Background Simulations with Transversely Polarized Target in CLAS12

Detector

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Abstract

The CEBAF Large Acceptance Spectrometer (CLAS12) at Jefferson Lab with a dynamically transverse polarized NH3 target is a unique facility to perform the first measurement of transverse target spin asymmetries in deeply inelastic exclusive and semi-inclusive processes over a large kinematical range. The operating luminosity is limited by the electromagnetic background leading to high occupancies in the first 12 layers (Region 1) of the CLAS12 drift chambers system. In this talk we present detailed description of the experiment configuration and the simulation studies to optimize the CLAS12 operation with a transversely polarized target at maximum luminosity.

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