Erratum

Mirror fermion production in ep collisions

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The correct form of eq. (24) reads:

$$\frac{d\sigma_{e^- q_A \rightarrow E^- q_A}}{dQ^2} = \frac{(g^2 + g'^2)^2}{2048\pi(M_Z^2 + Q^2)^2} \sin^2(2\alpha_{2l}) \cdot [(1 - 4|Q_A|\sin^2\Theta_w)^2 + \cos^2(2\alpha_{Aq})] \left[1 + (1 - y)^2 - \frac{M^2}{xs}(2 - y) \right]$$

where Q_A is the charge of the quark.

The correct form of eq. (34) reads:

$$\frac{d\sigma_{e^- u \rightarrow e^- U}}{dQ^2} = \frac{(g^2 + g'^2)^2}{2048\pi(M_Z^2 + Q^2)^2} \sin^2(2\alpha_{1q}) [(1 - 4\sin^2\Theta_w)^2 + \cos^2(2\alpha_{2l})] \left[1 + (1 - y)^2 - \frac{M^2}{xs} \right].$$

In accordance with the above changes eq. (28) should be multiplied by approximately 0.6, while eq. (38) should be divided by 2. Table 2 changes as given below. All the cross sections given in Tables 4 and 5 should be divided by 2.

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Table 2. Total production cross section (σ) and average transverse momentum ($\langle p_T \rangle$) of the mirror electron in ep collisions at energies $\sqrt{s} = 314, 566, 1400$ GeV as a function of the mirror electron mass M (in GeV). For simplicity, both mixing angle squared appearing in (24) are assumed here to be 0.02. The cross sections are in 10^{-2} pb, the transverse momenta in GeV

M	$\sqrt{s} = 314$ σ	$\sqrt{s} = 314$ $\langle p_T \rangle$	$\sqrt{s} = 566$ σ	$\sqrt{s} = 566$ $\langle p_T \rangle$	$\sqrt{s} = 1400$ σ	$\sqrt{s} = 1400$ $\langle p_T \rangle$
100	7.60	35.94	29.75	53.81	88.85	76.25
120	4.54	33.95	23.58	53.30	79.83	77.03
140	2.53	31.56	18.50	52.45	71.84	77.52
160	1.29	28.88	14.33	51.31	64.7	77.80
180	0.59	25.97	10.94	49.94	58.33	77.88
200	0.23	22.83	8.22	48.40	52.64	77.79
250	—	—	3.69	43.90	40.66	77.06
300	—	—	1.42	38.82	31.35	75.76
350	—	—	0.43	33.17	24.0	74.05
400	—	—	0.09	27.33	18.24	72.03
450	—	—	0.01	20.98	13.72	69.81
500	—	—	—	—	10.14	67.37