Errata

Erratum: Oscillatory free-induction decay [Phys. Rev. A 21, 887 (1980)]

Axel Schenzle, N. C. Wong, and Richard G. Brewer

(1) Equation (2.16) should read

$$g(\Delta) = (N/\sqrt{\pi}\,\sigma)e^{-(\Delta/\sigma)^2}.$$

(2) In the second line following equation (3.41): $g(0) = N/\sqrt{\pi\sigma}$ should be $g(0) = N/\sqrt{\pi}\,\sigma$.

Erratum: Linear-response theory within the density-functional formalism: Application to atomic polarizabilities [Phys. Rev. A 21, 12 (1980)]

M. J. Stott and E. Zaremba

A programming error was made in the numerical evaluation of $v'_{xc}(r)$ which resulted in incorrect values for the dipole polarizabilities as calculated within the density-functional theory. The corrected values for all the atoms previously considered are now contained in the table. They are generally in much better agreement with experiment. In particular, the good values for the alkaline earth metal atoms invalidates the earlier conclusion that the local-density approximation (LDA) is failing for these atoms. The LDA appears to be a good approximation for all the atoms considered, except perhaps for He whose polarizability is still significantly overestimated. Finally, we should mention that the numerical solutions to the integral equation for $\alpha(r)$ illustrated in the figures are quantitatively incorrect for the same reason, but qualitatively the figures convey the correct information.

TABLE I. Dipole polarizabilities in atomic units (a_0^3) as calculated within density-functional theory. The values in parentheses for the rare-gas atoms include exchange only. These values correct data in Tables I, III, and IV of the original paper.

He	Ne	Ar	Kr	Xe
1.63(1.77)	3.00(3.26)	11.8(12.8)	17.7(19.2)	28.3(30.7)
Li^+	Na^+	K^+	Rb^+	Cs^+
0.214	1.07	5.70	9.43	16.3
Be	Mg	Ca	Sr	Ba
43.0	69.8	145	184	264
Zn	Cd			
37.7	51.6			

Erratum: Generalized Hiller-Sucher-Feinberg identity [Phys. Rev. A 21, 1067 (1980)]

Jacob Katriel

The top six lines on the right-hand column on p. 1068 should be replaced by "construct (nonuniquely) a parametric family $\tilde{\Psi}(\eta)$ such that $\tilde{\Psi}(0) = \Psi$ and $\tilde{\Psi}(\eta_0)$ satisfies the hypervirial theorem, though neither is the exact eigenfunction. As the hypervirial relation is satisfied for...." Nothing else is affected by this change. This change avoids certain difficulties discussed by A. Burnel and H. Caprasse, Phys. Rev. D 21, 2000 (1980) and also by S. T. Epstein (unpublished).

I wish to thank Professor Saul T. Epstein for drawing my attention to this problem and for an illuminating correspondence.