Table 20.21 from (1998TI06): Resonances in $^{16}O(\alpha, \gamma)^{20}Ne$ [a]

E_α (MeV ± keV)	Γ_{cm} (keV)	$\omega\gamma$ (eV) [b]	E_x (MeV ± keV)	$J^\pi; T$
1.116 ± 4	2.6×10^{-6} [c]	$(1.7 \pm 0.3) \times 10^{-3}$	5.627 ± 4	$3^-; 0$
1.3174 ± 2.2 [d]	$(2.8 \pm 0.3) \times 10^{-2}$ [c]	$(1.7 \pm 0.3) \times 10^{-2}$ [e]	5.7877 ± 3.0	$1^-; 0$
2.490 ± 8	20 ± 3 [c, f]	$(7.1 \pm 1.2) \times 10^{-2}$ [f]	6.726 ± 6	$0^+; 0$
3.0359 ± 2.3 [d]	8.2 ± 0.3 [e]		7.1563 ± 0.5	$3^-; 0$
3.069	4	$(4.4 \pm 0.8) \times 10^{-3}$	7.189 ± 3	$0^+; 0$
3.359	8	0.146 ± 0.019	7.421 ± 1	$2^+; 0$
3.868	2.4	0.343 ± 0.035	7.828 ± 3	$2^+; 0$
(4.647 ± 3)			(8.451 ± 3)	$(5^-; 0)$
4.969 ± 9	2.1 ± 0.8	0.21 ± 0.05	8.708 ± 7	$1^-; 0$
5.05	< 3	1.35 ± 0.15	8.776 ± 4	$6^+; 0$
5.364	3.2	3.05 ± 0.38	9.024 ± 3	$4^+; 0$
5.477 ± 4	< 4	0.18 ± 0.02	9.114 ± 3	$3^-; 0$
5.94 ± 30	29 ± 15	1.3 ± 0.5	9.48 ± 30	$2^+; 0$
6.61 ± 30	155 ± 30	8 ± 3	10.02 ± 30	$(4^+); 0$
6.924 ± 7 [g]	≤ 1	19.5 ± 1.5 [h]	10.271 ± 7 [i]	$2^+; 1$
7.948 ± 4	< 1	30.2 ± 3.5	11.090 ± 3	$4^+; 1$
8.180 ± 5 [j]	< 1	2.06 ± 0.25 [k]	11.276 ± 4	$1^-; 1$
8.535 ± 6	1.3 ± 0.8	0.41 ± 0.05	11.559 ± 6	$0^+; 0$ [l]
8.994 ± 8	< 1	0.23 ± 0.05 [m]	11.926 ± 6	$4^+; 0$
9.02		0.131 ± 0.002	11.950 ± 4	$8^+; 0$
(9.05 ± 50)	< 40		(11.97)	
(9.15 ± 50)	< 40		(12.05)	
9.362 ± 5	< 1	1.41 ± 0.23	12.221 ± 4	$2^+; 1$
9.406 ± 4	< 1	6.6 ± 0.8 [j]	12.256 ± 3	$3^-; 1$
9.57 ± 10	33 ± 4	1.94 ± 0.15	12.39	$3^-; (1)$
9.70 ± 30	≤ 10	0.17 ± 0.05	12.49	

[a] For complete references see Tables 20.22 in (1978AJ03) and 20.20 in (1983AJ01). See also Table 20.22 here.
[b] $\omega\gamma = (2J+1)\Gamma_\alpha\Gamma_\gamma/\Gamma$.
[c] This is also Γ_α.
[d] The strength of the γ-decay of ^{20}Ne*(7.16) to ^{20}Ne*(5.79) (see Table 20.18) is strong evidence that these two states are members of the $K^\pi = 0^-$ band.
[e] Best value including the recent work by (1987HA24).
[f] (1987HA24).
[g] See also (1984RO04).
[h] Other values are $\omega\gamma = 19.2 \pm 1.9$ eV; $\Gamma_\alpha = 116 \pm 20$ eV; $\Gamma_\gamma = 4.26 \pm 0.23$ eV: see (1983AJ01).
[i] The measurements of the decay of this state lead to $E_x = 4247.9 \pm 1.3$, 4966.0 ± 1.9, 5621.0 ± 3.5, 7423.1 ± 3.0, 7828.1 ± 3.8 and 8776.7 ± 2.3 keV.
[j] See also Table 20.20 in (1983AJ01).
[k] The γ-decay is partly (see Table 20.18) to a state at $E_x = 9318 \pm 2$ keV. The strength of this transition and the subsequent decay to ^{20}Ne*(1.63) (and not to the ground state) favor 2^- for ^{20}Ne*(9.32). The other M1 transition $[11.27 \rightarrow 8.85]$ is also strong suggesting similar structures for ^{20}Ne*(8.85, 9.32) (1980FI01).
[l] Also observed as a resonance in the yield of 6.13 MeV γ-rays with $(2J+1)\Gamma_{\alpha_0}\Gamma_{\alpha_2}/\Gamma = 5.2 \pm 0.9$ eV (1980FI01).
[m] From (α, α_0): see (1984RI07).