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Exclusive η_c production by $\gamma\gamma^*$ interactions in electron-ion collisions

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One of the main goals of future electron-ion colliders is to improve our understanding of the structure of hadrons. We study the exclusive η_c production by $\gamma^*\gamma$ interactions in eA collisions and demonstrate that future experimental analysis of this process can be used to improve the description of the η_c transition form factor. The rapidity, transverse momentum and photon virtuality distributions are estimated considering the energy and target configurations expected to be present at the EIC, EicC and LHeC and assuming different predictions for the light-front wave function of the η_c meson. Our results indicate that the electron-ion colliders can be considered an alternative to providing supplementary data to those obtained in e^-e^+ colliders.

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