

## The $\nu$ GeN neutrino experiment at the Kalinin NPP

*Friday 13 December 2024 16:07 (17 minutes)*

The  $\nu$ GeN experiment is performed at the Kalinin Nuclear Power Plant at a distance of 11 m from the center of the reactor core. The goals of the experiment include observation of coherent elastic scattering of reactor antineutrinos off nuclei (CE $\nu$ NS) and search for the magnetic moment of antineutrino (NMM) using a 1.4 kg low-threshold germanium detector. Based on the data from September 2022 to May 2023 we report a 90% C.L. upper limit on CE $\nu$ NS cross-section of 4.3/1.4 times larger than the Standard model prediction (depending on the value of germanium recoils quenching factor). The 90% C.L. sensitivity of  $\nu$ GeN to NMM evaluated for the same dataset is  $5.3 \cdot 10^{-11} \mu\text{B}$ . The increase of the setup exposition up to 1100 kg-days allows to aim for an upper limit of  $2.6 \cdot 10^{-11} \mu\text{B}$ .

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**Session Classification:** Parallel Session