
01 Jun 2005

Erratum: Nonrelativistic QED Approach to the Bound-Electron g Factor (Phys. Rev. Lett. (2004) 93 (150401))

Krzysztof Pachucki

Ulrich D. Jentschura

Missouri University of Science and Technology, ulj@mst.edu

Vladimir A. Yerokhin

Follow this and additional works at: https://scholarsmine.mst.edu/phys_facwork



Part of the [Physics Commons](#)

Recommended Citation

K. Pachucki et al., "Erratum: Nonrelativistic QED Approach to the Bound-Electron g Factor (Phys. Rev. Lett. (2004) 93 (150401))," *Physical Review Letters*, vol. 94, no. 22, American Physical Society (APS), Jun 2005. The definitive version is available at <https://doi.org/10.1103/PhysRevLett.94.229902>

This Erratum is brought to you for free and open access by Scholars' Mine. It has been accepted for inclusion in Physics Faculty Research & Creative Works by an authorized administrator of Scholars' Mine. This work is protected by U. S. Copyright Law. Unauthorized use including reproduction for redistribution requires the permission of the copyright holder. For more information, please contact scholarsmine@mst.edu.

**Erratum: Nonrelativistic QED Approach to the Bound-Electron g Factor
[Phys. Rev. Lett. 93, 150401 (2004)]**

Krzysztof Pachucki, Ulrich D. Jentschura, and Vladimir A. Yerokhin

(Received 17 May 2005; published 7 June 2005)

DOI: 10.1103/PhysRevLett.94.229902

PACS numbers: 12.20.Ds, 31.15.-p, 31.30.Jv, 99.10.Cd

In a recently published Letter we have erroneously introduced an overall factor of 2 for the two-loop correction to the bound-electron g factor. Consequently, the right-hand side of Eqs. (11), (13) and the numerical value of the entry “Binding QED, $\sim(\alpha/\pi)^2(Z\alpha)^4$ ” in Table II (both the correction and the uncertainty) should be divided by 2. The total value for the g factor (the last line of Table II) becomes 2.001 041 590 32(6) for carbon and 2.000 047 020 75(17) for oxygen. The numerical values for the electron mass derived from the g factor values [Eqs. (14) and (15)] should read

$$m(^{12}\text{C}^{5+}) = 0.000\,548\,579\,909\,35(29)(2)\text{u}, \quad (1)$$

$$m(^{16}\text{O}^{7+}) = 0.000\,548\,579\,909\,72(41)(5)\text{u}. \quad (2)$$