444 option 1.

Where You Will Work

Located in northern New Mexico, Los Alamos National Laboratory (LANL) is a multidisciplinary research institution engaged in strategic 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 concerns.