

## Digital trigger system for the RED-100 detector based on the unit in VME standard

*Wednesday, 7 October 2015 15:15 (15)*

The system for forming a trigger for the RED-100 liquid xenon detector has been developed. The trigger can be generated for all types of events required to calibrate the detector and data acquisition, including events with one ionization electron. The system has an event detection mechanism where each event is assigned with the timestamp and event type. The trigger system is required in the systems searching for rare events to keep only the necessary information from the ADC array. The characteristics and implementation of the trigger system that provides high efficiency operation even at low-energy events have been described.

### Presentation type

Section talk (10+5 min)

**Primary author(s)** : Mr. NAUMOV, Pavel (MEPhI)

**Co-author(s)** : BOLOZDYNIA, Alexander (NRNU MEPhI); Dr. AKIMOV, Dmitry (ITEP, MEPhI); Mr. BELOV, Vladimir (ITEP, MEPhI); Mr. KAPLIN, Vladimir (MEPhI); Dr. EFREMENKO, Yuri (MEPhI, University of Tennessee)

**Presenter(s)** : Mr. NAUMOV, Pavel (MEPhI)

**Session Classification** : Nuclear physics and particle physics - parallel VIII

**Track Classification** : Nuclear physics and particle physics