^{17}O(e,e′) 1977No06,1986Ma48

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. G. Sheu, J. H. Kelley, J. Purcell	ENSDF	5-Aug-2021

1970Si02: The elastic-scattering cross sections for ^{17}O were measured at E_e=94-121 MeV with electron scattering angles θ=45°−140° at the Saskatchewan Accelerator Laboratory with a gas target system. RMS charge radius ratio of ^{17}O and ^{16}O, R_{17}/R_{16}=0.995 *6* in both $\beta\alpha$ (Born approximation) and DWA (distorted wave approcimation) calculations where $R_{16}(\beta\alpha)$=2.712 fm *22* and R_{16}(DWA)=2.674 fm *22*.

1975Ki15: Electron beams at E=84-122 MeV bombarded a 96% ^{17}O enriched gas target at the Saskatchewan Accelerator Laboratory with scattering angles θ=80°−145°. The range of momentum transfer was θ=0.6-1.1 fm^{-1} with the energy resolution, Δp/p≈0.2%. Coulomb form factors were measured and the B(E3) values for 12 odd-parity ^{17}O levels were deduced.

1977No06: An E=64.9, 83.3, 101.3, 113.6, 124.0 and 168.4 MeV electron beam impinged on the 96% enriched (^{16}O contaminant) ^{17}O gas target (≈11 atm pressure at room temperature) at the Saskatchewan Accelerator Laboratory. The scattered electrons were detected using a 45-channel array situated in the focal plane of a 127° double-focusing magnetic spectrmeter. A broad dipole resonance centered at E_x=22-23 MeV with strength extending down to 10-12 MeV was observed. A smaller resonance, with a form factor consistent with a C2 transition, was found between E_x=17.5 and 19.6 MeV.

1978Ki01: Cross sections were measured for electron elastic and inelastic scattering from ^{17}O for momentum transfer up to 1.2 fm^{-1} at the Saskatchewan electron scattering facility. E=62.5-125 MeV electron beams impinged on a 96% ^{17}O enriched gas target (≈10 atm pressure) with the scattering angles θ=79°−145°. Overall momentum resolution was ≈0.2%. The^{17}O charge radius was reported to be $\langle r^2\rangle_{1/2}$=2.710 fm *15* based on $\langle r^2_{17}\rangle^{1/2}/\langle r^2_{16}\rangle^{1/2}$=1.0015 *25*. Form factors for ^{17}O states E_x<9 MeV were also presented along with ground state transition strengths.

1979Hy01: Scattered-electron spectra were measured at θ=90°, 160° and 180° using three targets, 20-40 Mg/cm^2, 20-85% enriched BeO foils at the MIT-Bates Linear Accelerator. The transverse form factor of the $^{17}O_{g.s.}$ in the effective momentum-transfer range 0.55≤q_ε≤2.8 fm $^{-1}$ was determined. Considerable deviation from the single-particle prediction was found; in particular, a sizable suppression of the M3 multipole and an enhancement of the high-q side of the M5 multipole.

See also (1983Bu08).

1979Mi09: The charge form-factors of ^{17,18}O were measured at E_e=70-370 MeV and at θ=90° using 20-48 mg/cm^2 BeO foil targets (67% ^{18}O, 19% ^{17}O, 14% ^{16}O) at the MIT/Bates Linear Accelerator Laboratory. The range in momentum transfer was q=0.5-2.6 fm^{-1}. The charge-distribution differences between ^{17,18}O and ^{16}O were extracted and $\langle r^2_{17}\rangle^{1/2}$-$\langle r^2_{16}\rangle^{1/2}$=−0.008 fm *7* where $\langle r^2_{16}\rangle^{1/2}$=2.720 fm was reported.

1983Ra27: Six ^{17}O excited states at E_x=11-15.3 MeV (T=3/2) were populated in a high-resolution electron scattering experiment at Darmstadt. Electron beams of E_e=39-59 MeV bombarded a ^{17}O gas target filled to 7 bar (6.0% ^{16}O, 89.6% ^{17}O and 4.4% ^{18}O) with thickness of 3.5-8.0 mg/cm^2; measurements covered the momentum transfer q=0.32-0.52 fm^{-1}. Five transitions at E_x=11.08, 12.47, 12.99, 14.23 and 14.75 MeV:9/2$^-$ are dominantly M2 with transition strengths B(M2,k)↑=6.1 19, 6 *3*, 6 *3*, 46 *7* and 27 *9* $\mu_N^2\cdot$fm^2, respectively. The transition to ^{17}O*(15.10 MeV:(3/2)$^+$) is M1 with B(M1,k)↑=0.14 *4* μ_N^2.

1986Ma48: Inelastic scattering was studied at E_e=194.3, 209.2, 248.4, and 268.8 MeV (at θ=90′) (1.4, 1.5, 1.7 and 1.9 fm^{-1} momentum transfer) with the bombardment of a 29.1 mg/cm^2 enriched BeO foil at the MIT-Bates high-resolution energy-loss spectrometer facility. The energy resolution ranged from 20 to 30 keV. Measurements were also made at E_e=179.5 MeV (at θ=159.8°), which corresponds to a 1.7 fm^{-1} momentum transfer, with a poorer energy resolution of ≈70 keV. The form factors for ^{17}O*(15.78,17.06,20.14,20.70 MeV) were measured. See also (1987Mi25: comment) and (1987Ma40: reply).

1987Ma52: Electron-scattering measurements for ^{17}O were performed at the MIT-Bates Linear Accelerator Center with E_e≈100-269 MeV. Enriched BeO foils target were used (85% ^{17}O, 11% ^{16}O and 4% ^{18}O) with average thickness 29.1 mg/cm^2 and 28.7 mg/cm^2 for measurements of scattered electrons spectra at θ=90°, 160° and θ=140°, respectively. The energy resolution FWHM for the measurements ranged from 20-50 keV at 90°, from 30-60 keV at 140°, and from 70-80 keV at 160°.

Excited states of ^{17}O up to 15 MeV have been observed. A new narrow state, E_x=12.22 MeV *2* (Γ≤20 keV) was observed and the states E_x=8.90 MeV *2* and 14.72 MeV *2* were confirmed. Levels at E_x=5.87 MeV(3/2$^+$). 6.86 MeV(5/2$^+$), 7.58 MeV(7/2$^+$), and 8.47 MeV(9/2$^+$) were suggested as a predominabtly 5p-4h members (K^π=3/2$^+$) rotational band.

1988Ka08: The experiment was performed at the Bates Linear Accelerator Center/MIT with the high-resolution energy-loss spectrometer system (ELSSY) using 50-110 mg/cm^2 BeO targets (51.3% ^{17}O, 31.6% ^{18}O and 17.1% ^{16}O). The elastic magnetic form factor of ^{17}O was measured for effective momentum transfer 2.47≤q_{eff}≤3.65 fm^{-1}.

See also theoretical discussion on M4 transitions in (1987Mi25) and (1976AuZZ, 1978Ar04, 1980Bo04, 1982RaZX, 1985MaZX, 1986KaZZ, 1986MaZW, 1988Fu04,1988Ic01, 2007Do20, 2018Gu11, 2019Sa21: theory).

^{17}O(e,e′) 1977No06,1986Ma48 (continued)

Theory:

1982Co03: ^{17}O(e,e), E not given; calculated magnetic form factor; deduced three-body force, two-pion exchange effects.
1982Hi01: ^{17}O(e,e), E not given; calculated magnetic form factor; deduced $d_{5/2}$ neutron orbit radius, M3, M5 multipole quenching.
1982Mc01: ^{17}O(e,e), E not given; calculated magnetic form factor. Self-consistent method, effective operator, higher order terms.
1984Bl03: ^{17}O(e,e′), E not given; calculated magnetic form factor; deduced meson exchange, isobar, core polarization effects relative magnitude.
1984BlZW: ^{17}O(e,e), E not given; calculated form factors. Spin-isospin transitions, nucleon-hole, isobar-hole excitation, meson exchange.
1985KiZY: ^{17}O(e,e′), E not given; calculated charge, magnetic form factors.
1986Ki10: ^{17}O(e,e), E not given; calculated charge, magnetic form factor. Relativistic treatment.
1987Fu06: ^{17}O(e,e), E=175-500 MeV; calculated transverse form factors. Relativistic mean field theory.
1989Fu05: ^{17}O(e,e), E not given; calculated magnetic form factor. Relativistic Hartree approach.
1989Ga04: ^{17}O(e,e), E not given; calculated magnetic form factor.
1991Co12: ^{17}O(e,e), E not given; calculated magnetic form factor; deduced valence neutron radial wave function model dependence.
1992Go07: ^{17}O(e,e), E not given; calculated magnetic form factors; deduced core polarization role. Harmonic oscillator shell model, perturbation theory, Sussex interaction matrix elements.
1992Su02: ^{17}O(e,e), E not given; calculated magnetic form factors, Coulomb energy differences. Hartree-Fock, Wood-Saxon wave functions.
1992Zh07: ^{17}O(e,e), E not given; calculated magnetic form factor. Particle-hole, multi-particle multi-hole configurations mixing.
1994Am01: ^{17}O(pol. e,e), E not given; calculated magnetic and Coulomb form factors, response functions. Meson exchange effects, polarized target.
1994Mo19: ^{17}O(pol. e,e′), E not given; calculated response functions. Shell model wave functions, meson exchange effects, different target polarizations.
1995Pl02: ^{17}O(e,e), E not given; analyzed magnetic form factor data; deduced spin-isospin channel effective interaction suppression, Landau-Migdal constant momentum transfer dependence. Finite Fermi systems theory.
1996Ka52: ^{17}O(e,e), E not given; calculated transverse form factor. Coherent density fluctuation model based natural orbitals.
2003Ra09: ^{17}O(e,e′), E not given; calculated longitudinal Coulomb form factors, transition probabilities, core polarization effects, quadrupole moments. Modified surface delta interaction, comparison with data.
2003Ra30: ^{17}O(e,e), E not given; calculated electron scattering form factors, core polarization effects. Configuration mixing shell model.
2015Wa19: ^{17}O(e,e), q<4 fm^{-1}; calculated magnetic form factors in relativistic frame with single-nucleon wave functions generated using the relativistic mean field model. Comparison with experimental data.
2018Al08: ^{17}O(e,e),(e,e′), momentum transfer=0.0-3.0 fm^{-1}; calculated longitudinal and transverse form factors for several levels in ^{17}O. Shell model and Hartree-Fock mean field calculations with SLy4 and SkXcsb Skyrme interaction, Ho, and WS potentials. Comparison with experimental data. ^{17}O; calculated levels, J, π, rms radii using different single particle potentials, B(E2), B(E3) in the psdpn and zbme shell-model spaces.
2021He03: ^{17}O(e,e), E at momentum transfer θ<4 fm_1; calculated magnetic form factors for backwards elastic scattering.

For (1975Ki15, 1978Ki01, 1987Ma52), E_x are from (1971Aj02). J are from (1982Aj01) except where noted.

^{17}O Levels

E(level)	J$^{\pi}$[b]	Γ	Comments
0.87×10^{3} [#a]	1/2^{+}		See B(E2)↑=2.18 e^{2}fm^4 *16* (1987Ma52), and B(C2)↑=2.10 e^{2}fm^4 *1* (1978Ki01): deduced from the lifetime measurement of (1971Aj02).
3.06×10^{3} [†#a]	1/2^{-}	<10 keV	Γ: (1987Ma52). See B(E3)↑=14.1 e^{2}fm^6 *39* (1987Ma52), B(E3)↑=31 e^{2}fm^6 *6* (1975Ki15), and B(C3)↑=31 e^{2}fm^6 *6* (1978Ki01).
3.84×10^{3} [†#a]	5/2^{-}	<10 keV	Γ: (1987Ma52). See B(M2)↑=5×10^{-2} e^{2}fm^4 *2* (1978Ki01); B(E3)↑=93.0 e^{2}fm^6 *83* (1987Ma52), B(E3)↑=153 e^{2}fm^6 *6* (1975Ki15), and B(C3)↑=153 e^{2}fm^6 *6* (1978Ki01).

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^{17}O(e,e′) 1977No06,1986Ma48 (continued)

^{17}O Levels (continued)

E(level)	J$^{\pi}$[b]	Γ	Comments
4.55×10^3 [†#a]	3/2$^-$		See B(M2)↑=5.4×10^{-2} e^{2}fm^4 *21* (1978Ki01); B(E3)↑=20 e^{2}fm^6 12 (1987Ma52), B(E3)↑=98 e^{2}fm^6 *8* (1975Ki15), and B(C3)↑=98 e^{2}fm^6 *8* (1978Ki01).
5.08×10^3 [#a]	3/2$^+$		See B(E2)↑=2.05 e^{2}fm^4 *20* (1987Ma52), and B(C2)↑=2.5 e^{2}fm^4 *7* (1978Ki01).
5.22×10^3 [†#a]	9/2$^-$	<10 keV	Γ: (1987Ma52). J$^{\pi}$: From (1987Ma52). See B(M2)↑<4×10^{-2} e^{2}fm^4 (1978Ki01); B(E3)↑=319 e^{2}fm^6 *13* 1987Ma52), B(E3)↑=360 e^{2}fm^6 *11* (1975Ki15), and B(C3)↑=360 e^{2}fm^6 *11* (1978Ki01).
5.38×10^3 [†#a]	3/2$^-$		See B(M2)↑=6×10^{-2} e^{2}fm^4 *3* (1978Ki01); B(E3)↑=47.9 e^{2}fm^6 *43* (1987Ma52), B(E3)↑=45 e^{2}fm^6 *12* (1975Ki15), and B(C3)↑=45 e^{2}fm^6 *12* (1978Ki01).
5.70×10^3 [†#a]	7/2$^-$	<10 keV	Γ: (1987Ma52). See B(M2)↑=0.3 e^{2}fm^4 *2* (1978Ki01); B(E3)↑=97.0 e^{2}fm^6 *65* (1987Ma52), B(E3)↑=270 e^{2}fm^6 *32* (1975Ki15), and B(C3)↑=270 e^{2}fm^6 *32* (1978Ki01).
5.73×10^3 [a]	(5/2$^-$)	<10 keV	J$^{\pi}$,Γ: (1987Ma52). See B(E3)↑=134 e^{2}fm^6 *21* (1987Ma52).
5.87×10^3 [a]	3/2$^+$	<10 keV	Γ: (1987Ma52). See B(E2)↑=2.13 e^{2}fm^4 *22* (1987Ma52).
5.94×10^3 [†#a]	1/2$^-$		See B(E3)↑=25.3 e^{2}fm^6 *51* (1987Ma52), B(E3)↑=17 e^{2}fm^6 *10* (1975Ki15), and B(C3)↑=17 e^{2}fm^6 *10* (1978Ki01).
6.36×10^3 [#a]	1/2$^+$		See B(E2)↑=1.43 e^{2}fm^4 *21* (1987Ma52), and B(C2)↑=2.1 e^{2}fm^4 *13* (1978Ki01).
6859 [†#a]	5/2$^+$	<10 keV	Γ: (1987Ma52). Unresolved with 6970 (1978Ki01). J$^{\pi}$: From (1987Ma52). See B(E2)↑=0.83 e^{2}fm^4 *25* and J$^{\pi}$=5/2$^+$ (1987Ma52). Earlier analysis, based in J$^{\pi}$=(1/2$^-$) found B(E3)↑=(147 e^{2}fm^6 *34*) (1975Ki15), and B(C3)↑=147 e^{2}fm^6 *34* (1978Ki01).
6970 [#a]	(7/2$^-$)	<10 keV	J$^{\pi}$,Γ: (1987Ma52). Unresolved with 6859 (1978Ki01). See B(E3)↑=75.5 e^{2}fm^6 *56* and J$^{\pi}$=(7/2$^-$) (1987Ma52). Earlier analysis based in J$^{\pi}$=(5/2$^+$) from (1978Ki01) found B(C2)↑=1.9 e^{2}fm^4 *10* (1978Ki01).
7.17×10^3 [†a]	5/2$^-$	<10 keV	Γ: (1987Ma52). See B(E3)↑=11.1 e^{2}fm^6 *29* (1987Ma52), and B(E3)↑=22 e^{2}fm^6 *25* (1975Ki15).
7.20×10^3 [a]	3/2$^+$		See B(E2)↑=1.79 e^{2}fm^4 *25* (1987Ma52).
7378 [#a]	5/2$^+$	<10 keV	Γ: (1987Ma52). Unresolved with 7379 (1978Ki01,1987Ma52). See B(E2)↑<0.8 e^{2}fm^4 (1987Ma52), B(C2)↑=3.6 e^{2}fm^4 *10* (1987Ki01), and B(C0)↑=5.5 e^2 *10* (1987Ki01).
7379 [†#a]	5/2$^-$	<10 keV	Γ: (1987Ma52). Unresolved with 7378 (1978Ki01,1987Ma52). See B(E3)↑=36.9 e^{2}fm^6 *24* (1987Ma52), B(E3)↑=47 e^{2}fm^6 *38* (1975Ki15), and B(C3)↑=47 e^{2}fm^6 *38* (1978Ki01).
7.56×10^3 [a]	3/2$^-$		See B(E3)↑<15 e^{2}fm^6 (1987Ma52).
7.57×10^3 [†#a]	7/2$^+$	<10 keV	J$^{\pi}$,Γ: (1987Ma52). See B(E2)↑=4.20 e^{2}fm^4 *51* and J$^{\pi}$=7/2$^+$ (1987Ma52), Earlier analysis using J$^{\pi}$=7/2$^-$ found Eβ(C1)↑=7.8×10^{-2} e^{2}fm^2 *20* (1978Ki01), B(E3)↑=109 e^{2}fm^6 *26* (1975Ki15), and B(C3)↑=109 e^{2}fm^6 *26* (1978Ki01).
7.69×10^3 [a]	7/2$^-$		See B(E3)↑=33.9 e^{2}fm^6 *49* (1987Ma52).
7.76×10^3 [†#a]	(11/2$^-$)	<10 keV	Γ: (1987Ma52). See B(E3)↑=287 e^2 fm^6 *14* and J$^{\pi}$=11/2$^-$ (1987Ma52), B(E3)↑=369 e^{2}fm^6 *15* (1975Ki15), and B(C3)↑=369 e^{2}fm^6 *15* (1978Ki01).
7.96×10^3 [a]	1/2$^+$		See B(E2)↑=2.00 e^{2}fm^4 *38* (1987Ma52).
8.20×10^3 [a]	3/2$^-$		See B(E3)↑=11.0 e^{2}fm^6 *13* (1987Ma52).
8347 [#a]	1/2$^+$		Unresolved with 8402, 8467, 8502 (1978Ki01).

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^{17}O(e,e′) 1977No06,1986Ma48 (continued)

^{17}O Levels (continued)

E(level)	J$^{\pi}$[b]	Γ	Comments
			See B(E2)↑=0.48 e^{2}fm^4 *7* (1987Ma52), B(C0)↑=7.6 e^2 *14* (1978Ki01), and B(C2)↑=8.3 e^{2}fm^4 *26* (1978Ki01).
8402[#a]	5/2$^+$	<10 keV	Γ: (1987Ma52). Unresolved with 8347, 8467, 8502 (1978Ki01). See B(E2)↑=2.10 e^{2}fm^4 *34* (1987Ma52), B(C0)↑=7.6 e^2 *14* (1978Ki01), and B(C2)↑=8.3 e^{2}fm^4 *26* (1978Ki01).
8467[#a]	9/2$^+$	<10 keV	J$^{\pi}$,Γ: (1987Ma52). Unresolved with 8347, 8402, 8502 (1978Ki01). See B(E2)↑=10.1 e^{2}fm^4 12 and J$^{\pi}$=9/2$^+$ (1987Ma52). Earlier analysis using J$^{\pi}$=7/2$^+$ found B(C0)↑=7.6 e^2 *14* (1978Ki01), and B(C2)↑=8.3 e^{2}fm^4 *26* (1978Ki01).
8502[†#a]	5/2$^-$	<10 keV	Γ: (1987Ma52). B(E3)↑ negligible (1975Ki15). Unresolved with 8347, 8402, 8467 (1978Ki01). See B(E3)↑<7 e^2 fm^6 (1987Ma52), B(C0)↑=7.6 e^2 *14* (1978Ki01), and B(C2)↑=8.3 e^{2}fm^4 *26* (1978Ki01).
8.69×10^3[a]	3/2$^-$		See B(E3)↑=5.2 e^{2}fm^6 *12* (1987Ma52).
8.90×10^3[a] *2*	(9/2$^-$)	≤20 keV	E(level),J$^{\pi}$,Γ: (1987Ma52). E(level): Probably is the level reported in (1965Ba32: 8.884-MeV; Γ=8 keV). See B(E3)↑=13.3 e^{2}fm^6 *23* (1987Ma52).
8.97×10^3[a]	7/2$^-$		See B(E3)↑=36.3 e^{2}fm^6 *41* (1987Ma52).
9.15×10^3[a]	(1/2$^-$,9/2$^-$)	<10 keV	Γ: (1987Ma52). 1987Ma52: Unresolve doublet. See B(E3)<2.3 e^{2}fm^6 (1987Ma52).
9.18×10^3[a]	7/2$^-$	<10 keV	Γ: (1987Ma52). Unresolved with 9190 (1987Ma52). See B(E3)↑=2.4 e^{2}fm^6 *10* (1987Ma52).
9.19×10^3[a]	5/2$^+$	<10 keV	Γ: (1987Ma52). Unresolved with 9180 (1987Ma52). See B(E2)↑=0.48 e^{2}fm^4 *16* (1987Ma52).
9.42×10^3[a]	3/2$^-$		See B(E3)↑=17.6 e^{2}fm^6 *48* (1987Ma52).
9.49×10^3[a]	5/2$^-$		See B(E3)↑=6.5 e^{2}fm^6 *10* (1987Ma52).
9.71×10^3[a]	7/2$^+$		
9.86×10^3[a]	(5/2$^-$)	<10 keV	Γ: (1987Ma52). Unresolved with 9880 (1987Ma52).
9.88×10^3[a]	(1/2$^-$)		Unresolved with 9860 (1987Ma52).
11.04×10^3[a]			Unresolved with 11080 (1987Ma52).
11.08×10^3[@a]	1/2$^-$	<10 keV	T=3/2 (1983Ra27,1987Ma52) Γ: (1987Ma52). Unresolved with 11040 (1987Ma52). See B(M2)↑=6.1 μ_N^2fm^4 *19* (1983Ra27).
11.71×10^3[‡] *5*			Γ: narrow. E(level): (1977No06).
11.95×10^3[‡] *5*		≈250 keV	E(level),Γ: (1977No06).
12.22×10^3[a] *2*		≤20 keV	E(level),Γ: (1987Ma52).
12.47×10^3[@a]	3/2$^-$	<10 keV	T=3/2 (1983Ra27,1987Ma52) Γ: (1987Ma52). See B(M2)↑=6 μ_N^2 fm^4 *3* (1983Ra27), and if pure E1, B(E1)↑=1.0×10^{-2} e^{2}fm^2 *4* (1983Ra27).
12.66×10^3[‡] *5*		≈90 keV	E(level),Γ: (1977No06).
12.94×10^3[a]	1/2$^+$	<10 keV	T=3/2 (1987Ma52) E(level): See also the triplet 12.96×10^3 keV *5* with Γ≈200 keV (1977No06).

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^{17}O(e,e′) 1977No06,1986Ma48 (continued)

^{17}O Levels (continued)

E(level)	J$^{\pi}$ [b]	Γ	Comments
			Γ: (1987Ma52). Unresolved with 12990 (1987Ma52).
12.99×10^3 [@a]	5/2$^-$	<10 keV	T=3/2 (1983Ra27,1987Ma52) Γ: (1987Ma52). Unresolved with 12940 (1987Ma52). See B(M2)↑=6 μ_N^2fm^4 *3* (1983Ra27), and if pure E1, B(E1)↑=0.4×10^{-2} e^{2}fm^2 *2* (1983Ra27).
13.58×10^3 [a] *2*	(11/2$^-$)	68 keV *19*	See also E$_x$=13.56 MeV *5* and Γ≈150 keV (1977No06). E(level),Γ: (1987Ma52).
14.14×10^3 [‡] *10*		≈100 keV	E(level),Γ: (1977No06).
14.23×10^3 [@&a]	7/2$^-$		T=3/2 (1983Ra27,1986Ma48,1987Ma52) J$^{\pi}$: (1986Ma48,1987Ma52). See B(M2)↑=46 μ_N^2fm^4 *7* (1983Ra27), and B(E1)↑<0.01 e^{2}fm^2, from the estimate of longitudinal component (1983Ra27).
14.45×10^3 [a]			(1987Ma52).
14.72×10^3 [&a] *2*	9/2$^-$	35 keV *11*	T=3/2 (1983Ra27) E(level),J$^{\pi}$,Γ: (1987Ma52). E(level): See also E$_x$=14750 keV; J$^{\pi}$=9/2$^-$ (1983Ra27). See B(M2)↑=27 μ_N^2 fm^4 *10* (1983Ra27).
14.76×10^3 [‡] *10*		>300 keV	E(level),Γ: (1977No06).
15.10×10^3 [@]	(3/2$^+$,5/2$^+$,7/2$^+$)		T=3/2 (1983Ra27) See B(M2)↑=0.14 μ_N^2fm^2 *4* (1983Ra27). Γ: Narrow.
15.24×10^3 [‡] *10*		≈200 keV	E(level),Γ: (1977No06).
15780 [&] *20*	(13/2$^-$)	<30 keV	T=(3/2) (1986Ma48,1987Ma40) E(level),Γ: (1986Ma48); J$^{\pi}$: (1986Ma48,1987Ma40). See B(M4)↑=177 e^{2}fm^8 *17* (1986Ma48). J$^{\pi}$: From (1987Mi25): See comments, replies and discussion in (1987Mi25) and (1986Ma48, 1987Ma40). Initially identified in ^{17}O(e,e′) as (9/2$^-$).
16500 [&] *20*		≤20 keV	E(level),Γ: (1986Ma48).
16.52×10^3 [‡] *5*		≈300 keV	E(level),Γ: (1977No06).
17060 [&] *20*	(11/2$^-$)	<20 keV	J$^{\pi}$: From (1987Mi25): See comments, replies and discussion in (1987Mi25) and (1986Ma48, 1987Ma40). Initially identified in ^{17}O(e,e′) as (7/2$^-$). Also see (7/2$^-$) in ^{16}O(p,π+) and (11/2$^-$) in ^{13}C(^{6}Li,d). T=(1/2) from (1987Mi25), see comments in (1986Ma48, 1987Ma40, 1987Mi25). Initially reported as T=(3/2) (1986Ma48,1987Ma40). E(level),Γ: (1986Ma48); See also E$_x$=17090 keV *50*; Γ: narrow (1977No06). See B(M4)↑=76 e^{2}fm^8 *6* (1986Ma48).
17.5×10^3? [‡]			E(level): broad: 17.5-19.6 MeV (1977No06: C2).
17920 [&] *20*		98 keV *16*	E(level),Γ: (1986Ma48).
18720 [&] *20*		87 keV *33*	E(level),Γ: (1986Ma48).
18830 [&] *20*		≤20 keV	E(level),Γ: (1986Ma48).
19850 [&] *40*		530 keV *150*	E(level),Γ: (1986Ma48).
20140 [&] *20*	(11/2$^-$)	31 keV *5*	T=1/2 (1986Ma48,1987Ma40) E(level),Γ: (1986Ma48); J$^{\pi}$: (1986Ma48,1987Ma40). See B(M4)↑=349 e^{2}fm^8 *18* (1986Ma48). J$^{\pi}$: From (1987Mi25): See comments, replies and discussion in (1987Mi25) and (1986Ma48, 1987Ma40). Initially identified as

Continued on next page (footnotes at end of table)

^{17}O(e,e′) 1977No06,1986Ma48 (continued)

^{17}O Levels (continued)

E(level)	J$^{\pi}$[b]	Γ	Comments
			13/2$^-$ but later assigned 11/2$^-$.
20.5×10^3 [‡]			E(level): (1977No06).
20700[&] *20*	(9/2$^-$)	<20 keV	T=(3/2) (1986Ma48,1987Ma40) E(level),Γ: (1986Ma48); J$^{\pi}$: (1986Ma48,1987Ma40). See B(M4)↑=177 e^{2}fm^8 *10* (1986Ma48). J$^{\pi}$: From (1987Mi25): See comments, replies and discussion in (1987Mi25) and (1986Ma48, 1987Ma40). Initially identified as 11/2$^-$ but later assigned 9/2$^-$.
22.0×10^3 ? [‡]			E(level): doublet (1977No06: C1).
23.0×10^3 [‡]			E(level): (1977No06: C1).

[†] (1975Ki15).
[‡] (1977No06).
[#] (1978Ki01).
[@] (1983Ra27).
[&] (1986Ma48).
[a] (1987Ma52).
[b] See discussion on 5p-4h, 3p-2h and 1p-0h configuration mixing for positive parity states and 4p-3h and 2p-1h mixing for negative parity states.