ERRATA

Erratum: Helium momentum-space wave function and Compton profile [Phys. Rev. A 38, 3200 (1988)]

Paul J. Schreiber, R. P. Hurst, and Thomas E. Duvall

Four errors appeared in the Appendix.

(1) x_{10} in Eq. (A1) should read

$$x_{10}=\frac{1}{\sqrt{-x_8}}\left[\sin^{-1}\left[\frac{x_9}{\sqrt{x_7}}\right]-\sin^{-1}\left[\frac{2x_8}{\sqrt{x_7}(1+x_5/x_2)}+\frac{x_9}{\sqrt{x_7}}\right]\right].$$

(2) Equation (A2) should read

$$L_6=\frac{3}{8}\frac{1}{x_2}\int_0^1\frac{(u-u^2)du}{[(x_5/x_2)u+1][x_4(-u^2+u)+a^2]^{(1/2)+2}}.$$

(3) Δ_1 in Eq. (A7) should read

$$\Delta_1=-x_7<0\ .$$

(4) Finally, Eq. (A9) should read

$$L_7=\frac{1}{2}\frac{1}{x_2^2}\left\{x_{11}-(1+2x_5/x_2)\left[-\frac{2ax_5x_9}{x_2x_7x_8}+\frac{4a}{x_7}-\frac{2x_9^2}{ax_7x_8}+\frac{x_{10}}{x_8}\right]\right.$$
$$+\frac{x_5}{x_2}(1+x_5/x_2)\left[-\frac{1}{ax_8(1+x_5/x_2)}-\frac{2a}{x_8^2}+\frac{2a}{x_8^2(1+x_5/x_2)}-\frac{x_9x_{10}}{x_8^2}\right.$$
$$\left.\left.-\frac{x_9}{2x_8}\left[-\frac{2ax_5x_9}{x_2x_7x_8}+\frac{4a}{x_7}-\frac{2x_9^2}{ax_7x_8}+\frac{x_{10}}{x_8}\right]\right]\right\}.$$

These changes do not affect any of the computed values and do not affect any of the conclusions drawn in the paper.

We sincerely thank Dr. T. Koga for drawing our attention to the above errors.

Erratum: Radiation amplification through autoionizing resonances without population inversion [Phys. Rev. A 40, 4131 (1989)]

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This paper contains a number of misprints in the signs of Eqs. (1)–(6). The corrected set of equations reads as follows:

$$\dot{\rho}_{11}=-\gamma_1\rho_{11}+2\,\mathrm{Im}\left[\tilde{\Omega}_2\left[1-\frac{i}{q_2}\right]\rho_{21}\right]+2\,\mathrm{Im}\left[\tilde{\Omega}_3\left[1-\frac{i}{q_3}\right]\rho_{31}\right]+Q_1P-Q_2\rho_{11}\ , \tag{1}$$

$$\dot{\rho}_{22}=-\Gamma_2\rho_{22}-2\,\mathrm{Im}\left[\tilde{\Omega}_2\left[1+\frac{i}{q_2}\right]\rho_{21}\right]-2\,\mathrm{Im}(\Omega_{32}\rho_{23})+Q_2\rho_{11}\ , \tag{2}$$

$$\dot{\rho}_{33}=-\Gamma_3\rho_{33}-2\,\mathrm{Im}\left[\tilde{\Omega}_3\left[1+\frac{i}{q_3}\right]\rho_{31}\right]-2\,\mathrm{Im}(\Omega_{32}\rho_{32})\ , \tag{3}$$

$$\dot{\rho}_{21}=-\left[i\delta_2+\frac{\gamma_1+\Gamma_2}{2}\right]\rho_{21}-i\tilde{\Omega}_2\left[\left[1-\frac{i}{q_2}\right]\rho_{11}-\left[1+\frac{i}{q_2}\right]\rho_{22}\right]-i\Omega_{32}^{*}\rho_{31}+i\tilde{\Omega}_3\left[1+\frac{i}{q_3}\right]\rho_{23}\ , \tag{4}$$

$$\dot{\rho}_{31}=-\left[i\delta_3+\frac{\gamma_1+\Gamma_3}{2}\right]\rho_{31}-i\tilde{\Omega}_3\left[\left[1-\frac{i}{q_3}\right]\rho_{11}-\left[1+\frac{i}{q_3}\right]\rho_{33}\right]-i\Omega_{32}^{*}\rho_{21}+i\tilde{\Omega}_2\left[1+\frac{i}{q_2}\right]\rho_{32}\ , \tag{5}$$

$$\dot{\rho}_{32}=-\left[i(\delta_3-\delta_2)+\frac{\Gamma_2+\Gamma_3}{2}\right]\rho_{32}-i(\Omega_{32}^{*}\rho_{22}-\Omega_{32}\rho_{33})-i\tilde{\Omega}_3\left[1-\frac{i}{q_3}\right]\rho_{12}+i\tilde{\Omega}_2\left[1+\frac{i}{q_2}\right]\rho_{31}\ . \tag{6}$$

In the text following the equations, $\delta_1=\omega-\bar{\omega}_1$ should be replaced by $\delta_2=\bar{\omega}_2-\omega$, $\delta_2=\omega-\bar{\omega}_2$ by $\delta_3=\bar{\omega}_3-\omega$, $\bar{\omega}_1$ by ω_2, and $\bar{\omega}_2$ by $\bar{\omega}_3$, so that they are consistent with the labeling in Fig. 1 as well as Tables I and II. The equations with the correct signs were employed in the calculations. These misprints were first pointed out to us by Salvatore Basile and independently by Shi-Yao Zhu.

We have in the meantime discovered an error in Eq. (7). The definition of $\dot{n}$ given in that equation is not correct in general, but only for $q_j \gg 1$. The generally correct expression should read

$$\dot{n}=2\sum_{j=2}^{3}\mathrm{Im}\left[\tilde{\Omega}_j\left[1-\frac{i}{q_j}\right]\rho_{j1}\right]-\gamma_1\rho_{11}\ . \tag{7}$$

In the sentence following Eq. (7) the generally correct identification should be changed from $\dot{n}\sim-(\dot{\rho}_{22}+\dot{\rho}_{33}-\dot{\rho}_{11})$ to $\dot{n}\sim\dot{\rho}_{11}$.

This correction does not alter the conclusions of the paper, but it does alter somewhat the range of detunings (listed in Tables I and II) where the gain is positive. The change is favorable in the sense that the range of detuning for positive gain is larger and the value of the gain increased somewhat.

We will present more detailed discussions and calculations on this issue in our next paper.

Erratum: Collisional ionization and excitation of H_2: Two-electron processes [Phys. Rev. A 42, 1367 (1990)]

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Because of a calibration error, the cross sections published in this paper are approximately a factor of 2 too high. The relative values of the cross sections as reflected in the energy dependence are unaffected. Tables I and II should be replaced by the ones below. The analysis of the data remains the same.

TABLE I. Double-ionization cross sections of H_2 by electrons and protons oriented at 90° relative to the projectile direction.

Projectile (keV/amu)	σ^{2+} (10^{-20} cm^2) Electrons	Protons
350	22.4±3.4	20.5±3.1
400	21.7±3.2	17.2±2.6
500	15.2±2.3	12.0±1.8
750	13.6±2.0	6.60±1.00
1000	10.1±1.5	4.41±0.65
1500	7.92±1.20	2.81±0.42
2000	4.94±0.73	2.22±0.34
2500	4.20±0.63	1.75±0.26
3000	3.43±0.52	1.35±0.20
3500	3.01±0.45	1.14±0.17