^{176}Lu(p,t) 1978St04

History

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

Target: enriched ^{176}Lu($J^\pi=7^-$). Spectrometer: magnetic. E=34.1 MeV, FWHM=13 keV, θ=10° to 60° in steps of 5°.

^{174}Lu Levels

J^π: spin assignments are based on rotational band structure and on the fact that (p,t) reactions strongly populate levels with a structure closely related to that of the g.s. of the target. See Adopted Levels for evaluator's spin assignments.

E(level)	J^π	$T_{1/2}$	L[†]	Comments
0.0[‡]	1^-			
45[‡]	2^-			
113[‡]	3^-			
170[#]	6^-	142 d *2*		$T_{1/2}$: from Adopted Levels.
200[‡]	4^-			
318[#]	7^-		0	
361[&]	4^-			
435[a]	3^-			
481[&]	5^-			
523[@]	7^-		0	
568				
602				
662[a]	5^-			
715[@]	8^-			
758				
922[@]	9^-			
1112				
1140[@]	10^-			
1183				
1219				
1323				
1354				
1365				
1443				
1467				
1498				
1534				
1549				
1562				
1580				
1653				

[†] L=0 transfers were assigned on the basis of the distinctive oscillatory pattern of the experimental angular distributions.
[‡] Band(A): $K^\pi=1^-$ ground-state rotational band. Proposed Configuration=(π 7/2[404])-(ν 5/2[512]).
[#] Band(B): $K^\pi=6^-$ band. Proposed Configuration=(π 7/2(404))+(ν 5/2(512)).
[@] Band(C): $K^\pi=7^-$ band. Proposed Configuration=(π 7/2(404))+(ν 7/2(514)).
[&] Band(D): $K^\pi=4^-$ band. Proposed Configuration=(π 7/2(404))+(ν 1/2(521)).
[a] Band(E): $K^\pi=3^-$ band. Proposed Configuration=(π 7/2(404))-(ν 1/2(521)).

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Band(C): $K^{\pi}=7^{-}$ band

10^{-}	1140
9^{-}	922
8^{-}	715
7^{-}	523

Band(E): $K^{\pi}=3^{-}$ band

5^{-}	662
3^{-}	435

Band(D): $K^{\pi}=4^{-}$ band

5^{-}	481
4^{-}	361

Band(B): $K^{\pi}=6^{-}$ band

7^{-}	318
6^{-}	170

Band(A): $K^{\pi}=1^{-}$ ground-state rotational band

4^{-}	200
3^{-}	113
2^{-}	45
1^{-}	0.0

$^{174}_{71}Lu_{103}$