

^{159}Tm $Z = 69$ $N = 90$ adopted link ENSDF link

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

BE = 1289.928 (0.028) MeV

Qbeta+ = 3.991 (0.028) MeV

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

S-alpha=	-3.045	(0.033)	-----			
159TM 1	0.000	5/2+			1	9.13 M 16
159TM 2				0.053 (7/2)+	2	
159TM 3				0.062 (1/2)+	3	
159TM 4				0.078 (3/2+)	4	
159TM 5				0.166 (7/2-)	5	37.5 NS 13
159TM 6				0.177 (7/2)+	6	
159TM 7				0.183 (9/2-)	7	
159TM 8				0.233 (11/2-)	8	
159TM 9				0.247 (9/2)+	9	
159TM 10				0.254 (5/2+)	10	

159TM 11				0.317 (7/2+)	11	
159TM 12				0.375 (9/2)+	12	
159TM 13				0.457 (11/2+)	13	7.7 PS 23
159TM 14				0.464 (13/2-)	14	14.8 PS 11
159TM 15				0.480 (3/2+)	15	
159TM 16				0.496	16	
159TM 17				0.556 (5/2-,7/2-,9/2-)	17	
159TM 18				0.563 (15/2-)	18	10.5 PS 5
159TM 19				0.573	19	
159TM 20				0.584	20	

159TM 21				0.639	21	
159TM 22				0.645	22	
159TM 23				0.691 (13/2+)	23	3 PS 3
159TM 24				0.773	24	
159TM 25				0.813	25	
159TM 26				0.835	26	
159TM 27				0.903	27	
159TM 28				0.909 (17/2-)	28	1.2 PS 3
159TM 29				0.946 (15/2+)	29	3.5 PS 7
159TM 30				1.018	30	

159TM 31				1.025 (19/2-)	31	2.6 PS 2
159TM 32				1.063	32	
159TM 33				1.213	33	
159TM 34				1.217 (17/2+)	34	3.5 PS LT
159TM 35				1.296	35	
159TM 36				1.393	36	

159TM	37				1.400		37		
159TM	38				1.458	(21/2-)	38	1.5 PS	3
159TM	39				1.507	(19/2+)	39	0.7 PS	3
159TM	40				1.552		40		

159TM	41				1.583	(23/2-)	41	1.25 PS	14
159TM	42				1.801	(21/2+)	42	0.6 PS	5
159TM	43				2.076	(25/2-)	43	0.6 PS	5
159TM	44				2.110	(23/2+)	44	0.8 PS	2
159TM	45				2.176	(23/2+)	45		
159TM	46				2.213	(27/2-)	46	0.6 PS	2
159TM	47				2.374	(25/2+)	47	0.3 PS	3
159TM	48				2.423	(25/2+)	48		
159TM	49				2.549	(27/2+)	49	9 PS	4
S-p	=	2.556	(0.038)	-----					
159TM	50				2.704	(29/2+)	50	4.4 PS	17

159TM	51				2.710	(29/2-)	51	0.4 PS	4
159TM	52				2.862	(31/2-)	52	0.6 PS	2
159TM	53				2.911	(31/2+)	53	5.1 PS	8
159TM	54				3.140	(33/2-)	54	0.8 PS	2
159TM	55				3.159	(33/2+)	55	1.1 PS	5
159TM	56				3.349	(35/2-)	56	1.2 PS	2
159TM	57				3.402	(35/2+)	57	1.2 PS	3
159TM	58				3.583	(37/2-)	58	1.1 PS	3
159TM	59				3.734	(37/2+)	59	0.35 PS	14
159TM	60				3.859	(39/2-)	60	1.3 PS	2

159TM	61				4.019	(39/2+)	61	0.42 PS	14
159TM	62				4.135	(41/2-)	62	0.35 PS	14
159TM	63				4.405	(41/2+)	63	1.0 PS	LT
159TM	64				4.459	(43/2-)	64	0.48 PS	14
159TM	65				4.742	(43/2+)	65		
159TM	66				4.779	(45/2-)	66	0.28 PS	14
159TM	67				5.144	(47/2-)	67	0.35 PS	14
159TM	68				5.504	(49/2-)	68	0.2 PS	2
159TM	69				5.907	(51/2-)	69		
159TM	70				6.303	(53/2-)	70		

159TM	71				6.740	(55/2-)	71		
159TM	72				7.172	(57/2-)	72		
159TM	73				7.649	(59/2-)	73		
159TM	74				8.132	(61/2-)	74		

S-p = 2.556 (0.038)-----
S-n = 9.938 (0.038)-----
S-2p = 8.315 (0.036)-----
S-2n = 18.004 (0.040)-----
S-alpha= -3.045 (0.033)-----

S+p = -4.882 (0.028)
S+n = -7.802 (0.043)
S+2p = -6.570 (0.040)
S+2n = -17.471 (0.040)
S+alpha = 3.354 (0.040)

gap p = -2.326 (0.047)
gap n = 2.136 (0.057)
gap 2p = 1.745 (0.054)
gap 2n = 0.533 (0.056)
gap alpha = 0.309 (0.051)