

Geometric phase of quantized electromagnetic field in time-dependent linear media

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Erratum

Geometric phase of quantized electromagnetic field in time-dependent linear media

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After the publication of this paper, the authors realized the occurrence of several errors in their original presentation. They are listed below.

i) Equation (9) on page 2 should read correctly

$$\mathbf{D}(\mathbf{r},t) = -\sum_{l} \mathbf{u}_{l}(\mathbf{r}) \mathbf{e}^{-\int_{0}^{t} \Lambda(t') \mathrm{d}t'} p_{l}(t).$$
(9)

In all subsequent equations where $\mathbf{E}(\mathbf{r},t)$ appears in any form, it must be replaced by $\mathbf{D}(\mathbf{r},t)$. The results and conclusions drawn in the paper are not affected by these replacements which are mere typos.

ii) In eq. (12) on page 3, the numerical coefficient appearing in the denominator of the second term of the angle should be 4 instead of 2. Thus, Hannay's angle $\dot{\theta}_l^H$, throughout the manuscript, should read

$$\dot{\theta}_l^H = -\dot{\sigma}/4\varepsilon \varpi_l.$$

Consequently, the relation between Berry's phase and Hannay's angle appearing in the paragraph after eq. (17) on page 3 should be

$$\varphi_l^B(t) = -\theta_l^H(t).$$

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