

Table 19.13 from (1978AJ03):  
Levels of  $^{19}\text{F}$  and  $^{19}\text{Ne}$  from  $^{16}\text{O}(^6\text{Li}, ^3\text{He})$  and  $^{16}\text{O}(^6\text{Li}, t)$  <sup>a</sup>

$J^\pi$ <sup>c</sup>	$E_x$ <sup>b</sup> in $^{19}\text{F}$ (MeV)			$E_x$ <sup>b</sup> in $^{19}\text{Ne}$ (MeV)		
	$K^\pi = \frac{1}{2}^+$	$K^\pi = \frac{1}{2}^-$	other	$K^\pi = \frac{1}{2}^+$	$K^\pi = \frac{1}{2}^-$	other
$\frac{1}{2}^+$	0			0		
$\frac{3}{2}^+$	1.56			1.54 <sup>e</sup>		
$\frac{5}{2}^+$	0.20			0.24		
$\frac{7}{2}^+$	5.47			5.42		
$\frac{9}{2}^+$	2.78			2.79 <sup>e</sup>		
$\frac{11}{2}^+$	(6.50) <sup>d</sup>					
$\frac{13}{2}^+$	4.65			4.64		
$\frac{1}{2}^-$		0.11			0.28	
$\frac{3}{2}^-$		1.46			1.62 <sup>e</sup>	
$\frac{5}{2}^-$		1.35			1.51 <sup>e</sup>	
$\frac{7}{2}^-$		4.00			4.20 <sup>g</sup>	
$\frac{9}{2}^-$		4.03			4.14 <sup>g</sup>	
$\frac{3}{2}^+$			3.91 <sup>e</sup>			4.03 <sup>e</sup>
$\frac{7}{2}^+$			4.38			4.38 <sup>e</sup>
$\frac{5}{2}^+(+)$			4.55			4.55 <sup>e</sup>
$\frac{3}{2}^- (\frac{1}{2}^-)$			4.56			$4.593 \pm 0.006$
$\frac{5}{2}^-$			4.68			4.71
$\frac{5}{2}^-(-)$			5.11			5.09 <sup>f</sup>
$\frac{5}{2}^+$			5.34			
$\frac{7}{2}^-$			5.43			
						(6.12)
$(\frac{5}{2}, \frac{7}{2})^-$						6.29
$(\frac{11}{2}, \frac{9}{2})^-$						6.86

<sup>a</sup> (1971BI06, 1972BI14, 1972GA08, 1973BI02). See also reaction 14 in  $^{19}\text{Ne}$ .

<sup>b</sup> Energies are nominal.

<sup>c</sup>  $J^\pi$  assignments based on similarities in angular distributions, and on known spin of one of the analog states.

<sup>d</sup> Not strongly populated at  $E(^6\text{Li}) = 24$  MeV.

<sup>e</sup>  $J^\pi$  assignments based on similarities in  $\sigma_{\text{max}}$  in both reactions, and on known spin of analog state.

<sup>f</sup>  $J^\pi = (\frac{5}{2}^-, \frac{7}{2}^-)$  (1973BI02); a state at 4.78 MeV is also reported (1973BI02).

<sup>g</sup> See, however, reaction 5 in  $^{19}\text{Ne}$  (1973DA31).