

A circular inset image showing a young woman with long blonde hair, smiling and shielding her eyes from the sun. She is wearing a dark t-shirt. The background is a bright, sunny outdoor setting.

TEODORA
PETRUȘE

PRELIMINARY RESULTS OF THE ELISSA ARRAY

Extreme Light Infrastructure Silicon Strip Array (ELISSA), the silicon strip detector array developed at the Extreme Light Infrastructure - Nuclear Physics (ELI-NP) facility in collaboration with the Istituto Nazionale di Fisica Nucleare - Laboratori Nazionali del Sud (INFN-LNS), is a 4pi position sensitive silicon strip array. This detector is specifically designed to measure charged particles coming from photodissociation reactions relevant for p-process nucleosynthesis and supernova explosions. The first in-beam tests of the ELISSA experimental set-up were performed at the 3 MV Tandatron accelerator of National Horia Hulubei National Institute for research and development in Physics and Nuclear Engineering (NIPNE). The performance (such as angular coverage, threshold, energy and position resolution) of the silicon strip array are detailed in this presentation. Further, this setup was used for the absolute cross section measurement of key reactions in nuclear astrophysics, such as: $^{19}\text{F}(p,\alpha)^{16}\text{O}$, $^7\text{Li}(p,\alpha)^4\text{He}$ and $^1\text{H}(^{11}\text{B}, \alpha)\alpha$. Preliminary results of the above mentioned measurements will be detailed in this presentation.

ESPRESSO SEMINARS

9 SETTEMBRE 2025 | ORE 11:00

AULA AZZURRA - LNS

