

Table 19.22 from (1983AJ01):  
States of  $^{19}\text{F}$  and  $^{19}\text{Ne}$  from  $^{20}\text{Ne}(t, \alpha)$  and  $^{20}\text{Ne}(^3\text{He}, \alpha)$

$E_x$ in $^{19}\text{F}$ (MeV $\pm$ keV) <sup>a</sup>	$l_p$ <sup>b</sup>	$J^\pi$	$C^2S$ <sup>b,c</sup>		$E_x$ in $^{19}\text{Ne}$ (MeV)
			(t, $\alpha$ )	( $^3\text{He}, \alpha$ )	
0	0	$\frac{1}{2}^+$	0.12	0.20	0
0.11	1	$\frac{1}{2}^-$	1.7	1.8	0.28
0.20	2	$\frac{5}{2}^+$	1.6	0.95	0.24
1.46	1	$\frac{3}{2}^-$	0.30	0.21	1.62
1.55	2	$\frac{3}{2}^+$	0.31 <sup>d</sup>	0.70	1.54
2.794 $\pm$ 15					
3.917 $\pm$ 15		$\frac{3}{2}^+$	$\leq 0.04$	$\leq 0.1$	4.03
4.00					
4.032 $\pm$ 15					
4.385 $\pm$ 15					
4.55 + 4.56	1	$\frac{3}{2}^-$	0.69	0.57	4.55
4.65 + 4.68					
5.102 $\pm$ 15					
5.343 $\pm$ 15					
5.481 $\pm$ 15					
5.539 $\pm$ 15					
5.628 $\pm$ 15					
5.937 $\pm$ 20					
6.092 $\pm$ 15	1	$\frac{3}{2}^-$	1.0	1.4	6.01
6.169 $\pm$ 30					
6.247 $\pm$ 25					
6.501 $\pm$ 25					
6.79	1	$\frac{3}{2}^-$	0.96	1.5	6.74

<sup>a</sup> For references see [Table 19.23 in \(1978AJ03\)](#).  $E_x$  for which errors are not shown are nominal.

<sup>b</sup> (1974GA28):  $E_t = 20$  MeV.

<sup>c</sup> Calculated using finite range and non-local corrections. The ( $^3\text{He}, \alpha$ ) results are from (1970GA18). The absolute DWBA normalization factors were 4.6 for (t,  $\alpha$ ) and 10.2 for ( $^3\text{He}, \alpha$ ).

<sup>d</sup> Poor DWBA fit.