ERRATA

Erratum: “Relativistic Theory of the Electric Quadrupole Moment of a Hydrogen-Like Atom in the $s_{1/2}$ and $p_{1/2}$ States” [Optics and Spectroscopy 99, 527 (2005)]

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Received October 1, 2004

PACS numbers: 99.10.Cd

DOI: 10.1134/S0030400X06060245

In the section DISCUSSION OF THE RESULTS, an error was made by the authors. The expression for the total quadrupole moment of an atom should read

$$Q_{\text{total}} = \zeta Q_N + Q_\mu + Q_Q,$$

where

$$\zeta = \begin{cases} 1, & F = I + 1/2, \\ \frac{(I-1)(2I+3)}{I(2I+1)}, & F = I - 1/2. \end{cases}$$

This leads to the following changes in the values of Q_{total} (in barns) for the states with $F = I - 1/2$ presented in Tables 1–3:

Atom	^1H	$^{13}\text{C}^{5+}$	$^{17}\text{O}^{7+}$	$^{33}\text{S}^{15+}$	$^{43}\text{Ca}^{19+}$	$^{53}\text{Cr}^{23+}$
$Q_{\text{total}}, F = I - 1/2, 1s_{1/2}$	0	0	0.00583	−0.043(4)	−0.033(5)	−0.07(3)
$Q_{\text{total}}, F = I - 1/2, 2s_{1/2}$	0	0	0.03232	−0.044(4)	−0.023(5)	−0.07(3)
$Q_{\text{total}}, F = I - 1/2, 2p_{1/2}$	0	0	−115.2	3.3(2)	−6.44(8)	0.1(2)
Atom	$^{57}\text{Fe}^{25+}$	$^{73}\text{Ge}^{31+}$	$^{131}\text{Xe}^{53+}$	$^{207}\text{Pb}^{81+}$	$^{209}\text{Bi}^{82+}$	$^{235}\text{U}^{91+}$
$Q_{\text{total}}, F = I - 1/2, 1s_{1/2}$	0	−0.16(2)	−0.06(1)	0	−0.47(7)	4.398(5)
$Q_{\text{total}}, F = I - 1/2, 2s_{1/2}$	0	−0.15(2)	−0.06(1)	0	−0.48(7)	4.367(5)
$Q_{\text{total}}, F = I - 1/2, 2p_{1/2}$	0	−0.9(1)	0.04(1)	0	−0.11(9)	3.75(1)

Translated by V. Rogovoi