1 GeV and 2 GeV Cross-Sections

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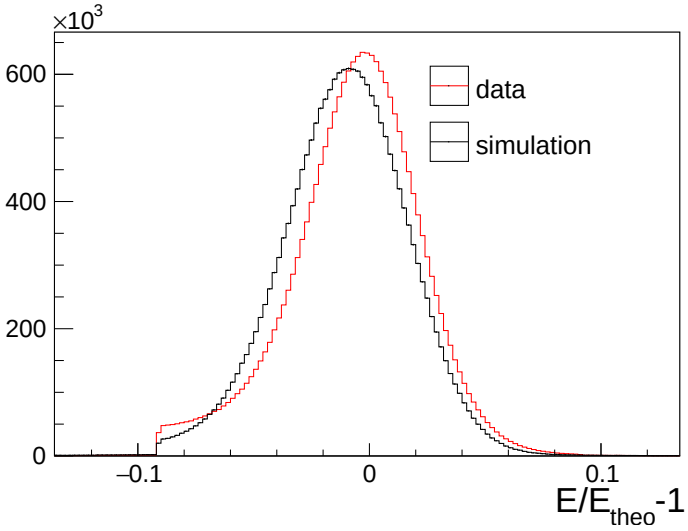
June 16, 2017

Selection

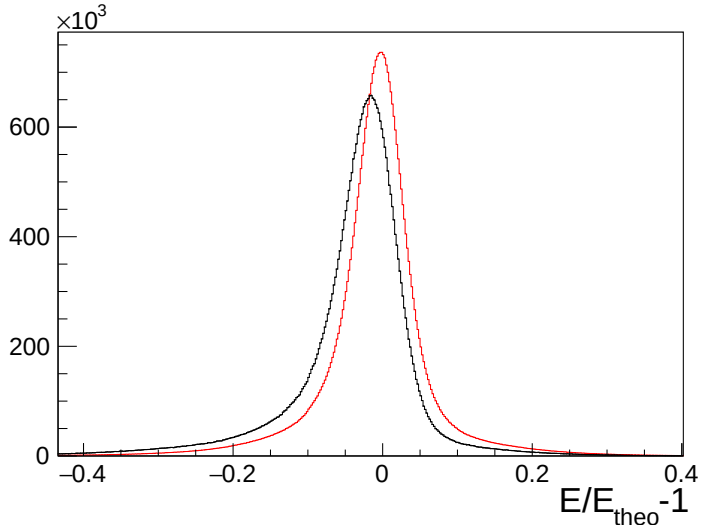
- event selection according to beam current, target pressure...
- fiducial cuts:
  - clusters with center in first and last layers not taken into account
  - 2.075 cm/3.815 cm around center of dead modules removed
- single electron (with GEM coordinates):
  - $\theta > 0.7$ deg
  - $|E_{cluster}/E_{theo} - 1| < 4 \cdot 0.024/\sqrt{E_{theo}}$ (0.065 for LG)
- double electron:
  - $\theta > 0.7$ deg or $\theta > 0.6$ deg for hybrid method
  - $|\Delta\phi - 180| < 5$ deg or $|\Delta\phi - 180| < 10$ deg for hybrid method
  - $|E_1 + E_2 - E_{beam}| < 4 \cdot \sqrt{0.024^2 \cdot E_1 + 0.024^2 \cdot E_2}$ (0.065 for LG)
  - $|z_{vertex}| < 150$ mm for GEM coordinates or $|z_{vertex}| < 500$ mm for hybrid method
  - then single eletron selection with GEM coordinates

Distributions for 1 GeV

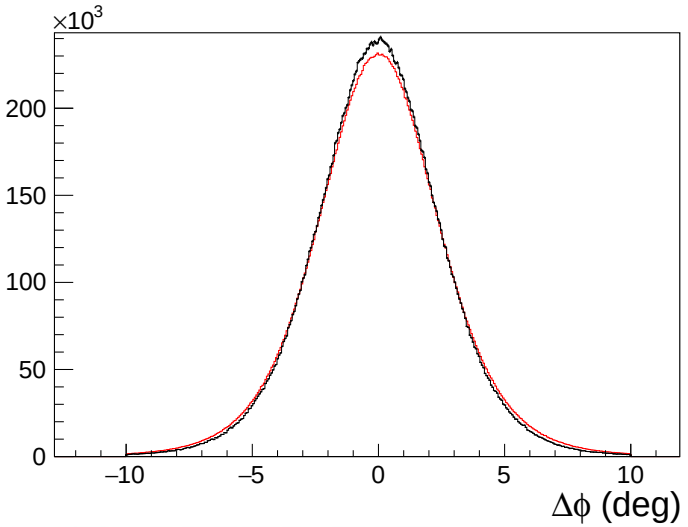
ep elasticity



ee elasticity

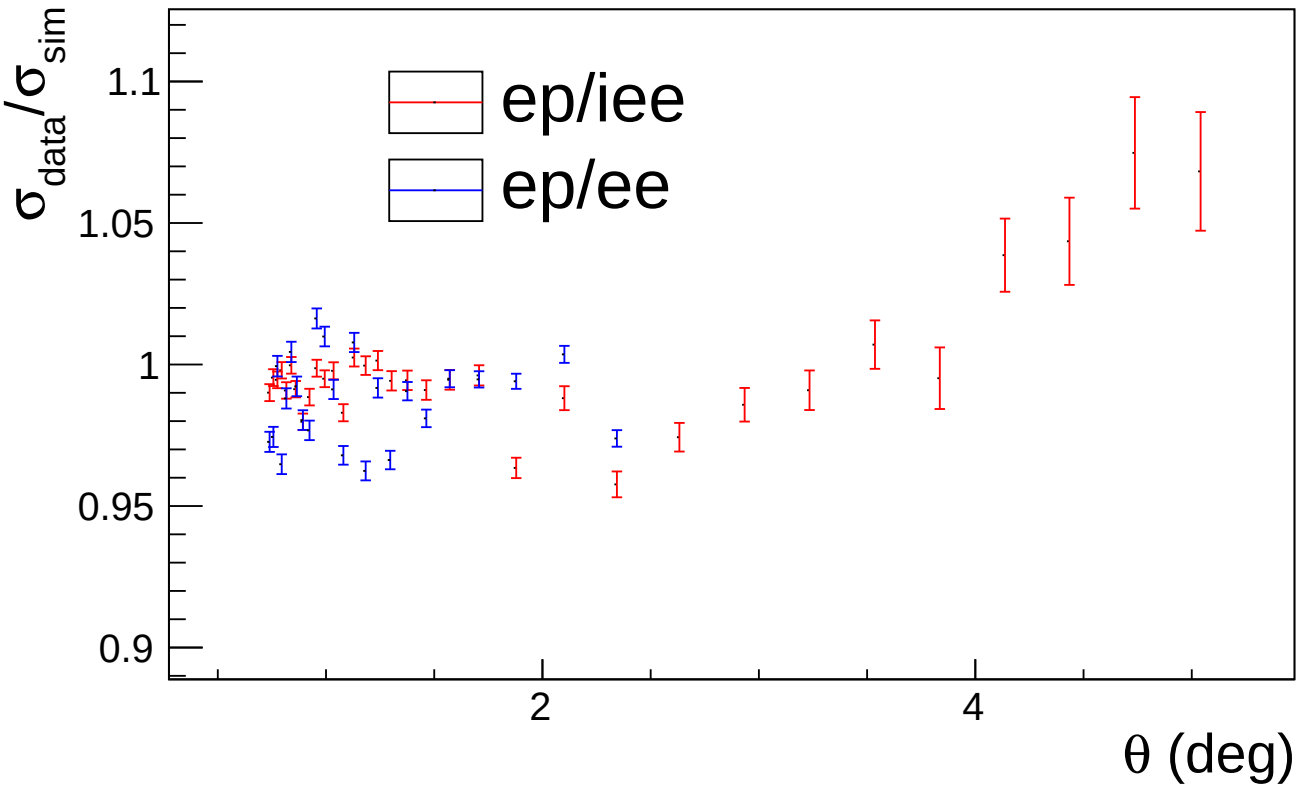


$\Delta\phi$

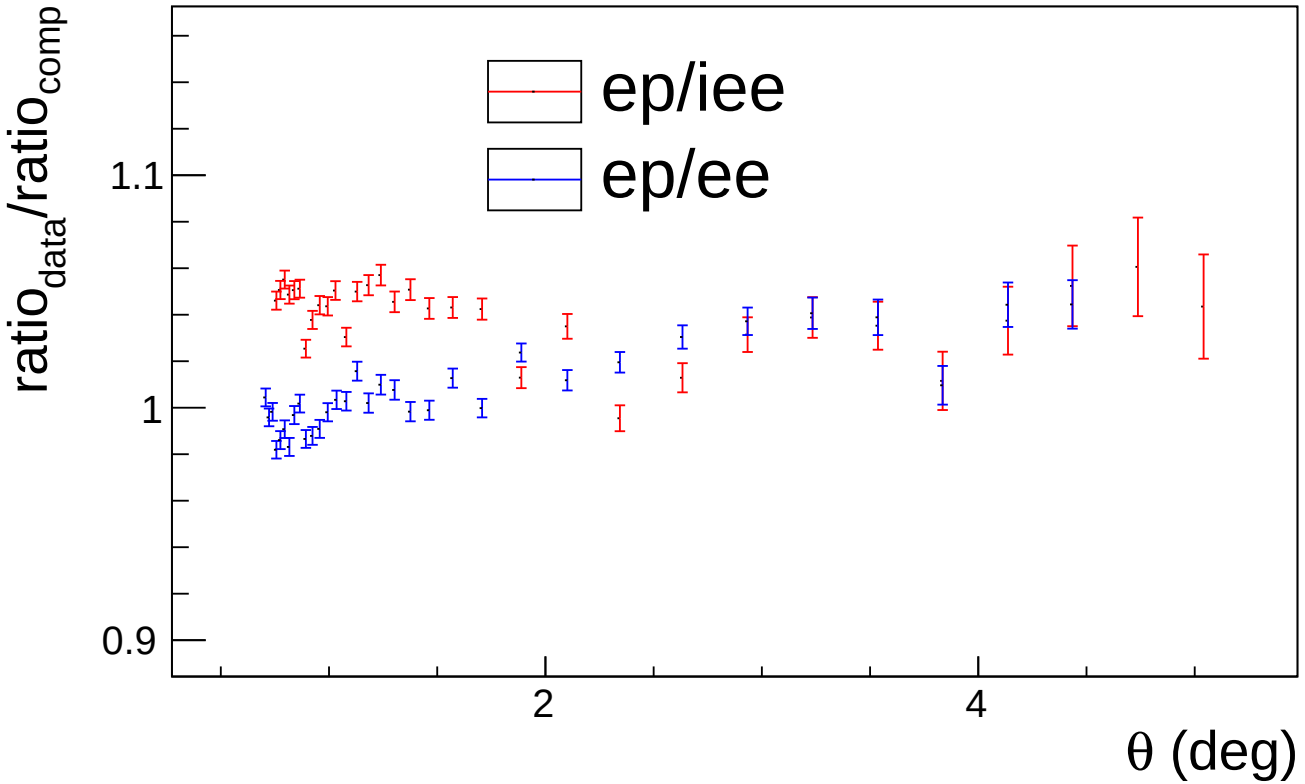


- Some calibration is needed for 1Gev simmulation
- Re-getting some constant from snake scan in progress

Ratio data/simulation 2GeV

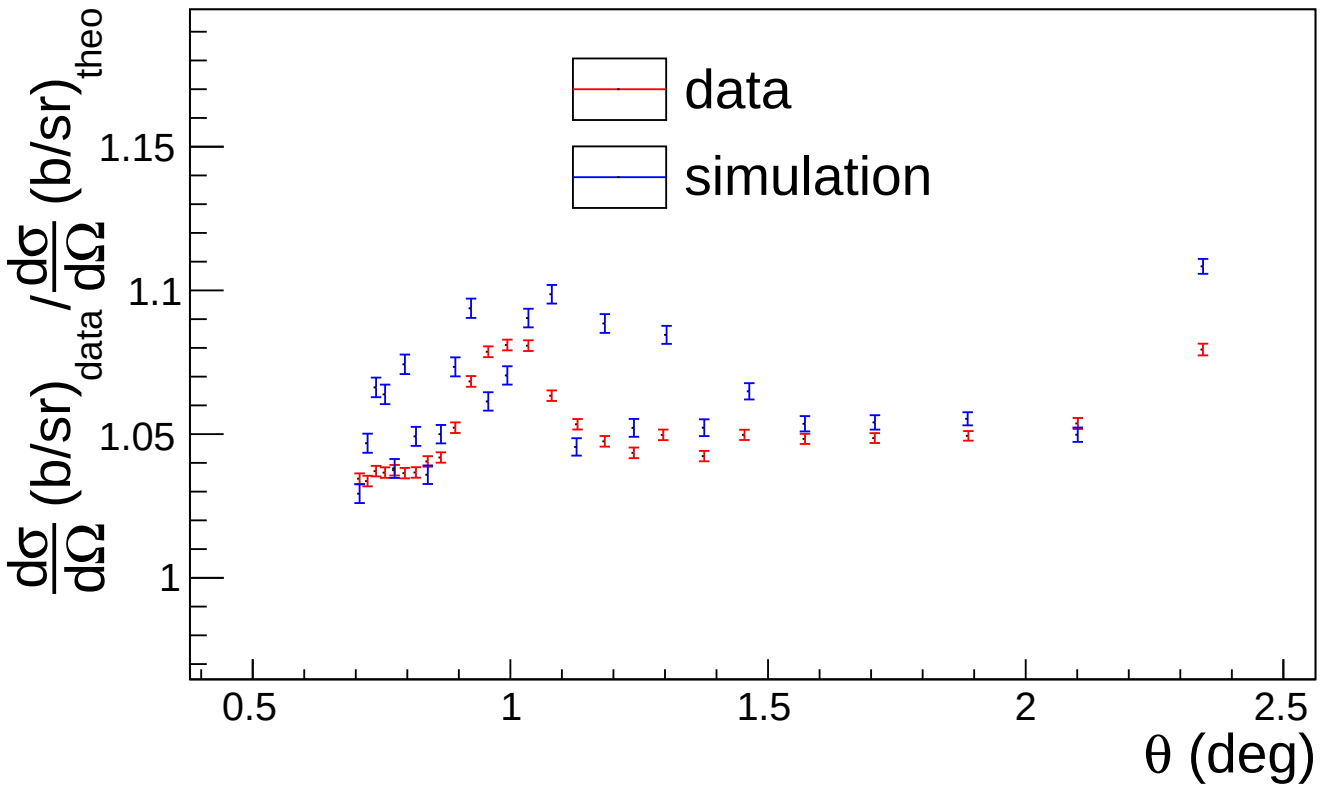


Ratio data/simulation 1GeV

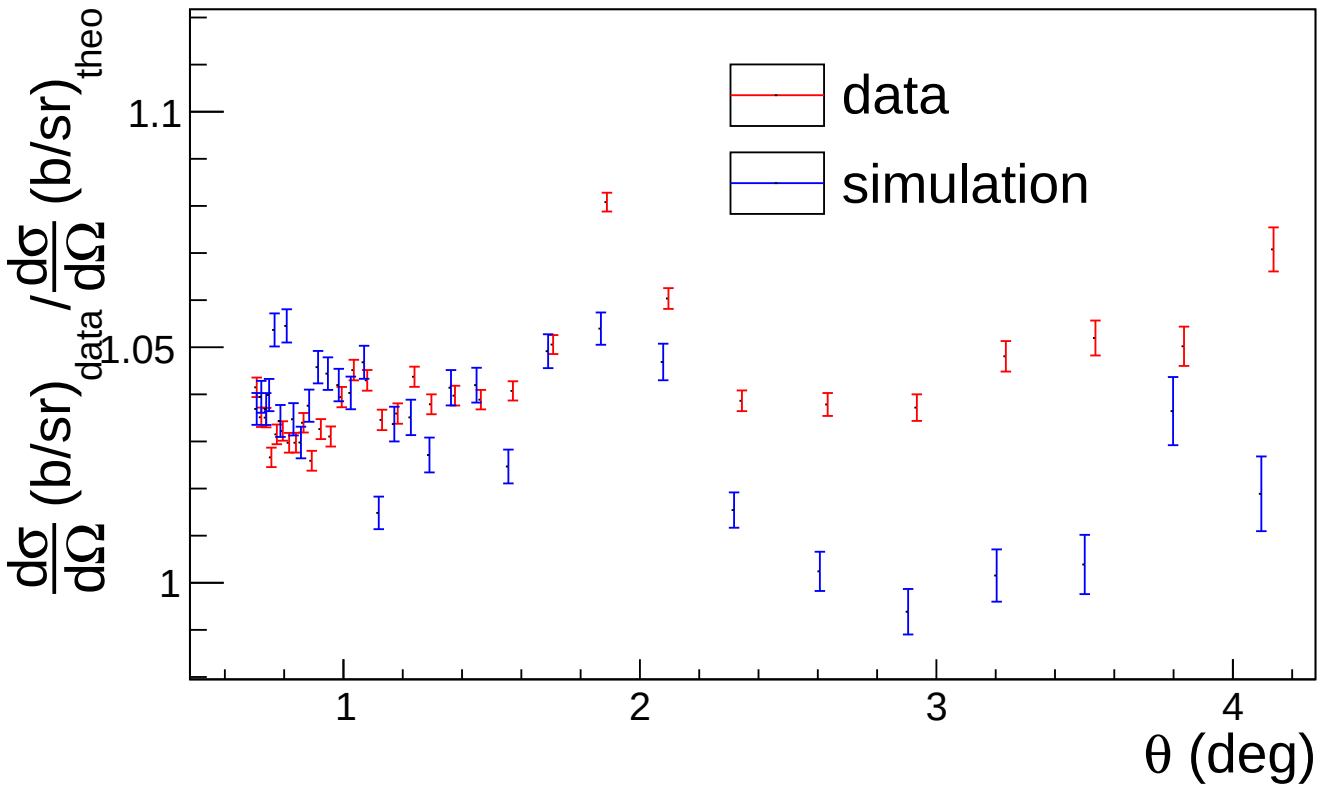


- Ratio integrated corrected with 2GeV GEM efficiency that explains the difference at low angle

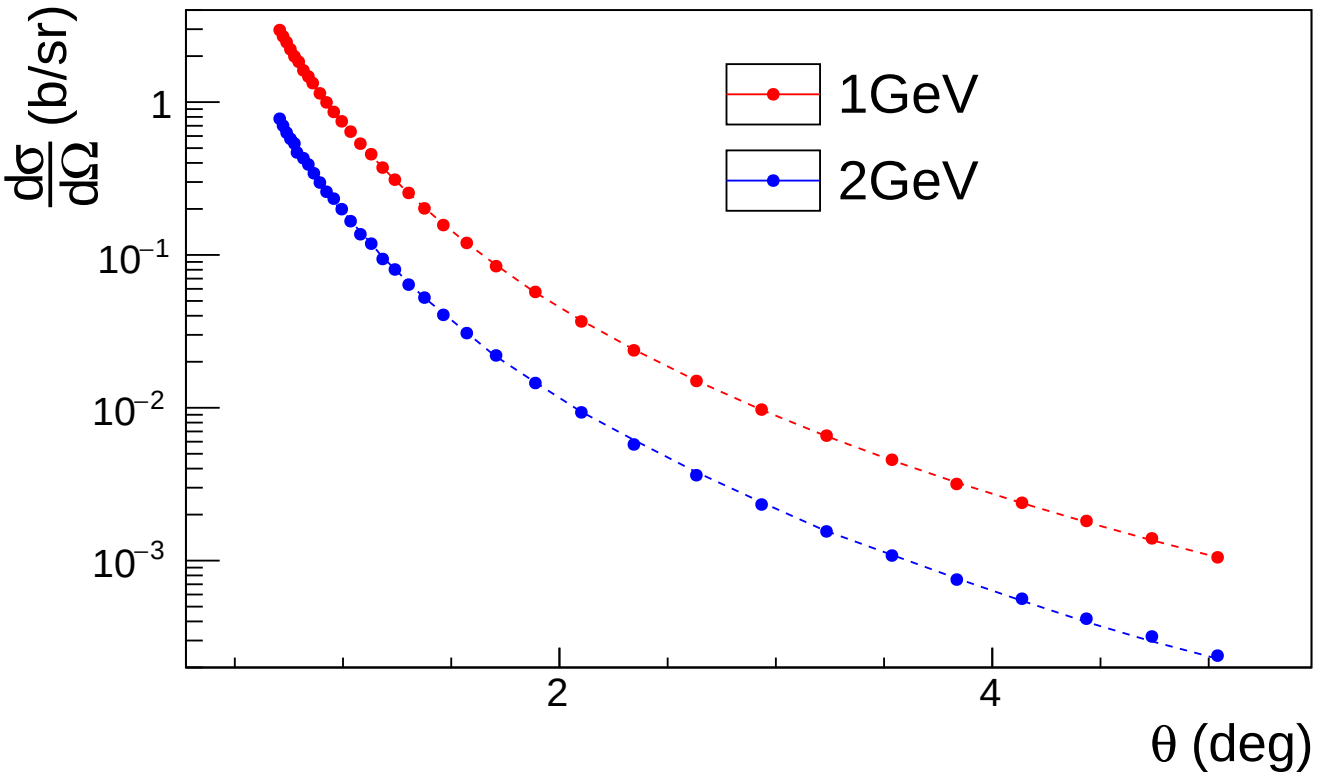
Ratio data or simulation over theory 2GeV



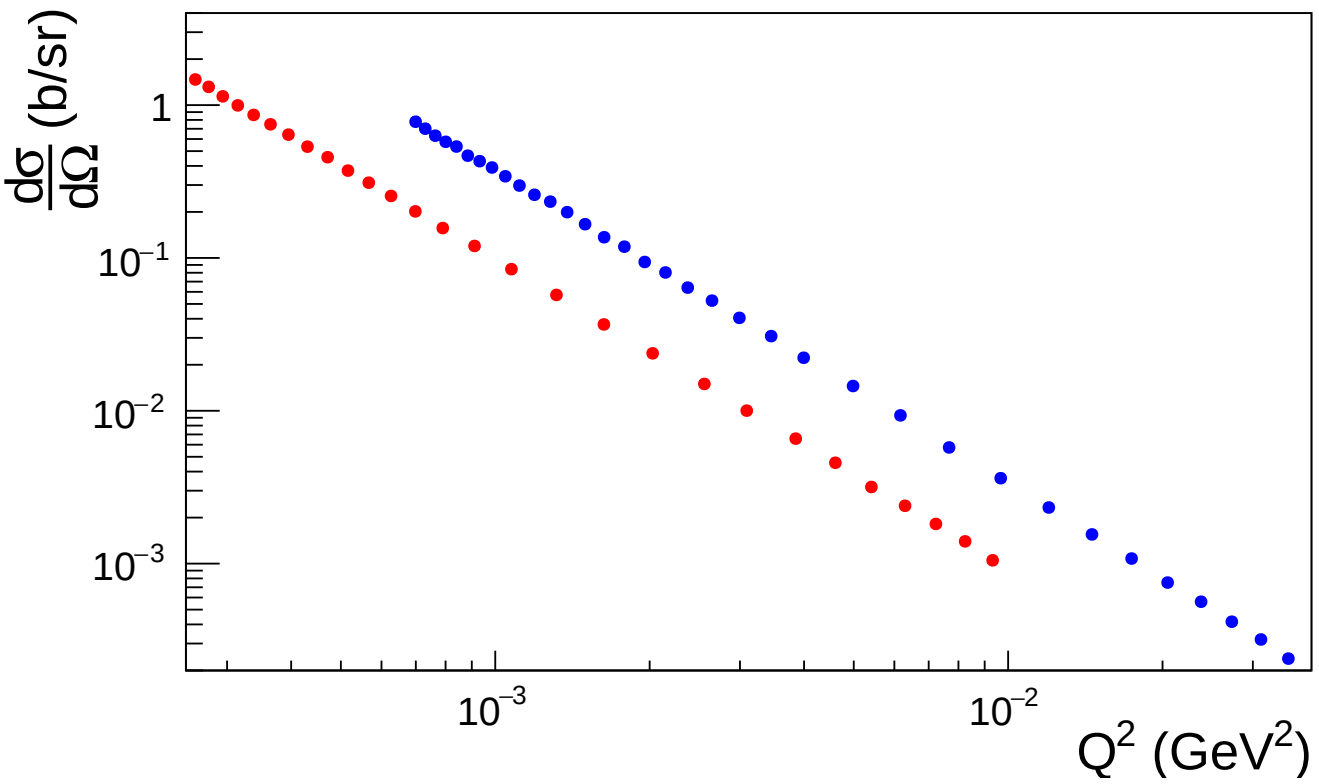
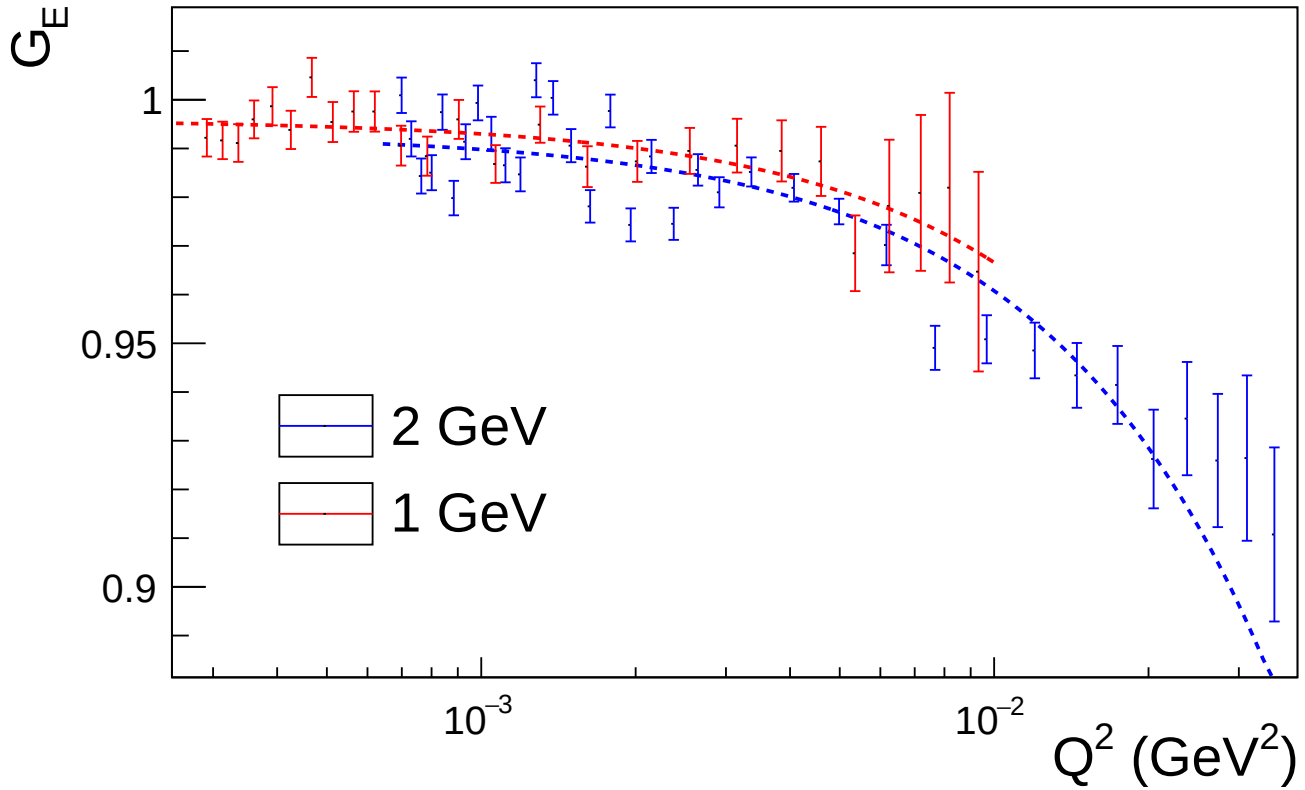
Ratio data or simulation over theory 1GeV



Cross sections for 1 GeV and 2 GeV



Cross sections for 1 GeV and 2 GeV



G_E for 1 GeV and 2 GeV