

Erratum: *Ab initio* mapping of the boundary of the $N = 20$ island of inversion [Phys. Rev. C **114**, 034307 (2026)]

E. F. Zhou (周恩付), C. R. Ding (丁晨蓉) , Q. Y. Luo (罗青杨), J. M. Yao (尧江明) , and H. Hergert



(Received 16 September 2026; published 23 October 2026)

DOI: [10.1103/vzpl-2wnz](https://doi.org/10.1103/vzpl-2wnz)

In the original article, Table I compared the calculated $B(E2 \downarrow; 5/2_1^+ \rightarrow 3/2_1^+)$ values for $^{29,31,33}\text{Na}$ with shell-model results and available experimental data. We update the experimental entries and their citations to include the relevant measurements for ^{29}Na and the most recent measurement for ^{31}Na . The corrected Table I is reproduced below.

TABLE I. Calculated $B(E2 \downarrow; 5/2_1^+ \rightarrow 3/2_1^+)$ values, in $e^2 \text{ fm}^4$, for $^{29,31,33}\text{Na}$. The IM-GCM results are compared with shell-model results based on the USDB interaction [1], obtained with effective charges $e_\pi = 1.5e$ and $e_\nu = 0.5e$ for protons and neutrons, respectively, and with available experimental data.

Isotope	USDB [2]	IM-GCM	Experiment
^{29}Na	96	63	93(17) [3]; 100(13) [4]
^{31}Na	76	79	140_{-31}^{+27} [5]
^{33}Na	—	97	—

These corrections affect neither the calculated results nor the conclusions of the original article.

-
- [1] W. A. Richter, S. Mkhize, and B. A. Brown, *sd*-shell observables for the USDA and USDB Hamiltonians, *Phys. Rev. C* **78**, 064302 (2008).
 [2] S. Sahoo, P. C. Srivastava, and T. Suzuki, Study of structure and radii for $^{20-31}\text{Na}$ isotopes using microscopic interactions, *Nucl. Phys. A* **1032**, 122618 (2023).
 [3] A. M. Hurst, C. Y. Wu, J. A. Becker, M. A. Stoyer, C. J. Pearson, G. Hackman, M. A. Schumaker, C. E. Svensson, R. A. E. Austin, G. C. Ball, D. Bandyopadhyay, C. J. Barton, A. J. Boston, H. C. Boston, R. Churchman, D. Cline, S. J. Colosimo, D. S. Cross, G. Demand, M. Djongolov, *et al.*, Narrowing of the neutron *sd*-*pf* shell gap in ^{29}Na , *Phys. Lett. B* **674**, 168 (2009).
 [4] M. Seidlitz, P. Reiter, R. Altenkirch, B. Bastin, C. Bauer, A. Blazhev, N. Bree, B. Bruyneel, P. A. Butler, J. Cederkäll, T. Davinson, H. De Witte, D. D. DiJulio, J. Diriken, L. P. Gaffney, K. Geibel, G. Georgiev, R. Gernhäuser, M. Huyse, N. Kesteloot, *et al.*, Coulomb excitation of $^{29,30}\text{Na}$: Mapping the borders of the island of inversion, *Phys. Rev. C* **89**, 024309 (2014).
 [5] R. Salinas, H. Iwasaki, A. Revel, B. A. Brown, J. Ash, D. Bazin, J. Chen, R. Elder, P. Farris, A. Gade, M. Grindler, N. Kobayashi, J. Li, B. Longfellow, T. Mijatović, J. Pereira, A. Sanchez, M. Spieker, Y. Utsuno, D. Weisshaar, *et al.*, Persistence of collectivity in the low-lying states of $^{30,31}\text{Na}$ inside the $N = 20$ island of inversion, *Phys. Rev. C* **113**, 014330 (2026).