Postdoctoral Researcher – ASTRO GAMMA

Scope of work:

The ASTRO-GAMMA project (funded under PN-III-P4-PCE-2021-1014) aims to expand our understanding of the Big Bang and p-process nucleosynthesis by using an improved experimental configuration coupled with theoretical calculations

Measurements of the 7Li(γ,t)4He ground-state cross section between and two p-process reactions (on Sn-112 and Pd-102 targets) are planned by the project team at the High Intensity γ-ray Source (HIgS) in USA. Large-scale calculations of cross sections and astrophysical reaction rates will be performed for the charged-particles capture and photo-disintegration reactions.

Your main role will be to support the project activities for Monte Carlo simulations, testing of silicon-strip detectors, characterization of Li-7 targets, and be actively involved in the experimental campaign at the HIgS facility in USA, data analysis, and results publications for both Li-7 and p-process reactions.

Professional background:

- PhD degree in experimental nuclear physics or nuclear astrophysics
- Publication record in experimental nuclear physics or nuclear astrophysics physics (at least one first author paper)
- Practical experience in nuclear measurements with silicon strip detectors
- Monte Carlo simulations: GEANT4
- Excellent programming skills in C/C++
- Fluency in English, both written and spoken

Working arrangements/Conditions of employment:

- Part time position (15 hours/week) until the end of the project on 31/12/2024, based in Bucharest - Magurele, Romania.
- Starting date: as soon as possible (after 5/09/2022)

Applications:

Please send CV with list of publications to office.gsd@eli-np.ro