

**Erratum: Reinvestigation of the excited states in the proton emitter  $^{151}\text{Lu}$ : Particle-hole excitations across the  $N = Z = 64$  subshell [Phys. Rev. C **96**, 064307 (2017)]**

F. Wang, B. H. Sun, Z. Liu, C. Qi, L. H. Zhu, C. Scholey, S. F. Ashley, L. Bianco, I. J. Cullen, I. G. Darby, S. Eeckhaudt, A. B. Garnsworthy, W. Gelletly, M. B. Gomez-Hornillos, T. Grahn, P. T. Greenlees, D. G. Jenkins, G. A. Jones, P. Jones, D. T. Joss, R. Julin, S. Juutinen, S. Ketelhut, S. Khan, A. Kishada, M. Leino, M. Niikura, M. Nyman, R. D. Page, J. Pakarinen, S. Pietri, Zs. Podolyák, P. Rahkila, S. Rigby, J. Sarén, T. Shizuma, J. Sorri, S. Steer, J. Thomson, N. J. Thompson, J. Uusitalo, P. M. Walker, and S. Williams



(Received 19 December 2017; published 13 February 2018)

 DOI: [10.1103/PhysRevC.97.029902](https://doi.org/10.1103/PhysRevC.97.029902)

The aim of this Erratum is to update Table I in the original article in which inconsistent spin-parity assignments were presented for the 242-, 432-, 445-, 525-, 643-, 684-, 704-, and 848-keV  $\gamma$  transitions. The errors are corrected in the new Table I here. The uncertainties of the  $E_\gamma$  have been included as well. Figure 3, the discussions, and the conclusions in the original article remain valid.

TABLE I. Energies and relative intensities for  $\gamma$  transitions assigned to  $^{151}\text{Lu}$ . The relative intensity of the 612-keV transitions, feeding the ground state, is normalized to 100%.

| $E_\gamma$ (keV) | $J_i^\pi$            | $J_f^\pi$            | $I_\gamma$ (%) |
|------------------|----------------------|----------------------|----------------|
| 170.4(15)        | (33/2 <sup>-</sup> ) | (31/2 <sup>-</sup> ) | 10(3)          |
| 242.3(10)        | (31/2 <sup>-</sup> ) | (31/2 <sup>-</sup> ) | 8(4)           |
| 301.8(3)         | (23/2 <sup>+</sup> ) | (19/2 <sup>+</sup> ) | 44(2)          |
| 322.3(4)         | (27/2 <sup>-</sup> ) | (23/2 <sup>-</sup> ) | 35(2)          |
| 401.8(6)         | (19/2 <sup>+</sup> ) | (17/2 <sup>-</sup> ) | 39(2)          |
| 431.7(6)         | (19/2 <sup>+</sup> ) | (19/2 <sup>-</sup> ) | 30(2)          |
| 445.2(12)        | (37/2 <sup>+</sup> ) | (35/2 <sup>+</sup> ) | 9(5)           |
| 524.6(10)        | (31/2 <sup>-</sup> ) | (31/2 <sup>-</sup> ) | 10(3)          |
| 612.3(4)         | (15/2 <sup>-</sup> ) | 11/2 <sup>-</sup>    | 100(2)         |
| 625.3(5)         | (35/2 <sup>+</sup> ) | (31/2 <sup>+</sup> ) | 29(2)          |
| 642.6(5)         | (31/2 <sup>-</sup> ) | (27/2 <sup>-</sup> ) | 32(2)          |
| 662.1(6)         | (13/2 <sup>-</sup> ) | 11/2 <sup>-</sup>    | 29(2)          |
| 684.4(5)         | (27/2 <sup>+</sup> ) | (23/2 <sup>+</sup> ) | 39(3)          |
| 703.8(10)        | (35/2 <sup>+</sup> ) | (31/2 <sup>+</sup> ) | 15(3)          |
| 840.1(12)        | (17/2 <sup>-</sup> ) | (13/2 <sup>-</sup> ) | 35(4)          |
| 847.5(12)        | (31/2 <sup>+</sup> ) | (27/2 <sup>+</sup> ) | 33(4)          |
| 860.3(5)         | (19/2 <sup>-</sup> ) | (15/2 <sup>-</sup> ) | 87(3)          |
| 890.1(10)        | (17/2 <sup>-</sup> ) | (15/2 <sup>-</sup> ) | 20(3)          |
| 930.9(10)        | (35/2 <sup>-</sup> ) | (31/2 <sup>-</sup> ) | 14(5)          |
| 950.3(6)         | (23/2 <sup>-</sup> ) | (19/2 <sup>-</sup> ) | 44(3)          |

TABLE II. The reduced transition probabilities for the 302-, 322-, and 612-keV transitions in  $^{151}\text{Lu}$  under different multipolarity assumptions; the small-space shell model results for  $E2$  transitions are also listed.

| $E_\gamma/\text{keV}$ | Lifetime (ps) | $B(M1)\downarrow$ [Weisskopf unit (W.u.)] |                         | $B(E2)\downarrow$ ( $e^2 \text{ fm}^4$ ) |                                | $B(E2)_{\text{theo}}$ ( $e^2 \text{ fm}^4$ ) |                                     | $B(E1)\downarrow$ (W.u.) |
|-----------------------|---------------|---|-------------------------|--|--------------------------------|--|-------------------------------------|--------------------------|
|                       |               | $B(M1)\downarrow(\mu_N^2)$                | unit (W.u.)             | $B(E2)\downarrow(e^2 \text{ fm}^4)$      | $B(E2)\downarrow(\text{W.u.})$ | $B(E2)\downarrow(e^2 \text{ fm}^4)$          | $B(E1)\downarrow(e^2 \text{ fm}^2)$ |                          |
| 302                   | 290(90)       | $7.1(22)\times 10^{-3}$                   | $4.0(12)\times 10^{-3}$ | 1125(349)                                | 23(7)                          | 265  | $7.9(24)\times 10^{-5}$             | $4.3(13)\times 10^{-5}$  |
| 322                   | 160(20)       | $1.0(1)\times 10^{-2}$                    | $6.0(7)\times 10^{-3}$  | 1480(184)                                | 31(34)                         | 1712   | $1.1(1)\times 10^{-4}$              | $6.4(8)\times 10^{-5}$   |
| 612                   | 7.4(42)       | $3.3(19)\times 10^{-2}$                   | $1.9(10)\times 10^{-2}$ | 1290(732)                                | 27(15)                         | 1508   | $3.7(21)\times 10^{-4}$             | $2.0(11)\times 10^{-4}$  |

Moreover, in the caption of the original Fig. 3 it said that “The half-lives for the  $(15/2^-)$ ,  $(27/2^-)$ , and  $(23/2^+)$  states . . . .” According to Ref. [1], we would like to clarify that 7.4(42) ps corresponds to the weighted average lifetimes for the  $(15/2^-)$  state, and 160(20) and 290(90) ps are the effective lifetimes for the  $(27/2^-)$  and  $(23/2^+)$  states, respectively. Accordingly, in the original table, the heading “half-life (ps)” should be modified as “Lifetime (ps).” The new Table II is updated here. All the related discussions remain valid.

We wish to thank B. Singh for making us aware of these errors in the original paper.

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- [1] M. Procter, D. Cullen, M. Taylor, G. Alharshan, L. Ferreira, E. Maglione, K. Auranen, T. Grahn, P. Greenlees, U. Jakobsson, R. Julin, A. Herzáň, J. Konki, M. Leino, J. Pakarinen, J. Partanen, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, J. Sarén, S. Stolze, C. Scholey, J. Sorri, J. Uusitalo, T. Braunroth, E. Ellinger, A. Dewald, D. Joss, C. McPeake, and B. Saygi, *Phys. Lett. B* **725**, 79 (2013).