^{9}Be(^{124}Xe,Xγ) 2017Pa35,2019Ha26

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, Balraj Singh	NDS 164, 1 (2020)	15-Feb-2020

2017Pa35: E(^{124}Xe)=345 MeV/nucleon beam incident on a 740 mg/cm^2 thick ^{9}Be target at the RIKEN-RIBF facility. The identification of the nuclide of interest was made through the BigRIPS separator and the ZeroDegree spectrometer by determining the atomic number and the mass-to-charge ratio of the ion using the tof-Bρ-ΔE method. The secondary beam was stopped in the double-sided silicon strip detector of the WAS3ABi spectrometer. The γ rays were detected by EURICA array comprising of 84 HPGe detectors. Measured Eγ, Iγ, $\gamma\gamma$(t). Deduced half-lives, isomeric ratios, transition strengths. Comparisons with available data and shell-model calculations.

2019Ha26: same experimental arrangement at RIBF-RIKEN as in 2017Pa35. Measured half-life of the (4$^+$) isomer at 107 keV by γ(t), and isomeric ratio. Deduced B(E2) for 107-keV transition.

^{98}Ag Levels

E(level)[†]	J$^\pi$	T$_{1/2}$	Comments
0	(6$^+$)[‡]		
107	(4$^+$)	161 ns *7*	J$^\pi$: assignment by 2017Pa35, based on E2 transition to (6$^+$). T$_{1/2}$: from 107γ(t) in 2017Pa35, as listed in authors' Table I and Fig. 2. Value of 160 ns *7* also quoted in authors' text and Fig. 7. 2019Ha26 measured T$_{1/2}$=0.14 μs *4* from 107γ(t). Measured isomeric ratio R=18% *4* (2019Ha26), 4.2% *10* (2017Pa35).
168	(3$^+$)[‡]		
515			

[†] From Eγ data.
[‡] From Adopted Levels.

γ(^{98}Ag)

E$_i$(level)	J$_i^\pi$	E$_\gamma$	I$_\gamma$	E$_f$	J$_f^\pi$
107	(4$^+$)	107[†]	100	0	(6$^+$)
168	(3$^+$)	61[†‡]		107	(4$^+$)
515		347[‡]		168	(3$^+$)

[†] The ordering of 107γ and 61γ is from 2017Pa35, based on the non-observation of 61γ in the time-delayed γ spectrum. It was reversed in previous studies of ^{98}Cd ε decay by 1992Pl01.
[‡] Observed in ^{98}Cd ε decay, as shown in Fig. 7 of 2017Pa35.

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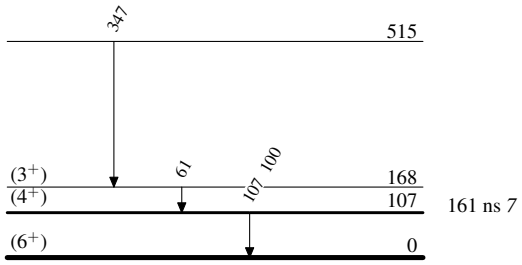
Level Scheme

Intensities: Relative photon branching from each level



$^{98}_{47}Ag_{51}$