replacing DNP17-2017-020192.

Abstract Submitted
for the DNP17 Meeting of
The American Physical Society

**Development of Signal Processing Blocks**[1] XAVIER JAMES, Univ of Wisconsin, LaCrosse, ALEXEY VOINOV, Joint Institute of Nuclear Research — Experiments executed on the Dubna Gas Filled Recoil Separator (DGFRS) at the Flerov Laboratory of Nuclear Reactions, Joint Institute of Nuclear Research, has proved the hypothesis of the existence of an 'island of stability' of super heavy nuclei. It is a highly sensitive detection system that uses the method of "active correlations" which allows rare events of the decay of super heavy nuclei to be detected in almost background-free conditions. The role of the signal processing block is to distribute an event signal to the rest of the data acquisition components within the trigger system. In doing so, it will synchronize the rest of the data acquisition signal blocks when an alpha particle recoil appears in the Dubna Gas-Filled Recoil Separator detector. This helps to limit the amount of background interference as the DGFRS undergoes an experiment with a targeted heavy nucleus to receive coherent and succinct results.

[1]Joint Institute of Nuclear Research and Dr. Shelly Lesher of University of Wisconsin- La Crosse

Xavier James
Univ of Wisconsin, LaCrosse

Date submitted: 01 Aug 2017 Electronic form version 1.4