ρ Exchange and Density Matrices in Baryon Resonance Production.

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The expressions given in eqs. (15), (16) for the general multipole couplings $E(J-\frac{1}{2})$ and $M(J+\frac{1}{2})$ to normal-parity baryon resonances are incorrect. The correct expressions, obtainable by comparing helicity vertices with their expansion in multipoles (¹), are

(15)
$$\overline{u}_{\mu_1\dots\mu_{J-\frac{1}{2}}}\left\{\varepsilon_{\mu_1\beta}\left(P\varDelta\right)\gamma_{\mathbf{5}}+\frac{2M^*}{(M^*+M)^2-t}P_{\mu_1}r_{\beta}\left(P\varDelta\right)\right\}P_{\mu_1}\dots P_{\mu_{J-\frac{1}{2}}}u,$$

(16)
$$\overline{u}_{\mu_1\dots\mu_{J-\frac{1}{2}}} \left\{ \varepsilon_{\mu_1\beta} \left(P \varDelta \right) \gamma_5 - \frac{2}{2J-1} \frac{2M^*}{(M^*+M)^2 - t} P_{\mu_1} r_\beta \left(P \varDelta \right) \right\} P_{\mu_2} \dots P_{\mu_{J-\frac{1}{2}}} u$$

Equations (17) and (18), with $J = \frac{5}{2}$, should be modified accordingly.

The rest of the paper is unaffected by the changes in these expressions, which were merely included for completeness. We are grateful to Dr. J. KÖRNER for pointing out the discrepancy between our previous expressions and formulae contained in a paper by DEVENISH *et al.* (²), to which the amended equations (15) and (16) are equivalent.

⁽¹⁾ L. DURAND III: Lectures in Theoretical Physics, Vol. 4 (New York, N. Y., 1962), p. 524.

⁽²⁾ R. C. E. DEVENISH, T. S. EISENSCHITZ and J. G. KÖRNER: preprint DESY 75/48, Electromagnetic N^2 - N^* transition form factors.