

$^{131}\text{Pr}$        $Z = 59$        $N = 72$       adopted link      ENSDF link

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

BE = 1085.485 ( 0.047) MeV

Qbeta+ = 5.408 ( 0.057) MeV

	Energy T	J+	J-	J-other	T1/2
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S-alpha=	-1.171 ( 0.054)				
131PR 1				0.000 (3/2+)	1 1.51 M 2
131PR 2				0.088 (5/2+)	2
131PR 3				0.152 (11/2-)	3 5.73 S 20
131PR 4				0.252 (7/2+)	4
131PR 5				0.262 (5/2,7/2+)	5
131PR 6				0.409 (15/2-)	6
131PR 7				0.448 (9/2+)	7
131PR 8				0.450 (7/2+)	8
131PR 9				0.516 (3/2,5/2,7/2+)	9
131PR 10				0.557 (3/2,5/2,7/2+)	10
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131PR 11				0.572 (3/2,5/2,7/2+)	11
131PR 12				0.669 (3/2,5/2,7/2+)	12
131PR 13				0.680 (11/2+)	13
131PR 14				0.681 (3/2,5/2,7/2+)	14
131PR 15				0.724 (3/2,5/2,7/2+)	15
131PR 16				0.773 (3/2,5/2,7/2)	16
131PR 17				0.788 (3/2,5/2,7/2+)	17
131PR 18				0.799 (3/2,5/2,7/2)	18
131PR 19				0.829 (3/2,5/2,7/2+)	19
131PR 20				0.876 (19/2-)	20
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131PR 21				0.892 (3/2,5/2,7/2)	21
131PR 22				0.924 (3/2,5/2,7/2+)	22
131PR 23				0.976 (9/2+)	23
131PR 24				0.980 (13/2+)	24
131PR 25				1.076 (5/2,7/2+)	25
131PR 26				1.156 (11/2+)	26
131PR 27				1.240 (3/2,5/2,7/2+)	27
131PR 28				1.241 (15/2+)	28
131PR 29				1.354 (13/2+)	29
131PR 30				1.502 (23/2-)	30 1.20 PS 10
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131PR 31				1.567 (15/2+)	31
131PR 32				1.617 (17/2+)	32
131PR 33				1.798 (17/2+)	33
131PR 34				1.871	34
131PR 35				1.951 (19/2+)	35
131PR 36				2.047 (19/2+)	36

131PR	37			2.118	(21/2+)	37			
S-p	=	2.167	( 0.055)	-----					
131PR	38			2.243	(27/2-)	38	0.60 PS	7	
131PR	39			2.314	(21/2+)	39			
131PR	40			2.328	(23/2+)	40			
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131PR	41			2.360	(19/2+)	41			
131PR	42			2.456	(21/2+)	42			
131PR	43			2.542	(25/2+)	43			
131PR	44			2.599	(23/2+)	44			
131PR	45			2.608	(23/2+)	45			
131PR	46			2.797	(27/2+)	46			
131PR	47			2.820	(25/2+)	47			
131PR	48			2.901	(25/2+)	48			
131PR	49			3.051	(31/2-)	49	0.62 PS	6	
131PR	50			3.083	(29/2+)	50			
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131PR	51			3.094	(27/2+)	51			
131PR	52			3.223	(27/2+)	52			
131PR	53			3.416	(31/2+)	53			
131PR	54			3.416	(29/2+)	54			
131PR	55			3.566	(29/2+)	55			
131PR	56			3.770	(33/2+)	56			
131PR	57			3.781	(31/2+)	57			
131PR	58			3.883	(35/2-)	58	1.08 PS	19	
131PR	59			3.916	(31/2+)	59			
131PR	60			4.178	(33/2+)	60			
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131PR	61			4.187	(35/2+)	61			
131PR	62			4.304	(33/2+)	62			
131PR	63			4.599	(37/2+)	63			
131PR	64			4.605	(35/2+)	64			
131PR	65			4.681	(35/2+)	65			
131PR	66			4.754	(39/2-)	66	0.35 PS	3	
131PR	67			5.053	(37/2+)	67			
131PR	68			5.091	(39/2+)	68			
131PR	69			5.105	(37/2+)	69			
131PR	70			5.502	(39/2+)	70			
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131PR	71			5.551	(41/2+)	71			
131PR	72			5.705	(43/2-)	72	0.38 PS	LT	
131PR	73			5.960	(41/2+)	73			
131PR	74			6.107	(43/2+)	74			
131PR	75			6.394	(43/2+)	75			
131PR	76			6.605	(45/2+)	76			
131PR	77			6.746	(47/2-)	77			
131PR	78			6.878	(45/2+)	78			
131PR	79			7.214	(47/2+)	79			
131PR	80			7.343	(47/2+)	80			
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S-2p	=	7.555	( 0.052)	-----		
131PR 81				7.744	(49/2+)	81
131PR 82				7.854	(49/2+)	82
131PR 83				7.868	(51/2-)	83
131PR 84				8.357	(51/2+)	84
131PR 85				8.898	(53/2+)	85
131PR 86				9.017	(55/2-)	86
131PR 87				9.454	(55/2+)	87

S-p	=	2.167	( 0.055)	-----		
S-n	=	11.196	( 0.080)	-----		
S-2p	=	7.555	( 0.052)	-----		
S-2n	=	20.670	( 0.056)	-----		
S-alpha	=	-1.171	( 0.054)	-----		

S+p	=	-4.414	( 0.053)
S+n	=	-8.998	( 0.055)
S+2p	=	-5.685	( 0.069)
S+2n	=	-19.780	( 0.049)
S+alpha	=	1.813	( 0.095)

gap p	=	-2.248	( 0.076)
gap n	=	2.198	( 0.097)
gap 2p	=	1.870	( 0.086)
gap 2n	=	0.890	( 0.074)
gap alpha	=	0.643	( 0.109)