

$^{14}\text{N}(^7\text{Li,p})$  1998Ti06

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	D. R. Tilley, C. Cheves, J. Kelley, S. Raman, H. Weller		NP A636, 249 (1998)	21-Apr-1997

E(MeV)=16. Levels for E=0-4366 keV are from [1977Fo11](#). Levels for E=4512-9022 keV are from [1985Fo01](#).  $J^\pi$  assignments are made based on cross sections and the  $2J(\text{final})+1$  relationship, with slopes which are different for even- and odd-parity states, these depend on states having been resolved. All groups for  $E \geq 7.0$  MeV appear to be due to unresolved states. For more details see table 20.7 in [1998Ti06](#).

 $^{20}\text{F}$  Levels

E(level)	$J^\pi$	Comments
0	2 <sup>+</sup>	
657 6	3 <sup>+</sup>	
820 5	4 <sup>+</sup>	
984 5	1 <sup>-</sup>	
1049 5	1 <sup>+</sup>	
1310 6	2 <sup>-</sup>	
1826 4	5 <sup>+</sup>	Unresolved.
1969 5	(3 <sup>-</sup> )	
2040 3	2 <sup>+</sup>	
2194 6	3 <sup>+</sup>	
2863 5	(3 <sup>-</sup> )	
2962 3		Unresolved.
3171 4	1 <sup>+</sup>	
3491 3	0 <sup>+</sup>	Unresolved.
3578 5		Possible doublet.
3674.2 28		Possible doublet.
3756.5 23	(2 <sup>-</sup> , 3 <sup>+</sup> )	
3967 5	1 <sup>+</sup>	
4080 4		Possible doublet.
4198 3		Unresolved.
4274 3		Unresolved.
4366 8	0 <sup>(-)</sup>	
4512 4	(3 <sup>-</sup> , 4 <sup>-</sup> , 5 <sup>+</sup> , 6 <sup>+</sup> )	
4579 4		Unresolved.
4728 5	(3 <sup>-</sup> , 4 <sup>-</sup> , 4 <sup>+</sup> , 5 <sup>+</sup> )	
4760 5	(4,5,6) <sup>-</sup> ,(6,7,8) <sup>+</sup>	
4889 4		Unresolved.
5032 4	2 <sup>-</sup>	
5064 5	(1 <sup>-</sup> , 2, 3 <sup>+</sup> )	
5128 5	(2 <sup>-</sup> , 3, 4 <sup>+</sup> )	
5222 4	(1 <sup>-</sup> , 2 <sup>-</sup> )	
5282 11		
5316 7		
5350 5	3 <sup>+</sup>	
5405 4		
5448 6		Unresolved.
5560 6		Unresolved.
5612 5		Unresolved.
5725 10	(2,3,4,5)	
5765 8	3 <sup>+</sup>	
5803 7	1 <sup>+</sup>	
5940 5		
6021 4		Unresolved.
6090 7	(0 <sup>-</sup> )	
6160 5	((1 <sup>-</sup> ), 2, 3 <sup>+</sup> )	

Continued on next page (footnotes at end of table)

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 ${}^{14}\text{N}({}^7\text{Li,p})$  **1998Ti06 (continued)**

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 ${}^{20}\text{F}$  Levels (continued)

<u>E(level)</u>	<u>J<math>\pi</math></u>	<u>Comments</u>
6193 6	(2 <sup>-</sup> , 3, 4 <sup>+</sup> )	
6297 5		Unresolved.
6344 9		Unresolved.
6379 5		Unresolved.
6417 4	(3 <sup>-</sup> , 4, 5, (6 <sup>+</sup> ))	
6470 4		
6565 6		Unresolved.
6600 8		Unresolved.
6633 3		Unresolved.
6695 3		
6756 3	(2 <sup>-</sup> , 3, 4 <sup>+</sup> )	
6823 3		
6936 4		
6968 4		
6991 7		
7034 9		
7080 7		
7154 5		
7232 7		
7283 4		
7319 8		
7370 20		
7419 20		
7495 5		
7655 5		
7734 6		
7865 16		
7975 5		
8062 8		
8113 4		
8147 6		
8268 12		
8349 4		
8573		
8697		
8754		
8792		
8907		
8946		
9022		