

Measurement of ^{144}Pr beta-spectrum with Si(Li) detectors for the purpose of determining the spectrum of electron antineutrinos.

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Measurements of the beta spectra of ^{144}Ce and ^{144}Pr are necessary for the successful implementation of a search for neutrino oscillations in a sterile state with artificial antineutrino source ^{144}Pr . The $^{144}\text{Ce} - ^{144}\text{Pr}$ target with a thickness of about $1 \mu\text{g cm}^{-2}$ is deposited on the Mylar substrate and is covered with 200 Å of palladium. The ^{207}Bi and $^{144}\text{Ce} - ^{144}\text{Pr}$ sources are located 14 mm from the Si(Li)-detector with a diameter of 16 mm and a thickness of 7 mm. The performed measurements allow to establish the response function of Si(Li) detector and to determine the concentration of α -, β - and γ -active impurities in the target.

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

Co-authors: Dr SEMENOV, Dmitrii (Petersburg Nuclear Physics Institute); Dr UNZHAKOV, Eugenu (Petersburg Nuclear Physics Institute); Dr DRACHNEV, Ilia (Petersburg Nuclear Physics Institute); Dr BAKHLANOV, Sergei (Petersburg Nuclear Physics Institute); Dr MURATOVA, Valentina (Petersburg Nuclear Physics Institute)

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

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