

$^{219}\text{Fr}$        $Z = 87$        $N = 132$       adopted link      ENSDF link

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

BE      =      1690.938 ( 0.007) MeV

	Energy T	J+	J-	J-other	T1/2
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S-alpha=	-7.449	( 0.010)	-----		
219FR 1			0.000	9/2-	1 24 MS 4
219FR 2				0.015 (5/2-)	2
219FR 3				0.056 (3/2-)	3
219FR 4				0.073 (13/2-)	4
219FR 5				0.081 (1/2-)	5
219FR 6				0.099 (7/2-)	6
219FR 7				0.134 (5/2-)	7
219FR 8				0.140 (3/2-)	8
219FR 9				0.191 (7/2+)	9
219FR 10				0.210 (3/2+)	10
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219FR 11				0.216 (11/2+)	11
219FR 12				0.269 (7/2-)	12
219FR 13				0.306 (9/2-)	13
219FR 14				0.325	14
219FR 15				0.333 (11/2-)	15
219FR 16				0.340 (5/2+)	16
219FR 17				0.370 (3/2+)	17
219FR 18				0.372 (7/2+)	18
219FR 19				0.375 (7/2)	19
219FR 20				0.384 (5/2+)	20
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219FR 21				0.432 (9/2)	21
219FR 22				0.445	22
219FR 23				0.462 (9/2+)	23
219FR 24				0.490 (5/2-)	24
219FR 25				0.507 (9/2+)	25
219FR 26				0.530 (11/2+)	26
219FR 27				0.534 (7/2-)	27
219FR 28				0.589 (9/2-)	28
219FR 29				0.650 (11/2-)	29
219FR 30				0.706 (5/2+)	30
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219FR 31				0.778 (7/2+)	31

S-p	=	3.889	( 0.007)	-----
S-n	=	6.514	( 0.008)	-----
S-2p	=	10.356	( 0.008)	-----
S-2n	=	11.840	( 0.009)	-----

S-alpha= -7.449 ( 0.010)-----

S+p = -5.634 ( 0.010)

S+n = -5.206 ( 0.008)

S+2p = -8.664 ( 0.057)

S+2n = -11.482 ( 0.008)

S+alpha = 6.783 ( 0.010)

gap p = -1.745 ( 0.013)

gap n = 1.308 ( 0.011)

gap 2p = 1.692 ( 0.058)

gap 2n = 0.358 ( 0.013)

gap alpha = -0.665 ( 0.014)