

EXPERIMENTS WITH GABRIELA DETECTOR SYSTEM ON SHELS

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For several years, on SHELS (Separator for Heavy Elements Spectroscopy) was carried out more dozen experiments, aimed to investigation of characteristics of heavy elements and discover new isotopes. Projectiles from ^{22}Ne to ^{54}Cr , and targets of $^{204-208}\text{Pb}$, ^{209}Bi , $^{236,238}\text{U}$ were used. Perfect data acquisition system GABRIELA lets fix 70% alpha particles and 90% gamma-quanta by spontaneous fission, and also accurately to separate events by time (1 μs). The mixing of α -decay with γ - and β -decay spectroscopy allows to investigate single particle states behavior, as well as the structure of little known elements in the $Z = 100-104$ and $N = 152-162$ region.