Contribution ID: **452** Type: **Poster coherent scattering**

The RED-100 experiment on CEvNS study

The RED-100 detector has been built for observation of CEvNS (Coherent Elastic Neutrino Nucleus Scattering) at the Kalinin nuclear power plant (KNPP).
The RED-100 is a two-phase xenon emission detector which is sensitive the extremely low ionization signals (down to single ionization electrons) in a massive target (~100-kg in FV). This corresponds to energies < 1 keV of Xe nuclear recoils.
The detector has been recently tested at the MEPhI lab. The basic characteristics of the detector such as the single electron detection capability, the achieved purity of LXe, scintillation and electroluminescent yield, etc. are presented.
Shipment of the RED-100 detector to KNPP is planned to the end of 2018. The detector to be installed under 3000-W reactor at 19 m under the core (overburden ~ 50 mwe, antineutrino flux ~ 1.3 10 13cm-2s-1).
Other neutrino studies (setting new limits on 2 beta+ decay of 124Xe, 78Kr isotopes) are discussed.

Authorship annotation

for the RED-100 collaboration

Session and Location

Wednesday Session, Poster Wall #31 (Robert-Schumann-Room)

Poster included in proceedings:

yes

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Track Classification: Poster (not participating in poster prize competition)