(HI,xnγ) 2004Ek01,2007De14,2007Ks01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, John Cameron and Balraj Singh	NDS 112,2715 (2011)	20-Oct-2011

2004Ek01,2005Ek01: ^{16}O(^{24}Mg,pαγ) E=60 MeV ^{24}Mg beam produced at the Legnaro National Laboratory. Target: a 0.5 mg/cm^2 enriched ^{40}Ca target with a 7 mg/cm^2 tantalum backing and with oxygen inside. Detectors: the GASP array of Ge detectors, the ISIS charged- particle array of 40 ΔE-E Si telescopes and a neutron detector in place of six of 80 BGO detectors. Measured Eγ, Iγ, γγ, γ(particle)(n) coin. Deduced levels, J^π from measured asymmetry ratios R(γ(θ)).

2007De14: ^{24}Mg(^{16}O,pαγ) E=70 MeV ^{16}O beam produced from the XTU-Tandem accelerator at Legnaro National Laboratory. Target: a 400 μg/cm^2 self-supporting target of ^{24}Mg. Detectors: the GASP spectrometer of 40 Compton-suppressed HPGe detectors and a multiplicity filter of 80 BGO scintillators, in conjunction with the 4π charged- particle detector ISIS and a neutron ring of 6 BC501A scintillators. Measured Eγ, Iγ, γγ, γ(θ), γp-coin. Deduced high-spin levels, J^π from the ADO ratios.

2007Ks01: ^{12}C(^{28}Si,pαγ), two different experiments: one at E=70 MeV at BARC-TIFR facility and the second at E=88 MeV at NSC facility, both using a target of about 50 μg/cm^2 ^{12}C on a about 10.5 mg/cm^2 gold backing and almost identical (INGA) arrays eight Compton-suppressed 'Clover' HPGe detectors. Measured Eγ, Iγ, γγ, γγ(θ)(DCO) and γγ(lin pol). Deduced levels, J^π, mixing ratios, half-lives using Doppler Shift Attenuation Method (DSAM). Comparisons with large-scale shell-model calculations.

1974Va13: ^{24}Mg(^{16}O,pαγ) E=36 MeV ^{16}O beam of 20-40 nA produced at Fysisch laboratorium in the Netherlands. Targets of 100 and 300 μg/cm^2 Mg on 1 μm Ni backings. A 125 cm^3 Ge(Li) detector for detecting γ-rays. Measured Eγ, Iγ. Deduced half life for the level of 3.16 MeV using Recoil Distance Method (RDM).

1976Ke02: ^{25}Mg(^{16}O,pnαγ) E=43 and 50 MeV ^{16}O beam produced at the Institut fur Kernphysik in Germany. A 150 μg/cm^2 enriched enriched ^{25}Mg target (99.2%) evaporated onto a Au backing. Two true coaxial Ge(Li) detectors of 45 cm^3 for detecting γ-rays. Measured Eγ, Iγ. Deduced $T_{1/2}$ for the level of 3162 keV.

1976Wa11: (HI,xnγ) various reactions, E=20-60 MeV ^{14}N beam produced at the Brookhaven National Laboratory. ^{24}Mg, ^{26}Mg, ^{27}Al targets. Ge(Li) detectors. Measured Eγ, Iγ, γ(θ), γγ-coin. Deduced levels, J^π, half-life using Recoil Distance Method (RDM) for ^{35}Cl and other nuclei.

1976Va24: ^{24}Mg(^{16}O,pαγ) E=38 and 45 MeV ^{16}O beam of 40-100 nA produced at Fysisch laboratorium in the Netherlands. Targets of 300 μg/cm^2 ^{24}Mg enriched to 99.94% evaporated onto 30 μm Au backings. A three-crystal Ge(Li) detector for detecting γ-rays. Measured Eγ, Iγ, γ(θ), γγ-coin. Deduced levels, mixing ratios.

1982Ra25: ^{24}Mg(^{16}O,pαγ) E=40-51 MeV ^{16}O beam produced at the Argonne National Laboratory. A target of 50 μg/cm^2 layer of ^{24}Mg (>99.9%) evaporated onto a 50 μg Au backing. A Ge(Li) detector for detecting γ-rays. Measured σ(E). Deduced levels.

1982Le04: ^{28}Si(^{12}C,X) ^{12}C (E_{cm}=23-35 MeV) beam produced from the University of Washington FN Tandem Van de Graaff. A target of 100 μg/cm^2 ^{28}Si on a thick tantalum backing. A Ge(Li) detector. Measured σ(E), Eγ. Deduced levels.

1991Ja11: ^{27}Al(^{16}O,2αγ) E=60 MeV ^{16}O beam produced from the 14 UD-Pelletron at TIFR. A target of 350 μg/cm^2 Al evaporated onto a 1.8 mg/cm^2 thick Ta backing. Ge(Li) detector. Measured Eγ. Deduced $T_{1/2}$ for the levels of 3162 and 8844 keV.

Others: 1979Ta03, 1985Kr21, 1986Br26, 1989De02, 1991Ra10, 2001Pi10.

^{35}Cl Levels

E(level)[†]	J^π[&]	$T_{1/2}$[ab]	E(level)[†]	J^π[&]	$T_{1/2}$[ab]
0	3/2+		6119.2?[@] *13*	(11/2−)	
1219.0 *10*			6380.8[‡] *8*		
1763.04 *9*	5/2+		7873.3[g] *3*	13/2+	
2645.79 *10*	7/2+	<0.90 ps	8319.8[#f] *5*	15/2−	<0.07 ps
3002.5 *7*	5/2+		8324.4?[@] *13*	(13/2−)	<0.07 ps
3162.83 *9*	7/2−	30.9[c] ps *6*	8481.4?[@] *11*	(15/2−)	<0.07 ps
3942.6[@] *6*	9/2+	<0.35 ps	8487.4[#] *5*	15/2−	
4347.85 *16*	9/2−	0.91 ps *19*	8558.3?[@] *14*	(13/2−)	<0.14 ps
5407.15[f] *18*	11/2−	<0.76 ps	8788.7[g] *5*	15/2+	<0.28 ps
5926.9 *3*	11/2−	<0.28 ps	8844.6[g] *4*	17/2+	5.9[e] ps *11*
6087.41 *20*	13/2−	5.3[d] ps *10*	10181.1[f] *4*	19/2−	<0.14 ps

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(HI,xnγ) 2004Ek01,2007De14,2007Ks01 (continued)

^{35}Cl Levels (continued)

E(level)[†]	Jπ[&]	$T_{1/2}$[ab]
10222.5 *11*	17/2⁻	<0.28 ps
10859.1[g] *8*	19/2⁺	<0.28 ps
11459.1[#g] *6*	21/2⁺	
12572.2[#f] *6*	23/2⁻	

[†] From least-squares fit to Eγ′s.
[‡] From 1976Va24.
[#] From 2007De14.
[@] From 2007Ks01.
[&] From measured asymmetry ratios R(γ(θ)) in 2004Ek01 and/or the transition multipolarities deduced from measured ADO ratios in 2007De14 and/or measured DCO ratios in 2007Ks01.
[a] From measurements using Recoil Distance Method (RDM) or Doppler Shift Attenuation Method (DSAM).
[b] Mostly from 2007Ks01, unless otherwise noted.
[c] Weighted average of 29.1 ps *14* (1974Va13), 28.9 ps *14* (1976Ke02), 29.0 ps *13* (1976Wa11) and 31.4 ps *4* (1991Ja11).
[d] From 1976Wa11.
[e] Weighted average of 5.5 ps *14* (1976Wa11) and 6.1 ps *11* (1991Ja11).
[f] Band(A): Band based on $f_{7/2}$ orbital. Band from 2007De14.
[g] Band(B): Band based on 13/2⁺. Band from 2007De14.

γ(^{35}Cl)

DCO values are for angles: 90° and 120° for E=70 MeV experiment at TIFR; and 80° and 136° for E=88 MeV experiment at NSC (2007Ks01) Expected ratios are ≈1 for ΔJ=2, quadrupole and ≈0.5 for ΔJ=1, dipole, when gated by ΔJ=2, quadrupole transition. Ratios are ≈2 for ΔJ=2, quadrupole and ≈1 for ΔJ=1, dipole, when gated on ΔJ=1, dipole transition.

Δ_{IPDCO} corresponds to integrated polarization asymmetry measurement at E=70 MeV at TIFR facility. The values are from e-mail reply of Dec 1, 2006 from one of the authors (M. Saha Sarkar) of 2007Ks01.

R_{ADO}=[Iγ(34°)+Iγ(146°)]/2Iγ(90°). Expected values for this geometry are: ≈1.3 for ΔJ=2, quadrupole and ≈0.8 for ΔJ=1, dipole transitions (2007De14).

R(γ(θ))=Asymmetry ratio measured at 35° and 81° with respect to the beam axis. Value of ≈1.2 for stretched quadrupole and ≈0.7 for stretched dipole (ΔJ=1) (2004Ek01,2005Ek01).

γ(^{35}Cl) from ^{12}C(^{28}Si,pαγ)

Eγ	Iγ	Mult	δ	E_i	Jπ	E_f	Jπ
1763	100	E2+M1		1763.1	5/2⁺	0.0	3/2⁺
882	8.7 6			2645.1	7/2⁺	1763.1	5/2⁺
2645	100 5	E2		2645.1	7/2⁺	0.0	3/2⁺
3003	100			3003.1	5/2⁺	0.0	3/2⁺
160	1.1 3			3163.2	7/2⁻	3003.1	5/2⁺
518	9.2 5	D		3163.2	7/2⁻	2645.1	7/2⁺
1400	1 LT			3163.2	7/2⁻	1763.1	5/2⁺
3163	100 5	M2+E3	+0.16 1	3163.2	7/2⁻	0.0	3/2⁺
779 ?	15 LT			3942.2	9/2⁺	3163.2	7/2⁻
1297	6 3			3942.2	9/2⁺	2645.1	7/2⁺
2179	100 11	E2+M3		3942.2	9/2⁺	1763.1	5/2⁺
1184	100 4	M1+E2	-0.3 1	4347.2	9/2⁻	3163.2	7/2⁻
1702	46 3	E1+M2	+0.5 +5-3	4347.2	9/2⁻	2645.1	7/2⁺
4347	4 LT			4347.2	9/2⁻	0.0	3/2⁺
1060	12 1	M1+E2	+0.2 1	5407.2	11/2⁻	4347.2	9/2⁻
2244	100 3	E2		5407.2	11/2⁻	3163.2	7/2⁻
1580	100 11	(M1+E2)	-0.2 1	5927.2	11/2⁻	4347.2	9/2⁻
1985	11 2			5927.2	11/2⁻	3942.2	9/2⁺
680	100 3	M1(+E2)	+0.1 1	6087.3	13/2⁻	5407.2	11/2⁻

1740	6.3 6	E2		6087.3	$13/2^-$	4347.2	$9/2^-$
712 ?	100 LT			6119.2	$(11/2^-)$	5407.2	$11/2^-$
1786	8.2 18	D(+Q)	-0.6 6	7873.3	$13/2^+$	6087.3	$13/2^-$
1946	45 5	E1+M2	+0.2 1	7873.3	$13/2^+$	5927.2	$11/2^-$
2466	100 9	E1+M2	-0.25 10	7873.3	$13/2^+$	5407.2	$11/2^-$
2917 ?	100	D(+Q)	-0.1 +3-2	8324.4	$(13/2^-)$	5407.2	$11/2^-$
2394 ?	100	D(+Q)	+0.2 +3-2	8481.4	$(15/2^-)$	6087.3	$13/2^-$
3074 ?	100			8481.4	$(15/2^-)$	5407.2	$11/2^-$
2631 ?	100	D(+Q)	-0.2 +2-3	8558.3	$(13/2^-)$	5927.2	$11/2^-$
914 ?	100 21	D(+Q)	-0.2 2	8787.3	$(15/2^+)$	7873.3	$13/2^+$
971	100 3	E2		8844.3	$17/2^+$	7873.3	$13/2^+$
1337 ?	100 17	D(+Q)	-0.2 2	10181.3	$(19/2^+)$	8844.3	$17/2^+$
1378 ?	100 50			10222.4	$(17/2^-)$	8844.3	$17/2^+$
2017 ?	100 14			10861.4	$(19/2^+)$	8844.3	$17/2^+$

$\gamma(^{35}Cl)$ from $^{16}O(^{24}Mg,p\alpha\gamma)$

Eγ	Iγ	E_i	J^π	E_f	J^π
1763.1 2	100	1763.09	$5/2^+$	0.0	$3/2^+$
882.9 1	15.2 6	2645.67	$7/2^+$	1763.09	$5/2^+$
2645.5 4	100 5	2645.67	$7/2^+$	0.0	$3/2^+$
517.7 1	14.3 8	3163.03	$7/2^-$	2645.67	$7/2^+$
1399.6 1	0.3 3	3163.03	$7/2^-$	1763.09	$5/2^+$
3162.7 4	100 5	3163.03	$7/2^-$	0.0	$3/2^+$
1185.0 2	100 LT	4347.95	$9/2^-$	3163.03	$7/2^-$
1702.0 3	40 5	4347.95	$9/2^-$	2645.67	$7/2^+$
1059.3 2	17 LT	5407.3	$11/2^-$	4347.95	$9/2^-$
2244.2 3	100 3	5407.3	$11/2^-$	3163.03	$7/2^-$
680.4 1	100 11	6087.7	$13/2^-$	5407.3	$11/2^-$

$\gamma(^{35}Cl)$ from $^{24}Mg(^{16}O,p\alpha\gamma)$

Eγ	Iγ	Mult	δ	E_i	J^π	E_f	J^π
1763.3 2	100 4	D+Q	+2.6 4	1763.29	$5/2^+$	0.0	$3/2^+$
882.9 5	11.1 3			2645.9	$7/2^+$	1763.29	$5/2^+$
2645.7 5	100 1			2645.9	$7/2^+$	0.0	$3/2^+$
161 1				3163.0	$7/2^-$	3002.0	
517.4 5	11.1 13			3163.0	$7/2^-$	2645.9	$7/2^+$
1399.9 7	0.5 2			3163.0	$7/2^-$	1763.29	$5/2^+$
3162.7 4	100.0 6	Q+O	-0.18 7	3163.0	$7/2^-$	0.0	$3/2^+$
2180 1	100			3943.4		1763.29	$5/2^+$
1184.9 4	100 4	D+Q	+0.65 30	4347.8	$9/2^-$	3163.0	$7/2^-$
1701.6 5	52.0 14			4347.8	$9/2^-$	2645.9	$7/2^+$
1059.5 2	19.2 5	D+Q	-0.12 3	5407.3	$11/2^-$	4347.8	$9/2^-$
2244.2 2	100 1	Q+O	+0 1	5407.3	$11/2^-$	3163.0	$7/2^-$
1578.9 5	100 4			5926.9	$11/2^-$	4347.8	$9/2^-$
680.5 5	100.0 6			6087.2	$13/2^-$	5407.3	$11/2^-$
1739.5 5	7.9 9			6087.2	$13/2^-$	4347.8	$9/2^-$
296 1				6380.7		6087.2	$13/2^-$
971 1				6380.7		5407.3	$11/2^-$
1786.2 5	9.7 4			7873.4	$13/2^+$	6087.2	$13/2^-$
1946.2 5	48.5 26			7873.4	$13/2^+$	5926.9	$11/2^-$
2466.2 5	100 2			7873.4	$13/2^+$	5407.3	$11/2^-$
2232.7 6	57 3			8319.7	$15/2^-$	6087.2	$13/2^-$
2911.9 8	100 5			8319.7	$15/2^-$	5407.3	$11/2^-$
2399.8 8	100 3			8487.4	$15/2^-$	6087.2	$13/2^-$
3080.0 7	32 2			8487.4	$15/2^-$	5407.3	$11/2^-$
915.4 4	100 7			8788.8	$15/2^+$	7873.4	$13/2^+$
971.4 5	100.0 16			8844.6	$17/2^+$	7873.4	$13/2^+$
1336.3 5	100 3			10181.0	$19/2^-$	8844.6	$17/2^+$
1693.5 5	84 9			10181.0	$19/2^-$	8487.4	$15/2^-$

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1861.3 5  83    6                     10181.0  19/2−   8319.7   15/2−
1377.8 10 100   8                     10222.4  17/2−   8844.6   17/2+
2014.7 9  100   5                     10859.1  19/2+   8844.6   17/2+
2069.8 10 32.5  22                    10859.1  19/2+   8788.8   15/2+
2614.5 5  100   4                     11459.0  21/2+   8844.6   17/2+
1113.3 5  24.4  18                    12572.1  23/2−   11459.0  21/2+
2390.8 5  100   4                     12572.1  23/2−   10181.0  19/2−
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Note: multipolarities and mixing ratios in these tables are from
1976Va24 and/or 2007Ks01
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E_i(level)	J^π_i	E_γ[†]	I_γ[&]	E_f	J^π_f	Mult.[a]	δ[a]	Comments
1219.0		1219		0	3/2+			E_γ: from 1982Le04.
1763.04	5/2+	1763.16 *10*	100	0	3/2+	D+Q	−2.6 *4*	A_2=−0.28 *2*, A_4=+0.05 *3* (1976Wa11). A_2=−0.368 *18*, A_4=+0.13 *2* (1976Va24). Δ_{IPDCO}=+0.13 *5*. R_{ADO}=0.77 *3*. $R(\gamma(\theta))$=1.43 *7*.
2645.79	7/2+	882.9 *1*	9 *1*	1763.04	5/2+			Δ_{IPDCO}=+0.01 *5*. R_{ADO}=0.75 *3*. A_2=+0.31 *40* (1976Wa11).
		2645.7 *3*	91 *1*	0	3/2+	Q		Δ_{IPDCO}=+0.08 *5*. R_{ADO}=1.35 *4*. $R(\gamma(\theta))$=1.21 *6*.
3002.5	5/2+	3003	100	0	3/2+			E_γ: from 1982Le04 and 2007Ks01.
3162.83	7/2−	161[‡] *1*	1.0 *3*	3002.5	5/2+			
		517.2 *1*	8.7 *4*	2645.79	7/2+	D(+Q)	0	DCO=0.8 *1* gated on 2645γ. A_2=+0.47 *25* (1976Wa11).
		1399.9[#] *7*	0.30 *4*	1763.04	5/2+			
		3162.5 *1*	90.0 *6*	0	3/2+	M2+E3	+0.16 *1*	δ: weighted average of +0.18 *7* (1976Va24) and +0.16 *1* (2007Ks01). DCO=0.8 *1* gated on 2244γ. Δ_{IPDCO}=−0.06 *2*. R_{ADO}=1.30 *2*. $R(\gamma(\theta))$=1.43 *7*. A_2=+0.37 *3*, A_4=−0.04 *3* (1976Wa11). A_2=+0.416 *6*, A_4=−0.001 *6* (1976Va24).
3942.6	9/2+	779[@b]	<14	3162.83	7/2−			
		1297	6 *3*	2645.79	7/2+			E_γ: from 1976Wa11 and 2007Ks01. I_γ: from 2007Ks01.
		2180[‡] *1*	94 *10*	1763.04	5/2+			Δ_{IPDCO}=+0.07 *5*.
4347.85	9/2−	1185.0 *2*	69 *2*	3162.83	7/2−	M1+E2	−0.34 *11*	δ: weighted average of −0.65 *30* (1976Va24) and −0.3 *1* (2007Ks01). DCO=2.4 *4* gated on 3163γ. Δ_{IPDCO}=−0.08 *3*. R_{ADO}=0.54 *2*. A_2=−0.66 *4*, A_4=+0.08 *4* (1976Wa11). A_2=−0.663 *25*, A_4=+0.004 *25* (1976Va24).
		1702.0 *3*	31 *1*	2645.79	7/2+	E1+M2	+0.5 *4*	DCO=1.0 *2* gated on 2645γ. Δ_{IPDCO}=+0.04 *4*. R_{ADO}=0.76 *6*. A_2=−0.20 *3* (1976Wa11).
		4347.8[#] *8*	<3	0	3/2+			I_γ: from 2007Ks01. 7.5 *7* from 2007De14.
5407.15	11/2−	1059.3 *2*	16.1 *5*	4347.85	9/2−	M1+E2	+0.13 *3*	δ: weighted average of +0.12 *3* (1976Va24) and +0.2 *1* (2007Ks01). DCO=0.9 *1* gated on 680γ.

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(HI,xnγ) 2004Ek01,2007De14,2007Ks01 (continued)

γ(^{35}Cl) (continued)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[&]	E_f	J^{π}_f	Mult.[a]	δ[a]	Comments
								Δ_{IPDCO}=−0.10 *4*. R_{ADO}=1.05 *4*. A_2=−0.04 *15* (1976Wa11). A_2=−0.08 *6*, A_4=+0.049 *46* (1976Va24).
5407.15	11/2−	2244.2 *2*	84.1 *7*	3162.83	7/2−	E2(+M3)	0.000 *1*	DCO=1.1 *1* gated on 3163γ. Δ_{IPDCO}=+0.04 *2*. R_{ADO}=1.26 *3*. R(γ(θ))=1.24 *6*. A_2=+0.23 *2*, A_4=−0.08 *2* (1976Wa11). A_2=+0.303 *20*, A_4=−0.119 *22* (1976Va24).
5926.9	11/2−	1579.1 *3*	90 *10*	4347.85	9/2−	(D+Q)	−0.2 *1*	DCO=1.0 *1* gated on 1184γ. Δ_{IPDCO}=+0.02 *3*. R_{ADO}=0.48 *1*. A_2=−0.6 *4* (1976Wa11).
		1985[@]	10 *2*	3942.6	9/2+			
6087.41	13/2−	680.3 *1*	93 *1*	5407.15	11/2−	M1(+E2)	+0.1 *1*	DCO=1.3 *1* gated on 2244γ. Δ_{IPDCO}=−0.09 *2*. R_{ADO}=0.84 *2*. A_2=−0.20 *2* (1976Wa11). R(γ(θ))=0.65 *3*.
		1739.4 *4*	7 *1*	4347.85	9/2−	Q		Δ_{IPDCO}=+0.12 *7*. R_{ADO}=1.38 *10*.
6119.2?	(11/2−)	712[@b]	<1	5407.15	11/2−			
6380.8		296[‡] *1*		6087.41	13/2−			
		971[‡] *1*		5407.15	11/2−			
7873.3	13/2+	1786.2[#] *5*	6.2 *3*	6087.41	13/2−	D(+Q)	−0.6 *6*	DCO=1.2 *3* gated on 971γ, E2. R_{ADO}=1.37 *7*.
		1946.4 *3*	29.7 *17*	5926.9	11/2−	E1+M2	+0.2 *1*	DCO=1.3 *2* gated on 971γ. Δ_{IPDCO}=+0.11 *6*. R_{ADO}=0.80 *4*. A_2=−0.2 *1* (1976Wa11).
		2465.9 *3*	63.7 *13*	5407.15	11/2−	E1+M2	−0.25 *10*	DCO=2.4 *3* gated on 3163γ. Δ_{IPDCO}=+0.21 *6*. R_{ADO}=0.77 *2*. A_2=−0.21 *6* (1976Wa11).
8319.8	15/2−	2232.7[#] *6*	36.4 *18*	6087.41	13/2−			
		2911.9[#] *8*	63.6 *28*	5407.15	11/2−			R_{ADO}=1.35 *5*.
8324.4?	(13/2−)	2917[@b]	100	5407.15	11/2−	D(+Q)	−0.1 *3*	DCO=1.9 *6* gated on 3163γ.
8481.4?	(15/2−)	2394[@b]	<100	6087.41	13/2−	D(+Q)	+0.2 *3*	DCO=1.4 *4* gated on 3163γ.
		3074[@b]	<100	5407.15	11/2−			
8487.4	15/2−	2399.8[#] *8*	75.9 *26*	6087.41	13/2−			
		3080.0[#] *7*	24.1 *15*	5407.15	11/2−			R_{ADO}=1.20 *12*.
8558.3?	(13/2−)	2631[@b]	100	5926.9	11/2−	D(+Q)	−0.2 *3*	DCO)=2.4 *7* gated on 3163γ.
8788.7	15/2+	915.4[#] *4*	100	7873.3	13/2+	D(+Q)	−0.2 *2*	DCO=2.2 *6* gated on 3163γ. R_{ADO}=0.69 *3*.
8844.6	17/2+	971.4 *2*	100	7873.3	13/2+	Q		DCO=0.9 *1* gated on 2244γ. Δ_{IPDCO}=+0.08 *4*. R_{ADO}=1.38 *3*. A_2=+0.28 *7*, A_4=−0.18 *7* (1976Wa11).
10181.1	19/2−	1336.3[#] *5*	37.4 *13*	8844.6	17/2+			DCO=2.0 *4* gated on 971γ. R_{ADO}=0.75 *2*.

Continued on next page (footnotes at end of table)

(HI,xnγ) 2004Ek01,2007De14,2007Ks01 (continued)

γ(^{35}Cl) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [&]	E_f	J_f^π	Comments
10181.1	19/2⁻	1693.5[#] *5*	31.5 *33*	8487.4	15/2⁻	R_{ADO}=1.44 *7*.
		1861.3[#] *5*	31.2 *21*	8319.8	15/2⁻	R_{ADO}=1.39 *7*.
10222.5	17/2⁻	1377.8[#] *10*	100	8844.6	17/2⁺	R_{ADO}=1.32 *12*.
10859.1	19/2⁺	2014.7[#] *9*	75 *4*	8844.6	17/2⁺	R_{ADO}=0.50 *3*.
		2069.8[#] *10*	25 *2*	8788.7	15/2⁺	R_{ADO}=1.57 *11*.
11459.1	21/2⁺	2614.5[#] *5*	100	8844.6	17/2⁺	R_{ADO}=1.33 *4*.
12572.2	23/2⁻	1113.3[#] *5*	19.6 *14*	11459.1	21/2⁺	R_{ADO}=0.86 *9*.
		2390.8[#] *5*	80.4 *34*	10181.1	19/2⁻	R_{ADO}=1.34 *12*.

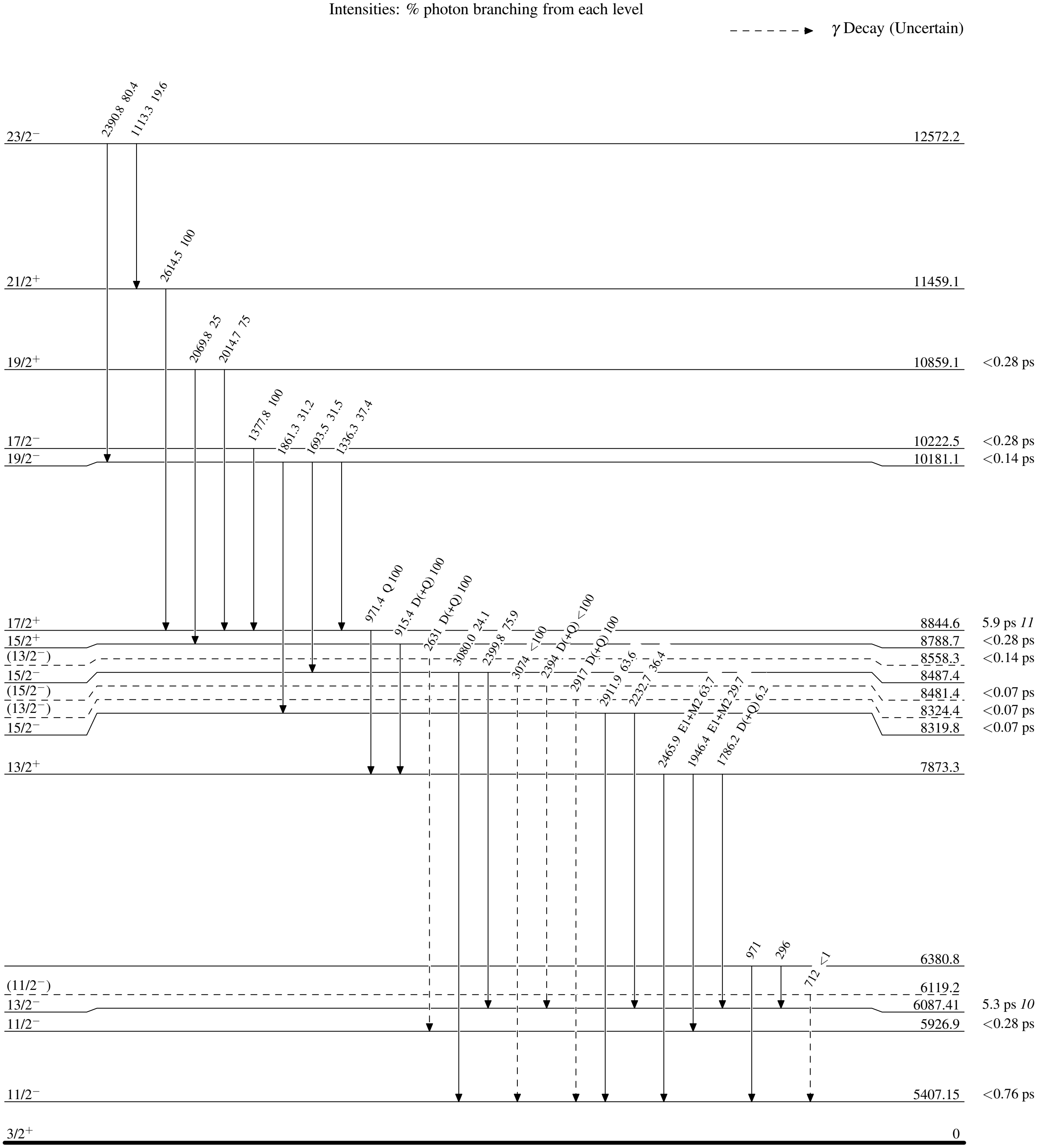
[†] Weighted average from 1976Wa11, 1976Va24, 2004Ek01 and 2007De14, unless otherwise noted.
[‡] From 1976Va24.
[#] From 2007De14.
[@] From 2007Ks01.
[&] From 1976Wa11, 2004Ek01, 2007De14 and 2007Ks01. Weighted average is taken when available.
[a] From γγ(θ) in 1976Va24 and/or 2007Ks01. For mixing ratios, weighted average is taken when values are available from both.
[b] Placement of transition in the level scheme is uncertain.

(HI,xnγ) 2004Ek01,2007De14,2007Ks01

Legend

Level Scheme

Intensities: % photon branching from each level

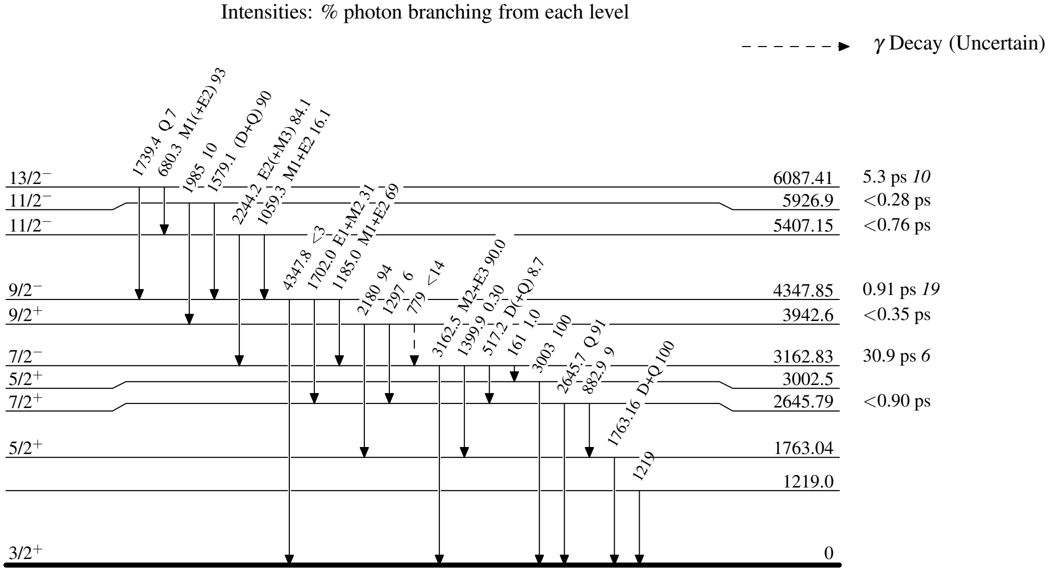


$^{35}_{17}Cl_{18}$

(HI,xnγ) 2004Ek01,2007De14,2007Ks01

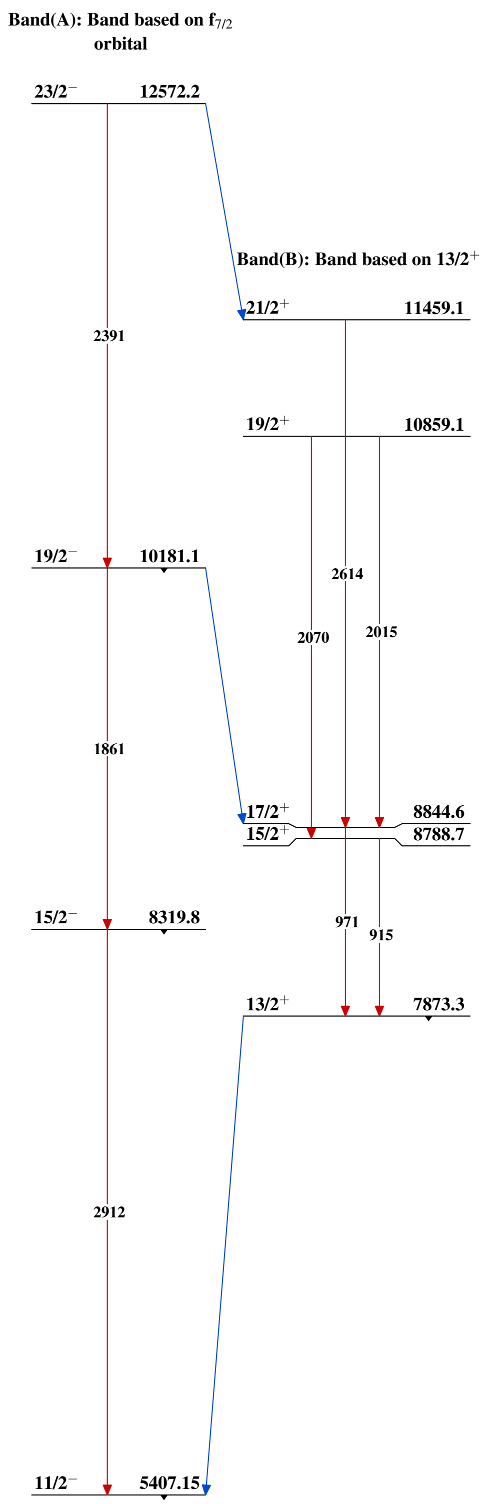
Level Scheme (continued)

Intensities: % photon branching from each level



$^{35}_{17}Cl_{18}$

(HI,xnγ) 2004Ek01,2007De14,2007Ks01



$^{35}_{17}Cl_{18}$