Erratum: Relativistic configuration-interaction calculations of the energy levels of the $1s^22l$ and $1s2l2l'$ states in lithiumlike ions: Carbon through chlorine [Phys. Rev. A **96**, 042505 (2017)]

V. A. Yerokhin, A. Surzhykov, and A. Müller
(Received 21 November 2017; published 5 December 2017)

DOI: [10.1103/PhysRevA.96.069901](https://doi.org/10.1103/PhysRevA.96.069901)

In generating Table IV, the reduced-mass Rydberg constant R_M was used erroneously instead of the standard Rydberg constant $R_\infty \equiv R$. In order to correct this error, all numerical values of the wavelengths in Table IV should be multiplied by the reduced-mass prefactor μ/m , specified for each element in Table III. As a result, in the case of carbon ($Z = 6$), all wavelengths are decreased by 46 ppm; whereas for chlorine ($Z = 17$) wavelengths are decreased by 16 ppm. The corrected Table IV is shown in full below.

TABLE IV. Theoretical wavelengths of the $1s2l2l' \rightarrow 1s^22l$ transitions in lithiumlike ions in angstroms. Transitions are labeled as by Gabriel [1].

Key	Transition	$Z = 6$	$Z = 7$	$Z = 8$	$Z = 9$	$Z = 10$	$Z = 11$
<i>a</i>	$1s(^2S)2p(^3P)^2P_{3/2} \rightarrow 1s^22p^2P_{3/2}^o$	41.36411(27)	29.46580(15)	22.04950(10)	17.117058(77)	13.671412(60)	11.169775(52)
<i>b</i>	$1s(^2S)2p(^3P)^2P_{3/2} \rightarrow 1s^22p^2P_{1/2}^o$	41.36230(26)	29.46357(15)	22.04692(10)	17.114208(75)	13.668325(60)	11.166499(51)
<i>c</i>	$1s(^2S)2p(^3P)^2P_{1/2} \rightarrow 1s^22p^2P_{3/2}^o$	41.36661(25)	29.46851(15)	22.05234(10)	17.120020(76)	13.674489(60)	11.172962(52)
<i>d</i>	$1s(^2S)2p(^3P)^2P_{1/2} \rightarrow 1s^22p^2P_{1/2}^o$	41.36480(25)	29.46628(15)	22.04977(10)	17.117169(74)	13.671401(60)	11.169684(51)
<i>e</i>	$1s(^2S)2p(^3P)^4P_{5/2} \rightarrow 1s^22p^2P_{3/2}^o$	41.98394(18)	29.87300(11)	22.330035(78)	17.317970(62)	13.819988(52)	11.282599(48)
<i>f</i>	$1s(^2S)2p(^3P)^4P_{3/2} \rightarrow 1s^22p^2P_{3/2}^o$	41.98464(18)	29.87401(11)	22.331274(78)	17.319389(62)	13.821551(52)	11.284277(48)
<i>g</i>	$1s(^2S)2p(^3P)^4P_{3/2} \rightarrow 1s^22p^2P_{1/2}^o$	41.98278(17)	29.87172(10)	22.328634(75)	17.316471(60)	13.818396(52)	11.280934(47)
<i>h</i>	$1s(^2S)2p(^3P)^4P_{1/2} \rightarrow 1s^22p^2P_{3/2}^o$	41.98598(18)	29.87543(11)	22.332744(78)	17.320904(62)	13.823108(52)	11.285869(48)
<i>i</i>	$1s(^2S)2p(^3P)^4P_{1/2} \rightarrow 1s^22p^2P_{1/2}^o$	41.98412(17)	29.87313(10)	22.330104(75)	17.317986(60)	13.819952(52)	11.282524(47)
<i>j</i>	$1s(^2S)2p(^1D)^2D_{5/2} \rightarrow 1s^22p^2P_{3/2}^o$	41.53913(57)	29.57647(32)	22.12455(20)	17.17048(15)	13.71095(13)	11.199960(86)
<i>k</i>	$1s(^2S)2p(^1D)^2D_{3/2} \rightarrow 1s^22p^2P_{1/2}^o$	41.53544(56)	29.57276(37)	22.12051(20)	17.16633(14)	13.70672(23)	11.195699(85)
<i>l</i>	$1s(^2S)2p(^1D)^2D_{3/2} \rightarrow 1s^22p^2P_{3/2}^o$	41.53726(57)	29.57501(38)	22.12310(20)	17.16920(15)	13.70983(23)	11.198993(86)
<i>m</i>	$1s(^2S)2p(^1S)^2S_{1/2} \rightarrow 1s^22p^2P_{3/2}^o$	40.7023(14)	29.05872(71)	21.78240(41)	16.93291(26)	13.53942(18)	11.07213(12)
<i>n</i>	$1s(^2S)2p(^1S)^2S_{1/2} \rightarrow 1s^22p^2P_{1/2}^o$	40.7006(14)	29.05655(71)	21.77989(41)	16.93012(26)	13.53639(18)	11.06891(12)
<i>o</i>	$1s2s^2S_{1/2} \rightarrow 1s^22p^2P_{3/2}^o$	43.7197(12)	30.92563(65)	23.01608(34)	17.79021(22)	14.15950(16)	11.53543(11)
<i>p</i>	$1s2s^2S_{1/2} \rightarrow 1s^22p^2P_{1/2}^o$	43.7177(12)	30.92317(65)	23.01328(34)	17.78714(22)	14.15618(16)	11.53194(11)
<i>q</i>	$1s(^2S)2s2p(^3P^o)^2P_{3/2}^o \rightarrow 1s^22s^2S_{1/2}$	41.33223(19)	29.43006(11)	22.018957(81)	17.092420(64)	13.651737(55)	11.153966(51)
<i>r</i>	$1s(^2S)2s2p(^3P^o)^2P_{1/2} \rightarrow 1s^22s^2S_{1/2}$	41.33391(18)	29.43181(11)	22.020763(80)	17.094270(64)	13.653615(55)	11.155884(51)
<i>s</i>	$1s(^2S)2s2p(^1P^o)^2P_{3/2}^o \rightarrow 1s^22s^2S_{1/2}$	40.86261(71)	29.14994(33)	21.83891(18)	16.96998(11)	13.564762(78)	11.089994(63)
<i>t</i>	$1s(^2S)2s2p(^1P^o)^2P_{1/2}^o \rightarrow 1s^22s^2S_{1/2}$	40.86248(71)	29.15000(33)	21.83913(18)	16.97032(11)	13.565210(78)	11.090530(64)
<i>u</i>	$1s(^2S)2s2p(^3P^o)^4P_{3/2}^o \rightarrow 1s^22s^2S_{1/2}$	42.15871(16)	29.95784(10)	22.375931(74)	17.344979(61)	13.837011(54)	11.293983(51)
<i>v</i>	$1s(^2S)2s2p(^3P^o)^4P_{1/2} \rightarrow 1s^22s^2S_{1/2}$	42.15879(16)	29.95815(10)	22.376420(74)	17.345607(61)	13.837750(54)	11.294810(51)
Key	Transition	$Z = 12$	$Z = 13$	$Z = 14$	$Z = 15$	$Z = 16$	$Z = 17$
<i>a</i>	$1s(^2S)2p(^3P)^2P_{3/2} \rightarrow 1s^22p^2P_{3/2}^o$	9.296314(46)	7.856984(42)	6.727310(39)	5.824400(37)	5.091381(35)	4.488138(33)
<i>b</i>	$1s(^2S)2p(^3P)^2P_{3/2} \rightarrow 1s^22p^2P_{1/2}^o$	9.292875(46)	7.853401(42)	6.723601(39)	5.820585(37)	5.087473(35)	4.484147(33)
<i>c</i>	$1s(^2S)2p(^3P)^2P_{1/2} \rightarrow 1s^22p^2P_{3/2}^o$	9.299613(46)	7.860398(42)	6.730846(39)	5.828064(37)	5.095179(35)	4.492076(33)
<i>d</i>	$1s(^2S)2p(^3P)^2P_{1/2} \rightarrow 1s^22p^2P_{1/2}^o$	9.296172(45)	7.856813(42)	6.727133(39)	5.824245(37)	5.091265(35)	4.488078(33)
<i>e</i>	$1s(^2S)2p(^3P)^4P_{5/2} \rightarrow 1s^22p^2P_{3/2}^o$	9.383954(44)	7.926388(41)	6.783220(38)	5.870121(36)	5.129288(35)	4.519963(33)
<i>f</i>	$1s(^2S)2p(^3P)^4P_{3/2} \rightarrow 1s^22p^2P_{3/2}^o$	9.385725(44)	7.928234(41)	6.785123(38)	5.872068(36)	5.131267(35)	4.521960(33)
<i>g</i>	$1s(^2S)2p(^3P)^4P_{3/2} \rightarrow 1s^22p^2P_{1/2}^o$	9.382219(43)	7.924586(41)	6.781350(39)	5.868191(37)	5.127297(35)	4.517909(33)

TABLE IV. (*Continued.*)

Key	Transition	Z = 12	Z = 13	Z = 14	Z = 15	Z = 16	Z = 17
<i>h</i>	$1s(^2S)2p^2(^3P)^4P_{1/2} \rightarrow 1s^22p^2P_{3/2}^o$	9.387349(44)	7.929888(41)	6.786811(38)	5.873789(36)	5.133023(35)	4.523756(33)
<i>i</i>	$1s(^2S)2p^2(^3P)^4P_{1/2} \rightarrow 1s^22p^2P_{1/2}^o$	9.383842(43)	7.926239(41)	6.783036(39)	5.869910(37)	5.129051(35)	4.519701(33)
<i>j</i>	$1s(^2S)2p^2(^1D)^2D_{5/2} \rightarrow 1s^22p^2P_{3/2}^o$	9.319988(77)	7.875976(56)	6.742862(49)	5.837365(42)	5.102371(39)	4.497592(36)
<i>k</i>	$1s(^2S)2p^2(^1D)^2D_{3/2} \rightarrow 1s^22p^2P_{1/2}^o$	9.315711(77)	7.871703(56)	6.738612(49)	5.833162(42)	5.098233(39)	4.493537(36)
<i>l</i>	$1s(^2S)2p^2(^1D)^2D_{3/2} \rightarrow 1s^22p^2P_{3/2}^o$	9.319167(77)	7.875302(56)	6.742337(48)	5.836993(42)	5.102158(39)	4.497545(36)
<i>m</i>	$1s(^2S)2p^2(^1S)^2S_{1/2} \rightarrow 1s^22p^2P_{3/2}^o$	9.222220(93)	7.799552(72)	6.682004(58)	5.788124(49)	5.061968(43)	4.464033(39)
<i>n</i>	$1s(^2S)2p^2(^1S)^2S_{1/2} \rightarrow 1s^22p^2P_{1/2}^o$	9.218835(92)	7.796021(72)	6.678345(59)	5.784356(49)	5.058105(43)	4.460085(38)
<i>o</i>	$1s2s^2S_{1/2} \rightarrow 1s^22p^2P_{3/2}^o$	9.577821(86)	8.078786(62)	6.905578(56)	5.970213(49)	5.212518(43)	4.590187(39)
<i>p</i>	$1s2s^2S_{1/2} \rightarrow 1s^22p^2P_{1/2}^o$	9.574170(85)	8.074998(63)	6.901669(57)	5.966205(49)	5.208422(43)	4.586013(39)
<i>q</i>	$1s(^2S)2s2p(^3P^o)^2P_{3/2} \rightarrow 1s^22s^2S_{1/2}$	9.283498(48)	7.846476(43)	6.718605(41)	5.817127(39)	5.085261(37)	4.482960(35)
<i>r</i>	$1s(^2S)2s2p(^3P^o)^2P_{1/2} \rightarrow 1s^22s^2S_{1/2}$	9.285445(47)	7.848451(43)	6.720609(41)	5.819161(39)	5.087328(37)	4.485063(35)
<i>s</i>	$1s(^2S)2s2p(^1P^o)^2P_{3/2} \rightarrow 1s^22s^2S_{1/2}$	9.235089(64)	7.808948(47)	6.688922(43)	5.793232(41)	5.065728(38)	4.466771(36)
<i>t</i>	$1s(^2S)2s2p(^1P^o)^2P_{1/2} \rightarrow 1s^22s^2S_{1/2}$	9.235698(55)	7.809619(48)	6.689646(44)	5.793999(41)	5.066531(38)	4.467602(36)
<i>u</i>	$1s(^2S)2s2p(^3P^o)^4P_{3/2} \rightarrow 1s^22s^2S_{1/2}$	9.391978(47)	7.932317(44)	6.787786(41)	5.873778(39)	5.132315(37)	4.522539(36)
<i>v</i>	$1s(^2S)2s2p(^3P^o)^4P_{1/2} \rightarrow 1s^22s^2S_{1/2}$	9.392877(47)	7.933273(44)	6.788790(41)	5.874818(39)	5.133385(37)	4.523632(36)

We are grateful to Dr. A. Kramida for alerting us about this error.

[1] A. H. Gabriel, *Mon. Not. R. Astron. Soc.* **160**, 99 (1972).