

^{69}Ga $Z = 31$ $N = 38$ [link to full NNDC output](#)

Based on ENSDF from Dec 2018, and mass evaluation from 2016

BE = 601.996 (0.001) MeV

	Energy T	J+	J-	J-other	T1/2
69GA 1			0.000	3/2-	1 STABLE
69GA 2			0.319	1/2-	2 70 PS LT
69GA 3			0.574	5/2-	3 1.7 PS 7
69GA 4			0.872	3/2-	4 0.250 PS 21
69GA 5			1.029	1/2-	5 1.2 PS 10
69GA 6			1.107	5/2-	6 0.222 PS 21
69GA 7				1.134	7
69GA 8			1.337	7/2-	8 1.18 PS 6
69GA 9			1.488	7/2-	9 1.9 PS +10-5
69GA 10			1.526	3/2-	10 0.55 PS GE
69GA 11			1.724	5/2-	11 0.15 PS +12-6
69GA 12			1.765	9/2-	12 0.83 PS 14
69GA 13			1.892	3/2-	13 22 FS 3
69GA 14			1.924	7/2-	14 0.62 PS GE
69GA 15				1.972 9/2(+)	15 2.8 PS GE
69GA 16				1.973 (1/2)-	16 97 FS 28
69GA 17				2.008 3/2(-),5/2(-)	17 0.35 PS +21-10
69GA 18			2.024	5/2-	18 0.175 PS 19
69GA 19			2.045	5/2-	19 111 FS 14
69GA 20				2.197	20
69GA 21				2.219	21 0.21 PS GE
69GA 22				2.251 (1/2,3/2)-	22 0.10 PS +5-3
69GA 23				2.320 (5/2+,7/2+)	23 1.04 PS 21
69GA 24				2.353 5/2	24 0.17 PS GE
69GA 25				2.423	25
69GA 26				2.429 5/2-,7/2-	26 1.7 PS GE
69GA 27				2.459 7/2(-)	27 0.15 PS +19-6
69GA 28	2.486	5/2+			28 70 FS +50-30
69GA 29				2.530 (3/2)-	29 76 FS 21
69GA 30				2.560 (7/2)-	30
69GA 31				2.564	31
69GA 32	2.573	9/2+			32
69GA 33			2.573	3/2-	33
69GA 34				2.600 -	34
69GA 35				2.614 -	35
69GA 36			2.660	3/2-	36
69GA 37				2.668 11/2	37 1.7 PS GE
69GA 38				2.680 5/2-,7/2-	38

69GA 39						2.718	13/2(+)	39	1.4 PS	GE
69GA 40						2.749	1/2-, 3/2-	40		

69GA 41						2.766		41		
69GA 42				2.789		1/2-		42		
69GA 43						2.795	(7/2)-	43		
69GA 44						2.847	+	44		
69GA 45						2.860		45		
69GA 46						2.932	3/2+, 5/2+	46		
69GA 47						2.965	-	47		
69GA 48						2.979	-	48		
69GA 49						2.995		49		
69GA 50						3.052	3/2, 7/2	50		

69GA 51		3.077		5/2+				51		
69GA 52						3.098	-	52		
69GA 53				3.118		11/2-		53	0.24 PS	5
69GA 54						3.135		54		
69GA 55						3.192	(-)	55		
69GA 56						3.203	(3/2-)	56		
69GA 57						3.211		57		
69GA 58						3.240	-	58		
69GA 59				3.242		13/2-		59	0.5 PS	3
69GA 60				3.283		3/2-		60		

69GA 61						3.299	-	61		
69GA 62						3.319	7/2	62		
69GA 63						3.328	-	63		
69GA 64						3.358	3/2+, 5/2+	64		
69GA 65				3.371		3/2-		65		
69GA 66						3.389	(15/2+)	66	1.9 PS	10
69GA 67						3.490	-	67		
69GA 68						3.543	11/2(+)	68	0.42 PS	7
69GA 69						3.578	-	69		
69GA 70						3.634	17/2(+)	70	1.4 PS	7

69GA 71						3.655	-	71		
69GA 72						3.693		72		
69GA 73						3.722	(11/2, 13/2)	73	1.6 PS	3
69GA 74				3.757		3/2-		74		
69GA 75						3.786	(15/2)	75	1.04 PS	21
69GA 76						3.795	(-)	76		
69GA 77		3.803		1/2+				77		
69GA 78						3.881	-	78		
69GA 79						3.928	(-)	79		
69GA 80						3.950		80		

69GA 81						3.966		81		
69GA 82						3.993		82		
69GA 83						4.032	-	83		

69GA 84						4.078	(15/2)-	84	0.55 PS	10
69GA 85						4.106		85		
69GA 86		4.115		1/2+				86		
69GA 87		4.152		1/2+				87		
69GA 88						4.160		88		
69GA 89		4.190		1/2+				89		
69GA 90						4.191		90		

69GA 91				4.251		3/2-		91		
69GA 92						4.253	(1/2+)	92		
69GA 93						4.291		93		
69GA 94						4.321	(1/2+)	94		
69GA 95						4.430		95		
S-alpha=		4.489		(0.001)						

69GA 96						4.528	(17/2,19/2)	96	2.8 PS	GE
69GA 97						4.533	(1/2+)	97		
69GA 98		4.830		1/2+				98		
S-p		=		6.610		(0.001)				

69GA 99						6.874	1/2	99	10 FS	LT
69GA 100		7.307		5/2+				100	4.3 FS	+11-7

69GA 101						9.814		101	1.5E-2 AS	5
69GA 102						10.248		102		
69GA 103						10.252		103		
69GA 104						10.257		104		
S-n		=		10.313		(0.002)				

69GA 105						10.586	(3/2-)	105	9.1E-1 AS	
69GA 106						10.597		106	1.8E-1 AS	
69GA 107				10.621		3/2-		107	1.5E-2 AS	
69GA 108						10.655	(5/2+)	108	1.5E-2 AS	
69GA 109						10.686	(5/2+)	109	1.8E-1 AS	
69GA 110						10.698	(5/2+)	110	1.8E-1 AS	

69GA 111						10.717	(5/2+)	111	1.8E-1 AS	
69GA 112		11.404		5/2+				112	1.5E-2 AS	
69GA 113		11.483		1/2+				113	7.6E-3 AS	
69GA 114						11.601	(1/2-)	114	1.5E-2 AS	
69GA 115		12.028		1/2+				115	1.1E-2 AS	
69GA 116		12.178		5/2+				116	1.5E-2 AS	
69GA 117		12.331		5/2+				117	1.5E-2 AS	
69GA 118		12.434		1/2+				118	9.1E-2 AS	

S-p		=		6.610		(0.001)				
S-n		=		10.313		(0.002)				
S-2p		=		16.586		(0.001)				
S-2n		=		18.591		(0.002)				
S-alpha=				4.489		(0.001)				

S+p		=		-8.523		(0.001)				

S+n = -7.654 (0.002)
S+2p = -13.143 (0.004)
S+2n = -16.954 (0.001)
S+alpha = -4.050 (0.004)

gap p = -1.913 (0.002)
gap n = 2.659 (0.002)
gap 2p = 3.443 (0.005)
gap 2n = 1.637 (0.002)
gap alpha = 0.439 (0.004)