**CROSS SECTION OF NEUTRINO ABSORPTION BY 82Se NUCLEI**

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Selenium-82 is a perspective isotope for neutrino investigations. Recently in experiments, produced with the help of NEMO-3 detector [1], which is composed of a tracker and a calorimeter, capable to reconstruct the full topology of ββ processes and measurements, performed at CUPID-0 setup [2], based on Zn82Sescintillating crystals, operated as cryogenic bolometers, nuclear mechanism of 82Se 2ν2β-decay have been examined. It was shown, that contribution of the single lowest excited 1+-level of intermediate nucleus 82Br dominates in the transition amplitude. It should be noted that for 82Se the quantum numbers of intermediate nucleus 82Br ground state are 5-, so transition via this state is strongly suppressed. Contribution of excited 1+ -states to 2ν2β-transition amplitude was considered in [3].

The lowest excited 1+-level of 82Br, Ex=75 keV, and corresponding Gamow-Teller strength have been determined in a high-resolution 82Se(3He,t) 82Br charge-exchange experiment [4]. Low value of threshold for neutrino absorption reaction together with considerable magnitude of transition strength to 75 keV (1+) state make 82Se to be interesting object both for solar neutrino detection and for measurements, aimed at investigation of new physics in calibration experiments.

The cross sections of absorption by 82Se nucleus of neutrinos, produced by artificial sources 51Cr, 37Ar, 65Znare calculated. The parameters of experimental setup on the base 82Se for searching of new types of neutrino are discussed.

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2. O. Azzolini et al, Phys. Rev. Lett. 123, 262501 (2019)

3. S.V. Semenov, AIP Conf. Proc. 942, 67 (2007)

4. D. Frekers et al, Phys. Rev. C 94, 014614 (2016)