



Erratum to: Neutral current forward-backward asymmetry: from θ_W to PDF determinations

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We submit an Erratum for our paper Eur. Phys. J. C (2018) 78: 663 (ID: EPJC-18-06-165), with title “Neutral current Forward-Backward Asymmetry: from θ_W to PDF determinations”.

This is the list of changes we include:

- Page 7. Beginning of section 4:
After the sentence: “We now want to exploit this idea as far as the LHC sensitivity would allow. For a meaningful analysis we cannot push the rapidity cut too high due to the reduction of the data sample though.”
We add the following: “Moreover in order to explore high di-lepton rapidities, we need to extend the acceptance region of the detector to $|\eta| < 5$. Experimentally this is possible in the di-electron channel, but the analysis still requires at least one lepton falling into the usual acceptance region $|\eta| < 2.5$ [1]. Here we relax this

assumption and impose instead a symmetric cut $|\eta| < 5$ on both leptons.”

- Page 7. Caption of Fig. 5:
The new caption reads: “Number of events as a function of the di-lepton invariant mass including the (a) statistical and (b) PDF errors for a rapidity cut $|Y_{ll}| > 4.5$. A luminosity $L = 300 \text{ fb}^{-1}$ is assumed and acceptance cuts $|\eta| < 5$ and $p_T > 20 \text{ GeV}$ are imposed on both leptons.”
- Page 7. Caption of Fig. 6:
The new caption reads: “ A_{FB}^* as a function of the di-lepton invariant mass including the (a) statistical and (b) PDF errors with a rapidity cut $|y| > 4.5$. A luminosity $L = 300 \text{ fb}^{-1}$ is assumed and acceptance cuts $|\eta| < 5$ and $p_T > 20 \text{ GeV}$ are imposed on both leptons.”

Furthermore we replace Figs. 1, 2, 5, 6 with corrected versions.

The original article can be found online at <https://doi.org/10.1140/epjc/s10052-018-6120-6>.

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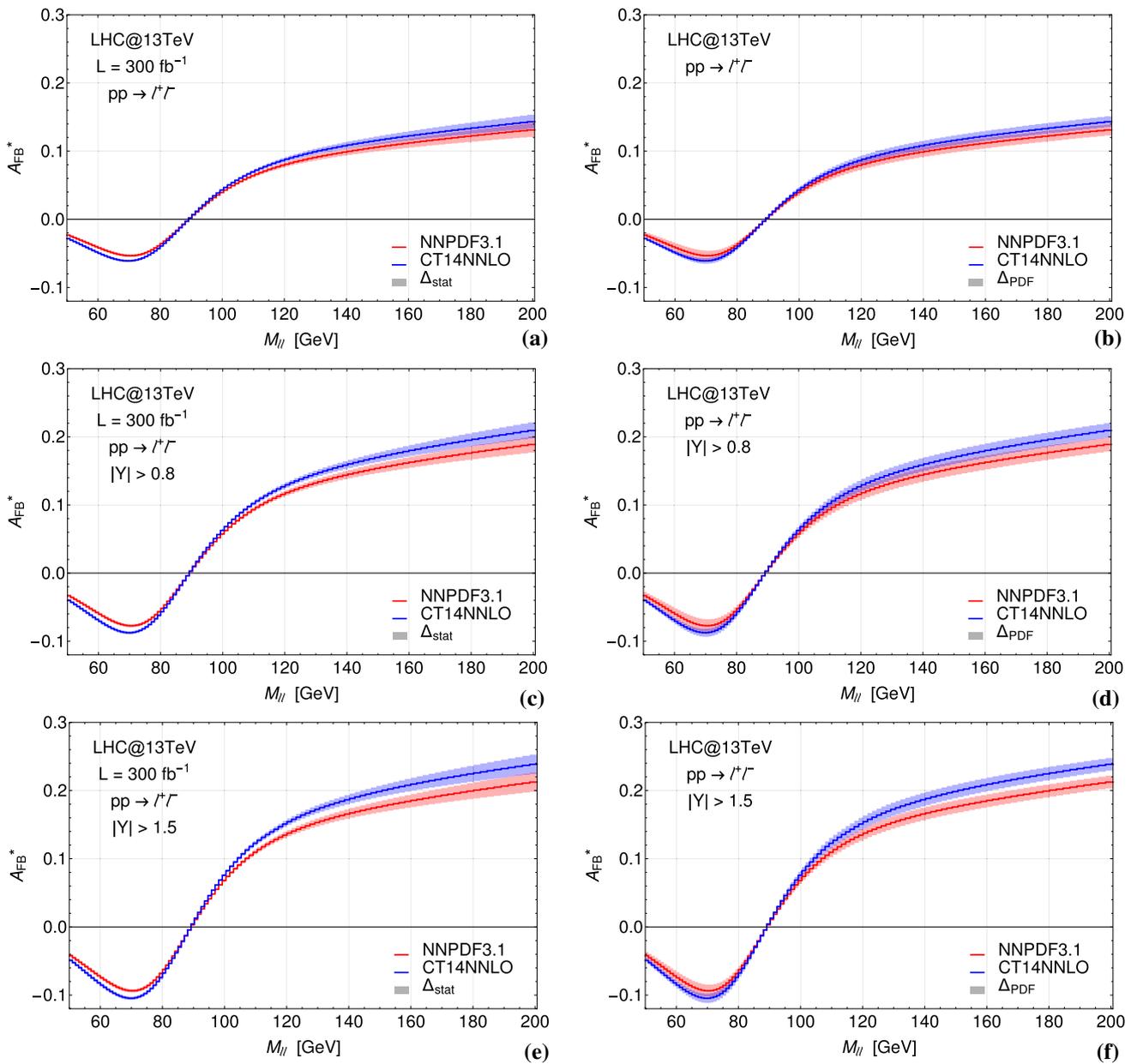


Fig. 1 A_{FB}^* with its statistical (left column) and PDF (right column) error bands obtained with the CT14, and NNPDF3.1 PDF sets with a rapidity cut of $|y| > 0$ (first row), $|y| > 0.8$ (second row) and $|y| > 1.5$ (third row)

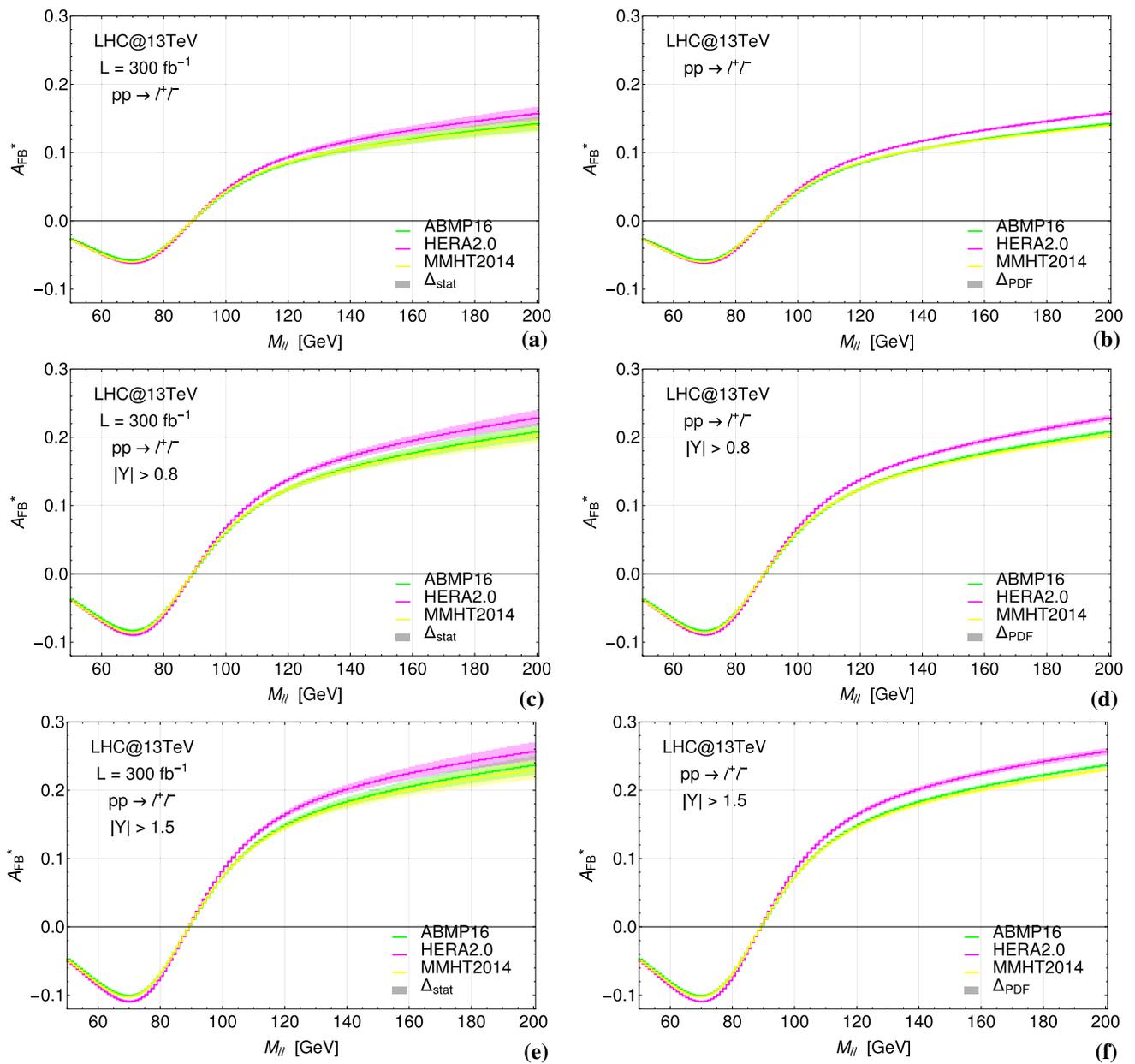


Fig. 2 A_{FB}^* with its statistical (left column) and PDF (right column) error bands obtained with the ABMP16, HERA2.0 and MMHT2014 PDF sets with a rapidity cut of $|y| > 0$ (first row), $|y| > 0.8$ (second row) and $|y| > 1.5$ (third row)

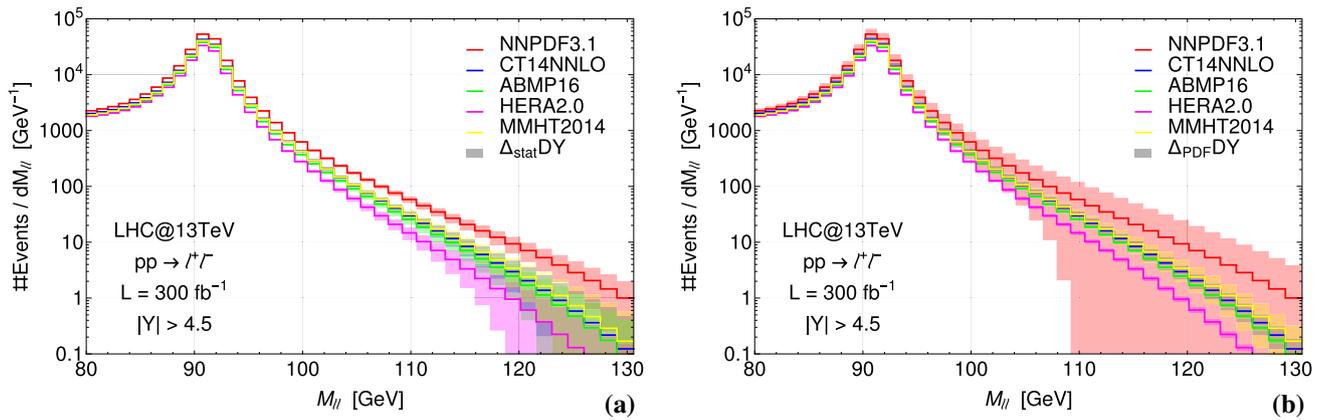


Fig. 5 Number of events as a function of the di-lepton invariant mass including the **a** statistical and **b** PDF errors for a rapidity cut $|Y_{ll}| > 4.5$. A luminosity $L = 300 \text{ fb}^{-1}$ is assumed and acceptance cuts $|\eta| < 5$ and $p_T > 20 \text{ GeV}$ are imposed on both leptons

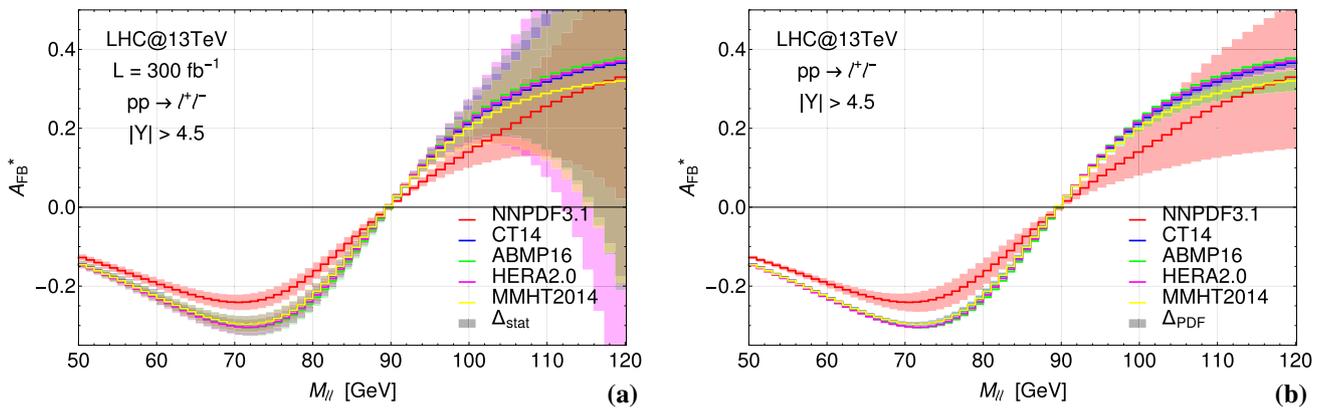


Fig. 6 A_{FB}^* as a function of the di-lepton invariant mass including the **a** statistical and **b** PDF errors with a rapidity cut $|y| > 4.5$. A luminosity $L = 300 \text{ fb}^{-1}$ is assumed and acceptance cuts $|\eta| < 5$ and $p_T > 20 \text{ GeV}$ are imposed on both leptons

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Reference

1. M. Aaboud et al., (ATLAS), *JHEP* **12**, 059 (2017). [arXiv:1710.05167](https://arxiv.org/abs/1710.05167) [hep-ex]