

$^{239}\text{Np}$        $Z = 93$        $N = 146$       adopted link      ENSDF link

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

BE = 1806.976 ( 0.001) MeV

Qbeta- = 0.723 ( 0.002) MeV

	Energy T	J+	J-	J-other	T1/2
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S-alpha=	-4.597	( 0.014)	-----		
239NP 1	0.000	5/2+			1 2.356 D 3
239NP 2	0.031	7/2+			2
239NP 3	0.071	9/2+			3
239NP 4			0.075	5/2-	4 1.39 NS 3
239NP 5			0.118	7/2-	5 40 PS LE
239NP 6				0.123 (11/2+)	6
239NP 7			0.173	9/2-	7
239NP 8				0.180 (13/2+)	8
239NP 9				0.220 (1/2+)	9
239NP 10				0.241 (11/2-)	10
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239NP 11				0.258 (3/2+)	11
239NP 12				0.261 (3/2-)	12
239NP 13				0.267	13
239NP 14				0.271 (1/2-)	14
239NP 15				0.315 (7/2-)	15
239NP 16				0.317 (13/2-)	16
239NP 17				0.325 (5/2-)	17
239NP 18				0.347 (9/2+,7/2+)	18
239NP 19				0.359 (9/2+)	19
239NP 20				0.411	20
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239NP 21				0.421	21
239NP 22				0.427	22
239NP 23				0.439 (11/2+)	23
239NP 24				0.448 (3/2-)	24
239NP 25				0.453 (5/2+,7/2-)	25
239NP 26				0.474	26
239NP 27				0.483 (5/2-)	27
239NP 28				0.518 (7/2-)	28
239NP 29				0.530	29
239NP 30				0.547 (13/2+)	30
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239NP 31				0.564	31
239NP 32				0.579 (9/2-)	32
239NP 33				0.600	33
239NP 34				0.616	34
239NP 35				0.637	35
239NP 36				0.657 (11/2-)	36

239NP	37				0.662	(5/2-)	37
239NP	38				0.695	(7/2-)	38
239NP	39				0.724		39
239NP	40				0.742	(9/2-)	40
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239NP	41				0.779		41
239NP	42				0.785		42
239NP	43				0.819	(7/2-)	43
239NP	44				0.823		44
239NP	45				0.844	(7/2-)	45
239NP	46				0.849		46
239NP	47				0.863		47
239NP	48				0.865	(9/2+)	48
239NP	49				0.891		49
239NP	50				0.917		50
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239NP	51				0.951		51
239NP	52				0.959		52
239NP	53				0.964	(7/2-)	53
239NP	54				0.967		54
239NP	55				0.992	(7/2-)	55
239NP	56				1.020	(13/2+)	56
239NP	57				1.040	(5/2-, 7/2-)	57
239NP	58				1.049	(9/2-)	58
239NP	59				1.077		59
239NP	60				1.097	(7/2+)	60
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239NP	61				1.118	(11/2-)	61
239NP	62				1.141		62
239NP	63				1.155		63
239NP	64				1.183		64
239NP	65				1.197		65

S-p = 5.286 ( 0.002)-----  
S-n = 6.215 ( 0.002)-----  
S-2p = 12.794 ( 0.013)-----  
S-2n = 11.703 ( 0.002)-----  
S-alpha= -4.597 ( 0.014)-----

S+p = -6.475 ( 0.002)  
S+n = -5.066 ( 0.017)  
S+2p = -10.955 ( 0.002)  
S+2n = -11.139 ( 0.100)  
S+alpha = 5.439 ( 0.002)

gap p = -1.189 ( 0.003)  
gap n = 1.149 ( 0.017)  
gap 2p = 1.840 ( 0.013)  
gap 2n = 0.565 ( 0.100)

gap alpha = 0.842 ( 0.014)