

02 R MEASUREMENTS AND IMPLICATIONS FOR THEORY

Study of the process $e^+e^- \rightarrow \pi^+\pi^-\pi^0\pi^0$ at energies $\sqrt{s} < 1$ GeV

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摘要

In an experiment with the Spherical Neutral Detector at VEPP-2M collider the cross section of the process $e^+e^- \rightarrow \pi^+\pi^-\pi^0\pi^0$ was measured. At energies $\sqrt{s} < 920$ MeV this cross section was measured for the first time. The energy dependence of the cross section is well described by the vector dominance model with contributions from ρ , ρ' , ρ'' mesons. The decay probability $\rho \rightarrow \pi^+\pi^-\pi^0\pi^0$ was found to be $B_\rho = (1.60 \pm 0.74 \pm 0.18) \times 10^{-5}$. The upper limit for the decay $\omega \rightarrow \pi^+\pi^-\pi^0\pi^0$ was improved by two orders of magnitude compared to the previous measurements and is $B_\omega < 2 \times 10^{-4}$ at 90% confidence level.

关键词 [VEPP-2M, spherical neutral detector, meson decay](#)

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