

Abstract Submitted
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Identification of Charm-Quark-Initiated Jets Using Displaced Track Counting with the ATHENA Experiment at the Electron-Ion Collider¹ STEPHEN SEKULA, Southern Methodist University, ATHENA COLLABORATION — The Electron-Ion Collider (EIC) recently passed through the CD-1 project approval process and continues toward construction and operation at the Brookhaven National Accelerator Laboratory. The ATHENA (A Totally Hermetic Electron-Nucleus Apparatus) proto-experiment is under development as one of the possible experimental programs at the EIC. I will present work done in the context of ATHENA using tracks displaced from the interaction point as a means to identify charm-quark-initiated jets. These jets can be produced when the beam lepton interacts with a strange quark in a proton, neutron, or nucleus. I will show preliminary results on charm jet tagging using this approach and provide an outlook for this and other approaches at the EIC.

¹The Dean's Research Council at SMU

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