

Erratum: Baryon form factors of relativistic constituent-quark models [Phys. Rev. C 69, 035212 (2004)]

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The results shown in Fig. 7 are affected by numerical errors. These errors do not affect the subsequent discussion or other results reported in the manuscript. Figure 7 should be replaced as follows.

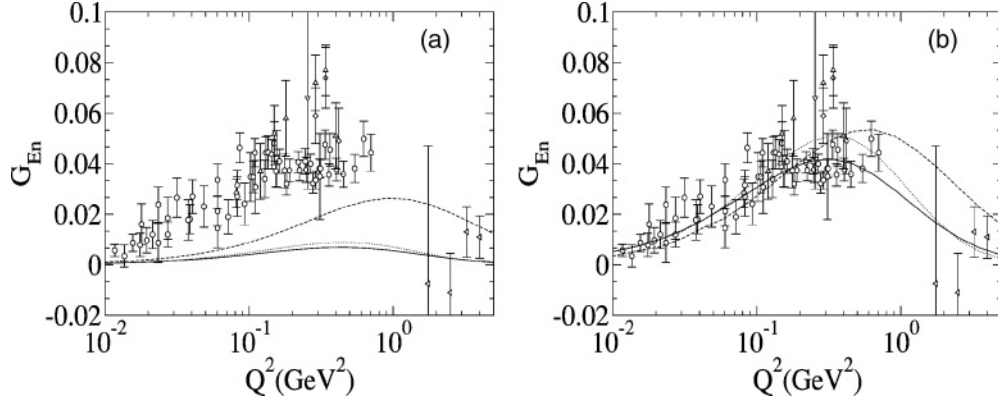


FIG. 7. Electric form factor of the neutron. Solid, dotted, and dashed lines correspond to the instant, point, and front forms, respectively. (a) No mixed symmetry S -state is included. (b) Some percentage of mixed symmetry S -state is included in the neutron wave function as described in the text. Experimental data are from Ref. [12].

In Eq. (61) there are two typographical errors:

\mathbf{p}_1 should be replaced by \mathbf{p}_2 and $(P^+)^3$ should be replaced by P^+ .

The expression for the Jacobian shown in Eq. (63) involves errors. These errors do not affect any of the results reported in the paper. Equation (63) should be replaced by the correct expression

$$\begin{aligned} J(\vec{P}, \vec{p}_2, \vec{p}_3) &:= \left(\frac{\partial \vec{k}, \vec{q}}{\partial (\vec{p}_2, \vec{p}_3)} \right)_{\vec{p}} = \sqrt{27} \frac{\partial(\vec{k}_2, \vec{k}_3, \vec{v})}{\partial(\vec{p}_2, \vec{p}_3, \vec{v})} \frac{\partial(\vec{k}_2, \vec{k}_3, \vec{P})}{\partial(\vec{k}_2, \vec{k}_3, \vec{v})} \frac{\partial(\vec{p}_2, \vec{p}_3, \vec{v})}{\partial(\vec{p}_2, \vec{p}_3, \vec{P})} \\ &= \frac{\sqrt{27} \omega_2 \omega_3}{E_2 E_3} \left(1 - v_z \frac{k_{1z}}{E_1} \right), \end{aligned} \quad (63)$$

where $\vec{k}_1 := -(\vec{k}_2 + \vec{k}_3)$.

The transition from factor $G_{M\Delta}$ shown in Figs. 12 and 13 is by definition equal to G_M^* defined in Appendix A, which establishes the relation to matrix elements of current densities. Equations (A4) and (A7) involve errors. These errors affected the results depicted in Figs. 12 and 13.

Equations (A4) and (A7) should be replaced by

$$\begin{aligned} G_E^* &= \frac{M}{3(M^* + M)} \left[\frac{M^{*2} - M^2 - Q^2}{M^*} \sqrt{\frac{M^* M}{Q^2}} G_1 + \frac{M^{*2} - M^2}{\sqrt{Q^2}} G_2 - 2M^* G_3 \right], \\ G_M^* &= \frac{M}{3(M^* + M)} \left[\frac{(3M^* + M)(M^* + M) + Q^2}{M^*} \sqrt{\frac{M^* M}{Q^2}} G_1 + \frac{M^{*2} - M^2}{\sqrt{Q^2}} G_2 - 2M^* G_3 \right], \\ G_C^* &= \frac{2M}{3(M^* + M)} \left[2M^* \sqrt{\frac{M^* M}{Q^2}} G_1 + \frac{3M^{*2} + M^2 + Q^2}{2\sqrt{Q^2}} G_2 + \frac{M^{*2} - M^2 - Q^2}{Q^2} M^* G_3 \right], \end{aligned} \quad (A4)$$

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$$\begin{aligned}
\left\langle \frac{3}{2} \left| I^+(0) \right| \frac{1}{2} \right\rangle &= -\frac{1}{\sqrt{2}} \left[G_1 + \frac{M^* - M}{\sqrt{4MM^*}} G_2 \right], \\
\left\langle \frac{1}{2} \left| I^+(0) \right| -\frac{1}{2} \right\rangle &= \frac{1}{\sqrt{6}} \left[-\frac{M}{M^*} G_1 + \frac{(M^* - M) - Q^2/M^*}{\sqrt{4MM^*}} G_2 + \sqrt{\frac{Q^2}{MM^*}} G_3 \right], \\
\left\langle \frac{1}{2} \left| I^+(0) \right| \frac{1}{2} \right\rangle &= \frac{1}{\sqrt{6}} \left[\frac{\sqrt{Q^2}}{M^*} G_1 + \sqrt{\frac{Q^2}{4M^*M}} \left(\frac{M^* - M}{M^*} + 1 \right) G_2 - \frac{M^* - M}{\sqrt{MM^*}} G_3 \right].
\end{aligned} \tag{A7}$$

Figures 12 and 13 should be replaced as follows.

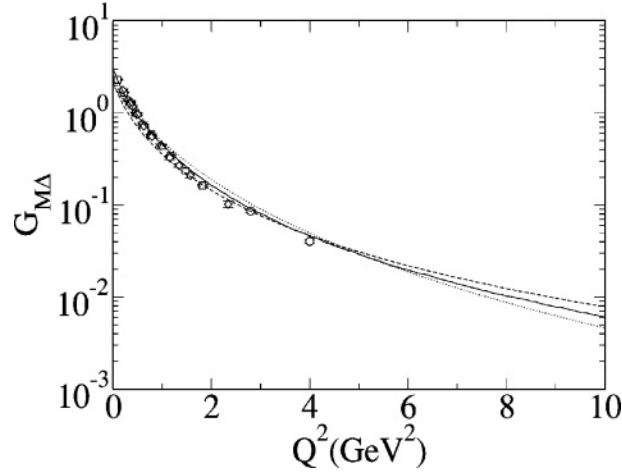


FIG. 12. Magnetic $\Delta \rightarrow N$ transition form factor. Solid, dotted, and dashed lines correspond to the instant, point, and front forms, respectively. Experimental data are from Ref. [24].

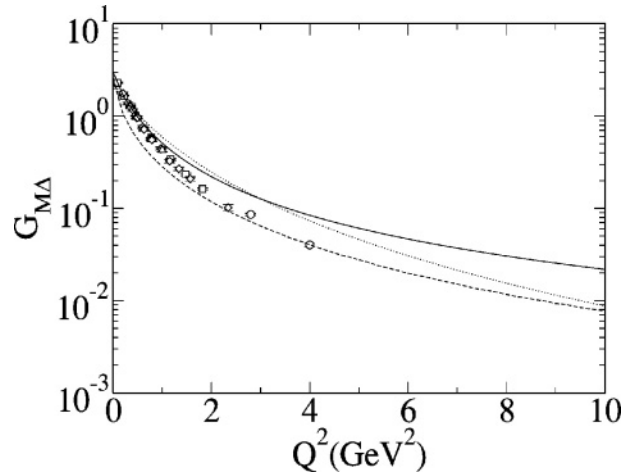


FIG. 13. Magnetic $\Delta \rightarrow N$ transition form factor in the zero quark mass case. Solid, dotted, and dashed lines correspond to the instant, point, and front forms, respectively. Experimental data are from Ref. [24].

The captions have not been changed. On p. 13, first column, the second paragraph, which refers to Fig. 13, should be deleted. No other results of the paper are affected by these errors.