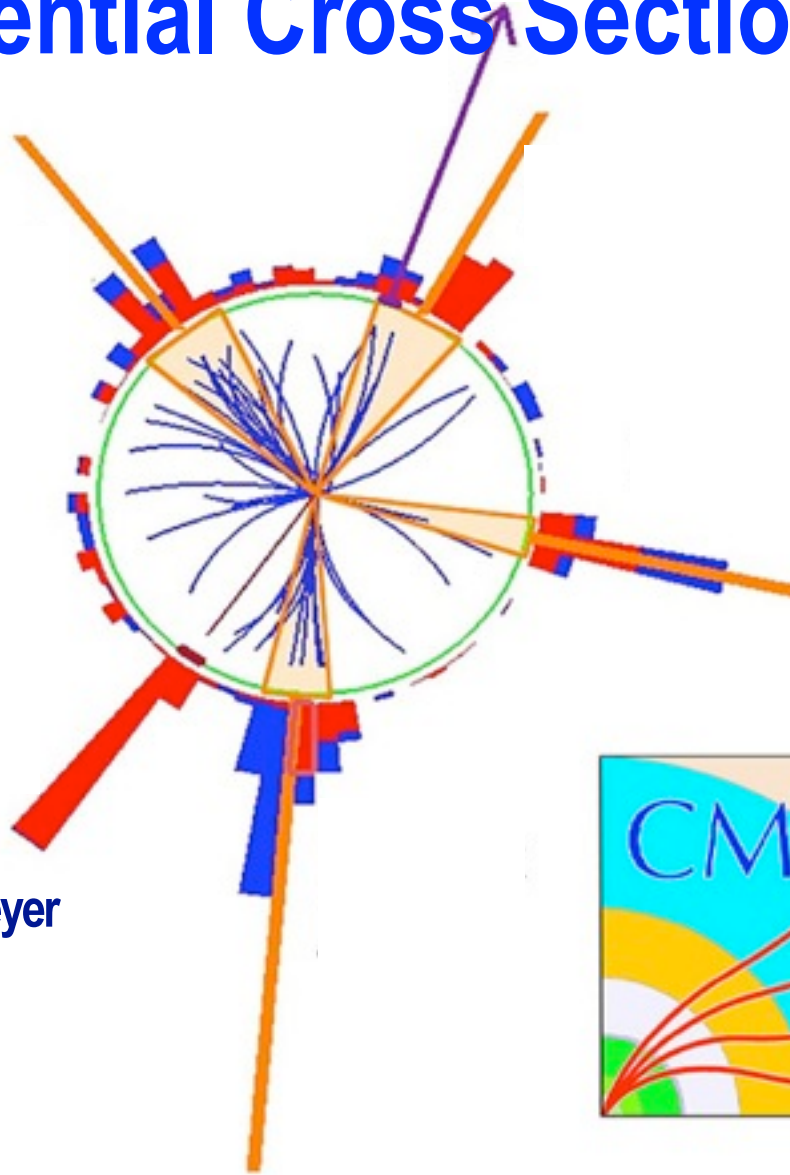


Description of Top Quark Differential Cross Sections



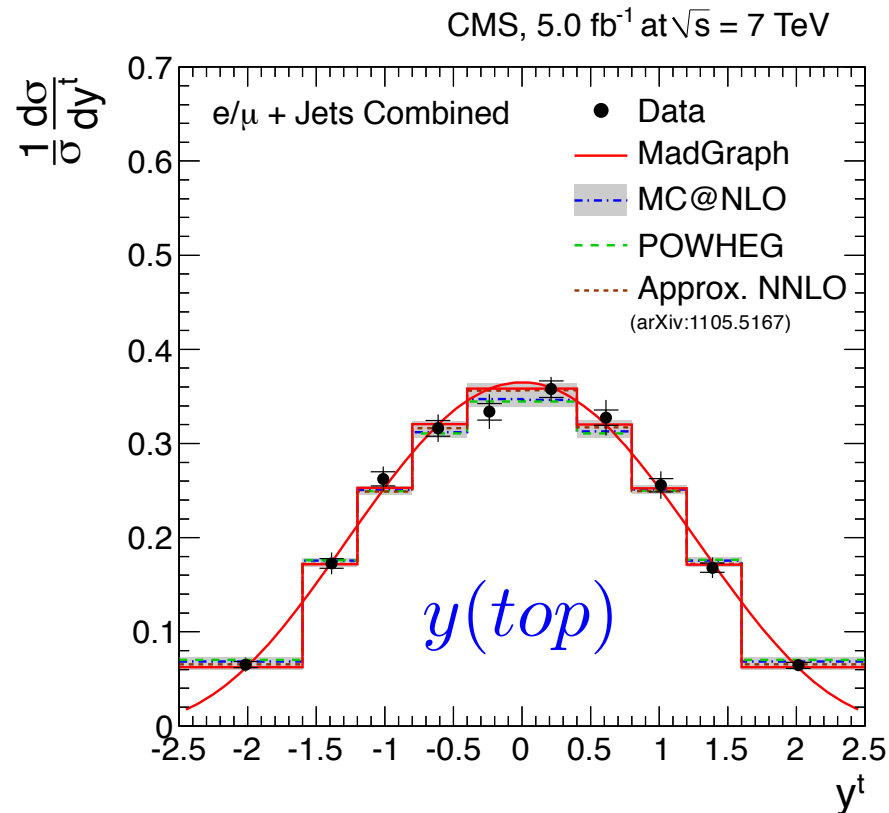
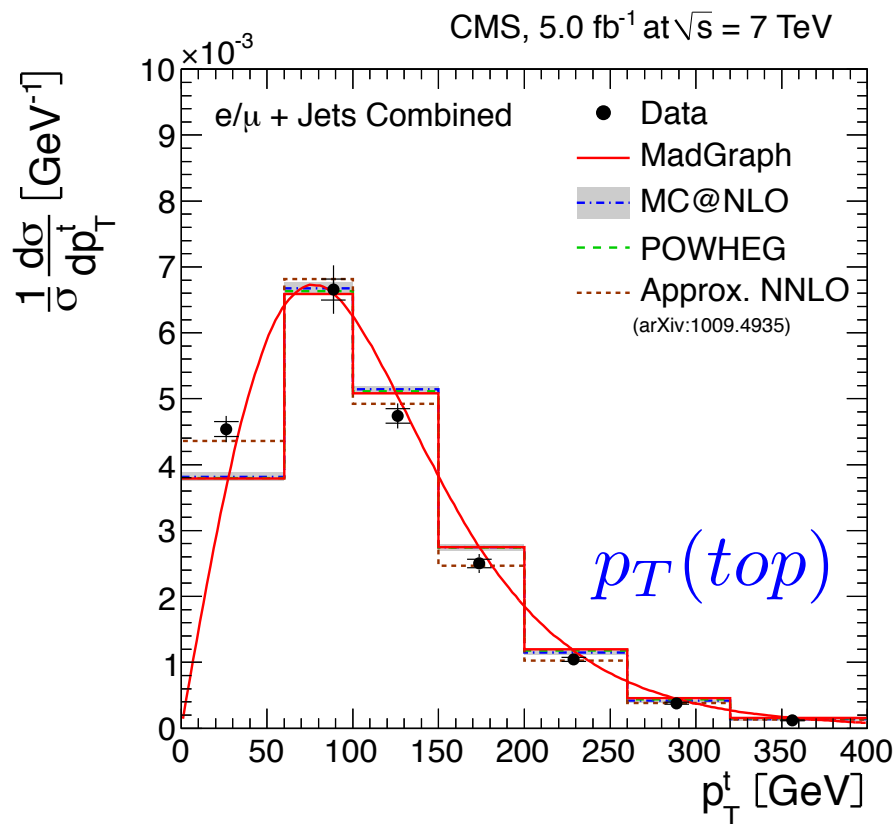
Andreas B. Meyer
DESY
31 May 2013





Top Quark Distributions at 7 TeV

EPJC 73(2013) 2339 [arXiv:1211.2220]

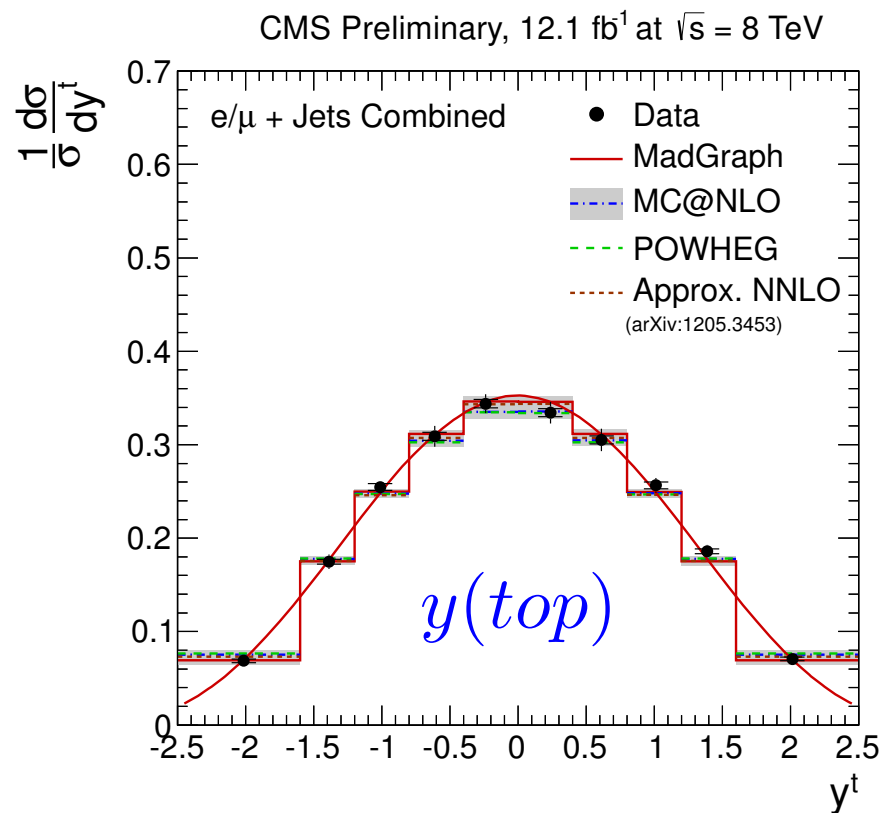
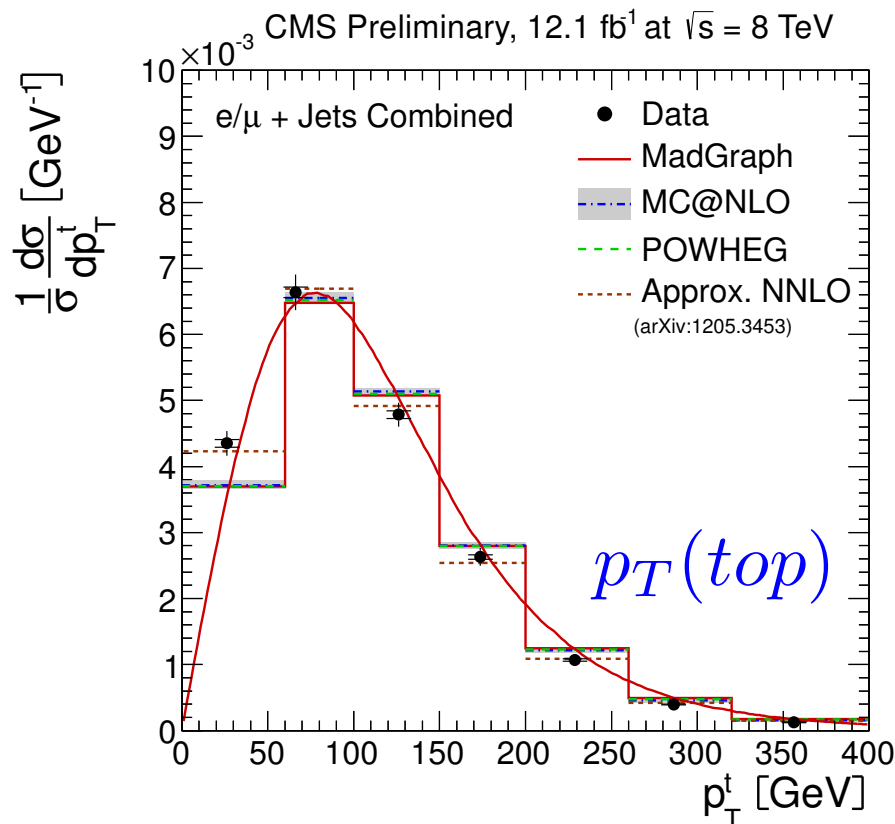


Generally good description by all predictions - approx. NNLO better than MC (NLO and multi-leg)



Top Quark Distributions at 8 TeV

CMS-12-027, CMS-12-028



Generally good description by all predictions - approx. NNLO better than MC (NLO and multi-leg)

$pp \rightarrow t\bar{t}$ at LHC $\sqrt{S}=7$ TeV $m=173$ GeV

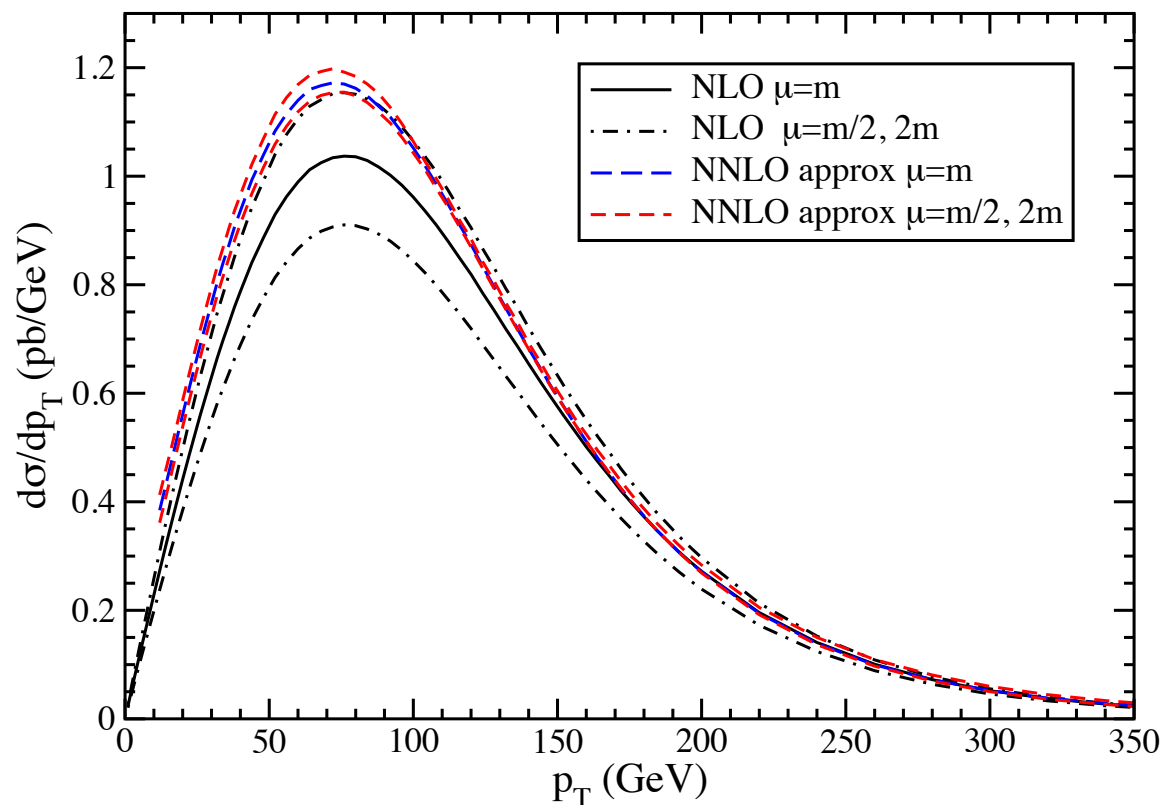
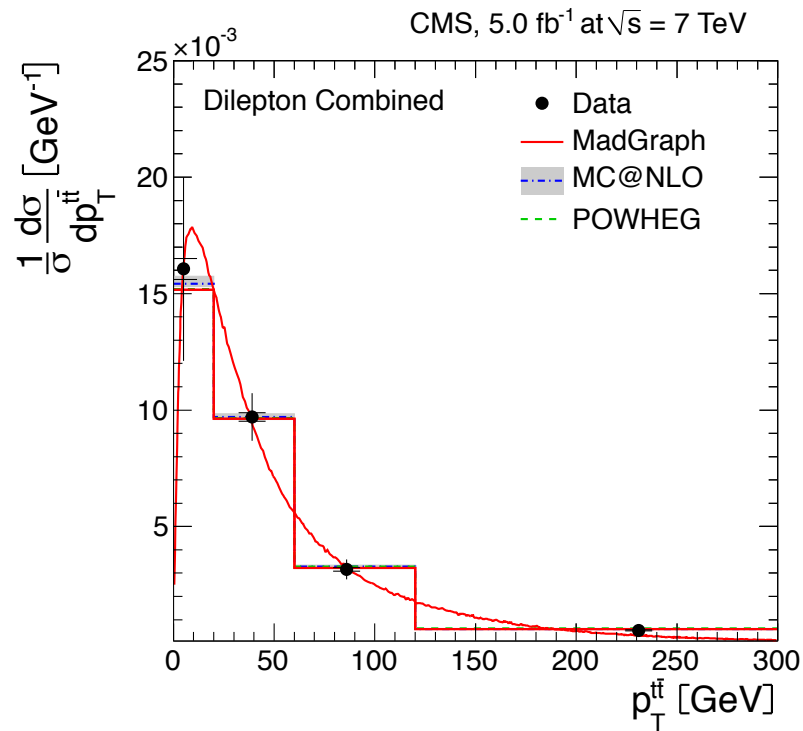
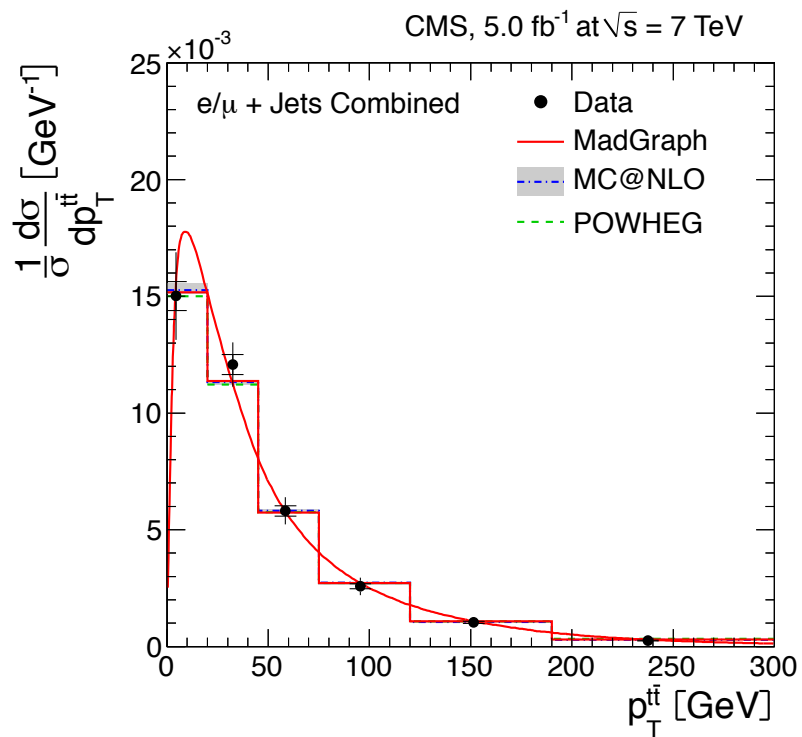


Figure 11: The top quark p_T distribution at the LHC with $\sqrt{S} = 7$ TeV and $m = 173$ GeV.

N.Kidonakis arXiv:1009.4935 [hep-ph]



pt(ttbar)





Discussion

- **Approx. NNLO: effects from soft gluon resummation should be at small $p_t(\text{top})$?**
- **What other distributions would be affected, i.e. have a NLO/approx.NNLO**
- **non-resonant contributions to $t\bar{t}$ final state ?**
- **POWHEG+HERWIG**
- **POWHEG vs. MC@NLO**