Quantum Mechanics: A Paradigms Approach

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Corrections to the 2nd printing

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- page 323, 2nd line after Eq. (10.49): Change "decreasing" to "increasing".
- page 333, Eq. (10.83): Insert minus sign before third term:

$$H' = -\boldsymbol{\mu} \bullet \mathbf{B}' = -\omega_2 S_x \doteq \begin{pmatrix} 0 & -\frac{\sqrt{3}}{2}\hbar\omega_2 & 0 & 0 \\ -\frac{\sqrt{3}}{2}\hbar\omega_2 & 0 & -\frac{\sqrt{4}}{2}\hbar\omega_2 & 0 \\ 0 & -\frac{\sqrt{4}}{2}\hbar\omega_2 & 0 & -\frac{\sqrt{3}}{2}\hbar\omega_2 \\ 0 & 0 & -\frac{\sqrt{3}}{2}\hbar\omega_2 & 0 \end{pmatrix} \tag{10.83}$$

- page 333, Eq. (10.85): Insert minus signs in 2nd and 3rd lines:

$$\begin{aligned} E_1^{(2)} &= \sum_{m\neq 1} \frac{\left|\left\langle 1^{(0)}\right| H' \left| m^{(0)}\right\rangle\right|^2}{\left(E_1^{(0)} - E_m^{(0)}\right)} = \frac{\left|\left\langle 1^{(0)}\right| H' \left| 2^{(0)}\right\rangle\right|^2}{\left(E_1^{(0)} - E_2^{(0)}\right)} \\ &= \frac{\left|-\frac{\sqrt{3}}{2}\hbar\omega_2\right|^2}{\left(\frac{-3}{2}\hbar\omega_0 - \frac{-1}{2}\hbar\omega_0\right)} \\ &= -\frac{3\hbar\omega_2^2}{4\omega_0} \end{aligned} \tag{10.85}$$

- page 362, first line after Eq. (11.33): Change second "I_x" to "I_y".
- page 460, Eq. (14.69), second line: Change the first epsilon symbol to a script font for electric field:

$$\begin{aligned} R_{1\to 2} &= \frac{2\pi}{\hbar}\left|V_{21}\right|^2 g\left(E_f\right) \\ &= \frac{2\pi e^2 \mathcal{E}_0^2}{\hbar}\left|\hat{\varepsilon} \bullet \langle 2|\mathbf{r}|1\rangle\right|^2 \frac{\hbar A_{21}/2\pi}{\left(E - \hbar\omega_{21}\right)^2 + \left(\frac{\hbar A_{21}}{2}\right)^2} \end{aligned} \tag{14.69}$$

- pages 482 and 483, Eqs. (15.38) and (15.39): An overall phase (which is physically meaningless) has been omitted from Eqs. (15.38) and (15.39).

- page 483, Fig. 15.12: Each wave function is defined only over the range $0.5a \le x \le 8.5a$ (given that we are using periodic boundary conditions).