Erratum: Level scheme of ^{153}Sm obtained from the $^{152}\text{Sm}(n_{\text{th}}, \gamma)$ reaction using a $\gamma\text{-}\gamma$ coincidence spectrometer [Phys. Rev. C **100, 024324 (2019)]**

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We found a mistake in the code which was used to calculate the back-shifted Fermi gas (BSFG) nuclear level densities. This mistake is related to the BSFG results shown in Fig. 6 and Table II of the original article, which should be replaced with the corrected Fig. 6 and Table II, respectively.

These corrected calculations point out that our claim in the original article that the BSFG model with the free parameters taken from Ref. [34] completely fails to describe both the total and the J -dependent experimental cumulative curves does not hold. Indeed, as can be seen in the corrected Fig. 6, the BSFG with the free parameters taken from Ref. [34] describes fairly well the J -dependent experimental cumulative curve and the low-energy part (i.e., less than 0.5 MeV) of the total cumulative one. Fortunately, these changes do not affect our conclusion in the original article that the recent exact pairing plus independent-particle model at finite temperature is found to be the best-fitted one.

TABLE II. Corrected version of Table II in the original article. Values of the free parameters obtained within the constant temperature (CT) and BSFG models presented in Fig. 6.

Model	CT		BSFG	
	E_0 (MeV)	T (MeV)	a (MeV $^{-1}$)	E_1 (MeV)
Parameters from Ref. [34]	-2.06 ± 0.29	0.61 ± 0.03	17.76 ± 0.28	-1.08 ± 0.13
Fitted to this work 1 in Fig. 6(a)			3.52 ± 0.28	-11.65 ± 1.24
Fitted to this work 1 in Fig. 6(b)			12.58 ± 0.15	-2.51 ± 0.07

FIG. 6. Corrected version of Fig. 6 in the original article. Comparison between the experimental total (a) and partial (b) cumulative numbers of levels and those predicted by two phenomenological nuclear level density models.

In addition, there was also a misprint in the formula of the spin cutoff parameter within the BSFG model, which should read (squared, not linear) σ_{BSFG}^2 . The corrected expression should, thus, read

$$\sigma_{\text{BSFG}}^2 = 0.0146A^{5/3} \frac{1 + \sqrt{1 + 4a(E - E_1)}}{2a}.$$

The latter misprint affected none of the conclusions in the original article.

[34] T. von Egidy and D. Bucurescu, [Phys. Rev. C **72**, 044311 \(2005\)](#).