

${}^9\text{Be}({}^{124}\text{Xe},\text{X}\gamma)$ 2017Pa35

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

2017Pa35: ${}^{90}\text{Nb}$ produced in fragmentation of a ${}^{124}\text{Xe}$ beam at $E=345$ MeV/nucleon incident on a 740 mg/cm² thick ${}^9\text{Be}$ 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-B ρ - ΔE method. The secondary beam was stopped in the double-sided silicon strip detector of the WAS3ABi spectrometer. Measured E_γ , I_γ and $T_{1/2}$ using the EURICA array consisting of 84 HP Ge detectors.

α : [Additional information 1](#).

 ${}^{90}\text{Nb}$ Levels

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

† Rounded values from the Adopted Levels.

‡ From the Adopted Levels.

 $\gamma({}^{90}\text{Nb})$

E_γ^\dagger	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	α	$I_{(\gamma+ce)}$	Comments
71	5.4 14	1880	11^-	1809	9^-	[E2]	3.97 7	27 7	$\alpha(\text{K})=3.07$ 6; $\alpha(\text{L})=0.746$ 14; $\alpha(\text{M})=0.1338$ 25; $\alpha(\text{N})=0.0177$ 4; $\alpha(\text{O})=0.000406$ 7 I_γ : from reported $I(\gamma+ce)$ 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	$\alpha(\text{K})=0.001306$ 19; $\alpha(\text{L})=0.0001478$ 21; $\alpha(\text{M})=2.61 \times 10^{-5}$ 4; $\alpha(\text{N})=3.82 \times 10^{-6}$ 6; $\alpha(\text{O})=2.23 \times 10^{-7}$ 4 I_γ : from reported $I(\gamma+ce)$ in 2017Pa35 and α .

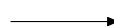


† Rounded values from the Adopted Gammas.

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Level Scheme

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

Legend

-  $I_\gamma < 2\% \times I_\gamma^{\max}$
-  $I_\gamma < 10\% \times I_\gamma^{\max}$
-  $I_\gamma > 10\% \times I_\gamma^{\max}$

