Status Report of the Nuclear Structure and Decay Data Evaluation in CNDC

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1. Members

Huang Xiaolong: Major NSDD

Wang Jimin: Temporary NSDD, major EXFOR

Liu Yangyang: 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)	B.Singh et al.
195	NDS, 121, 395 (2014)	Huang Xiaolong, Kang Mengxiao
196	NDS,108,1093(2007)	Huang Xiaolong, being evaluated
197	NDS,104,283(2005)	Huang Xiaolong, Wang Jimin, Kang Mengxiao, 2nd review
198	NDS,133,221(2016)	Huang Xiaolong, Kang Mengxiao

3. Decay data evaluation

- **DDEP decay data evaluation**

In recent 2 years, CNDC has updated the main decay data for ^{108m}Ag and ^{110m}Ag.

Revised eval., 108m-Ag –based on 2014Fe03

1, Decay branch

Mode	Present	DDEP	ENSDF
%IT	7.44(20)	9.1(6)	8.7(9)
%ε	92.56(20)	90.9(6)	91.3(9)

2, γ emission probability.

Eγ/keV	Present	DDEP	ENSDF
79.138(IT)	5.68(18)	6.9(5)	6.6(5)
433.937(ε)	91.73(20)	90.1(6)	90.5
614.276(ε)	92.3(22)	90.5(16)	89.8(19)
722.907(ε)	92.4(22)	90.8(16)	90.8(19)

3. Decay data evaluation

●CENDL decay data sublibrary for fission product

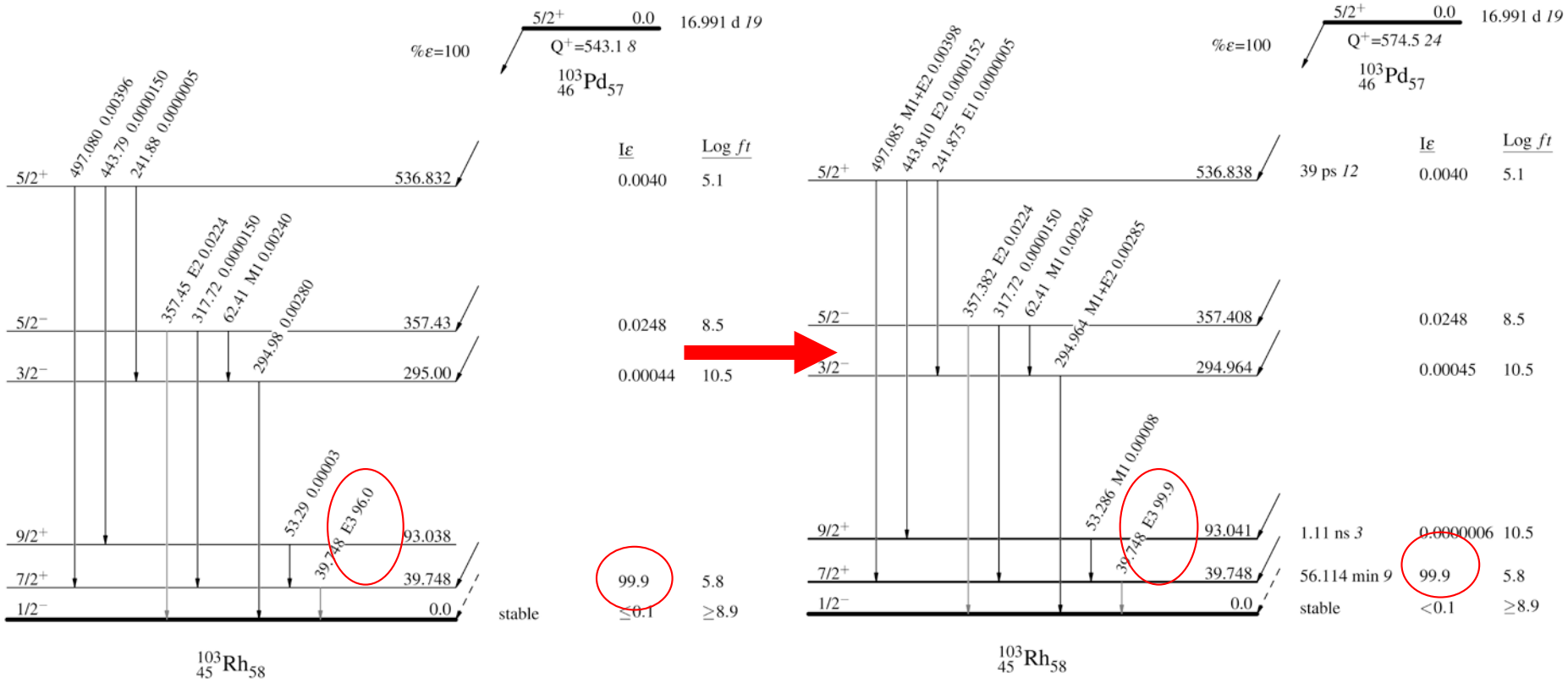
✓To meet the requirements of decay heat calculation, burn-up calculation, analysis neutrino spectra anomaly, the CENDL evaluated nuclear decay data sublibrary for fission product was being developped.

✓ About 1415 nuclides will be included.

✓in recent 2 years, CNDC has updated and compiled some decay data for some fission products

Revised eval., 103Pd – decay data

Eγ/keV	Mult.	α_{Theo}	α_{exp}	α_{adopt}
39.748	E3	1404	1462	1462



对Bump有重要贡献的核素

核素	Q(MeV)	t(s)	Log(ft)	份额	PRL_Dwyer
96Y	7.103	5.34	5.59	**12.50%**	13.60%
92Rb	8.095	4.48	5.75	**8.11%**	7.40%
142Cs	7.308	1.68	5.59	**4.89%**	5%
94Rb	10.283	2.70	7.14	**4.04%**	-
99Y	6.9687	1.48	>5.9	**3.79%**	-
97Y	6.689	3.75	5.70	**3.42%**	3.80%
90Rb	6.584	158	7.35	**3.26%**	-
98Y	8.824	0.55	5.76	**2.91%**	-
138I	7.820	6.46	8.83	**2.90%**	-
93Rb	7.462	5.84	6.14	**2.83%**	3.70%
140Cs	6.22	63.70	7.05	**2.70%**	2.70%
100Nb	6.386	1.50	5.10	**2.58%**	3.00%
95Sr	6.089	23.90	6.16	**2.47%**	2.60%

谢谢！