Introduction to Quantum Mechanics, 2nd ed.
by David Griffiths

Corrections to the 14th Printing
(August 1, 2014)

• Page 138, Table 4.2, caption: $P^m_l (\cos \theta) \rightarrow |P^m_l (\cos \theta)|$.
• Page 150, line 4: 1924 → 1926.
• Page 196, Equation 4.199, insert (after a space) before period: $(m \geq 0)$.
• Page 229. Problem 5.18(b): remove “There is an exception:” and change “$\psi(x) = 0.$” to “$\psi(x) = 0/0$ (indeterminate).”
• Page 247, last equation: $n = 1 \rightarrow n = 0$.
• Page 319, Problem 8.1, line 2: insert comma after $V_0$.
• Page 367, Equation 9.97, bottom line: $l_2 - 1 \rightarrow l_2 + 1$.
• Page 367, Problem 9.22, add at end:

You may find useful the following recursion formulas (which hold for $m \geq 0$):

\[
(2l + 1) x P^m_l (x) = (l + m) P^m_{l-1} (x) + (l - m + 1) P^m_{l+1} (x) \quad [9.99]
\]

\[
(2l + 1) \sqrt{1 - x^2} P^m_l (x) = P^{m+1}_{l+1} (x) - P^{m+1}_{l-1} (x) \quad [9.100]
\]

(G. B. Arfken and H. J. Weber, “Mathematical Methods for Physicists, 5th ed.”, Academic Press, San Diego, p. 774), and the orthogonality relation (which follows from Eq. 4.33):

\[
\int_{-1}^{1} P^m_l (x) P^m_l (x) \, dx = \frac{2}{(2l + 1) \, (l + |m|) \, (l - |m|) \, !}. \quad [9.101]
\]

• Page 401, Table 11.1, last term in $\hbar^{(2)}$: $+ \frac{i}{\hat{z}} \rightarrow - \frac{i}{\hat{z}}$.
• Page 408, Problem 11.7, line 3: $\infty \rightarrow 0$.
• Page 429, lines 11 and 12: “electron” → “positron”.
• Page 459, under “associated Legendre function”: add “, 367”.
• Page 466, under “recursion formula”: add “,196, 367”.

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