

Table 20.32 from (1983AJ01): States of  $^{20}\text{Ne}$  from  $^{19}\text{F}(^3\text{He}, d)^{20}\text{Ne}$  <sup>a</sup>

$E_x$ (MeV $\pm$ keV)	$\Gamma$ (keV)	$nlj$ <sup>b</sup>	$J^\pi; T$	$K^\pi$	$(2J + 1)C^2S$	
					DWBA	CCBA <sup>c</sup>
0		$2s_{1/2}$	$0^+$	$0_1^+$		0.37
$1.6353 \pm 1.8$		$1d_{5/2}$	$2^+$	$0_1^+$		1.7
$4.249 \pm 2.5$		n.s.	$4^+$	$0_1^+$		0.08
$4.968 \pm 3$		$1p_{3/2}$	$2^-$	$2^-$	(0.03)	0.03
$5.623 \pm 3$		$1f_{7/2}$	$3^-$	$2^-$	(0.09)	0.06
$5.785 \pm 3$		$2p_{3/2}$	$1^-$	$0^-$	0.16	0.11
$6.722 \pm 3$		$2s_{1/2}$	$0^+$	$0_2^+$	0.52	0.30
7.00		$1f_{7/2}$	$4^-$	$2^-$		0.12
$7.156 \pm 8$		$1f_{7/2}$	$3^-$	$0^-$	0.42	0.12
$7.422 \pm 3$		$1d_{5/2}$	$2^+$	$0_2^+$	0.79	0.50
$7.829 \pm 10$		$1d_{5/2}$	$2^+$	$0_3^+$	0.06	0.046
$\approx 8.3$	$\approx 800$	$2s_{1/2}$	$0^+$	$0_4^+$	0.13	
8.45		n.s.	$5^-$	$2^-$		
8.70		n.s.	$1^-$			
$8.769 \pm 10$		n.s.	$6^+$	$0_1^+$		
8.8	broad	$1d_{5/2}$	$2^+$		0.21	
$8.841 \pm 10$		$2p_{3/2}$	$1^-$		(0.01)	
9.03		n.s.	$4^+$	$0_3^+$		
9.12		n.s.	$3^-$			
$9.305 \pm 10$		$1d_{5/2}$	$(1, 2, 3)^+$		0.04	
$9.469 \pm 10$		$1d_{5/2}$	$2^+$		0.03	
$9.859 \pm 3$		$1d_{5/2}$	$3^+ \text{ e}$		2.37	
9.92		n.s.	$(1^+)$			
9.99		n.s.	$4^+$	$0_2^+$		
$10.257 \pm 15$		$1d_{5/2}$	$2^+; 1$		0.07	
10.40						
10.55						
$10.568 \pm 15$	27	$1d_{5/2}$	$2^+$		0.05	
$10.815 \pm 15$	12	$1d_{5/2}$	$2^+$		0.05	
$10.860 \pm 15$		$1d_{5/2}$	$3^+; 1 \text{ e}$		2.82	

Table 20.32 from (1983AJ01): States of  $^{20}\text{Ne}$  from  $^{19}\text{F}(^3\text{He}, \text{d})^{20}\text{Ne}$  <sup>a</sup> (continued)

$E_x$ (MeV $\pm$ keV)	$\Gamma$ (keV)	$nlj$ <sup>b</sup>	$J^\pi; T$	$K^\pi$	$(2J + 1)C^2S$	
					DWBA	CCBA <sup>c</sup>
10.951 $\pm$ 15						
11.067 $\pm$ 15		n.s.	(4 <sup>+</sup> ; 1)			
11.239 $\pm$ 15					see <sup>a</sup>	
11.27 $\pm$ 15	73	n.s.				
11.549 $\pm$ 15		1d <sub>5/2</sub>	3 <sup>+</sup> <sup>e</sup>		1.00	
11.83 $\pm$ 15	81	1d <sub>5/2</sub>			0.10	
11.992 $\pm$ 15		n.s.	(8 <sup>+</sup> )	0 <sub>1</sub> <sup>+</sup>		
12.082 $\pm$ 15		1d <sub>5/2</sub>			0.35	
12.190 $\pm$ 15	< 0.1	1d <sub>5/2</sub>	(1, 2, 3) <sup>e</sup>		2.10	
12.367 $\pm$ 15 <sup>d</sup>	< 200		3 <sup>-</sup> <sup>e</sup>		see <sup>a,e</sup>	
12.423 $\pm$ 15	160	1d <sub>5/2</sub>	(2 <sup>+</sup> )		0.19	
12.503 $\pm$ 15		1d <sub>5/2</sub>			0.02	
12.823 $\pm$ 15		2s <sub>1/2</sub>			0.15	
13.037 $\pm$ 15		1d <sub>5/2</sub>				
13.135 $\pm$ 15						
13.270 $\pm$ 15						

n.s. = not stripping.

<sup>a</sup> For complete references see [Table 20.35 in \(1978AJ03\)](#).

<sup>b</sup> Orbital for direct transfer.

<sup>c</sup> Average of values displayed in [Table 20.35 \(1978AJ03\)](#).

<sup>d</sup>  $\alpha$ -decays to  $^{16}\text{O}^*(6.13)$  ([1977MA07](#)).

<sup>e</sup> Gamma-ray measurements ([1977MA07](#)):  $E_x = 9.88 \pm 0.03, 10.89 \pm 0.03, 11.59 \pm 0.03, 12.22, 12.40 \pm 0.04$  MeV. The  $E_x$  measured by ([1975BE02](#)) appear to be systematically low by 14 – 30 keV: see ([1977MA07](#)).