

^{140}Gd $Z = 64$ $N = 76$ adopted link ENSDF link

Based on ensdf_240402 (Apr 2024), and mass evaluation from 2020

BE = 1141.697 (0.028) MeV

Qbeta+ = 5.204 (0.059) MeV

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

S-alpha=	-2.604	(0.031)	-----				

140GD 1	0.000	0+	|		|		1 15.8 S 4
140GD 2	0.329	2+	|		|		2
140GD 3	0.713	(2+)	|		|		3
140GD 4	0.836	4+	|		|		4
140GD 5	1.068	(3+)	|		|		5
140GD 6	1.281	(4+)	|		|		6
140GD 7	1.464	6+	|		|		7
140GD 8	1.693	(5+)	|		|		8
140GD 9	1.881	(6+)	|		|		9
140GD 10	2.140	8+	|		|		10

140GD 11			|	2.211	8-	|	11 1.5 NS 4
140GD 12	2.411	(7+)	|		|		12
140GD 13			|	2.457	9-	|	13
140GD 14	2.632	(8+)	|		|		14
140GD 15			|	2.744	10-	|	15
140GD 16	2.797	10+	|		|		16
140GD 17	2.927	10+	|		|		17
140GD 18			|	3.034	9(-)	|	18
140GD 19			|	3.061	11-	|	19
140GD 20	3.268	12+	|		|		20

140GD 21			|	3.403	12-	|	21
140GD 22	3.617	(12+)	|		|		22
140GD 23			|	3.625	11(-)	|	23
S-p	= 3.673	(0.031)	-----				

140GD 24			|	3.767	13-	|	24
140GD 25	3.849	14+	|		|		25
140GD 26			|			4.026 (12,13)	26
140GD 27			|	4.150	(14-)	|	27
140GD 28			|	4.320	(13-)	|	28
140GD 29			|	4.553	(15-)	|	29
140GD 30	4.593	16+	|		|		30
S-2p	= 4.863	(0.030)	-----				

140GD 31			|	4.976	(16-)	|	31
140GD 32	5.461	(18+)	|		|		32
140GD 33	6.423	(20+)	|		|		33

S-p	=	3.673	(	0.031)	-----
S-n	=	12.183	(	0.142)	-----
S-2p	=	4.863	(	0.030)	-----
S-2n	=	22.241	(	0.141)	-----
S-alpha	=	-2.604	(	0.031)	-----
S+p	=	-0.047	(	0.109)	
S+n	=	-9.513	(	0.034)	
S+2p	=	-2.965	(	0.711)	
S+2n	=	-21.320	(	0.040)	
S+alpha	=	2.787	(	0.029)	
gap p	=	3.626	(	0.113)	
gap n	=	2.669	(	0.146)	
gap 2p	=	1.897	(	0.711)	
gap 2n	=	0.921	(	0.146)	
gap alpha	=	0.184	(	0.042)	