

³¹P(d,n),²H(³¹P,N) 1976Uz01,1987Mi11,1998Ka31

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Christian Ouellet, Balraj Singh		NDS 112, 2199 (2011)	24-Aug-2011

$J^\pi(^{31}\text{P g.s.})=1/2^+$.

1998Ka31: ²H(³¹P,n) E=24-29 MeV ³¹P from the 5 MV tandem accelerator EGP-10-II at Helsinki. γ -rays detected using Ge detector with BGO veto for high precision DSAM lifetime measurements. Monte-Carlo lineshape analysis.

1987Mi11: ³¹P(d,n) E=24.8 MeV deuterons from the AVF cyclotron and the Cyclotron and Radioisotope Center, Tohoku university. Dipole magnet beam "swinger". Liquid scintillator detectors. Red phosphorus target. Measured angular distributions. DWBA analysis.

1976Uz01: ³¹P(d,n) E=7 MeV deuterons from EN Tandem Van de Graaff at Bruyeres-le-Chatel. Red phosphorus target. Liquid scintillator detectors. Measured E(n) and angular distributions. DWBA analysis.

Others: **1974Hu10, 1968Fe04** (poor agreement with newer data).

³²S Levels

E(level) ^{†‡}	T _{1/2} [@]	L [†]	S [#]	Comments
0		0	0.75	
2226 8		2	1.51	
3775 7		0	0.15	
4280 7	41 fs 6	(2)		L: from 1987Mi11. Additional information 1.
4459 6				
4695 5		2	0.67	
5007 6		3	0.92	
5414 7				
5551 6	58 fs 10	2	0.13	Additional information 2.
5801 4	6.4 fs 21	1	0.15	Additional information 3.
6228 4	73 fs 9	1	0.15	Additional information 4.
6414 7				
6624 4		3	0.54	
6672 8		2	(0.10)	
6764 6				
6861 6				
7005 4	1.7 fs 8	2	0.58	Additional information 5.
7118 4	2.5 fs 12	2	0.70	Additional information 6.
7195 4	8 fs 2	0	0.02	Additional information 7.
7358 6				
7431 5	8.1 fs 10	1	0.09	Additional information 8.
7488 9	5.1 fs 12			Additional information 9.
7539 4	2.3 fs 7	0	0.05	Additional information 10.
7707 5				
7887 4		1	0.035	
7962 4		3		L: from 1987Mi11.
8128 3		0	0.08	
8294 4		3		L: from 1987Mi11.
8501 3		1	0.12	
8695 7				
9024 4		1	0.10	L: 3,1 from 1987Mi11.
9060 3				
9210 4		0+2		
9241 4		(1)	0.04	
9288 4		0+2		
9389 3		1	0.23	
9483 4		1	0.06	
9648 4				
9728 4		1	0.08	L: 3,1 from 1987Mi11.

Continued on next page (footnotes at end of table)

$^{31}\text{P}(\text{d,n}), ^2\text{H}(^{31}\text{P,N})$ 1976Uz01,1987Mi11,1998Ka31 (continued) ^{32}S Levels (continued)

E(level) ^{†‡}	L [†]	S [#]	Comments
9817 4			
9846 4		0.02	L: L=1 from 1976Uz01 disagrees with L=3 from 1987Mi11.
9884 6			
9945 5			
9975 4			
10073 3	1	0.31	
10220 4			
10253 4			
10270	‡		
10286 4			
10327 4	1	0.08	
10394 4		0.07	L: L=1 from 1976Uz01 disagrees with L=3 from 1987Mi11.
10720	1‡		
10763 4			
10819 6	1		L: from 1987Mi11.
11020	1‡		
11210	3‡		
11580	1‡		
11820	1‡		
12040	3‡		
12190	1‡		
12390	1‡		
12630	1‡		
13430	3‡		

† From 1976Uz01, except where noted.

‡ From 1987Mi11.

From 1976Uz01 at 7 MeV.

@ From 1998Ka31.