Contribution ID: **196** Type: **Poster**

Test experiment to determine the time distribution of the background between MMF accelerator pulses on the RADEX channel.

Wednesday, 13 July 2022 11:10 (20 minutes)

To determine the possibility of studying various cluster structures (for example, [1]) in light nuclei on the RADEX neutron channel of the MMF INR RAS accelerator, it is necessary to carry out a study to measure the background between accelerator pulses (the level, composition and time distribution of it). For example, when searching for the cluster structure of α-4n-α and 8Be-4n in the highly-excited state of 12Be, *it is necessary to detect charged particles from the b-decay of 12Be* during its formation in the n + 13C reaction in the intervals between pulses of cascade neutrons [2]. This will be possible with a certain background level and its time distribution.
The first experiments of this kind were carried out on the RADEX MMF channel at several pulse durations and frequencies from 1 to 50 Hz. Between the pulses of the accelerator, the spectra and time distribution of gamma quanta, neutrons, and b-particles were measured. The first measurement results are presented.

1. Marque's F.M. , et al. // Phys.Rev. C. 65, 044006 (2002).
2. A. Kasparov, M. Mordovskoy, V. Skorkin // "Nucleus-2021", Book of Abstracts, 317 (2021).

The speaker is a student or young scientist

No

Section

1. Experimental and theoretical studies of nuclear reactions

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