ADOPTED

ACTIONS: IAEA Consultants' Meeting on Total Absorption γ-ray Spectroscopy, 19-21 February 2018

Status as of 1 March 2018 (P. Dimitriou/A.L. Nichols**)**

No.	Responsible	Requirement(s)	Action
1	NNDC-BNL/ Sonzogni	Recent TAGS measure GS to GS beta emission probability of 87.25(25)% (2015Za10) and 91(3)% (2016Ra25) for ^{92}Rb, compared with much earlier ENSDF evaluation of 51(18)% (2000Bb11) and later recommendation of 95.2(7)% (2012Ba51). What value has been adopted in ENDF/B-VIII?	Define and hence clarify GS to GS beta emission probability adopted in ENDF/B-VIII for ^{92}Rb Rapid response – within three weeks: 31 March 2018
2	Nantes/Fallot	Performances of JEFF decay-data libraries in terms of decay-heat and antineutrino benchmark calculations: Adopt the two sets of FYs from JEFF 3.1.1 and 3.3 and combine with: (1). JEFF-3.1 decay data: no TAGS at all (2). JEFF 3.3: Greenwood *et al.* plus other TAGS data included (to be specified by Action#14) (3). JEFF 3.3 + all other TAGS data published but not included in JEFF 3.3	Comparison of JEFF 3.1 with JEFF 3.3. Undertake decay-heat and antineutrino benchmark calculations 235-U th, 239-Pu th; 235-U f, 238-U f, 239-Pu f, 233-U f, 232-Th f Deadline: 30 April 2018
3	NNDC-BNL/ Sonzogni	Performances of ENDF/B decay-data libraries in terms of decay-heat and antineutrino benchmark calculations: Adopt the two sets of FYs from JEFF 3.1.1 and 3.3 and combine with: (1). JEFF-3.1 decay data: no TAGS at all, (2). ENDF/B-VII.1: Greenwood *et al.* and Valencia TAGS for Mo-105 and Tc-102,104,105,106,107, (3). ENDF/B-VIII: all above, plus other TAGS data included (to be specified by Action#13) (4). ENDF/B-VIII + all other TAGS data from ORNL and Valencia/Nantes published but not included in ENDF/B-VIII	Comparison of ENDF/B-VII.1 with ENDF/B-VIII. Undertake decay-heat and antineutrino benchmark calculations for 235-U th, 239-Pu th; 235-U f, 238-U f, 239-Pu f, 233-U f, 232-Th f Deadline: 30 April 2018
4	Tokyo Inst. Technology/ Yoshida	Performances of JENDL- decay-data libraries in terms of decay-heat and antineutrino benchmark calculations: Adopt the latestJENDL-4 FPY library (2017) and Gross theory spectra to combine with: (1). JENDL- decay data File 2000 (JENDL/FPD-2000): no TAGS at all (2). JENDL- Decay Data File 2015 (JENDL/DDF-2015): Valencia TAGS data (2010) only (to be specified by Action#15) (3). JENDL- Decay Data File 2015 (JENDL/DDF-2015) + all other TAGS data published but not included in JENDL-(mean energies from tables of Action #5)	Comparison of JENDL Decay Data libraries. Undertake decay-heat and anti-neutrino benchmark calculations for 235-U th, 239-Pu th; 235-U f, 238-U f, 239-Pu f, 233-Th f Deadline: 30 April 2018
5	Valencia/ Nantes/ ORNL	Tabulate all relevant decay-heat and antineutrino motivated TAGS measurements undertaken, and send to Dimitriou for information	Prepare tables in three column form: radionuclide, publications, mean energies Continuous: first such laboratory review by 31 March 2018
6	ORNL/ Rykaczewski	Recent TAGS measurements of ^{96}Y (2016Ra25, 2017Ra06), and resulting mean energies	Provide mean energies of ^{96}Y as measured by TAGS at ORNL to meeting participants: 31 March 2018
7	Valencia/Tain	TAGS single-crystal spectrometers provide γ-ray energies and intensities, but not at optimum conditions (not in the standard manner of γ singles), part 1	Provide a full example dataset (all energies, intensities and mean energies of both β and γ decay types) to all participants Deadline: 31 March 2018
8	NNDC-BNL/ Sonzogni	Need to incorporate known TAGS data in XUNDL: energies, intensities and mean energies, part 2 – Tain will first provide an appropriate example dataset including TAGS-based γ-ray energies and intensities as part 1 (see Action #7)	Create and incorporate all such individual TAGS datasets into XUNDL. Continuous: first such exercise by 30 September 2018

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9	Valencia/ Algora	Handling of branching ratio matrices, part 1	Sample file of branching ratio matrices to be sent to Sonzogni Deadline: 31 March 2018
10	NNDC-BNL/ Sonzogni	Handling of branching ratio matrices, part 2, after Part 1 (see Action #9)	Investigate best arrangements for incorporation into XUNDL Deadline: 30 September 2018
11	Valencia/ Nantes/ ORNL	List proposed and approved TAGS measurements that are currently in their pipe lines (studies yet to be undertaken), and send to Dimitriou for information	Prepare both an approved list and a proposed list of future TAGS measurements Deadline: 31 March 2018
12	Mukherjee	List proposed and approved high-resolution γ-spectroscopy (HRGS) or TAGS measurements currently in the pipe lines at VECC (INGA) to address locally produced high-priority list of decay heat nuclides	Prepare both an approved and a proposed list of future HRGS and/or TAGS measurements Deadline: 31 March 2018
13	NNDC-BNL/ Sonzogni	Specify current TAGS content of ENDF/B-VIII decay-data file: mean β and γ energies and uncertainties, discrete β and γ energies, intensities and uncertainties, and identify specific sources of such data	Provide precise information Deadline: 31 March 2018
14	IAEA-NDS/ Dimitriou	Specify current TAGS content of JEFF 3.3 decay-data file: mean β and γ energies and uncertainties, discrete β and γ energies, intensities and uncertainties, and identify specific sources of such data	Provide precise information Deadline: 31 March 2018
15	Yoshida	Specify current TAGS content of JENDL decay-data file: mean β and γ energies and uncertainties, discrete β and γ energies, intensities and uncertainties, and specific sources of such data	Provide precise information Deadline: 31 March 2018
16	NNDC-BNL/ Sonzogni	Tengblad *et al.* (1989) and Rudstam *et al.* (1989) β and γ datasets	These datasets to be placed in XUNDL, as agreed Deadline: 30 September 2018
17	Nichols, Kondev Yoshida, Algora	Extend their entries in the draft assessment table for TAGS, γ singles and γ−γ coincidence, as modified and provided at the meeting by Dimitriou	Insert column of Sn values from 20017Wa10, and Pn data in main assessment column from ENSDF when appropriate Deadline: 31 March 2018
18	Mukherjee	Provide recommendations for high-resolution gamma-ray spectroscopy (HRGS) measurements of fission products relevant to decay heat and/or anti-neutrino spectra	Based on assessment tables produced by Action #17, create a list of priority nuclides that can be potentially measured using the INGA set-up Deadline: 30 April 2018
19	IAEA-NDS/ Dimitriou	Maintain all available decay heat experimental data	Create repository of decay heat experiments Deadline: 31 July 2018
20	All attendees	Presentations to be forwarded to Dimitriou	Email Powerpoint presentations by 28 February 2018 Email brief summary of each presentation (approximately one A4 page) by 31 March 2018
21	Dimitriou/ Nichols	Draft paper for publication	Initiate and lead drafting of IAEA CM-driven paper Deadline for submission: 30 September 2018