



Contribution ID: 383

Type: **Oral**

## **CONTROLLING SYSTEM FOR EXPERIMENTAL SETUPS OF MASHA AT CYCLOTRON DC280.**

Modernization of control system of the experiment MASHA will be discussed. The controlling system based on CompactRIO, FlexRIO and PXI/PXIe standards will be developed, tested and integrated with new experimental setups at cyclotron DC280. MASHA Experiment is designed to study properties of super heavy elements synthesized in reactions  $^{242,244}\text{Pu}$  and other neutron rich actinides +  $^{48}\text{Ca}$ . Setup of MASHA is a combination of ISOL (Isotope Separator On-Line) methods and the classical mass spectroscopy. There is a requirement for high reliability and stability of the measurement and control. Therefore, we are gradually building distributed control network consist of up-to-date devices. Controllers based on RIO architecture was applied for control (several actuators) and connecting to whole experiment for study cross sections of reactions  $^{40}\text{Ar} + ^{144}\text{Sm}$  and  $^{166}\text{Er}$ . And there is plan to use RIO standard (consist of microprocessor working on real-time operating system and Field Programmable Gate Array) in new setup of MASHA with gas catcher and beam line from new accelerator DC280.

**Primary author:** Mr OPÍČHAL, Antonín (Palacký University Olomouc)

**Presenter:** Mr OPÍČHAL, Antonín (Palacký University Olomouc)

**Track Classification:** Experimental Nuclear Physics