

<sup>148</sup>Nd(p,n $\gamma$ ) **1989Le01**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 117, 1 (2014)	1-Oct-2013

E=8 MeV.

Measured:  $\gamma$ ,  $\gamma\gamma$  coincidences using HERA array of 21 Compton-suppressed germanium detectors.

<sup>148</sup>Pm Levels

E(level) <sup>†</sup>	J $\pi$ <sup>‡</sup>	E(level) <sup>†</sup>	E(level) <sup>†</sup>	E(level) <sup>†</sup>
0.0	1 <sup>-</sup>	308.9 3	526.4 4	622.7 6
75.70 25	1 <sup>-</sup> ,2 <sup>-</sup>	363.4 4	529.4 5	641.9 5
137.2 5		379.7 3	543.4 4	655.7 5
137.9 3	5 <sup>-</sup> ,6 <sup>-</sup>	385.3 5	545.7 4	660.5 6
215.3 4		388.1 3	550.3 4	669.5 4
219.9 3		409.6 4	561.3 4	672.9 4
292.0 3		413.5 4	564.2 4	726.3 3
302.9 4		440.1 3	573.1 3	797.0 6
304.7 3		452.0 3	611.2 5	800.5 7

<sup>†</sup> From a least-squares fit to E $\gamma$  data.

<sup>‡</sup> From Adopted Levels.

$\gamma$ (<sup>148</sup>Pm)

E $\gamma$	E <sub>i</sub> (level)	J $\pi$ <sub>i</sub>	E <sub>f</sub>	J $\pi$ <sub>f</sub>	E $\gamma$	E <sub>i</sub> (level)	E <sub>f</sub>	J $\pi$ <sub>f</sub>
62.2 5	137.9	5 <sup>-</sup> ,6 <sup>-</sup>	75.70	1 <sup>-</sup> ,2 <sup>-</sup>	162.2 5	550.3	388.1	
75.7 5	75.70	1 <sup>-</sup> ,2 <sup>-</sup>	0.0	1 <sup>-</sup>	165.0 5	302.9	137.9	5 <sup>-</sup> ,6 <sup>-</sup>
76.8 <sup>†</sup> 5	379.7		302.9		166.0 5	545.7	379.7	
77.0 <sup>†</sup> 5	622.7		545.7		170.1 5	385.3	215.3	
78.2 5	215.3		137.2		171.0 <sup>†</sup> 5	308.9	137.9	5 <sup>-</sup> ,6 <sup>-</sup>
79.2 <sup>†</sup> 5	388.1		308.9		173.1 5	561.3	388.1	
83.4 <sup>†</sup> 5	388.1		304.7		176.1 5	564.2	388.1	
84.5 5	304.7		219.9		181.5 5	561.3	379.7	
87.9 5	379.7		292.0		184.5 5	564.2	379.7	
88.6 5	452.0		363.4		186.9 5	550.3	363.4	
88.9 5	308.9		219.9		193.4 5	573.1	379.7	
96.1 5	388.1		292.0		194.4 5	409.6	215.3	
112.9 5	526.4		413.5		197.8 5	611.2	413.5	
119.8 5	529.4		409.6		200.8 5	564.2	363.4	
121.6 5	413.5		292.0		215.6 5	655.7	440.1	
129.8 5	543.4		413.5		216.3 5	292.0	75.70	1 <sup>-</sup> ,2 <sup>-</sup>
131.2 5	440.1		308.9		219.9 5	219.9	0.0	1 <sup>-</sup>
133.0 <sup>†</sup> 5	573.1		440.1		223.6 5	526.4	302.9	
137.1 5	440.1		302.9		225.5 5	363.4	137.9	5 <sup>-</sup> ,6 <sup>-</sup>
141.3 5	529.4		388.1		229.0 5	304.7	75.70	1 <sup>-</sup> ,2 <sup>-</sup>
148.0 5	363.4		215.3		229.5 5	669.5	440.1	
148.1 5	440.1		292.0		233.2 5	308.9	75.70	1 <sup>-</sup> ,2 <sup>-</sup>
149.1 5	452.0		302.9		236.8 5	545.7	308.9	
154.1 5	292.0		137.9	5 <sup>-</sup> ,6 <sup>-</sup>	241.0 5	545.7	304.7	
154.6 5	564.2		409.6		246.1 5	655.7	409.6	
157.6 5	545.7		388.1		247.4 5	550.3	302.9	
159.8 5	379.7		219.9		248.0 5	385.3	137.9	5 <sup>-</sup> ,6 <sup>-</sup>
160.0 5	452.0		292.0		250.2 <sup>†</sup> 5	388.1	137.9	5 <sup>-</sup> ,6 <sup>-</sup>

Continued on next page (footnotes at end of table)

$^{148}\text{Nd}(p,n\gamma)$  **1989Le01** (continued) $\gamma(^{148}\text{Pm})$  (continued)

$E_\gamma$	$E_i(\text{level})$	$E_f$	$J_f^\pi$	$E_\gamma$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	$E_\gamma$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$
253.7 <sup>†</sup> 5	545.7	292.0		304.7 5	304.7		0.0	1 <sup>-</sup>	364.4 5	440.1		75.70	1 <sup>-</sup> ,2 <sup>-</sup>
258.3 <sup>†</sup> 5	550.3	292.0		308.9 5	308.9		0.0	1 <sup>-</sup>	364.8 5	669.5		304.7	
259.3 5	672.9	413.5		311.1 5	526.4		215.3		376.3 5	452.0		75.70	1 <sup>-</sup> ,2 <sup>-</sup>
263.3 5	672.9	409.6		312.4 5	388.1		75.70	1 <sup>-</sup> ,2 <sup>-</sup>	379.7 5	379.7		0.0	1 <sup>-</sup>
264.2 5	573.1	308.9		314.1 5	452.0		137.9	5 <sup>-</sup> ,6 <sup>-</sup>	388.1 5	388.1		0.0	1 <sup>-</sup>
268.4 5	573.1	304.7		318.0 5	622.7		304.7		395.8 5	611.2		215.3	
270.2 <sup>†</sup> 5	655.7	385.3		328.3 5	543.4		215.3		405.5 5	543.4		137.9	5 <sup>-</sup> ,6 <sup>-</sup>
271.7 5	409.6	137.9	5 <sup>-</sup> ,6 <sup>-</sup>	333.0 5	641.9		308.9		407.8 <sup>†</sup> 5	545.7		137.9	5 <sup>-</sup> ,6 <sup>-</sup>
272.2 <sup>†</sup> 5	564.2	292.0		333.9 <sup>†</sup> 5	409.6		75.70	1 <sup>-</sup> ,2 <sup>-</sup>	412.4 5	550.3		137.9	5 <sup>-</sup> ,6 <sup>-</sup>
274.1 5	800.5	526.4		337.7 5	413.5		75.70	1 <sup>-</sup> ,2 <sup>-</sup>	421.6 5	726.3		304.7	
274.3 5	726.3	452.0		338.2 5	726.3		388.1		422.0 5	641.9		219.9	
281.0 5	573.1	292.0		341.6 5	561.3		219.9		426.3 5	564.2		137.9	5 <sup>-</sup> ,6 <sup>-</sup>
284.1 5	669.5	385.3		346.6 5	726.3		379.7		435.2 5	573.1		137.9	5 <sup>-</sup> ,6 <sup>-</sup>
284.8 5	672.9	388.1		351.6 5	660.5		308.9		485.5 <sup>†</sup> 5	561.3		75.70	1 <sup>-</sup> ,2 <sup>-</sup>
292.0 5	292.0	0.0	1 <sup>-</sup>	356.9 5	797.0		440.1		494.1 <sup>†</sup> 5	797.0		302.9	
296.9 <sup>†</sup> 5	660.5	363.4		360.6 <sup>†</sup> 5	669.5		308.9		497.7 <sup>†</sup> 5	800.5		302.9	
302.2 5	440.1	137.9	5 <sup>-</sup> ,6 <sup>-</sup>	362.9 5	726.3		363.4						

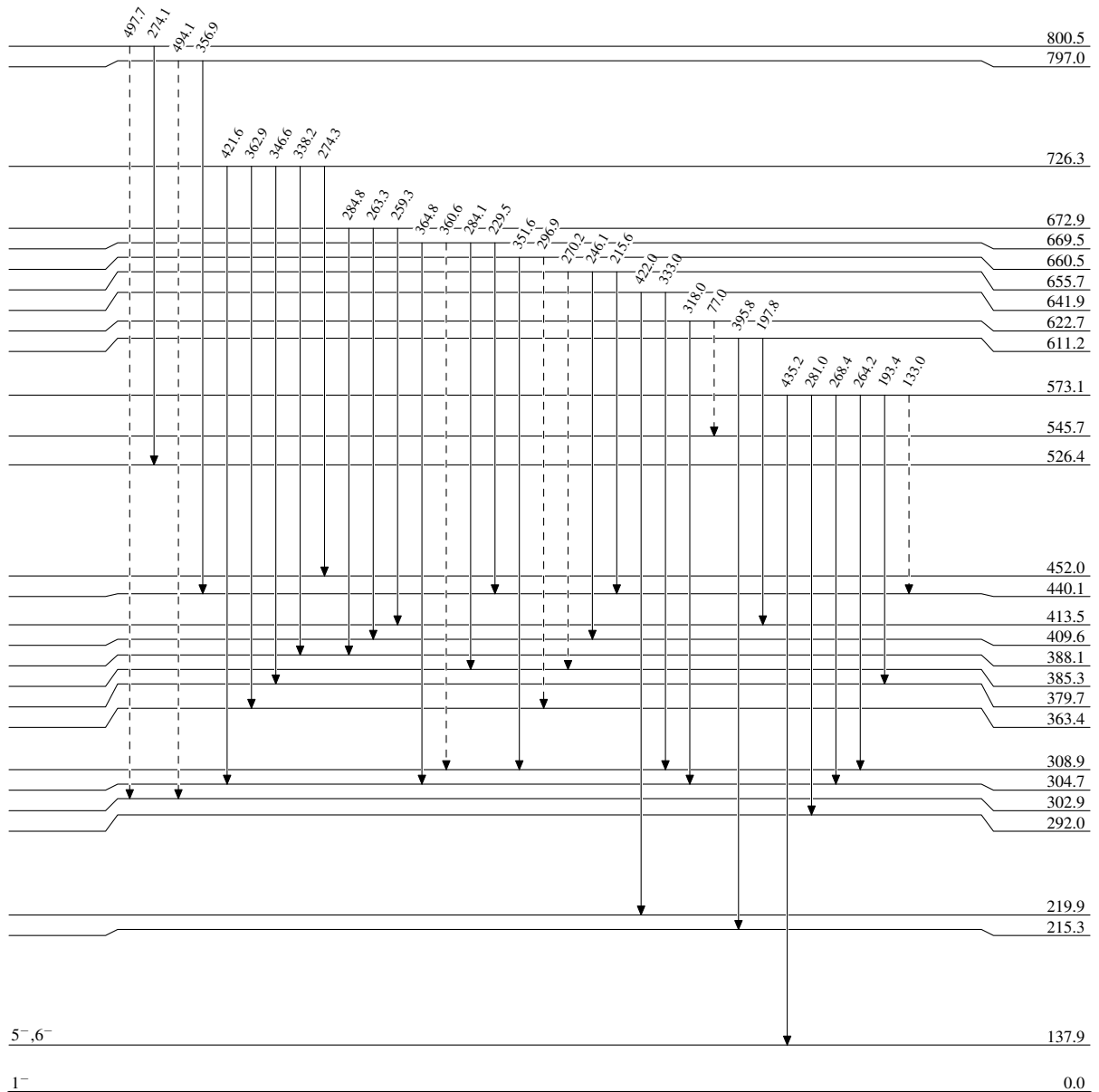
<sup>†</sup> Placement of transition in the level scheme is uncertain.

$^{148}\text{Nd}(p,n\gamma)$  1989Le01

Legend

Level Scheme

-----▶  $\gamma$  Decay (Uncertain)



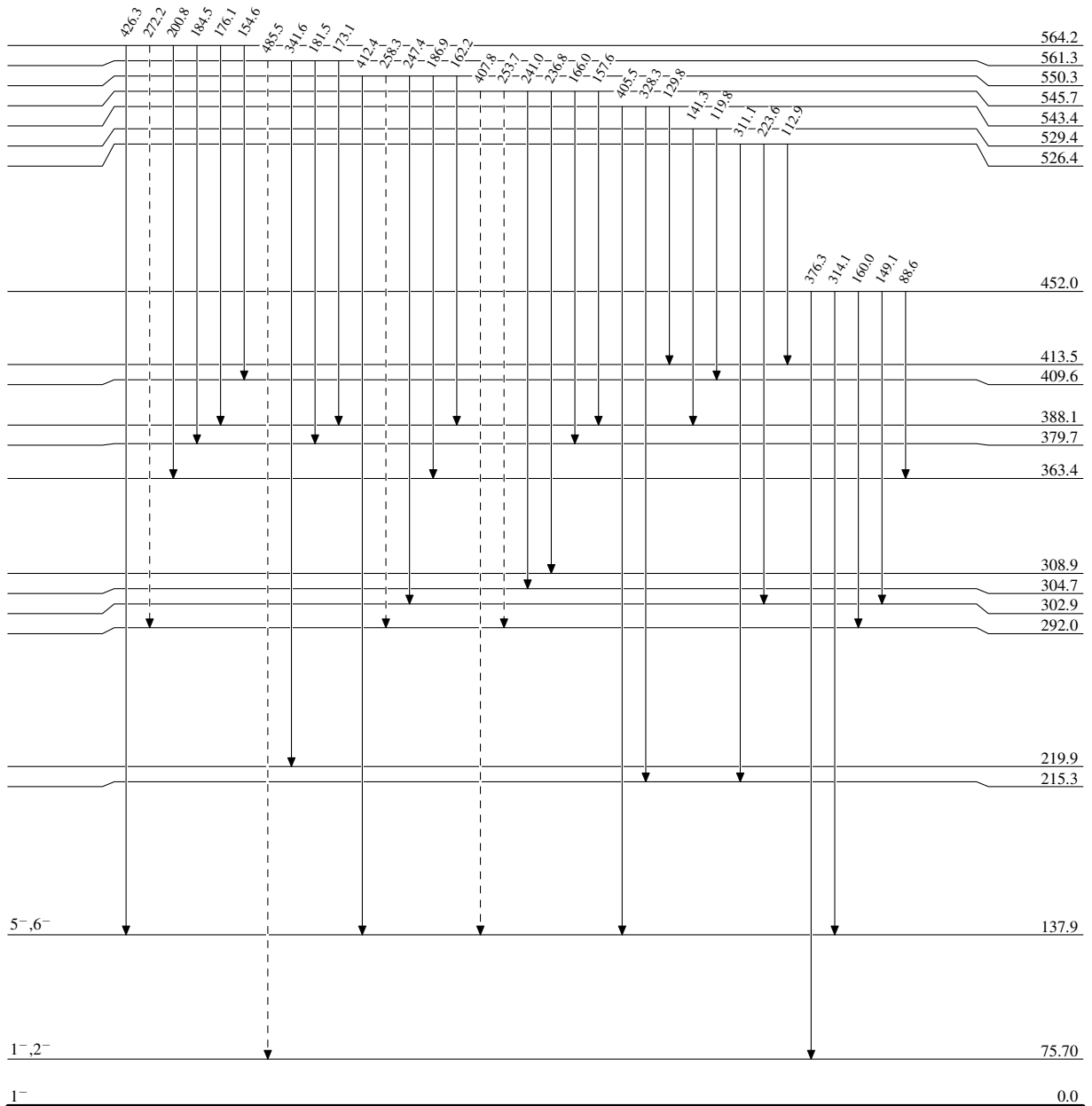
$^{148}_{61}\text{Pm}_{87}$

$^{148}\text{Nd}(p,n)$  1989Le01

Legend

Level Scheme (continued)

----->  $\gamma$  Decay (Uncertain)



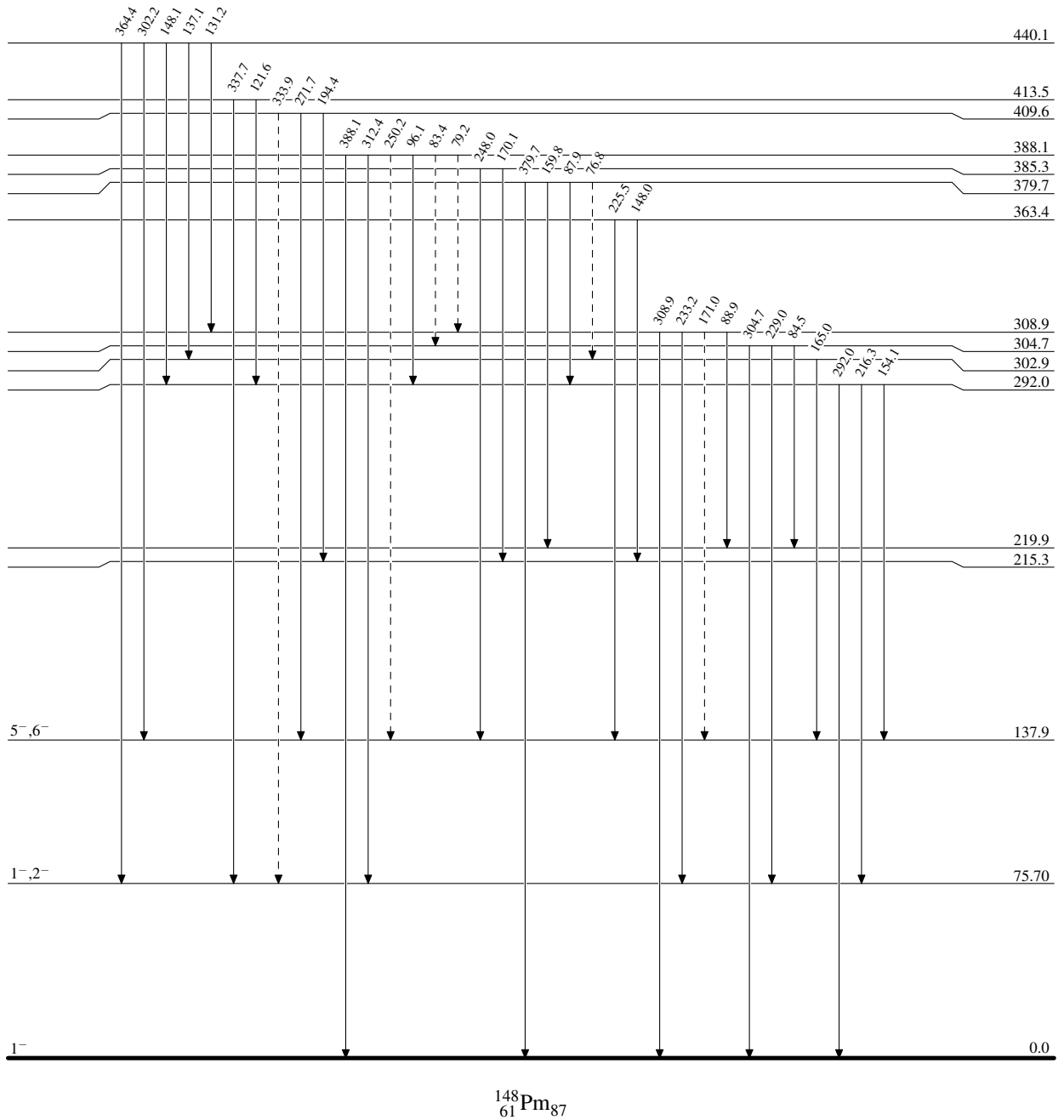
$^{148}_{61}\text{Pm}_{87}$

$^{148}\text{Nd}(p,n)$  1989Le01

Legend

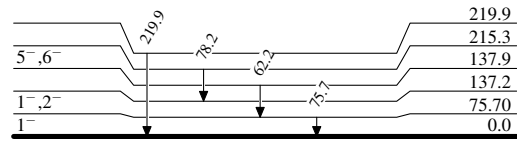
Level Scheme (continued)

----->  $\gamma$  Decay (Uncertain)



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## Level Scheme (continued)

 $^{148}_{61}\text{Pm}_{87}$