Erratum: High-precision radiative corrections to the Dalitz plot in the semileptonic decays of neutral hyperons

[Phys. Rev. D 48, 5233 (1993)]

S. R. Juárez W.

PACS number(s): 13.30.Ce, 13.40.Ks, 14.20.Jn, 99.10.+g

(1) The factor in front of the integral in Eq. (35) should read

$$\frac{\alpha}{\pi}d\Omega \frac{|\mathbf{p_2}||l|}{16\pi}$$
.

(2) The formula for the coefficient $N_0^{\rm I}$ in Eq. (53) should read

$$N_0^{
m I} = -rac{|{f p}_2||l|}{2M_1} \left[2E(Q_1+Q_3) + (E+E_
u^0)Q_3 + (1-y_0)rac{|{f p}_2|}{eta}Q_3
ight] \; .$$

(3) The formulas for the coefficients $N_0^{\rm II},\,N_4^{\rm II},\,N_5^{\rm II},\,{\rm and}\,\,N_{17}^{\rm II}$ in Eq. (54) should read

$$N_0^{
m II} = rac{|{f p_2}||l|}{2M_1} \left[E_
u^0 Q_1 + (1-y_0) rac{|{f p_2}|}{2eta} Q_3
ight] \; .$$

$$N_4^{
m II} = -rac{|{f p}_2||l|}{2M_1}[(m^2+EE_
u^0)(Q_1+Q_3)+({E_
u^0}^2-|{f p}_2|^2)Q_3] \; ,$$

$$N_5^{
m II} = -rac{|{f p}_2||l|^2}{2M_1}[(E+E_
u^0)(Q_1+Q_3) + 2E_
u^0Q_3] \; ,$$

$$N_{17}^{
m II} = rac{|{f p_2}||l|}{2M_1} \left[(E+2E_
u^0) + (y_0-1) rac{|{f p_2}|eta}{2} Q_3
ight] \ .$$

(4) The following coefficients in Eq. (55) do not contribute:

$$N_{15}^{\rm III} = N_{16}^{\rm III} = N_{17}^{\rm III} = 0$$
.

(5) The formulas for the coefficients ΔN_0 , ΔN_4 , ΔN_5 , and ΔN_{17} in Eq. (61) should read

$$\begin{split} \Delta N_0 &= -\frac{|\mathbf{p}_2||l|}{2M_1} \left[2(E-E_{\nu}^0)R^+ + (E+2E_{\nu}^0)R^- + (1-y_0)\frac{|\mathbf{p}_2|}{2\beta}R^- \right] ,\\ \Delta N_4 &= -\frac{|\mathbf{p}_2||l|}{2M_1} [2E^2R^+ + |l|(|l|+4|\mathbf{p}_2|y_0)R^-] ,\\ \Delta N_5 &= -\frac{|\mathbf{p}_2||l|^2}{M_1} [ER^+ + 2E_{\nu}^0R^-] ,\\ \Delta N_{17} &= \frac{|\mathbf{p}_2||l|}{4M_2} [2E_{\nu}^0 + (1-y_0)|\mathbf{p}_2|\beta]R^- . \end{split}$$

(6) The penultimate integral in Appendix C should read

$$\int \frac{K_1'}{1 - \beta x} dy \, dx = \frac{2\pi}{M_2} \left[\theta_{17} + \frac{E_2 |\mathbf{p}_2|}{2\beta M_2^2} (y_0 - 1) \theta_0 \right] .$$

⁽⁷⁾ The denominator $1 + \beta x_0$ in one of the arguments of the Spence function for T_3^{\pm} in Appendix E should be replaced by $1 - \beta x_0$.

⁽⁸⁾ The denominator $1 + \beta a^{\pm}$ of one of the terms for T_6^{\mp} in Appendix E should be replaced by $1 + \beta a^{\mp}$. The conclusions of the paper are not altered by any of these corrections.