Contribution ID: **67** Type: **Poster report**

MONITOR SYSTEM FOR STOPPED PION SELECTUON

Thursday, October 15, 2020 6:55 PM (20 minutes)

Description of a semiconductor system for selection of events in the reactions of stopped pion absorption by nuclei (1, 2) is presented. The system consists of two thin silicon detectors. The regions of energy release in the detectors corresponding to pion stops in the targets are determined using a "live" target - a silicon detector of a certain thickness. The thicknesses of other targets used in the experiment must be equivalent to the pion range in the "live" target.
The monitor system makes it possible to achieve ~ 90% efficiency of pion selection in a target. The total number of pion stops in various targets was obtained in an experiment performed at the PNPI accelerator. It is shown that the accuracy of absolute calibration is 7% for the "live" target and 8% for other targets.

1. Yu.B. Gurov et al. // Bull. Russ. Acad. Sci. Phys., 2013. V. 77. P. 370.
2. Yu.B. Gurov, V.G. Sandukovsky, B.A. Chernyshev // Phys. Part. Nucl. // 2018. V. 49. P. 249.

Primary authors: Prof. CHERNYSHEV, B.A. (National Research Nuclear University ""MEPhI", Moscow, Russia); Prof. GUROV , Yu.B. (National Research Nuclear University, Moscow, Russia, Joint Institute for Nuclear Research, Dubna, Russia); Dr ROZOV, S.V. (Joint Institute for Nuclear Research, Dubna, Russia,); Dr ROZOVA, I.E. (Joint Institute for Nuclear Research, Dubna, Russia); Prof. SANDUKOVSKY, V.G. (Joint Institute for Nuclear Research, Dubna, Russia)

Presenter: Prof. GUROV , Yu.B. (National Research Nuclear University, Moscow, Russia, Joint Institute for Nuclear Research, Dubna, Russia)

Session Classification: Poster session 3 (part 3)

Track Classification: Section 3. Modern nuclear physics methods and technologies.