

Table 19.16 from (1983AJ01): Resonances in $^{18}\text{O}(p, \gamma)^{19}\text{F}$ ^a

E_p (keV)	Γ_{lab} (keV)	$\omega\gamma$ (eV)	J^π	E_x (MeV)
151 ± 2	≤ 0.3	$(1.0 \pm 0.1) \times 10^{-3}$	$\frac{1}{2}^+$	8.136 ^e
216 ± 1	≤ 1	$> 0.8 \times 10^{-5}$		8.198
274 ± 3	≤ 1.5	$(3.7 \pm 0.5) \times 10^{-5}$	$\leq \frac{7}{2}$	8.253
334 ± 2	≤ 1	$(0.95 \pm 0.08) \times 10^{-3}$	$\frac{5}{2}^+$	8.310 ^f
622 ± 2	≤ 0.5	$(10 \pm 2) \times 10^{-3}$	$\frac{5}{2}^+$	8.582
629.6 ± 0.3	2.0 ± 0.3	0.10 ± 0.02	$\frac{3}{2}^-$	8.5896 ^g
≈ 680	300		$\frac{3}{2}$	8.637
841 ± 2	48 ± 2	1.4 ± 0.2	$\frac{1}{2}^+$ ^b $T = \frac{3}{2}$	8.790 ^h
977 ± 2	10 ± 2	$(1.5 \pm 0.2) \times 10^{-2}$	$\frac{3}{2}$	8.919
1166.5 ± 0.4		0.31 ± 0.10	$\frac{7}{2}^-$	9.0980 ⁱ
1398 ± 2	3.6 ± 0.8	0.08 ± 0.01	$\frac{3}{2}^+$	9.317
1630 ± 2 ^c	7 ± 2	0.025 ± 0.005	$\frac{5}{2}^+$	9.537
1660 ± 3	27 ± 3	0.041 ± 0.010	$\frac{3}{2}^-$	9.565
1670 ± 4	70 ± 3	0.06 ± 0.01	$\frac{3}{2}^-$	9.575
1684 ± 4	8 ± 2	0.025 ± 0.004	$\frac{7}{2}$	9.588
1768 ± 1.4	3.8 ± 0.4	1.2 ± 0.2	$\frac{3}{2}^+$	9.668
1928.4 ± 0.6 ^d	0.3 ± 0.05	2.8 ± 0.7	$\frac{5}{2}$	9.819
1986 ± 2	< 1.5	0.13 ± 0.04	$\frac{11}{2}^-$	9.874
1996 ± 4	26 ± 2	0.14 ± 0.05	$\frac{1}{2}^+$	9.883
2263.0 ± 0.7	5.0 ± 1.0		$\frac{3}{2}^-$	10.136
> 2300 ^d				

^a Mostly from (1980WI17). For earlier references see Table 19.15 in (1978AJ03). See also Tables 19.7 and 19.15.

^b Supported by direct capture into this state with a $\sin^2 \theta$ distribution of the d.c. γ -rays and by interference patterns near the resonance (1980WI17).

^c Decays partly (see Table 19.7) via a state at 8015 ± 2 keV with $J^\pi = \frac{5}{2}^+$ (1980WI17).

^d See Table 19.15 in (1978AJ03).

^e $\Gamma_p = 0.17$ eV, $\Gamma_\alpha = 220$ eV, $\Gamma_\gamma = 1.3$ eV: see (1980WI17) for this footnote and the ones below.

^f $\Gamma_\gamma = 0.71 \pm 0.17$ eV, $\Gamma_p = 0.019 \pm 0.009$ eV, $\Gamma_\alpha = 46 \pm 19$ eV, $\Gamma_{\text{total}} = 47 \pm 19$ eV.

^g $\Gamma_\gamma = 0.85 \pm 0.17$ eV, $\Gamma_p = 224 \pm 43$ eV, $\Gamma_\alpha = 3410 \pm 1220$ eV.

^h The strength of the transition to $^{19}\text{F}^*(7.262)$ [see Table 19.7] limits J to $\frac{1}{2}$ or $\frac{3}{2}$ for that state.

ⁱ The angular distribution of the γ -ray from this state to $^{19}\text{F}^*(5.62)$ and branching ratio arguments lead to $J = \frac{5}{2}$ for that state.