Erratum: Effects of a chiral three-nucleon force on nucleus-nucleus scattering **[Phys. Rev. C **90**, 051601(R) (2014)]**

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As reported in the Erratum [1], several errors were found in the program code for the nuclear-matter calculation reported in the associated original paper [2]. The changes in the G matrices in nuclear matter including the three-nucleon force (3NF) effects affect the results of subsequent applications of them to the description of nucleus-nucleus scatterings reported in the original paper for which we present corrected results in the present Erratum.

The single-particle potentials in Fig. 1 in the original paper are corrected as shown in Fig. 1 for each spin-isospin channel. The 3NF effects become weaker except for the real part in the ^3O channel.

The real and imaginary parts of the ^{16}O - ^{16}O potential at 70 MeV/nucleon are revised as shown in Fig. 2. Corresponding to the change in 3NF effects shown in Fig. 1, the 3NF effects on the folding potential become somewhat weaker.

The corrected angular distributions of the ^{16}O - ^{16}O and ^{12}C - ^{12}C scatterings are shown in Fig. 3. On the whole, the

3NF effects persist, improving the correspondence between the calculated and the measured cross sections, although the agreement is insufficient at large angles. It has been confirmed that the 3NF effects on the total reaction cross sections are still small. Our conclusion for the 3NF effects in the nucleus-nucleus elastic scatterings does not change qualitatively.

FIG. 1. Revised version of Fig. 1 in the original paper. k_F dependence of the nucleon single-particle potential in each spin-isospin channel at $E = 70$ MeV: (a) ^1O , (b) ^1E , (c) ^3E , and (d) ^3O channels. The circles, squares, and triangles stand for the results of the chiral two-nucleon force (2NF) + 3NF, chiral 2NF, and Bonn-B 2NF, respectively. The closed (open) symbols correspond to the real (imaginary) part of the single-particle potentials. For ^3O , the imaginary part is shifted down by 10 MeV.

FIG. 2. Revised version of Fig. 2 in the original paper. The folding potential for the ^{16}O - ^{16}O elastic scattering at 70 MeV/nucleon. The real and imaginary parts of the potential are shown in the upper and lower panels, respectively. The solid (dashed) curve represents the result with (without) the 3NF effects.

FIG. 3. Revised version of Fig. 3 in the original paper. The differential cross sections of (a) the $^{16}\text{O}-^{16}\text{O}$ elastic scattering at 70 MeV/nucleon and (b) the $^{12}\text{C}-^{12}\text{C}$ elastic scattering at 85 MeV/nucleon as a function of the scattering angle in the center-of-mass system. The solid (dashed) line corresponds to the result of Melbourne interaction with (without) the 3NF corrections. The experimental data are taken from Refs. [3,4].

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