

²⁴⁴Pu(d,p) 1975ErZX,1975ErZT

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 189,1 (2023)	14-Feb-2023

The evaluator is unable to verify the data from the scanned copy of 1975ErZX as it does not contain any information pertaining to ²⁴⁵Pu. The section on the private communication for ²⁴⁴Pu(d,p) seems to be missing in the scanned copy that is available at nndc. This dataset is from the work of the previous evaluators (2011Br03,1992Ak05,1981El09, 1976El01) who referenced the private communication 1975ErZX. However, the evaluator has included 1975ErZT (same first author as 1975ErZX) reference which shows the proton spectrum from the ²⁴⁴Pu(d,p) experiment.

Other: 1975GaZZ.

All information here are considered tentative by the evaluator.

²⁴⁵Pu Levels

Spins and Nilsson assignments are based on (d,p) cross sections at 90°, 120°, and 150°, in comparison with relative cross sections from theory. Please note that 1975ErZT have tentative assignments for seven rotational bands as indicated in Fig.18 (1975ErZT).

E(level) ^{†‡}	J ^π	Comments
0.0 [#]	(9/2 ⁻)	
222 [#]	(15/2 ⁻)	
251 ⁴	(9/2 ⁺)	Configuration=5/2[622].
311 [@] 3	(1/2 ⁺)	
330 ²	(9/2 ⁺)	Configuration=7/2[613].
360 [@] 3	(5/2 ⁺)	
428 [@] 5	(7/2 ⁺)	
464 [@] 5	(9/2 ⁺)	
580 ^{&} 4	(3/2 ⁺)	
618 ^{&} 4	(5/2 ⁺)	
642 ^a 4	(3/2 ⁻)	
665 ^{&} 3	(7/2 ⁺)	
680 ^a 3	(7/2 ⁻)	
728 ^{&} 3	(9/2 ⁺)	
743 ³		
763 ⁴		
807 ^b 2	(11/2 ⁺)	Configuration=9/2[615].
1076 ³		
1133 ³		
1284 ³		
1394 ⁴		

[†] Levels have been increased by 5 keV from original values in 1975ErZX by the previous evaluators in 2011Br03.

[‡] Energies are relative to 222 keV for the 15/2⁻, 9/2[734] level.

[#] Band(A): 9/2⁻[734]. Band members between 9/2⁻ and 15/2⁻ have not been reported.

[@] Seq.(E): 1/2⁺[620]. (3/2⁺) member has not been reported.

[&] Band(B): 3/2⁺[622].

^a Band(C): 1/2⁻[750].

^b Band(D): 9/2⁺[615] Bandhead.

$^{244}\text{Pu}(\text{d,p})$ 1975ErZX,1975ErZT

		Band(D): 9/2⁺[615] Bandhead	
		<u>(11/2⁺)</u>	<u>807</u>
Band(B): 3/2⁺[622]			
<u>(9/2⁺)</u>	<u>728</u>		
Band(C): 1/2⁻[750]			
		<u>(7/2⁻)</u>	<u>680</u>
<u>(7/2⁺)</u>	<u>665</u>		
		<u>(3/2⁻)</u>	<u>642</u>
<u>(5/2⁺)</u>	<u>618</u>		
<u>(3/2⁺)</u>	<u>580</u>		
		Seq.(E): 1/2⁺[620]	
		<u>(9/2⁺)</u>	<u>464</u>
		<u>(7/2⁺)</u>	<u>428</u>
		<u>(5/2⁺)</u>	<u>360</u>
		<u>(1/2⁺)</u>	<u>311</u>
Band(A): 9/2⁻[734]			
<u>(15/2⁻)</u>	<u>222</u>		
<u>(9/2⁻)</u>	<u>0.0</u>		