

^{224}Th $Z = 90$ $N = 134$ adopted link ENSDF link

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

BE = 1717.568 (0.010) MeV

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

S-alpha=	-7.299	(0.012)	-----		
224TH 1	0.000	0+			1 1.04 S 2
224TH 2	0.098	2+			2 0.590 NS 40
224TH 3				0.251 (1-)	3
224TH 4	0.284	4+			4
224TH 5				0.305 (3-)	5
224TH 6				0.465 (5-)	6
224TH 7	0.535	6+			7
224TH 8				0.700 (7-)	8
224TH 9	0.834	8+			9
224TH 10				0.998 (9-)	10

224TH 11	1.174	10+			11
224TH 12				1.347 (11-)	12
224TH 13	1.550	12+			13
224TH 14				1.739 (13-)	14
224TH 15	1.959	14+			15
224TH 16				2.165 (15-)	16
224TH 17	2.398	16+			17
224TH 18				2.620 (17-)	18
224TH 19	2.864	18+			19

S-p = 5.119 (0.012)-----
S-n = 7.461 (0.012)-----
S-2p = 8.903 (0.011)-----
S-2n = 13.350 (0.014)-----
S-alpha= -7.299 (0.012)-----

S+p = -2.928 (0.082)
S+n = -5.757 (0.011)
S+2p = -7.245 (0.015)
S+2n = -12.941 (0.011)
S+alpha = 6.800 (0.017)

gap p = 2.191 (0.083)
gap n = 1.705 (0.017)
gap 2p = 1.658 (0.018)
gap 2n = 0.410 (0.018)
gap alpha = -0.499 (0.021)