

## Contribution submission to the conference Mainz 2012

**OLYMPUS Luminosity Monitoring** — ●OZGUR ATES for the OLYMPUS-Collaboration — Hampton University, Hampton, VA, USA

The OLYMPUS experiment at DESY will measure the ratio of positron-proton and electron-proton elastic scattering cross sections to quantify the effect of two-photon exchange, which is widely considered to be responsible for the discrepancy between measurements of the proton electric to magnetic form factor ratio with the Rosenbluth and polarization transfer methods. In order to control the systematic uncertainties to the percent level, the luminosities are monitored redundantly with high precision by measuring the rates for symmetric Moller and Bhabha scattering, and by measuring the ep-elastic count rates at forward angles and low momentum transfer with tracking telescopes based on GEM (Gas Electron Multiplier) and MWPC (Multi Wire Proportional Chamber) technology. The production, installation, and commissioning of the OLYMPUS GEM luminosity monitors will be presented.

**Part:** HK  
**Type:** Vortrag;Talk  
**Topic:** Hadronenstruktur und -spektroskopie  
**Email:** atesozgur@gmail.com