



Postdoctoral Position in Experimental Neutrino Physics

The Experimental Neutrino Physics Group at National Taiwan University (NTU) invites applications for a postdoctoral research position focusing on the LEGEND experiment. LEGEND seeks to uncover the nature of neutrinos and measure the effective Majorana neutrino mass by observing the rare neutrinoless double beta decay in ^{76}Ge . As a two-phase project based at the Gran Sasso National Laboratory in Italy, LEGEND employs enriched high-purity germanium diodes both as the decay source and as signal detectors, achieving exceptional detection efficiency. The detectors are immersed in liquid argon (LAr), which also functions as an active veto system to identify the rare decay events while minimizing background noise.

At NTU, our group is developing an on-site LAr facility within the department to study next-generation wavelength-shifting materials and develop a new energy calibration mechanism for LEGEND's LAr shields. The successful candidate will be responsible for all aspects of this facility, from design and setup to operation.

Qualifications:

- A recent PhD in experimental nuclear, particle, atomic, or accelerator physics. Candidates expecting to complete their PhD within three months are also encouraged to apply.
- Knowledge of neutrino physics and several years of graduate-level hardware experience in one of the above fields.
- Experience with cryogenic systems, optical sensors (e.g., silicon photomultipliers), Ge detectors, low-background counting, statistical data analyses, and Monte Carlo simulations is highly advantageous.

Applications process:

Please submit your application by email to Asst. Prof. Dr. Pin-Jung Chiu at pin-jung.chiu@phys.ntu.edu.tw, including the following documents:

- Cover letter
- Statement of research experience and interests
- Detailed curriculum vitae, including a list of publications
- Copies of final university degree certificates

Additionally, please arrange for two letters of recommendation to be sent to the same address. Applications will be reviewed on a rolling basis until the position is filled.