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## Status of RED experiment

The RED-100 (Russian Emission Detector) is being constructed for the experiment on detection of neutrino elastic coherent scattering off atomic nuclei. The detector details and the current status are given.

The RED-100 is an emission two-phase xenon detector containing 200 kg of the liquid Xe (~ 100 kg in a fiducial volume). One of the possible sites of the experiment is SNS, Oak Ridge National Laboratory. The energy spectrum of neutrinos produced at the SNS source extends up to ~ 50 MeV that gives the kinetic energies of Xe recoils up to a few tens of keV. For these energies of Xe recoils the response of the LXe is well known from neutron calibrations of dark matter detectors. Possible detector locations at the SNS are under consideration now. One of them is underground at a distance of 40 meters from a target and in a 20-m deep well. For this location, the count rate of signals with a magnitude of more than two electrons from nu-nucleus coherent scattering is expected to be ~1500 events/year. Our simulations predict less than 300 events/year from all background sources at these conditions.

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