

## Erratum: Radiative lifetime and energy of the low-energy isomeric level in $^{229}\text{Th}$ [Phys. Rev. C **92**, 054324 (2015)]

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In the original paper, the range of possible radiative linewidths  $\Gamma_{\text{rad}}$  (Fig. 2) and possible conversion widths for the neutral thorium atom due to internal conversion (IC) (Fig. 3) was plotted incorrectly for one of the referenced reduced probabilities  $B_{\text{W.u.}}$ . Furthermore, the scale for  $T_{1/2}^{\text{is}}$  was flipped in Fig. 3. The possible lifetime in a neutral thorium atom due to IC should read  $0.4 \mu\text{s} \lesssim T_{1/2}^{\text{is}} \lesssim 9 \mu\text{s}$  instead of  $10 \mu\text{s}$ . These corrections have no implications on experimental searches for the thorium nuclear isomeric transition or their results.

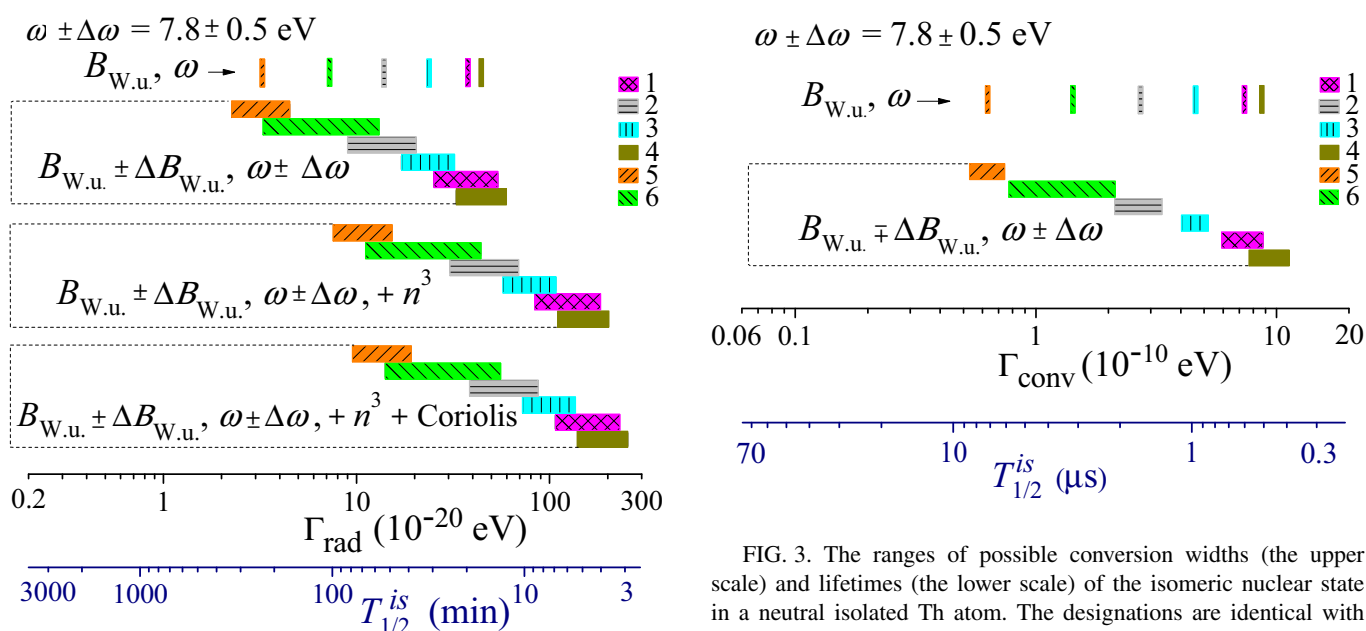


FIG. 2. The range of possible radiative linewidths  $\Gamma_{\text{rad}}$  (upper scale) and half-lives  $T_{1/2}^{\text{is}}$  (lower scale) of the isomeric state  $3/2^+3/2[631](7.8 \pm 0.5 \text{ eV})$  in the  $^{229}\text{Th}$  nucleus. Calculations are based on values for  $B_{\text{W.u.}}(M1; 3/2^+3/2[631] \rightarrow 5/2^+5/2[633])$  from Table I (calculated from 1; Ref. [1]; 2; Ref. [2]; 3; Ref. [3]; and 4; Ref. [4]) and, for completeness, Table II (5; Ref. [5]; and 6; Ref. [3]). The refractive index  $n \approx 1.5$  increases the probability of the  $M1$  transition by a factor of  $n^3$  (third row). The Coriolis interaction can lead to a slight increase in the linewidth by a factor of 1.2–1.3 [6] (fourth row). Note the correction to the range in case number 6.

FIG. 3. The ranges of possible conversion widths (the upper scale) and lifetimes (the lower scale) of the isomeric nuclear state in a neutral isolated Th atom. The designations are identical with the designations in Fig. 2. Note the correction to the range in case number 6 and the corrected axis for  $T_{1/2}^{\text{is}}$ .

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