

$^{174}\text{Yb}(p,3n\gamma)$  **1974BeXY**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 75,199 (1995)	31-May-1995

E=27 MeV.

**1974BeXY** (also **1973BeVE**): enriched target. Measured  $\gamma$ ,  $\gamma\gamma$ ,  $\gamma(\theta)$ ,  $\gamma(t)$ .

$^{172}\text{Lu}$  Levels

The level scheme is tentative.

E(level)	$J^\pi$	$T_{1/2}$	Comments
0.0 <sup>†</sup>	4 <sup>-</sup>		$J^\pi$ : from Adopted Levels.
68 <sup>‡</sup> 3	(3 <sup>-</sup> )		E(level): uncertainty from Adopted Levels.
111.1 <sup>†</sup> 2	(5 <sup>-</sup> )		
168 <sup>‡</sup> 3	(4 <sup>-</sup> )		
213.6 2	(6 <sup>-</sup> )	150 ns	$J^\pi$ : $K^\pi=6^-$ band. Suggested Configuration= $((\pi 7/2(404))(\nu 5/2(512)))$ . $T_{1/2}$ : $\gamma\gamma(t)$ ( <b>1974BeXY</b> ).
244.7 <sup>†</sup> 3	(6 <sup>-</sup> )		
290 <sup>‡</sup> 3	(5 <sup>-</sup> )		
399.3 <sup>†</sup> 4	(7 <sup>-</sup> )		
434 <sup>‡</sup> 3	(6 <sup>-</sup> )		
576.8 <sup>†</sup> 4	(8 <sup>-</sup> )		
602 <sup>‡</sup> 3	(7 <sup>-</sup> )		

<sup>†</sup> Band(A):  $K^\pi=4^-$  g.s. band. Configuration= $((\pi 7/2(404))(\nu 1/2(521)))$ .

<sup>‡</sup> Band(B):  $K^\pi=3^-$  band. Configuration= $((\pi 7/2(404))(\nu 1/2(521)))$ .

# Probable band assignment.

$\gamma(^{172}\text{Lu})$

$E_\gamma$ <sup>†</sup>	$I_\gamma$ <sup>‡</sup>	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	$E_\gamma$ <sup>†</sup>	$I_\gamma$ <sup>‡</sup>	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$
<sup>x</sup> 95.2 2	45 5					168.0 2	12 1	602	(7 <sup>-</sup> )	434	(6 <sup>-</sup> )
99.6 2	28 3	168	(4 <sup>-</sup> )	68	(3 <sup>-</sup> )	<sup>x</sup> 171.3 2	88 9				
102.5 2	27 3	213.6	(6 <sup>-</sup> )	111.1	(5 <sup>-</sup> )	<sup>x</sup> 174.7 2	14 2				
<sup>x</sup> 106.0 2	22 2					177.5 2	59 6	576.8	(8 <sup>-</sup> )	399.3	(7 <sup>-</sup> )
<sup>x</sup> 108.6 2	31 3					<sup>x</sup> 184.9 2	24 3				
111.2 2	84 9	111.1	(5 <sup>-</sup> )	0.0	4 <sup>-</sup>	<sup>x</sup> 189.8 2	27 3				
<sup>x</sup> 115.2 2	33 3					<sup>x</sup> 195.0 2	26 3				
<sup>x</sup> 119.2 2	30 3					<sup>x</sup> 197.0 2	8 1				
122.2 2	54 5	290	(5 <sup>-</sup> )	168	(4 <sup>-</sup> )	<sup>x</sup> 200.2 2	9 1				
<sup>x</sup> 128.1 2	57 6					<sup>x</sup> 206.0 2	5 1				
133.6 2	32 3	244.7	(6 <sup>-</sup> )	111.1	(5 <sup>-</sup> )	<sup>x</sup> 209.0 2	25 3				
<sup>x</sup> 137.2 2	17 2					213.5 2	44 4	213.6	(6 <sup>-</sup> )	0.0	4 <sup>-</sup>
<sup>x</sup> 139.1 2	12 1					<sup>x</sup> 216.0 2	8 1				
144.2 2	43 4	434	(6 <sup>-</sup> )	290	(5 <sup>-</sup> )	<sup>x</sup> 220.3 2	21 2				
<sup>x</sup> 147.5 2	25 3					<sup>x</sup> 223.4 2	17 2				
<sup>x</sup> 150.4 2	21 2					<sup>x</sup> 226.5 2	15 2				
154.6 2	42 4	399.3	(7 <sup>-</sup> )	244.7	(6 <sup>-</sup> )	<sup>x</sup> 230.0 2	14 2				
<sup>x</sup> 157.5 2	66 7					<sup>x</sup> 233.7 2	23 2				
<sup>x</sup> 161.5 2	54 6					<sup>x</sup> 238.0 2	29 3				

Continued on next page (footnotes at end of table)

$^{174}\text{Yb}(p,3n\gamma)$  **1974BeXY (continued)** $\gamma(^{172}\text{Lu})$  (continued)

$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_i(\text{level})$	$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_i(\text{level})$	$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_i(\text{level})$
$^{x240.9} 2$	61 6		$^{x330.0} 2$	15 2		$^{x411.0} 2$	13 1	
$^{x245.0} 2$	70 7		$^{x333.4} 2$	22 2		$^{x416.9} 2$	100 10	
$^{x248.7} 2$	26 3		$^{x337.0} 2$	10 1		$^{x421.0} 2$	12 1	
$^{x254.5} 2$	36 4		$^{x340.0} 2$	7 1		$^{x433.0} 2$	23 2	
$^{x258.8} 2$	18 2		$^{x347.1} 2$	21 2		$^{x436.8} 2$	18 2	
$^{x263.9} 2$	32 3		$^{x353.6} 2$	18 2		$^{x440.0} 2$	96 10	
$^{x268.0} 2$	14 2		$^{x360.3} 2$	9 1		$^{x445.2} 2$	32 3	
$^{x283.6} 2$	9 1		$^{x367.9} 2$	17 2		$^{x453.0} 2$	22 2	
$^{x288.1} 2$	26 3		$^{x372.8} 2$	43 4		$^{x461.1} 2$	28 3	
$^{x293.9} 2$	24 3		$^{x377.7} 2$	18 2		$^{x470.4} 2$	17 2	
$^{x296.8} 2$	26 3		$^{x385.3} 2$	19 2		$^{x475.8} 2$	44 5	
$^{x302.0} 2$	7 1		$^{x388.0} 2$	17 2		$^{x482}$		
$^{x307.4} 2$	27 3		$^{x393.1} 2$	12 1		$^{x488}$		
$^{x311.7} 2$	48 5		$^{x398.7} 2$	39 4		$^{x493}$		
$^{x316.7} 2$	15 2		$^{x402.2} 2$	24 3		$^{x598}$		
$^{x319.9} 2$	26 3		$^{x406.0} 2$	13 1				
$^{x323.8} 2$	10 1		$^{x409.0} 2$	14 2				

$^\dagger$  Uncertainty  $\approx 0.2$  keV.

$^\ddagger$   $\Delta I_\gamma \approx 10\%$ .

$^x$   $\gamma$  ray not placed in level scheme.

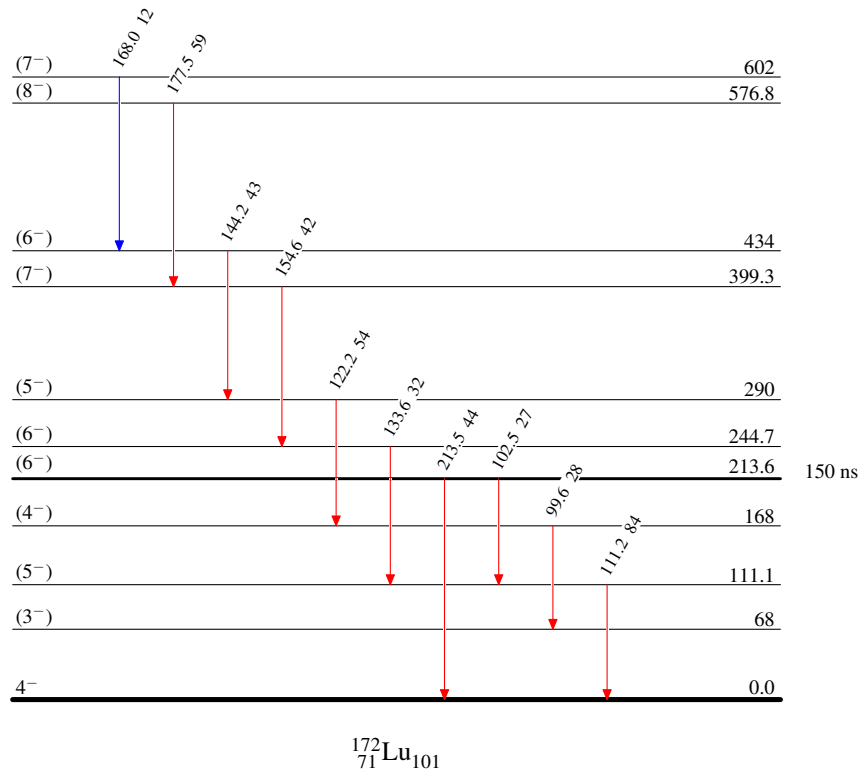
$^{174}\text{Yb}(p,3n\gamma)$  1974BeXY

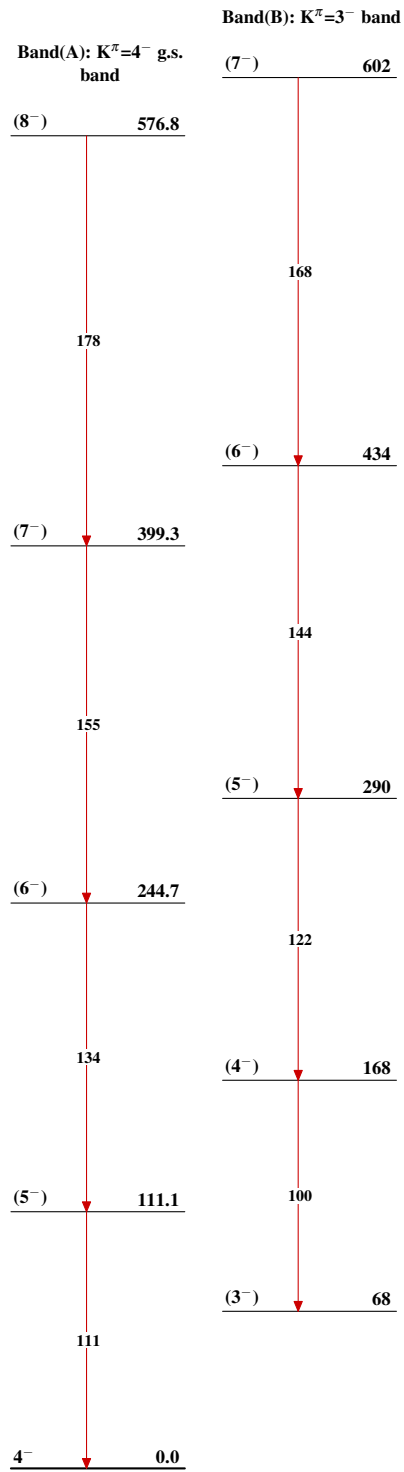
## Level Scheme

Intensities: Relative  $I_\gamma$ 

## Legend

- $\blacktriangleright$   $I_\gamma < 2\% \times I_\gamma^{\max}$
- $\color{blue}\blacktriangleright$   $I_\gamma < 10\% \times I_\gamma^{\max}$
- $\color{red}\blacktriangleright$   $I_\gamma > 10\% \times I_\gamma^{\max}$



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