ERRATA

Erratum: Extension of a moment-problem minimax quantization procedure to anharmonic potentials [Phys. Rev. A 52, 3468 (1995)]

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PACS number(s): 03.65.Ca, 03.65.Db, 03.65.Ge, 99.10.+g

The anharmonic oscillator eigenenergy bounds quoted in Table VI and in the adjoining text were incompletely specified (for the ground state) and erroneously transcribed (for the second excited state). In the former case we have

$P_{\max}$	LP-EMM bounds for E_0
30	[1.491 019 895 411, 1.491 019 895 804].

For the second excited state, the correct energy bounds are

$$10.993\,737\,333\,708\,8 < E_2 < 10.993\,737\,336\,245\,9.$$

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Erratum: Variational calculation of polarizability and second hyperpolarizability of two-electron systems [Phys. Rev. A 54, 283 (1996)]

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In the paper above, we had applied the variation-perturbation formalism within Kohn-Sham density-functional theory to calculate the linear and nonlinear dipole polarizabilities of two-electron systems. However, in the expression for the fourth-order energy change, we had not included the correction due to the change in the effective potential. This leads to additional terms in Eq. (4) of our paper. These terms are

$$\left\langle \phi^{(1)} \middle| \int \frac{\delta^2 E_{Hxc}[\rho]}{\delta\rho(\mathbf{r})\,\delta\rho(\mathbf{r}')}\rho^{(1)}(\mathbf{r}')d\mathbf{r}' \middle| \phi^{(2)} \right\rangle + \left\langle \phi^{(2)} \middle| \int \frac{\delta^2 E_{Hxc}[\rho]}{\delta\rho(\mathbf{r})\,\delta\rho(\mathbf{r}')}\rho^{(1)}(\mathbf{r}')d\mathbf{r}' \middle| \phi^{(1)} \right\rangle .$$

Inclusion of these terms modifies the reported values slightly. The new numbers are

Atom/ion	γ from HF density	γ from KSLDA density
H^-	5.98×10^6	
He	36.03	83.34
Li^+	0.2274	0.3650

In addition, the value of α for Li^+ calculated from the KSLDA density is not given correctly. The correct value is 0.2138 a.u. Notice that the modified number for He is slightly less than its HF value, but that for H^- still remains much greater than the corresponding HF number.

We note that although the values for hyperpolarizabilities have changed with the inclusion of the above-mentioned corrections, this does not affect the conclusions arrived at in our paper.

Erratum: Kinetics for evaporative cooling of a trapped gas [Phys. Rev. A 55, 1281 (1997)]

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[S1050-2947(97)00210-2]

PACS number(s): 32.80.Pj, 05.30.Jp, 03.75.Fi, 51.10.+y, 99.10.+g

The above manuscript contains several errors, and I thank Meritt Reynolds for communicating some of them to me, as well as for valuable comments.

The expression in Eq. (11) appears with a wrong sign in Eqs. (12) and (15). In Eq. (18) the right-hand sides should be multiplied by a factor of 1/2. This also applies to Eq. (22). The expressions in Eqs. (17) and (21) agree with (L43a) and (L43b) in Ref. [5] by Luiten *et al.*, but my definition of $\xi = U_0/(k_B T)$ differs from the one chosen in [5] ($\xi = U_0/\epsilon_t$). Thus, the expressions in Luiten *et al.* (Ref. [5]) are correct.

The expression for the energy change due to evaporation, Eq. (19), is incorrect. In the case of a varying trap, the total energy of the system of trapped plus escaping gas is not conserved, since work is performed on the system. Therefore, Eq. (19) should be replaced by the following:

$$\begin{aligned}
\dot{E}_{\rm ev} &= \frac{d}{dt}\left(\int_0^{\epsilon_t(t)} {\rm d}\epsilon \epsilon \rho(\epsilon) f(\epsilon) \right) \\
&= \frac{d\epsilon_t}{dt} \epsilon_t \rho(\epsilon_t) f(\epsilon_t) + \int_0^{\epsilon_t(t)} d\epsilon \epsilon \dot{\rho}(\epsilon) f(\epsilon) - n_0^2 \sigma \overline{v e^{-\eta}} V_{\rm ev} \left\{ \epsilon_t + \frac{W_{\rm ev}}{V_{\rm ev}} k_B T \right\} \\
&\quad - \frac{1}{(2\pi\hbar)^3} \int_0^{\epsilon_t(t)} d\epsilon \int d^3 r d^3 p \, \epsilon \, \frac{\partial U(\mathbf{r})}{\partial t} \frac{\partial f(\epsilon)}{\partial \epsilon} \, \delta\left(U(\mathbf{r}) + \frac{\mathbf{p}^2}{2m} - \epsilon \right) \\
&= \frac{d\epsilon_t}{dt} \epsilon_t \rho(\epsilon_t) f(\epsilon_t) - n_0^2 \sigma \overline{v e^{-\eta}} V_{\rm ev} \left\{ \epsilon_t + \frac{W_{\rm ev}}{V_{\rm ev}} k_B T \right\} + A_{IQ} n_0 \Lambda^3 (k_B T)^5 \Delta \, . \qquad (19)
\end{aligned}$$

The quantity Δ reads

$$\begin{aligned}
\Delta = &\left(\frac{1}{\alpha^2} \frac{d\alpha^2}{dt} + \frac{1}{2\beta} \frac{d\beta}{dt} \right) \left(6 + 4\xi - e^{-\eta} \left[6 + 6\eta + 3\eta^2 + \eta^3 + \frac{1}{4}\eta^4 + \frac{1}{8}\eta^5 + 4\xi + 4\xi\eta + 2\xi\eta^2 + \frac{2}{3}\xi\eta^3 + \frac{1}{3}\xi\eta^4 \right] \right) \\
&- \frac{1}{U_0} \frac{dU_0}{dt} \left(4\xi - e^{-\eta} \xi \left[4 + 4\eta + 2\eta^2 + \frac{2}{3}\eta^3 + \frac{1}{3}\eta^4 \right] \right) .
\end{aligned}$$

The above corrections introduce only slight changes in the figures presented in the manuscript: The final number of atoms is smaller, and the condensation parameter is reduced. This, however, does not change the conclusions of the paper. For completeness, we include the new figures 1(a) and 2.

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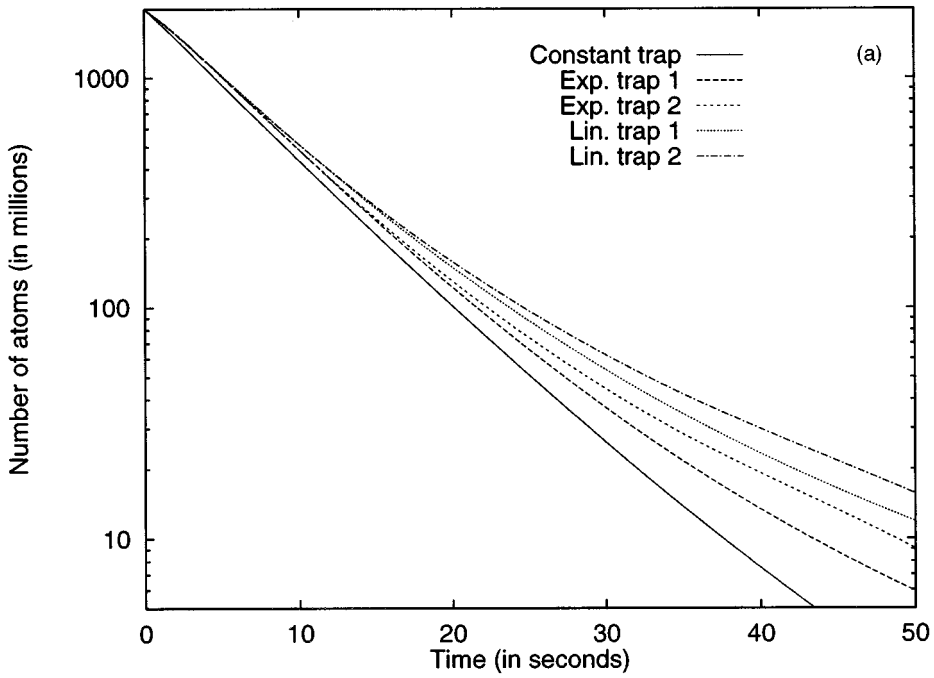

FIG. 1. The course of an evaporative cycle in the five different traps considered. In (a), we show the decrease in number of atoms. (b)–(d) may be found in the original manuscript.

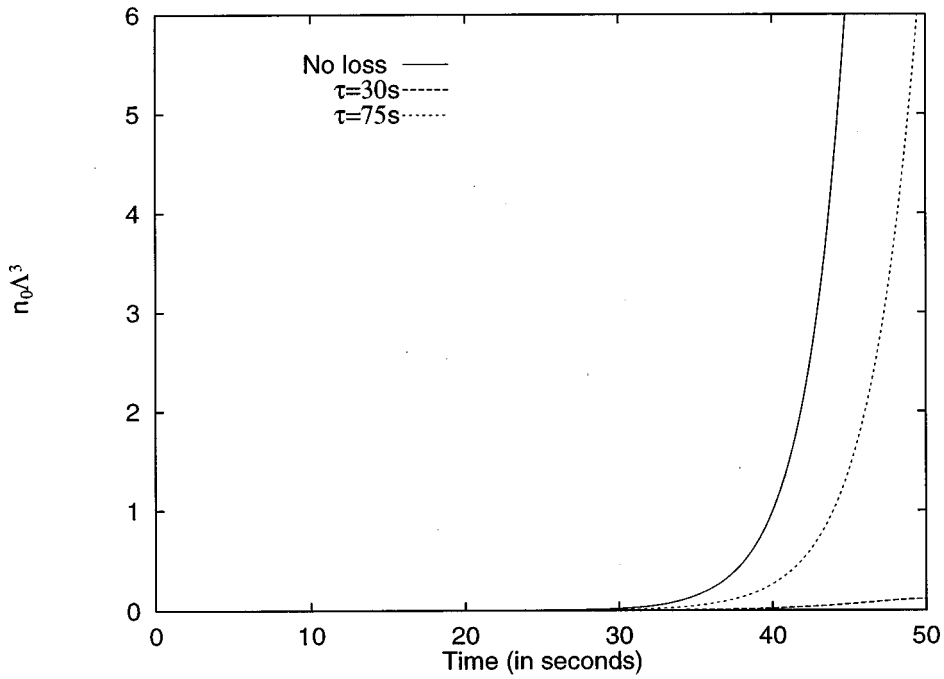

FIG. 2. The evaporation in the linear trap 2 when loss due to background gas collisions is taken into account. We observe that the condensation conditions are reached later as the background gas pressure is increased, and for τ=30 s, corresponding to a pressure of around 3.8×10^{-11} torr, the increase in the phase-space density stops towards the end of the evaporation cycle and the BEC condition is not reached.

Erratum: Quantum evolution of classical nonlinear eigenmode in parametric interaction and realization in traps with ions [Phys. Rev. A 55, R4007 (1997)]

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In order to have a nonzero third-order term x^2y, we need to introduce a relative phase θ between the two components of the field, so that the last term in Eq. (19) will be $ik_x^2k_yx^2ye^{i\theta}/2+$ c.c. All other arguments about realizing parametric interactions in traps hold. We regret this oversight.

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