Quantum Mechanics

A New Introduction

K. Konishi
University of Pisa and INFN, Pisa
G. Paffuti
University of Pisa and INFN, Pisa

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Part I

Errata Corrige

Subsection 4.7.1

In the 9th line of p.105, the following citation about the Table of the Clebsch-Gordan coefficients is missing. We apologize and thank the PDG group. It will appear in the reprint version.

"Table (Figure 24.5) at the end of the book has been reproduced from the 2008 Particle Review with permission from Particle Data Group, see C. Amsler et al., Phys. Lett. B667, 1 (2008), Copyright 2008 The Regents of the University of California."

Section 8.2

In the sidenote of p.186, "qymmetry" should read "symmetry".

Section 9.3

In the second line of Section 9.3,

$$|a_k|^2| \to |a_k|^2$$

Section 9.4

In the third line of p.231, correct $\delta E\Gamma \to \delta E$.

Section 12.3

In p.312, in eqn (12.16),

$$E_s \to E_s c_s$$

in the first line, and

$$\sum_k \to \sum_s$$

in the second line.

Section 9.5

Equations appearing between Eq. (9.71) and Eq. (9.72a) must read

$$\begin{aligned} &\boldsymbol{\varepsilon}_x = \hat{\mathbf{x}}\,; \qquad \boldsymbol{\varepsilon}_y = \hat{\mathbf{y}}\,; \\ &\boldsymbol{\varepsilon}_+ = -\frac{1}{\sqrt{2}}(\hat{\mathbf{x}} + i\hat{\mathbf{y}})\,; \quad \boldsymbol{\varepsilon}_- = \frac{1}{\sqrt{2}}(\hat{\mathbf{x}} - i\hat{\mathbf{y}})\,, \end{aligned}$$

Subsection 12.5.2

In the sidenote of p.337, "rediation" should read "radiation".

Subsection 14.1.2

In eqn (14.12) of p.384, drop ψ on the right hand side.

Section 14.2

The second equation in (14.34) should read

$$\Delta\ell = \frac{xd}{L}.$$

Section 14.4

Between Eq. (14.50) and Eq. (14.51) the vacuum Maxwell equations should read

$$\nabla \times \mathbf{B} = -\frac{1}{c}\frac{\partial \mathbf{E}}{\partial t}; \qquad \nabla \cdot \mathbf{E} = 0;$$
$$\nabla \times \mathbf{E} = \frac{1}{c}\frac{\partial \mathbf{E}}{\partial t}; \qquad \nabla \cdot \mathbf{B} = 0\,,$$

Eq. (14.52) should read

$$\nabla \times \mathbf{B} = -\frac{1}{c}\frac{\partial \mathbf{E}}{\partial t} + \frac{4\pi}{c}\mathbf{j}, \qquad \nabla \cdot \mathbf{E} = -4\pi\rho\,, \tag{1}$$

Section 15.6

In the sixth line from the bottom, in p. 433,

$$\psi \sim 1/\sqrt{Z}$$

should read

$$\psi \sim \sqrt{Z}$$

Section 17.2

The figure 17.1 in p.486 must be replaced by Fig. 1.

Subsection 18.2

The equation in the fifth line from the bottom in p. 509 (the equation before eqn (18.12)) should read

$$S \equiv \frac{1}{4}\left(F_{\mathbf{a},\mathbf{b}} - F_{\mathbf{a},\mathbf{b}'} + F_{\mathbf{a}',\mathbf{b}} + F_{\mathbf{a}',\mathbf{b}'} - 2\right)$$

In Figure 18.3 in p.510 the vector labels indicating the polarizer directions must read

$$\mathbf{a}, \quad \mathbf{b}, \quad \mathbf{a}', \quad \mathbf{b}'\,,$$

in clockwise order (the primes missing).

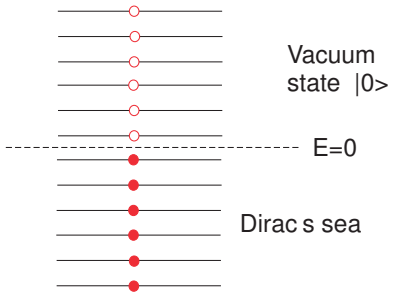

Fig. 1

Subsection 18.5

In the second line from the bottom in p. 514,
"... $p_1 = 0$, $p_i = 0$, $i \neq 1$. "
should read
"... $p_1 = 1$, $p_i = 0$, $i \neq 1$. "

Subsection 19.3.1

Poldolsky in the first line (p.522) should read *Podolsky*.

Subsection 19.4.2

In the last line of this subsection, p.538, replace
"and such a theory has a necessarily non-local character."
with
"such a theory has a necessarily non-local character."

Table: Physical constants and conversion factors (p.762)

The symbol for the neutron mass should read

$$m_n$$

instead of m_p. The equivalent value of 1 eV in erg should read

$$= 1.602\,176\,487(40) \times 10^{-12}\,\mathrm{erg}$$