

Abstract Submitted
for the APR13 Meeting of
The American Physical Society

An Update on the OLYMPUS Two-Photon Exchange Experiment at DESY COLTON O'CONNOR, MIT, OLYMPUS COLLABORATION — The OLYMPUS experiment seeks to provide a high-precision measurement ($<1\%$ statistical error) of the positron-proton versus electron-proton elastic scattering cross-section ratio. Divergence from unity is attributed to two-photon exchange, predicted to be a few-percent effect in the kinematic region studied, ($0.6 < Q^2 < 2.2$) GeV^2 . As the final particle physics program to run on the DORIS III beamline, OLYMPUS collected production data between October 2012 and January 2013 with a fixed beam energy and an internal hydrogen target. The design goal of 3.6 fb^{-1} integrated luminosity was exceeded by 13%, with at least 2.01 fb^{-1} collected for each beam charge. A review of the running period will be given along with the current status of the event reconstruction and analysis effort that is now underway. This work is supported by DOE Grant DE-FG02-94ER40818.

Colton O'Connor
MIT

Date submitted: 11 Jan 2013

Electronic form version 1.4