

$^{28}\text{P}$        $Z = 15$        $N = 13$       [link to full NNDC output](#)

Based on ENSDF from Dec 2018, and mass evaluation from 2016

BE = 221.409 ( 0.001) MeV

Qbeta+ = 14.345 ( 0.001) MeV

	Energy T	J+	J-	J-other	T1/2
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28P 1	0.000	3+			1 270.3 MS 5
28P 2				0.106 (2+)	2
28P 3				0.877	3
28P 4				1.134 (3+)	4 1.0 PS LT
28P 5				1.313 (1+)	5
28P 6				1.516 (2+)	6
28P 7				1.567 (1+)	7
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S-p =	2.052 ( 0.001)				
28P 8				2.104 (2+)	8 87 FS LT
28P 9				2.143 (1+)	9
28P 10				2.216 (3,4)+	10
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28P 11				2.406 (0,1,2)+	11
28P 12				2.483	12
28P 13				2.628 (3,4)+	13
28P 14				2.857	14
28P 15				2.896 (3,4)+	15
28P 16				2.973 (1+)	16
28P 17				3.164 (3,4)+	17
28P 18				3.200	18
28P 19				3.250	19
28P 20				3.512 (1+)	20
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28P 21				3.558	21
28P 22				3.728	22
28P 23				3.806	23
28P 24				3.911 (2+)	24
28P 25				4.150	25
28P 26				4.180	26
28P 27				4.290	27
28P 28				4.500	28
28P 29	4.630	1+			29
28P 30			4.940	6-	30
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28P 31				4.970	31
28P 32				5.190	32
28P 33	5.900	2 0+			33

S-p = 2.052 ( 0.001)

S-n = 14.497 ( 0.026)-----  
S-2p = 9.516 ( 0.001)-----  
S-2n = 0.000 ( 0.000)-----  
S-alpha= 9.524 ( 0.001)-----

S+p = -3.298 ( 0.050)  
S+n = -17.876 ( 0.001)  
S+2p = 0.000 ( 0.000)  
S+2n = -29.196 ( 0.001)  
S+alpha = -8.612 ( 0.001)

gap p = -1.245 ( 0.050)  
gap n = -3.380 ( 0.026)  
gap 2p = 0.000 ( 0.000)  
gap 2n = 0.000 ( 0.000)  
gap alpha = 0.912 ( 0.002)