

Errata

Erratum: Autoionization of foil-excited states in Liu and Liu [Phys. Rev. A 12, 1808 (1975)]

R. Bruch, G. Paul, J. Andrä, and Lester Lipsky

P. 1810, second column, first line: $1 \geq 1$ should read $l \geq 1$.

P. 1810, first column, third last and last lines: $(1s2s^3 S\epsilon l)$ should read $(1s2s^3 S\epsilon l)$ and $(1s2p^3 Pnl)$, $(1s2p^3 Pnl)$.

P. 1810, caption to Fig. 4, bottom line: $(1s^2\epsilon 1)^2 1$ should read $(1s^2\epsilon 1)^2 l$.

P. 1812, second column, line 12: $n=2$ should be $N=2$.

Table III, p. 1816: Some of the levels are out of order. The seventh number in column 2 [(3, 3a)100*] through the third number in column 3 [(3, 4d)311*, p. 1817] should be at the front of the table. Also, the levels 104.4803 and 104.4668 are interchanged.

P. 1818, Table IV: There should be a comment to $(3, na)^1 S^e$ which reads “(3, 4a) and (3, 3c) are very close.”

P. 1818: In the comments to $^1 D^o$, “df” should be “df” twice.

P. 1818, under “Approximate mixings” to $(3, nc)^1 D^o$: $3p_{nf}$ should read $3dnf$.

P. 1820, Table V: There should be a footnote to each of the energy-level columns, “Taken from Ref. 28.”

P. 1820, caption to Table VI: $n=2$ (or 3) should read $N=2$ (or 3).

P. 1821, line eleven and Table VII, both caption and heading: “A” and “B” should be “a” and “b”.

Erratum: Analytic perturbation theory for screened Coulomb potentials: Nonrelativistic case [Phys. Rev. A 13, 532 (1976)]

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Equation (22d) should read

$$T_3(n, l) = -(n^2 V_3/2a)[5n^2 + 1 - 3l(l+1)].$$

Line 29, page 540 [above Eq. (41)] should be “ $n \rightarrow -i\nu$. Thus we can . . .” The first term on the right-hand side of Eq. (78) should be $-\chi_n(-k_c) \times f_c(k_c, r)$. Equation (100) should read

$$N^2(\kappa, l) = \frac{-(2\kappa)^2}{f(i\kappa, l)f'(-i\kappa, l)}.$$

Similarly, the right-hand side of Eq. (101) should have a factor -1 . Equation (103) should be

$$\delta_{in}(k, l) = \delta_c(k_c, l) - \lambda^2 (V_2/16T_c)\nu[\nu^2 - l(l-1)] - \lambda^3 (aV_3/32T_c^2)\nu[(l-1)(l-4) - \frac{7}{3}(\nu^2 + 1)].$$

Finally, Eq. (119) should read

$$\delta(k) = \nu \ln\left(\frac{2k_c}{\lambda}\right) + \delta_c(k_c) + \frac{a^2\lambda}{4k_c^2} + \frac{a\lambda^2}{48k_c^3} - \frac{a^3\lambda^2}{24k_c^5} + O(\lambda^3).$$

In addition, it has been brought to our attention that related work using an analytic perturbation theory based on expansion of the screened Coulomb potential has been done recently by H. J. W. Müller-Kirsten and N. Vahedi-Faridi and others.¹ Their expression for the bound-state wave function is essentially the same as our own, although the normalization is not considered. In the continuum case, however, their results differ considerably from ours.

¹See, for example, H. J. W. Müller-Kirsten and N. Vahedi-Faridi, J. Math. Phys. 14, 1291 (1973),

and references therein.