

Study of the (K^+, K^0) reaction on medium light nuclei close to threshold

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The ability of the FINUDA spectrometer, operating on the DAΦNE collider at LNF, to explore the K^+ charge exchange reaction on medium-light nuclei from about 100 MeV/ c down to threshold (63.4 MeV/ c on a free neutron) has been proved by searching for K_S^0 . The analysis of the ~ 200 pb⁻¹, collected in 2003-2004, on ${}^7\text{Li}$ allows us to set an upper limit of 1.89 mb (at 95% confidence level) for the total cross section at such a low momentum. Results of the first FINUDA data taking and preview of the recent data taking will be presented.