



Status Report of NSDD in CNDC

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1. Members

Huang Xiaolong: Major NSDD

Liu Lilie: Temporary NSDD, major FY

Wang Xianghan: graduate student

2. Mass chain evaluation

Mass chain A	Status	Evaluators
51	NDS,144,1(2017)	Wang Jimin, Huang Xiaolong
62	NDS, 113, 973 (2012)	Balraj, Huang Xiaolong, being evaluated
195	NDS, 121, 395 (2014)	Huang Xiaolong, Kang Mengxiao
196	NDS,108,1093(2007)	Huang Xiaolong, under review
197	NDS,104,283(2005)	Huang Xiaolong, Wang Jimin, Kang Mengxiao, under review
198	NDS,133,221(2016)	Huang Xiaolong, Kang Mengxiao

3. DDEP

No evaluation in past year,

In this year, reviewed the evaluation of ^{87}Rb .

4. Radioactive Decay Data File: CENDL-DDL



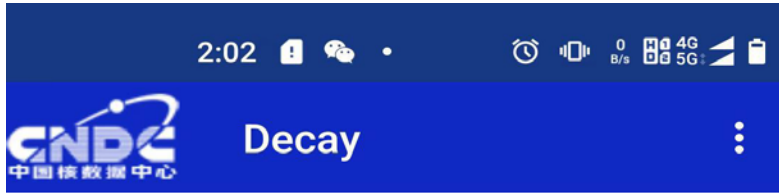
- ✓ The first release CENDL-DDL included 2351 nuclei between $A=66$ to $A=172$ FY region. ENSDF and ENDF format were adopted. Evaluations taken from :
 - (1) CNDC+ Jilin Univ.: **~500 nuclei**;
 - (2) DDEP: ~200 nuclei; (3) ENSDF: ~1500 nuclei;
 - (4) JEF3.2: ~150 nuclei (only for stable nuclei);
- ✓ The Q-values of the decay modes are updated to the Atomic Mass Evaluation (AME) released in 2021Wa16
- ✓ All $T_{1/2}$ are revised by new measurements(2022,6).

4. Radioactive Decay Data File: CENDL-DDL



- ✓ Mean energies for β & γ : from TAGS measurements when available, otherwise from theoretical calculation. For even-even nuclides, from theoretically analysis which employed QRPA approach in Jilin University.
- ✓ Beta-delayed n,p, α emitted are adopted: P_{1n} , P_{2n} from eva. of 2015Bi05, 2020Li32; P_{1p} , $P_{1\alpha}$ from eva. of 2020Ba07 when measurements available. Otherwise from systematics or theoretical calculation.

4. Decay App



Z or Element: Tb
 A: 152
 M: 0-ground state

Select evaluated lib

Search Decay chain of the A

Quit



Convert to PDF

CENDL-DDL-1.0										JENDL-5									
Nucleus: 65-Tb-152																			
Library: CENDL-DDL-1.0										Library: JENDL-5									
Author: CONVERSION FROM ENSDF										Author: Conversion from ENSDF									
EDate: NOV13										EDate: NOV21									
Half-life: 17.5 ± 0.1 h										Half-life: 17.5 ± 0.1 h									
AWR: 150.619										AWR: 150.619									
Isomer number: 0										Isomer number: 0									
Level number: 0										Level number: 0									
Spin & Parity: 2-										Spin & Parity: 2-									
E(beta): 257.924419.9528(keV)										E(beta): 249.767819.94927(keV)									
E(gamma): 1353.51417.0375(keV)										E(gamma): 1351.3994132.3609(keV)									
E(alpha): 0.000022±2.79432±07(keV)										E(alpha): 0.0(keV)									
Decay modes: 5										Decay modes: 4									
Radiation types: 5										Radiation types: 4									
DecayMode: 2 ECβ+										DecayMode: 2 ECβ+									
λ: 399040 keV										λ: 399040 keV									
Branching: 100±0 %										Branching: 100±0 %									
DecayMode: 4 α										DecayMode: 4 α									
λ: 2155441 keV										λ: 2155441 keV									
Branching: 76-07±0 %										Branching: 76-07±0 %									
Radiation type: 0 γ										Radiation type: 0 γ									
AvgDecayEne: 1116.256.63288 keV										AvgDecayEne: 1116.20516.63287 keV									
DiscreteSpectrum: 381 lines										DiscreteSpectrum: 381 lines									
Normalization: 0.01±0										Normalization: 1±0.009449									
#	E, keV	Intensity, %	I/Imax, %	RTYP	TYPE	#	E, keV	Intensity, %	I/Imax, %	RTYP	TYPE								
1	117.25±0.07	0.049848±0.001474	0.08±0	2 ECβ+	1	117.25±0.07	0.049848±0.001397	0.08±0	2 ECβ+	1	117.25±0.07								
2	159.16±0.16	0.009334±0.00102	0.01±0	2 ECβ+	2	159.16±0.16	0.009334±0.001016	0.01±0	2 ECβ+	2	159.16±0.16								
3	175.14±0.09	0.024135±0.0025	0.04±0	2 ECβ+	3	175.14±0.09	0.024135±0.00254	0.04±0	2 ECβ+	3	175.14±0.09								
4	178.58±0.11	0.012002±0.001022	0.02±0	2 ECβ+	4	178.58±0.11	0.012002±0.001016	0.02±0	2 ECβ+	4	178.58±0.11								
5	195.17±0.07	0.396240±0.00946	0.62±0.02	2 ECβ+	5	195.17±0.07	0.396240±0.00889	0.62±0.01	2 ECβ+	5	195.17±0.07								
6	209.14±0.08	0.036068±0.001376	0.06±0	2 ECβ+	6	209.14±0.08	0.036068±0.001334	0.06±0	2 ECβ+	6	209.14±0.08								
7	218.42±0.09	0.013843±0.000711	0.02±0	2 ECβ+	7	218.42±0.09	0.013843±0.000699	0.02±0	2 ECβ+	7	218.42±0.09								
8	248.75±0.09	0.06285±0.007643	0.1±0.01	2 ECβ+	8	248.75±0.09	0.06285±0.00762	0.1±0.01	2 ECβ+	8	248.75±0.09								
9	271.09±0.07	0.525±0.0169	1.5±0.3	2 ECβ+	9	271.09±0.07	0.525±0.0165	1.5±0.3	2 ECβ+	9	271.09±0.07								
10	298.06±0.21	0.006858±0.001018	0.01±0	2 ECβ+	10	298.06±0.21	0.006858±0.001016	0.01±0	2 ECβ+	10	298.06±0.21								
11	301.8±0.3	0.004953±0.001398	0.01±0	2 ECβ+	11	301.8±0.3	0.004953±0.001397	0.01±0	2 ECβ+	11	301.8±0.3								
12	315.1±0.07	0.8128±0.0254	1.28±0.03	2 ECβ+	12	315.1±0.07	0.8128±0.01905	1.28±0.03	2 ECβ+	12	315.1±0.07								
13	324.9±0.07	0.04191±0.001946	0.07±0	2 ECβ+	13	324.9±0.07	0.04191±0.001905	0.07±0	2 ECβ+	13	324.9±0.07								
14	335.56±0.07	0.059055±0.001985	0.09±0	2 ECβ+	14	335.56±0.07	0.059055±0.001905	0.09±0	2 ECβ+	14	335.56±0.07								
15	344.27±0.0013	±0.541.6971	100±2.67	2 ECβ+	15	344.27±0.0013	±0.541.5973	100±2.5	2 ECβ+	15	344.27±0.0013								
16	351.73±0.07	0.23241±0.006122	0.37±0.01	2 ECβ+	16	351.73±0.07	0.23241±0.005715	0.37±0.01	2 ECβ+	16	351.73±0.07								
17	353.78±0.09	0.028448±0.001298	0.04±0	2 ECβ+	17	353.78±0.09	0.028448±0.00127	0.04±0	2 ECβ+	17	353.78±0.09								
18	364.15±0.09	0.02845±0.001206	0.05±0	2 ECβ+	18	364.15±0.09	0.02845±0.001905	0.05±0	2 ECβ+	18	364.15±0.09								
19	367.8±0.07	0.34925±0.009483	0.55±0.01	2 ECβ+	19	367.8±0.07	0.34925±0.00889	0.55±0.01	2 ECβ+	19	367.8±0.07								
20	387.8±0.07	0.37211±0.013178	0.59±0.02	2 ECβ+	20	387.8±0.07	0.37211±0.0127	0.59±0.02	2 ECβ+	20	387.8±0.07								
21	390.8±0.15	0.00242±0.00139	0.01±0	2 ECβ+	21	390.8±0.15	0.00242±0.001207	0.01±0	2 ECβ+	21	390.8±0.15								
22	407.12±0.21	0.01397±0.00191	0.02±0	2 ECβ+	22	407.12±0.21	0.01397±0.001905	0.02±0	2 ECβ+	22	407.12±0.21								
23	411.117±0.0013	±0.60045±0.095187	5.67±0.15	2 ECβ+	23	411.116±0.0013	±0.60045±0.0889	5.67±0.14	2 ECβ+	23	411.116±0.0013								
24	427.8±0.11	0.02002±0.001347	0.03±0	2 ECβ+	24	427.8±0.11	0.02002±0.001334	0.03±0	2 ECβ+	24	427.8±0.11								
25	441.02±0.08	0.045402±0.001281	0.07±0	2 ECβ+	25	441.02±0.08	0.045403±0.001207	0.07±0	2 ECβ+	25	441.02±0.08								
26	454.8±0.3	0.005017±0.001144	0.01±0	2 ECβ+	26	454.8±0.3	0.005017±0.001143	0.01±0	2 ECβ+	26	454.8±0.3								
27	456.92±0.07	0.041275±0.001945	0.07±0	2 ECβ+	27	456.92±0.07	0.041275±0.001905	0.07±0	2 ECβ+	27	456.92±0.07								
28	471.98±0.09	0.021463±0.000912	0.03±0	2 ECβ+	28	471.98±0.09	0.021463±0.000889	0.03±0	2 ECβ+	28	471.98±0.09								
29	482.34±0.09	0.052388±0.001363	0.08±0	2 ECβ+	29	482.34±0.09	0.052388±0.001461	0.08±0	2 ECβ+	29	482.34±0.09								
30	489.59±0.13	0.02413±0.001919	0.04±0	2 ECβ+	30	489.59±0.13	0.02413±0.001905	0.04±0	2 ECβ+	30	489.59±0.13								
31	490.66±0.09	0.05842±0.001983	0.09±0	2 ECβ+	31	490.66±0.09	0.05842±0.001905	0.09±0	2 ECβ+	31	490.66±0.09								
32	493.81±0.07	0.141605±0.00438	0.22±0.01	2 ECβ+	32	493.81±0.07	0.141605±0.00381	0.22±0.01	2 ECβ+	32	493.81±0.07								
33	496.37±0.07	0.146050±0.003462	0.23±0.01	2 ECβ+	33	496.37±0.07	0.146050±0.003175	0.23±0.01	2 ECβ+	33	496.37±0.07								
34	500.23±0.12	0.006477±0.001018	0.01±0	2 ECβ+	34	500.23±0.12	0.006477±0.001016	0.01±0	2 ECβ+	34	500.23±0.12								
35	503.43±0.07	0.06477±0.002001	0.1±0	2 ECβ+	35	503.43±0.07	0.06477±0.001905	0.1±0	2 ECβ+	35	503.43±0.07								
36	520.3±0.08	0.011985±0.001206	0.02±0	2 ECβ+	36	520.3±0.08	0.011985±0.001206	0.02±0	2 ECβ+	36	520.3±0.08								
37	526.83±0.09	0.26289±0.006231	0.41±0.01	2 ECβ+	37	526.83±0.09	0.26289±0.005715	0.41±0.01	2 ECβ+	37	526.83±0.09								
38	534.21±0.09	0.052388±0.001363	0.08±0	2 ECβ+	38	534.21±0.09	0.052388±0.001277	0.08±0	2 ECβ+	38	534.21±0.09								
39	543.59±0.07	0.192405±0.004462	0.3±0.01	2 ECβ+	39	543.59±0.07	0.192405±0.004461	0.3±0.01	2 ECβ+	39	543.59±0.07								
40	547.47±0.07	0.070485±0.002018	0.11±0	2 ECβ+	40	547.47±0.07	0.070485±0.001905	0.11±0	2 ECβ+	40	547.47±0.07								
41	557.43±0	0.038735±0.007629	0.06±0.01	2 ECβ+	41	557.43±0	0.038735±0.00762	0.06±0.01	2 ECβ+	41	557.43±0								
42	557.81±0	0.07239±0.007018	0.11±0.01	2 ECβ+	42	557.81±0	0.07239±0.006985	0.11±0.01	2 ECβ+	42	557.81±0								
43	562.58±0.09	0.066675±0.002006	0.11±0	2 ECβ+	43	562.58±0.09	0.066675±0.001905	0.11±0	2 ECβ+	43	562.58±0.09								
44	572.57±0.09	0.017399±0.000904	0.03±0	2 ECβ+	44	572.57±0.09	0.017399±0.000889	0.03±0	2 ECβ+	44	572.57±0.09								
45	579.63±0.09	0.029845±0.001324	0.05±0	2 ECβ+	45	579.63±0.09	0.029845±0.001324	0.05±0	2 ECβ+	45	579.63±0.09								
46	583±0.11	0.028575±0.002554	0.04±0	2 ECβ+	46	583±0.11	0.028575±0.00254	0.04±0	2 ECβ+	46	583±0.11								

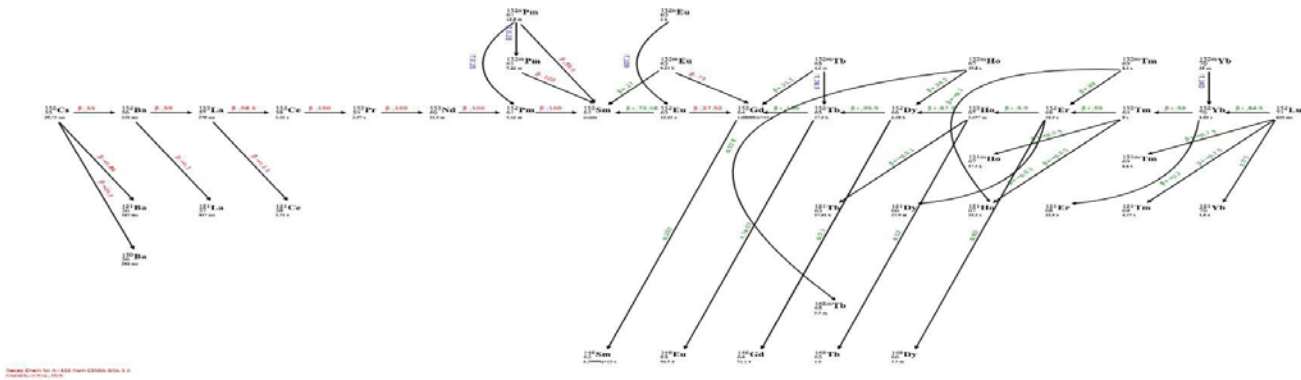
This App can retrieve decay data of nucleus, and give the decay chain for the specified mass number from various evaluated data libraries: CENDL-DDL-1.0, JENDL-5.0, ENSDF/B-VII.0 and JEFF-3.3 etc. The retrieved data can be shown in PDF formats for exchange.

4. Decay App

04 [Icons] 15.5 KB/s 4G 5G [Battery]

← **CNDC** Decay
中国核数据中心

Copy Link <http://www.nuclear.csdb.cn/cgi-bin/getdecay.pl?z>



谢谢!