

^{220}Fr $Z = 87$ $N = 133$ adopted link ENSDF link

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

BE = 1696.144 (0.004) MeV
 Qbeta- = 1.210 (0.009) MeV
 Qbeta+ = 0.870 (0.004) MeV

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

S-alpha=	-6.801	(0.005)			
220FR 1	0.000	1+			1 27.4 S 3
220FR 2				0.007 (3)+	2
220FR 3	0.012	2+			3
220FR 4				0.020 (4)+	4
220FR 5	0.048	2+			5
220FR 6				0.056 (5+)	6
220FR 7				0.073 (3)+	7
220FR 8				0.127 (4+)	8
220FR 9			0.141 1-		9
220FR 10			0.157 2-		10

220FR 11				0.177 (3)-	11
220FR 12				0.200 (5+)	12
220FR 13				0.214 (4)-	13
220FR 14				0.247	14
220FR 15				0.257	15
220FR 16	0.274	1+			16
220FR 17				0.276	17
220FR 18				0.291 (5-)	18
220FR 19				0.300 (1)+	19
220FR 20				0.307	20

220FR 21				0.315	21
220FR 22				0.340 (0)-	22
220FR 23				0.348	23
220FR 24				0.355 (0-,2-)	24
220FR 25				0.361	25
220FR 26				0.364 3+,4-	26
220FR 27				0.376 (2-)	27
220FR 28				0.380	28
220FR 29				0.415	29
220FR 30				0.442	30

220FR 31				0.452	31
220FR 32				0.480	32
220FR 33				0.501	33
220FR 34				0.511	34
220FR 35				0.580	35

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S-p    =  4.636 ( 0.005)-----  
S-n    =  5.206 ( 0.008)-----  
S-2p   = 11.196 ( 0.012)-----  
S-2n   = 11.720 ( 0.006)-----  
S-alpha= -6.801 ( 0.005)-----  
  
S+p    = -5.807 ( 0.006)  
S+n    = -6.276 ( 0.006)  
S+2p   = -9.438 ( 0.006)  
S+2n   = -11.247 ( 0.008)  
S+alpha =  6.327 ( 0.006)  
  
gap p   = -1.171 ( 0.008)  
gap n   = -1.070 ( 0.010)  
gap 2p  =  1.758 ( 0.014)  
gap 2n  =  0.473 ( 0.010)  
gap alpha = -0.474 ( 0.008)
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