Contribution ID: **2012** Type: **Poster**

Research of the effects of Gamma irradiation on the electrical properties of GaN transistors and amplifiers for scintillation detectors in high-luminosity experiments

Monday 27 October 2025 18:30 (20 minutes)

The results of a study on the effect of gamma radiation exposure on the properties of GaN transistors and amplifiers based on them, which can be utilized in the development of electromagnetic calorimeters and other detector systems for experiments in high-energy physics with high radiation load, are presented. The topology of GaN transistors was modeled, their characteristics were compared before and after irradiation, and the gamma radiation dose absorbed in the transistor material was calculated. Additionally, the density of gamma-induced crystal lattice defects was analyzed by means of deep-level transient spectroscopy (DLTS), and the results are presented.

Author: МОСКАЛЕНКО, Виктория

Co-author: АТАНОВ, Николай (JINR)

Presenter: МОСКАЛЕНКО, Виктория

Session Classification: Poster session & Welcome drinks

Track Classification: Instruments and Methods of Experimental Physics