

Table 20.11 from (1959AJ76):
Resonances for ground state α -particles (α_0) in $^{19}\text{F}(p, \alpha_0)^{16}\text{O}$

E_p (keV)	Γ_{lab} (keV)	σ (mb)	t^f	θ_α^2 ^a (%)	J^π	$^{20}\text{Ne}^*$ (MeV)
400 ^g	100	0.04	0		1^-	13.253
400	100	0.005	0		0^+	13.253
650	200	0.2	∞		1^-	13.491
710 ^{a, g}	35	< 0.5		0.6	(1^-)	13.548
733	66	1.4	0.2	1.0	2^+	13.569
778	≈ 10	> 0.5	1.6	0.02	2^+	13.612
843	23	3.7	1.38	0.16	2^+ ^e	13.674
≈ 860	120	1.0	10.6	2.1	1^-	13.690
≈ 930	≈ 180	0.5		2.9	0^+	13.757
≈ 1080	≈ 200	3.4	5.1	3.4	1^-	13.899
1115	50	2.4	2.2	0.55	2^+	13.932
1160	≈ 70	5.1		1.1	0^+	13.975
1235 ^{a, b}	≈ 70	5.2	0.11	1.2	1^-	14.046
≈ 1250 ^a	≈ 150	0.26	0.6	2.7	2^+	14.061
1358 ^{a, b, c}	54	43 ^d	2.6	0.49	2^+	14.163
1640 ^b	< 115					14.431
1709 ^{b, c}	140	53	0		0^+	14.497
1853 ^{b, c}	132	76	0.4		1^-	14.633
2110 ^{b, c}	75	9			(4^+)	14.878
2310 ^{b, c}	80	29			(2^+)	15.067
(2530) ^b						(15.28)
2590 ^{b, c}	300	51 ± 10			(0^+)	15.33
2680 ^b	80					15.42
(2820)						(15.55)
2940						15.67
3120	170					15.84
3340	105					16.05
3680	(100)					16.37
3860						16.54
3980	135					16.65

Table 20.11 from (1959AJ76):
Resonances for ground state α -particles (α_0) in $^{19}\text{F}(\text{p}, \alpha_0)^{16}\text{O}$ (continued)

E_p (keV)	Γ_{lab} (keV)	σ (mb)	t^f	θ_α^2 ^a (%)	J^π	$^{20}\text{Ne}^*$ (MeV)
4130	100					16.80
4360	100					17.02
4460	95					17.11
4690	65					17.33
4900	90					17.53
4990	40					17.62

^a (1958IS10, 1958IS11): quoted cross sections in these references are resonant cross sections, derived from analysis of angular distributions.

^b (1958RA15).

^c (1957CL42).

^d See also (1958FR03).

^e $J = 0^+$ from $^{19}\text{F}(\text{p}, \text{p})^{19}\text{F}$; possibly $T = 1$ (1955BA94, 1955BA1C).

^f $t = \Gamma(J_c = 1)/\Gamma(J_c = 0)$.

^g (1958BR1K).