

^{75}Ga β^- decay (126 s) 1974Ch22

Type	Author	History	Citation	Literature Cutoff Date
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Parent: ^{75}Ga : $E=0$; $J^\pi=3/2^-$; $T_{1/2}=126$ s 2; $Q(\beta^-)=3392.4$ 24; $\% \beta^-$ decay=100.0

^{75}Ga - J^π , $T_{1/2}$: From ^{75}Ga Adopted Levels.

^{75}Ga - $Q(\beta^-)$: From Adopted Levels.

Measured: γ , $\gamma(t)$, $T_{1/2}$.

Others: 1974Gr29, 1960Mo01, 1960Yt01.

Measured endpoint energy is 3.3 MeV 2 (1960Mo01).

The decay scheme is not normalized because β feeding to g.s. is unknown.

 ^{75}Ge Levels

E(level)	$J^\pi^\dagger$	$T_{1/2}^\dagger$	E(level)	$J^\pi^\dagger$	E(level)	$J^\pi^\dagger$
0	$1/2^-$		584.3 3	$5/2^+$	1501.10 12	$1/2^-, 3/2^-$
139.48 16	$7/2^+$	47.7 s 5	761.10 15	(3/2)	1796.38 13	$1/2^-, 3/2^-$
252.86 10	$3/2^-$		885.19 10	$1/2^-$	2103.73 20	
316.66 14	$5/2^-$		1222.93? 15		2664.08 23	(1/2, 3/2, 5/2)
457.08 11	$5/2^-$		1240.05 13	(5/2) $^-$		
574.34 11	$3/2^-$		1427.24 15	(1/2, 3/2)		

† From Adopted Levels.

 $\gamma(^{75}\text{Ge})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. ‡	$\alpha^\&$	Comments
124.3 2	0.8 3	885.19	$1/2^-$	761.10 (3/2)				
139.3 2		139.48	$7/2^+$	0	$1/2^-$	E3	1.549 24	$\alpha(\text{K})=1.298$ 20; $\alpha(\text{L})=0.217$ 4; $\alpha(\text{M})=0.0322$ 5; $\alpha(\text{N})=0.001404$ 22
177.0 2	10.7 8	316.66	$5/2^-$	139.48	$7/2^+$	(E1+M2)	0.06 5	$\alpha(\text{K})=0.06$ 5; $\alpha(\text{L})=0.006$ 6; $\alpha(\text{M})=0.0010$ 8; $\alpha(\text{N})=6.E-5$ 5 δ : +0.03 +111-9 or $\delta < -5$.
203.9 2	5.3 8	457.08	$5/2^-$	252.86	$3/2^-$	(M1+E2)	0.032 20	$\alpha(\text{K})=0.028$ 18; $\alpha(\text{L})=0.0031$ 20; $\alpha(\text{M})=0.0005$ 3; $\alpha(\text{N})=2.8 \times 10^{-5}$ 17 δ : -0.1 2 or >2.
252.8 2	100	252.86	$3/2^-$	0	$1/2^-$	(M1+E2)	0.015 9	$\alpha(\text{K})=0.014$ 8; $\alpha(\text{L})=0.0015$ 9; $\alpha(\text{M})=0.00022$ 13; $\alpha(\text{N})=1.4 \times 10^{-5}$ 8 δ : -2.4 < δ < -0.12.
x 279.3 2	2.9 6							
310.4 2	6.6 10	885.19	$1/2^-$	574.34	$3/2^-$			
316.8 2	3.3 7	316.66	$5/2^-$	0	$1/2^-$			
321.6 2	2.0 4	574.34	$3/2^-$	252.86	$3/2^-$			
428.3 2	1.1 3	885.19	$1/2^-$	457.08	$5/2^-$			
x 442.8 † 2	0.9 1							
444.8 2	1.6 2	584.3	$5/2^+$	139.48	$7/2^+$	(M1+E2)	0.0026 8	$\alpha=0.0026$ 8; $\alpha(\text{K})=0.0023$ 7; $\alpha(\text{L})=0.00024$ 8; $\alpha(\text{M})=3.6 \times 10^{-5}$ 12; $\alpha(\text{N})=2.3 \times 10^{-6}$ 7
457.1 2	4.5 4	457.08	$5/2^-$	0	$1/2^-$	(E2)	0.00312 5	$\alpha=0.00312$ 5; $\alpha(\text{K})=0.00278$ 4; $\alpha(\text{L})=0.000293$ 5; $\alpha(\text{M})=4.37 \times 10^{-5}$ 7; $\alpha(\text{N})=2.77 \times 10^{-6}$ 4
568.5 2	2.4 4	885.19	$1/2^-$	316.66	$5/2^-$			
574.7 2	31.6 20	574.34	$3/2^-$	0	$1/2^-$	(M1+E2)	0.0013 3	$\alpha=0.0013$ 3; $\alpha(\text{K})=0.00114$ 24; $\alpha(\text{L})=0.00012$ 3; $\alpha(\text{M})=1.8 \times 10^{-5}$ 4;

Continued on next page (footnotes at end of table)

^{75}Ga β^{-} decay (126 s) [1974Ch22](#) (continued) $\gamma(^{75}\text{Ge})$ (continued)

E_{γ}	I_{γ}	$E_i(\text{level})$	J_i^{π}	E_f	J_f^{π}	Comments
$\alpha(N)=1.14\times 10^{-6}$ 23 $\delta: -2.4<\delta<+0.12.$						
584.1 ^{#b} 2	1.5 1	584.3	5/2 ⁺	0	1/2 ⁻	
632.2 2	5.5 3	885.19	1/2 ⁻	252.86	3/2 ⁻	
647.5 ^b 2	1.8 2	1222.93?		574.34	3/2 ⁻	
761.3 2	1.2 3	761.10	(3/2)	0	1/2 ⁻	
783.2 2	2.1 2	1240.05	(5/2) ⁻	457.08	5/2 ⁻	
885.4 2	11.1 7	885.19	1/2 ⁻	0	1/2 ⁻	
927.2 2	6.6 5	1501.10	1/2 ⁻ ,3/2 ⁻	574.34	3/2 ⁻	
987.5 2	1.4 2	1240.05	(5/2) ⁻	252.86	3/2 ⁻	
1043.3 [@] 2	2.6 2	1501.10	1/2 ⁻ ,3/2 ⁻	457.08	5/2 ⁻	
1174.6 2	1.5 2	1427.24	(1/2,3/2)	252.86	3/2 ⁻	
^x 1182.3 2	1.4 2					
1222.5 ^{ab} 2	1.3 ^a 2	1222.93?		0	1/2 ⁻	
1222.5 ^a 2	1.3 ^a 2	1796.38	1/2 ⁻ ,3/2 ⁻	574.34	3/2 ⁻	
1239.5 2	0.3 1	1240.05	(5/2) ⁻	0	1/2 ⁻	
1248.5 2	5.5 3	1501.10	1/2 ⁻ ,3/2 ⁻	252.86	3/2 ⁻	
^x 1358.8 2	0.4 1					
1427.0 2	0.9 2	1427.24	(1/2,3/2)	0	1/2 ⁻	
1501.1 2	4.5 5	1501.10	1/2 ⁻ ,3/2 ⁻	0	1/2 ⁻	
1543.0 2	1.1 2	1796.38	1/2 ⁻ ,3/2 ⁻	252.86	3/2 ⁻	
^x 1745.6 2	<0.1					
1796.4 2	0.6 1	1796.38	1/2 ⁻ ,3/2 ⁻	0	1/2 ⁻	
2089.7 2	0.20 5	2664.08	(1/2,3/2,5/2)	574.34	3/2 ⁻	
2103.7 2	0.20 5	2103.73		0	1/2 ⁻	

[†] Tentatively placed ([1974Ch22](#)) from the 761 level, but the energy fit is poor (level energy difference=444.4).

[‡] From Adopted Gammas. Mixing ratios, when available from Adopted Gammas, are given under comments.

[#] Not seen in other studies, also γ to 1/2⁻ is unlikely.

[@] Poor energy fit, level-energy difference=1044.0.

[&] [Additional information 1.](#)

^a Multiply placed with undivided intensity.

^b Placement of transition in the level scheme is uncertain.

^x γ ray not placed in level scheme.

Legend

