Abstract Submitted
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The gluonic radii of light nuclei; A threshold coherent electroproduction measurement of upsilon at and EIC ZEIN-EDDINE MEZIANI, WHITNEY ARMSTRONG, IAN CLOET, ADAM FREESE, SYLVESTER JOOSTEN, TSUNG-SHUNG LEE, Argonne National Laboratory — The fully exclusive elastic electroproduction of Υ on the proton, deuteron, ^{3}He and ^{4}He at an EIC is a powerful tool to extract their gluonic radii and examine the contribution of the trace anomaly to their mass. Only at energies and luminosity planned for a future US-based EIC that one can contemplate these challenging measurements to reach these goals. The full exclusivity of the process as well as the access of large Q^2 and low t in the threshold region should allow to address both the reaction mechanism of electroproduction of Υ as well as the multiple gluonic exchange between the probe and the target in a region of virtual-photon target invariant mass ranging from a perturbative to a non-perturbative regime. We will discuss the motivation of such measurements and show projections of achievable precision in the determination of these gluonic radii using the TOPSiDE detector concept.

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