

^{209}At $Z = 85$ $N = 124$ adopted link ENSDF link

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

BE = 1633.290 (0.005) MeV

Qbeta+ = 3.482 (0.005) MeV

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

S-alpha=	-5.757 (0.007)				
209AT 1			0.000 9/2-		1 5.42 H 5
209AT 2			0.408 7/2-		2
209AT 3			0.577 11/2-		3
209AT 4			0.725 13/2-		4
209AT 5			0.746 7/2-		5
209AT 6				0.789 (9/2)-	6
209AT 7			0.795 5/2-		7
209AT 8				0.935 (7/2)-	8
209AT 9				1.081 (5/2,7/2)-	9
209AT 10				1.093 (7/2)-	10

209AT 11				1.098 (7/2)-	11
209AT 12				1.131 (5/2,7/2)-	12
209AT 13				1.214 11/2-,13/2-	13
209AT 14				1.242 (13/2-)	14
209AT 15				1.270 (11/2,13/2)-	15
209AT 16			1.322 17/2-		16
209AT 17				1.340 (13/2,15/2)-	17
209AT 18				1.394 (13/2,15/2)-	18
209AT 19				1.394 (7/2)-	19
209AT 20			1.428 21/2-		20 25.3 NS 7

209AT 21				1.517	21
209AT 22				1.660	22
209AT 23				1.773 (15/2-)	23
209AT 24			1.852 23/2-		24
209AT 25				1.907 (19/2)-	25
209AT 26	1.954 7/2+				26
209AT 27				2.076 (19/2-)	27
209AT 28				2.086	28
209AT 29				2.136 (5/2,7/2)+	29
209AT 30				2.183 (23/2-)	30

209AT 31			2.238 25/2-		31
209AT 32				2.403 (21/2-)	32
209AT 33				2.415 5/2+,7/2+	33
209AT 34	2.429 29/2+				34 0.916 US 10
209AT 35				2.517 (5/2:9/2)+	35
209AT 36				2.522 (5/2+,7/2+)	36

209AT 37				2.569	(3/2-,5/2,7/2)	37
209AT 38				2.581	(3/2,5/2,7/2)	38
209AT 39				2.605	(25/2+)	39
209AT 40				2.612	(25/2-)	40

209AT 41				2.677		41
209AT 42				2.684	(27/2-)	42
209AT 43				2.690	(3/2-,5/2,7/2)	43
S-p	=	2.703	(0.005)	-----		
209AT 44				2.713	(3/2-,5/2,7/2)	44
209AT 45				2.822	(5/2,7/2)	45
209AT 46				3.140	(5/2,7/2)	46
209AT 47				3.172	(3/2-,5/2,7/2)	47
209AT 48				3.189	(31/2+)	48
209AT 49				3.293	(29/2-)	49
209AT 50				3.388	(3/2-,5/2,7/2)	50

209AT 51				3.544	(5/2,7/2)	51
209AT 52				3.551	(5/2,7/2,9/2)	52
209AT 53				3.592	(33/2+)	53
209AT 54				3.627	(3/2-,5/2,7/2)	54
209AT 55				3.749	(33/2+)	55
209AT 56				3.754	(5/2,7/2)	56
209AT 57				3.813	(33/2+)	57
209AT 58				3.899	(33/2+)	58
209AT 59				4.176	(35/2+)	59
209AT 60				4.377		60

209AT 61				4.506	(35/2+)	61
209AT 62				4.697		62

S-p = 2.703 (0.005)-----
S-n = 8.485 (0.010)-----
S-2p = 7.407 (0.005)-----
S-2n = 15.799 (0.013)-----
S-alpha= -5.757 (0.007)-----

S+p = -4.010 (0.007)
S+n = -7.160 (0.009)
S+2p = -5.834 (0.013)
S+2n = -14.906 (0.005)
S+alpha = 6.905 (0.007)

gap p = -1.307 (0.008)
gap n = 1.326 (0.014)
gap 2p = 1.573 (0.014)
gap 2n = 0.893 (0.014)
gap alpha = 1.148 (0.010)