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Erratum: Measurement of the W Boson Production Charge Asymmetry in  $pp[\overline{\nu}] \rightarrow W+X \rightarrow e\nu+X$  Events at  $\sqrt{s}=1.96$  TeV [Phys. Rev. Lett. 112, 151803 (2014)]

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**Erratum: Measurement of the  $W$  boson production charge asymmetry in  
 $p\bar{p} \rightarrow W + X \rightarrow e\nu + X$  events at  $\sqrt{s} = 1.96$  TeV**

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The measurement of the  $W$  boson production charge asymmetry published in our recent Letter [1] employed a correction  $K_{\text{eff}}^{\pm}$  to take into account the relative efficiency difference between electrons and positrons. Based on a recent study [2], we realized that the determination of  $K_{\text{eff}}^{\pm}$  was incorrect. Instead of taking the ratio of the positron to electron efficiencies, we took the ratio of the numbers of reconstructed positrons to electrons. In addition, we had not taken into account the solenoid polarity when determining  $K_{\text{eff}}^{\pm}$ . These two problems have now been corrected.

The corrected  $W$  boson charge asymmetry values measured using the updated efficiency correction [2] are given in Table I. These revised measurements, together with those from the CDF Collaboration [3] are shown in Fig. 1. The asymmetry values have changed relative to those in the original publication by  $< 2\%$ , with smaller asymmetry values for  $|y_W| < 0.6$  and larger asymmetry values for  $0.8 < |y_W| < 2.4$ , compared to the published result [1].

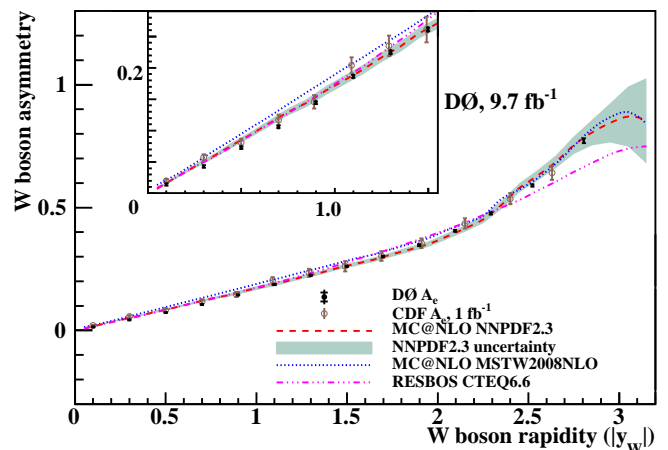


FIG. 1: (color online). Measured  $W$  boson charge asymmetry, after CP-folding, compared to predictions and the CDF  $1 \text{ fb}^{-1}$  result. The points show the measured asymmetry, with the horizontal bars delineating the statistical uncertainty component and the vertical lines showing the total uncertainty. The central value and uncertainty from MC@NLO [4] using the NNPDF2.3 [5] PDF sets and the predictions from RESBOS [6] using the CTEQ6.6 [7] central PDF set and MC@NLO using the MSTW2008NLO [8] central PDF set are also shown. The inset focuses on the  $y_W$  region from 0 to 1.5.

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TABLE I: CP-folded  $W$  boson charge asymmetry for data and predictions from MC@NLO using the NNPDF2.3 PDFs tabulated in percent (%) for each  $|y_W|$  bin. The  $\langle |y_W| \rangle$  is calculated as the cross section weighted average of  $y_W$  in each bin from RESBOS with PHOTOS [9]. For data, the first uncertainty is statistical and the second is systematic. The uncertainties on the prediction come from both the PDF uncertainties and  $\alpha_s$  uncertainties.

Bin index	$ y_W $	$\langle  y_W  \rangle$	Data	Prediction
1	0.0–0.2	0.10	$1.39 \pm 0.17 \pm 0.12$	$1.61 \pm 0.19$
2	0.2–0.4	0.30	$4.28 \pm 0.18 \pm 0.19$	$5.06 \pm 0.33$
3	0.4–0.6	0.50	$7.28 \pm 0.19 \pm 0.27$	$8.50 \pm 0.41$
4	0.6–0.8	0.70	$10.59 \pm 0.20 \pm 0.30$	$12.05 \pm 0.53$
5	0.8–1.0	0.90	$14.45 \pm 0.21 \pm 0.32$	$15.36 \pm 0.66$
6	1.0–1.2	1.10	$18.63 \pm 0.22 \pm 0.39$	$18.86 \pm 0.74$
7	1.2–1.4	1.30	$22.50 \pm 0.24 \pm 0.44$	$22.52 \pm 0.80$
8	1.4–1.6	1.50	$26.12 \pm 0.27 \pm 0.42$	$26.30 \pm 0.85$
9	1.6–1.8	1.70	$30.06 \pm 0.31 \pm 0.44$	$29.89 \pm 0.92$
10	1.8–2.0	1.90	$34.73 \pm 0.35 \pm 0.49$	$34.04 \pm 1.08$
11	2.0–2.2	2.10	$40.59 \pm 0.40 \pm 0.54$	$39.77 \pm 1.31$
12	2.2–2.4	2.29	$47.65 \pm 0.44 \pm 0.56$	$47.73 \pm 1.62$
13	2.4–2.7	2.52	$59.04 \pm 0.46 \pm 0.60$	$61.81 \pm 1.74$
14	2.7–3.2	2.81	$77.24 \pm 0.93 \pm 0.66$	$78.05 \pm 4.36$

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