PHYSICAL REVIEW D, VOLUME 63, 019901(E)

Erratum: Angular distribution and *CP* asymmetries in the decays $\bar{B} \rightarrow K^- \pi^+ e^- e^+$ and $\bar{B} \rightarrow \pi^- \pi^+ e^- e^+$ [Phys. Rev. D 61, 114028 (2000)]

Frank Krüger, Lalit M. Sehgal, Nita Sinha, and Rahul Sinha (Published 21 November 2000)

DOI: 10.1103/PhysRevD.63.019901 PACS number(s): 13.20.He, 11.30.Er, 99.10.+g

The matrix element for the antiparticle channels $B \rightarrow K^+ \pi^- e^- e^+$ and $B \rightarrow \pi^- \pi^+ e^- e^+$, Eqs. (2.19a) and (2.19b), should be

$$\bar{\mathcal{M}}_{SD} = \mathcal{M}_{SD}(x_{L,R} \to -\bar{x}_{L,R}; y_{L,R} \to \bar{y}_{L,R}; z_{L,R} \to \bar{z}_{L,R}). \tag{2.19}$$

As a result, Eqs. (5.5a) and (5.5b) change to

$$I_{1,2,3,4,7}(x_{L,R}; y_{L,R}; z_{L,R}) \rightarrow I_{1,2,3,4,7}(\bar{x}_{L,R}; \bar{y}_{L,R}; \bar{z}_{L,R}) \equiv \bar{I}_{1,2,3,4,7},$$
 (5.5a)

$$I_{5.6.8.9}(x_{L,R}; y_{L,R}; z_{L,R}) \rightarrow -I_{5.6.8.9}(\bar{x}_{L,R}; \bar{y}_{L,R}; \bar{z}_{L,R}) \equiv -\bar{I}_{5.6.8.9}.$$
 (5.5b)

Equations (5.6) and (5.7) then become

$$d\Gamma_{\text{diff}} = \mathcal{N}[(I_1 - \bar{I}_1) + (I_2 - \bar{I}_2)\cos 2\theta_l + (I_3 - \bar{I}_3)\sin^2\theta_l\cos 2\phi + (I_4 - \bar{I}_4)\sin 2\theta_l\cos\phi + (I_5 + \bar{I}_5)\sin\theta_l\cos\phi]$$

$$+(I_6+\overline{I}_6)\cos\theta_l+(I_7-\overline{I}_7)\sin\theta_l\sin\phi+(I_8+\overline{I}_8)\sin2\theta_l\sin\phi+(I_9+\overline{I}_9)\sin^2\theta_l\sin2\phi]\beta XdPS, \qquad (5.6)$$

$$d\Gamma_{\text{sum}} = \mathcal{N}[(I_1 + \overline{I}_1) + (I_2 + \overline{I}_2)\cos 2\theta_l + (I_3 + \overline{I}_3)\sin^2\theta_l\cos 2\phi + (I_4 + \overline{I}_4)\sin 2\theta_l\cos \phi + (I_5 - \overline{I}_5)\sin\theta_l\cos\phi]$$

$$+(I_6-\overline{I}_6)\cos\theta_l+(I_7+\overline{I}_7)\sin\theta_l\sin\phi+(I_8-\overline{I}_8)\sin2\theta_l\sin\phi+(I_9-\overline{I}_9)\sin^2\theta_l\sin2\phi]\beta XdPS. \tag{5.7}$$

Consequently, the paragraph after Eq. (5.10) should read as follows:

"Note that the asymmetries $\langle A_{CP} \rangle$, $\langle A_{3,4,7} \rangle$ involving the differences $(I_i - \overline{I}_i)$, i = 1,2,3,4,7, can be obtained from a measurement of the difference $d\Gamma_{\text{diff}}$. On the other hand, the asymmetries $\langle A_{5,6,8,9} \rangle$ require only a measurement of $d\Gamma_{\text{sum}}$ and, in principle, can be determined even for an untagged equal mixture of B and \overline{B} ."

Finally, the last paragraph in Sec. V should be replaced by

"The small value of $\langle A_6 \rangle$ implies that the FB asymmetry of the electron is opposite in sign for B and \bar{B} decay [Eq. (4.6)]. This result agrees with the statement in Ref. [13]."

We stress that all results of the paper, pertaining to the particle channels $\bar{B} \to K^- \pi^+ e^- e^+$ and $\bar{B} \to \pi^- \pi^+ e^- e^+$, remain unchanged. These include the angular distributions given in Sec. IV and the numerical predictions in Tables I, II, and III.