

Errata for Quantum Mechanics, third edition, third printing

Please note that a number of corrections to the first 1998 printing of the third edition were made in the third printing and are therefore not included below.

Page

- 19 Two lines before Eq. (2.19), change “in” to “if”.
- 47 Line before Eq. (3.84), change (3.80) to (3.81).
- 58 Line 13: Change “eigenfunction” to “eigenfunctions”.
- Line above Eq. (4.26): Reduce line spacing.
- 71 Eq. (4.87): Read  $e^{i2\pi n x/\xi}$ .
- 78 Problem 3: In equation, change  $\hat{\mathbf{k}}$  to  $\hat{\mathbf{z}}$ .
- 90 Last two lines read: “coordinate of a linear harmonic oscillator has a value that lies outside the allowed region for a classical oscillator of the same energy.”
- 140 Eq. (8.17): On RHS in denominator, add  $\delta_{ij}$ .
- Eqs. (8.18) and (8.19): Replace  $\psi$  by  $\chi$ .
- 147 Eq. (8.49): Replace  $i$  by  $j$  below the summation sign.
- 156 Eq. (8.86): In first line in denominator, close argument of gamma function with  $]$ .
- 160 Fig. 8.7: Change interaction between  $\mathbf{r}_2$  and  $\mathbf{R}_2$  to  $V(\mathbf{r}_2, \mathbf{R}_2)$ . Change interaction between  $\mathbf{r}_2$  and  $\mathbf{R}_3$  to  $V(\mathbf{R}_3, \mathbf{r}_2)$ .
- 161 Eq. (8.106): Add subscript to electron energy on RHS to read  $E_e^{(i)}(\mathbf{R})$ .
- 163 Line 7: Change “elections” to “electrons”.
- Line 8: Read  $E_e^{(i)}(\mathbf{R})$ .
- Eq. (8.112): In second term, read  $\hbar^2$ .
- 164 Eq. (8.117): On RHS read  $E_e^{(i)}(X)$ .
- 205 Equation at bottom of page: On RHS, replace  $m^2$  by  $\frac{m}{2}$ .
- 226 Eq. (10.107): Change  $a^+$  to  $a^\dagger$ .
- 231 Eq. (10.132): In exponent, change  $a$  to italic  $a$ .
- 233 Eq. (11.4): Change  $[L_z, x] = 0$  to  $[L_x, x] = 0$ .
- 240 Line 4: Replace “number” by “integer”.

- 255 Problems 4 and 5: Add footnotes with references to papers by Gil Paz in Eur. J. Phys. **22**, 335 (2001), and Phys. A: Math. Gen. **35**, 3727 (2002).
- 262 Eq. (12.42): Read  $r > a$ .
- 263 Eq. (12.43): On LHS, in denominator change  $\kappa^2$  to  $-\kappa^2$ . On RHS, change arguments of Hankel functions to  $i\kappa a$ .
- 265 Eq. (12.54): Insert  $r$  between  $C$  and  $\log r$ .
- 291 Eq. (12.32): In exponent replace  $\mathbf{k}$  by  $\mathbf{k}'$ .
- 295 Eq. (13.47): Replace  $d^3 r$  by  $d^3 r'$ .
- 347 Eq. (15.17): Replace  $d^2 p'$  by  $d^3 p'$ .
- 382 Eq. (16.33): Replace  $n \rightarrow \infty$  by  $N \rightarrow \infty$ .
- 387 Line 1: Replace “dependent” by “independent”.
- 397 Line 6 from bottom: Delete “states”.
- 398 Eq. (16.113) and preceding equation: On RHS in the first and on the LHS in the second equation, change  $dt$  in denominator into  $\partial t$ .
- 403 Eq. (16.136): Change RHS to  $-\bar{p}_+ \ln \bar{p}_+ - \bar{p}_- \ln \bar{p}_-$ .
- 457 Insert space after Exercise 18.6.  
Eq. (18.43): On RHS read  $E_n^{(1)}$ .
- 475 Insert space after Exercise 18.19.
- 482 Eq. (19.2): On LHS insert  $>$ .
- 508 Line 2: Read “or ion”. Change  $ze$  to  $Ze$ .
- 544 Eq. (21.38): Change the equations to  $a|n\rangle = \sqrt{n}|n-1\rangle$  and  $a^\dagger|n\rangle = \sqrt{n+1}|n+1\rangle$ .
- 563 Eq. (22.33): In two places insert  $[$  to balance square brackets.
- 597 Eq. (24.31): Read  $\alpha_x \alpha_y + \alpha_y \alpha_x = \alpha_y \alpha_z + \alpha_z \alpha_y = \alpha_z \alpha_x + \alpha_x \alpha_z$
- 621 After Eq. (24.162), read  $F_{\mu\nu} = \frac{\partial A_\nu}{\partial x^\mu} - \frac{\partial A_\mu}{\partial x^\nu}$
- 654 In index, add reference to “Rabi oscillations, 397, 501”.
- 655 In “Two-slit interference” entry, change 546 to 586.