

^{143}Eu $Z = 63$ $N = 80$ adopted link ENSDF link

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

BE = 1179.152 (0.011) MeV

Qbeta+ = 5.276 (0.011) MeV

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

S-alpha=	-0.835	(0.017)	-----		
143EU 1	0.000	5/2+			1 2.59 M 2
143EU 2				0.259 (3/2)+	2
143EU 3	0.272	7/2+			3
143EU 4			0.390 11/2-		4 50.0 US 5
143EU 5				0.464 (1/2)+	5
143EU 6				0.804	6
143EU 7				0.813 (1/2,3/2)+	7
143EU 8	0.907	9/2+			8
143EU 9				0.977 (9/2)-	9
143EU 10	1.057	11/2+			10

143EU 11			1.058 13/2-		11
143EU 12				1.088	12
143EU 13			1.188 11/2-		13
143EU 14			1.214 11/2-		14
143EU 15	1.257	11/2+			15
143EU 16			1.306 15/2-		16
143EU 17	1.331	11/2+			17
143EU 18				1.406	18
143EU 19				1.498	19
143EU 20				1.543 (1/2,3/2)+	20

143EU 21				1.565	21
143EU 22				1.603	22
143EU 23				1.676	23
143EU 24				1.724 (1/2,3/2)+	24
143EU 25				1.754 -	25
143EU 26				1.762	26
143EU 27			1.893 15/2-		27
143EU 28				1.904	28
143EU 29	1.908	15/2+			29
143EU 30				1.971	30

143EU 31				2.019 (9/2-)	31
143EU 32				2.065 (9/2-)	32
143EU 33				2.092	33
143EU 34			2.116 17/2-		34
143EU 35				2.121 (15/2+)	35
143EU 36				2.197 (11/2-)	36

143EU	37					2.209							37			
143EU	38					2.254							38			
143EU	39					2.276							39			
143EU	40				2.318		19/2-						40			

143EU	41				2.329		17/2-						41			
143EU	42								2.332				42			
143EU	43								2.351				43			
143EU	44								2.358				44			
143EU	45				2.378		19/2-						45			
143EU	46								2.418				46			
143EU	47		2.457	17/2+									47			
143EU	48								2.474		21/2(-)		48	5.8 NS	15	
S-p	=	2.548	(0.011)	-----											-----
143EU	49		2.559	19/2+									49	7.4 PS	4	
143EU	50								2.601				50			

143EU	51								2.611				51			
143EU	52				2.612		21/2-						52			
143EU	53		2.630	21/2+									53	9.7 PS	21	
143EU	54		2.812	23/2+									54	2.6 PS	10	
143EU	55				3.011		23/2-						55			
143EU	56		3.343	25/2+									56	3.5 PS	LT	
143EU	57		3.364	25/2+									57	2.8 PS	LT	
143EU	58								3.414		(25/2)		58			
143EU	59				3.604		23/2-						59			
143EU	60				3.689		25/2-						60			

143EU	61		3.749	27/2+									61	4.2 PS	14	
143EU	62		3.761	27/2+									62			
143EU	63								3.788		(27/2)		63			
143EU	64		3.963	27/2+									64			
143EU	65								4.091		(29/2)		65			
143EU	66				4.168		27/2-						66			
143EU	67								4.216		(29/2)		67			
143EU	68		4.319	29/2+									68	2.0 PS	2	
143EU	69		4.397	29/2+									69			
143EU	70				4.473		27/2-						70			

143EU	71		4.478	31/2+									71	7.9 PS	3	
143EU	72								4.563		(31/2)		72			
143EU	73		4.566	31/2+									73			
143EU	74		4.654	33/2+									74	6 PS	2	
143EU	75		4.787	31/2+									75			
143EU	76								4.947		35/2(+)		76	2.1 PS	LT	
143EU	77				5.052		31/2-						77	7 PS	LT	
143EU	78								5.075		(31/2)		78			
143EU	79								5.107		33/2(+)		79			
143EU	80		5.131	35/2+									80			

143EU 81				5.191	31/2-				81
143EU 82						5.244	33/2(-)		82
143EU 83						5.246	37/2(-)		83
143EU 84						5.329	33/2(+)		84
143EU 85						5.382	37/2(-)		85
143EU 86						5.411	35/2(-)		86
143EU 87						5.419	35/2(-)		87
143EU 88						5.587	37/2(-)		88
143EU 89						5.723	35/2(-)		89
143EU 90						5.792	35/2(+)		90

143EU 91						5.799	37/2(-)		91
143EU 92						5.848	39/2(-)		92
143EU 93						5.869	35/2(+)		93
143EU 94				5.905	35/2-				94 0.7 PS LT
143EU 95		5.939	39/2+						95
143EU 96						6.001	39/2(-)		96
143EU 97						6.056	39/2(-)		97
143EU 98						6.058	37/2(+)		98
143EU 99						6.316	41/2		99
143EU 100						6.333	39/2(+)		100

143EU 101						6.363	39/2(-)		101
143EU 102						6.365	41/2(-)		102
143EU 103						6.556	41/2(-)		103
143EU 104						6.695	41/2(+)		104
143EU 105						6.709	39/2		105
143EU 106						6.748			106
143EU 107						6.815	43/2		107
143EU 108				6.841	39/2-				108 0.7 PS LT
143EU 109		6.871	43/2+						109
143EU 110		6.882	43/2+						110

143EU 111						6.976	41/2(-)		111
143EU 112						7.024	41/2(-)		112
143EU 113						7.152	45/2		113
143EU 114						7.154	43/2(+)		114
143EU 115						7.215	43/2(+)		115
143EU 116						7.249	45/2		116
143EU 117						7.274	41/2(-)		117
143EU 118						7.289	43/2(-)		118
143EU 119						7.342	43/2		119
143EU 120				7.389	43/2-				120 6.4 PS 3

143EU 121						7.390	45/2		121
143EU 122						7.449	45/2(+)		122
143EU 123						7.502	43/2(-)		123
143EU 124						7.577	47/2		124
143EU 125						7.660	45/2(+)		125
143EU 126						7.694	45/2		126

143EU 127		7.702	47/2+						127
143EU 128						7.727	45/2(+)		128
143EU 129		7.769	47/2+						129
143EU 130						7.805	45/2(-)		130

143EU 131						7.926	47/2		131
143EU 132						7.943	47/2		132
143EU 133					8.004	47/2-			133 2.1 PS 2
143EU 134						8.014	47/2		134
143EU 135						8.214	47/2(-)		135
143EU 136						8.264	47/2(+)		136

S-2p	=	8.296	(0.018)						
143EU 137						8.486	49/2		137
143EU 138						8.656			138
143EU 139						8.731	49/2(-)		139
143EU 140						8.794	(51/2-)		140

143EU 141					8.870	51/2-			141 0.4 PS 1
143EU 142						8.944	51/2		142
143EU 143						8.972	49/2		143
143EU 144						9.295	51/2(-)		144
143EU 145						9.365	53/2		145
143EU 146						9.444	(55/2-)		146
143EU 147						9.568	53/2		147
143EU 148					9.978	55/2-			148 0.4 PS LT

S-p = 2.548 (0.011)-----
S-n = 11.004 (0.032)-----
S-2p = 8.296 (0.018)-----
S-2n = 20.458 (0.017)-----
S-alpha= -0.835 (0.017)-----

S+p = -4.807 (0.030)
S+n = -9.449 (0.015)
S+2p = -6.736 (0.111)
S+2n = -19.893 (0.011)
S+alpha = 1.074 (0.014)

gap p = -2.259 (0.032)
gap n = 1.554 (0.036)
gap 2p = 1.560 (0.113)
gap 2n = 0.565 (0.020)
gap alpha = 0.239 (0.022)