

Abstract Submitted
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Track Reconstruction for the OLYMPUS Experiment COLTON O'CONNOR, MIT, OLYMPUS COLLABORATION — The OLYMPUS Experiment at DESY is currently measuring the ratio between electron-proton and positron-proton elastic scattering cross sections in order to precisely quantify the two-photon-exchange contribution to these processes. Event selection relies on track reconstruction achieved using a large-acceptance magnetic spectrometer consisting of two drift chambers, each with 18 parallel planes of sensitive wires. Track fitting techniques focus on finding the scattering vertex, scattering angles, and particle momenta. For future data-taking periods, a GEM detector will be installed in front of each drift chamber to enhance tracking. The design of these tracking elements will be discussed, along with a description of reconstruction methods.

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