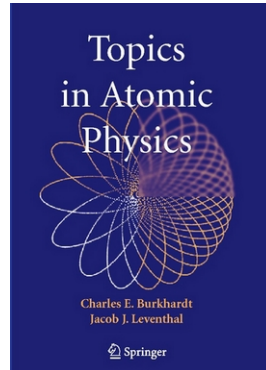


ERRATA FOR

*Topics in Atomic Physics* by C. E. Burkhardt and J. J. Leventhal, (Springer, New York) ISBN: 0387257489,2005).



page 21, Equations (2.44) and (2.45):  $C_{nm}^+$  and  $C_{nm}^-$  should be  $C_{jm}^+$  and  $C_{jm}^-$ .

p23 Equation (2.57): should read  $C_{jm+1}^- = (C_{jm}^+)^*$  because of Equation (254).

p30 Equation (2.98): OK except  $e^{-i\phi} \rightarrow e^{i\phi}$ .

P57 Equation (3.24): OK except the lhs  $\langle 11|00 \rangle \rightarrow \langle 10|00 \rangle$

P76 line under Equation (4.18): The sentence should read as follows. This series converges, but it converges to  $e^\rho$  so the wave function in Equation (4.14) diverges.

p118 Equation (6.72): OK except  $\hat{J}^2 \rightarrow \hat{K}^2$ .

p127 Equation (7.5): first line  $\frac{\hat{p}^2}{m_e c^2} \rightarrow \frac{\hat{p}^2}{m_e^2 c^2}$

$$\text{second line } \frac{\hat{p}^2}{2m_e c^2} \rightarrow \frac{\hat{p}^2}{2m_e^2 c^2}$$

p128 line above Equation (7.7): "...according to the virial theorem  $\hat{T}_0$  is one-half the magnitude of the total energy." Should read "... according to the virial theorem  $\hat{T}_0$  is one-half the magnitude of the potential energy so that  $\hat{T}_0 = -E_n^{(0)}$ ."

P247 Equation (13.6): the second and third lines of this equation should be multiplied by the electronic charge  $e$ . Also, in the last line  $e^{i(\omega_n - \omega_n)t} \rightarrow e^{i(\omega_k - \omega_q)t}$ .

P264 & 265 Equations(13.71) & (13.72): coefficient of  $Y_{11}(\theta, \phi)$  should be  $\frac{-\hat{i} + \hat{j}}{\sqrt{2}}$ .

p266 Equation (13.79): the left hand side should be inverted so it reads

$$\frac{\tau_{n=2}}{T_{n=2}} \approx 10^6$$