

Table 20.33 from (1978AJ03):
Resonances for 6 – 7 MeV γ -rays ($\alpha_2, \alpha_3, \alpha_4$) in $^{19}\text{F}(p, \alpha)^{16}\text{O}$

E_p^\dagger (keV)	Γ_{lab} (keV)	Γ_{α_2} (eV)	Γ_{α_3} (eV)	Γ_{α_4} (eV)	J^π	$^{20}\text{Ne}^*$ (MeV)
226.9 ± 3.4 ^{a,b}	1.0	1000	< 2.5	< 2.5	2^-	13.060
340.46 ± 0.04 ^{c,d}	2.4 ± 0.2	2800	16	75	1^+	13.1680
483.8 ± 0.3 ^e	0.9 ± 0.1	700	19	190	1^+	13.3038
872.11 ± 0.20 ^{f,g}	4.7 ± 0.2	2200	620	180	2^-	13.6729
935.4 ± 1.3 ^g	8.1 ± 0.5	2900	110	720	1^+	13.733
1347.7 ± 1.0 ^{h,m}	4.9 ± 0.7	2250	650	1200	2^-	14.124
1373.0 ± 1.0 ^{i,m}	12.4 ± 1.0	6650	700	300	2^-	14.148
1694 ± 1.7 ^{j,m}	35 ± 3					14.453
1949 ± 2.5 ^{j,m}	40 ± 10					14.695
2030 ± 3.0 ^{j,m}	120 ± 20					14.722
2320 ^k	85					15.05
2510	30					15.23
2630	90					15.34
2800	60					15.50
3020	30					15.71
3190	80					15.87
3490	40					16.16
3920	30					16.57
4000	110					16.64
4090 ^l					$0^+; T = 2$	16.73
4290	50					16.92
4490	30					17.11
4570	30					17.18
4710	30					17.32
4780	35					17.38
4990	20					17.58
5070	35					17.66
5200	70					17.78

- ^a (1959KU79; assignment to this reaction probable but not certain). See also (1959AJ76).
- ^b (1962KE03). $\Gamma_{\alpha_0} < 100$ eV.
- ^c (1955BA94, 1959BO14, 1964SE1A, 1974KRZE). $\Gamma_{\alpha_0} \lesssim 7 \times 10^{-6}$ eV (1974KRZE).
- ^d (1950AR1A, 1950BA1A, 1950CH1A). Values listed for E_p and Γ are those recommended by (1966MA60).
- ^e (1959BO14, 1959KU79, 1960HU11, 1963BE19). $\Gamma_{\alpha_0} < 25$ eV (1963BE19).
- ^f Values listed for E_p and Γ are those recommended by (1966MA60). Other values are $E_{\text{res}} = 872.4 \pm 0.4$ keV (1959BO14), 873.5 ± 0.7 keV (1960HU11), 872.3 ± 0.5 keV (1961BE13), 871.80 ± 0.25 keV (1962RY01), 872.5 ± 1.1 keV (1965AS07). See also (1974CA22).
- ^g (1965AS07).
- ^h Other reported resonance energies are $E_p = 1344.5 \pm 1.0$ keV (1959LI51), 1347.7 ± 1.0 keV (1960HU11), 1347.7 ± 1.8 keV (1965AS07).
- ⁱ Other reported resonance energies are $E_p = 1373.0 \pm 1.0$ keV (1959LI51), 1373.7 ± 1.2 keV (1960HU11), 1374.5 ± 1.8 keV (1965AS07).
- ^j (1952WI27, 1955HU1A).
- ^k (1952WI27); these values should be reduced by about 0.2%: see (1955KI28).
- ^l Resonance in α_2 yield: see text (1967KU06).
- ^m See also (1972HE39). The 1.69 MeV resonance may correspond to more than one state.
- [†] *Footnote added in proof.* A number of other resonances shown in Table 20.13 of (1959AJ76) are not listed here because questions arose about their identification. However, (1978GO1F) report the observation of resonances at $E_p = 597, 672, 835, 902, 1090, 1140, 1189$ and 1283 keV: see (1959AJ76). I am indebted to F.C. Young for his comments.