Errata

Erratum: Radiative corrections to $e^+e^- \to \mu^+\mu^-$ and neutral currents in unified gauge theories [Phys. Rev. D 8, 890 (1973)]

Duane A. Dicus

There is an error in the first term of the expression for the polarization of the final electron in the reaction $e^-e^- \to e^-e^-$. Equation (27) should read

$$P = ab\frac{1-z}{W_1}[(1+z)^3 + (1-z)(1-z^2)s^2\cos 2\phi]. \tag{27}$$

Nothing else is changed.

I thank Dr. A. McDonald for pointing out this mistake.

Erratum: Pion charge-exchange scattering in the (3,3)-resonance region in nuclei with a neutron excess [Phys. Rev. D 9, 2144 (1974)]

Stephen L. Adler

The following misprints should be corrected:

(i) Page 2148, first column, line 2: The quantity $\mu_{fi}^{(\pm)}$ should read $M_{fi}^{(\pm)}$.

(ii) Page 2150, Eq. (60): The matrix element $S_1 - S_2^2$ should read $S_1^2 - S_2^2$.

Erratum: Nuclear charge-exchange corrections to leptonic pion production in the (3,3)-resonance region [Phys. Rev. D 9, 2125 (1974)]

Stephen L. Adler, Shmuel Nussinov, and E. A. Paschos

Page 2138: In the second paragraph of the added note, the statement "The effect is to reduce R' by about 2.5%... should cause an error of perhaps 10% at most in R'" should be changed to read "The effect is to reduce R' by about 1%... should cause an error of at most a few percent in R'."

The following misprints should be corrected:

(i) Page 2127, Eq. (9b): The π_i to the right of the arrow should read π_f.

(ii) Page 2128, Eq. (15): The quantity $\sigma(\nu_\mu + T \to \mu^- + T' + \pi^0)$ should read $\sigma(\nu_\mu + T \to \mu^- + T'' + \pi^0)$.

(iii) Page 2134, Eq. (46): The quantity $\tilde{r}(\nu_\mu\mu^-{}_{13}\mathrm{Al}^{27})$ should read $\tilde{r}'(\nu_\mu\mu^-{}_{13}\mathrm{Al}^{27})$.

(iv) Page 2139, Eq. (A14): The quantity

$$\sum \text{ should read } \sum_i$$

(v) Page 2143: In Ref. 4 "G. M. Wing, Ref. 20" should read "G. M. Wing, Ref. 22"; in Ref. 26, "Eq. (6C.6) of Ref. 18" should read "Eq. (6C.6) of S. Adler, Ann. Phys. (N.Y.) 50, 189 (1966)."

Erratum: Sum rule for deep-inelastic electroproduction from polarized protons [Phys. Rev. D 9, 1444 (1974)]

John Ellis and Robert Jaffe

Sum rules for polarized deep-inelastic scattering off protons and neutrons individually had been obtained by other authors[1,2] prior to our work, and we should have referred to them.

Gourdin[1] obtained (in the notation of our paper)

$$\int_0^1 g_1^{ep}(\xi)d\xi = 0.19g_A, \qquad \int_0^1 g_1^{en}(\xi)d\xi = 0.02g_A \tag{1}$$

using a parton model and assuming that the gluon

spins were uncorrelated with the nucleon spin. de Alwis[2] obtained

$$\int_0^1 g_1^{ep}(\xi)d\xi = 0.24g_A, \quad \int_0^1 g_1^{en}(\xi)d\xi = 0.07g_A \quad (2)$$

using the Melosh[3] transformation between current and constituent quarks. However, we are unable to reproduce his numbers. It seems that the correct consequences of his assumptions and realistic axial-vector F/D ratios are

$$\int_0^1 g_1^{ep}(\xi)d\xi = \begin{cases} 0.17g_A \\ 0.15g_A, \end{cases}$$

$$\int_0^1 g_1^{en}(\xi)d\xi = \begin{cases} 0.00g_A \\ -0.02g_A, \end{cases} \qquad \frac{F}{D} = \begin{cases} \frac{2}{3} \\ 0.59. \end{cases} \quad (3)$$

Since our work, Close[4] has used a variety of other theoretical approaches to infer a small polarization asymmetry for electroproduction off neutrons.

It is interesting that so many theoretical approaches seem to agree in giving the proton a large positive polarization asymmetry. It is clear that our particular parton-model ansatz, which also yielded the results (3), is not unique in this regard.

We thank F. E. Close and A. J. G. Hey for reminding us of the work of Gourdin and drawing our attention to the work of de Alwis, and also for useful discussions.

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[1]M. Gourdin, Nucl. Phys. B38, 418 (1972).
[2]S. P. de Alwis, Nucl. Phys. B55, 427 (1973).
[3]H. J. Melosh, Phys. Rev. D 9, 1095 (1974).
[4]F. E. Close, CERN Report No. CERN-TH-1843 (unpublished) [invited talk given at the IX Rencontre de Moriond, 1974 (unpublished)]; CERN Report No. CERN-TH-1875, 1974 (unpublished).