Contribution ID: **60** Type: **Flash presentation**

Nuclear data measurement using accelerator-based neutron sources

Tuesday 26 September 2023 10:00 (15 minutes)

In order to develop new applications and advanced technologies the worldwide scientific community requires very precise and highly reliable cross-section measurements. In this talk, I will present a measurement of neutron-induced (n,γ), (n,p), & (n,2n) reaction cross sections in the fast neutron energy region using FOTIA and PURNIMA facilities at BARC, India [1-2]. I will further talk about the work carried out at IFIN-HH related to preparation of a neutron capture cross-section measurement at the n_TOF facility at CERN [3].

References

1. A. Gandhi, Aman Sharma, A. Kumar, Rebecca Pachuau, B. Lalremruata, S.V. Suryanarayana, L.S. Danu, Tarun Patel, Saroj Bishnoi, B.K. Nayak "Neutron radiative capture cross section for sodium with covariance analysis", European Physical Journal A, 57, 1 (2021).
2. A. Gandhi, Aman Sharma, Rebecca Pachuau, B. Lalremruata, Mayur Mehta, Prashant N Patil, S.V. Suryanarayana, L.S. Danu, B.K. Nayak, A. Kumar "Measurement of (n,γ), (n,p), and (n,2n) reaction cross sections for sodium, potassium, copper, and iodine at neutron energy 14.92±0.02 MeV with covariance analysis", Physical Review C, 102, 014603 (2020).
3. https://www.nipne.ro/proiecte/pn3/ntof/

Author: Dr GANDHI, Aman (Horia Hulubei National Institute of Physics and Nuclear Engineering—IFIN HH)

Presenter: Dr GANDHI, Aman (Horia Hulubei National Institute of Physics and Nuclear Engineering—IFIN HH)

Session Classification: Flash presentation of the participants

Track Classification: Flash presentations