

$^{189}\text{Au}$        $Z = 79$        $N = 110$       adopted link      ENSDF link

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

BE = 1497.256 ( 0.020) MeV

Qbeta+ = 2.887 ( 0.022) MeV

	Energy T	J+	J-	J-other	T1/2
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S-alpha=	-4.329 ( 0.034)				
189AU 1	0.000	1/2+			1 28.7 M 4
189AU 2	0.010	3/2+			2 30 NS 4
189AU 3	0.204	3/2+			3
189AU 4			0.247	11/2-	4 4.59 M 11
189AU 5	0.249	5/2+			5
189AU 6	0.308	5/2+			6
189AU 7			0.325	9/2-	7 190 NS 15
189AU 8			0.484	7/2-	8 0.15 NS 5
189AU 9			0.492	5/2-	9 0.30 NS 3
189AU 10	0.512	7/2+			10
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189AU 11				0.603 1/2+,3/2+	11
189AU 12			0.646	13/2-	12
189AU 13	0.647	7/2+			13
189AU 14			0.682	15/2-	14
189AU 15			0.713	11/2-	15
189AU 16	0.761	9/2+			16
189AU 17			0.771	7/2-	17
189AU 18				0.802 1/2+,3/2+	18
189AU 19				0.812 (5/2,3/2,1/2)+	19
189AU 20			0.813	13/2-	20
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189AU 21			0.814	1/2-	21
189AU 22	0.848	9/2+			22
189AU 23			0.862	9/2-	23
189AU 24				0.880 +	24
189AU 25			0.880	9/2-	25
189AU 26				0.887 (3/2,5/2)-	26
189AU 27			0.911	7/2-	27
189AU 28				0.961 (5/2,3/2)+	28
189AU 29				0.978	29
189AU 30			1.059	3/2-	30
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189AU 31			1.097	13/2-	31
189AU 32				1.098	32
189AU 33			1.105	3/2-	33
189AU 34			1.105	17/2-	34
189AU 35				1.107 (5/2,3/2)+	35
189AU 36				1.107	36

189AU 37		1.112	11/2+					37
189AU 38						1.116	7/2-, 5/2-	38
189AU 39				1.130	11/2-			39
189AU 40				1.134	9/2-			40
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189AU 41						1.134		41
189AU 42						1.146	13/2-, 15/2-	42
189AU 43						1.156	(5/2, 7/2)-	43
189AU 44						1.165		44
189AU 45						1.166		45
189AU 46				1.189	11/2-			46
189AU 47						1.194	-	47
189AU 48						1.247	(9/2, 7/2)+	48
189AU 49						1.254	5/2-, 7/2-	49
189AU 50						1.261		50
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189AU 51				1.273	11/2-			51
189AU 52						1.286		52
189AU 53				1.296	11/2-			53
189AU 54		1.299	11/2+					54
189AU 55				1.313	13/2-			55
189AU 56						1.347		56
189AU 57						1.353	(15/2, 13/2, 11/2)	57)-
189AU 58						1.359		58
189AU 59						1.365		59
189AU 60						1.368	(17/2, 13/2, 15/2)	60)-
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189AU 61						1.371		61
189AU 62						1.376	-	62
189AU 63		1.383	13/2+					63
189AU 64				1.412	19/2-			64
189AU 65						1.420	(13/2, 11/2)+	65
189AU 66						1.432		66
189AU 67						1.456	+	67
189AU 68		1.460	11/2+					68
189AU 69						1.464	-	69
189AU 70						1.476		70
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189AU 71				1.482	13/2-			71
189AU 72						1.483	(7/2)+	72
189AU 73						1.489	(7/2, 11/2)-	73
189AU 74						1.517	-	74
189AU 75						1.523	(-)	75
189AU 76						1.524	+	76
189AU 77						1.525	-	77
189AU 78		1.535	13/2+					78
189AU 79						1.559	-	79
189AU 80						1.560	-	80
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189AU 81						1.580	-	81

189AU 82				1.595		82
189AU 83				1.597		83
189AU 84				1.601	13/2+,15/2+	84
189AU 85				1.654	13/2-,15/2-	85
189AU 86		1.662	21/2-			86
189AU 87				1.688		87
189AU 88				1.731		88
189AU 89				1.739	13/2+,15/2+	89
189AU 90				1.746		90
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189AU 91				1.755		91
189AU 92				1.757	-	92
189AU 93				1.760		93
189AU 94				1.764		94
189AU 95				1.767		95
189AU 96				1.775		96
189AU 97				1.788	(+)	97
189AU 98				1.801	(15/2+)	98
189AU 99				1.808		99
189AU 100				1.822	-	100
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189AU 101				1.835	(13/2+,15/2+)	101
189AU 102				1.851		102
189AU 103				1.863	-	103
189AU 104				1.863		104
189AU 105				1.877	-	105
189AU 106				1.879		106
189AU 107				1.905		107
189AU 108				1.913		108
189AU 109				1.935	+	109
189AU 110				1.939	+	110
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189AU 111				1.960		111
189AU 112				1.971		112
189AU 113				2.031		113
189AU 114				2.031		114
189AU 115				2.034		115
189AU 116				2.035		116
189AU 117				2.036		117
189AU 118				2.046	+	118
189AU 119				2.062		119
189AU 120				2.063	(21/2+)	120
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189AU 121				2.066		121
189AU 122				2.066	3/2-,5/2-	122
189AU 123				2.074	-	123
189AU 124				2.075	-	124
189AU 125				2.093	-	125
189AU 126				2.094	-	126
189AU 127				2.094		127

189AU 128				2.100		128
189AU 129				2.101		129
189AU 130				2.102	(-)	130
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189AU 131				2.110		131
189AU 132				2.114		132
189AU 133				2.145		133
189AU 134				2.155	-	134
189AU 135				2.155		135
189AU 136				2.157		136
189AU 137				2.163	+	137
189AU 138				2.165	+	138
189AU 139				2.169	(+)	139
189AU 140				2.170	+	140
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189AU 141				2.176	+	141
189AU 142				2.177		142
189AU 143				2.178		143
189AU 144				2.201		144
189AU 145		2.205	23/2-			145
189AU 146				2.210		146
189AU 147				2.211	+	147
189AU 148				2.240		148
189AU 149				2.241	(+)	149
189AU 150				2.251	(25/2+)	150
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189AU 151				2.252		151
189AU 152				2.255		152
189AU 153				2.257	(-)	153
189AU 154				2.258	(+)	154
189AU 155				2.259		155
189AU 156				2.264		156
189AU 157				2.265	+	157
189AU 158				2.268		158
189AU 159				2.269		159
189AU 160				2.270		160
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189AU 161				2.271	+	161
189AU 162				2.272	+	162
189AU 163				2.273		163
189AU 164				2.274		164
189AU 165				2.275		165
189AU 166				2.276	+	166
189AU 167				2.277	+	167
189AU 168				2.281		168
189AU 169				2.282		169
189AU 170				2.294		170
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189AU 171				2.295	+	171
189AU 172				2.296		172

189AU 173		2.299	25/2-		173
189AU 174				2.311	174
189AU 175				2.316	175
189AU 176				2.317	176
189AU 177				2.318	177
189AU 178				2.319	178
189AU 179				2.325	179
189AU 180				2.331	180
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189AU 181				2.335	181
189AU 182				2.336	182
189AU 183				2.336	183
189AU 184				2.339	184
189AU 185				2.340	185
189AU 186				2.349	186
189AU 187				2.370	187
189AU 188				2.385	188
189AU 189				2.401	189
189AU 190				2.406	190
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189AU 191				2.417	191
189AU 192				2.418	192
189AU 193				2.436	193
189AU 194				2.451	194
189AU 195				2.484	195
189AU 196				2.492	196
189AU 197				2.516	197
189AU 198				2.543	198
189AU 199				2.554	199

S-p = 3.050 ( 0.021)-----  
 S-n = 9.282 ( 0.020)-----  
 S-2p = 8.611 ( 0.034)-----  
 S-2n = 16.696 ( 0.030)-----  
 S-alpha= -4.329 ( 0.034)-----

S+p = -5.078 ( 0.026)  
 S+n = -7.323 ( 0.020)  
 S+2p = -7.279 ( 0.021)  
 S+2n = -16.359 ( 0.021)  
 S+alpha = 3.680 ( 0.021)

gap p = -2.028 ( 0.033)  
 gap n = 1.959 ( 0.029)  
 gap 2p = 1.332 ( 0.041)  
 gap 2n = 0.338 ( 0.037)  
 gap alpha = -0.649 ( 0.040)