^{73}Ge(n,γ) E=102.6 eV 1974Ch18

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Ameenah R. Farhan	NDS 107, 1923 (2006)	30-Apr-2006

Others: 1973Sh17, 1968Ma27, 1957Bo30, 1950Mu97.
1974Ch18: natural target. Time of flight method for neutrons and germanium detectors for γ's. Average radiative strengths deduced.
1968Ma27: 47 neutron resonances measured in the range 102.6 eV to 8530 eV.

^{74}Ge Levels

E(level)‡	J^π	Comments
0.0		
593.2 *7*		
1202.7 *9*		
1464.3 *5*		
1696.7 *4*		
2165.8 *5*		
2537.8 *6*		
2694.9 *6*		
2830.7 *5*		
2936.2 *5*		
2974.7† *5*		
3050.3 *10*		
3060.2 *10*		
3084.1 *6*		
3105.6 *4*		
3143.2† *7*		
3177.1† *9*		
3272.5† *6*		
3383.2† *7*		
3412.2† *6*		
3481.2† *6*		
3515.7† *10*		
3699.0 *6*		
3774.8† *11*		
3809.0† *7*		
3836.8† *6*		
3957.6† *7*		
3997.0† *6*		
4236.1† *10*		
(S(n)+102.6)	4^+	E(level): S(n)=10196.22 *6* (2003Au03), E(n)=102.6 eV (1968Ma27). J^π: from 1974Ch18.

† Level included by evaluators on the basis of (n,γ) E=thermal.
‡ Based on S(n)=10196.31 *7* from (n,γ) E=thermal and Eγ's of 1974Ch18. Values are systematically lower by about 2 keV compared to those from (n,γ) E=thermal (1985HoZQ, 1991Is01).

^{73}Ge(n,γ) E=102.6 eV 1974Ch18 (continued)

γ(^{74}Ge)

E_γ[‡]	I_γ[#]	E_i(level)	J^π_i
^{x}4637.8 *6*	0.71 *29*		
^{x}4681.9 *3*	0.59 *13*		
^{x}4711.8 *10*	0.41 *26*		
^{x}4721.5[†] *9*	0.41 *26*		
^{x}4772.9[†] *15*	0.35 *28*		
^{x}4804.7[†] *4*	0.52 *14*		
^{x}4829.0[†] *5*	0.21 *17*		
^{x}4835.3[†] *7*	0.41 *17*		
^{x}4893.1 *5*	0.14 *8*		
^{x}4902.7 *6*	0.10 *8*		
^{x}4950.8[†] *8*	0.51 *25*		
^{x}5018.2 *7*	0.45 *21*		
^{x}5061.9 *9*	0.37 *24*		
^{x}5111.5 *7*	0.18 *18*		
^{x}5158.7 *3*	0.72 *28*		
^{x}5205.3 *5*	0.45 *12*		
^{x}5349.8[†] *8*	0.73 *42*		
^{x}5437.7 *6*	0.18 *17*		
^{x}5474.6[†] *6*	0.33 *18*		
^{x}5514.3[†] *6*	0.37 *16*		
^{x}5560.9[†] *4*	0.51 *18*		
^{x}5594.2[†] *3*	0.094 *12*		
^{x}5635.6[†] *3*	0.24 *12*		
^{x}5663.8 *3*	0.55 *14*		
^{x}5673.0 *7*	0.16 *14*		
^{x}5692.8 *5*	0.35 *26*		
^{x}5746.2[†] *8*	0.29 *26*		
^{x}5780.7 *5*	0.18 *13*		
^{x}5830.2 *6*	0.034 *4*		
^{x}5878.4[†] *8*	0.18 *17*		
^{x}5899.0 *4*	0.18 *5*		
5960.3[†] *9*	0.34 *21*	(S(n)+102.6)	4^+
^{x}5975.4 *6*	0.42 *22*		
^{x}5990.3[†] *7*	0.31 *24*		
^{x}6026.5 *5*	0.50 *24*		
^{x}6040.7[†] *6*	0.48 *24*		
^{x}6111.9 *3*	0.64 *10*		
^{x}6129.5 *7*	0.22 *10*		
6199.4[†] *4*	0.79 *22*	(S(n)+102.6)	4^+

E_γ[‡]	I_γ[#]	E_i(level)	J^π_i	E_f
6238.8[†] *6*	0.51 *29*	(S(n)+102.6)	4^+	
^{x}6268.9[†] *6*	0.43 *28*			
^{x}6317.2 *13*	0.20 *16*			
6359.6[†] *4*	0.43 *18*	(S(n)+102.6)	4^+	
^{x}6366.8[†] *7*	0.14 *13*			
6387.4 *6*	0.41 *16*	(S(n)+102.6)	4^+	
6421.6[†] *10*	0.20 *16*	(S(n)+102.6)	4^+	
^{x}6469.3[†] *9*	0.10 *12*			
6497.4 *5*	0.22 *14*	(S(n)+102.6)	4^+	3809.0
^{x}6531.4 *8*	0.17 *8*			
6680.7[†] *9*	0.33 *29*	(S(n)+102.6)	4^+	
6715.2[†] *5*	0.96 *34*	(S(n)+102.6)	4^+	
6784.2[†] *5*	0.55 *20*	(S(n)+102.6)	4^+	3515.7
6813.2[†] *5*	0.67 *20*	(S(n)+102.6)	4^+	3481.2
6923.9[†] *4*	0.34 *13*	(S(n)+102.6)	4^+	
^{x}6971.2[@] *8*	0.28 *18*			
7019.3[†] *8*	0.43 *18*	(S(n)+102.6)	4^+	3272.5
7053.2 *6*	0.09 *12*	(S(n)+102.6)	4^+	
^{x}7076.6[@] *7*	0.20 *12*			
7090.8[†] *2*	1.27 *13*	(S(n)+102.6)	4^+	
7112.3[†] *5*	0.18 *18*	(S(n)+102.6)	4^+	
7136.2 *9*	0.17 *18*	(S(n)+102.6)	4^+	
7146.1[†] *9*	0.24 *17*	(S(n)+102.6)	4^+	
7221.7[†] *3*	0.77 *21*	(S(n)+102.6)	4^+	
7260.2[†] *3*	2.7 *4*	(S(n)+102.6)	4^+	
7365.7[†] *3*	0.20 *18*	(S(n)+102.6)	4^+	2936.2
^{x}7429.0[@] *11*	0.10 *8*			
7501.5[†] *4*	1.4 *3*	(S(n)+102.6)	4^+	
7658.6[†] *4*	0.38 *16*	(S(n)+102.6)	4^+	
^{x}7811.6 *7*	0.14 *8*			
^{x}7844.6[@] *7*	0.16 *7*			
^{x}8011.4 *7*	0.35 *17*			
8030.6[†] *3*	1.5 *2*	(S(n)+102.6)	4^+	
^{x}8144.9[@] *7*	0.12 *5*			
^{x}8304.0[@] *13*	0.12 *8*			
8499.7[†] *2*	1.6 *2*	(S(n)+102.6)	4^+	
8732.1[†] *3*	0.24 *7*	(S(n)+102.6)	4^+	
8993.7[†] *8*	0.10 *7*	(S(n)+102.6)	4^+	
9603.2[†] *6*	0.18 *8*	(S(n)+102.6)	4^+	

[†] γ seen in (n,γ) E=thermal also.
[‡] Energies are systematically higher compared with the recent work of 1985HoZQ in (n,γ) E=thermal. In the energy range of this experiment, the differences in energies are 2 to 3 keV.
[#] Intensity per 100 neutron captures.
[@] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

^{73}Ge(n,γ) E=102.6 eV 1974Ch18