Stopped K^- physics with FINUDA

Paolo Camerini
on behalf of the FINUDA collaboration

Università degli Studi di Trieste and INFN

The FINUDA experiment has collected one fb^{-1} of data at the electron-positron DAΦNE collider in Frascati (Italy). The low energy negative kaons from the $\phi(1020)$ decay were stopped on 8 light nuclear targets (A=6,7,9,13,16) and the charged reaction products were momentum and mass identified by the FINUDA spectrometer. Thanks to the excellent performances of the apparatus, several different research topics are being successfully investigated. The proton spectra from non mesonic weak decays of Λ-hypernuclei are being studied down to threshold energies never reached before (15 MeV) while the search for hypernuclear systems with high N/Z ratio is being pursued searching for signals of the formation of ${}^{6}_{\Lambda}H$ and ${}^{7}_{\Lambda}H$. The study of K^- absorption on multinucleon systems, besides giving an insight on a rather poorly known mechanism, is an effective tool to investigate the debated subject of nuclear kaon bound systems. A survey of the results of these ongoing analyses will be given.

E-mail: camerini@ts.infn.it