

^{219}Th $Z = 90$ $N = 129$ adopted link ENSDF link

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

BE = 1682.745 (0.056) MeV

Qbeta+ = 2.893 (0.076) MeV

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

S-alpha=	-9.506 (0.057)				
219TH	1			0.000 (9/2+)	1 1.025 US 30
219TH	2			0.244 (7/2+)	2
219TH	3			0.363 (11/2+)	3
219TH	4			0.537 (13/2+)	4
219TH	5			0.610 (13/2-)	5
219TH	6			0.967 (15/2+)	6
219TH	7			0.968 (15/2-)	7
219TH	8			1.049 (17/2+)	8
219TH	9			1.174 (17/2-)	9
219TH	10			1.376 (19/2+)	10

219TH	11			1.436 (19/2-)	11
219TH	12			1.520 (21/2+)	12
219TH	13			1.726 (21/2-)	13
219TH	14			1.752 (23/2+)	14
219TH	15			1.969 (27/2+)	15
219TH	16			1.974 (25/2+)	16
219TH	17			2.322 (29/2+)	17

S-p = 3.677 (0.081)-----
 S-n = 5.975 (0.057)-----
 S-2p = 6.005 (0.057)-----
 S-2n = 13.886 (0.057)-----
 S-alpha= -9.506 (0.057)-----

S+p = -1.473 (0.058)
 S+n = -7.845 (0.058)
 S+2p = -4.521 (0.092)
 S+2n = -13.666 (0.057)
 S+alpha = 9.158 (0.082)

gap p = 2.204 (0.100)
 gap n = -1.869 (0.082)
 gap 2p = 1.484 (0.108)
 gap 2n = 0.220 (0.081)
 gap alpha = -0.348 (0.100)