

INTERNSHIP PROPOSAL

(One page maximum)

Laboratory name: Michigan State University; Facility for Rare Isotope Beams (FRIB);

International Research Laboratory NPA.

CNRS identification code: IRL2024

Internship director'surname: Artemis Spyrou

e-mail: spyrou@frib.msu.edu

Phone number:

Web page: <https://npa.in2p3.fr/summer-training-program/>

Internship location: East Lansing, Michigan, USA

Thesis possibility after internship: NO

Funding: YES/NO, possible

If YES, which type of funding:

gratification de stage CNRS (environ 700euros/mois)

Title: Experimental studies of nuclear reactions to understand astrophysical processes

Summary (half a page maximum)

My group works in the field of Nuclear Astrophysics. We focus on measuring nuclear physics properties that drive astrophysical processes. We collaborate with astronomers and astrophysicists to identify important nuclear reactions that affect the evolution/explosion of stars and the production of elements. Based on this input we design and run experiments to study these nuclear reactions. A student working in my group can choose one of our existing projects such as detector testing/development (if available), analysis of existing data, and/or theoretical calculations that relate to these nucleosynthesis processes. Programming experience is desired but not required. Through this project students will gain understanding of astrophysical processes and how they connect to nuclear experiments, gamma ray spectroscopy, nuclear reactions and beta-decays.

The registration for the internship must be done on the website: <https://npa.in2p3.fr/summer-training-program/>

Please, indicate which speciality(ies) seem(s) to be more adapted to the subject:

Condensed Matter Physics: NO Soft Matter and Biological Physics: NO

Quantum Physics: YES

Theoretical Physics: NO