## **Be**(<sup>238</sup>U,Fγ):**XUNDL-3 2019Wa14**

Compiled (unevaluated) dataset from 2019Wa14: Phys Lett B 792, 263 (2019). Compiled by Amani Ahnuar and Jun Chen (NSCL, MSU), May 19, 2019.

2019Wa14:  $^{125}$ Pd isotopes were produced from in-flight of fission of  $^{238}$ U beam of 345 MeV/nucleon with 7-12 pnA intensity on a Be target at the RI-Beam Factory (RIBF) in the RIKEN Nishina Center. Fission products were transported through the BigRIPS-ZeroDegree spectrometer and implanted into the WAS3ABi active stopper consisting of eight layers of double-sided silicon-strip detectors (DSSSDs) and  $\gamma$  rays were detected using the EURCA  $\gamma$ -ray spectrometer consisting of 12 Cluster-type detectors, each of which contains 7 HPGe crystals packed closely. Measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma(t)$ . Deduced levels, spin-parities, half-life. Results are compared to the shell-model calculation, suggesting the competition between proton and neutron excitations in the proton-hole and neutron-hole systems in the south-west quadrant of the doubly magic nucleus  $^{132}$ Sn.

## 125Pd Levels

E(level) <sup>†</sup>	$J^{\pi \ddagger}$	$T_{1/2}^{\#}$
0	$(11/2^{-})$	
756.56 9	$(15/2^{-})$	
1581.51 <i>13</i>	$(19/2^{-})$	
1696.83 <i>14</i>	$(19/2^+)$	
1805.23 <i>18</i>	$(23/2^+)$	144 ns 4

<sup>&</sup>lt;sup>†</sup> From a least-squares fit to  $\gamma$ -ray energies (by compilers).

<sup>&</sup>lt;sup>#</sup> From weighted average of results from  $108.4\gamma(t)$ ,  $115.3\gamma(t)$ ,  $824.9\gamma(t)$  and  $756.6\gamma(t)$ .

γ	(1	<sup>25</sup> Pd)

$E_{\gamma}^{\dagger}$	$I_{\gamma}^{\dagger}$	$E_i(level)$	$\mathbf{J}_i^{\pi}$	$\mathbf{E}_f$	$\mathbf{J}_f^{\pi}$	Mult.‡
108.4 <i>I</i>	48 6	1805.23	$(23/2^+)$	1696.83	$(19/2^+)$	E2
115.32 6	100 11	1696.83	$(19/2^+)$	1581.51	$(19/2^{-})$	E1
756.56 9	100 11	756.56	$(15/2^{-})$	0	$(11/2^{-})$	E2
824.94 9	93 11	1581.51	$(19/2^{-})$	756.56	$(15/2^{-})$	E2

<sup>&</sup>lt;sup>†</sup> From 2019Wa14.

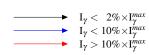
<sup>&</sup>lt;sup>‡</sup> As given in 2019Wa14.

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Intensities: Relative  $I_{\gamma}$ 



Legend

