

HYDROGEN ISOTOPES PRODUCTION UNDER (π -)MESON ABSORPTION IN SILICON "LIVE" TARGET

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The results of the analysis of the outputs p, d, t formed under the absorption of stopped π -mesons by silicon nuclei are presented. The measurements were performed using a "live" target - Si detector (analog of the ^{28}Si target). For the ^{28}Si nucleus, the spectrum of primary protons was obtained from the absorption act on the pp pair when both particles (n and p) are not distorted by secondary interactions. It is shown that the data on proton yield do not contradict the assumption that the ratio of widths of elementary pion absorption processes on pn and pp pairs ($R' = 3.5$) is constant. "Direct", without excitation, mechanisms of formation of deuterons and tritons on silicon were found, and their yields were estimated at a level $\geq 30\%$. This result makes it possible to test models of the formation of complex particles associated with the excitation of nuclei.

The speaker is a student or young scientist

No

Section

1. Experimental and theoretical studies of nuclear reactions

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