

^{209}Pb $Z = 82$ $N = 127$ adopted link ENSDF link

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

BE = 1640.368 (0.002) MeV

Qbeta- = 0.644 (0.002) MeV

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

S-alpha=	-2.248 (0.004)				
209PB 1	0.000	9/2+			1 3.234 H 7
209PB 2	0.779	11/2+			2 8.2 PS 9
209PB 3			1.423	15/2-	3 1.36 NS 30
209PB 4	1.567	5/2+			4 0.33 PS 9
209PB 5	2.032	1/2+			5 160 PS 6
209PB 6			2.149	1/2-	6 3.96 NS 4
209PB 7			2.316	3/2-	7
209PB 8				2.424	8
209PB 9				2.461	(5/2)- 9
209PB 10	2.491	7/2+			10

209PB 11				2.525	(1/2,3/2) 11
209PB 12	2.538	3/2+			12 60 FS 17
209PB 13				2.563	5/2-,7/2- 13
209PB 14				2.588	(11/2-) 14
209PB 15			2.736	5/2-	15
209PB 16			2.869	5/2-	16
209PB 17			2.905	3/2-	17
209PB 18				2.994	3/2-,5/2- 18
209PB 19			3.027	9/2-	19
209PB 20				3.031	1/2-,3/2- 20

209PB 21				3.047	(15/2)- 21
209PB 22			3.070	3/2-	22
209PB 23				3.072	11/2-,13/2- 23
209PB 24				3.092	(17/2-) 24
209PB 25			3.205	7/2-	25
209PB 26			3.302	11/2-	26
209PB 27				3.361	(5/2)- 27
209PB 28				3.362	(1/2,3/2) 28
209PB 29				3.389	(1/2,3/2) 29
209PB 30				3.414	30

209PB 31				3.423	15/2-,17/2- 31
209PB 32				3.477	32
209PB 33				3.494	(7/2)- 33
209PB 34				3.524	(3/2-) 34
209PB 35				3.524	(19/2-) 35
209PB 36				3.557	(15/2)- 36

209PB 37						3.562	(3/2-)	37
209PB 38						3.615		38
209PB 39						3.637	(3/2-)	39
209PB 40						3.650	(5/2-)	40

209PB 41						3.657	(17/2-)	41
209PB 42		3.659	13/2+					42
209PB 43						3.681	(1/2-, 3/2-)	43
209PB 44						3.708	(5/2+, 7/2+)	44
209PB 45						3.716	13/2-, 15/2-	45
209PB 46						3.743	(7/2-, 9/2-)	46
209PB 47						3.751	9/2-, 11/2, 13/2	47+
209PB 48						3.800		48
209PB 49						3.810	(21/2-)	49
209PB 50						3.813	9/2-, 11/2, 13/2	50+

209PB 51						3.831	(3/2-)	51
209PB 52						3.842	(21/2+)	52
209PB 53						3.854		53
209PB 54						3.897	(7/2)-	54
209PB 55						3.936	(1/2-, 3/2-)	55
S-n	=	3.937	(0.002)	-----				
209PB 56		3.940	13/2+					56
209PB 57						3.947		57
209PB 58						3.958		58
209PB 59						3.977	(11/2-, 13/2+)	59
209PB 60						3.984		60

209PB 61						3.991	11/2+, 13/2+	61
209PB 62						4.005		62
209PB 63			4.008	3/2-				63
209PB 64			4.015	3/2-				64
209PB 65						4.016	(7/2-)	65
209PB 66			4.023	1/2-				66
209PB 67						4.032		67
209PB 68			4.054	3/2-				68
209PB 69						4.067	3/2+, 5/2+	69
209PB 70						4.075	(3/2+, 5/2, 7/2-)	70

209PB 71						4.080		71
209PB 72						4.089	1/2-, 3/2-	72
209PB 73						4.097	(5/2+)	73
209PB 74						4.100	1/2-, 3/2-	74
209PB 75						4.105	3/2+, 5/2+	75
209PB 76			4.105	3/2-				76
209PB 77						4.106	3/2+, 5/2+	77
209PB 78						4.112	(3/2+, 5/2, 7/2-)	78
209PB 79						4.119	1/2-, 3/2-	79
209PB 80						4.138	(5/2, 7/2-)	80

209PB 81						4.164		81
209PB 82						4.168	(11/2-)	82
209PB 83		4.206	3/2+					83
209PB 84						4.211		84
209PB 85						4.212	(7/2)-	85
209PB 86				4.214	1/2-			86
209PB 87						4.222	(7/2)-	87
209PB 88						4.248		88
209PB 89				4.260	3/2-			89
209PB 90						4.265		90

209PB 91						4.267	(7/2)-	91
209PB 92						4.281		92
209PB 93						4.290		93
209PB 94		4.290	3/2+					94
209PB 95						4.295	(1/2,3/2-)	95
209PB 96						4.312	5/2-,7/2-	96
209PB 97						4.329	(23/2+)	97
209PB 98				4.343	3/2-			98
209PB 99						4.347		99
209PB 100				4.354	3/2-			100

209PB 101						4.374		101
209PB 102						4.385	(13/2-)	102
209PB 103						4.395	5/2-,7/2-	103
209PB 104						4.413		104
209PB 105				4.424	1/2-			105
209PB 106				4.441	3/2-			106
209PB 107		4.441	1/2+					107
209PB 108						4.451	(11/2-,13/2-)	108
209PB 109		4.462	5/2+					109
209PB 110						4.466		110

209PB 111						4.466	1/2-,3/2-	111
209PB 112				4.499	1/2-			112
209PB 113						4.502	5/2-,7/2-	113
209PB 114						4.505	3/2+,5/2+	114
209PB 115						4.506		115
209PB 116						4.518		116
209PB 117						4.532	5/2-,7/2-	117
209PB 118						4.535		118
209PB 119						4.544	5/2-,7/2-	119
209PB 120						4.548	5/2-,7/2-	120

209PB 121						4.550		121
209PB 122						4.560	5/2-,7/2-	122
209PB 123						4.566		123
209PB 124				4.569	5/2-			124
209PB 125						4.570	7/2	125
209PB 126						4.581	(7/2)-	126

209PB 127						4.584		127
209PB 128						4.617		128
209PB 129				4.621		5/2-		129
209PB 130						4.627	5/2-,7/2-	130

209PB 131						4.629	(11/2-,13/2-)	131
209PB 132						4.631		132
209PB 133		4.634		5/2+				133
209PB 134		4.655		5/2+				134
209PB 135				4.656		3/2-		135
209PB 136						4.657	5/2-,7/2-	136
209PB 137						4.660		137
209PB 138				4.673		5/2-		138
209PB 139						4.688	5/2-,7/2-	139
209PB 140				4.698		3/2-		140

209PB 141						4.698		141
209PB 142				4.699		7/2-		142
209PB 143						4.701		143
209PB 144				4.720		5/2-		144
209PB 145						4.729		145
209PB 146						4.745		146
209PB 147				4.748		7/2-		147
209PB 148				4.748		1/2-		148
209PB 149		4.749		5/2+				149
209PB 150						4.756		150

209PB 151				4.758		5/2-		151
209PB 152						4.758		152
209PB 153						4.766	5/2-,7/2-	153
209PB 154						4.767		154
209PB 155						4.780	5/2-,7/2-	155
209PB 156		4.784		3/2+				156
209PB 157				4.794		5/2-		157
209PB 158						4.799		158
209PB 159				4.811		3/2-		159
209PB 160						4.816	1/2-,3/2-	160

209PB 161				4.818		1/2-		161
209PB 162		4.821		1/2+				162
209PB 163						4.837		163
209PB 164						4.839	(1/2-,3/2-)	164
209PB 165				4.844		1/2-		165
209PB 166				4.845		7/2-		166
209PB 167						4.852		167
209PB 168				4.853		5/2-		168
209PB 169				4.860		1/2-		169
209PB 170						4.869		170

209PB 171		4.877		3/2+				171

209PB 172			4.880	1/2-		172
209PB 173			4.881	3/2-		173
209PB 174	4.883	5/2+				174
209PB 175					4.897	175
209PB 176			4.907	3/2-		176
209PB 177			4.917	3/2-		177
209PB 178					4.923	178
209PB 179	4.930	1/2+				179
209PB 180					4.937	180

209PB 181					4.938	181
209PB 182					4.965	182
209PB 183					4.985	183
209PB 184					4.997	184
209PB 185					5.026	185
209PB 186					5.059	186
209PB 187					5.081	187
209PB 188					5.100	188
209PB 189					5.115	189
209PB 190					5.135	190

209PB 191					5.159	191
209PB 192					5.172	192
209PB 193					5.202	193
209PB 194					5.216	194
209PB 195					5.241	195
209PB 196					5.290	196
209PB 197					5.326	197
209PB 198					5.359	198
209PB 199					5.400	199
209PB 200					5.423	200

209PB 201					5.476	201
209PB 202					5.513	202
209PB 203					5.577	203
209PB 204					5.600	204
209PB 205					5.637	205
209PB 206					5.684	206
209PB 207					5.759	207
209PB 208					5.834	208
209PB 209					5.861	209
209PB 210					5.874	210

209PB 211					5.931	211
209PB 212					5.985	212
209PB 213					6.050	213
209PB 214					6.082	214
209PB 215					6.099	215
209PB 216					6.138	216
209PB 217					6.198	217

209PB 218				6.248	218
209PB 219				6.390	219
209PB 220				6.437	220

209PB 221				7.900	221

S-p = 8.153 (0.003)-----
S-n = 3.937 (0.002)-----
S-2p = 15.705 (0.030)-----
S-2n = 11.305 (0.002)-----
S-alpha= -2.248 (0.004)-----

S+p = -4.466 (0.002)
S+n = -5.185 (0.002)
S+2p = -9.396 (0.002)
S+2n = -9.021 (0.003)
S+alpha = 8.536 (0.004)

gap p = 3.687 (0.003)
gap n = -1.248 (0.003)
gap 2p = 6.309 (0.030)
gap 2n = 2.284 (0.004)
gap alpha = 6.288 (0.005)