

Szanowni Państwo,

Zapraszamy na cotygodniowe Seminarium Fizyki Jądra Atomowego.

Link (ten sam dla wszystkich spotkań), aktywny w każdy czwartek w godz.

od 10.00 do 12.00 :

<https://us02web.zoom.us/j/86759935850?pwd=ejZhaHBjUTNncVVDZFJTRnVaYW9MQT09>

ID: 867 5993 5850

Passcode: 909432

Seminarium, które odbędzie się w czwartek 7 stycznia 2021 r. o godz. 10:15, wygłoszą:

dr Caterina Michelagnoli oraz dr Yung Hee Kim z Instytutu Laue-Langevin w Grenoble, Francja

Tytuły seminarium:

„Gamma-ray spectroscopy after slow neutron induced reactions: FIPPS I”

„Future of FIPPS with gas-filled magnet: FIPPS II”

Abstract:

FIPSS is a powerful array of Compton-suppressed Ge spectrometers, newly developed at the ILL Grenoble. Its location on the intense thermal-neutron beam from the ILL reactor allows various studies of nuclei produced in neutron-capture and in neutron-induced-fission reactions. In the talk the present configuration of the spectrometer (FIPPS I), the up-to-date results and the near-future experiments will be discussed. The capability of FIPPS will be expanded with the next phase upgrade (FIPPS II). FIPPS II aims to study i) Nuclear structure of neutron-rich nuclei far from stability produced from neutron-induced fission. ii) Exploring the dynamics of the fission process, such as generation of angular momentum. A new ancillary device coupled to FIPPS I will be added to achieve this goal by the increase in the sensitivity of fission fragments and kinetic energy measurement. Newly designed gas filled dipole magnet (GFM), characterized by $1/r$ magnetic field with Thales circle-shaped dipole edge is proposed to separate fission fragments without tracking ions while achieving large acceptance. The new optimization method using realistic magnetic field calculation and ion trajectory simulation will be presented. Characteristics study of the GFM for detecting fission fragments using Monte-Carlo simulation will be shown. Finally, the ion separation power and its effect on gamma-ray spectroscopy will be discussed.

K. Rusek, J. Skalski, W. Urban