Erratum: Double-resonance frequency shift in a hydrogen maser
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We wish to clarify an inconsistency in our notation where we have defined the term $\mathbf{H}_C$ in two different ways. In Sec. II, we have written the microwave cavity field as

$$\mathbf{H}(\mathbf{r}, \omega) = \sqrt{4\pi} p_C(\omega) \mathbf{H}_C(\mathbf{r}). \quad (1)$$

Here, the amplitude and time dependence of the field are included in $p_C(\omega)$, whereas $\mathbf{H}_C$ is merely an orthonormal vector describing the spatial variation of the field.

On the other hand, in Sec. III and Sec. IV, we have defined the microwave cavity field as

$$\mathbf{H}(\mathbf{r}, t) = \mathbf{H}_C(\mathbf{r}) \cos(\omega t). \quad (2)$$

Here, $\mathbf{H}_C$ represents the time-independent amplitude of the microwave cavity field. With this definition, the amplitude of the coupling between states $|2\rangle$ and $|4\rangle$ would be given by $H_{24} = \langle 2 | \hat{\boldsymbol{\mu}} \cdot \mathbf{H}_C | 4 \rangle$. The couplings to the dressed states (H_{4a} , H_{4b} , and H_{4c}) are similarly defined.