

FIG. 6: Ratio of $(1/\sigma)$ d σ/dp_T for top quarks in $t\bar{t}$ production (two entries per event) to the expectation from NLO pQCD. The gray band encompasses uncertainties on the scale of pQCD and parton distribution functions. Also shown are ratios relative to NLO pQCD for an approximate NNLO pQCD calculation and of predictions for several event generators. Inner and outer error bars represent statistical and total (statistical and systematic added in quadrature) uncertainties, respectively.

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- [g] Visitor from Universität Bern, Bern, Switzerland.
- [8] I. Bigi et. al., Phys. Lett. B181, 157 (1986).
- [9] C. T. Hill and S. J. Parke, Phys. Rev. D49, 4454 (1994).
- [10] D. Atwood et al., Phys. Rev. D52, 6264 (1995).
- [11] T. Affolder et al., CDF Collaboration, Phys. Rev. Lett. 87, 102001 (2001);
 B. Abbott et al., D0 Collaboration, Phys. Rev. D58, 052001 (1998).
- [12] V. M. Abazov et al., D0 Collaboration, Nucl. Instrum. Methods in Phys. Res. A565, 463 (2006).
- [13] G. C. Blazey et al., in Proceedings of the Workshop: QCD and Weak Boson Physics in Run II, edited by U. Baur, R. K. Ellis, and D. Zeppenfeld, Fermilab-Pub-00/297 (2000).
- [14] V. M. Abazov et al., D0 Collaboration, Nucl. Instrum. Methods in Phys. Res. A620, 400 (2010).
- [15] V. M. Abazov et al., D0 Collaboration, Phys. Rev. D80 (RC), 071102 (2009).
- [16] Pseudorapidity is defined as $\eta = -\ln \tan(\theta/2)$ where θ is the angle measured with respect to the proton beam coinciding with the positive z axis of a right-handed coordinate system at the center of the detector.
- [17] M. L. Mangano, et al., J. High Energy Phys. 0307, 001 (2003).
- [18] T. Sjöstrand *et al.*, Comput. Phys. Commun. **135**, 238 (2001); R. Field and R. C. Group, arXiv:hep-ph/0510198.
- [19] J. Pumplin et al., J. High Energy Phys. **0207**, 012 (2002).

- [20] E. E. Boos et al., Phys. Atom. Nucl. 69, 1317 (2006); Yad. Fiz. 69, 1352 (2006).
- [21] R. Brun and F. Carminati, CERN Program Library Long Writeup W5013, 1993 (unpublished).
- [22] V. M. Abazov et al., D0 collaboration, Phys. Rev. D75, 092001 (2007);
- [23] S. Snyder, Ph.D. thesis, State University of New York at Stony Brook (1995), [Institution Report No. FERMILAB-THESIS-1995-27].
- [24] A. Hoecker and V. Kartvelishvili, Nucl. Instrum. Methods in Phys. Res. A372, 469 (1996).
- ods in Phys. Res. A372, 409 (1996). [25] V. Kartvelishvili, http://www.lancs.ac.uk/users/spc/staff/kartv
- [26] M. Mangano, P. Nason, and G. Ridolfi, Nucl. Phys. B373, 295 (1992).
- [27] P. Nason, S. Dawson, and R. K. Ellis, Nucl. Phys. B327, 49 (1989) [Erratum-ibid. B335, 260 (1990)].
- [28] D. Stump et al., J. High Energy Phys. **0310**, 046 (2003).
- [29] N. Kidonakis and R. Vogt, Phys. Rev. D78, 074005 (2008).
- [30] A.D. Martin, W.J. Stirling, R.S. Thorne, G. Watt, Eur. Phys. J. C63 189 (2009).
- [31] S. Frixione and B. R. Webber, J. High Energy Phys. 0206, 029 (2002); S. Frixione, P. Nason, and B. R. Webber, J. High Energy Phys. 0308, 007 (2003).
- [32] N. D. Gagunashvili, Nucl. Instrum. Methods in Phys. Res. A596, 439 (2008).