

Erratum: Reexamination of the helium fine structure [Phys. Rev. A **79, 062516 (2009)]**

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The relativistic correction to the Bethe logarithm E_{L1} was defined inconsistently in different parts of the paper. To correct this, $\ln K$ and $\ln \kappa$ in Eqs. (168) and (173) should be replaced by $\ln(2K/Z^2)$ and $\ln(2\kappa/Z^2)$, respectively. As a consequence, the numerical result for E_{L1} [Eq. (176)] should read

$$E_{L1} = -0.082\,787(6)u_J + 0.096\,858\,9(4)v_J.$$

The corresponding entry in Table II should be -25.42 kHz for the ν_{01} interval and -3.36 for the ν_{12} interval. The total theoretical values for the fine-structure intervals of helium given in Table II should read $\nu_{01} = 29\,616\,952.29 \pm 1.6$ kHz and $\nu_{12} = 2\,291\,178.90 \pm 1.6$ kHz. This change removes the disagreement with experiment reported in the paper. The corrected theoretical results and a discussion of consequences for the determination of the fine-structure constant are given in the follow-up Letter [1].

[1] K. Pachucki and V. A. Yerokhin, Phys. Rev. Lett. **104**, 070403 (2010).