Contribution ID: **311**   Type: **Oral**

Advanced time-delayed β-γ-γ(t) method as a powerful tool to study neutron-rich nuclei

The nuclear structure investigation of the nuclei located at the double shell closures needs verification of theoretical models predictions. For this reason, the nuclear level half-lives have to be known. They allow to extract essential information about the transition matrix elements. This can be obtained from measurements of the nuclear levels half-lives.

The advanced time-delayed β-γ-γ(t) method [1] can be used for that aim, specifically for a study of the neutron-rich nuclei. The method provides a picoseconds precision. The two LaBr3 detectors of fast-response were used with a fast β detector in the coincidence mode. In the experimental setup there were also the Ge detectors towards a requirement of getting to know decay branch with a high energy resolution. The timing information was reached from the β-γ(t) delayed coincidences between the events registered in the β detector and the LaBr3 scintillator.

[1] H. Mach et al. , Nucl. Instrum. Methods Phys. Res. A 280, 49-72
(1989).

Primary author: Ms ADAMSKA, Ewa (Faculty of Physics, University of Warsaw)

Co-authors: Dr KORGUL, Agnieszka (Faculty of Physics, University of Warsaw); Ms PIERSA, Monika (Faculty of Physics University of Warsaw)

Presenter: Ms ADAMSKA, Ewa (Faculty of Physics, University of Warsaw)

Track Classification: Experimental Nuclear Physics