

^{139}Pm $Z = 61$ $N = 78$ adopted link ENSDF link

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

BE = 1151.691 (0.014) MeV

Qbeta+ = 4.516 (0.031) MeV

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

S-alpha=	-1.010	(0.018)	-----		
139PM 1				0.000 (5/2)+	1 4.15 M 5
139PM 2				0.189 (11/2)-	2 180 MS 20
139PM 3				0.228 (5/2+,7/2+)	3
139PM 4				0.274 (3/2)+	4
139PM 5				0.307 (1/2,3/2)+	5
139PM 6				0.463 (1/2,3/2)+	6
139PM 7				0.589	7
139PM 8				0.596 (1/2,3/2)+	8
139PM 9				0.655 (15/2-)	9
139PM 10				0.655	10

139PM 11				0.721 (1/2,3/2)+	11
139PM 12				0.782 (1/2,3/2)+	12
139PM 13				0.786 (13/2-)	13
139PM 14				0.856	14
139PM 15				0.862	15
139PM 16				0.886	16
139PM 17				0.926	17
139PM 18				0.930	18
139PM 19				1.016	19
139PM 20				1.111	20

139PM 21				1.127	21
139PM 22				1.184	22
139PM 23				1.207	23
139PM 24				1.285 (15/2-)	24
139PM 25				1.366	25
139PM 26				1.376 (17/2-)	26
139PM 27				1.406 (19/2-)	27
139PM 28				1.442	28
139PM 29				1.462	29
139PM 30				1.463	30

139PM 31				1.502	31
139PM 32				1.527	32
139PM 33				1.596	33
139PM 34				1.666	34
139PM 35				1.714 (15/2+)	35
139PM 36				1.720	36

139PM 37				1.896		37
139PM 38				1.903	(19/2-)	38
139PM 39				1.952	(17/2+)	39
139PM 40				1.982		40

139PM 41				2.044		41
139PM 42				2.075		42
139PM 43				2.091	(19/2+)	43
139PM 44				2.108	(19/2+)	44
139PM 45				2.191	(21/2-)	45
139PM 46				2.210		46
139PM 47				2.303	(21/2+)	47
139PM 48				2.352	(23/2-)	48
139PM 49				2.518	(21/2+)	49
139PM 50				2.571	(23/2+)	50

139PM 51				2.615		51
139PM 52				2.691	(23/2+)	52
139PM 53				2.768	(23/2-)	53
S-p	=	2.773	(0.018)	-----		
139PM 54				2.799	(25/2+)	54
139PM 55				2.965	(25/2+)	55
139PM 56				3.024		56
139PM 57				3.158	(25/2-)	57
139PM 58				3.200	(25/2-)	58
139PM 59				3.236		59
139PM 60				3.262	(27/2-)	60

139PM 61				3.281	(27/2+)	61
139PM 62				3.308		62
139PM 63				3.391		63
139PM 64				3.417	(27/2-)	64

S-p	=	2.773	(0.018)	-----		
S-n	=	10.658	(0.018)	-----		
S-2p	=	8.877	(0.016)	-----		
S-2n	=	19.571	(0.019)	-----		
S-alpha	=	-1.010	(0.018)	-----		
S+p	=	-5.244	(0.018)			
S+n	=	-8.782	(0.028)			
S+2p	=	-7.003	(0.019)			
S+2n	=	-19.165	(0.019)			
S+alpha	=	0.835	(0.017)			
gap p	=	-2.471	(0.026)			
gap n	=	1.876	(0.033)			
gap 2p	=	1.875	(0.024)			
gap 2n	=	0.406	(0.027)			

gap alpha = -0.175 (0.025)