

$^{72}\text{Ge}$        $Z = 32$        $N = 40$       adopted link      ENSDF link

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

BE = 628.686 ( 0.000) MeV

	Energy T	J+	J-	J-other	T1/2
72GE 1	0.000	0+			1 STABLE
72GE 2	0.691	0+			2 444.2 NS 8
72GE 3	0.834	2+			3 3.35 PS 5
72GE 4	1.464	2+			4 4.5 PS +8-6
72GE 5	1.728	4+			5 1.55 PS 16
72GE 6	2.029	0+			6
72GE 7	2.049	4+			7
72GE 8	2.065	3+			8 2 PS GE
72GE 9				2.117 1	9 0.41 FS 8
72GE 10				2.396	10
72GE 11	2.402	2+			11
72GE 12	2.464	4+			12 1.4 PS +35-7
72GE 13				2.505	13
72GE 14			2.515 3-		14 4.7 PS 9
72GE 15				2.572	15
72GE 16				2.583	16
72GE 17				2.754 (0+)	17
72GE 18	2.772	6+			18 0.7 PS +7-4
72GE 19				2.876	19
72GE 20	2.897	0+			20
72GE 21			2.940 1-		21
72GE 22			2.943 3-		22
72GE 23				2.950 1+,2+	23
72GE 24	3.034	2+			24
72GE 25			3.036 2-		25
72GE 26	3.080	4+			26
72GE 27				3.089 1	27 0.38 FS 19
72GE 28	3.094	2+			28
72GE 29			3.129 5-		29 3.5 PS +7-21
72GE 30				3.131 (4+)	30
72GE 31	3.139	0+			31
72GE 32	3.182	4+			32
72GE 33				3.223 +	33
72GE 34				3.228 -	34
72GE 35				3.250 3+,4+,5+	35
72GE 36			3.325 3-		36
72GE 37	3.327	2+			37
72GE 38				3.338 1(+)	38 89 PS 21

72GE 39						3.342	(2)-		39	
72GE 40						3.358	+		40	
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72GE 41		3.378	4+						41	
72GE 42					3.394	5-			42	
72GE 43								3.402	(6+)	43 1 PS +4-1
72GE 44								3.403		44
72GE 45					3.409	3-				45
72GE 46		3.420	2+							46
72GE 47		3.427	4+							47
72GE 48								3.439	+	48
72GE 49								3.455	2-,3-	49
72GE 50								3.468	0-,1-,2-	50
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72GE 51		3.509	2+							51
72GE 52		3.511	4+							52
72GE 53		3.528	4+							53
72GE 54					3.536	1-				54
72GE 55								3.551	(1)-	55
72GE 56								3.566	(-)	56
72GE 57		3.586	0+							57
72GE 58								3.591	3+,4+,5+	58
72GE 59		3.619	2+							59
72GE 60								3.624		60
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72GE 61								3.644	(+)	61
72GE 62								3.652		62
72GE 63		3.666	1+							63
72GE 64		3.667	6+							64 2.1 PS GT
72GE 65								3.667	+	65
72GE 66								3.678	2-,3-	66
72GE 67								3.688	6-,7-,8-	67
72GE 68								3.691	1+,2+,3+	68
72GE 69		3.708	2+							69
72GE 70					3.722	3-				70
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72GE 71								3.745		71
72GE 72								3.757	-	72
72GE 73		3.760	8+							73 0.8 PS +5-2
72GE 74								3.777	3+,4+,5+	74
72GE 75					3.784	7-				75 2.8 PS GE
72GE 76								3.804	1,2+	76
72GE 77								3.815	2-,3-	77
72GE 78					3.821	5-				78
72GE 79		3.840	4+							79
72GE 80								3.858	3+,4+,5+	80
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72GE 81		3.872	2+							81
72GE 82								3.882	1+,2+,3+	82
72GE 83								3.892	(3-)	83

72GE 84						3.895	1		84
72GE 85						3.898	(7-)		85
72GE 86						3.915			86
72GE 87						3.937	4-,5-,6-		87
72GE 88				3.965	3-				88
72GE 89		3.966	2+						89
72GE 90						3.984			90
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72GE 91						3.986			91
72GE 92						3.995	0-,1-,2-		92
72GE 93		3.995	1+						93
72GE 94						4.004			94
72GE 95		4.017	4+						95
72GE 96						4.027	3+,4+,5+		96
72GE 97				4.031	5-				97
72GE 98						4.041	0-,1-,2-		98
72GE 99						4.046	+		99
72GE 100						4.047	-		100
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72GE 101						4.050	1		101
72GE 102				4.065	5-				102
72GE 103				4.076	5-				103
72GE 104		4.078	8+						104 0.8 PS +15-7
72GE 105						4.082	3+,4+,5+		105
72GE 106						4.090	+		106
72GE 107		4.108	2+						107
72GE 108		4.144	4+						108
72GE 109						4.147	+		109
72GE 110						4.171	+		110
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72GE 111		4.191	0+						111
72GE 112						4.194	-		112
72GE 113				4.228	3-				113
72GE 114						4.245	+		114
72GE 115						4.256	1		115
72GE 116						4.257	(3-)		116
72GE 117				4.285	3-				117
72GE 118						4.292	+		118 0.5 PS +7-1
72GE 119						4.315	+		119
72GE 120						4.335			120
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72GE 121						4.359	1		121
72GE 122				4.369	3-				122
72GE 123						4.374	+		123
72GE 124						4.419			124
72GE 125						4.454	(2)-		125
72GE 126						4.458	-		126
72GE 127						4.483			127
72GE 128						4.512	(2)-		128
72GE 129						4.521			129

72GE 130		4.534	3-			130
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72GE 131				4.575		131
72GE 132				4.601		132
72GE 133				4.620	+	133
72GE 134				4.634	(5-)	134
72GE 135				4.650	-	135
72GE 136				4.679	-	136
72GE 137				4.705	(4+)	137
72GE 138				4.724	(3-)	138
72GE 139		4.741	9-			139 0.90 PS +14-7
72GE 140				4.755	-	140
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72GE 141				4.766	(4+)	141
72GE 142				4.804	(4+)	142
72GE 143				4.820	(10+)	143 0.51 PS +7-4
72GE 144				4.840	+	144
72GE 145				4.875	(+)	145
72GE 146				4.903	(4)+	146
72GE 147				4.926		147
72GE 148				4.950		148
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S-alpha=	5.004	( 0.001)				
72GE 149				5.004		149
72GE 150				5.076	(2)-	150
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72GE 151				5.082		151
72GE 152				5.100	-	152
72GE 153				5.160	-	153
72GE 154	5.165	1+				154
72GE 155				5.199	1	155
72GE 156				5.280	1	156
72GE 157				5.315	1	157
72GE 158				5.396		158
72GE 159				5.421		159
72GE 160	5.436	1+				160
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72GE 161		5.838	11-			161 0.9 PS +4-2
72GE 162				5.850	1(-)	162
72GE 163		5.920	1-			163
72GE 164				5.975	1	164
72GE 165				6.115	(12+)	165 0.33 PS +7-4
72GE 166				6.132	1	166
72GE 167				6.146	1	167
72GE 168				6.163	1(-)	168
72GE 169				6.383	1	169
72GE 170				6.470	1	170
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72GE 171				6.630	1	171
72GE 172				6.737	1	172
72GE 173		6.812	1-			173

72GE 174				7.061	1	174
72GE 175				7.450	1	175
72GE 176				7.518	1	176
72GE 177		7.674	1-			177
72GE 178				7.805	1(-)	178
72GE 179				8.442	1(-)	179
72GE 180				8.487	1(-)	180
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72GE 181				8.868	1	181

S-p = 9.736 ( 0.001)-----  
 S-n = 10.751 ( 0.001)-----  
 S-2p = 17.599 ( 0.002)-----  
 S-2n = 18.167 ( 0.001)-----  
 S-alpha= 5.004 ( 0.001)-----

S+p = -5.656 ( 0.004)  
 S+n = -6.783 ( 0.000)  
 S+2p = -14.205 ( 0.000)  
 S+2n = -16.979 ( 0.000)  
 S+alpha = -5.091 ( 0.000)

gap p = 4.080 ( 0.004)  
 gap n = 3.968 ( 0.001)  
 gap 2p = 3.394 ( 0.002)  
 gap 2n = 1.187 ( 0.001)  
 gap alpha = -0.087 ( 0.001)