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Some errors may not appear in certain printings.

Page xi: Line 30 “easy so adopt” should read “easy to adopt”
Page xii: Para 2, line 1, should read “.. costs were ..”
Page 3: Line 9 “do not puposely use” should read “purposely do not use”
Page 18: Second line of Exercise 1.4.1* |0⟩ → |0⟩
Page 43: Equation in part (2) should read “M^i M^j = -M^j M^i for i ≠ j”
Page 52 3rd line from bottom: |II⟩(t)⟩ → |II⟩(t)⟩
Page 52, Middle of page, after the word ”Consequently” : |I⟩(t) → |I⟩(t)⟩
Page 54: The sum runs from 0 to ∞.
Page 63: Exercise 1.10.2: δ(f(x)) = Σ_i δ(x-x_i) where x_i are the zeros of f.
Page 66: In un-numbered equation above (1.10.30) lower limit of integral is L and not 0.
Page 68: (1.10.35) the first integral should be “∫_{-∞}^{∞} ⟨x|k⟩⟨k|f⟩dk”
Page 72: Line 1 K should be K^2
Page 81: 4 lines below (2.1.14): should read “...ρ = (x^2 + y^2)^{1/2}...”
Page 91: Line 8 the” should read ””is that”
Page 94: Line 18 p_i = ∂L/∂q_i
Page 101 Line 10 (2.8.6) → (2.8.3)
Page 118: Line 16: Example 4.2.2 should be 4.2.4
Page 119: Unnumbered equation in (5) should read “P(λ) ∝ |⟨λ|ψ⟩|^2 ”
Page 120: First equation (line 4) |ψ⟩ = 1/2|ω1⟩...

Page 131: Line 9 ”vesa” should read “versa”
Page 152 Line 25 |p, E = p^2/(2m)⟩ → |p, E = p^2/(2m)⟩
Page 154: “particles” should be “particle”
Page 167: 2 lines below (5.4.1) should read “..dotted lines in Figure 5.2.”
Page 171: Line below Eq (5.4.17): ..Gaussian G(−a, k_0, t) is centered...

Page 175: Exercise 5.4.2: Line 1, “of a potential” → ”off a potential ”
Page 191: 7 lines below (7.3.8) should read “... ranging from atomic physics...”
Page 195: H_n(x) → H_n(√(mω/h)x)
Page 208: 2nd line from bottom: “matrix of elements” should read “matrix elements”
Page 220: Line 19, “assuming” should read “assuming”
Page 233: Eq. 8.6.10: $m \to \frac{1}{2} m$.
Page 233: Eqn. (8.6.14): $\ldots t'' \to \ldots t''$]
Page 234: In Exercise (8.6.4), refer to Eq. (8.5.6) and not Eq. (8.6.5).
Page 265: line -8: $j_1 = a; j_2 = b \rangle \! \langle j_1 = b; j_2 = a \rangle$
Page 252: 3 lines above (10.1. 9a) should read "\ldots X_1^{(1)} \otimes (2) \ldots"
Page 254 $P^{(1)}(1) \otimes (2) \to P^{(1)}_1(1) \otimes (2)$
Page 255: 2 lines below (10. 1. 28c) should read “.. energy eigenvectors...”
Page 271: Para 3, lines 8 and 9: “including some $(K, \bar{K})$ and $(\bar{K}, K)$ pairs
Page 274: In second line of Eq. (10.3.39) $\psi(x_{\text{rest}}) \to \psi_{\text{rest}}(x_{\text{rest}})$
Page 296: Footnote should read "which does change with time ".
Exercise (12.3. 8) should read “.. particle of mass $\mu$ and charge $q$..”
Page 301: Eq 12.4.12: Last exponential must have an $i$ in it..
Page 301: Eq. (12.4.12) second line $= e^{-iL \theta}$
$L$ and $\theta$ should be same size despite what I have shown above)
Page 321 line 3, 1 $\to I$.
Page 325: lines 4 and 8: exchange (1) $\leftrightarrow$ (2)
Page 322: Line above 12.5.3: “lowering operators”
Page 332: Exercise 12.5.5 $\theta \to \theta$ in exponential.
Page 335: Line 8: $Y_l^{-1} \to Y_l^{-1}$
Page 331: 5 lines from bottom should read “.. combinations of ..”
Page 337: 1 line below (12.5.41) should read “..Legendre Polynomial.”
Page 339: Line 4: $\theta_z \to \theta_x$, and $\psi_R = \psi(x, y \cos \theta_x + z \sin \theta_x, z \cos \theta_x - y \sin \theta_x)$
Page 339: Exercise (12.5.14), last line, change (2) to (3) in Hint.
Page 339: Last line $-1/(\hbar^2 r^2) \to -1/(2\mu r^2 \hbar^2)$
Page 340: Eqn. (12.6.3) $\frac{\partial}{\partial r} \to \frac{d}{dr}$ because $R$ depends on only $r$.
Page 350: Top equation should contain $pr \cos \theta/\hbar$ (OK in some printings)
Page 350: Eq. (12.6. 39), $(2\pi \hbar^{3/2} \to (2\pi \hbar)^{3/2}$
Page 358: line -4: $\vec{U} \to \vec{V}$
Page 361: Eq. 13.3.1: Mev $\to$ MeV
Page 385, Fig 14.1 The arrows must run counterclockwise in all four sides.
Page 392: line above heading Paramagnetic Resonance should read i.e., since $\omega_0 < 0$ for an electron, $\phi$ increases at a rate $|\omega_0|$.
Page 394: Line 2 from bottom replace $n$ by $N$ in equation.
Page 395: eq. (14.4.33) numerator of middle term, $e^{-\beta \mu B_0} \rightarrow e^{-\beta \mu B_0}$

Page 397: Fourth line from bottom “weak” should read “strong”

Page 399: Exercise (14.5.11) should be renumbered as (14.5.2) and part (1)
second line should read “..1000kG is applied.”

Page 408: 3 lines above part (3): should read “wavelength of emitted..”

Page 414: In line above Eq. (15.2.19) “deduce” is misspelt. Second footnote
should read “.. one for $j = l + \frac{1}{2}$ and ..”

Page 415: Third line second para, “weak” should read “strong”

Page 415: Exercise (15.2 6) should read “... the projection operators ..”

Page 415: Exercise (15.2 7) should read “... states with $j = 2j_1 - 1$ are..”

Page 418: Eq. 15.3.11 first line : $\pm \hbar [...]$ becomes $\hbar [...]$, i.e., drop the $\pm$

Page 418: 2 lines below (15.3.13) should read “.. orthogonal to $T_q^l|\alpha jm\rangle$
unless.”

Page 419: Footnote should read “..\mp\{J_x \pm i J_y\}/\sqrt{2} = ..”

Page 420: In (15.3. 17) the conjugated $Y$ functions should appear as follows:

$Y^{m2 *}$

Page 420: Renumber exercises 15.3.2, 15.3.3 and 15.3.4 as 15.3.1, 15.3.2,15.3.3

Page 429: Last line should read :“ This minimum..”

Page 432: 4 lines above (16.1.15) should read ”variational method. For a
trial..

Page 432: Line below (16.1. 15) should read “...minimum lies not at $Z = 2$...”

Page 434: Line 22 “wil” should read “will”

Page 439: In the un-numbered equation for $U$, let $X' \rightarrow x'$

Page 445: Exercise (16.2.4) $x_0|x_e \rightarrow x_0/x_e$

Page 446: 2 lines below (16.2. 28) should read “.. neither Eq. (16.2 27) nor
Eq. (16.2. 28) is ..”

Page 456: Line 8: “ay” should read “by”

Page 467: Eq. 17.3.11: $\frac{4E_0^2\hbar}{l+1/2} \rightarrow \frac{4(E_0^2\hbar)^2}{l+1/2}$

Page 478: “neutron” misspelt in Ex. (18.2.4)

Page 485: Line above (18.3. 8b) should read ”.. equation, we get”

Page 496: Last line should read ”.. least action) are ..”

Page 502: Line above (18.5.12) should read“.. may approximate..”

Page 506: In unnumbered equation above Eqn. 18.5.31 $R_{i\rightarrow d\Omega} \rightarrow \frac{R_{i\rightarrow d\Omega}}{d\Omega}$.

Page 507: First line penultimate para ”..coordinates.”

Page 510: 6 lines above Eq. (18.5.40) “angles” is misspelt. Line -3: Eqn
18.5.42 follows upon using \(|\nabla \times \mathbf{A}|^2 = -\mathbf{A} \cdot \nabla^2 \mathbf{A}\) *within* \(f \, d\mathbf{r}\).

Page 526: Line above (19.2.5) should end with “..Eq. (19.2.2)

Page 518: \(e^{ikr} \rightarrow e^{-ikr}\) in 18.5.81 and the one below it.

Page 519: Last factor in (18.5.86) should be 
\[ (\varepsilon_1^{-1}\delta_{m,+1} + \varepsilon_0^0\delta_{m,0} + \varepsilon_1^{-1}\delta_{m,-1}) \]

Page 524: In the first line of Eq. (19.2.1) \(e^{ikx} \rightarrow e^{ikx}

Page 527: Eqn. 19.2.8: \(m = 0, \text{and} Y^m_l = P_l \) because plane wave in Eqn. 19.2.6 is along \(z\).

Page 528: Eq. (19.2.13), left hand side: \(j_{inc} \rightarrow j_{inc}\)

Page 530: Eq. (19.3.2): \(\mu \mathbf{p}_i \rightarrow \mu \mathbf{p}_i\), Eq. (19.3.4), \(\langle \mathbf{p}_j \rangle \rightarrow \langle \mathbf{p}_j \rangle\)

Page 533: Line 3 should read “.. \(r_0 = 1/\mu_0\)…”

Page 539: Top line should contain only the following and nothing else: \(\simeq r \left(1 - 2r_0^2\right)^{1/2}\), In Eq. (19.4.21), rhs, in the exponential, the dot is missing in the dot product.

Page 544: Eqn. 19.4.43: \(\cdot V(r)e^{ik \cdot r'}d^3r\).\n
Page 554: Exercise 19.5.4: In last 4 lines \(k_2' \rightarrow k_0', k_1' \rightarrow k_1'.\)

Page 564: Eqn. (20.1.12b) it should read “.. \(+(mc)^2/n\)”

Page 569: Eq. (20.2.18) \(e\phi \rightarrow -e\phi\)

Page 570: line 3: the equation should be numbered (20.2.26)

Page 572: Top line should read “.. terms make corrections..”

Page 573: Third line put a comma after first \(\mathbf{P}\)

Page 576: last line (foot note) ”...we woke up...” should read ”..he woke up...”

Page 586: Line 13: \(\Sigma_{i=1}^N \rightarrow \Sigma_{n=1}^N\)

Page 587: 5 lines above (21.1.29), sentence should begin as follows: “Let us discuss a problem...”

Page 604: Line 11: “coordinate” should read “coordinates”

Page 609: RHS of (21.1.126) should be \(e^{z\cdot z_1}\), RHS of (21.1.127) should end with \(= e^{-z\cdot z}\).

Page 610: Second line below Eqn.(21.1.132): “.. \(\langle z'|z \rangle = e^{z'\cdot z}\)

Page 614: In (21.2.3) replace \(\psi(t)\) by \(\psi(\tau)\) in LHS.

Page 614: Line -8: \(\Pi_0^N \rightarrow \Pi_1^N\)

Page 616: Line below 921.2.17) should end as follows “case \(a = A = 1\)”

Page 618: Eq 21.2.25 should read (the factor \(a\) is currently missing)

\[ ... \tanh \left[ \frac{2}{m} a A \tau \right] \]
Page 619: Line 28: “limitis” should read “limits”
Page 620: Line 11 \( \langle -a|U(\tau)|a \rangle \to \langle a|U(\tau)| - a \rangle \)
Page 631: Eq. 21.2.82 \( \lambda_0 \to \ln \lambda_0 \)
Page 636: 2 lines below Eq. 21.3.2: \( x \) axis \( \to \) \( y \) axis
Page 637: Line 14” so when one usually “ should read “usually so when one”
Page 652 Eq 21.3.107: The bar should be on \( \psi(0) \): i.e.,

\[ \langle \psi(\tau)\bar{\psi}(0) \rangle \]

Page 662: Line 15 “pole as \( z \)” should read “pole at \( z \)”
Page 667: Answer to 14.3.5 should read ..... + \( i \left( \frac{\beta-\gamma}{2} \right) \sigma_y + .. \)
Page 673: Insert index item “Legendre polynomial 337” above Lamb shift.
Page 676 Last entry, Zeeman should have just one \( n \).