Report of the NSDD Bucharest Data Centre

May 2017 – April 2019

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The Data Centre

Manpower: 0.4 FTE

- 2 evaluators, 0.2 FTE each: Sorin PASCU, Alexandru NEGRET
- Adina OLACEL attended the last Trieste Workshop – *some hope that she could get involved in the future in the activity of the Data Centre*

Responsibility: 6 mass chains

- A=57, 58, 59 (A. Negret)
- A=117, 118, 119 (S. Pascu)

Funding

- Activity funded mostly by IFIN-HH;
- S. Pascu also has a Research Contract funded by IAEA

Evaluation

Status of the mass chains under our responsibility

Mass	Cut-off date of the latest ENSDF evaluation	Observations
57	September 24, 1998	Under evaluation by A. Negret, B. Singh and R. Firestone (Post-review)
58	January 10, 2010	^{58}Co updated by C. D. Nesaraja and B. Sing (cut-off date 31.10.2015)
59	April 1st, 2018	Evaluation by S. Basunia
117	March 1, 2009	^{117}Mo, ^{117}Tc and ^{117}Ru updated by B. Singh (cut-off date 20.7.2015)
118	November 1, 1992	^{118}Mo, ^{118}Tc and ^{118}Ru updated by B. Singh (cut-off date 31.5.2015) ^{118}Rh, ^{118}Pd and ^{118}Ba updated by B. Singh (cut-off date 15.12.2006)
119	December 1, 2008	^{119}Tc and ^{119}Ru updated by B. Singh (cut-off date 20.7.2015)

Evaluation activity 2017 – 2019

- A=57: A. Negret, B. Singh, R. Firestone – Post-review (2018)
- ^{86}Sr: A. Negret, B. Singh (2018)
- A=101: Bucharest + Debrecen Data Centre – ongoing work, rejected by reviewer (2017)
- A=118: S. Pascu (+A. Negret) – ongoing work (2019)
- A=130: S. Pascu, B. Singh, A. Rodionov and G. Shulyak – Sent for review (2019)

IFIN-HH

Other activities

Nuclear structure activity funded by the European Comission: the SANDA project

SANDA: Supplying Accurate Nuclear Data for energy and non-energy Applications (2019 – 2023)

WP4 Nuclear data evaluation and uncertainties

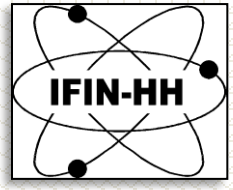
Work package number	WP4			Lead beneficiary		PSI	
Work package title							
Participant number							
Short name of participant	CEA	*PSI*	CNRS	CIEMAT	UU	UTW	UB
Person-months per participant							
EC contribution per participant k€	257.5	99	93.7	70.8	91	52.4	78.4
Participant number							
Short name of participant	UPM	JSI	IFIN-HH	USC	Sofia	Atomki	
Person-months per participant							
EC contribution per participant k€	46	36	20	25	20	20	
Participant number							
Start month	1			End month	48		

Task 4.2.2: Evaluation of nuclear structure and decay data

Together with the fission yields, evaluations of nuclear structure and decay data can have an important impact on specific applications, such as decay heat calculations. Additionally, it is important that the (cumulative) fission yields are evaluated together with decay data. In this context, a few experienced groups will join efforts to perform ENSDF (Evaluated Nuclear Structure Data File) evaluations. ENSDF constitutes the main source of nuclear structure information used in RIPL (The Reference Input Parameter Library), the major library used by TALYS and EMPIRE. It should be noted that some of these groups also have experimental and simulation programs which are combined with the evaluation efforts. For instance, new TAGS data will be analysed to develop the calculation of the experimental uncertainties associated to these experiments, in order to be able to provide nuclear databases with covariance matrices for beta decay data. These covariance matrices are mandatory for the propagation of decay data uncertainties on the decay heat, antineutrino spectra and beta-delayed neutron emission fractions of reactors (CNRS/Subatech). Evaluation activity will be performed by CEA/LNHB, ATOMKI, Sofia and IFIN-HH: theoretical calculations, evaluations, and nuclear data library production, to improve the JEFF Radioactive Decay Data Library and the Evaluated Nuclear Structure Data File.

Nuclear Structure Experimental Issues (NSEI) Database

https://nucleardata.berkeley.edu/hpnsrl/



Thank you!