

XXVIII International Workshop on Deep Inelastic Scattering and Related Subjects



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Study of short-range nuclear correlations in light nuclei using the BeAGLE event generator

Wednesday, March 25, 2020 12:40 PM (20 minutes)

The dynamics among nucleons at short distances and the role QCD plays in it, is an outstanding problem in nuclear physics. It's understanding is important for uncovering the underlying physics of Short-Range Correlations (SRCs). In recent years, SRCs have been observed from light to heavy nuclei using fixed target experiments at Jefferson Lab via high energy electron-nucleus scattering. In this talk, I will talk about the opportunity of studying SRCs using light nuclei at the future Electron-Ion Collider (EIC). One experimental technique deployed is based on exclusive processes with tagging final-state particles, in order to fully control the initial state of the wave function. A few examples of physics cases will be briefly discussed. Recently, the spectral functions in light nuclei have been modeled within the BeAGLE event generator. In my talk I will discuss the decay kinematics of the light nuclei and their influence on the very forward detector design at the EIC .

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