Erratum: β-delayed fission of ^{180}Tl [Phys. Rev. C 88, 044321 (2013)]

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While analyzing β-delayed fission data from another experiment, we realized that there were minor errors in the description of fission calibration procedure for the silicon detectors in the original paper. Although in the reported results all the energy shifts listed in Table I in the original paper were taken into account, they were not always included in the relevant equations [Eqs. (5), (8), and (9)]. In order to rectify this mistake, the following corrections should be made.

The paragraph above Eq. (5) should introduce symbol $\Delta E_{i,\mathrm{cal}}$ and read as follows: "To solve this system of equations the quantities E_i and E_i^* and m_i and m_i^* have to be related. This can be done by taking into account the number of neutrons emitted in the fission ν_i, the corresponding energy carried away by the neutrons $\Delta E_{i,\nu}$, the above-mentioned energy shift caused by the different N/Z ratio of measured fission fragments compared to fragments used for calibration $\Delta E_{i,\mathrm{cal}}$, and the energy loss of the fission fragments owing to their interaction with matter during their flight from the source to the active volume of the silicon detector $\Delta E_{i,\mathrm{int}} = \Delta E_{i,\mathrm{cf}} + \Delta E_{i,\mathrm{dl}}$. The latter contribution consists of the energy loss of the fragment in the implantation carbon foil $\Delta E_{i,\mathrm{cf}}$ and in the dead layer of the detector $\Delta E_{i,\mathrm{dl}}$ (which will increase when the fragments are detected at a certain angle). These considerations lead to the following relations...."

In Eq. (5), the formula for E_i^* should be modified to include $\Delta E_{i,\mathrm{cal}}$:

$$E_i^* = E_i + \Delta E_{i,\nu} + \Delta E_{i,\mathrm{int}} + \Delta E_{i,\mathrm{cal}} = E_i + \Delta E_{i,\nu} + \Delta E_{i,\mathrm{cf}} + \Delta E_{i,\mathrm{dl}} + \Delta E_{i,\mathrm{cal}}.$$

As a consequence, in Eq. (8), the formula for E_i^* should read as

$$E_i^* = (a_i/F_i + a_i' m_i^*)x_i + b_i/F_i + b_i' m_i^* + \Delta E_{i,\mathrm{cf}}/F_i + \Delta E_{i,\mathrm{dl}}/F_i + \Delta E_{i,\mathrm{cal}}/F_i.$$

And in Eq. (9), the expressions for parameters B and C should read as

$$B = a_1 x_1 + b_1 + a_2 x_2 + b_2 + 2A_f a_2' x_2 + 2A_f b_2' + \Delta E_{i,\mathrm{cf}} + \Delta E_{i,\mathrm{dl}} + \Delta E_{i,\mathrm{cal}},$$

$$C = -A_f(a_2 x_2 + A_f a_2' x_2 + b_2 + A_f b_2' + \Delta E_{2,\mathrm{cf}} + \Delta E_{2,\mathrm{dl}} + \Delta E_{2,\mathrm{cal}}).$$

All of the energy shifts were listed in Table I of the original paper, where (i) corresponds to $\Delta E_{i,\mathrm{cal}}$, (ii) corresponds to $\Delta E_{i,\mathrm{dl}}$, and (iii) corresponds to $\Delta E_{i,\mathrm{cf}}$.

In the third paragraph of left column on page 6 of the original paper, the calculation of the energy should refer to Eq. (8), where the discussed energy shifts are included, instead of Eq. (2).

Finally, the last sentence on page 8 should be modified as follows: "Equation (8) can be solved through an iteration procedure by replacing a_i, b_i, $\Delta E_{i,\mathrm{cf}}$, $\Delta E_{i,\mathrm{dl}}$, and $\Delta E_{i,\mathrm{cal}}$ with a_i/F_i, b_i/F_i, $\Delta E_{i,\mathrm{cf}}/F_i$, $\Delta E_{i,\mathrm{dl}}/F_i$, and $\Delta E_{i,\mathrm{cal}}/F_i$, respectively, in Eq. (9)."

We confirm that the corrections in this Erratum apply only to the description of the procedure in the original text, while the proper procedure and formulas were used in the data analysis. Therefore the results and conclusions of the original article are not affected.

