

$$pp \rightarrow e + \nu_e \mu^+ \mu^- jj$$

LO EW @ 13 TeV, $\mu_R = \mu_F = m_W$

The PDF used is NNPDF3.0_NLO_QED for both the LO contributions

December 4, 2017

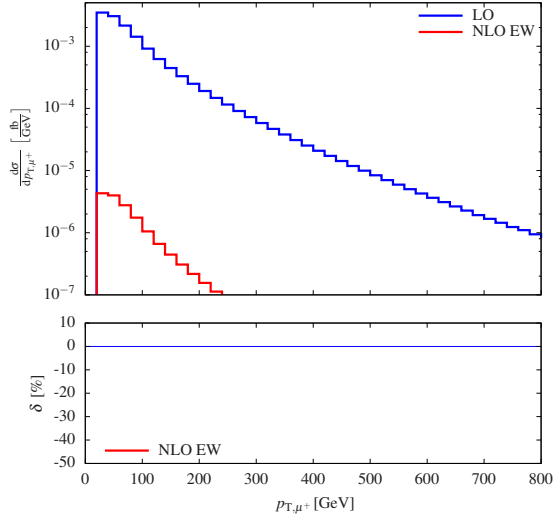
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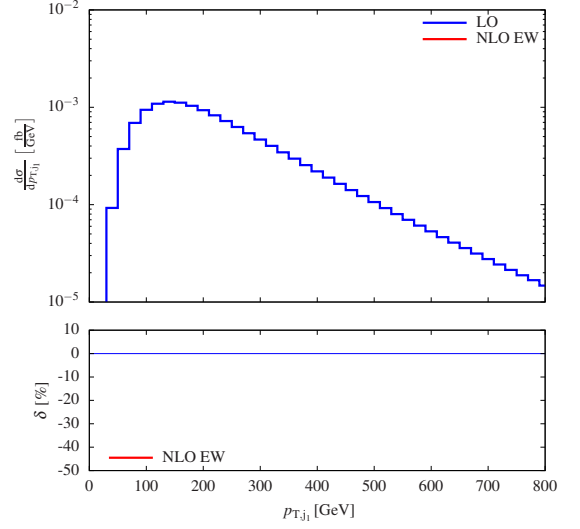
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1 Transverse Momentum

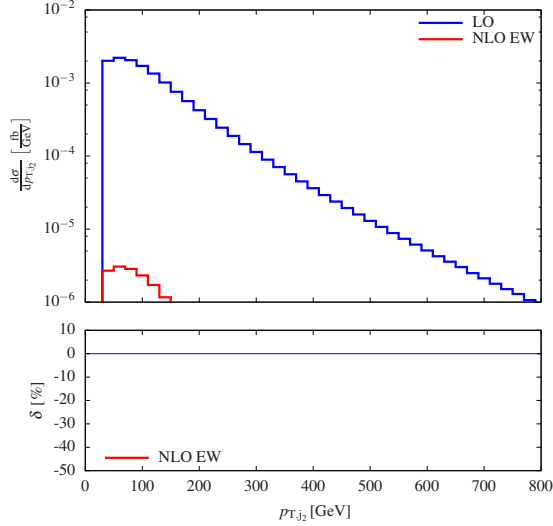
Transverse Momentum anti-Muon



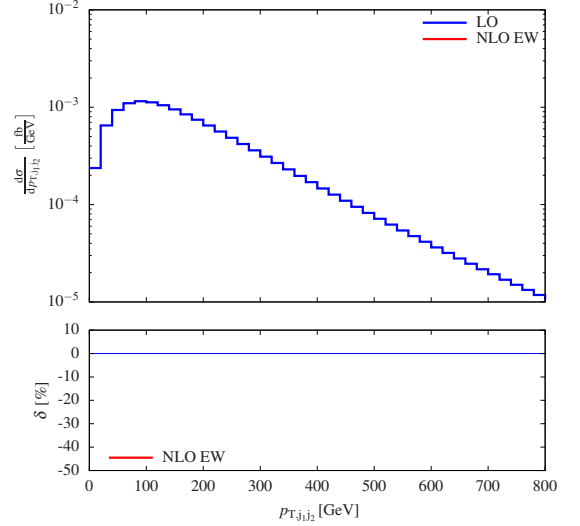
Transverse Momentum Harder Jet



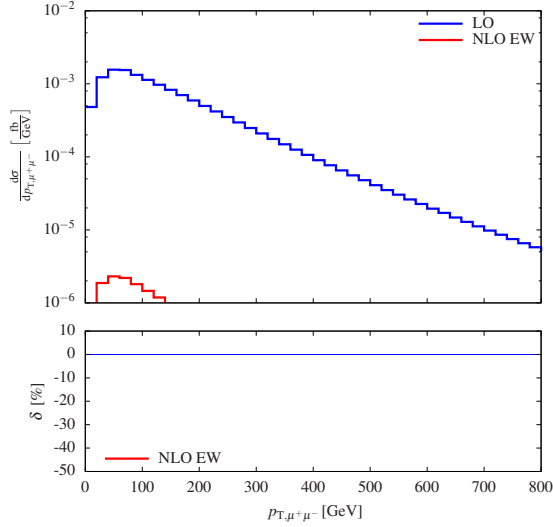
Transverse Momentum Softer Jet



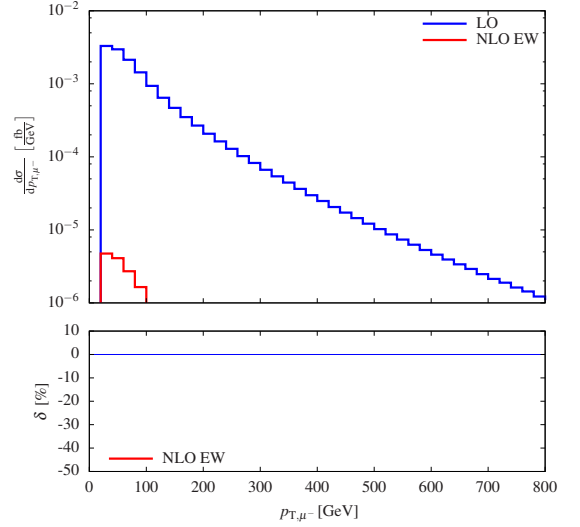
Transverse Momentum Jet Pair



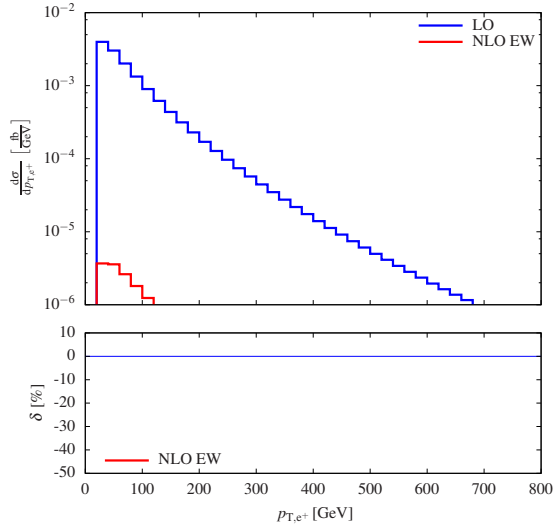
Transverse Momentum anti-Muon-Muon



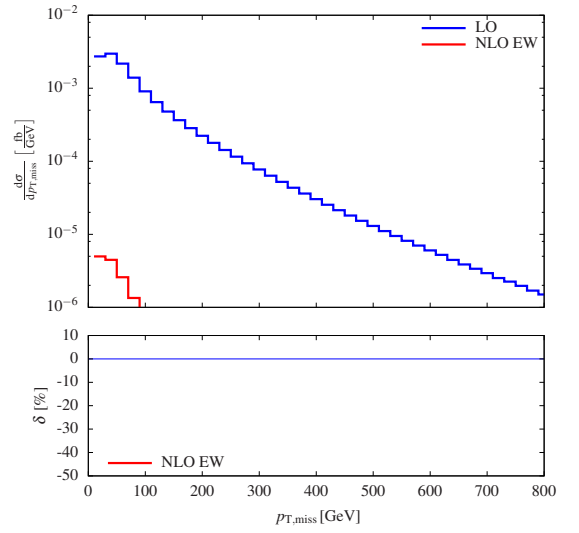
Transverse Momentum Muon



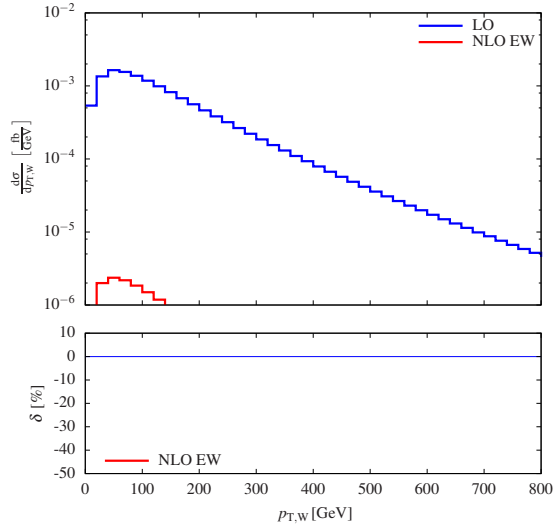
Transverse Momentum Positron



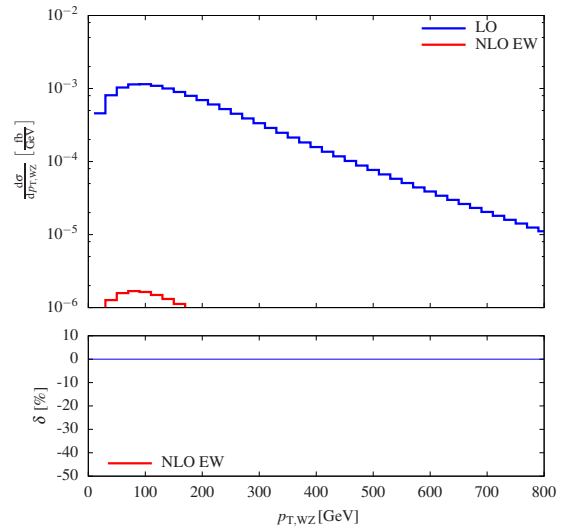
Missing Transverse Momentum



W boson Transverse Momentum

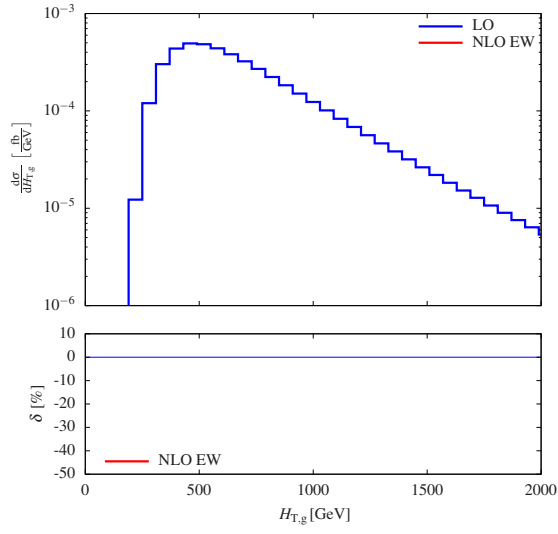


Transverse Momentum of W-Z system

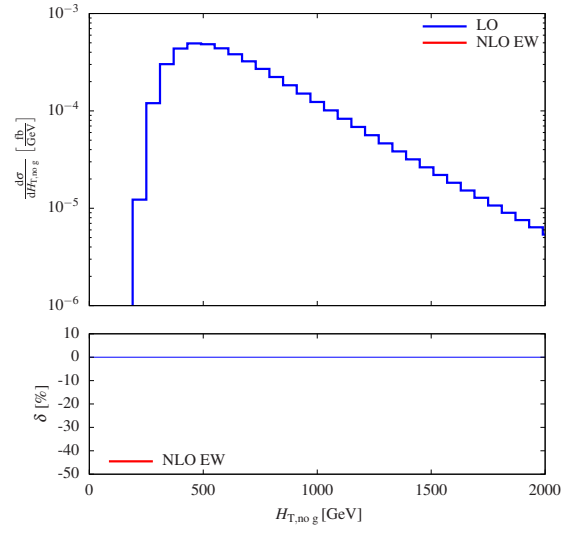


2 Transverse Energy

Total Transverse Energy with Gluon

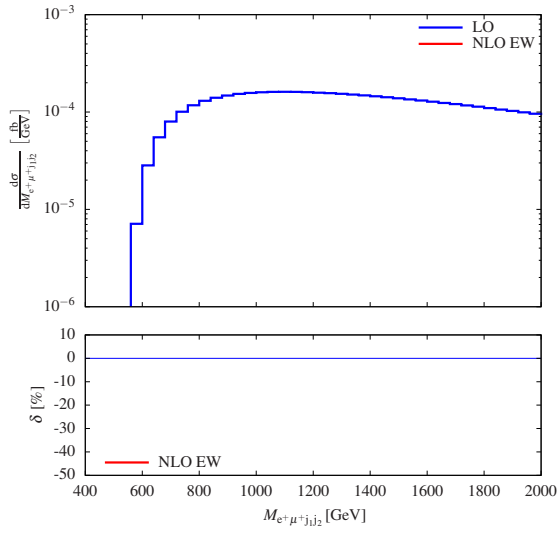


Total Transverse Energy without Gluon

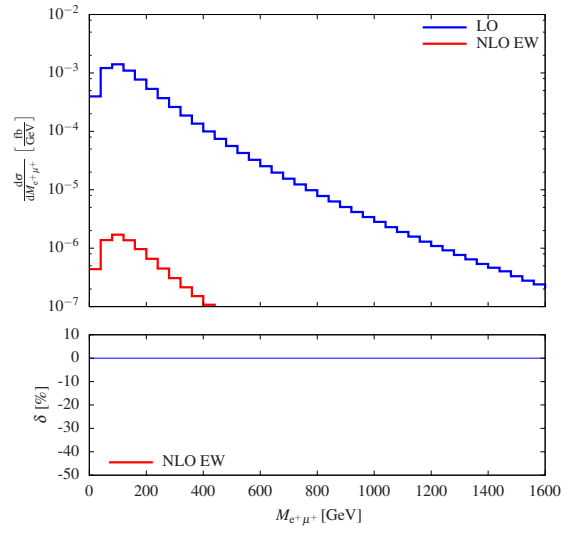


3 Invariant Mass

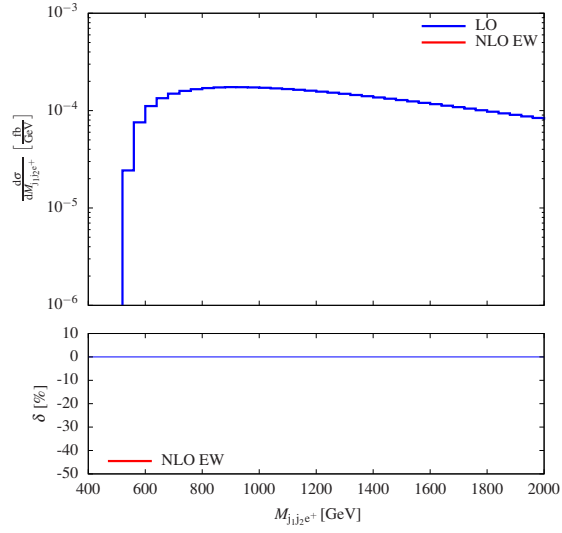
Invariant Mass visible System



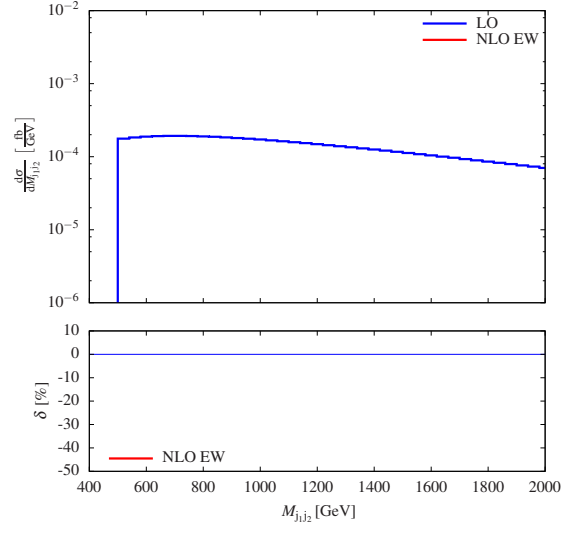
Invariant Mass Positron–anti-Muon System



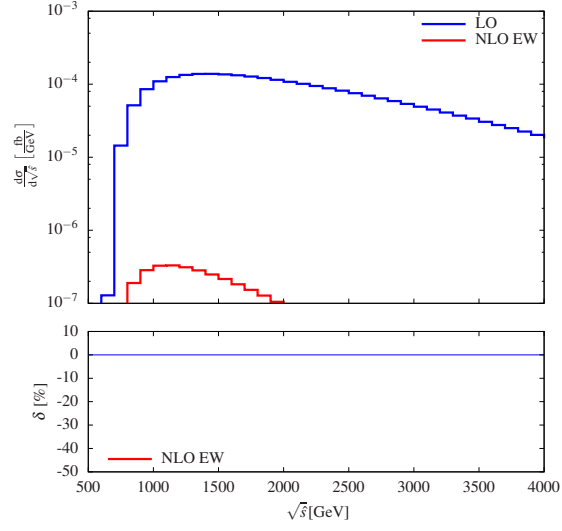
Invariant Mass j-j-positron System



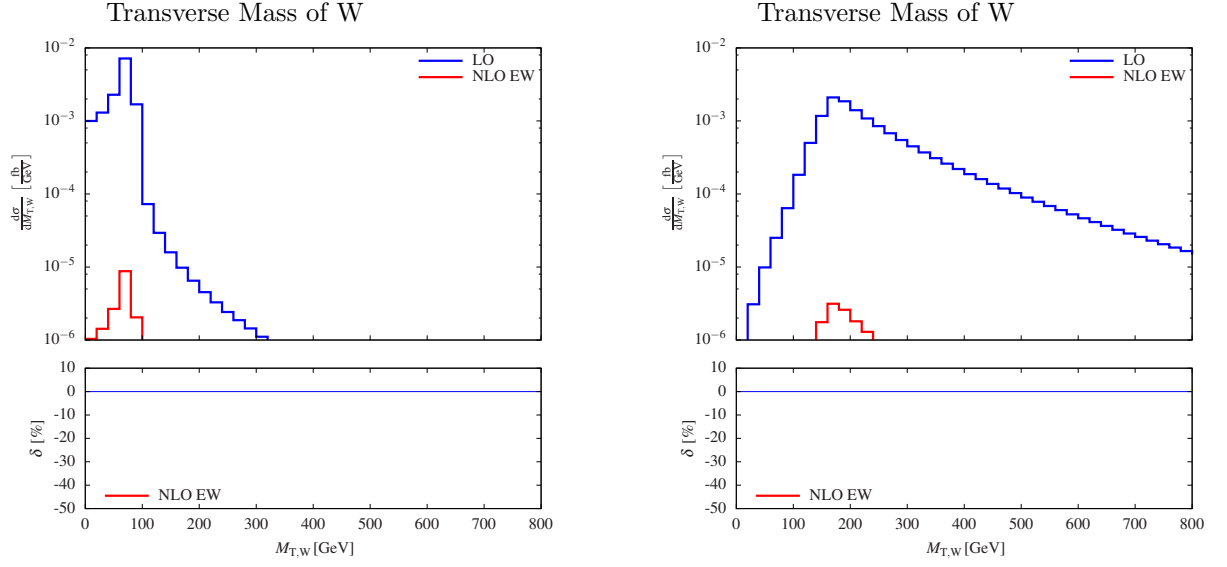
Invariant Mass Jet Pair



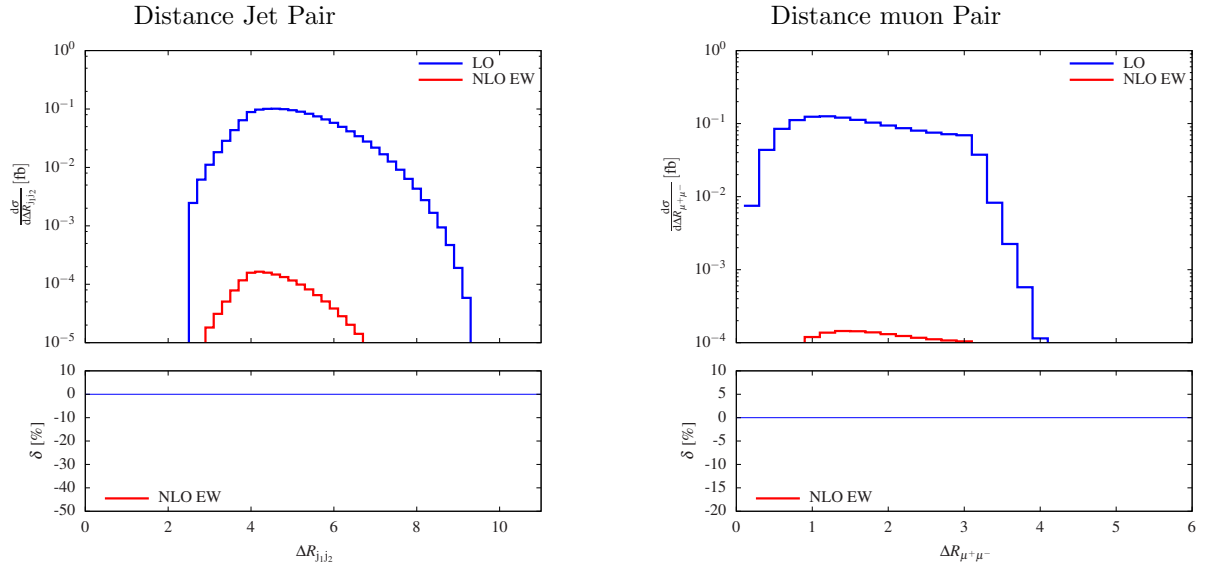
CMS Energy

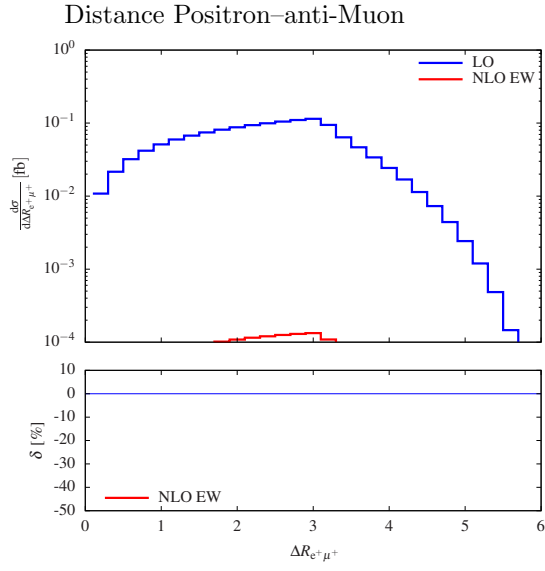


4 Transverse Mass

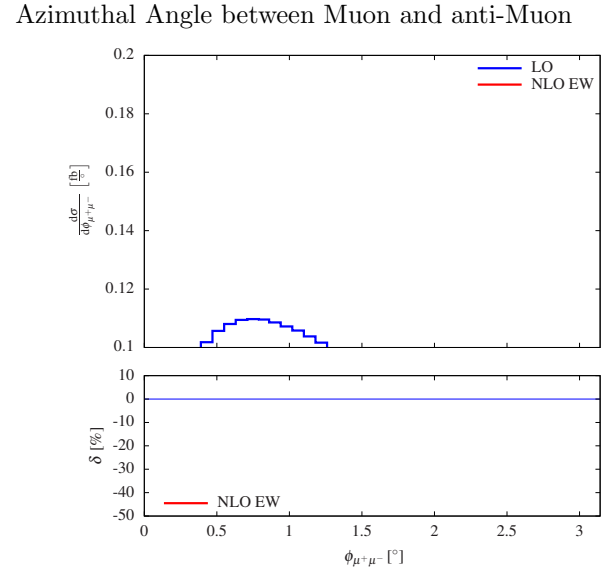
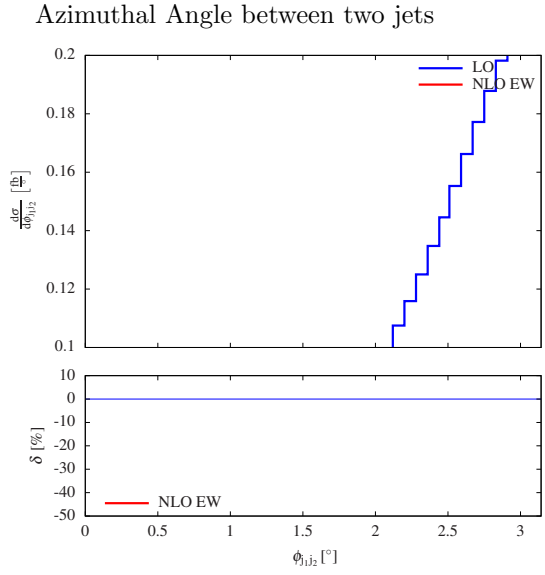


5 Distance



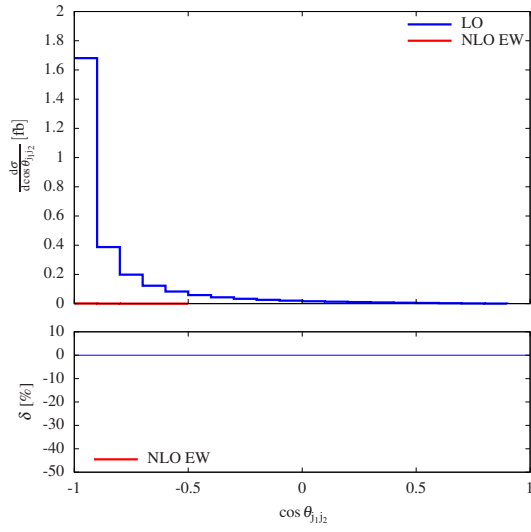


6 Azimuthal-Angle Separation

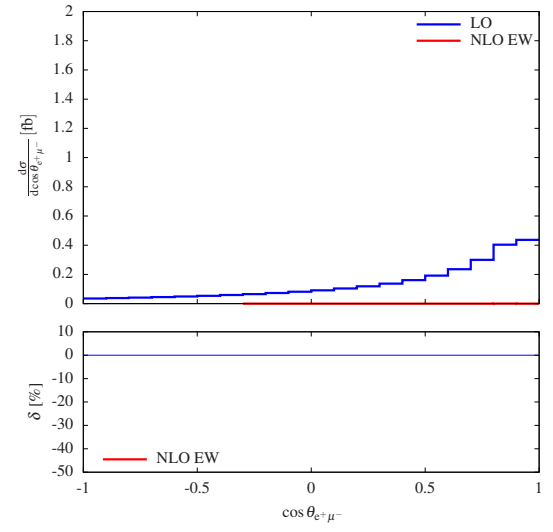


7 Cosine-Angle Separation

Cosine of Angle between two jets

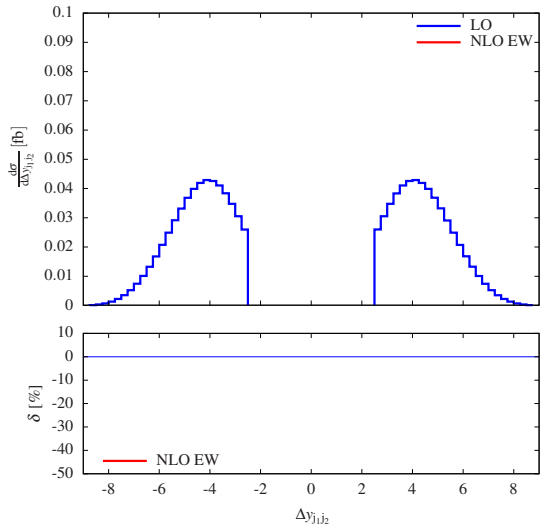


Cosine of Angle between Muon and anti-Muon

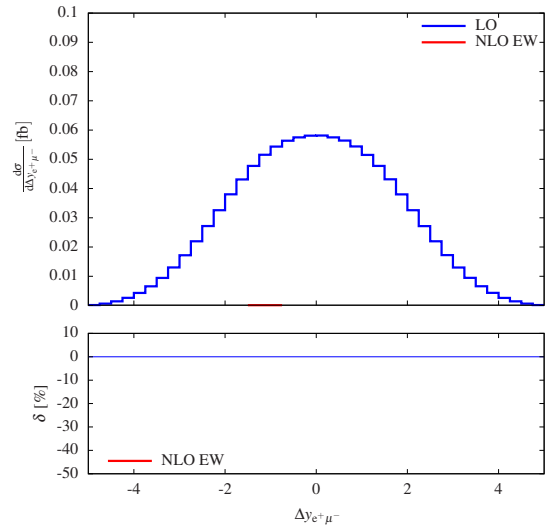


8 Rapidity Separation

Rapidity separation Jets

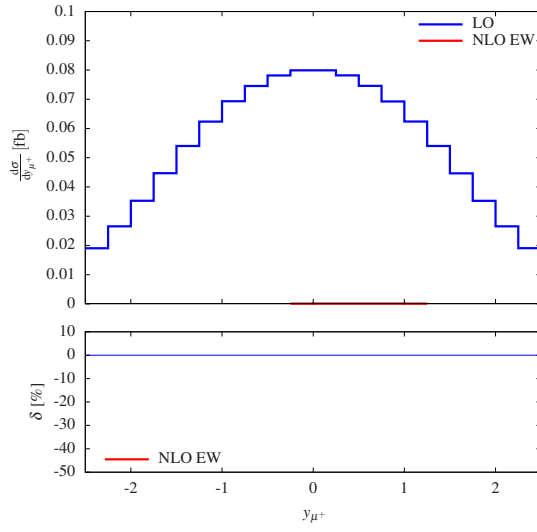


Rapidity separation Leptons

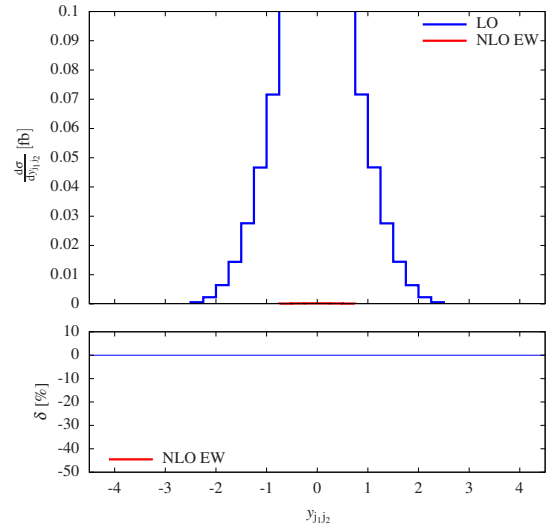


9 Rapidity

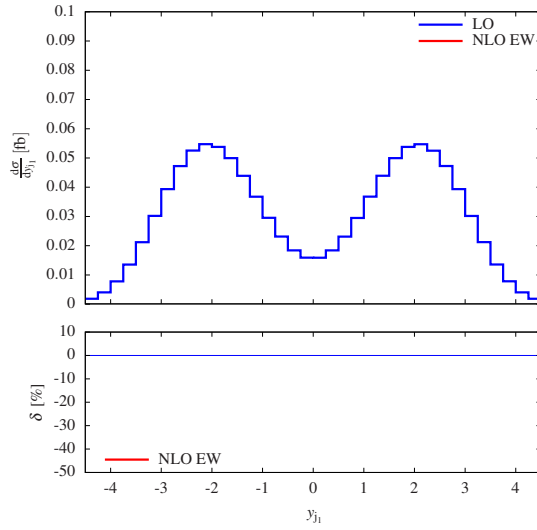
Rapidity anti-Muon



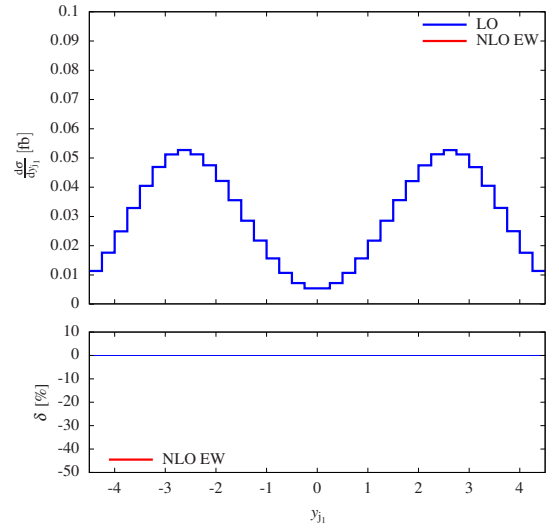
Rapidity Jet pair



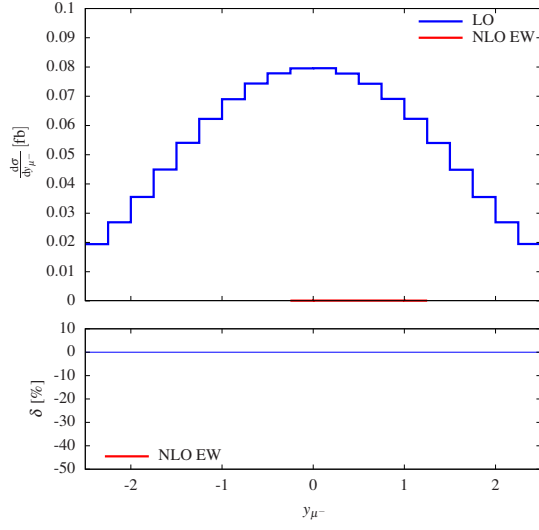
Rapidity Harder Jet



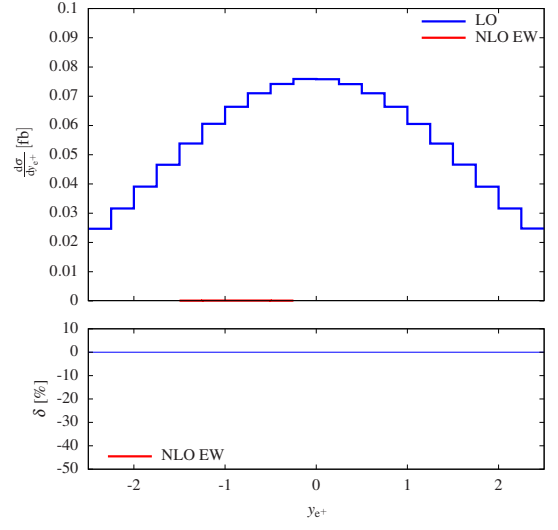
Rapidity Softer Jet



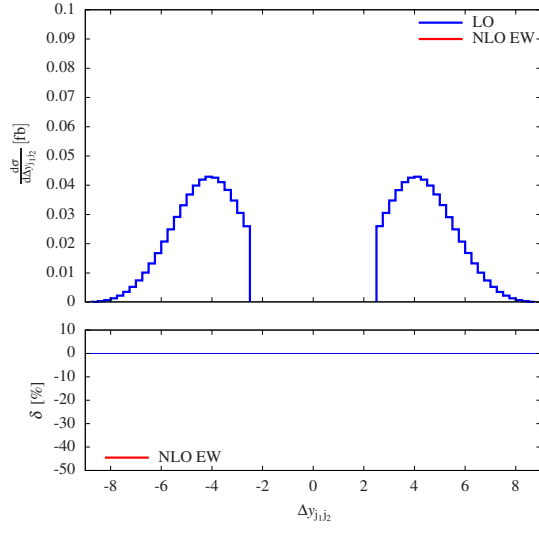
Rapidity Muon



Rapidity Positron



Rapidity separation Jets



Rapidity separation Leptons

