ep Cross-section for 2.2 GeV period

Maxime Levillain

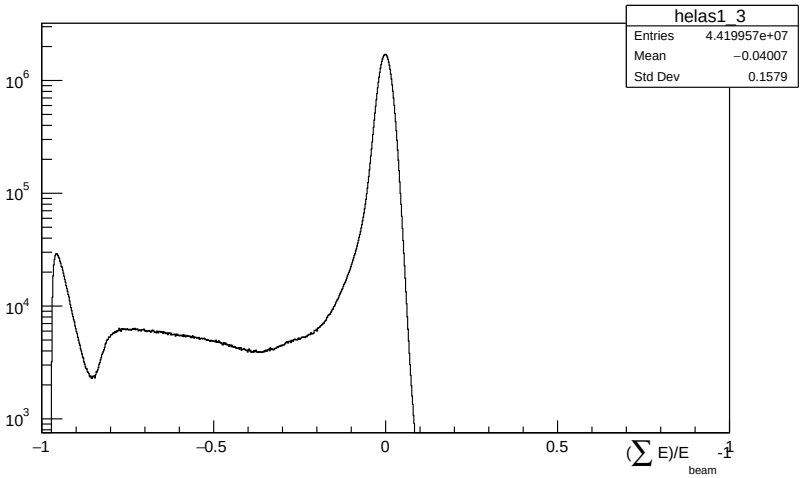
April 14, 2017

Cuts used

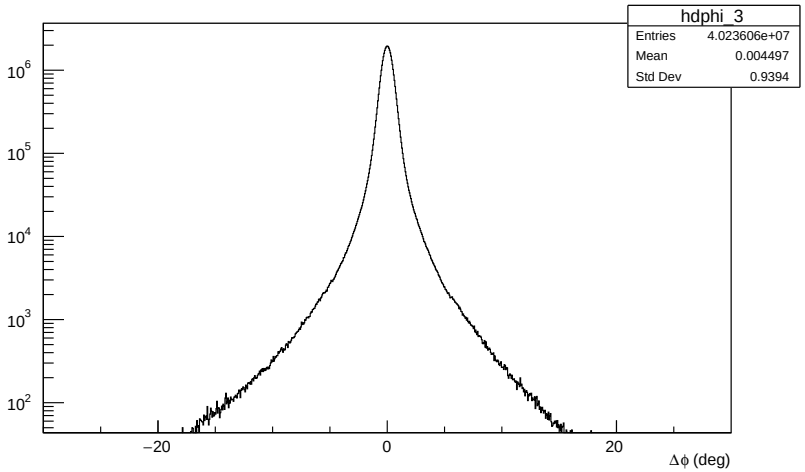
- 2.2 GeV from run 1443 to 1516 divided into 2 subperiod
- cut on elasticity: 4σ
- cut on $\Delta\phi$: 10 deg
- cut on z_{vertex}: 200 mm

Distribution

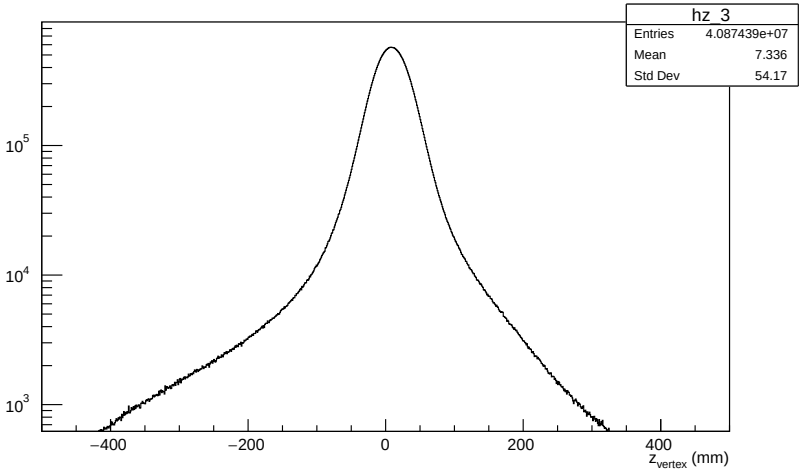
Elasticity



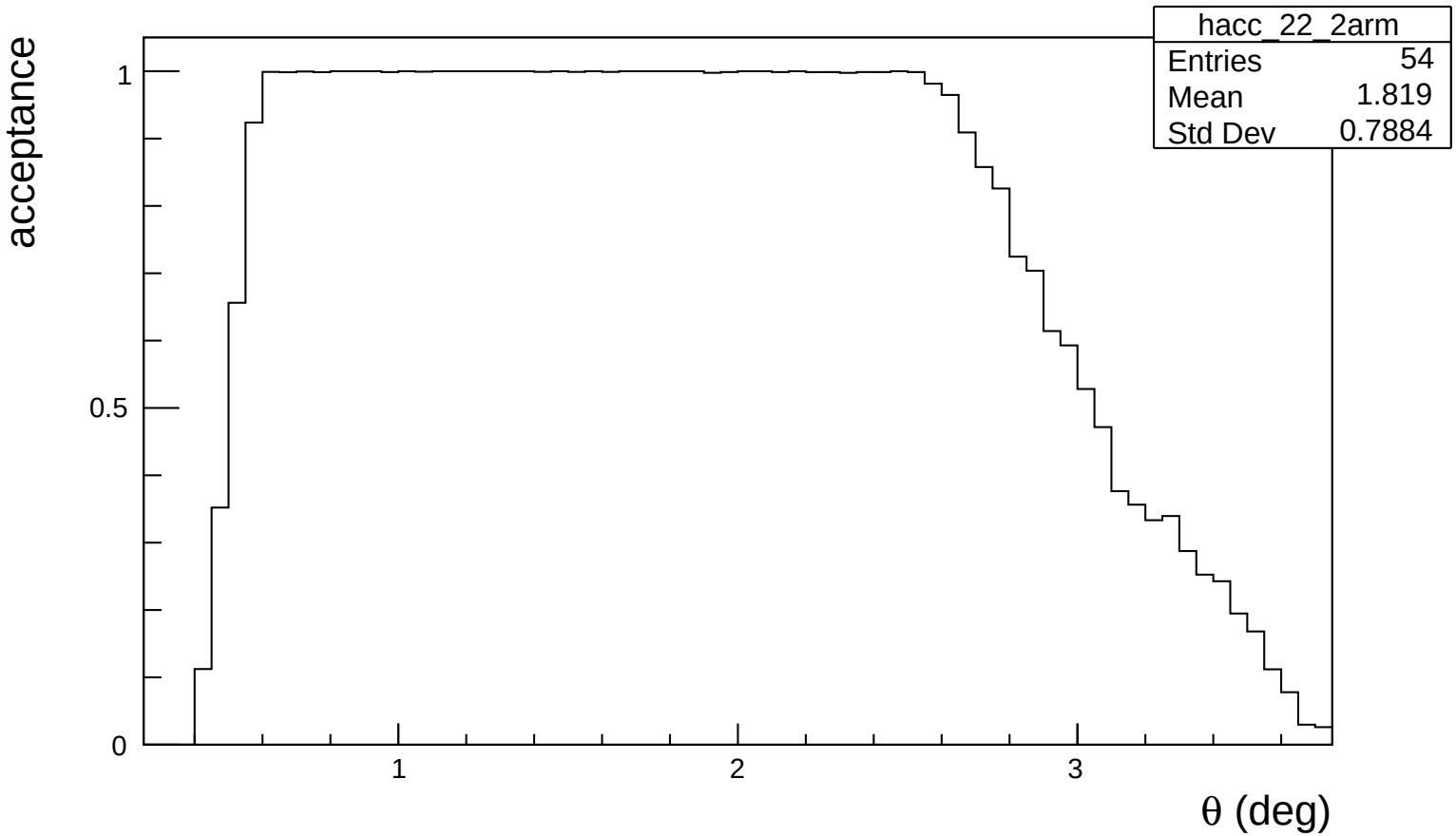
$\Delta\phi$



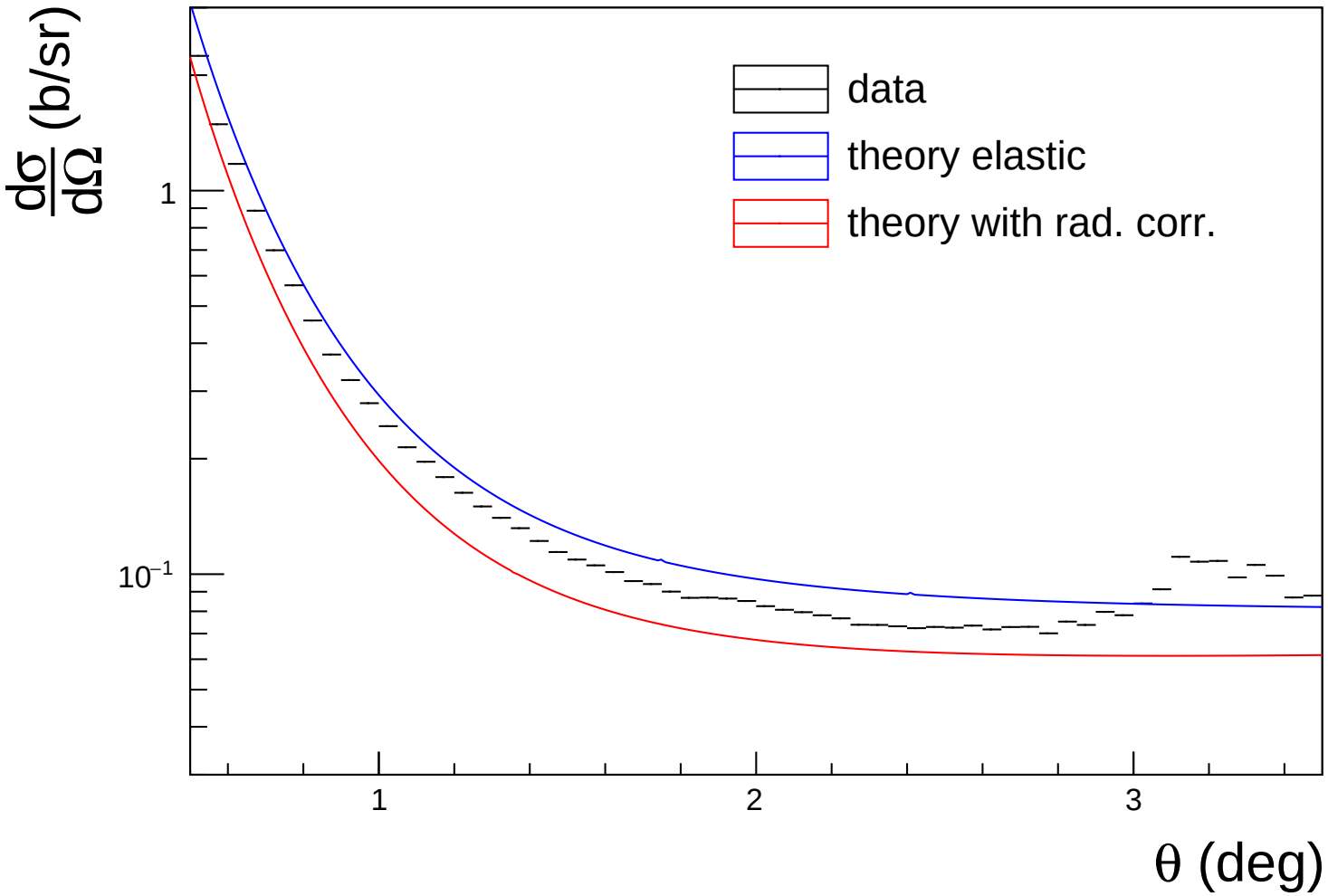
z_{vertex}



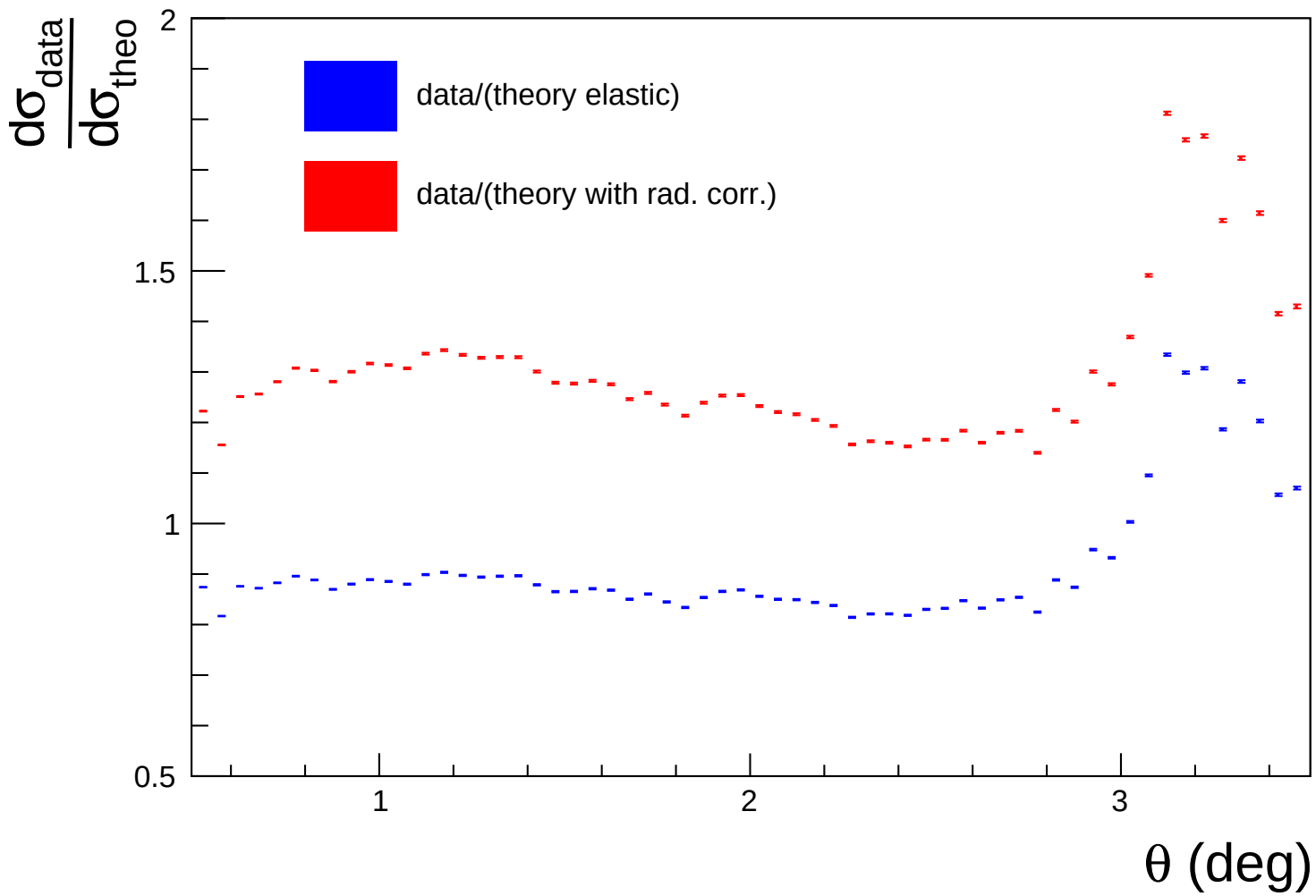
Acceptance for Double Arm Moller



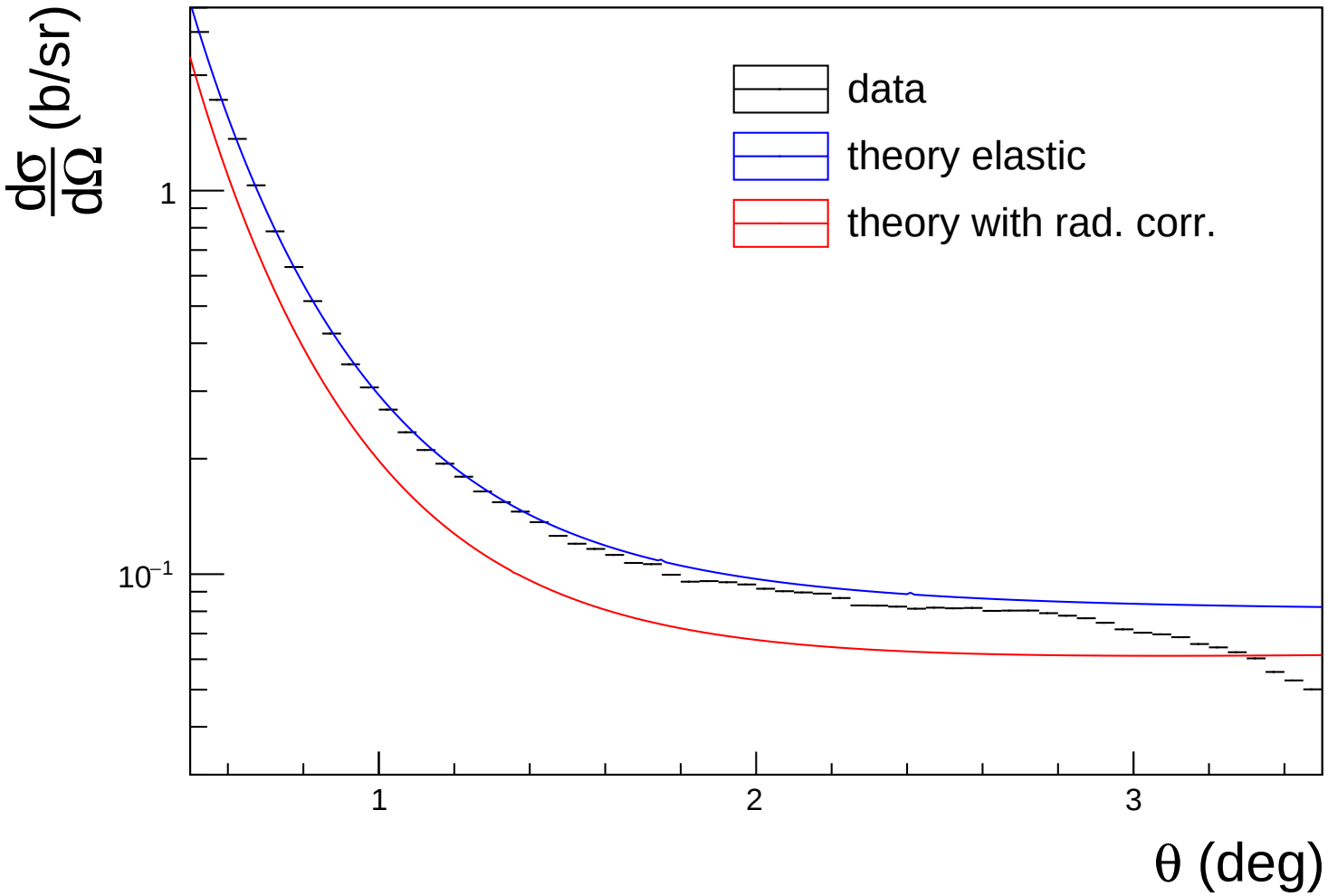
Double Arm Moller Cross-Section



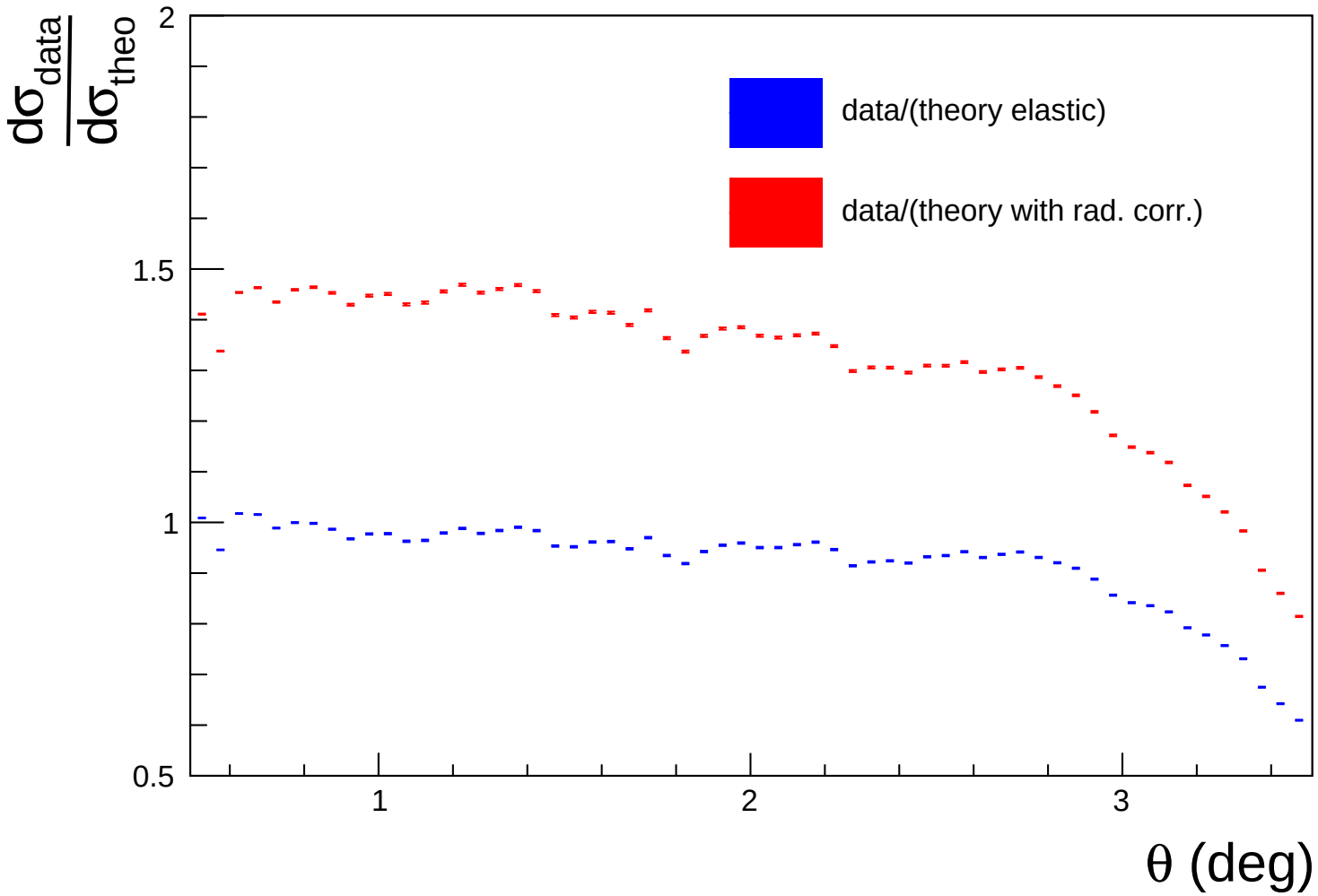
Ratio Double Arm Moller Cross-Section



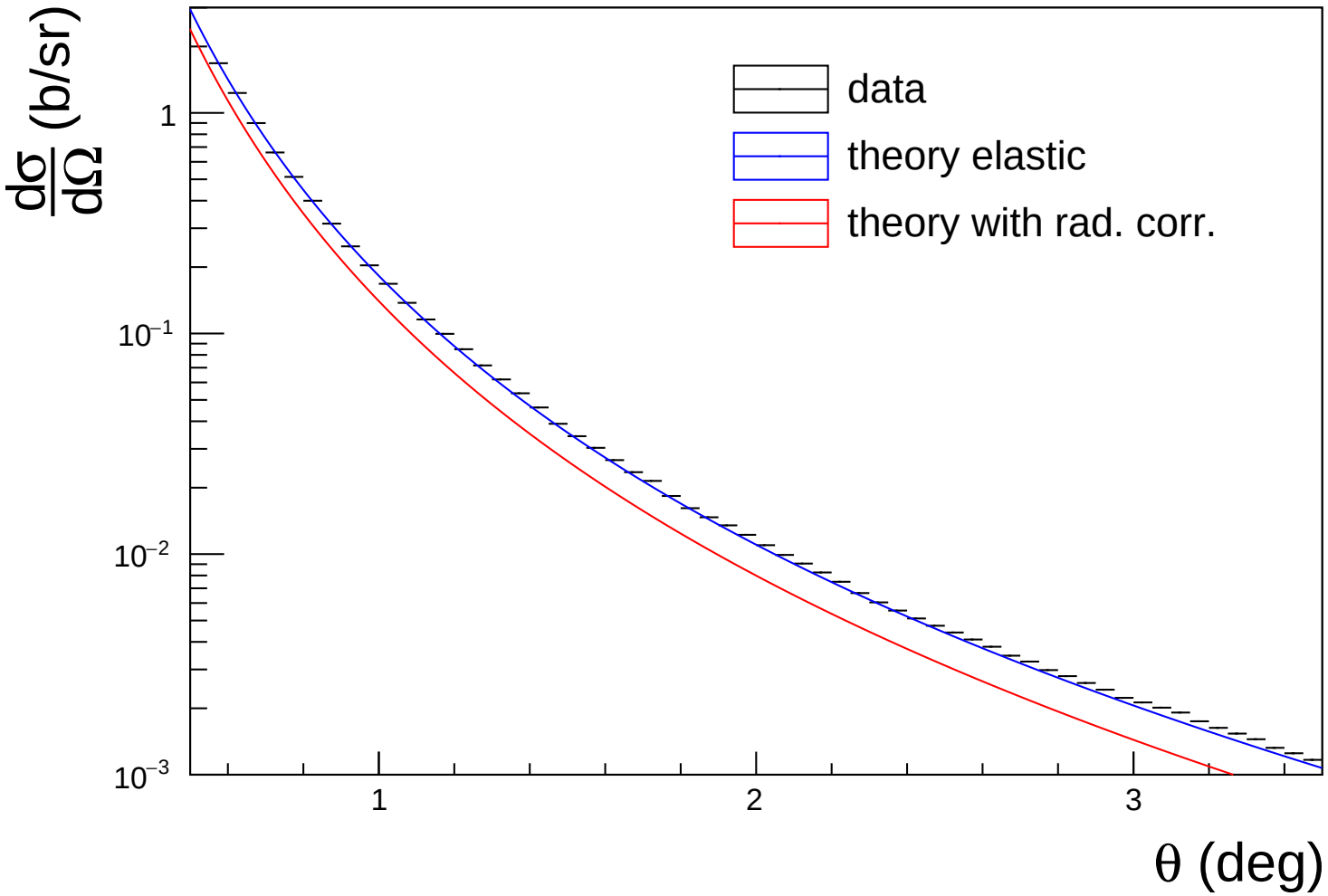
Single Arm Moller Cross-Section



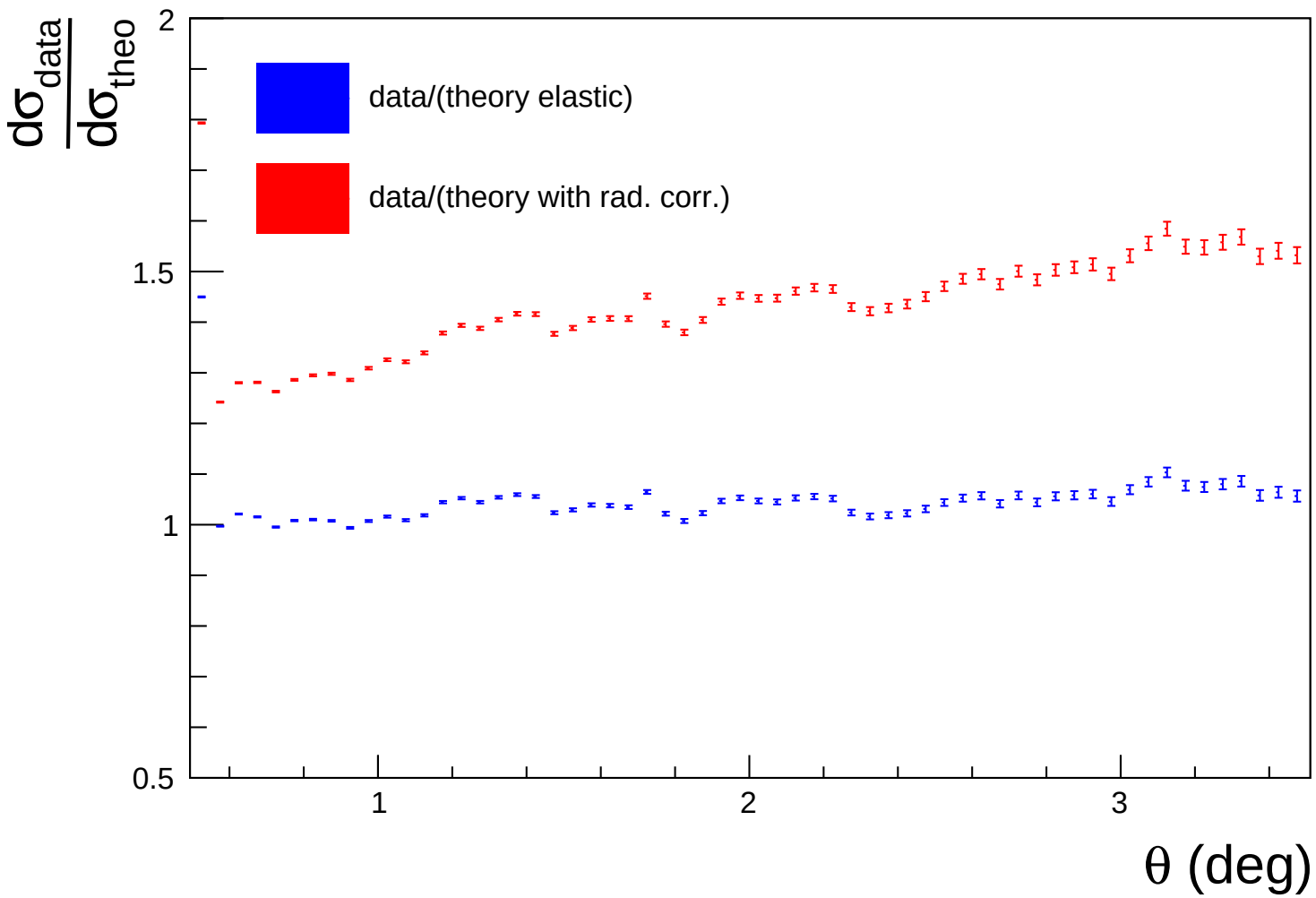
Ratio Single Arm Moller Cross-Section



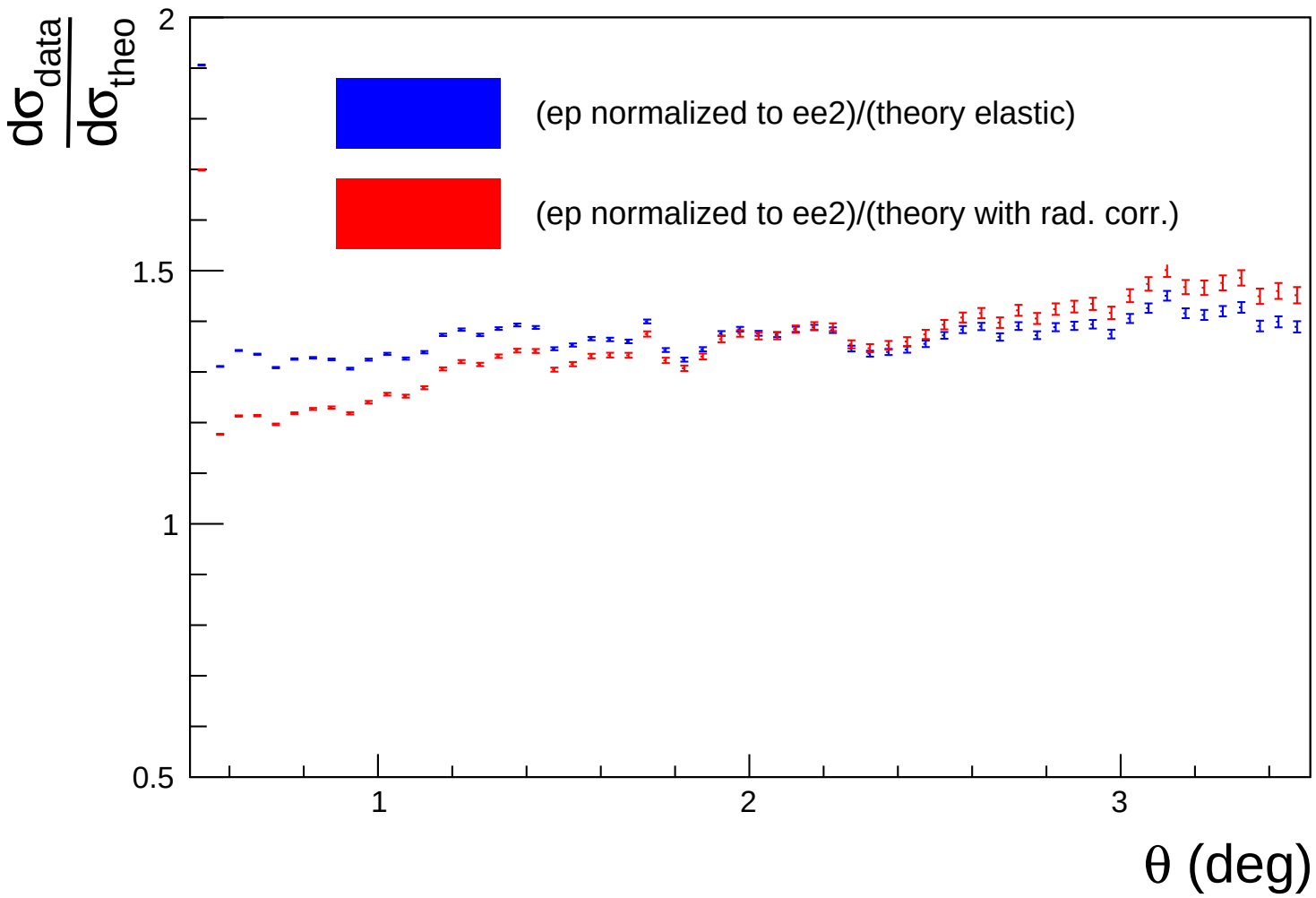
ep Cross-Section



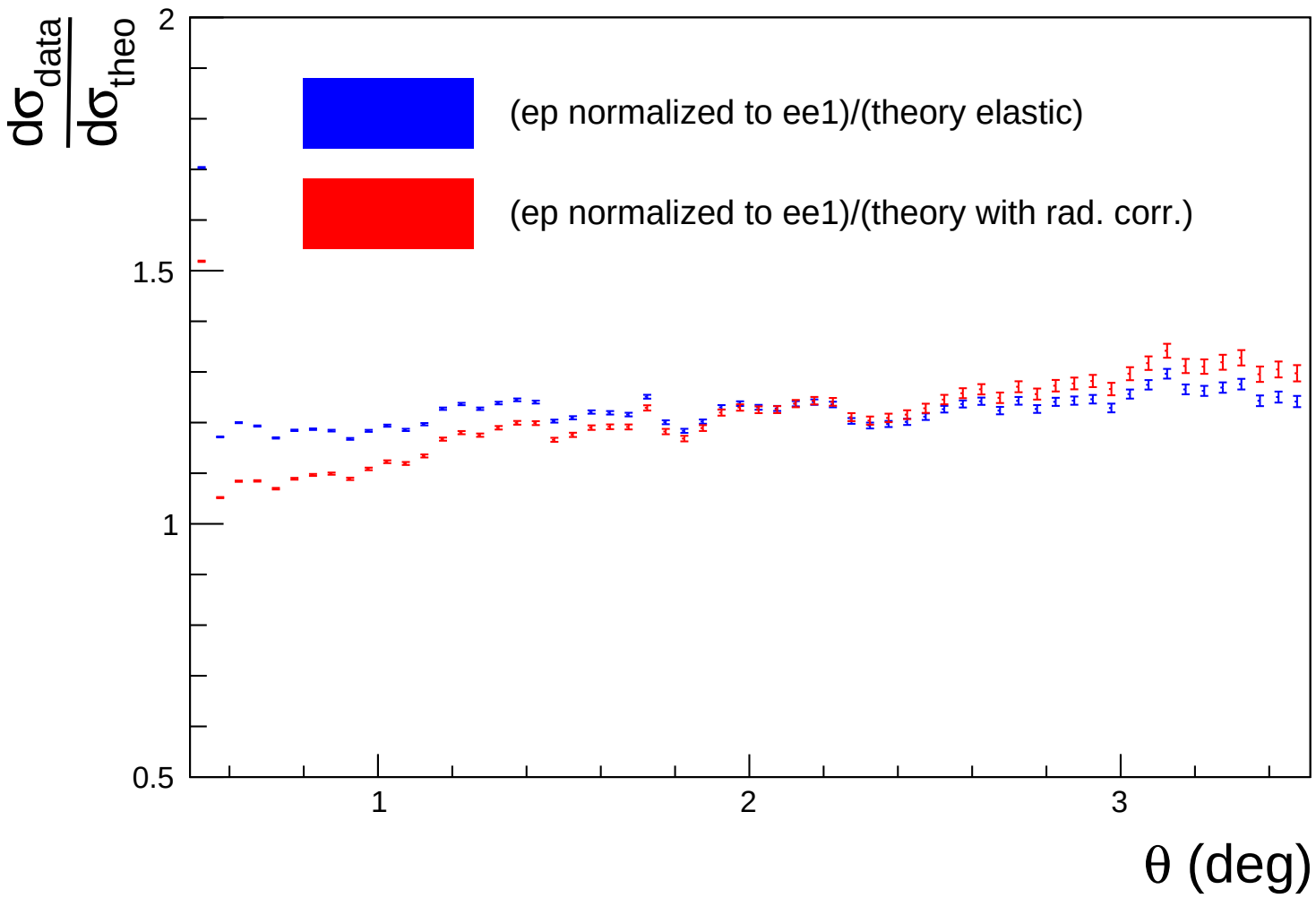
Ratio *ep* Cross-Section



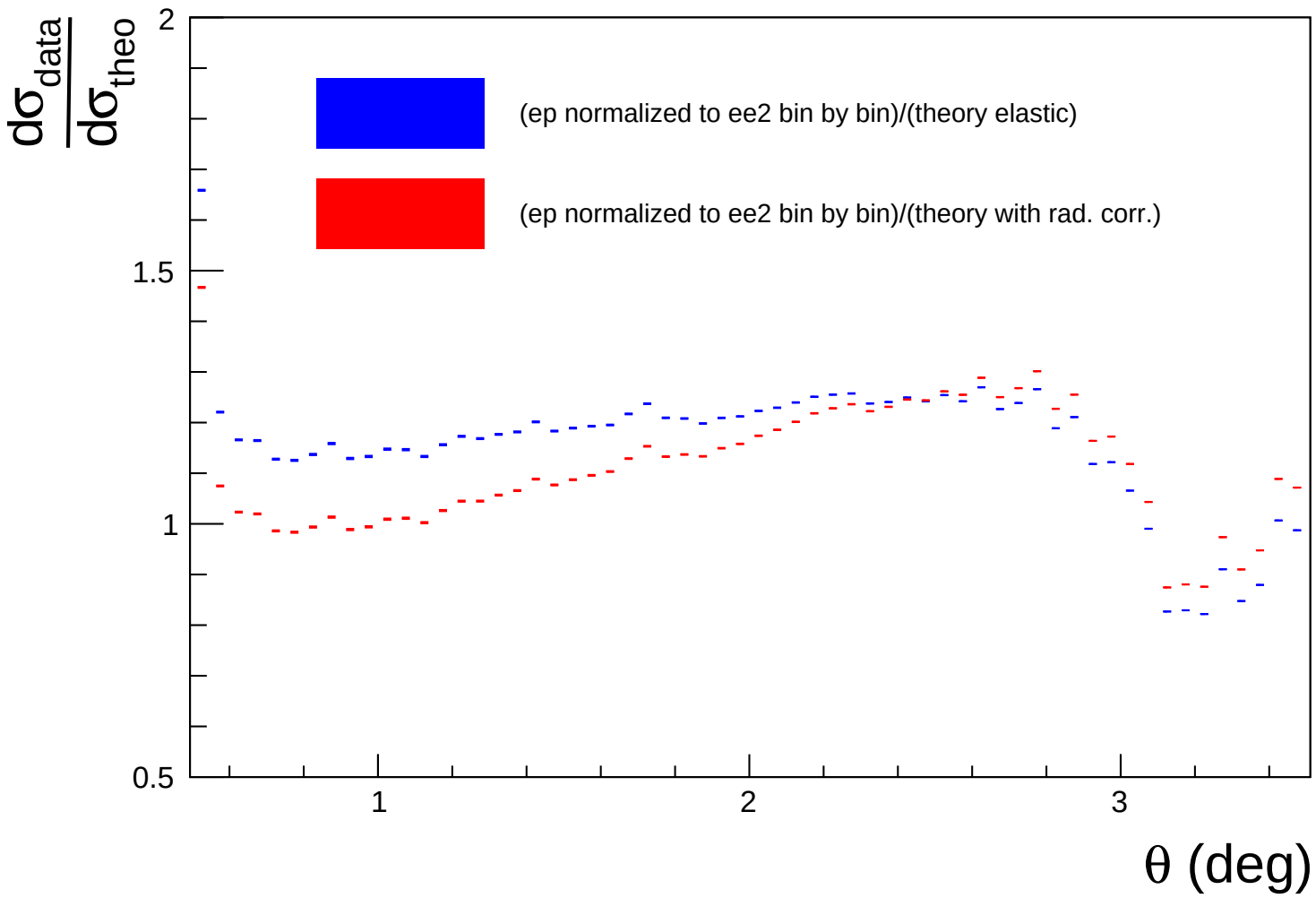
Ratio *ep* Cross-Section Normalized by Double Arm Moller



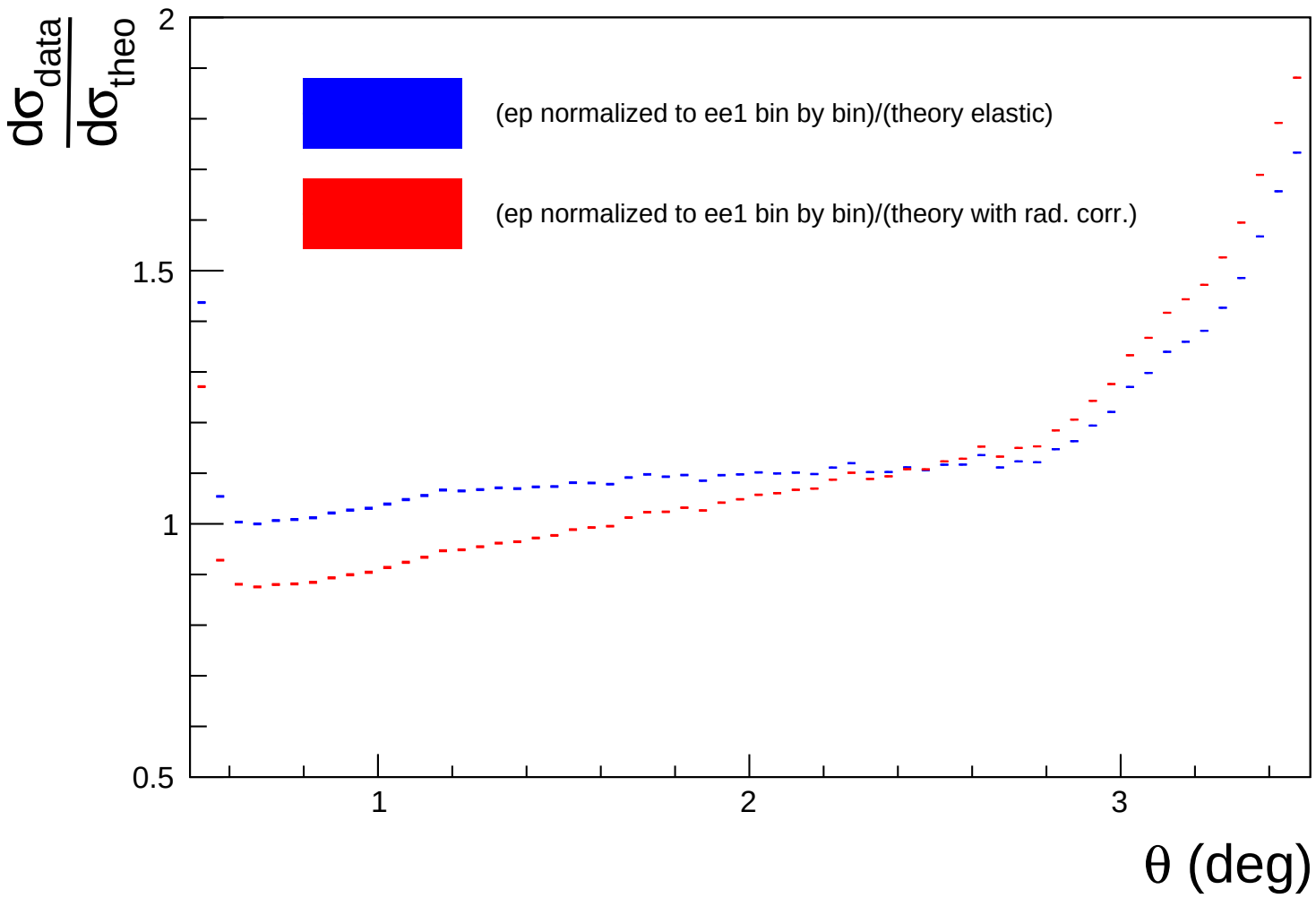
Ratio *ep* Cross-Section Normalized by Single Arm Moller



Ratio *ep* Cross-Section Normalized by Double Arm Moller

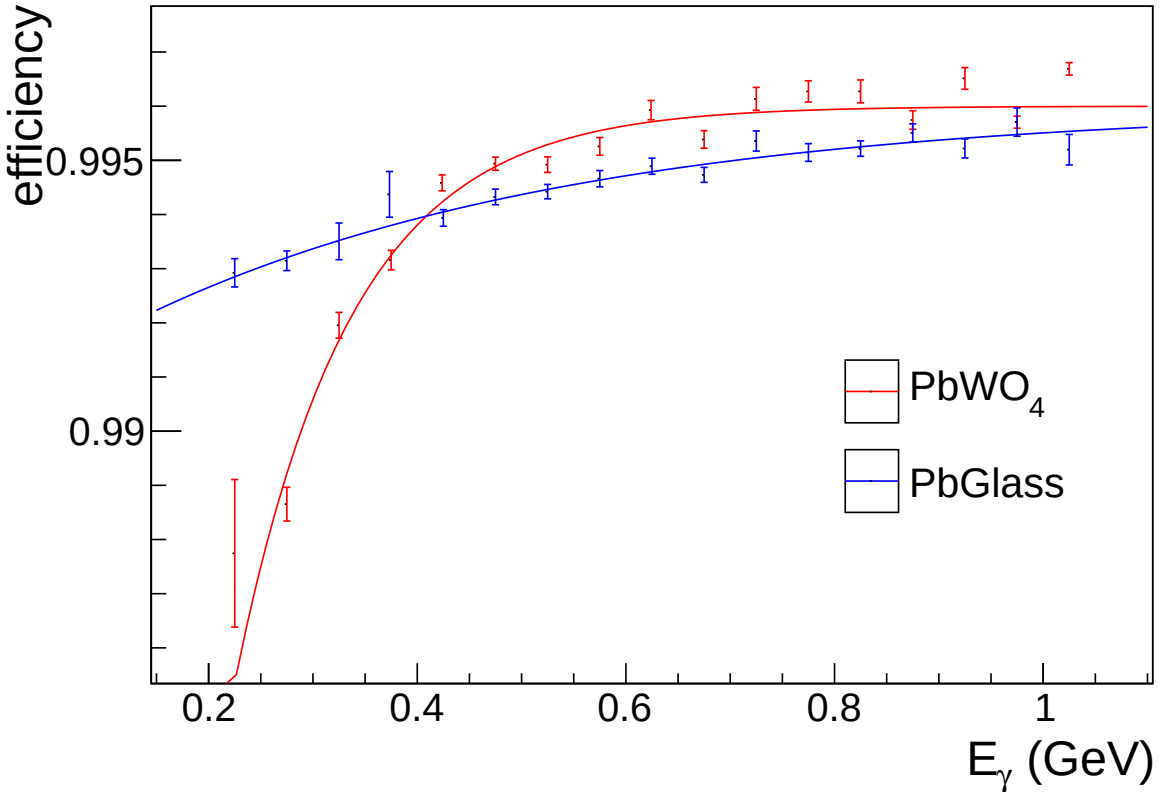


Ratio *ep* Cross-Section Normalized by Single Arm Moller



Trigger Efficiency versus Energy

- Efficiency taken for most stable part of calibration (end)



- Fit results (E in GeV):
  - for PWO: $\epsilon = 0.996 \cdot (1 - e^{-(9 \cdot E + 2.5)})$
  - for LG: $\epsilon = 0.996 \cdot (1 - e^{-(2.5 \cdot E + 5)})$

$\rightarrow$ ϵ(moller PWO corner) $= 0.97$