^{9}Be(^{124}Xe,Xγ) 2017Pa35

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, E. A. Mccutchan	NDS 165, 1 (2020)	1-Mar-2020

2017Pa35: ^{90}Nb produced in fragmentation of a ^{124}Xe beam at E=345 MeV/nucleon 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. Measured Eγ, Iγ and $T_{1/2}$ using the EURICA array consisting of 84 HP Ge detectors.

α: Additional information 1.

^{90}Nb Levels

E(level)†	J$^\pi$‡	$T_{1/2}$	Comments
0	8$^+$		
813	9$^+$		
1809	9$^-$		
1880	11$^-$	415 ns *67*	E(level): Isomeric ratio R=16% *3* (2017Pa35). $T_{1/2}$: From γ(t) in 2017Pa35; gating γ-ray transitions were not specified by the authors.

† Rounded values from the Adopted Levels.
‡ From the Adopted Levels.

γ(^{90}Nb)

E$_\gamma$†	I$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.	α	I$_{(\gamma+ce)}$	Comments
71	5.4 *14*	1880	11$^-$	1809	9$^-$	[E2]	3.97 *7*	27 *7*	α(K)=3.07 *6*; α(L)=0.746 *14*; α(M)=0.1338 *25*; α(N)=0.0177 *4*; α(O)=0.000406 *7* I$_\gamma$: from reported I(γ+ce) in 2017Pa35 and α .
813		813	9$^+$	0	8$^+$				
996		1809	9$^-$	813	9$^+$				
1067	73 *7*	1880	11$^-$	813	9$^+$	[M2]	1.48×10^{-3}	73 *7*	α(K)=0.001306 *19*; α(L)=0.0001478 *21*; α(M)=2.61×10^{-5} *4*; α(N)=3.82×10^{-6} *6*; α(O)=2.23×10^{-7} *4* I$_\gamma$: from reported I(γ+ce) in 2017Pa35 and α.

† Rounded values from the Adopted Gammas.

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Level Scheme

Intensities: Relative $I_{(\gamma+ce)}$