

^{181}Re $Z = 75$ $N = 106$ adopted link ENSDF link

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

BE = 1448.750 (0.013) MeV

Qbeta+ = 1.716 (0.013) MeV

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

S-alpha=	-2.772	(0.013)	-----		
181RE 1	0.000	5/2+			1 19.9 H 7
181RE 2	0.118	7/2+			2
181RE 3			0.263	9/2-	3 156.7 NS 19
181RE 4	0.266	9/2+			4
181RE 5			0.357	5/2-	5 87.6 NS 12
181RE 6			0.391	9/2-	6
181RE 7			0.427	11/2-	7
181RE 8			0.432	1/2-	8
181RE 9	0.444	11/2+			9
181RE 10			0.546	13/2-	10

181RE 11			0.600	3/2-	11
181RE 12			0.619	13/2-	12
181RE 13	0.646	13/2+			13
181RE 14				0.788 (1/2+,3/2+)	14
181RE 15			0.822	17/2-	15
181RE 16				0.827 (1/2,3/2)+	16
181RE 17	0.832	3/2+			17
181RE 18			0.834	15/2-	18
181RE 19				0.867 1/2-, 3/2-	19
181RE 20	0.873	15/2+			20

181RE 21				0.932 (1/2+,3/2+)	21
181RE 22				1.000	22
181RE 23				1.060 (-)	23
181RE 24	1.060	3/2+			24
181RE 25			1.072	17/2-	25
181RE 26				1.108 1/2-, 3/2-	26
181RE 27	1.116	17/2+			27
181RE 28				1.192 1/2-, 3/2-	28
181RE 29			1.208	21/2-	29
181RE 30			1.327	19/2-	30

181RE 31	1.376	19/2+			31
181RE 32				1.385 (1/2-, 3/2)	32
181RE 33				1.434 (3/2-)	33
181RE 34			1.443	3/2-	34
181RE 35			1.475	15/2-	35
181RE 36			1.601	21/2-	36

181RE 37		1.642	21/2+						37
181RE 38				1.656	21/2-				38
181RE 39				1.689	25/2-				39
181RE 40		1.693	17/2+						40

181RE 41				1.744	19/2-				41
181RE 42		1.809	19/2+						42
181RE 43		1.858	21/2+						43
181RE 44		1.881	25/2+						44
181RE 45				1.883	23/2-				45
181RE 46				1.883	23/2-				46
181RE 47		1.914	23/2+						47
181RE 48						1.925	(3/2)-		48
181RE 49						1.938	1/2+,3/2+		49
181RE 50				1.946	3/2-				50

181RE 51						1.959	(1/2+,3/2+)		51
181RE 52		1.987	23/2+						52
181RE 53						2.015	(1/2+,3/2+)		53
181RE 54						2.091	1/2+,3/2+		54
181RE 55				2.104	23/2-				55
181RE 56		2.136	27/2+						56
181RE 57				2.136	25/2-				57
181RE 58				2.138	3/2-				58
181RE 59		2.156	25/2+						59
181RE 60				2.172	3/2-				60

181RE 61		2.177	25/2+						61
181RE 62				2.178	25/2-				62
181RE 63				2.225	25/2-				63
181RE 64				2.246	29/2-				64
181RE 65		2.354	27/2+						65
181RE 66				2.412	27/2-				66
181RE 67		2.413	29/2+						67
181RE 68						2.426	(1/2-,3/2)		68
181RE 69				2.427	27/2-				69
181RE 70		2.449	27/2+						70

181RE 71				2.468	27/2-				71
181RE 72				2.482	3/2-				72
181RE 73				2.550	27/2-				73
181RE 74		2.574	29/2+						74
181RE 75				2.633	29/2-				75
181RE 76		2.710	29/2+						76
181RE 77		2.711	31/2+						77
181RE 78				2.713	29/2-				78
181RE 79				2.763	29/2-				79
181RE 80		2.815	31/2+						80

181RE 81				2.855	31/2-				81

181RE 82				2.857	33/2-			82
181RE 83						2.867	1/2-,3/2-	83
181RE 84		2.991	31/2+					84
181RE 85		3.028	33/2+					85
181RE 86				3.031	31/2-			86
181RE 87				3.047	31/2-			87
181RE 88		3.074	33/2+					88
181RE 89				3.076	31/2-			89
181RE 90				3.093	33/2-			90

181RE 91		3.272	33/2+					91
181RE 92				3.333	33/2-			92
181RE 93		3.348	35/2+					93
181RE 94						3.348	(33/2)	94
181RE 95				3.349	35/2-			95
181RE 96		3.371	35/2+					96
181RE 97				3.371	33/2-			97
181RE 98						3.486	(33/2-)	98
181RE 99				3.508	37/2-			99
181RE 100						3.513	(33/2+)	100

181RE 101		3.588	35/2+					101
181RE 102				3.618	35/2-			102
181RE 103				3.624	37/2-			103
181RE 104		3.642	37/2+					104
181RE 105				3.679	35/2-			105
181RE 106				3.711	35/2-			106
181RE 107		3.724	37/2+					107
181RE 108						3.869	(35/2-)	108 1.2 US 2
181RE 109		3.904	37/2+					109
181RE 110				3.915	39/2-			110

181RE 111				3.925	37/2-			111
181RE 112		3.963	39/2+					112
181RE 113						3.967	(37/2-)	113
181RE 114						3.990	(37/2-)	114 22.2 NS 5

S-p	=	4.170 (0.013)			-----			
181RE 115				4.202	41/2-			115
181RE 116						4.226	(37/2-)	116
181RE 117				4.229	41/2-			117
181RE 118						4.230	(37/2)	118
181RE 119				4.238	39/2-			119
181RE 120		4.261	39/2+					120

181RE 121		4.288	41/2+					121
181RE 122						4.328	(39/2-)	122
181RE 123				4.354	39/2-			123
181RE 124				4.553	43/2-			124
181RE 125						4.571	(39/2)	125
181RE 126				4.583	41/2-			126

181RE 127						4.587	(39/2-)	127
181RE 128		4.612	41/2+					128
181RE 129		4.654	43/2+					129
181RE 130						4.678	(41/2-)	130

181RE 131						4.801	(41/2-)	131
181RE 132				4.910	45/2-			132
181RE 133						4.917	(41/2)	133
181RE 134				4.929	43/2-			134
181RE 135				4.948	45/2-			135
181RE 136		5.010	45/2+					136
181RE 137		5.010	43/2+					137
181RE 138						5.044	(43/2-)	138
181RE 139				5.097	43/2-			139
181RE 140						5.184	(43/2-)	140

181RE 141				5.260	47/2-			141
181RE 142						5.273	(43/2)	142
181RE 143		5.385	45/2+					143
181RE 144		5.422	47/2+					144
181RE 145						5.426	(45/2-)	145
181RE 146						5.578	(45/2-)	146
181RE 147						5.640	(45/2)	147
181RE 148				5.666	49/2-			148
181RE 149				5.759	49/2-			149
181RE 150		5.804	49/2+					150

181RE 151						5.824	(47/2-)	151
181RE 152				5.898	47/2-			152
181RE 153						5.985	(47/2-)	153
181RE 154				6.032	51/2-			154
181RE 155						6.238	(49/2-)	155
181RE 156		6.256	51/2+					156
181RE 157						6.402	(49/2-)	157
181RE 158				6.457	53/2-			158
181RE 159				6.641	53/2-			159
181RE 160		6.656	53/2+					160

181RE 161						6.666	(51/2-)	161
181RE 162				6.741	51/2-			162
181RE 163				6.862	55/2-			163
181RE 164				7.591	57/2-			164

S-p = 4.170 (0.013)-----
S-n = 8.751 (0.025)-----
S-2p = 10.738 (0.013)-----
S-2n = 16.076 (0.028)-----
S-alpha= -2.772 (0.013)-----

S+p = -5.381 (0.025)
S+n = -7.000 (0.103)
S+2p = -8.263 (0.028)
S+2n = -15.435 (0.015)
S+alpha = 3.757 (0.031)

gap p = -1.210 (0.028)
gap n = 1.751 (0.106)
gap 2p = 2.475 (0.030)
gap 2n = 0.641 (0.031)
gap alpha = 0.984 (0.033)