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Status of the RED-100 experiment

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The process of coherent elastic neutrino nucleus scattering (CEvNS) was predicted more than 40 years ago within the Standard Model of elementary particles (SM). It was observed for the first time only in 2017 by the COHERENT collaboration at the Spallation Neutron Source (Oak Ridge, USA) in a flux of 3 neutrino types with energy up to 50 MeV. The RED-100 two-phase emission detector was built for the further study of CEvNS on Xe nuclei in the close vicinity of reactor core at the Kalinin Nuclear Power Plant (KNPP). One of the goal for RED-100 is to detect for the first time CEvNS process for the single neutrino type (electron antineutrino) in the low energy region up to 8 MeV. In this talk the status of RED-100 experiment will be discussed: the results of the supporting structure and cooling system tests, the concept and tests of passive shielding, results of the first physical test and the current timeline.

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