

Erratum: Test of charge-conjugation symmetry via microwave spectroscopy of positronium [Phys. Rev. A **112**, 062801 (2025)]

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In our original article an incorrect value of the Rabi frequency Ω_1 was used to determine the electric field in the waveguide used in the experiment. The field was determined using $\mathcal{E}_0(\nu_1) = \hbar\Omega_1/d_{2S_1,2P_1}$, where $d_{2S_1,2P_1} = 4.24ea_0$, which is correct. However, as shown in Fig. 5, we measured $\Omega_1 = 17.72$ MHz, and so the correct field is equal to 3.3 V/cm, and not 4.3 V/cm as stated. This mistake propagated through to the ν_F fields, which were obtained by scaling the ν_1 value, also accounting for the waveguide response. Thus, $\mathcal{E}(\nu_F)$ is equal to 12.5 V/cm, and not 18.1 V/cm as stated.

Since $\mathcal{E}(\nu_F)$ was used to determine $|M_{CV}|$ from the measured values of $\Omega_{M_J}(0)$ using Eq. (7), i.e.,

$$\Omega_{M_J}(0) = \frac{(6ea_0)\mathcal{E}_0}{\hbar} |M_{CV}| \sqrt{\sum_J \frac{C_{JM_J}}{E_J^2}},$$

the $|M_{CV}|$ values reported in the table are also incorrect. The corrected values are shown here in Table I.

These corrections do not affect the conclusions of the paper. The nonzero matrix elements observed exhibit slightly lower statistical significance (2.5σ as compared to approximately 3σ), but the general conclusion that this arises, at least in part, from our inability to resolve the two components that make up the line shape remains the same.

TABLE I. Values of $|M_{CV}|$ derived from measured values of $\Omega_{M_J}(0)$ using the correct electric field.

M_J	$\Omega_{M_J}(0)$ (MHz)	$ M_{CV} $ (MHz)	σ
1	7.46 ± 2.38	26.0 ± 10.4	2.5
0	10.31 ± 3.30	53.6 ± 21.4	2.5