

^{143}Gd $Z = 64$ $N = 79$ adopted link ENSDF link

Based on ENSDF from Oct 2022, and mass evaluation from 2020

BE = 1172.359 (0.200) MeV

Qbeta+ = 6.010 (0.201) MeV

	Energy T	J+	J-	J-other	T1/2

S-alpha=	-1.724	(0.201)	-----		
143GD 1				0.000 (1/2)+	1 39 S 2
143GD 2				0.045 (3/2+)	2
143GD 3				0.153 (11/2-)	3 110.0 S 14
143GD 4				0.354 (5/2+)	4
143GD 5				0.407 (5/2+)	5
143GD 6				0.493 (9/2-)	6
143GD 7				0.752 (15/2-)	7
143GD 8				0.788 (7/2)	8
143GD 9				1.077 (13/2-)	9
143GD 10				1.251 (9/2,11/2-)	10

143GD 11				1.474 (9/2,11/2-)	11
143GD 12				1.776 (19/2-)	12
143GD 13	1.794	13/2+			13
143GD 14				1.848 (15/2-)	14
143GD 15				1.864 (15/2+)	15
143GD 16				1.912 (17/2-)	16
143GD 17				2.054 (17/2+)	17
143GD 18				2.181 (13/2+)	18
143GD 19				2.237	19
143GD 20				2.328 (17/2+)	20

143GD 21				2.420 (19/2+)	21
143GD 22				2.431 (19/2+)	22
143GD 23				2.505 (19/2-)	23
143GD 24	2.537	17/2+			24
143GD 25				2.652 (21/2+)	25
143GD 26				2.668 (23/2+)	26
143GD 27				2.670 (23/2-)	27
143GD 28				2.768 (23/2+)	28
143GD 29				2.883 (25/2+)	29
143GD 30				2.986 (23/2-)	30

143GD 31				2.994 (23/2-)	31
143GD 32				3.007 (23/2-)	32
143GD 33				3.087 (23/2-)	33
143GD 34				3.091 (27/2+)	34
143GD 35				3.149 (23/2-)	35
143GD 36				3.159 (25/2-)	36

143GD 37						3.224	(23/2)	37	
143GD 38						3.249	(27/2-)	38	
143GD 39		3.273	21/2+					39	
143GD 40						3.284	(21/2+)	40	

143GD 41						3.331	(27/2-)	41	
143GD 42						3.535	(29/2+)	42	
143GD 43						3.584	(29/2-)	43	
143GD 44						3.601	(25/2-)	44	
143GD 45						3.821	(31/2+)	45	
143GD 46		3.836	25/2+					46	
143GD 47						4.016	(29/2-)	47	
143GD 48						4.127	(31/2-)	48	
S-p	=	4.211	(0.203)	-----					
143GD 49						4.214	(31/2-)	49	
143GD 50						4.251	(29/2-)	50	

143GD 51		4.395	29/2+					51	
143GD 52						4.453	(33/2+)	52	
143GD 53						4.489	(31/2-)	53	
143GD 54						4.646	(33/2-)	54	
143GD 55						4.799	(35/2)	55	
143GD 56						4.847	(35/2-)	56	
143GD 57						4.924	(31/2-)	57	
143GD 58		4.932	35/2+					58	
143GD 59		5.023	33/2+					59	
143GD 60						5.123	(33/2-)	60	

143GD 61						5.227	(33/2+)	61	
143GD 62						5.306	(37/2)	62	
143GD 63						5.400	(35/2+)	63	
143GD 64						5.588	(37/2+)	64	
143GD 65						5.626	(35/2-)	65	
143GD 66		5.757	37/2+					66	
143GD 67						5.764	(39/2+)	67	
143GD 68						5.826	(39/2)	68	
143GD 69						6.065	(37/2-)	69	
143GD 70						6.160	(41/2+)	70	

143GD 71		6.576	41/2+					71	
143GD 72						6.591	(43/2+)	72	
143GD 73						6.651		73	
S-2p	=	6.875	(0.200)	-----					
143GD 74						7.098		74	
143GD 75						7.109	(45/2+)	75	
143GD 76						7.188		76	
143GD 77		7.281	45/2+					77	
143GD 78						7.453		78	
143GD 79						7.539	(47/2+)	79	
143GD 80		7.910	49/2+					80	

143GD	81				8.039	(49/2+)	81
143GD	82				8.425		82
143GD	83				8.539	(51/2+)	83
143GD	84		8.722	53/2+			84
143GD	85				8.750		85
S-n	=	9.343	(0.202)	-----			
143GD	86				9.595		86
143GD	87				9.747	(57/2+)	87

S-p = 4.211 (0.203)-----
 S-n = 9.343 (0.202)-----
 S-2p = 6.875 (0.200)-----
 S-2n = 21.150 (0.201)-----
 S-alpha= -1.724 (0.201)-----

S+p = -1.426 (0.202)
 S+n = -11.600 (0.202)
 S+2p = -4.589 (0.200)
 S+2n = -20.838 (0.201)
 S+alpha = 1.610 (0.200)

gap p = 2.785 (0.286)
 gap n = -2.257 (0.286)
 gap 2p = 2.286 (0.283)
 gap 2n = 0.312 (0.285)
 gap alpha = -0.114 (0.284)