Erratum: Faddeev calculation of ${}^{3}_{\Lambda}$H incorporating the 2π-exchange ΛNN interaction [Phys. Rev. C 108, 024004 (2023)]

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As reported in Ref. [1], errors were found in the expressions of partial-wave matrix elements of the 2π exchange ΛNN three-body force (3BF) [2] in the next-to-next-to-leading-order (NNLO) in chiral effective field theory and also in the numerical code of calculating them during the benchmark work [3] with the Jülich group. Due to the errors, matrix elements between the s- and d-wave components in the NN pair were left out. These contributions are attractive and overwhelm the repulsive contribution from the s-wave pair that was shown in Fig. 2 of original paper. Assuming the same choice of the low energy constants, the effect of the 2π 3BF is around 100 keV with small variations depending on the NN interaction employed.

Figure 1 presents the revised results using three hyperon-nucleon (YN) interactions, chiral NLO13 [4], chiral NLO19 [5], and NSC89 [6] along with four different chiral NN interactions [7], which replaces Fig. 3 of original paper.

Table III of original paper, which represents plain numbers of the calculated hypertriton separation energy with 2π-exchange ΛNN 3BFs, is replaced by Table I.

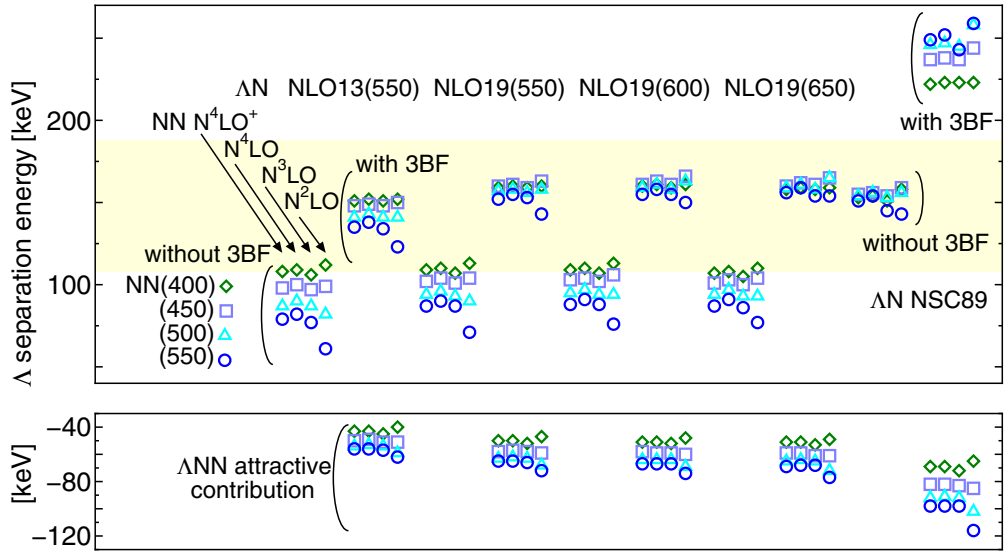

FIG. 1. Λ separation energies of ${}^{3}_{\Lambda}$H using three YN interactions, chiral NLO13 [4], chiral NLO19 [5], and NSC89 [6] along with four different chiral NN interactions [7]. Several cutoff scales are employed for the chiral interactions: 400, 450, 500, and 550 MeV for NN, and 550 and 600 MeV for YN. For both the chiral and the NSC89 YN interactions, the leftmost entry shows the results without the 2π exchange ΛNN 3BF. The band with a different concentration indicates the experimental standard value by the Mainz group [10] of 148 ± 40 keV.

TABLE I. Hypertriton separation energies that include 2π-exchange ΛNN 3BF with $3b_0 + b_D = 0$ and $2b_2 + 3b_4 = -3.0$ GeV^{-1}. Entries are in keV. The numbers in parentheses for NN and YN chiral potentials indicate the cutoff scale Λ_c in MeV.

	YN potential (Λ_c)				
NN potential (Λ_c)	NLO13 (550)	NLO19 (550)	NLO19 (600)	NLO19 (650)	NSC89
CD Bonn [8]	135	151	151	151	244
Nijmegen 93 [9]	114	135	138	140	249
Nijmegen I [9]	120	142	144	145	252
N^{4}LO+ (550)	135	152	155	156	249
N^{4}LO+ (500)	141	157	159	159	246
N^{4}LO+ (450)	148	160	161	160	237
N^{4}LO+ (400)	151	159	160	158	222
N^{4}LO (550)	138	155	158	159	252
N^{4}LO (500)	143	158	161	161	247
N^{4}LO (450)	149	161	163	162	238
N^{4}LO (400)	152	160	161	159	223
N^{3}LO (550)	134	153	155	154	243
N^{3}LO (500)	141	156	158	158	245
N^{3}LO (450)	148	159	161	161	237
N^{3}LO (400)	151	159	159	158	223
N^{2}LO (550)	123	143	150	154	259
N^{2}LO (500)	141	158	163	165	258
N^{2}LO (450)	150	163	166	165	244
N^{2}LO (400)	152	160	161	159	223

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