

$^{175}\text{Lu}(\text{t},\alpha)$ 1993Fr01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, Huo Junde		NDS 87, 15 (1999)	1-Nov-1998

 ^{174}Yb Levels

Target: natural lutetium. Projectile: t, E=35.5 MeV. α particles at several angles. Deduced L-transfer values. Detector: magnetic spectrometer, FWHM $\approx$ 18 keV.

E(level)	J^π [†]	L	E(level)	J^π [†]	L	E(level)	J^π [†]	L	E(level)	J^π [†]	L
0.0 [‡]	0 ⁺	4	2087 3			2521 3			2885 ^b 4	4 ⁺	(2)
77 [‡] 2	2 ⁺	4	2114 2			2546 4			2901 4		
255 [‡] 1	4 ⁺	4	2163 [@] 2	4 ⁺	2	2572 ^a 3	(6 ⁺)	2	3009 ^b 4	5 ⁺	
527 [‡] 2	6 ⁺	4	2192 2			2592 4			3051 3		
1605 [#] 2	3 ⁺	2	2230 2			2654 3			3162 4		
1701 [#] 1	4 ⁺	2	2260 4			2683 ^{&} 3	9 ⁻	5	3184 4		
1819 [#] 2	5 ⁺	2	2290 [@] 2	5 ⁺	2	2726 ^b 3	2 ⁺	2	3244 3		
1913 2			2329 ^{&} 2	7 ⁻	5	2761 3			3521 4		
1934 3			2408 3			2791 ^b 3	3 ⁺	2			
1959 [#] 2	6 ⁺		2434 ^a 3	5 ⁺	2	2818 4					
2019 2		2	2496 ^{&} 4	8 ⁻	5	2868 3					

[†] Spin, parity, and rotational band assignments are based on the angular distribution of the scattered α particles, and on a comparison of relative yields and spectroscopic factors for members of each rotational band with those predicted by the Nilsson model.

[‡] Band(A): $K^\pi=0^+$ g.s. rotational band.

[#] Band(B): $K^\pi=3^+$ hexadecapole rotational band.

[@] Band(C): $K^\pi=4^+$ rotational band.

[&] Band(D): $K^\pi=7^-$ rotational band.

^a Band(E): $K^\pi=(5^+)$ rotational band.

^b Band(F): $K^\pi=(2^+)$ rotational band.

<u>$^{175}\text{Lu}(\text{t},\alpha)$</u> <u>1993Fr01</u>		Band(F): $K^\pi=(2^+)$ rotational band	
		<u>5⁺</u>	<u>3009</u>
		<u>4⁺</u>	<u>2885</u>
	Band(D): $K^\pi=7^-$ rotational band	<u>3⁺</u>	<u>2791</u>
	<u>9⁻</u> 2683	<u>2⁺</u>	<u>2726</u>
		Band(E): $K^\pi=(5^+)$ rotational band	
		<u>(6⁺)</u>	<u>2572</u>
	<u>8⁻</u> 2496	<u>5⁺</u>	<u>2434</u>
	Band(C): $K^\pi=4^+$ rotational band	<u>7⁻</u>	<u>2329</u>
	<u>5⁺</u> 2290		
	<u>4⁺</u> 2163		
	Band(B): $K^\pi=3^+$ hexadecapole rotational band		
	<u>6⁺</u>	<u>1959</u>	
	<u>5⁺</u>	<u>1819</u>	
	<u>4⁺</u>	<u>1701</u>	
	<u>3⁺</u>	<u>1605</u>	
Band(A): $K^\pi=0^+$ g.s. rotational band	<u>6⁺</u>	<u>527</u>	
	<u>4⁺</u>	<u>255</u>	
	<u>2⁺</u>	<u>77</u>	
	<u>0⁺</u>	<u>0.0</u>	