

$^{188}\text{Re}$        $Z = 75$        $N = 113$       adopted link      ENSDF link

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

BE = 1497.749 ( 0.001) MeV

Qbeta- = 2.120 ( 0.001) MeV

	Energy T	J+		J-		J-other		T1/2
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S-alpha=	-1.398	( 0.026)	-----					
188RE 1				0.000	1-			1 17.005 H 3
188RE 2				0.064	2-			2 56 PS 7
188RE 3				0.156	3-			3
188RE 4				0.169	3-			4
188RE 5				0.172	6-			5 18.59 M 4
188RE 6							0.183 (4-)	6 20.3 NS 18
188RE 7				0.205	2-			7 3.6 NS 3
188RE 8		0.208						8 3.68 NS 18
188RE 9		0.231						9 21.2 NS 12
188RE 10				0.257	2-			10 0.2 NS LT
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188RE 11				0.287	4-			11
188RE 12				0.291	1-			12 0.2 NS LT
188RE 13		0.300						13 1.5 NS 2
188RE 14				0.317	3-			14
188RE 15				0.326	4-			15
188RE 16							0.340 (5-)	16
188RE 17		0.343						17
188RE 18							0.354 (1+)	18
188RE 19		0.361						19 5.5 NS 6
188RE 20				0.363	2-			20
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188RE 21				0.372	3-			21
188RE 22							0.391	22
188RE 23							0.440 (3)+	23
188RE 24				0.446	5-			24
188RE 25				0.462	4-			25
188RE 26				0.470	3-			26
188RE 27		0.482						27 0.26 NS 10
188RE 28							0.484 (5)+	28
188RE 29							0.494 (4+)	29
188RE 30		0.500						30
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188RE 31		0.512						31
188RE 32				0.516	5-			32
188RE 33				0.523	4-			33
188RE 34							0.551 3+,4,5+	34
188RE 35							0.554 (4)+	35
188RE 36							0.558 (4,5)-	36

188RE 37		0.576	3+						37
188RE 38					0.582	1-			38
188RE 39					0.609	4-			39
188RE 40								0.609 (1-)	40
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188RE 41								0.612 (1,2)	41
188RE 42								0.629 (2)-	42
188RE 43								0.641 (5-)	43
188RE 44								0.645 1,2+	44
188RE 45					0.647	2-			45
188RE 46								0.655 (5+)	46
188RE 47								0.657 3+,4,5+	47
188RE 48								0.680 (2-)	48
188RE 49								0.696 (5+)	49
188RE 50								0.701 0-,1,2,3-	50
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188RE 51		0.703	4+						51
188RE 52								0.704 (2-)	52
188RE 53					0.709	5-			53
188RE 54								0.720 3+,4,5+	54
188RE 55								0.723 1-,2,3-	55
188RE 56								0.735 1,2	56
188RE 57								0.737 (3)-	57
188RE 58								0.739 (6-)	58
188RE 59								0.740 3-,4,5-	59
188RE 60								0.745 2,3,4	60
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188RE 61								0.748 2,3,4-	61
188RE 62								0.750 2+,3,4	62
188RE 63								0.755 3-,4-	63
188RE 64								0.757 1+,2,3-	64
188RE 65					0.782	5-			65
188RE 66								0.783 (3-)	66
188RE 67								0.792 1-,2,3-	67
188RE 68								0.798 (3-)	68
188RE 69		0.800	5+						69
188RE 70								0.800 2-,3,4-	70
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188RE 71								0.808 1+,2+	71
188RE 72								0.811 3+,4+	72
188RE 73								0.813 1,2,3-	73
188RE 74								0.818 1+,2,3,4+	74
188RE 75								0.823 1,2,3-	75
188RE 76								0.832 2-,3-	76
188RE 77								0.852 3,4-	77
188RE 78								0.854 3+,4,5	78
188RE 79								0.859 2-,3-	79
188RE 80								0.868 1-,2,3,4-	80
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188RE 81								0.871 1-,2,3-	81

188RE 82				0.874	2+,3,4,5+	82
188RE 83				0.884	1-,2,3-	83
188RE 84				0.885	2-,3,4,5-	84
188RE 85				0.890	3+,4,5+	85
188RE 86				0.896	2+,3+	86
188RE 87				0.897	2-,3,4-	87
188RE 88				0.899	3-,4,5-	88
188RE 89				0.900	3+,4,5+	89
188RE 90				0.911	1-,2,3-	90
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188RE 91				0.914	2+,3,4	91
188RE 92				0.914	1-,2,3,4,5-	92
188RE 93				0.916	2,3,4,5-	93
188RE 94				0.924	1-,2,3-	94
188RE 95				0.924	1+,2,3+	95
188RE 96				0.925	2-,3,4-	96
188RE 97				0.932	3+,4,5+	97
188RE 98				0.933	1-,2,3-	98
188RE 99				0.944	1-,2,3-	99
188RE 100				0.946	1+,2,3,4+	100
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188RE 101				0.956	2-,3,4	101
188RE 102				0.963	3+,4,5+	102
188RE 103				0.965	2-,3,4,5-	103
188RE 104				0.977	(2+,3,4+)	104
188RE 105				0.978	1-,2,3,4-	105
188RE 106				0.983	2-,3,4-	106
188RE 107				0.987	2+,3,4+	107
188RE 108				0.994	2+,3,4,5+	108
188RE 109				0.997	2+,3,4,5+	109
188RE 110				1.000	2-,3,4-	110
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188RE 111				1.001	2+,3,4+	111
188RE 112				1.002	(2+,3,4+)	112
188RE 113				1.009	1,2,3-	113
188RE 114				1.011	2-,3,4-	114
188RE 115				1.013	(3-,4,5-)	115
188RE 116				1.013	2+,3,4+	116
188RE 117				1.026	2+,3,4+	117
188RE 118				1.026	2-,3,4-	118
188RE 119				1.035	2-,3,4-	119
188RE 120				1.035	2-,3,4,5-	120
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188RE 121				1.039	2-,3,4-	121
188RE 122				1.049	1-,2,3-	122
188RE 123				1.062	2-,3-	123
188RE 124				1.063	3+,4,5	124
188RE 125				1.071	1+,2,3,4+	125
188RE 126				1.076	2+,3,4,5+	126
188RE 127				1.082	1-,2,3-	127

188RE 128			1.084	2+,3,4,5+	128
188RE 129			1.087	3-,4,5-	129
188RE 130			1.089	(2-,3,4,5-)	130
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188RE 131			1.094	(1-,2,3)	131
188RE 132			1.097	2,3,4,5-	132
188RE 133			1.099	3+,4,5+	133
188RE 134			1.106	2-,3,4,5-	134
188RE 135			1.109	3-,4,5-	135
188RE 136			1.117	2-,3-	136
188RE 137			1.119	2+,3,4,5+	137
188RE 138			1.122	2-,3,4-	138
188RE 139			1.124	2-,3,4-	139
188RE 140			1.137	2+,3,4,5+	140
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188RE 141			1.139	2-,3,4,5-	141
188RE 142			1.144	3-,4,5-	142
188RE 143			1.146	1,2+	143
188RE 144			1.146	1,2,3,4-	144
188RE 145			1.158	1-,2,3-	145
188RE 146			1.166	(1,2,3-)	146
188RE 147			1.167	2-,3,4-	147
188RE 148			1.183	2-,3,4,5-	148
188RE 149			1.188	3-,4,5	149
188RE 150			1.205	2-,3,4,5	150
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188RE 151			1.208	1-,2,3-	151
188RE 152			1.209	3-,4,5-	152
188RE 153			1.217	1+,2,3,4+	153
188RE 154			1.218	(3,4)-	154
188RE 155			1.224	3-,4,5-	155
188RE 156			1.227	1+,2+	156
188RE 157			1.227	3-,4,5-	157
188RE 158			1.232	2-,3,4,5-	158
188RE 159			1.242	2-,3,4,5	159
188RE 160			1.247	2+,3,4,5+	160
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188RE 161			1.250	1-,2,3,4-	161
188RE 162			1.253	1+,2,3,4,5+	162
188RE 163			1.255	1-,2,3,4-	163
188RE 164			1.258	1,2+	164
188RE 165			1.262	2-,3,4-	165
188RE 166			1.301	3-,4,5	166
188RE 167			1.326	2-,3,4,5-	167
188RE 168			1.342	2+,3,4+	168
188RE 169			1.346	2-,3,4,5	169
188RE 170			1.433	1-,2,3,4-	170
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188RE 171			1.448	3-,4,5	171
188RE 172			1.464	1-,2,3,4-	172

188RE 173				1.514	1+,2,3,4+	173
188RE 174				1.557	1+,2,3+	174
188RE 175				1.584	1,2,3,4-	175
188RE 176				5.872	2+,3+	176

S-p = 6.402 ( 0.001)-----  
 S-n = 5.872 ( 0.001)-----  
 S-2p = 14.987 ( 0.060)-----  
 S-2n = 13.232 ( 0.001)-----  
 S-alpha= -1.398 ( 0.026)-----

S+p = -7.259 ( 0.001)  
 S+n = -7.034 ( 0.008)  
 S+2p = -12.315 ( 0.002)  
 S+2n = -12.709 ( 0.005)  
 S+alpha = 1.756 ( 0.001)

gap p = -0.857 ( 0.002)  
 gap n = -1.162 ( 0.008)  
 gap 2p = 2.672 ( 0.060)  
 gap 2n = 0.523 ( 0.005)  
 gap alpha = 0.359 ( 0.026)