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Event reconstruction for the upcoming Super BigBite Spectrometer program in JLab's Hall A[1] ANDREW PUCKETT, Univ of Connecticut - Storrs — The common collection of experimental apparatus known as the Super BigBite Spectrometer (SBS), slated for installation in Jefferson Lab's Hall A in 2020, will facilitate a highly anticipated program of measurements of nucleon electromagnetic form factors at large Q^2, transverse single-spin asymmetries in Semi-Inclusive Deep Inelastic Scattering (SIDIS), and future novel measurements such as the pion structure function from tagged DIS. The enabling technology for this physics program is the high-rate charged-particle tracking technology of Gas Electron Multipliers (GEMs), which can operate with large solid-angle acceptance in the high-luminosity environment of Hall A, with direct line of sight from the target to the detectors. The major challenge for event reconstruction in the SBS experiments is the high rate of soft photon-induced random background hits in the GEMs, which is overcome using a combination of constraints on the particle tracks of interest from total-absorption calorimeters and other PID detectors, and/or exclusivity of the reaction kinematics. In this talk, I will provide an overview of the tracking challenge facing the SBS experiments, the methods for overcoming those challenges, and the present status and performance of the SBS event reconstruction software.

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