

Table 20.25 from (1998TI06): Levels of  $^{20}\text{Ne}$  from  $^{19}\text{F}(p, p_0)$  <sup>a</sup>

$E_p$ (keV)	$\Gamma_{\text{cm}}$ (keV)	$l$	$J^\pi; T$	$\Gamma_p/\Gamma$	$\theta_p^2$ (%)	$^{20}\text{Ne}^*$ (MeV)
340	2.8	0	$1^+$	0.016	3.8	13.171
483			$1^+$			13.307
598	35	1	$2^-$	0.0012	0.38	13.416
669	7.1	0	$1^+$	0.98	9.6	13.483
843	22	0	$0^+$	0.996	10.8	13.649
873	4.9	1	$2^-$ <sup>b</sup>	0.21	1.5	13.677
935	7.0	0	$1^+$	0.17	0.44	13.736
1346	4.3	1	$2^-$ <sup>b</sup>	0.067	0.07	14.126
1372	14	1	$2^-$ <sup>b</sup>	0.17	0.52	14.151
1422	13.9	0	$1^+$	0.85	0.92	14.198
1710 <sup>c</sup>	86	0	$0^+$	0.8		14.472
1896 <sup>c</sup>	24	0	$0^+$	0.3		14.648
1943 <sup>c</sup>	38	0	$(1^+)$	0.5		14.693
2030 <sup>c</sup>	67	1	$(1^-)$	0.75		14.776
2763 <sup>c</sup>		2				15.472
2970 <sup>c</sup>		2				15.668
$4094 \pm 3$	$2.0 \pm 0.5$	0	$0^+; 2$	$0.062 \pm 0.004$		16.735
$5879 \pm 7$ <sup>d</sup>	$9.5 \pm 3$	2	$2^+; 2$	$\approx 0.2$		18.430

<sup>a</sup> For references see [Table 20.27 in \(1978AJ03\)](#). For  $\theta^2$  see [Table 20.28 in \(1978AJ03\)](#).

<sup>b</sup>  $1^-$  not excluded by elastic scattering alone.

<sup>c</sup> (1985OU01, 1986OU01; R-matrix analysis). Weak resonances at  $E_p = 1.75$  and  $1.78$  MeV are also suggested.

<sup>d</sup> Resonance also observed in  $p_1, p_3, p_4$  and  $p_5$  yields.