

Symposium on Nuclear Data 2020

Ag102 12.9 m	Ag103 65.7 m	Ag104 69.2m	Ag105 41.29 d	S ymposium on	Ag107 51.839 %	Ag108 2.37 m	Ag109 48.161 %	Ag110 24.6 s	Ag111 7.45 d	Ag112 2.135 h
Pd101 8.47 h	Pd102 1.02 %	Pd103 16.991 d	Pd104 11.14 %	Pd105 22.33 %	N uclear	Pd107 6.3e+4 y	Pd108 26.46 %	Pd109 15.700(26)	Pd110 11.72 %	Pd111 23.4 m
Rh100 20.8 h	Rh101 3.3 y	Rh102 2.72 d	Rh103 100 %	Rh104 42.3 s	Rh105 35.95 h	D ata	2020 Nov.	Rh108 9.0 m	Rh109 99 s	Rh110 3.3 s

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Unified description of the fission probability for highly excited nuclei

Various spallation reaction models have been developed for the use of neutronic and shielding design of high-energy accelerator facilities such as J-PARC and ADS. However, their complicated theory for the de-excitation process has made improving their prediction accuracy difficult. In particular, it has been pointed out that the conventional models underestimate the yield of the spallation products produced from the fission reaction. This work has thus aimed to model the probability was described using a simpler, systematic expression, and then confirmed to predict fission cross sections for various incident energies and target nuclei with improved accuracy [1]. In this presentation, we will present a description of our model and research results.

[1] H. Iwamoto, S. Meigo, "Unified description of the fission probability for highly excited nuclei", Journal of Nuclear Science and Technology, 56:2, 160-171 (2020).

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