^{152}Pm β^- decay (13.8 min)

Parent: ^{152}Pm: E=150+x; J^π=(8); $T_{1/2}$=13.8 min 2; $Q(\beta^-)$=3508 26; $\%\beta^-$ decay≤100.0

Measured: γ, $\gamma\gamma$ (1985YaZV,1972WiZI,1971Da19), γ (1977Ya07).

The data reported for the decay of this isomer is fragmentary. none of the authors proposes a decay scheme. Based on data from other datasets, the evaluator has created a decay scheme. The 229.9γ is not reported in any other dataset. 1989Pe11 has suggested that this transition feeds the 7^- level at 2121 from a K^π=8$^-$ level at 2351, the only level in the proposed decay scheme that might be populated directly in the β^- decay of the 13.8-min ^{152}Pm isomer, with probable K^π=8$^-$.

^{152}Sm Levels

E(level)†	J$^{\pi\ddagger}$	Comments
0.0	0^+	
121.8	2^+	
366.5	4^+	
706.9	6^+	
1559.6	5^+	
1804.0	5^-	
1920.5	6^-	
2057.5	7^-	
2121.0	7^-	
2350.9?	(8^-)	E(level): Not adopted. Not seen in any other decay or reaction dataset.

† Rounded-off values from Adopted Levels.

‡ From Adopted Levels.

$\gamma(^{152}$Sm)

$E_\gamma{}^\dagger$	E_i(level)	J_i^π	E_f	J_f^π	$E_\gamma{}^\dagger$	E_i(level)	J_i^π	E_f	J_f^π
63	2121.0	7^-	2057.5	7^-	340.4	706.9	6^+	366.5	4^+
(116.5)	1920.5	6^-	1804.0	5^-	360.4	1920.5	6^-	1559.6	5^+
121.8	121.8	2^+	0.0	0^+	(852.8)	1559.6	5^+	706.9	6^+
137.4	2057.5	7^-	1920.5	6^-	(1193.1)	1559.6	5^+	366.5	4^+
200.3	2121.0	7^-	1920.5	6^-	1214 1	1920.5	6^-	706.9	6^+
229.9	2350.9?	(8^-)	2121.0	7^-	^{x}1233.8 7				
244.7	366.5	4^+	121.8	2^+	1437.5 3	1804.0	5^-	366.5	4^+

† The 116.5, 852.8, and 1193.1 γ's were seen only in (α,2nγ). The 63, 137, 200, 230, and 360 γ's were reported by 1985YaZV, the 137.4, 229.9, and 360.4 γ's by 1977Ya07, and the 1214, 1233, and 1437.5 γ's by 1971Da19.
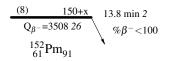
^{x} γ ray not placed in level scheme.

^{152}Pm β^- decay (13.8 min)

Decay Scheme

Legend

(8)   150+x   13.8 min *2*

Q_{β^-}=3508 *26*   %β^-<100

$^{152}_{61}$Pm$_{91}$

- - - - - → γ Decay (Uncertain)

229.9

(8$^-$)   2350.9

200.3   63   137.4

7$^-$ 2121.0

7$^-$ 2057.5

121.4   360.4   116.5   1437.5

6$^-$ 1920.5

5$^-$ 1804.0

1193.1   852.8

5$^+$ 1559.6

340.4

6$^+$ 706.9

244.7

4$^+$ 366.5

121.8

2$^+$ 121.8

0$^+$ 0.0

$^{152}_{62}$Sm$_{90}$