ERRATA

Erratum: Auger decay of Na-like $\text{Si}^{3+}(2p^5 3lnl')$ states formed in slow $\text{Si}^{5+} \rightarrow \text{He}$ and Ar ion-atom collisions [Phys. Rev. A 51, 4652 (1995)]

D. Schneider, M. H. Prior, R. Bruch, A. Shlyaptseva, T. Brage, and D. Ridder

PACS number(s): 34.50.Fa, 32.80.Hde, 99.10.+g

The experimental work was done in close collaboration with Dr. M. H. Prior of the LBL Chemical Sciences Division. All of the spectra included in this work were obtained by Drs. D. Schneider and M. H. Prior during several running periods at the LBL/LLNL ECR facilities, and Dr. Prior should have been listed as a co-author of this work. The author list thus should have read: D. Schneider, M. H. Prior, R. Bruch, A. Shlyaptseva, T. Brage, and D. Ridder.

1050-2947/96/53(4)/2903(1)/\$10.00

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Erratum: Universal superpositions of coherent states and self-similar potentials [Phys. Rev. A 52, 1909 (1995)]

Vyacheslav Spiridonov

PACS number(s): 03.65.-w, 42.50.-p, 02.30.-f, 99.10.+g

References [14] and [15] should read:

[1] V. Spiridonov, Université de Montréal, Report No. CRM-1913, 1993 (unpublished); in *Proceedings of the XXth International Colloquium on Group Theoretical Methods in Physics*, edited by A. Arima, T. Eguchi, and N. Nakanishi (World Scientific, Singapore, 1995), p. 453.

[2] V. Spiridonov, *Lett. Math. Phys.* **35**, 179 (1995).

1050-2947/96/53(4)/2903(1)/\$10.00

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Erratum: Two-ion superradiance theory [Phys. Rev. A 52, 2965 (1995)]

R. G. Brewer

PACS number(s): 32.80.Pj, 42.50.Ar, 42.50.Fx, 42.50.Md, 99.10.+g

Figure 1 is incomplete. To be consistent with the definitions of the angles θ and ϕ above Eq. (3.3), the ion-ion axis (with ion 2 at the origin) must be coincident with the z axis. Figure 1 as shown applies when the two ions are aligned on the trap's symmetry axis, axially. However, when the ions lie in the trap's radial plane, the coordinates of Fig. 1 must be rotated so that the z axis is again coincident with the ion-ion axis. The paragraph above Eq. (4.5) changes accordingly.

The sign of the interference terms should be reversed in Eqs. (4.3), (4.5), (4.6), and (4.8) ($- \rightarrow +$) and in Eq. (4.4) and the abstract ($+ \rightarrow -$). This is a consequence of incorrectly assuming that the excited-state wave functions, Eqs. (2.1)–(2.4), are antisymmetric.

In Eq. (3.4a), the two-ion relative phase Φ is introduced as an initial condition, but it is more logical for Φ to first appear in the wave functions, Eqs. (2.1)–(2.4), as shown below, even though the final result Eq. (4.4) is the same in either case. This preparation was not discussed and follows from solutions of the generalized Bloch equations, derived from the master equation, Eq. (3.6), with a driving term included [1]. For preparation in steady state, where free emission follows its abrupt termination, the two-ion excited-state wave functions will be of the form

$$\psi(1,2)_{ss} = \frac{1}{\sqrt{2}} [{}^2P_{1/2}(1){}^2S_{1/2}(2)e^{i\Phi} + {}^2P_{1/2}(2){}^2S_{1/2}(1)],$$

where (1,2) label the two ions, $\Phi = \mathbf{k}' \cdot \mathbf{R}$, $\mathbf{k}'$ is the propagation vector of the exciting light, and $\mathbf{R} = \mathbf{r}_1^0 - \mathbf{r}_2^0$ is the two-ion position vector. For pulse preparation of duration t_0 , $\psi(1,2)_{pulse} \propto \psi(1,2)_{ss} \sin(\beta t_0/2)$, where β is the effective Rabi frequency. Thus, in both cases the two-ion relative phase Φ is the same, being determined by the geometry of the problem and not the time dependence. Finally, the predicted interference of the two-ion spontaneous emission lifetime Eq. (4.4), multiplied by -1 , agrees in magnitude and phase with current superradiance experiments [2].

I am indebted to W. Itano and his group for reawakening my interest in these issues with a more critical understanding.

¹R.G. Brewer (unpublished).

²R.G. DeVoe and R.G. Brewer, Phys. Rev. Lett (to be published).

Erratum: Direct two-color photoassociative ionization in a rubidium magneto-optic trap [Phys. Rev. A 52, R4332 (1995)]

D. Leonhardt and J. Weiner

PACS number(s): 32.80.Pj, 33.80.Ps, 34.50.Rk, 34.80.Qb, 99.10.+g

Figure 1 that appears in the article is not the correct figure and does not correspond to the caption, which is correct. The correct figure and caption are presented here.

FIG. 1. (a) Schematic potentials and transitions relevant to PAI in sodium. Note that there are two pathways to PAI: (1) Optical coupling to an attractive excited state followed by a second optical transition to a doubly excited state. The doubly excited state then undergoes autoionization at short range to produce the final $\text{Na}_2^+ + e$ product (dashed arrows). (2) Optical coupling to an attractive excited state followed by photoionization directly to $\text{Na}_2^+ + e$ (solid arrows). (b) Analogous potentials and transitions in ^{85}Rb collisions. Note that the energy gap between the doubly excited asymptote and the minimum of the molecular ion potential closes the autoionization channel at ultracold temperatures.