

Abstract Submitted
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ϕ Meson Photoproduction on Nuclear Targets at Jefferson Lab

DENNIS WEYGAND, Jefferson Laboratory — Theoretical calculations predict a shift of vector meson masses within the nuclear medium due to partial restoration of chiral symmetry. Experimental data from KEK on the ϕ meson suggests such a shift. Experiment E01-112 at Jefferson Lab produced ϕ mesons using a tagged bremsstrahlung photon beam up to 4 GeV incident on a range of nuclear targets. The ϕ mesons were observed via the rare leptonic e^+e^- decay, which is devoid of final state interactions, as well as the dominant hadronic mode K^+K^- . As the ϕ decay is near the K^+K^- production threshold energy, a small change in the meson mass will result in a sharp change in the ratio of the two branching ratios. Preliminary results will be shown.

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