

$^{172}\text{Ta}$        $Z = 73$        $N = 99$       adopted link      ENSDF link

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

BE = 1382.485 ( 0.028) MeV

Qbeta+ = 5.072 ( 0.037) MeV

	Energy T	J+	J-	J-other	T1/2
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S-alpha=	-3.318 ( 0.047)				
172TA 1				0.000 (3+)	1 36.8 M 3
172TA 2				0.003 (+)	2
172TA 3				0.039	3
172TA 4				0.091 (5+)	4
172TA 5				0.093 (4-)	5 7 NS 2
172TA 6				0.127	6
172TA 7				0.164 (4+)	7
172TA 8				0.173 (5-)	8
172TA 9				0.260	9
172TA 10				0.265 (7+)	10
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172TA 11				0.275 (6-)	11
172TA 12				0.326 (6+)	12
172TA 13				0.371	13
172TA 14				0.400 (7-)	14
172TA 15				0.462	15
172TA 16				0.487	16
172TA 17				0.515	17
172TA 18				0.521 (9+)	18
172TA 19				0.533	19
172TA 20				0.548 (8-)	20
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172TA 21				0.550	21
172TA 22				0.574 (8+)	22
172TA 23				0.585	23
172TA 24				0.586	24
172TA 25				0.608	25
172TA 26				0.626	26
172TA 27				0.717 (9-)	27
172TA 28				0.851 (11+)	28
172TA 29				0.902 (10+)	29
172TA 30				0.906 (10-)	30
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172TA 31				1.114 (11-)	31
172TA 32				1.250 (13+)	32
172TA 33				1.304 (12+)	33
172TA 34				1.338 (12-)	34
172TA 35				1.575 (13-)	35
172TA 36				1.706 (15+)	36

172TA 37				1.777	(14+)	37
172TA 38				1.829	(14-)	38
172TA 39				2.089	(15-)	39
172TA 40				2.214	(17+)	40
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172TA 41				2.322	(16+)	41
172TA 42				2.371	(16-)	42
172TA 43				2.655	(17-)	43
172TA 44				2.774	(19+)	44
172TA 45				2.960	(18-)	45
S-p	=	3.188	( 0.040)	-----		
172TA 46				3.265	(19-)	46
172TA 47				3.388	(21+)	47
172TA 48				3.604	(20-)	48
172TA 49				3.937	(21-)	49
172TA 50				4.060	(23+)	50
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172TA 51				4.789	(25+)	51
172TA 52				5.575	(27+)	52
172TA 53				6.415	(29+)	53
172TA 54				7.305	(31+)	54

S-p = 3.188 ( 0.040)-----  
S-n = 7.681 ( 0.040)-----  
S-2p = 8.602 ( 0.033)-----  
S-2n = 17.335 ( 0.040)-----  
S-alpha= -3.318 ( 0.047)-----

S+p = -4.686 ( 0.040)  
S+n = -9.138 ( 0.040)  
S+2p = -6.921 ( 0.040)  
S+2n = -16.553 ( 0.040)  
S+alpha = 3.842 ( 0.040)

gap p = -1.499 ( 0.056)  
gap n = -1.457 ( 0.056)  
gap 2p = 1.681 ( 0.051)  
gap 2n = 0.782 ( 0.056)  
gap alpha = 0.524 ( 0.062)