

The Theory of Quark and Gluon Interactions,
by F. J. Ynduráin.

ERRATUM

P. 33, In the equation above Eq. (2.4.5), a minus sign is missing in the right hand side; and in Eq. (2.3.5), there is a missing exponential in the first line; should read,

$$\lambda \langle T A_\mu(x) (\partial_\nu A^\nu(0)) \rangle_0 = - \langle T (\partial_\mu \omega(x)) \omega(0) \rangle_0.$$

A Fourier transformation gives

$$\begin{aligned} i q_\nu D^{\mu\nu}(q) &= i q_\nu \int d^4x e^{iq \cdot x} \langle T A^\mu(x) A^\nu(0) \rangle_0 \\ &= \int d^4x e^{iq \cdot x} \langle T A^\mu(x) (\partial_\nu A^\nu(0)) \rangle_0 = -\frac{1}{\lambda} \int d^4x e^{iq \cdot x} \langle T (\partial^\mu \omega(x)) \omega(0) \rangle_0 \\ &= \frac{i q^\mu}{\lambda} \int d^4x e^{iq \cdot x} \langle T \omega(x) \omega(0) \rangle_0 = \frac{q^\mu}{\lambda} \frac{1}{q^2 + i0}. \end{aligned} \quad (2.4.5)$$

P. 333: in Eq. (7.11.4b), a minus sign is missing in the right hand side in the expression for $a_0^{(2)}$; should read

$$\begin{aligned} a_0^{(0)} &= \frac{7M_\pi}{32\pi f_\pi^2} \left\{ 1 + \frac{5M_\pi^2}{84\pi^2 f_\pi^2} [\bar{l}_1 + 2\bar{l}_2 - \frac{3}{8}\bar{l}_3 + \frac{21}{10}\bar{l}_4 + \frac{21}{8}] \right\}, \\ a_0^{(2)} &= \frac{-M_\pi}{16\pi f_\pi^2} \left\{ 1 - \frac{M_\pi^2}{12\pi^2 f_\pi^2} [\bar{l}_1 + 2\bar{l}_2 + \frac{3}{8}] + \frac{M_\pi^2}{32\pi^2 f_\pi^2} [\bar{l}_3 + 4\bar{l}_4] \right\}, \\ a_1^{(1)} &= \frac{1}{24\pi M_\pi f_\pi^2} \left\{ 1 - \frac{M_\pi^2}{12\pi^2 f_\pi^2} [\bar{l}_1 - \bar{l}_2 + \frac{65}{48}] + \frac{M_\pi^2}{8\pi^2 f_\pi^2} \bar{l}_4 \right\}. \end{aligned} \quad (7.11.4b)$$

P. 334: in Eq. (7.11.4c), a minus sign is missing in the right hand side in the expression for $b_0^{(2)}$; should read

$$\begin{aligned} b_0^{(0)} &= \frac{1}{4\pi M_\pi f_\pi^2} \left\{ 1 + \frac{M_\pi^2}{12\pi^2 f_\pi^2} [2\bar{l}_1 + 3\bar{l}_2 - \frac{13}{16}] + \frac{M_\pi^2}{8\pi^2 f_\pi^2} \bar{l}_4 \right\}, \\ b_0^{(2)} &= \frac{-1}{8\pi M_\pi f_\pi^2} \left\{ 1 - \frac{M_\pi^2}{12\pi^2 f_\pi^2} [\bar{l}_1 + 3\bar{l}_2 - \frac{5}{16}] + \frac{M_\pi^2}{8\pi^2 f_\pi^2} \bar{l}_4 \right\}. \end{aligned} \quad (7.11.4c)$$

P. 337. There are errors in the exponents of the unnumbered equations at the top of the page, which should read

$$\begin{aligned}
b_2^{(0)} &= \frac{-481}{203200\pi^3 f_\pi^4 M_\pi^3} \simeq -3.9 \times 10^{-4} M_\pi^{-7}, \\
b_2^{(2)} &= \frac{-277}{201600\pi^3 f_\pi^4 M_\pi^3} \simeq -2.25 \times 10^{-4} M_\pi^{-7}, \\
a_3^{(1)} &= \frac{11}{95080\pi^3 f_\pi^4 M_\pi^3} \simeq 1.91 \times 10^{-5} M_\pi^{-7}, \\
b_3^{(1)} &= \frac{-47}{529200\pi^3 f_\pi^4 M_\pi^5} \simeq -1.45 \times 10^{-5} M_\pi^{-9}
\end{aligned}$$

and

$$\begin{aligned}
b_2^{(0)} &= (-4.1 \pm 0.3) \times 10^{-4} M_\pi^{-7}, & b_2^{(2)} &= (-3.9 \pm 0.3) \times 10^{-4} M_\pi^{-7}, \\
a_3^{(1)} &= (6.3 \pm 0.4) \times 10^{-5} M_\pi^{-7}, & b_3^{(1)} &= (-4.6 \pm 0.4) \times 10^{-5q} M_\pi^{-9}.
\end{aligned}$$

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