Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan and A. A. Sonzogni	NDS 115, 135 (2014)	1-Nov-2013

Q(β^-)=−1.101×10^4 *15*; S(n)=13873 *5*; S(p)=6102 *8*; Q(α)=−3691 *7* 2012Wa38
S(2n)=24719 *5*; S(2p)=9296 *5* (2012Wa38).
Additional information 1.
α: Additional information 2.

^{88}Mo Levels

Cross Reference (XREF) Flags

- A ^{88}Tc ε decay (6.4 s)
- B ^{88}Tc ε decay (5.8 s)
- C ^{58}Ni(^{36}Ar,α2pγ)
- D ^{58}Ni(^{40}Ca,2α2pγ):SD

E(level)†	Jπ‡	$T_{1/2}$#	XREF	Comments
0.0@	0$^+$	8.0 min *2*	ABC	%ε+%β^+=100 $T_{1/2}$: from 1982De43. Other: 8.2 min *5* (1971Do01).
740.54@ *4*	2$^+$	7.14 ps *21*	ABC	Jπ: E2 741γ to 0$^+$.
1495.04e *10*	2$^+$		C	Jπ: ΔJ=0, M1+E2 754.5γ to 2$^+$, 1495γ to 0$^+$.
1654.83@ *10*	4$^+$	0.97 ps *14*	ABC	Jπ: E2 914γ to 2$^+$.
2091.90e *20*	(3$^+$)		C	Jπ: ΔJ=1, (M1+E2) 597γ to 2$^+$.
2100.7 *4*	(4$^+$,5$^+$,6$^+$)		A	Jπ: log *ft*=5.4 from (5$^+$,6$^+$,7$^+$), 446γ to 4$^+$.
2402.14 *14*			C	
2626.80@ *12*	6$^+$	8.0 ps *3*	A C	g=+0.54 *26* Jπ: E2 972γ to 4$^+$, band member. g: from IMPAD technique (1995We03). Mean g-factor for the 6$^+$ and 8$^+$ yrast states, dominated by the 8$^+$ g-factor.
2646.42& *13*	5$^-$	13.7 ps *3*	C	Jπ: E1 992γ to 4$^+$, no γ's to 2$^+$.
2672.0e *3*	(5$^+$)		C	Jπ: (E2) 580γ to (3$^+$).
2903.93 *16*			C	
2963.01 *13*	(6$^+$)		C	Jπ: (E2) 1308γ to 4$^+$, 387γ from 7$^-$.
3046.9 *3*			C	
3187.61 *16*	(6)		C	Jπ: D 541γ to 5$^-$.
3212.91@ *15*	8$^+$	22.2 ps *3*	C	g=+0.54 *26* Jπ: E2 586γ to 6$^+$, band member. g: from IMPAD technique (1995We03). Mean g-factor for the 6$^+$ and 8$^+$ yrast states, dominated by the 8$^+$ g-factor.
3213.43 *22*	(6)		C	Jπ: D 567γ to 5$^-$.
3349.82& *13*	7$^-$	4.6 ps *6*	C	Jπ: E2 703γ to 5$^-$, band member.
3484.63 *17*	(8$^+$)	<3.5 ps	C	Jπ: ΔJ=0, D(+Q) 272γ to 8$^+$, 711γ from 10$^+$.
3489.69 *15*			C	
3642.4 *3*			C	
3662.92 *16*	9$^-$		C	Jπ: E2 313γ to 7$^-$.
3816.14 *20*	(8$^+$)		C	Jπ: 1189γ to 6$^+$, 795γ from (10$^+$).
4063.70 *24*	(7,8)		C	Jπ: 876γ to (6).
4119.27 *16*			C	
4195.18@ *17*	10$^+$	4.37 ps *7*	C	Jπ: E2 982γ to 8$^+$, band member.
4313.82& *15*	9$^-$	2.6 ps *3*	C	Jπ: E2 964γ to 7$^-$, band member.
4358.17 *17*	(10$^+$)		C	Jπ: E2 873.5γ to (8$^+$).

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Adopted Levels, Gammas (continued)

^{88}Mo Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
4611.15 *19*	(10^+)		C	Jπ: ΔJ=0, D(+Q) 253γ to (10^+), 795γ to (8^+).
4822.35 *19*			C	
4988.7 *4*			C	
5052.49[@] *18*	12^+	18.0 ps *14*	C	Jπ: E2 857γ to 10^+, band member.
5153.45[&] *16*	11^-	1.2 ps *3*	C	Jπ: E2 840γ to 9^-, band member.
5270.0 *3*			C	
5272.37 *19*	(12^+)	0.55 ps *14*	C	Jπ: (E2) 1077γ to 10^+.
5387.58 *19*	(12^+)		C	Jπ: (E2) 1192γ to 10^+.
5959.27[@] *19*	14^+	5.67 ps *6*	C	Jπ: E2 907γ to 12^+, band member.
5969.75[&] *19*	13^-	0.90 ps *14*	C	Jπ: E2 816γ to 11^-, band member.
6206.95 *19*	(14^+)	1.80 ps *14*	C	Jπ: (E2) 935γ to (12^+).
6549.44 *19*	$(15)^+$	0.49 ps *14*	C	Jπ: ΔJ=1, (M1+E2) 590γ to 14^+.
6868.26[&] *21*	15^-	3.54 ps *21*	C	Jπ: E2 898.5γ to 13^-, band member.
6944.73[@] *21*	$(16)^+$	<0.6 ps	C	Jπ: ΔJ=1, M1+E2 395γ to $(15)^+$, band member.
6947.96 *22*	(16)		C	Jπ: ΔJ=1, D+Q 398.5γ to $(15)^+$.
7322.79 *21*	(16^+)	<0.35 ps	C	Jπ: (E2) 1116γ to (14^+).
7350.24 *21*			C	
7765.43 *20*	$(17)^+$		C	Jπ: (E2) 1216γ to $(15)^+$.
7848.47[&] *23*	17^-	1.25 ps *7*	C	Jπ: E2 980γ to 15^-, band member.
8127.33[@] *21*	$(18)^+$	<0.35 ps	C	Jπ: ΔJ=1, M1(+E2) 362γ to $(17)^+$, E2 1183γ to $(16)^+$.
8267.57 *24*	$(17)^-$		C	Jπ: M1+E2 419γ to 17^-, 1400γ to 15^-.
8609.4 *3*	$(18)^-$	<0.5 ps	C	Jπ: ΔJ=1, (M1+E2) 761γ to 17^-.
8931.3 *3*			C	
8968.1 *3*	(19)		C	Jπ: ΔJ=1, D+Q 359γ to $(18)^-$.
9336.4 *3*	$(19)^-$		C	Jπ: ΔJ=1, (M1+E2) 727γ to $(18)^-$, 1488γ to 17^-.
9400.24[@] *24*	$(20)^+$		C	Jπ: (E2) 1273γ to $(18)^+$.
9472.0 *3*	$(20)^+$		C	Jπ: (E2) 1345γ to $(18)^+$.
9710.8 *3*			C	
9829.1 *3*	$(20)^-$		C	Jπ: (E2) 1220γ to $(18)^-$.
10181.6 *4*			C	
10203.7 *3*	(21)		C	Jπ: ΔJ=1, D+Q 375γ to (20).
10358.3 *3*			C	
11079.6 *3*	$(22)^+$		C	
11616.5 *3*	(23)		C	Jπ: (E2) 1413γ to (21).
x[a]	J1		D	
x+1237.6[a] *4*	J1+2		D	
x+2579.7[a] *5*	J1+4		D	
x+4060.4[a] *5*	J1+6		D	
x+5693.9[a] *6*	J1+8		D	
x+7489.4[a] *6*	J1+10		D	
x+9451.6[a] *7*	J1+12		D	
x+11585.0[a] *8*	J1+14		D	
x+13891.6[a] *14*	J1+16		D	
y[b]	J2		D	
y+1458.6[b] *8*	J2+2		D	
y+3054.2[b] *11*	J2+4		D	
y+4797.3[b] *12*	J2+6		D	
y+6692.2[b] *13*	J2+8		D	
y+8746.4[b] *16*	J2+10		D	
y+10970.7[b] *22*	J2+12		D	
z[c]	J3		D	

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Adopted Levels, Gammas (continued)

^{88}Mo Levels (continued)

E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF
z+1259.1[c] *12*	J3+2	D	z+9627[c] *4*	J3+12	D	u+2978.4[d] *13*	J4+4	D
z+2641.7[c] *18*	J3+4	D	z+11761[c] *4*	J3+14	D	u+4684.6[d] *16*	J4+6	D
z+4164.6[c] *25*	J3+6	D	z+14058[c] *5*	J3+16	D	u+6543.5[d] *19*	J4+8	D
z+5834[c] *3*	J3+8	D	u[d]	J4	D	u+8539.1[d] *23*	J4+10	D
z+7651[c] *3*	J3+10	D	u+1417.6[d] *9*	J4+2	D	u+10628?[d] *3*	J4+12	D

† From least-squares fit to Eγ by evaluators.
‡ For levels populated in ^{58}Ni(^{36}Ar,α2pγ) all E2 transitions are of stretched character and spin assignments are made under the assumption of increasing spin with increasing excitation energy, except where noted.
# From Recoil distance Doppler-shift measurements in ^{58}Ni(^{36}Ar,α2pγ).
@ Band(A): Yrast band.
& Band(B): Negative parity cascade.
a Band(C): SD-1 band (1999Bb13,2003La24,2004La21). Q(intrinsic)=5.2 *3* (2003La24), 6.0 *+20−14* (1999Bb13). Configuration=$\pi 1/2[431]^{-1}5^1$; π=−, α=1 (1999Bb13); $\nu 5^2\pi 5^1$ or $\nu 5^2\pi 5^0$ (2003La24). Percent population ≈1% of the reaction channel.
b Band(D): SD-2 band (1999Bb13,2003La24,2004La21). Q(intrinsic)=7.6 *+53−17* (2003La24). Configuration=$\pi 5/2[422]^{-1}5^1$; π=− (1999Bb13,2004La21) Percent population ≈0.3% of the reaction channel.
c Band(E): SD-3 band (1999Bb13,2004La21). Configuration=$\pi 5/2[422]^{-1}5^1$; π=−. SD-2 and SD-3 bands are interpreted as signature partners. This band is isospectral with SD band in ^{89}Tc (2004La21). Percent population ≈0.3% of the reaction channel.
d Band(F): SD-4 band (2004La21). This band is assigned as SD "vacuum" configuration (2004La21). Percent population ≈0.3% of the reaction channel.
e Band(G): Quasi-gamma vibrational band (2007An21).

Adopted Levels, Gammas (continued)

γ(^{88}Mo)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[@]	α	Comments
740.54	2+	740.54 *4*	100	0.0	0+	E2	1.60×10^{-3}	α(K)=0.001404 *20*; α(L)=0.0001624 *23*; α(M)=2.90×10^{-5} *4*; α(N)=4.39×10^{-6} *7*; α(O)=2.39×10^{-7} *4* B(E2)(W.u.)=15.3 *5*
1495.04	2+	754.5 *1*	100 *7*	740.54	2+	M1+E2	0.00151 *3*	α(K)=0.001327 *22*; α(L)=0.000151 *5*; α(M)=2.70×10^{-5} *8*; α(N)=4.10×10^{-6} *10*; α(O)=2.29×10^{-7} *4*
		1495.0 *6*	14 *5*	0.0	0+			
1654.83	4+	914.28 *9*	100	740.54	2+	E2	9.52×10^{-4}	α(K)=0.000836 *12*; α(L)=9.53×10^{-5} *14*; α(M)=1.702×10^{-5} *24*; α(N)=2.58×10^{-6} *4* α(O)=1.433×10^{-7} *20* B(E2)(W.u.)=39 *6*
2091.90	(3+)	596.9 *2*	100 *12*	1495.04	2+	(M1+E2)	0.00270 *16*	α(K)=0.00237 *13*; α(L)=0.000274 *21*; α(M)=4.9×10^{-5} *4*; α(N)=7.4×10^{-6} *6*; α(O)=4.08×10^{-7} *16*
		1351.2 *4*	62 *12*	740.54	2+	(M1+E2)	4.49×10^{-4} *11*	α(K)=0.000365 *12*; α(L)=4.06×10^{-5} *12*; α(M)=7.24×10^{-6} *21*; α(N)=1.10×10^{-6} *4*; α(O)=6.31×10^{-8} *24*
2100.7	(4+,5+,6+)	445.9 *4*	100	1654.83	4+			
2402.14		907.1[&] *1*	100	1495.04	2+			
2626.80	6+	971.93 *9*	100	1654.83	4+	E2	8.25×10^{-4}	α(K)=0.000725 *11*; α(L)=8.24×10^{-5} *12*; α(M)=1.470×10^{-5} *21*; α(N)=2.23×10^{-6} *4* α(O)=1.244×10^{-7} *18* B(E2)(W.u.)=3.51 *14*
2646.42	5−	991.6 *1*	100	1654.83	4+	E1	3.37×10^{-4}	α(K)=0.000297 *5*; α(L)=3.28×10^{-5} *5*; α(M)=5.84×10^{-6} *9*; α(N)=8.89×10^{-7} *13*; α(O)=5.06×10^{-8} *7* B(E1)(W.u.)=2.56×10^{-5} *6*
2672.0	(5+)	580.1 *2*	100	2091.90	(3+)	(E2)	0.00309	α(K)=0.00270 *4*; α(L)=0.000319 *5*; α(M)=5.70×10^{-5} *8*; α(N)=8.60×10^{-6} *12*; α(O)=4.57×10^{-7} *7*
2903.93		257.5 *1*	100	2646.42	5−			
2963.01	(6+)	1308.2 *1*	100	1654.83	4+	(E2)[a]	4.58×10^{-4}	α(K)=0.000379 *6*; α(L)=4.24×10^{-5} *6*; α(M)=7.56×10^{-6} *11*; α(N)=1.151×10^{-6} *17*; α(O)=6.51×10^{-8} *10*
3046.9		955.0[&] *2*	100	2091.90	(3+)			
3187.61	(6)	541.2 *1*	100	2646.42	5−	D		
3212.91	8+	586.1 *1*	100	2626.80	6+	E2	0.00300	α(K)=0.00263 *4*; α(L)=0.000310 *5*; α(M)=5.54×10^{-5} *8*; α(N)=8.34×10^{-6} *12*; α(O)=4.44×10^{-7} *7* B(E2)(W.u.)=15.81 *22*
3213.43	(6)	567.0 *2*	100	2646.42	5−	D		
3349.82	7−	386.9 *2*	3.0 *3*	2963.01	(6+)	[E1]	0.00281	α(K)=0.00247 *4*; α(L)=0.000278 *4*; α(M)=4.94×10^{-5} *7*; α(N)=7.49×10^{-6} *11*; α(O)=4.14×10^{-7} *6* B(E1)(W.u.)=3.3×10^{-5} *5*
		445[&]		2903.93				
		703.4[&] *1*	<100	2646.42	5−	E2	0.00183	α(K)=0.001604 *23*; α(L)=0.000186 *3*; α(M)=3.33×10^{-5} *5*; α(N)=5.03×10^{-6} *7*; α(O)=2.73×10^{-7} *4* B(E2)(W.u.)<27.1

$^{88}_{42}Mo_{46}$-4

Adopted Levels, Gammas (continued)

γ(^{88}Mo) (continued)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π	Mult. @	δ e	α	Comments
3349.82	7⁻	723.0 *1*	10.3 *3*	2626.80	6⁺	E1		6.39×10⁻⁴	α(K)=0.000564 *8*; α(L)=6.26×10⁻⁵ *9*; α(M)=1.114×10⁻⁵ *16*; α(N)=1.695×10⁻⁶ *24*; α(O)=9.57×10⁻⁸ *14* B(E1)(W.u.)=1.76×10⁻⁵ *24* Mult.: D from R(DCO), Δπ=yes from level scheme. δ: δ(M2/E1)=+0.06 *9*.
3484.63	(8⁺)	271.7 *1*	100	3212.91	8⁺	M1(+E2)	<0.6	0.0195 *22*	α(K)=0.0171 *19*; α(L)=0.0020 *3*; α(M)=0.00036 *5*; α(N)=5.5×10⁻⁵ *8*; α(O)=3.0×10⁻⁶ *3* B(M1)(W.u.)>0.23 Mult.: D(+Q) from R(DCO) in ^{58}Ni(^{36}Ar,α2pγ), Δπ=no from level scheme.
3489.69		585 &	<34	2903.93					
		843.3 *1*	100 *3*	2646.42	5⁻				
3642.4		454.8 *3*	100	3187.61	(6)				
3662.92	9⁻	313.1 *1*	100	3349.82	7⁻	E2		0.0209	α(K)=0.0181 *3*; α(L)=0.00232 *4*; α(M)=0.000415 *6*; α(N)=6.17×10⁻⁵ *9*; α(O)=2.96×10⁻⁶ *5*
3816.14	(8⁺)	1189.2 & *3*	100	2626.80	6⁺				
4063.70	(7,8)	850.2 *4*	45 *9*	3213.43	(6)				
		876.1 *2*	100 *18*	3187.61	(6)				
4119.27		629.6 & *1*	100	3489.69					
4195.18	10⁺	711 &	<2	3484.63	(8⁺)				
		982.3 *1*	100.0 *11*	3212.91	8⁺	E2		8.05×10⁻⁴	α(K)=0.000708 *10*; α(L)=8.03×10⁻⁵ *12*; α(M)=1.433×10⁻⁵ *20*; α(N)=2.18×10⁻⁶ *3* α(O)=1.214×10⁻⁷ *17* B(E2)(W.u.)=6.02 *15*
4313.82	9⁻	964.0 *1*	100.0 *9*	3349.82	7⁻	E2		8.41×10⁻⁴	α(K)=0.000739 *11*; α(L)=8.40×10⁻⁵ *12*; α(M)=1.499×10⁻⁵ *21*; α(N)=2.27×10⁻⁶ *4* α(O)=1.267×10⁻⁷ *18* B(E2)(W.u.)=10.9 *13*
		1100.8 *2*	2.8 *3*	3212.91	8⁺	[E1]		2.82×10⁻⁴	α(K)=0.000244 *4*; α(L)=2.69×10⁻⁵ *4*; α(M)=4.78×10⁻⁶ *7*; α(N)=7.29×10⁻⁷ *11*; α(O)=4.16×10⁻⁸ *6* B(E1)(W.u.)=2.7×10⁻⁶ *5*
4358.17	(10⁺)	163.0 *1*	54.5 *23*	4195.18	10⁺	M1(+E2)	<1.1	0.10 *4*	α(K)=0.09 *4*; α(L)=0.012 *6*; α(M)=0.0022 *10*; α(N)=0.00032 *14*; α(O)=1.5×10⁻⁵ *5* Mult.: D(+Q) from R(DCO), Δπ=no from level scheme.
		873.5 *1*	100.0 *23*	3484.63	(8⁺)	E2		1.06×10⁻³	α(K)=0.000932 *13*; α(L)=0.0001066 *15*; α(M)=1.90×10⁻⁵ *3*; α(N)=2.88×10⁻⁶ *4* α(O)=1.596×10⁻⁷ *23*
4611.15	(10⁺)	253.0 *1*	100 *6*	4358.17	(10⁺)	M1(+E2)	<0.5	0.0231 *23*	α(K)=0.0202 *20*; α(L)=0.0024 *3*; α(M)=0.00043 *6*; α(N)=6.5×10⁻⁵ *8*; α(O)=3.5×10⁻⁶ *3* Mult.: D(+Q) from R(DCO) in ^{58}Ni(^{36}Ar,α2pγ), Δπ=no from level scheme.

$^{88}_{42}Mo_{46}$-5

Adopted Levels, Gammas (continued)

γ(^{88}Mo) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Mult. [@]	δ [e]	α	Comments
4611.15	(10$^+$)	795.0 *1*	94 *6*	3816.14	(8$^+$)				
4822.35		703[&]	100	4119.27					
4988.7		925.0 *3*	100	4063.70	(7,8)				
5052.49	12$^+$	441		4611.15	(10$^+$)				
		694.3 *1*	7.0 *4*	4358.17	(10$^+$)	[E2]		0.00189	α(K)=0.001659 *24*; α(L)=0.000193 *3*; α(M)=3.45×10^{-5} *5*; α(N)=5.21×10^{-6} *8*; α(O)=2.82×10^{-7} *4* B(E2)(W.u.)=0.55 *6*
		857.3 *1*	100.0 *11*	4195.18	10$^+$	E2		1.11×10^{-3}	α(K)=0.000975 *14*; α(L)=0.0001116 *16*; α(M)=1.99×10^{-5} *3*; α(N)=3.02×10^{-6} *5* α(O)=1.669×10^{-7} *24* B(E2)(W.u.)=2.73 *22*
5153.45	11$^-$	331.1 *1*		4822.35					
		839.6 *1*	100.0 *10*	4313.82	9$^-$	E2		1.17×10^{-3}	α(K)=0.001026 *15*; α(L)=0.0001176 *17*; α(M)=2.10×10^{-5} *3*; α(N)=3.18×10^{-6} *5* α(O)=1.755×10^{-7} *25* B(E2)(W.u.)=46 *12*
		1034.2 *1*	5.4 *3*	4119.27					
5270.0		956.2[&] *3*	100	4313.82	9$^-$				
5272.37	(12$^+$)	914[&]		4358.17	(10$^+$)				
		1077.2 *1*	100 *3*	4195.18	10$^+$	(E2)[b]		6.53×10^{-4}	α(K)=0.000575 *8*; α(L)=6.49×10^{-5} *9*; α(M)=1.158×10^{-5} *17*; α(N)=1.759×10^{-6} *25*; α(O)=9.87×10^{-8} *14* B(E2)(W.u.)=30 *8*
5387.58	(12$^+$)	1192.4 *1*	100	4195.18	10$^+$	(E2)[a]		5.30×10^{-4}	α(K)=0.000461 *7*; α(L)=5.18×10^{-5} *8*; α(M)=9.23×10^{-6} *13*; α(N)=1.404×10^{-6} *20*; α(O)=7.91×10^{-8} *11*
5959.27	14$^+$	571.7 *1*	7.5 *4*	5387.58	(12$^+$)	(E2)[b]		0.00322	α(K)=0.00282 *4*; α(L)=0.000333 *5*; α(M)=5.95×10^{-5} *9*; α(N)=8.97×10^{-6} *13*; α(O)=4.76×10^{-7} *7* B(E2)(W.u.)=4.9 *3*
		906.8 *1*	100.0 *12*	5052.49	12$^+$	E2[b]		9.70×10^{-4}	α(K)=0.000853 *12*; α(L)=9.73×10^{-5} *14*; α(M)=1.736×10^{-5} *25*; α(N)=2.63×10^{-6} *4* α(O)=1.461×10^{-7} *21* B(E2)(W.u.)=6.51 *13*
5969.75	13$^-$	816.3[&] *1*	100	5153.45	11$^-$	E2[b]		1.25×10^{-3}	α(K)=0.001099 *16*; α(L)=0.0001262 *18*; α(M)=2.25×10^{-5} *4*; α(N)=3.41×10^{-6} *5*; α(O)=1.88×10^{-7} *3* B(E2)(W.u.)=75 *12*
6206.95	(14$^+$)	247.7 *1*	20.8 *14*	5959.27	14$^+$	M1(+E2)	<0.7	0.026 *4*	α(K)=0.023 *4*; α(L)=0.0027 *6*; α(M)=0.00049 *10*; α(N)=7.4×10^{-5} *14*; α(O)=3.9×10^{-6} *5* B(M1)(W.u.)>0.07 Mult.: D(+Q) from comparison to RUL, Δπ=no from level scheme.
		934.6 *1*	100 *3*	5272.37	(12$^+$)	(E2)[b]		9.03×10^{-4}	α(K)=0.000794 *12*; α(L)=9.04×10^{-5} *13*; α(M)=1.614×10^{-5} *23*; α(N)=2.45×10^{-6} *4*

$^{88}_{42}Mo_{46}$-6

Adopted Levels, Gammas (continued)

γ(^{88}Mo) (continued)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π	Mult. @	δ e	α	Comments
									α(O)=1.361×10^{-7} *19* B(E2)(W.u.)=12.7 *11*
6206.95	(14$^+$)	1154.4 *1*	27.8 *14*	5052.49	12$^+$	[E2]		5.64×10^{-4}	α(K)=0.000494 *7*; α(L)=5.56×10^{-5} *8*; α(M)=9.91×10^{-6} *14*; α(N)=1.507×10^{-6} *22*; α(O)=8.48×10^{-8} *12* B(E2)(W.u.)=1.23 *12*
6549.44	(15)$^+$	342.5 *1*	10.1 *5*	6206.95	(14$^+$)				
		590.2 *1*	100.0 *10*	5959.27	14$^+$	(M1+E2) c	−0.05 *3*	0.00262	α(K)=0.00230 *4*; α(L)=0.000260 *4*; α(M)=4.64×10^{-5} *7*; α(N)=7.08×10^{-6} *10*; α(O)=4.04×10^{-7} *6* B(M1)(W.u.)=0.20 *6* δ: −0.05 *3* or −4.0 *4*, the latter is excluded by comparison to RUL.
6868.26	15$^-$	898.5 *1*	100	5969.75	13$^-$	E2 b		9.92×10^{-4}	α(K)=0.000872 *13*; α(L)=9.95×10^{-5} *14*; α(M)=1.775×10^{-5} *25*; α(N)=2.69×10^{-6} *4* α(O)=1.493×10^{-7} *21* B(E2)(W.u.)=11.7 *7*
6944.73	(16)$^+$	395.2 *1*	100.0 *9*	6549.44	(15)$^+$	M1+E2		0.0083 *15*	α(K)=0.0072 *13*; α(L)=0.00087 *19*; α(M)=0.00015 *4*; α(N)=2.3×10^{-5} *5*; α(O)=1.23×10^{-6} *18* δ: 0.0 *4* or −5.2 *+9−13*. Mult.: D+Q from R(DCO) in ^{58}Ni(^{36}Ar,α2pγ), Δπ=no from assumed band structure.
		985 &		5959.27	14$^+$				
6947.96	(16)	398.5 *1*	100	6549.44	(15)$^+$	D+Q c			δ: −0.09 *+14−18* or −3.5 *+14−33*.
7322.79	(16$^+$)	1115.8 *1*	100	6206.95	(14$^+$)	(E2) b		6.05×10^{-4}	α(K)=0.000532 *8*; α(L)=6.00×10^{-5} *9*; α(M)=1.069×10^{-5} *15*; α(N)=1.625×10^{-6} *23*; α(O)=9.13×10^{-8} *13* B(E2)(W.u.)>40
7350.24		800.9 *1*	100	6549.44	(15)$^+$				
7765.43	(17)$^+$	415.3 *1*	21.2 *15*	7350.24					
		442.5 & *2*	≈106	7322.79	(16$^+$)				
		816 &	<15	6947.96	(16)				
		820.4 *1*	100 *3*	6944.73	(16)$^+$	M1+E2		1.24×10^{-3}	α(K)=0.001088 *16*; α(L)=0.0001234 *22*; α(M)=2.20×10^{-5} *4*; α(N)=3.35×10^{-6} *6*; α(O)=1.88×10^{-7} *4* δ: +0.02 *6* or −5.6 *+13−24*. Mult.: D(+Q) from R(DCO) in ^{58}Ni(^{36}Ar,α2pγ), Δπ=no from level scheme.
		1216.0 *1*	61 *3*	6549.44	(15)$^+$	(E2) a		5.12×10^{-4}	α(K)=0.000442 *7*; α(L)=4.96×10^{-5} *7*; α(M)=8.84×10^{-6} *13*; α(N)=1.345×10^{-6} *19*; α(O)=7.59×10^{-8} *11*
7848.47	17$^-$	980.1 *1*	100	6868.26	15$^-$	E2 b		8.09×10^{-4}	α(K)=0.000711 *10*; α(L)=8.08×10^{-5} *12*; α(M)=1.441×10^{-5} *21*; α(N)=2.19×10^{-6} *3*

$^{88}_{42}Mo_{46}$-7

Adopted Levels, Gammas (continued)

γ(^{88}Mo) (continued)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π	Mult. @	δ e	α	Comments
									α(O)=1.220×10^{-7} *17* B(E2)(W.u.)=21.5 *12*
8127.33	(18)$^+$	361.7 *1*	100.0 *21*	7765.43	(17)$^+$	M1(+E2)	−0.01 *4*	0.00846	α(K)=0.00743 *11*; α(L)=0.000850 *12*; α(M)=0.0001520 *22*; α(N)=2.31×10^{-5} *4* α(O)=1.309×10^{-6} *19* B(M1)(W.u.)>0.76 δ: −0.01 *4* or −4.8 *+8−11*, the latter is excluded by comparison to RUL. Mult.: D(+Q) from R(DCO) in ^{58}Ni(^{36}Ar,α2pγ), Δπ=no from level scheme.
		1182.8 *1*	73.4 *21*	6944.73	(16)$^+$	E2 b		5.38×10^{-4}	α(K)=0.000469 *7*; α(L)=5.27×10^{-5} *8*; α(M)=9.40×10^{-6} *14*; α(N)=1.429×10^{-6} *20*; α(O)=8.05×10^{-8} *12* B(E2)(W.u.)>13
8267.57	(17)$^-$	419.0 *1*	32 *5*	7848.47	17$^-$	M1+E2		0.0070 *12*	α(K)=0.0061 *10*; α(L)=0.00073 *14*; α(M)=0.000130 *25*; α(N)=2.0×10^{-5} *4*; α(O)=1.05×10^{-6} *14* δ: +1.0 *+5−3* or −0.7 *3*. Mult.: D(+Q) from R(DCO) in ^{58}Ni(^{36}Ar,α2pγ), Δπ=no from level scheme.
		1399.7 *2*	100 *5*	6868.26	15$^-$				
8609.4	(18)$^-$	761.0 *1*	100	7848.47	17$^-$	(M1+E2) c		1.48×10^{-3} *3*	α(K)=0.001300 *21*; α(L)=0.000148 *4*; α(M)=2.64×10^{-5} *7*; α(N)=4.01×10^{-6} *10*; α(O)=2.25×10^{-7} *4* δ: 0.0 *3* or −5.0 *+5−7*.
8931.3		321.9 *1*	100	8609.4	(18)$^-$				
8968.1	(19)	358.6 *1*	100	8609.4	(18)$^-$	D+Q c			δ: −0.12 *6* or −3.1 *+6−8*.
9336.4	(19)$^-$	727.1 *1*	100 *6*	8609.4	(18)$^-$	(M1+E2)		0.00165 *4*	α(K)=0.00145 *3*; α(L)=0.000165 *6*; α(M)=2.95×10^{-5} *10*; α(N)=4.49×10^{-6} *14*; α(O)=2.50×10^{-7} *4* δ: −0.21 *+11−14* or −2.4 *+7−9*. Mult.: D(+Q) from R(DCO) in ^{58}Ni(^{36}Ar,α2pγ), Δπ=no from level scheme.
		1487.7 *2*	65 *6*	7848.47	17$^-$				
9400.24	(20)$^+$	1272.9 *1*	100	8127.33	(18)$^+$	(E2) a		4.76×10^{-4}	α(K)=0.000401 *6*; α(L)=4.49×10^{-5} *7*; α(M)=8.01×10^{-6} *12*; α(N)=1.219×10^{-6} *17*; α(O)=6.90×10^{-8} *10*
9472.0	(20)$^+$	1344.7 *2*	100	8127.33	(18)$^+$	(E2) a		4.43×10^{-4}	α(K)=0.000358 *5*; α(L)=4.00×10^{-5} *6*; α(M)=7.13×10^{-6} *10*; α(N)=1.086×10^{-6} *16*; α(O)=6.16×10^{-8} *9*
9710.8		1583.5 *2*	100	8127.33	(18)$^+$				
9829.1	(20)$^-$	492.8 *1*	51.2 *23*	9336.4	(19)$^-$	M1+E2		0.0045 *5*	α(K)=0.0039 *4*; α(L)=0.00046 *6*; α(M)=8.2×10^{-5} *11*; α(N)=1.24×10^{-5} *16*; α(O)=6.7×10^{-7} *6* δ: −0.02 *5* or −4.6 *+9−13*. Mult.: D(+Q) from R(DCO) in ^{58}Ni(^{36}Ar,α2pγ), Δπ=no from level scheme.
		898 &	≈23	8931.3					

$^{88}_{42}Mo_{46}$-8

Adopted Levels, Gammas (continued)

γ(^{88}Mo) (continued)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π	Mult.@	α	Comments
9829.1	(20)$^-$	1219.7 *1*	100 *5*	8609.4	(18)$^-$	(E2)[a]	5.09×10^{-4}	α(K)=0.000439 *7*; α(L)=4.93×10^{-5} *7*; α(M)=8.79×10^{-6} *13*; α(N)=1.336×10^{-6} *19*; α(O)=7.54×10^{-8} *11*
10181.6		709.6& *2*	100	9472.0	(20)$^+$			
10203.7	(21)	374.6 *1*	100.0 *18*	9829.1	(20)$^-$	D+Q[c]		δ: −0.05 *3* or −4.0 *4*.
		1235.5 *1*	17.5 *18*	8968.1	(19)			
10358.3		154.6 *1*	100	10203.7	(21)			
11079.6	(22)$^+$	1679.3 *2*	100	9400.24	(20)$^+$	(E2)[a]	4.18×10^{-4}	α(K)=0.000230 *4*; α(L)=2.55×10^{-5} *4*; α(M)=4.55×10^{-6} *7*; α(N)=6.94×10^{-7} *10*; α(O)=3.96×10^{-8} *6*
11616.5	(23)	1257.9 *2*	19 *5*	10358.3				
		1413.1 *2*	100 *5*	10203.7	(21)	(E2)[a]	4.22×10^{-4}	α(K)=0.000324 *5*; α(L)=3.61×10^{-5} *5*; α(M)=6.43×10^{-6} *9*; α(N)=9.80×10^{-7} *14*; α(O)=5.56×10^{-8} *8*
x+1237.6	J1+2	1238.6 *4*	0.50# *7*	x	J1	Q[d]		
x+2579.7	J1+4	1342.07 *23*	0.90# *7*	x+1237.6	J1+2	Q[d]		
x+4060.4	J1+6	1480.70 *23*	1.00# *7*	x+2579.7	J1+4	Q[d]		
x+5693.9	J1+8	1633.45 *22*	1.00# *7*	x+4060.4	J1+6	Q[d]		
x+7489.4	J1+10	1795.50 *25*	1.00# *7*	x+5693.9	J1+8	Q[d]		
x+9451.6	J1+12	1962.2 *3*	0.65# *7*	x+7489.4	J1+10	Q[d]		
x+11585.0	J1+14	2133.4 *5*	0.30# *5*	x+9451.6	J1+12	(Q)[d]		
x+13891.6	J1+16	2306.5 *11*	0.15# *5*	x+11585.0	J1+14			
y+1458.6	J2+2	1459.6 *8*	0.85# *15*	y	J2			
y+3054.2	J2+4	1595.6 *7*	0.90# *15*	y+1458.6	J2+2			
y+4797.3	J2+6	1743.1 *5*	1.00# *20*	y+3054.2	J2+4			
y+6692.2	J2+8	1894.8 *5*	1.05# *20*	y+4797.3	J2+6			
y+8746.4	J2+10	2054.2 *9*	0.45# *15*	y+6692.2	J2+8			
y+10970.7	J2+12	2224.3 *16*	0.15# *10*	y+8746.4	J2+10			
z+1259.1	J3+2	1260.1 *12*	0.15# *15*	z	J3			
z+2641.7	J3+4	1382.6 *13*	0.95# *20*	z+1259.1	J3+2			
z+4164.6	J3+6	1522.9 *17*	0.85# *20*	z+2641.7	J3+4			
z+5834	J3+8	1668.9 *16*	0.95# *40*	z+4164.6	J3+6			
z+7651	J3+10	1817.8 *15*	1.15# *30*	z+5834	J3+8			
z+9627	J3+12	1975.3 *14*	1.10# *20*	z+7651	J3+10			
z+11761	J3+14	2134.7 *14*	1.05# *20*	z+9627	J3+12			
z+14058	J3+16	2297 *3*	0.35# *15*	z+11761	J3+14			
u+1417.6	J4+2	1418.6 *9*	0.90# *15*	u	J4			
u+2978.4	J4+4	1560.8 *10*	0.95# *15*	u+1417.6	J4+2			
u+4684.6	J4+6	1706.2 *9*	1.00# *15*	u+2978.4	J4+4			

$^{88}_{42}Mo_{46}$-9

Adopted Levels, Gammas (continued)

γ(^{88}Mo) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π
u+6543.5	J4+8	1858.8 *9*	1.00[#] *15*	u+4684.6	J4+6
u+8539.1	J4+10	1995.6 *14*	0.30[#] *10*	u+6543.5	J4+8
u+10628?	J4+12	2088.5[f] *20*	0.40[#] *10*	u+8539.1	J4+10

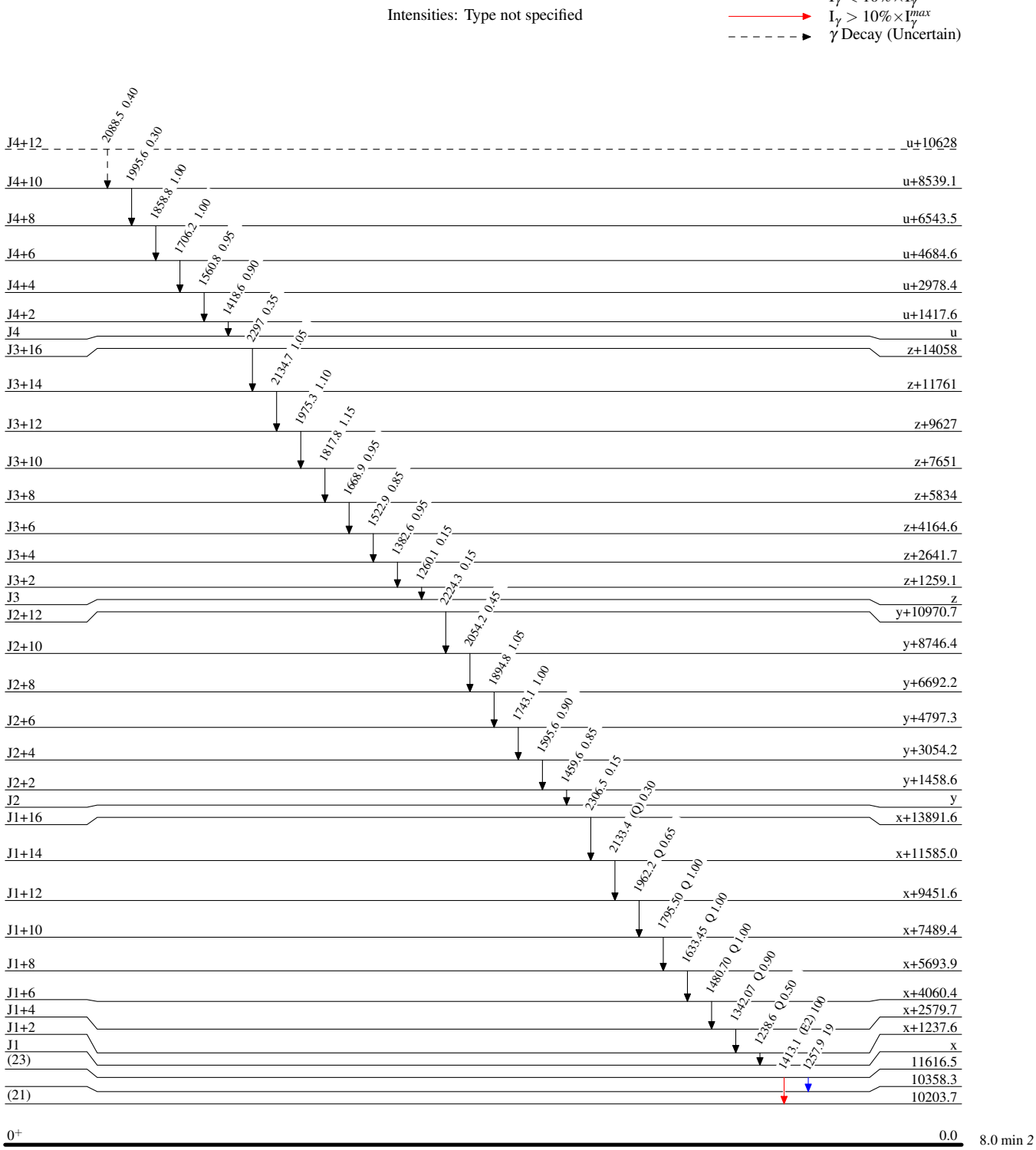
[†] From ^{58}Ni(^{36}Ar,α2pγ).
[‡] Relative branching ratios from ^{58}Ni(^{36}Ar,α2pγ), except where noted.
[#] For SD bands, values are relative intensities within each band, normalized to ≈1 for the strongest transition in the band.
[@] From γγ(θ)(DCO), γγ(lin pol) in ^{58}Ni(^{36}Ar,α2pγ) (2007An21), except where noted.
[&] Doublet transition.
[a] Stretched Q from R(DCO) in ^{58}Ni(^{36}Ar,α2pγ), E2 from assumed band structure (1992We02).
[b] Stretched Q from R(DCO) ^{58}Ni(^{36}Ar,α2pγ), M2 excluded by comparison to RUL.
[c] From R(DCO) measurements in ^{58}Ni(^{36}Ar,α2pγ) (1992We02,1994Ka20).
[d] From R(DCO) in ^{58}Ni(^{40}Ca,2α2pγ):SD.
[e] From γ(θ)(DCO) in ^{58}Ni(^{36}Ar,α2pγ) (1994Ka20).
[f] Placement of transition in the level scheme is uncertain.

$^{88}_{42}Mo_{46}$-10

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

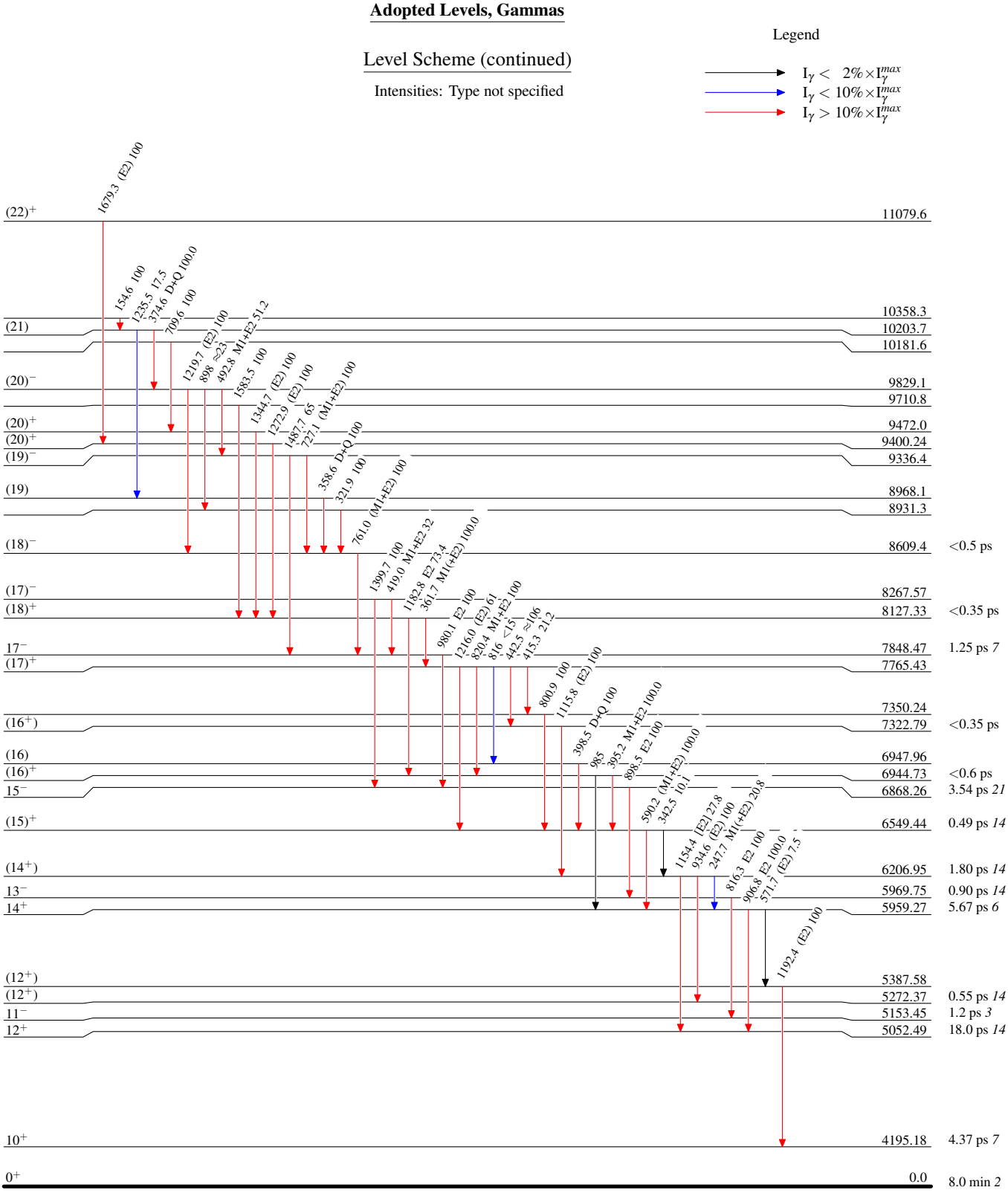


$^{88}_{42}Mo_{46}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

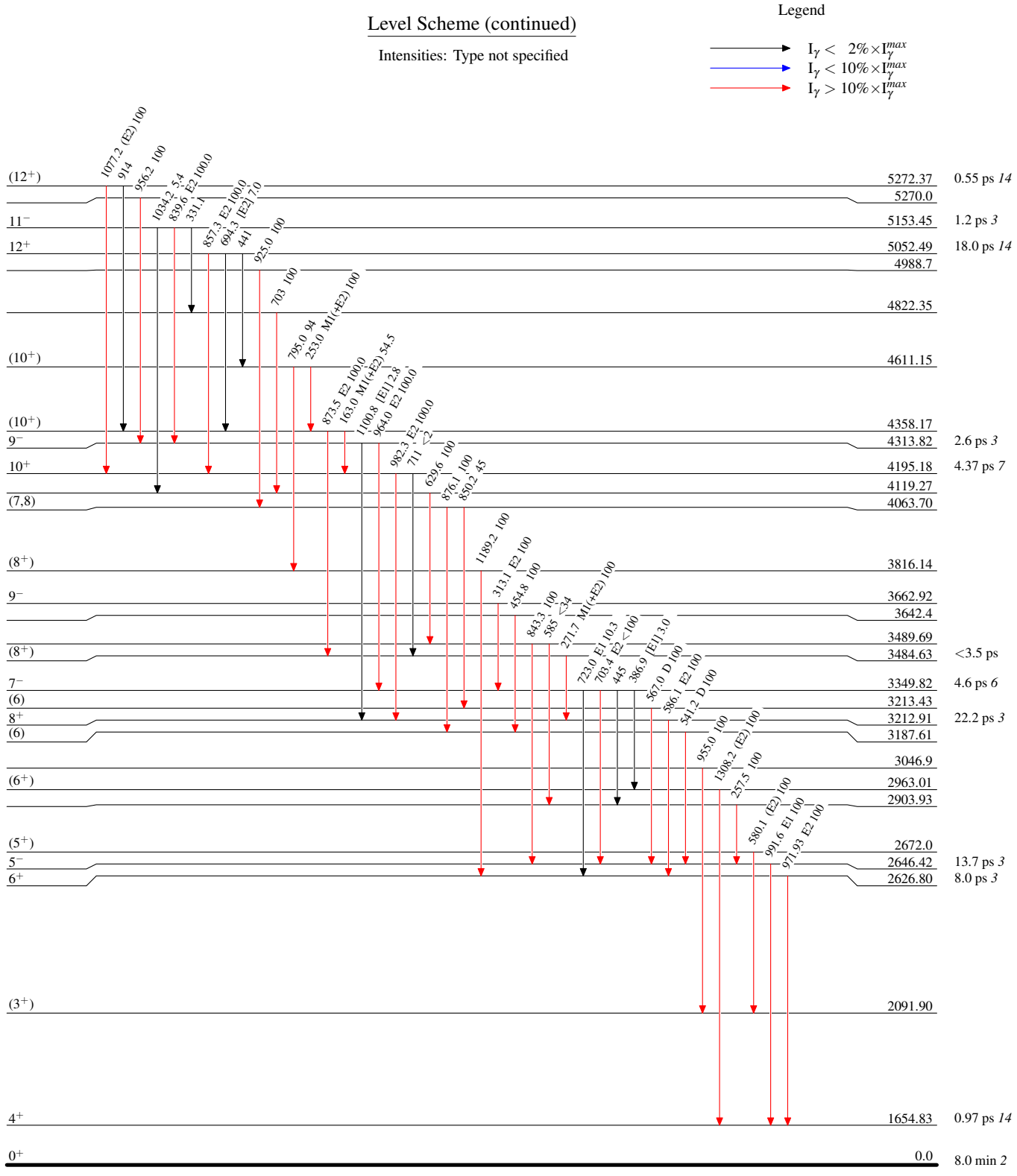


$^{88}_{42}Mo_{46}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

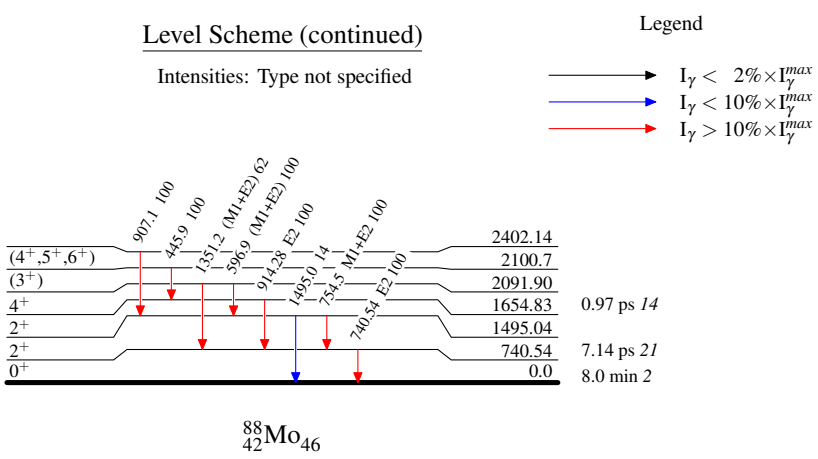


$^{88}_{42}Mo_{46}$

Adopted Levels, Gammas

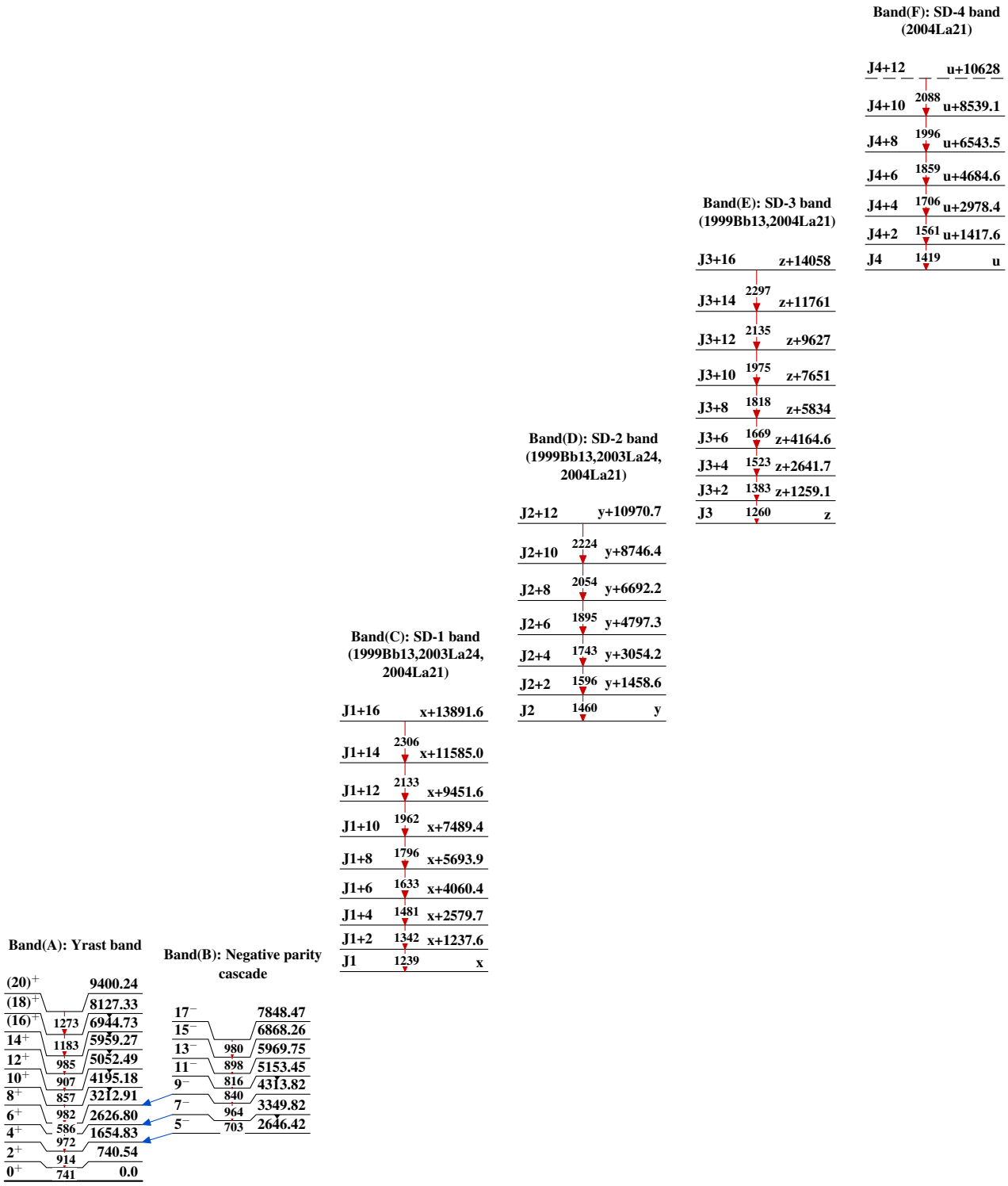
Level Scheme (continued)

Intensities: Type not specified

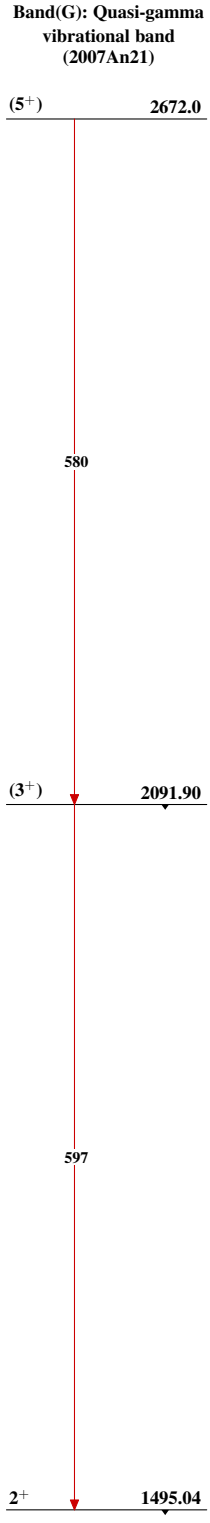


$^{88}_{42}Mo_{46}$

Adopted Levels, Gammas



Adopted Levels, Gammas (continued)



$^{88}_{42}Mo_{46}$