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Experimental testing of heavy ions mass search procedure in the measurements with PIN diodes

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Using of semiconductor detectors for spectrometry of heavy ions is known to have several methodological obstacles, which are necessary to be overcome. First of them is pulse-height defect (PHD), which is manifested in the form of apparently less energies than particles actually have. Second is plasma delay effect (PD), which prevents precise measurements (TOF technique) due to creation of plasma in detectors, which is obstructing the charge collection. We discuss the quality of HI mass reconstruction using Si PIN diodes for measuring both energy and time-of-flight. The results to be presented are based on the experimental data obtained at the accelerator IC-100 in the Flerov Laboratory of the JINR (Dubna, Russia).

Presentation type

Section talk (10+5 min)

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