

^{145}Gd $Z = 64$ $N = 81$ adopted link ENSDF link

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

BE = 1193.198 (0.020) MeV

Qbeta+ = 5.065 (0.020) MeV

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

S-alpha=	-0.582 (0.021)-----				
145GD 1	0.000	1/2+			1 23.0 M 4
145GD 2	0.027	3/2+			2 11.5 NS 3
145GD 3			0.749	11/2-	3 85 S 3
145GD 4	1.015	5/2+			4
145GD 5			1.273	7/2-	5
145GD 6	1.415	7/2+			6 0.3 NS LT
145GD 7	1.498	5/2+			7
145GD 8				1.525 5/2-,7/2-	8
145GD 9				1.667 7/2(-)	9
145GD 10			1.684	9/2-	10

145GD 11			1.810	9/2-	11
145GD 12				2.182 (9/2-)	12 0.3 NS LT
145GD 13			2.196	11/2-	13
145GD 14	2.200	13/2+			14 20.4 NS 16
145GD 15			2.259	11/2-	15
145GD 16	2.302	13/2+			16
145GD 17				2.382 (9/2-)	17
145GD 18	2.411	15/2+			18
145GD 19	2.432	17/2+			19 0.37 NS 15
145GD 20			2.443	13/2-	20

145GD 21				2.473	21
145GD 22				2.641	22
145GD 23				2.658	23
145GD 24				2.784 (11/2+,13/2+)	24
145GD 25	2.823	15/2+			25
145GD 26				2.873	26
145GD 27				2.886 (13/2,15/2,17/2)	27-
145GD 28				2.935	28
145GD 29				2.974 (13/2+,15/2+)	29
145GD 30				2.987	30

145GD 31				3.105	31
145GD 32				3.176	32
145GD 33				3.194	33
145GD 34	3.207	17/2+			34
145GD 35				3.285	35
145GD 36				3.354	36

145GD 37		3.357	19/2+				37	
145GD 38		3.458	21/2+				38	
145GD 39						3.469	39	
145GD 40						3.506	40	

145GD 41						3.511	41	
145GD 42						3.559	42	
145GD 43						3.573	43	
145GD 44						3.586	44	
145GD 45						3.603	45	
145GD 46						3.653	46	
145GD 47						3.674	47	
145GD 48						3.694	48	
145GD 49						4.037	49	
145GD 50						4.156	50	

145GD 51						4.160	51	
145GD 52						4.240	52	
145GD 53						4.283	53	
145GD 54						4.336	54	
145GD 55						4.540	55	
S-p	=	4.596	(0.022)	-----				
145GD 56						4.901	56	
145GD 57						4.936	57	
145GD 58						5.024	58	
145GD 59						5.033	59	
145GD 60						5.317	60	

145GD 61						5.414	61	
145GD 62						5.415	62	
145GD 63						5.446	63	
145GD 64						5.465	64	
145GD 65						5.488	65	
145GD 66						5.537	66	
145GD 67						5.685	67	
145GD 68						5.730	68	
145GD 69						5.755	69	
145GD 70						5.906	70	

145GD 71						5.931	71	
145GD 72						6.070	72	
145GD 73						6.160	73	
145GD 74						6.265	74	
145GD 75						6.547	75	
145GD 76						6.682	76	
145GD 77						6.699	77	
145GD 78						6.866	78	
145GD 79						6.900	79	
145GD 80						6.956	80	

145GD 81				7.034	81
145GD 82				7.098	82
145GD 83				7.221	83
145GD 84				7.223	84
145GD 85				7.263	85
145GD 86				7.473	86
145GD 87				7.503	87
145GD 88				7.716	88

S-2p	=	7.987	(0.020)		
145GD 89				8.121	89
145GD 90				8.183	90

145GD 91				8.199	91
145GD 92				8.212	92
145GD 93				8.247	93
145GD 94				8.386	94
145GD 95				8.637	95
145GD 96				8.734	96
145GD 97				8.804	97
145GD 98				9.025	98

S-n	=	9.238	(0.034)		
145GD 99				9.373	99
145GD 100				9.377	100

145GD 101				9.601	101

S-p	=	4.596	(0.022)		
S-n	=	9.238	(0.034)		
S-2p	=	7.987	(0.020)		
S-2n	=	20.838	(0.201)		
S-alpha	=	-0.582	(0.021)		

S+p	=	-2.126	(0.049)		
S+n	=	-11.230	(0.020)		
S+2p	=	-5.847	(0.022)		
S+2n	=	-18.573	(0.020)		
S+alpha	=	2.808	(0.022)		

gap p	=	2.470	(0.054)		
gap n	=	-1.992	(0.040)		
gap 2p	=	2.140	(0.029)		
gap 2n	=	2.265	(0.202)		
gap alpha	=	2.225	(0.031)		