

$^{176}\text{Lu}(\text{d,p})$ 1971Mi01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 159, 1 (2019)	30-Aug-2019

1971Mi01: Enriched ^{176}Lu target. E=12 MeV. Measured scattered protons at $\theta=20^\circ$, 45° , 60° , 75° , and 130° . Magnetic spectrograph, FWHM $\approx$ 20 keV, estimated by the evaluator.
 $J^\pi(^{176}\text{Lu})=7^-$.

 ^{177}Lu Levels

E(level) [†]	J^π [†]	Comments
0.0 [‡]	7/2 ⁺	
121 [‡] 3	9/2 ⁺	
269 [‡] 4	11/2 ⁺	
440 [‡] 4	13/2 ⁺	
633 [‡] 4	15/2 ⁺	J^π : From Adopted Levels.
972 [@] 3	23/2 ⁻	
1073 [#] 4	19/2 ⁻	J^π : From Adopted Levels.
1243 [@] 5	(25/2 ⁻)	
1306 ^{&} 2	11/2 ⁺	
1357 ^a 1	15/2 ⁺	
1453 ^d 2	(13/2 ⁺)	
1473 ^{&} 2	(13/2 ⁺)	
1503 ^c 1	13/2 ⁺	
1543 ^a 2	17/2 ⁺	
1587 [#] 4	23/2 ⁻	J^π : From Adopted Levels.
1608 ^d 3	(15/2 ⁺)	
1632 ^b 2	(15/2 ⁺)	
1679 ^c 2	15/2 ⁺	
1711 5		
1749 ^a 4	19/2 ⁺	
1766 5		
1787 ^d 5	(17/2 ⁺)	
1814 ^b 4	(17/2 ⁺)	
1839 4		
1857 5	(9/2 ⁻)	
1880 ^{ce} 3	17/2 ⁺	
1902 4		
1935 4		
1974 3		
2000? 5		
2018 4		
2037 5		
2057 5		
2085 3		
2108 4		
2142 3		
2185 3		
2209 ^e		
2241 3		
2278 ^e		
2373 3		
2417 4		

Continued on next page (footnotes at end of table)

$^{176}\text{Lu}(\text{d,p})$ **1971Mi01** (continued) ^{177}Lu Levels (continued)E(level)[†]

2605 3

2637 4

2668 3

[†] From **1971Mi01**, unless otherwise stated.[‡] Band(A): $K^\pi=7/2^+$, $\pi 7/2[404]$.# Band(B): $K^\pi=9/2^-$, $\pi 9/2[514]$.@ Band(C): $K^\pi=23/2^-$, $\pi(7/2[404])\otimes v^2(7/2[514],9/2[624])$.& Band(D): $K^\pi=11/2^+$, a mixture between $\pi 7/2[404]\otimes 2^+$ (K=2 γ -vibration phonon) and $\pi 7/2[404]\otimes v^2(3/2[512],7/2[514])$.^a Band(E): $K^\pi=15/2^+$, $\pi 7/2[404]\otimes v^2(1/2[510],7/2[514])$.^b Band(F): $K^\pi=15/2^+$, $\pi 7/2[404]\otimes v^2(1/2[521],7/2[514])$.^c Band(G): $K^\pi=13/2^+$, $\pi 7/2[404]\otimes v^2(1/2[510],7/2[514])$.^d Band(H): $K^\pi=13/2^+$, $\pi 7/2[404]\otimes v^2(1/2[521],7/2[514])$.^e Possible $^{176}\text{Yb}(\text{d,p})^{177}\text{Yb}$ contaminant.

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[illegible]

$^{176}\text{Lu}(\text{d,p})$ **1971Mi01 (continued)**

Band(G): $K^\pi=13/2^+$,
 $\pi 7/2[404]$
 $\otimes \nu^2(1/2[510],$
 $7/2[514])$

$17/2^+$ 1880

Band(H): $K^\pi=13/2^+$,
 $\pi 7/2[404]$
 $\otimes \nu^2(1/2[521],$
 $7/2[514])$

($17/2^+$) 1787

$15/2^+$ 1679

($15/2^+$) 1608

$13/2^+$ 1503

($13/2^+$) 1453

$^{177}_{71}\text{Lu}_{106}$
