



Contribution ID: 162

Type: Poster

Study of the $\omega \rightarrow \pi^0 e^+ e^-$ conversion decay with the CMD-3 detector at VEPP-2000 collider

Monday, January 10, 2022 4:23 PM (1 minute)

The study of the conversion decay $\omega \rightarrow \pi^0 e^+ e^-$ in the decay channel $\pi^0 \rightarrow \gamma\gamma$ was performed with the CMD-3 detector at the VEPP-2000 e^+e^- collider in Novosibirsk. Main background processes are events of $\omega \rightarrow \pi^+ \pi^- \pi^0$ decay, QED events and events of the radiative decay $\omega \rightarrow \pi^0 \gamma$, where monochromatic photon converts on the material in front of the sensitive volume of the detector. To suppress the last type of background the deep neural network was used. Using an integrated luminosity of about 10 pb^{-1} collected at the c.m. energy range from 760 MeV to 840 MeV the visible cross-section of the process under study was measured and the preliminary result for branching ratio $Br(\omega \rightarrow \pi^0 e^+ e^-)$ was obtained. The result is more precise than any previous measurements. The current status of the analysis is presented.

Primary author: KUTSENKO, Bogdan (Budker Institute of Nuclear Physics (RU))

Presenter: KUTSENKO, Bogdan (Budker Institute of Nuclear Physics (RU))

Session Classification: Precision SM Measurements

Track Classification: Standard Model