

High-sensitivity detector for the neutrino investigations on the electron magnetic spectrometer



G.V. Sapozhnikov^a, A.V. Kholzakov^a,

I.N. Shabanova^b, A.E. Kazantzev^b

Surface Physics Institute, Udmurt State University,
1 Universitetskaya St, Izhevsk, 426034, Russia

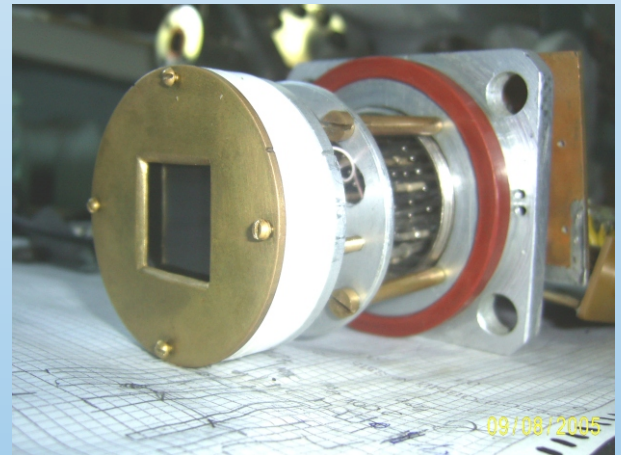
Physical Technical Institute, 132 Kirov st., Izhevsk, 426000, Russia
xps@fti.udm.ru



For the precise determination of the energy of electrons that are formed during the reaction $\nu_e + d \rightarrow e^- + p + p$ with the use of the electron magnetic spectrometer, an experimental unit for the system of highly susceptible high-speed parallel electron recording based on microchannel plates has been developed and tested.



100-cm electronic magnetic spectrometer



High susceptible, high-speed system detector for the parallel registration of electron spectra

The presence of the focal plane in spectrometers with magnetic focusing (fig.1) gives a unique opportunity of the simultaneous record of all the electrons focused on it (fig.2), which is not possible to carry out on electrostatic spectrometers.

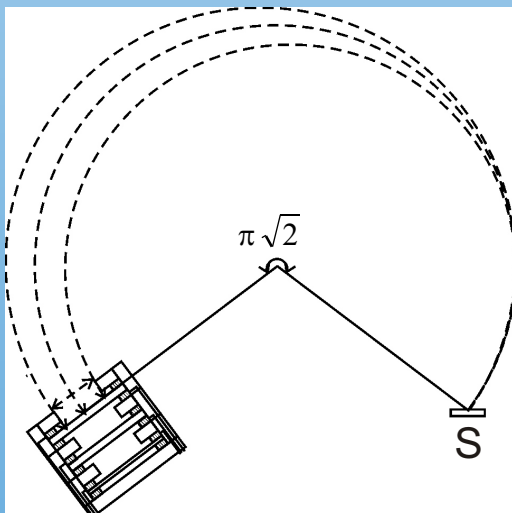


Fig.1.

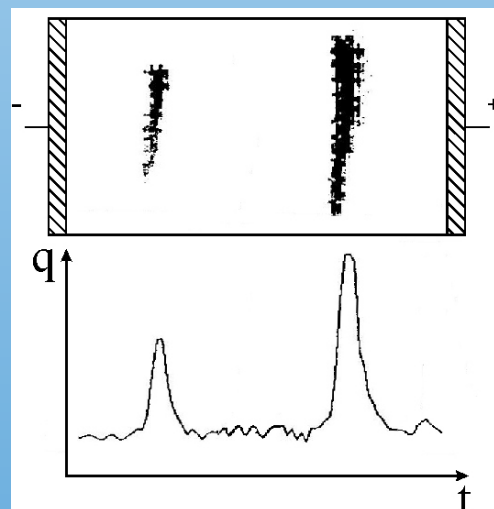


Fig.2.