6.728 Applied Quantum and Statistical Physics:

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Errata for Introductory Quantum and Statistical Physics

Page xi: Change 'Schweitzer' to 'Schweizer' and 'Steven Cohen' to 'Stephen Cohen.'

Page 23: Second line above Eqn. 2.45. Change "The second integral is a function of $x + ct$," to "The second integral is a function of $x - ct$,"

Figure 4.2: y-axis should read $P(x, t)/P(0, 0)$.

Figure 4.3: y-axis should read $P(x, t)/P(0, 0)$.

Page 106: Heading at the bottom should read "Commuting Operators **can be made to** have the Same Eigenfunctions."

Page 107 : The line below Eqn. 6.90 should read "then the energy eigenfunction ϕ_j *can also be made to be* an eigenfunction of the operator $\hat{Q}$ ..." See Problem 6.2.

Problem 6.2: The first term on the RHS should read

$$Ae^{i[k_o x - \omega(k_o)]t} + \cdots$$

Equation 8.21: The numerators should read $16E(V_o - E)$.

Page 176: The leading term for $\phi_1(y)$ should read

$$\left[\frac{\sqrt{2}}{\pi^{1/4}} \right]$$

Problem 10.2: The line after the equation should read "where $\phi_n(x)$ is a ..."

Problem 10.4: Part "(c)" should be labeled part "(b)"

Problem 11.2: The equation should read

$$\psi(x, t = 0) = c_0 \phi_0(x) + c_2 \phi_2(x)$$

Equation 14.73 q_0 should be e, the charge of the electron.

Page 290: The sentence after Eqn. 16.13 should read "The matrix eigenvalue equation can *be* solved..."

Page 293: The line above Eqn. 16.23 should read "For example, we could *choose*..."

Figure 17.2: The x-axis should read "$(E_2 - E_1)/(2\hbar)$ "

Page 343: The sentence after Eqn. 18.72 should have the absolute value sign around the vector **E** so that it reads "The driving term here is proportional to $|\mathbf{E}_0|^2$"

Problem 18.4: In part (a) change "V_0" to "V"

Page 360: The third line of the subsection "Two-State Approximation" should read "Fig. 19.1" and not "Fig. 18.1"

Problem 19.3 In this problem $2W$ is the thickness of the capacitor.

Page 375: The last sentence should read "The particle dynamics in x are independent..."

Page 461: The first sentence of section 23.8, change the word "involve" to "involving"

Problem 25.2: In part (b) change the word "probably" to "probable"

Page 549: The second to last sentence should read "The process *is* termed ..."

Page 576: The last sentence before the *Summary* should end as "...continue to focus on the relative dynamics."

Page 733: The sentence after Eqn. M.2 should read " asserting that there *are* only two ..."

Page 734: The sentence between Eqn. M9 and Eqn. M10 should begin "This leads to the Hamiltonian"

Table of Constants, Endpiece: Speed of light is 2.99792458×10^8 m/s, not $2.99792458 \times 10^{10}$ m/s.