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Measurement of ¹⁴⁴Ce - ¹⁴⁴Pr **beta-spectra with Si(Li)** detectors for the purpose of determining the spectra of electron antineutrinos.

S.V. Bakhlanov, A.V. Derbin, I.S. Drachnev, V.N. Muratova, N.V. Pilipenko, D.A. Semenov, E.V. Unzhakov

St. Petersburg Nuclear Physics Institute National Research Center "Kurchatov Institute", Gatchina, Russia

The specifications of a newly developed beta-spectrometer, based on full absorption Si(Li) detector and thin transmission detector, are shown. The spectrometer allows to separate effectively beta-radiation and accompanying X-rays and gamma radiation using registration of coincident events from both detectors. The spectrometer can be used for precision measurements of various beta-spectra, namely for the beta-spectrum shape study of $^{144}\mathrm{Pr}$, which is considered to be an advantageous anti-neutrino source for sterile neutrino searches. The preliminary results for beta spectra from $^{144}\mathrm{Ce}-^{144}\mathrm{Pr}$ decays and reconstructed antineutrino spectra are presented.

Session and Location

Monday Session, Poster Wall #86 (Auditorium Gallery Left)

Poster included in proceedings:

yes

Primary author: Prof. DERBIN, Alexander (Petersburg Nuclear Physics Institute)Presenter: Prof. DERBIN, Alexander (Petersburg Nuclear Physics Institute)

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