

## ERRATA

### Erratum: Microwave spectroscopy of high- $L$ helium Rydberg states.

#### II. The $10F - 10G$ and $10G - 10H$ intervals

[Phys. Rev. A 41, 3663 (1990)]

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The systematic correction for “time dilation” was applied with the wrong sign. The proper correction to the average of the up-shifted and down-shifted line centers is  $-\frac{1}{2}\beta^2\nu$  instead of  $+\frac{1}{2}\beta^2\nu$  as reported. All measurements should therefore be reduced by  $\beta^2\nu$ , where  $\beta=0.002\ 66$ . The corrected values for the measured  $n=10$  intervals (shown in Tables I and II and used in Table III) are 486.8623(17), 488.6686(20), 491.9671(14), and 495.5571(17) MHz for the  $^+G_4-^+H_5$ ,  $^3G_3-^3H_4$ ,  $^3G_5-^3H_6$ , and  $^-G_4-^-H_5$  intervals, and 2017.3110(31), 2037.8961(47), 2044.9703(39), and 2043.4381(52) MHz for the  $^+F_3-^+G_4$ ,  $^3F_2-^3G_3$ ,  $^3F_4-^3G_5$ , and  $^-F_3-^-G_4$  intervals. These lead to intervals between mean  $10L$  energies (Table VI) of  $E(10G_{\text{mean}})-E(10F_{\text{mean}})=2036.5588(22)$  MHz and  $E(10H_{\text{mean}})-E(10G_{\text{mean}})=491.0090(13)$  MHz. The “previous measurements” listed in Table VI should read 157.0508(26), 60.8152(18), and 27.1835(63) MHz for the  $10H-I$ ,  $I-K$ , and  $K-L$  intervals, as they were originally reported [1].

*Note.* More accurate values for the  $10G-H$ ,  $H-I$ , and  $I-K$  intervals are now available [2].

[1] E. A. Hessels, W. G. Sturuss, and S. R. Lundeen, Phys. Rev. A **38**, 4574 (1988).

[2] E. A. Hessels, F. J. Deck, P. W. Arcuni, and S. R. Lundeen, Phys. Rev. Lett. **65**, 2765 (1990); **66**, 2544 (1991).

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### Erratum: Photoionization cross section of hydrogenic atoms: A generating function solution

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The continuum radial function of Bethe and Salpeter was assumed to be normalized in the  $k$  scale when in fact it is normalized in the  $E$  scale. This does not affect the validity of our solution to the bound-continuum radial integral but unfortunately causes us to apply this solution incorrectly. The following changes should be made.

(1) The left-hand side of Eq. (1b) should be replaced with

$$\frac{d\sigma_{nlmn'l'm'}^\lambda}{dE}.$$

(2) Page 1314, line 3 should start with “ $R_{n'l'}$  is in units of  $a^{-3/2}R^{-1/2}$ .”

(3) Equation (3b) should read as follows: while the continuum wave function is normalized in the  $E$  scale [7],

$$\int_{E-\Delta E}^{E+\Delta E} dE \int_0^\infty r^2 R_{nl}^2 dr = 1. \quad (3b)$$

(3) Equation (9) should be replaced with

$$\sigma_{nl} = \frac{h\nu}{2l+1} \sum_{l',m} \frac{d\sigma_{nlmn'l'm}^\lambda}{dE} \quad (9a)$$

$$= \frac{2\pi^2\alpha a^2}{\mathcal{R}} h\nu \sum_{l'=l\pm 1} \frac{l_{>}^2 - l(l+1)/3}{(2l_{>}+1)(2l_{>}-1)} \left[ \frac{X_{nl'n'l'}}{\text{a.u.}} \right]^2. \quad (9b)$$