

High Energy Physics - Phenomenology

Primakoff effect in eta-photoproduction off protons

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We analyse data on forward eta-meson photoproduction off a proton target and extract the eta to gamma gamma decay width utilizing the Primakoff effect. The hadronic amplitude that enters into our analysis is strongly constrained because it is fixed from a global fit to available gamma p to p eta data for differential cross sections and polarizations. We compare our results with present information on the two-photon eta-decay from the literature. We provide predictions for future PrimEx experiments at Jefferson Laboratory in order to motivate further studies.

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