

Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Hadronization Studies via $\omega(782)$ Electroproduction off D, C, Fe, and Pb ANDRES BORQUEZ, Universidad Tecnica Federico Santa Maria, MICHAEL WOOD, Canisius College, HAYK HAKOBYAN, WILLIAM BROOKS, Universidad Tecnica Federico Santa Maria, CLAS COLLABORATION — A complete picture of the strong interaction must include hadronization, the dynamical process of a free quark forming a color-neutral hadron. To study the hadronization of the vector meson $\omega(782)$, we perform semi-inclusive deep-inelastic scattering measurements on deuterium, carbon, iron, and lead using data collected with the CLAS detector at Jefferson Lab employing a 5.014 GeV electron beam. To examine nuclear dependence, we present ω multiplicities of the solid targets relative to those on deuterium as one-dimensional functions of the virtual-photon energy ν , the photon virtuality Q^2 , the fractional hadron energy z , and the square of the hadron transverse momentum p_T^2 . This analysis corresponds to the first hadronization studies of the ω meson and hints at a promising future for upcoming CLAS12 and EIC experiments, where more detailed investigations could be achieved.

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Date submitted: 08 Jan 2021

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