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Erratum to "Semiclassical and Quantum-Mechanical Formalism Applied in Calculating the Emission Intensity of the Atomic Hydrogen" [Journal of Modern Physics 7 (2016) 1004-1020]

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The original online version of this article (Stanisław Olszewski (2016) Semiclassical and Quantum-Mechanical Formalism Applied in Calculating the Emission Intensity of the Atomic Hydrogen. *Journal of Modern Physics*, 7, 1004-1020. http://dx.doi.org/10.4236/jmp.2016.79091) unfortunately contains a mistake. The author wishes to correct the errors in Section 2.

Particular ratios of the emission intensity belonging to different pairs of the electron transitions in the hydrogen atom are represented in Tables 1-3; see also [8]. In Table 1, the ratios are given:

$$\frac{I_{n'_\alpha d,n''_\alpha p}}{I_{n'_\beta d,n''_\beta p}}=\frac{I_{n'_\alpha d-n''_\alpha p}}{I_{n'_\beta d-n''_\beta p}}, \tag{20}$$

$$\frac{I_{n'_\alpha f,n''_\alpha d}}{I_{n'_\beta f,n''_\beta d}}=\frac{I_{n'_\alpha f-n''_\alpha d}}{I_{n'_\beta f-n''_\beta d}}, \tag{20a}$$

$$\frac{I_{n'_\alpha g,n''_\alpha f}}{I_{n'_\beta g,n''_\beta f}}=\frac{I_{n'_\alpha g-n''_\alpha f}}{I_{n'_\beta g-n''_\beta f}}. \tag{20b}$$

Certainly f in (20a) and (20b) should not be confused with f in (5).

A characteristic point in (20), (20a) and (20b) is that the angular momentum of the beginning state n' is larger than the angular momentum of the end state n''. In Table 3, the intensity ratios are represented:

$$\frac{I_{n'_\alpha s,n''_\alpha p}}{I_{n'_\beta s,n''_\beta p}}=\frac{I_{n'_\alpha s-n''_\alpha p}}{I_{n'_\beta s-n''_\beta p}}, \tag{21}$$

which corresponded to transitions between the higher energy states having the angular momentum s $(l = 0)$ and lower energy stated p $(l = 1)$. This is a case representing the angular momentum behaviour opposite to that given in (20), (20a) and (20b).