Contribution ID: **344**   Type: **Oral**

New particle position determination modules for Double Side Silicon Strip Detector at DGFRS

New particle position determination modules for Double side silicon strip detector were designed that allow to simplify existing multi-channel measurement system in search for the rare events of super heavy elements formation at DGFRS. The main principle is to search position correlated sequences of implanted SHE and followed alpha-particles/or SF events above predefined threshold Energy level in real-time for all 128 back strips. The resulting information is about providing the address of active strip and the coincidence sign. The newly developed system trigger passed the prototyping stage and is about to use in next experiment. This system will reduce the overall system dead time. This talk is about to description in deep of the CD32-5M coder units and the PKK-05 preregister unit briefly introduced by this abstract.

Summary

A new series of experiments aimed on the synthesis and study of decay properties of the most neutron-deficient isotopes of element Flerovium (Z = 114) and of the heaviest isotopes of 118 element was performed on the Dubna Gas-filled recoil separator. An appropriate registering system is to be implemented to transfer spectrometric data from double-sided silicon strip detector. New measuring and automatization modules were designed that allow to simplify existing multi-channel measurement system in search for the rare events of super heavy elements formation. The newly developed position determination system trigger passed the prototyping stage and is about to use in next experiment

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Track Classification: Experimental Nuclear Physics