

**Erratum: Semileptonic decays of  $B_c$  mesons into charmonium states in a relativistic quark model [Phys. Rev. D **71**, 094006 (2005)]**

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- (1) change  $\mp \frac{3}{4} \cos\theta \frac{d\Gamma_P}{dq^2}$  to  $\pm \frac{3}{4} \cos\theta \frac{d\Gamma_P}{dq^2}$  in Eq. (29).
- (2) the entries in column “P” in Table IV have to be sign reversed. With the column “P” sign reversed Table IV holds for the decays  $B_c^- \rightarrow M_{\bar{c}c} + l^- + \bar{\nu}_l$ .
- (3) replace Table V by a new Table V given below.
- (4) On page 11 (last paragraph) replace the sentence “For the decay into the other spin states one has  $A_{FB}(e^-) = -A_{FB}(e^+)$  but  $A_{FB}(\tau^-) \neq -A_{FB}(\tau^+)$  as can easily be appreciated by looking at Eq. (31).” by “Since  $P(B_c^-) = -P(B_c^+)$  and  $\widetilde{S}L, U, \widetilde{U}, L, \widetilde{L}, \widetilde{S}(B_c^-) = \widetilde{S}L, U, \widetilde{U}, L, \widetilde{L}, \widetilde{S}(B_c^+)$  one has  $A_{FB}(l^-) = A_{FB}(l^+)$  as Eq. (31) shows. We therefore only list  $A_{FB}(l^-)$  in the corrected Table V.

 TABLE V. Forward-backward asymmetry  $A_{FB}$  and the asymmetry parameter  $\alpha^*$ .

Mode	$A_{FB}(l^-)$	$\alpha^*$
$B_c \rightarrow \eta_c e \nu$	$9.5310^{-7}$	...
$B_c \rightarrow \eta_c \tau \nu$	0.36	...
$B_c \rightarrow J/\psi e \nu$	-0.21	-0.34
$B_c \rightarrow J/\psi \tau \nu$	-0.048	-0.24
$B_c \rightarrow \chi_{c0} e \nu$	$1.3110^{-6}$	...
$B_c \rightarrow \chi_{c0} \tau \nu$	0.39	...
$B_c \rightarrow \chi_{c1} e \nu$	0.19	...
$B_c \rightarrow \chi_{c1} \tau \nu$	0.34	...
$B_c \rightarrow h_c e \nu$	-0.036	...
$B_c \rightarrow h_c \tau \nu$	0.31	...
$B_c \rightarrow \chi_{c2} e \nu$	-0.16	...
$B_c \rightarrow \chi_{c2} \tau \nu$	0.044	...
$B_c \rightarrow \psi(3836) e \nu$	0.21	-0.17
$B_c \rightarrow \psi(3836) \tau \nu$	0.41	0.006

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