

Status of the RED-100 experiment

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The RED-100 is a two-phase emission liquid xenon detector. It was deployed at the Kalinin Nuclear Power Plant (KNPP) to detect and study the process of Coherent Elastic Neutrino-Nucleus Scattering (CEvNS) on Xe nuclei in a close vicinity to a reactor core. CEvNS was predicted more than 40 years ago and was observed only recently by the COHERENT experiment with CsI and LAr targets deployed at the SNS (Oak Ridge, USA). Further study of this process with different targets and with different neutrino sources is ongoing all over the world. RED-100 is the first LXe detector operating near the reactor core of the nuclear power plant for the CEvNS study. One of the heaviest target material, the source of single neutrino type along with lowest neutrino energies provide the possibility to study CEvNS within unique parametric space of this process. In this talk the status of the RED-100 experiment is presented, and the preliminary results of the first engineering run are discussed.

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