Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huo Junde	NDS 110,2689 (2009)	31-Mar-2007

Q(β^-)=−3742.3 *18*; S(n)=12053.5 *19*; S(p)=6559.9 *4*; Q(α)=−9153.0 *11* 2012Wa38
Note: Current evaluation has used the following Q record −3742.6 1712053.8 *196559.9* 3-9155.9 *13* 2003Au03.

^{53}Mn Levels

Cross Reference (XREF) Flags

A	^{53}Fe ε decay	G	^{52}Cr(d,n)	M	^{56}Fe(p,α)
B	(HI,xnγ)	H	^{52}Cr(^{3}He,d), (^{3}He,dγ)	N	^{52}Cr(^{12}C,^{11}B), (^{14}N,^{13}C)
C	^{50}Cr(α,p)	I	^{52}Cr(^{7}Li,^{6}He)	O	^{52}Cr(^{13}C,^{12}B)
D	^{50}Cr(α,pγ)	J	^{53}Cr(p,n), (p,nγ)	P	^{52}Cr(α,t)
E	^{51}V(α,2nγ)	K	^{54}Fe(d,^{3}He)	Q	^{53}Cr(^{3}He,t)
F	^{52}Cr(p,γ) E=res	L	^{55}Mn(p,t)	R	Fe(μ^-,xnγ)

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	7/2$^-$	3.7×10^6 y *4*	ABCDEFGHIJKLMNOPQR	%ε=100 g=1.435 *2* (2000Sp08) μ=5.024 *7* (2005St24). J$^\pi$: L(^{3}He,d)=L(d,n)=L(d,^{3}He)=3. T$_{1/2}$: from 1971Ho24. Others: 2.9×10^6 y *12* (1971Ma18), 10.8×10^6 y *45* (1969Ho35), 1.9×10^6 y *5* (1965Ka10).
377.89 *7*	5/2$^-$	117 ps *6*	AB DEFGH JKLM R	μ=+3.3 *3* (2005St24) XREF: K(370)L(380). μ: Other: μ=2.9 *4* (1974Ke11). J$^\pi$: L(p,t)=0, L(^{3}He,d)=L(d,^{3}He)=(3). T$_{1/2}$: from (p,nγ) (1966Go19).
1289.83 *11*	3/2$^-$	0.55 ps *4*	A CD FGHIJK MN R	T$_{1/2}$: from (α,pγ) (1974Ge07). Other: >0.13 ps (p,n). J$^\pi$: L(^{3}He,d)=L(d,n)=L(d,^{3}He)=1, J dependence of $\sigma(\theta)$ in (α,p).
1441.15 *10*	11/2$^-$	0.60 ps *8*	B DEF J M	T$_{1/2}$: from (α,pγ) (1974Ge07). Others: 0.14 ps *+21−7* (p,n), 0.7 ps *2* (1978Li21) (HI,xnγ). J$^\pi$: γ to 7/2$^-$ is ΔJ=2, E2.
1620.12 *10*	9/2$^-$	0.48 ps *6*	A DEF JKLM	T$_{1/2}$: from 1974Ge07 (α,pγ). Other: 0.21 ps *+70−14* (1973Ch25) (p,nγ). J$^\pi$: γ to 7/2$^-$ is M1+E2, γ to 5/2$^-$ is ΔJ=2, E2.
2273.90 *13*	5/2$^-$	0.25 ps *5*	A D F J LM	T$_{1/2}$: from 1974Ge07 (α,pγ). Others: 0.22 ps *+34−11* (1973Ch25) (p,nγ), >70 fs (p,γ). J$^\pi$: L=0+2 component in (p,t).
2407.03 *14*	3/2$^-$	0.11 ps *4*	CD FGHIJK MNOP	XREF: C(2413)G(2360)P(2400). T$_{1/2}$: from 1979Fi08 (α,pγ). Others: ≈0.084 ps (1975Sc08) (p,γ), 0.08 ps *+10−4* (1973Ch25) (p,nγ). J$^\pi$: γ to 7/2$^-$ is ΔJ=2, E2; L(^{3}He,d)=L(d,n)=L(d,^{3}He)=1.
2448.1 *8*			F	
2562.99 *13*	13/2$^-$	10.7 ps *13*	B DE M	T$_{1/2}$: from 1974Br04 (HI,xnγ). Other: 14 ps *+6−4* (1974En04) (α,pγ). J$^\pi$: γ to 11/2$^-$ is ΔJ=1, M1+(E2), L(p,t)=2.
2573.10 *17*	7/2$^-$	0.06 ps *2*	CD F JKLM	XREF: C(2578)L(2560). T$_{1/2}$: from 1979Fi08 (α,pγ). Others: 0.029 ps *+42−25* (1973Ch25) (p,nγ), ≈0.042 ps (1970Ma25) (p,γ). J$^\pi$: γ to 7/2$^-$ is ΔJ=0, D+Q. L(p,t)=2.
2671.17 *20*	1/2$^-$	21 fs *+17−10*	CD FGHIJ M OP	XREF: C(2684)G(2600)I(2680)O(2680)P(2690). T$_{1/2}$: from (1970Ma25) (p,γ). Other: 0.07 ps *+9−5* (p,nγ).

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Adopted Levels, Gammas (continued)

^{53}Mn Levels (continued)

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
				Jπ: L(^{3}He,d)=L(d,n)=1, J dependence of σ(θ) in (α,p).
2686.16 *15*	7/2−	0.05 ps *+4−2*	A F J LM	XREF: L(2680). $T_{1/2}$: from (p,ng). Jπ: γ to 3/2− is ΔJ=2, E2; log *ft*=5.1 via 7/2− parent. L(p,t)=2+4.
2693.29 *20*	15/2−	2.7 ps *4*	B DE	$T_{1/2}$: from (HI,xnγ). Other: 0.04 fs *3* (α,pγ). Jπ: γ to 11/2− is ΔJ=2, E2; γ to 13/2− is ΔJ=1, M1+E2.
2697.71 *18*	11/2−		D M	Jπ: γ to 11/2− IS ΔJ=0, M1+E2; γ to 9/2− is ΔJ=1, M1.
2706.92 *22*	1/2+	0.8 ps *3*	D F H JK M R	$T_{1/2}$: from 1972Go10 (α,pγ). Other: >70 fs (p,γ). Jπ: L(^{3}He,d)=L(d,^{3}He)=0.
2761.0 *6*			F	
2875.96 *15*	3/2−	41 ps *+14−11*	D F HIJ M	$T_{1/2}$: from 1975Sc08 (p,γ). Others: 0.11 ps *2* (1974Ge07) (α,pγ), 0.046 ps *+63−30* (1973Ch25) (p,nγ). Jπ: L(^{7}Li,^{6}He)=L(^{3}He,d)=1, γ to 7/2−.
2912.88 *20*	3/2−	58 fs *+35−24*	D FG JK M	XREF: G(2900)K(2900). $T_{1/2}$: from 1975Sc08 (p,γ). Jπ: γ to 5/2− ΔJ=1; γ to 3/2− is ΔJ=0, D+Q. L(d,n)=1, L(d,^{3}He)=(1).
2946.9 *4*	(9/2)−	0.06 ps *2*	A D J LM	XREF: L(2920). $T_{1/2}$: from 1974Ge07 (α,pγ). Jπ: log *ft*=5.1 via 7/2− parent, γ to 7/2− ΔJ=1, D+Q, yield in (p,nγ). L(p,t)=2+4.
2967.3 *8*			F	
2978.1 *8*			F	
3007.13 *18*	(5/2)+	>0.84 ps	D F H JK M	Jπ: L((d,^{3}He)=L(^{3}He,d))=2; γ assumed dipole to 7/2−. $T_{1/2}$: from 1974Ge07 (α,pγ).
3060 *15*	(5/2−,7/2−)		I	Jπ: L(^{7}Li,^{6}He)=3.
3097.23 *17*	3/2−	0.053 ps *+46−21*	F H J M	$T_{1/2}$: from (1975Sc08) (p,γ). Jπ: L(^{3}He,d)=1, M1+E2 to 5/2−.
3101.9 *3*		0.074 ps *13*	D M	$T_{1/2}$: from 1974Ge07 (α,pγ).
3127.37 *18*	(5/2−)	0.11 ps *2*	A CD F H JKLM	XREF: C(3110)K(3140). $T_{1/2}$: from 1974Ge07 (α,pγ). Jπ: log *ft*=4.5 via 7/2− parent, J dependence of σ(θ) in (α,p). L(^{3}He,d)=3, L(d,^{3}He)=(3). L(p,t)=4.
3182.08 *17*	(3/2−,5/2−)	0.07 ps *2*	D F J M	$T_{1/2}$: from 1974Ge07 (α,pγ). Other: 0.029 ps *7* (1975Sc08) (p,γ). Jπ: D+Q γ to 3/2−, 5/2−.
3199.94 *20*	5/2−[c]		F J LM	XREF: L(3230). L(p,t)=2.
3248.9 *10*	(9/2)−		A J M	Jπ: log *ft*=4.8 via 7/2− parent, no γ to 5/2−, 3/2−.
3381.10 *23*	7/2−[c]		F JK M	XREF: K(3370). Jπ: L(p,t)=4.
3426.0 *4*	13/2−	0.7 ps *+4−3*	DE LM	XREF: L(3410). $T_{1/2}$: from 1979Fi08 (α,pγ). Jπ: γ to 11/2− is ΔJ=1, M1+E2. No γ to J<11/2.
3439.4 *3*	15/2−	0.14 ps *2*	B DE M	$T_{1/2}$: from (HI,xnγ). Other: 0.09 ps *+4−3* (α,pγ), 0.06 ps *3* (α,2nγ). Jπ: γ to 15/2− is ΔJ=0, M1+E2.

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Adopted Levels, Gammas (continued)

^{53}Mn Levels (continued)

E(level)[†]	J$^{\pi}$	T$_{1/2}$	XREF	Comments
3466.32 *23*	(3/2$^-$,5/2,7/2$^-$)[c]		F J M	
3480.0 *3*	1/2$^-$		C FGHIJK M	XREF: C(3460)G(3420). T$_{1/2}$: contradictory values from (p,γ): 27 fs *+21−10* (1975Sc08), <4 fs (1970Ma25). J$^{\pi}$: L(^{3}He,d)=L(d,n)=1, J dependence of $\sigma(\theta)$ in (α,p).
3532.28 *24*	(3/2$^-$,5/2,7/2$^-$)[c]		F H J M	
3555.2 *11*	(11/2$^-$)		C J M	J$^{\pi}$: J dependence of $\sigma(\theta)$ in (α,p).
3595.2 *4*	(5/2$^-$,7/2$^-$)[c]		F H JK M	XREF: K(3560). J$^{\pi}$: L(d,^{3}He)=(3).
3624.8 *12*	$^+$		J LM	XREF: L(3590). L(p,t)=2+4.
3666.19 *24*	5/2$^-$		C F HIJK MNO	J$^{\pi}$: L(^{3}He,d)=3, L(d,^{3}He)=(3), J dependence of $\sigma(\theta)$ in (α,p).
3704.9 *8*	(5/2$^-$,7/2$^-$)		D H J M	XREF: D(3705)J(3713). J$^{\pi}$: L(^{3}He,d)=L(d,^{3}He)=(3).
3709.7 *5*	7/2$^-$[c]		F	J$^{\pi}$: L(^{3}He,d)=(3).
3727.6 *13*			H J M	
3784.3 *13*	$^+$		JKLM	XREF: L(3770). L(p,t)=2+4.
3850.0 *11*			J M	
3898.09 *23*	1/2$^-$		C FGHIJ M	XREF: G(3930). J$^{\pi}$: L(^{3}He,d)=L(d,n)=1, J dependence of $\sigma(\theta)$ in (α,p).
3955.0 *3*	7/2$^-$[c]		F M	
3960.1 *3*	(5/2$^-$,7/2$^-$)		JK M	J$^{\pi}$: L(d,^{3}He)=(3).
3999.1 *4*	(3/2$^-$,5/2,7/2$^-$)[c]		F J M	
4021.3? *14*			M	
4062.2? *3*	(7/2$^-$)		C F I	XREF: C(4067)I(4070). J$^{\pi}$: J dependence of $\sigma(\theta)$ in (α,p), L(^{3}He,d)=(1,3).
4066.21 *19*			F Hi M	XREF: i(4070).
4069.2 *8*	3/2$^+$,5/2$^+$		F iJk	XREF: k(4057). J$^{\pi}$: L(d,^{3}He)=2.
4083.0 *4*	(3/2,5/2,7/2/2$^-$)[c]		Jk M	
4149.0 *5*		0.05 ps *1*	D M	T$_{1/2}$: from 1979Fi08 (α,pγ).
4168.7 *11*			D M	
4238.0 *8*			D M	XREF: M(4239).
4266.3 *3*	(5/2$^-$,7/2$^-$)[b]		F H M	J$^{\pi}$: L(^{3}He,d)=(3).
4281.5 *15*			M	
4300.1 *4*	5/2$^-$,7/2$^-$[b]		F HI M	J$^{\pi}$: L(^{3}He,d)=3.
4310.0 *8*			CD	
4348.2 *4*	1/2$^-$,3/2$^-$[b]		FGH M	XREF: G(4350). J$^{\pi}$: L(d,n)=1, L(^{3}He,d)=(1).
4362.0 *6*	1/2$^-$,3/2,5/2,7/2$^-$[c]		F M	
4384.5 *3*	17/2$^-$	0.16 ps *+6−5*	B DE	T$_{1/2}$: from (α,2nγ). Other: < 87 fs (HI,xnγ). J$^{\pi}$: γ to 15/2- 3439-keV level is ΔJ=1, D.
4399.6 *13*			M	
4427.81 *23*	3/2$^-$		F HI M	XREF: I(4440). J$^{\pi}$: J^{π}=3/2$^-$ from L=1 and J dependence of $\sigma(\theta)$ in (^{7}Li,^{6}He) for E=4440 *15*. L(^{3}He,d)=1.
4438.3 *8*	3/2$^-$		I M	XREF: I(4440). J$^{\pi}$: J^{π}=3/2$^-$ from L=1 and J dependence of $\sigma(\theta)$ in (^{7}Li,^{6}He) for E=4440 *15*.

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Adopted Levels, Gammas (continued)

^{53}Mn Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
4456.3 *16*			M	
4522.1 *8*	$(3/2^+,5/2^+)$		F K M	XREF: K(4530). Jπ: L(^{3}He,d)=L(d,^{3}He)=(2).
4552.1 *5*	$(5/2^-,7/2^-)^b$		F H M	Jπ: L(^{3}He,d)=(3).
4560.1 *7*	$3/2^-,5/2^c$		C F M	Jπ: L(^{3}He,d)=(3).
4572.6 *6*	$1/2^-,3/2^-{}^b$		F HI M	Jπ: L(^{3}He,d)=1.
4596.0 *15*			M	
4635.1 *5*	$(5/2^-,7/2^-)^b$		C F H M	XREF: C(4626). Jπ: L(^{3}He,d)=(3).
4650.1 *11*			M	
4719.2 *5*	$1/2^-$		FGHI M	XREF: G(4710). Jπ: L(d,n)=L(^{3}He,d)=1 and J dependence of $\sigma(\theta)$ in (^{7}Li,^{6}He).
4763.8 *6*	$(3/2^-,5/2,7/2^-)^c$		F M	
4780.3 *4*	$(1/2^-,3/2^-)^b$		C F H M	Jπ: L(^{3}He,d)=(1).
4793.2 *5*	$(3/2^-,5/2,7/2^-)^c$		F M	
4806.2 *16*			M O	XREF: O(4800).
4838.4 *15*	$(5/2^-,7/2^-)^b$		C K M	Jπ: L(d,^{3}He)=(3).
4845.2 *16*			M	
4856.5 *11*			B E M	
4907.4 *16*			M	
4929.0 *16*	$5/2^-,7/2^-{}^b$		H MN	XREF: N(4900). Jπ: L(^{3}He,d)=3.
4944.7 *15*			M	
4955.3 *6*	$1/2^-$		C GHI M	XREF: G(4950). Jπ: L(^{3}He,d)=L(d,n)=1, J dependence of $\sigma(\theta)$ in (^{7}Li,^{6}He).
4988.1 *6*	$1/2,3/2^-,5/2^-{}^c$		F M	
5007.3 *15*			M	
5028.7 *15*	$1/2^+$		c K M	XREF: K(5020). Jπ: L(d,^{3}He)=0.
5044.3 *11*			c M	
5053.9 *15*			M	
5081.4 *15*	$(1/2^-,3/2^-)$		HI M	Jπ: From L(^{3}He,d)=(1) for 5081+5096.
5094.6 *6*	$(1/2^-,3/2^-)$		C FGH M	XREF: G(5120). Jπ: From L(^{3}He,d)=(1) for 5081+5096. L(d,n)=1.
5155[#] *10*			C	
5240[#] *10*	$(5/2^-,7/2^-)$		C K	XREF: K(5210). Jπ: L(d,^{3}He)=(3).
5316.3 *5*			F H K	XREF: H(5320)K(5300). Jπ: L(d,^{3}He)=(3) for 5300 *40*. L(^{3}He,d)=(1) for 5320 *3*.
5370.8 *5*	≥9/2		C F	XREF: C(5356). Jπ: J dependence of $\sigma(\theta)$ in (α,p),
5434.3 *5*	$(7/2^-)$		C F	XREF: C(5446). Jπ: J dependence of $\sigma(\theta)$ in (α,p), γ's to $3/2^-$, $5/2^-$, $7/2^-$.
5476 *3*			H	
5490.8 *5*	$1/2^-$		C F HI	Jπ: From L(^{3}He,d)=(1) for 5476+5494 and J dependence of $\sigma(\theta)$ in (α,p).
5546[‡] *20*	$3/2^+,5/2^+$		K	Jπ: L(d,^{3}He)=2.
5578.7 *6*			F H	
5614.9 *5*	$(19/2^-)$	0.12 ps *6*	B E	$T_{1/2}$: from (α,2nγ). Other: <49 fs (HI,xnγ). Jπ: γ to $17/2^{(-)}$ is ΔJ=1, M1+E2, γ to $15/2^-$ is ΔJ=2, E2.
5705 *15*			H K	

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Adopted Levels, Gammas (continued)

^{53}Mn Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
5801 *6*			H	
5814[#] *10*	(11/2⁻)		C	Jπ: J dependence of σ(θ) in (α,p).
5860[@] *15*	3/2⁺,5/2⁺		c I K	XREF: c(5881). Jπ: L(d,^{3}He)=2.
5894 *3*			c H	XREF: c(5881). Jπ: L(^{3}He,d)=(0,1).
5954 *3*			H	
5998.1 *5*	3/2⁻,5/2,7/2⁻[c]		F	
6005 *6*			C HI	
6040[‡] *40*	3/2⁺,5/2⁺		K	Jπ: L(d,^{3}He)=2.
6084.5 *15*			B	
6119[#] *10*			C	
6150 *15*			HI	
6177[#] *10*	3/2⁺,5/2⁺		C K	XREF: K(6180). Jπ: L(d,^{3}He)=2.
6240 *15*			C HI	
6320 *15*	3/2⁺,5/2⁺		C HI K	XREF: C(6342)K(6330). Jπ: L(d,^{3}He)=2.
6410 *15*			C HI	XREF: I(6430).
6490 *15*			H	
6520[‡] *40*	(1/2⁺)		K	Jπ: L(d,^{3}He)=(0).
6533.9 *6*	21/2⁻	0.32 ps *18*	B E I	$T_{1/2}$: from (HI,xnγ). Other: 0.08 ps *4* (α,2nγ). Jπ: γ to 17/2⁻ is ΔJ=2, E2.
6540 *15*	(7/2⁺,9/2⁺)		C H O	Jπ: L(^{3}He,d)=(4).
6601 *10*	3/2⁺,5/2⁺		C K N	XREF: K(6640). Jπ: L(d,^{3}He)=2.
6730 *15*			C H	XREF: C(6744).
6870 *15*	3/2⁺,5/2⁺		C H K	XREF: K(6880). Jπ: L(d,^{3}He)=2.
6977 *5*	3/2⁻[a]		C HI Q	XREF: C(6990)I(6950). E(level): IAS of ^{53}Cr(g.s.) (see 1976Ga20) (^{3}He,d). Jπ: L(^{3}He,d)=1, IAS of ^{53}Cr(g.s., 3/2⁻)).
7004.7 *6*	(23/2⁻)	0.83 ps *+17−14*	B E	$T_{1/2}$: from (α,2nγ). Other: 1.29 ps *18* (HI,xnγ). Jπ: γ to 21/2⁻ is ΔJ=1, M1+E2 and linear polarization of 471γ in (HI,xnγ) (1979Gu10).
7028 *8*	7/2⁺,9/2⁺[b]		H	Jπ: L(^{3}He,d)=4.
7094 *8*	5/2⁻,7/2⁻[b]		C HI	XREF: C(7083). Jπ: L(^{3}He,d)=3.
7150 *8*	3/2⁺,5/2⁺[b]		H	Jπ: L(^{3}He,d)=2.
7220[@] *15*			I	
7277 *5*	5/2⁻,7/2⁻		H	Jπ: L(^{3}He,d)=3.
7360[‡] *40*	3/2⁺,5/2⁺		K	Jπ: L(d,^{3}He)=2.
7385 *8*	5/2⁻,7/2⁻[b]		H	Jπ: L(^{3}He,d)=3.
7420 *5*	1/2⁻,3/2⁻[b]		H	Jπ: L(^{3}He,d)=1.
7461.0 *3*			F	
7473 *8*			H	
7494.5 *3*			F	
7507 *8*	5/2⁻,7/2⁻[b]		H	
7528.2 *3*			F	
7546.7 *10*	1/2⁻[a]		F HI	XREF: I(7540). E(level): IAS of 1/2⁻ 564 level in ^{53}Cr (see 1976Ga20)

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Adopted Levels, Gammas (continued)

^{53}Mn Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
				(^{3}He,d). Jπ: L(^{3}He,d)=1, IAS of 1/2⁻ 564 level in ^{53}Cr.
7574[#] *10*			C	
7628 *8*	(1/2⁻,3/2⁻)[b]		H O	XREF: O(7600).
7667 *8*			H	
7710 *8*	5/2⁻,7/2⁻[b]		H	
7758 *8*	(5/2⁻,7/2⁻)[b]		HI	XREF: I(7770).
7810 *8*	(1/2⁻,3/2⁻)[b]		H	
7899[#] *10*			C	
7917.8[&] *3*	5/2⁻		F	
7921.2 *14*	5/2⁻[c]		F	
7928.4 *3*	5/2⁻		F H	XREF: H(7935). Jπ: M1+E2 γ's to 7/2⁻,5/2⁻ and 3/2⁻.
7935.4[&] *3*	5/2⁻,7/2⁻[b]		F H	
7961.0[&] *3*			F	
7964.5 *3*	(25/2⁻)	0.17 ps *+6−4*	B EF	XREF: E(7961). $T_{1/2}$: from (α,2nγ). Other: <0.26 ps (HI,xnγ). Jπ: from σ(E) in (HI,xnγ).
7977 *3*	3/2⁻[c]		F	
7994.3[&] *3*			F	
8007.1 *3*	5/2⁻[c]		C F HI	XREF: C(8016)H(8000)I(8010).
8012.0[&] *3*			F	
8015.9[&] *3*			F	
8025.7 *3*	5/2⁻[c]		F H	XREF: H(8027). Jπ: L^{3}He,d)=3.
8028.5 *15*	5/2⁻		F H	XREF: H(8027). Jπ: D(Q) γ's to 7/2⁻ and 3/2⁻, L(^{3}He,d)=3.
8038.5 *3*			F P	
8047.3 *3*			F P	
8053.2 *3*	5/2⁻[c]		F H	XREF: H(8050). IAS of 5/2⁻ 1006 level in ^{53}Cr.
8057.1 *3*	5/2⁻[c]		F	
8065.0[&] *3*			F	
8071.8[&] *3*			F	
8076.3[&] *3*			F	
8082.6 *3*	5/2⁻[c]		F	
8087.5 *3*	5/2⁻[c]		F	
8095.4 *3*	3/2 to 7/2⁻[c]		F	
8100.3[&] *3*			F	
8108.1[&] *3*			F	
8117.9[&] *3*			F	
8121.9[&] *3*			F H	XREF: H(8129).
8132.7[&] *3*			F H	XREF: H(8129).
8134.6 *3*	3/2⁻[c]		F	
8138.1 *16*	3/2⁻		F H	XREF: H(8129). Jπ: D+Q γ's to 3/2⁻ and 1/2, γ(θ) in (p,γ).
8157.2 *3*	5/2⁺		F K	XREF: K(8150). Jπ: L(d,^{3}He)=2, γ(θ) in (p,γ).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{53}Mn Levels (continued)

E(level)[†]	J^π	XREF	Comments
8176.8 *3*	$3/2^-$,$5/2^-$[c]	F	
8183.7[&] *3*		F	
8188.6 *3*	$1/2^-$,$3/2^-$[b]	F H	
8191.5[&] *3*		F	
8197.4[&] *3*		F	
8214.1[&] *3*		F	
8219.0[&] *3*		F	
8229.8[&] *3*		F	
8240.6[&] *3*		F	
8247.4 *3*	$3/2^-$,$5/2^-$[c]	F	
8251.0 *3*	5/2,3/2	F	J^π: D(Q) γ's to $5/2^-$, $3/2^-$.
8262.9 *3*	$5/2^-$	F	J^π: D+Q γ's to $5/2^-$ and $7/2^-$, D to $3/2^-$.
8267.1 *3*	$(3/2^-,5/2^-)$[c]	F	
8271.0[&] *3*		F	
8273.9[&] *3*		F	
8290.6[&] *3*		F	
8293.8 *3*	$3/2^-$	F	J^π: D+Q γ's to $1/2^-$, $3/2^-$, 5/2; Q to $7/2^-$, $\gamma(\theta)$ in (p,γ).
8302.4 *3*	$5/2^-$[c]	F	
8312.2[&] *3*		F	
8320.1[&] *3*		F	
8325.9 *3*	$7/2^-$[c]	F	IAS of $7/2^-$ 1290 level in ^{53}Cr.
8329.0 *3*	5/2	F	J^π: D(Q) γ's to $3/2^-$, $5/2^-$ and $7/2^-$, $\gamma(\theta)$ in (p,γ).
8335.7 *3*	$3/2^-$[c]	F	
8346.5[&] *3*		F	
8348.5[&] *3*		F	
8351.4[&] *3*		F	
8355.4[&] *3*		F	
8357.3[&] *3*		F	
8374.0[&] *3*		F	
8379.9[&] *3*		F	
8394.6[&] *3*		F	
8399.5 *3*	$(3/2^-,5/2^-)$[c]	F	
8402.5 *3*	$3/2^-$[c]	F	
8406.4[&] *3*		F	
8420.1 *3*	$3/2^-$[c]	F H	
8425.1 *3*	$3/2^-$	F H	XREF: H(8421). J^π: M1+E2 γ's to $5/2^-$ and L(^{3}He,d)=1.
8432.8[&] *3*		F	
8442.7[&] *3*		F	
8450.4[&] *3*		F	
8453.5 *3*	$5/2^{(+)}$[c]	F	
8459.4[&] *3*		F	
8466.2[&] *3*		F	
8477.0[&] *3*		F	
8482.9 *3*	$3/2^{(-)}$[c]	F	
8488.8[&] *3*		F	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{53}Mn Levels (continued)

E(level)[†]	Jπ	XREF	Comments
8493.7 *3*	7/2−[c]	F	IAS of 7/2− 1290 level in ^{53}Cr, see 1991Di07.
8500.6 *3*	(3/2−,5/2)[c]	F	
8505.5 *3*	7/2−[c]	F	IAS of 7/2− 1537 level in ^{53}Cr, see 1991Di07.
8513.3 *3*	3/2−,5/2−[c]	F	E(level): doublet with E=8516 level.
8515.3 *3*	7/2−[c]	F H	E(level): doublet with E=8514 level. IAS of 7/2− 1537 level in ^{53}Cr, see (p,γ) and (^{3}He,d).
8519.2 *3*	(3/2+,5/2+)	F K	Jπ: L(d,^{3}He)=(2).
8534.9[&] *3*		F	
8538.8[&] *3*		F	
8544.7 *3*		F	Jπ: 1/2 to 5/2 and 7/2−, 9/2+ (1991Di07).
8547.7[&] *3*		F	
8555.5[&] *3*		F	
8558.5 *3*	(3/2−,5/2−)[c]	F	
8563.4 *3*	(3/2−,5/2,7/2−)[c]	F H	XREF: H(8562).
8573.2[&] *3*		F	
8579.1[&] *3*		F	
8592.8[&] *3*		F	
8595.7[&] *3*		F	
8607.5 *3*	(3/2−,5/2−)[c]	F H	
8608.5[&] *3*		F H	
8611.4 *3*	(3/2−,5/2,7/2−)[c]	F	
8623.2[&] *3*		F	
8632.1[&] *3*		F	
8637.0[&] *3*		F	
8643.8[&] *3*		F	
8647.7[&] *3*		F	
8652.7 *3*	(3/2−)[c]	F	
8663.4[&] *3*		F H	XREF: H(8660).
8668.4[&] *3*		F	
8673.3 *3*	(3/2−)[c]	F	
8683.1[&] *3*		F	
8690.9 *3*	(3/2−,5/2,7/2−)[c]	F	
8702.7[&] *3*		F	
8705.6[&] *3*		F	
8712.5 *3*	(3/2−,5/2,7/2−)[c]	F	
8719.4[&] *3*		F H	XREF: H(8722).
8728.2[&] *3*		F	
8731.1 *3*	5/2−[c]	F	
8743.9 *3*	(3/2−,5/2,7/2−)[c]	F	
8752.7[&] *3*		F	
8755.7[&] *3*		F	
8760.6[&] *3*		F	
8768.4[&] *3*		F	
8784.1 *3*	(3/2−,5/2,7/2−)[c]	F	
8790.0[&] *3*		F	
8795.9[&] *3*		F	

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Adopted Levels, Gammas (continued)

^{53}Mn Levels (continued)

E(level)[†]	Jπ	XREF	Comments
8802.8[&] 3		F	
8807.7 3	(3/2⁻,5/2,7/2⁻)[c]	F	
8812.6[&] 3		F	
8816.5 3	5/2[c]	F	
8821.4[&] 3		F	
8824.4[&] 3		F	
8827.3[&] 3		F	
8834.2[&] 3		F	
8837.1 3	5/2[c]	F	
8845.0 3	(3/2⁻,5/2⁺)[c]	F	
8850.8[&] 3		F	
8859.7 3	(3/2⁻,5/2⁺)[c]	F	
8863.6 3	5/2[c]	F	
8867.5[&] 3		F	
8879.3 3	5/2[c]	F H	XREF: H(8883).
8889.1[&] 3		F	
8894.0[&] 3		F	
8897.9[&] 3		F	
8900.9 3	(3/2⁻,5/2,7/2⁻)[c]	F	
8911.7[&] 3		F	
8918.5 3	(3/2⁻,5/2⁺)[c]	F	
8921.5 3	(3/2⁻,5/2,7/2⁻)[c]	F	
8923.4 3	7/2⁻[c]	F	
8924.4 3	5/2⁻,7/2⁻[c]	F	
8936.2 3	5/2⁻[c]	F	
8941.1[&] 3		F	
8945.0 3	5/2,7/2⁻[c]	F	IAS of 5/2⁻ 1974 level in ^{53}Cr, see 1991Di07.
8952.9 3	(5/2⁻,7/2⁻)[c]	F	IAS of 5/2⁻ 1974 level in ^{53}Cr, see 1991Di07.
8959.7[&] 3		F	
8965.6[&] 3		F	
8972.2 3	(3/2⁻,5/2,7/2⁻)[c]	F	
8977.4 3	(3/2⁻,5/2,7/2⁻)[c]	F	
8981.3 3	(3/2⁺,5/2⁺)[c]	F H	Jπ: π from L(^{3}He,d)=(2).
8985.3[&] 3		F	
8993.1 3	3/2⁻,5/2[c]	F	
8996.1 3	(5/2⁻,7/2)[c]	F	
9002.9 3	(3/2⁻,5/2,7/2⁻)[c]	F	
9011.7[&] 3		F	
9015.7[&] 3		F	
9020.6[&] 3		F H	XREF: H(9022).
9023.5[&] 3		F	
9027.4 3	(3/2⁻,5/2,7/2⁻)[c]	F	
9035.0[&] 3		F	
9041.2[&] 3		F	
9044.1[&] 3		F	
9050.0[&] 3		F	

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Adopted Levels, Gammas (continued)

^{53}Mn Levels (continued)

E(level)[†]	Jπ	XREF	Comments
9053.0[&] *3*		F	
9063.7[&] *3*		F	
9066.7[&] *3*		F	
9070.6 *3*	3/2−[c]	F	
9082.4[&] *3*		F	
9091.2[&] *3*		F	
9096.1 *3*	3/2−,5/2−[c]	F	
9100.1[&] *3*		F	
9107.9[&] *3*	5/2+[a]	F H	XREF: H(9106).
9114.8 *3*	3/2−,5/2,7/2−[c]	F	
9120.7 *3*	3/2−,5/2−[c]	F	
9127.5[&] *3*		F	
9139.3 *3*	3/2−,5/2+[c]	F	
9149.1[&] *3*		F	
9153.0 *3*	3/2−,5/2+[c]	F	
9156.0[&] *3*		F	
9159.0[&] *3*		F	
9168.7 *3*	3/2−,5/2,7/2−[c]	F	
9173.6[&] *3*		F	
9179.5 *3*	5/2−[c]	F	
9182.5[&] *3*		F	
9190.3[&] *3*	5/2	F	Jπ: from γ(θ) in (p,γ) (1991Di07).
9193.3 *3*	9/2+	F H	Jπ: L(^{3}He,d)=4 for E=9194 *8* and γ(θ) in p,γ). (p,γ) excit by L=4 is more likely than by L=5.
9197.2 *3*	3/2−,5/2,7/2−[c]	F	
9200.1 *3*	3/2−,5/2,7/2−[c]	F	
9204.1 *3*	9/2+[c]	F	
9208.5 *3*	5/2−[c]	F	
9214.9[&] *3*	(3/2+,5/2+)	F K	XREF: K(9210). Jπ: L(d,^{3}He)=(2).
9218.9 *3*	3/2−,5/2−,7/2−[c]	F	
9224.8 *3*	3/2−,5/2,7/2−[c]	F	
9229.7 *3*	5/2−[c]	F	
9232.6[&] *3*		F	
9241.4 *3*	3/2−,5/2,7/2−[c]	F	
9245.4 *3*	3/2−,5/2−[c]	F	
9250.3 *3*	5/2+[a]	F H K	XREF: K(9210).
9263.0[&] *3*		F	
9267.9[&] *3*		F	
9277.7 *3*	5/2−[c]	F	
9283 *3*	3/2−	F H	Jπ: from comparison of the single-particle proton strength (^{3}He,d) of the low-lying levels in ^{53}Mn with the corresponding γ strength from the deexcitation of the resonance (1983Kl03), and γ(θ) in (p,γ). IAS of 3/2− 2321 level in ^{53}Cr, see 1991Di07.
9290.5[&] *3*		F	
9296 *3*	3/2−	F	Jπ: from comparison of the single-particle proton strength (^{3}He,d) of the

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{53}Mn Levels (continued)

E(level)†	Jπ	XREF	Comments
			low-lying levels in ^{53}Mn with the corresponding γ strength from the deexcitation of the resonance (1983Kl03).
			IAS of 3/2⁻ 2321 level in ^{53}Cr, see 1991Di07.
9303.2& *3*		F	
9307.2 *3*	7/2⁻[c]	F	
9313.9 *3*	5/2⁻[c]	F	
9318.8& *3*		F	
9326.7& *3*		F	
9332.6& *3*		F	
9343.4 *3*	3/2⁻[c]	F	
9346.3 *3*	3/2⁻,5/2,7/2⁻[c]	F	
9352.2& *3*		F	
9361.0 *3*	3/2⁻,5/2,7/2⁻[c]	F	
9365.0& *3*		F	
9370.8& *3*		F	
9377.7& *3*		F	
9380.2& *3*		F	
9388.5& *3*		F	
9399.3& *3*		F	
9403.2& *3*		F	
9406.2& *3*		F	
9411.1& *3*		F	
9416.0 *3*	(3/2⁻)[c]	F	
9425 *5*	1/2⁻,3/2⁻[b]	H	
9585 *8*	(1/2⁻,3/2⁻)[b]	H	
9654 *3*	5/2⁻,7/2⁻[b]	F H	Jπ: from γ(θ), excitation functions (1983Kl03).
			IAS of ^{53}Cr 2657, 5/2⁻,7/2⁻, see 1991Di07.
9837 *8*	(9/2)+[a]	H	
9938 *8*	(5/2⁻,7/2⁻)[b]	H	E(level): IAS of ^{53}Cr 2993, (5/2⁻,7/2⁻) (1976Ga20).
10050 *8*		H	
10108 *8*	(3/2+,5/2+)[b]	H	
10174.4 *3*	(3/2)⁻	F	Jπ: from inelastic proton angular distribution in (p,p),(p,p′),(p,p′γ).
			E(level): IAS of ^{53}Cr 3180, (3/2⁻) (see 1985Oz01) (p,p),(p,p′),(p,p′γ) Res.
10190 *8*	(3/2+,5/2+)[b]	H	
10320 *8*	(3/2+,5/2+)[b]	H	
10475 *8*	(3/2+,5/2+)[b]	H	
10552.3 *20*	1/2⁻	F	E(level): IAS of ^{53}Cr 3616, 1/2⁻ (1983Kl03) (p,γ).
10557.0 *3*	1/2⁻	F	E(level): IAS of ^{53}Cr 3616, 1/2⁻ (1985Oz01) (p,p),(p,p′),(p,p′γ).
10570 *3*	1/2⁻	F H	XREF: H(10575).
			Jπ: from γ(θ), excitation functions L=1 resonance (1983Kl03).
10584.0 *8*		F	
10597 *3*	9/2+	F H	Jπ: IAS of ^{53}Cr 3706, 9/2+ (1979Fo19) (p,γ). L(^{3}He,d)=4.
10607.2 *20*	7/2+,9/2+[b]	F H	XREF: H(10604).
10611.8 *20*	9/2+	F	E(level): IAS of ^{53}Cr 3706, 9/2+ (1979Fo19) (p,γ). γ(θ) consistent with J=9/2.
10620.3 *20*	9/2+	F	E(level): IAS of ^{53}Cr 3706, 9/2+ (1979Fo19) (p,γ). γ(θ) consistent with J=9/2.
10626.8 *20*		F	
10638 *3*	9/2+	F	E(level): IAS of ^{53}Cr 3706, 9/2+ (1979Fo19) (p,γ). γ(θ) consistent with

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Adopted Levels, Gammas (continued)

^{53}Mn Levels (continued)

E(level)[†]	J$^{\pi}$	XREF	Comments
			J=9/2.
			J$^{\pi}$: from $\gamma(\theta)$ (1979Fo19).
10644.8 *20*	9/2^{+}[c]	F	E(level): IAS of ^{53}Cr 3706, 9/2^{+} (1979Fo19) (p,γ). $\gamma(\theta)$ consistent with J=9/2.
10651.3 *20*		F	
10657 *3*	9/2^{+}	F h	J$^{\pi}$: IAS of ^{53}Cr 3706, 9/2^{+} (see 1979Fo19) (p,γ). $\gamma(\theta)$ consistent with J=9/2.
10662.3 *20*	9/2^{+}	F h	J$^{\pi}$: IAS of ^{53}Cr 3706, 9/2^{+} (see 1979Fo19) (p,γ). $\gamma(\theta)$ consistent with J=9/2.
10667.8 *20*	9/2^{+}	F	E(level): IAS of ^{53}Cr 3706, 9/2^{+} (1979Fo19) (p,γ). $\gamma(\theta)$ consistent with J=9/2.
10673.2 *20*		F	
10678 *3*	9/2^{+}	F	J$^{\pi}$: IAS of ^{53}Cr 3706, 9/2^{+} (1979Fo19) (p,γ).
10686.2 *20*		F	
10691.4 *20*		F	
10697.3 *20*		F	
10721.6 *20*		F	
10721.8 *20*		F	
10736.5 *20*		F	
10747.5 *20*		F	
10954.4 *3*	(5/2)$^{+}$	F	J$^{\pi}$: from (p,p),(p,p$'$),(p,p$'\gamma$).
			E(level): IAS of ^{53}Cr 4135, 3/2^{+},5/2^{+} (1985Oz01), (p,p),(p,p$'$),(p,p$'\gamma$).
11033 *8*	3/2^{+},5/2^{+}[b]	H	
11070 *3*	3/2^{+},5/2^{+}[a]	F	E(level): IAS of ^{53}Cr 4135, 3/2^{+}, 5/2^{+} (1983Kl03) (p,γ).
11082 *8*	3/2^{+},5/2^{+}[b]	H	
11159 *3*	3/2^{+},5/2^{+}	F	E(level): IAS of ^{53}Cr 4230, 3/2^{+}, 5/2^{+} (1983Kl03) (p,γ).
11600 *8*		H	
11654 *8*	5/2^{-},7/2^{-}[b]	H	E(level): IAS of ^{53}Cr 4661, 5/2^{-}, 7/2^{-} (see 1976Ga20) (^{3}He,d).
12130 *8*		H	

[†] Levels connected by γ ray are from a least-squares fit. Others: E<5100 from (p,α), E>5100 from (^{3}He,d), except as noted.
[‡] From (d,^{3}He).
[#] From (α,p).
[@] From (^{7}Li,^{6}He).
[&] From (p,γ).
[a] From L in (^{3}He,d) and d-p angular correlation in (^{3}He,dp).
[b] From L in (^{3}He,d).
[c] From $\gamma(\theta)$ in (p,γ).

Adopted Levels, Gammas (continued)

γ(^{53}Mn)

E,MR,RI,M From (p,γ), except as noted.

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ	Comments
377.89	5/2$^-$	377.88 *9*	100	0.0	7/2$^-$	M1+E2	+0.61 *8*	B(M1)(W.u.)=0.00254 *23*; B(E2)(W.u.)=14 *3* E_γ: from weighted average of values in ^{53}Fe ε decay and (α,pγ). δ: others: +0.49 *3* (α,pγ), +0.6 *3* (p,nγ).
1289.83	3/2$^-$	912.0† *3*	85	377.89	5/2$^-$	M1+E2	+0.18 *2*	B(M1)(W.u.)=0.023 *3*; B(E2)(W.u.)=1.9 *5* δ: others: +0.15 *3* (α,pγ), +0.22 *8* (p,nγ).
		1289.8† *4*	100	0.0	7/2$^-$	E2		B(E2)(W.u.)=13.4 *11*
1441.15	11/2$^-$	1441.2‡ *1*	100	0.0	7/2$^-$	E2		B(E2)(W.u.)=12.8 *18*
1620.12	9/2$^-$	1241.7@ *10*	11@ *2*	377.89	5/2$^-$	E2		B(E2)(W.u.)=3.7 *6*
		1619.9# *1*	100@ *2*	0.0	7/2$^-$	M1+E2	+2.7† *3*	B(M1)(W.u.)=0.0012 *3*; B(E2)(W.u.)=7.0 *9* δ: other: +3.2 *8* (p,nγ).
2273.90	5/2$^-$	984.0	5	1289.83	3/2$^-$	M1+E2	+0.8 *3*	B(M1)(W.u.)=0.0021 *8*; B(E2)(W.u.)=3.0 *15*
		1896.3	30 *2*	377.89	5/2$^-$	M1+E2	−0.74† *3*	B(M1)(W.u.)=0.0019 *4*; B(E2)(W.u.)=0.61 *14* δ: other: −3.3 *24* (p,nγ).
		2273.5# *3*	100#	0.0	7/2$^-$	M1+E2	+0.17† *5*	B(M1)(W.u.)=0.0054 *11*; B(E2)(W.u.)=0.07 *4*
2407.03	3/2$^-$	1117.5	100	1289.83	3/2$^-$	M1+E2	+0.13† *5*	B(M1)(W.u.)=0.064 *24*; B(E2)(W.u.)=1.9 *16* δ: other: −0.10 *7* (p,γ).
		2029.4	28	377.89	5/2$^-$	M1+(E2)	≤−0.4&	B(M1)(W.u.)>0.0038 *+22−10*; B(E2)(W.u.)<0.43
		2406.8	85	0.0	7/2$^-$	E2		B(E2)(W.u.)=2.0 *9*
2448.1		2070.1	100	377.89	5/2$^-$			
2562.99	13/2$^-$	1121.7‡ *1*	100	1441.15	11/2$^-$	M1+(E2)	+0.02† *2*	B(M1)(W.u.)=0.00146 *18*
2573.10	7/2$^-$	2195.3† *9*	100	377.89	5/2$^-$			
		2573.3	61	0.0	7/2$^-$	M1+E2	+0.5& *−5+7*	If M1, B(M1)(W.u.)=0.009 *3*.
2671.17	1/2$^-$	263.9	50	2407.03	3/2$^-$	M1		
		1381.4	67	1289.83	3/2$^-$	D,E2		
		2293.4	100	377.89	5/2$^-$	E2		B(E2)(W.u.)=15 *12*
2686.16	7/2$^-$	1397.6# *8*	11# *5*	1289.83	3/2$^-$	E2		
		2307.7# *6*	14# *5*	377.89	5/2$^-$	M1+E2	−0.3 *3*	
		2685.6# *4*	100# *26*	0.0	7/2$^-$	M1+E2	−0.9 *3*	
2693.29	15/2$^-$	130.1† *4*	6†	2562.99	13/2$^-$	M1+(E2)	−0.08 *8*	B(E1)(W.u.)=2.1 *4*
		1252.1† *2*	100†	1441.15	11/2$^-$	E2		B(E2)(W.u.)=5.4 *8*
2697.71	11/2$^-$	1076.2† *3*	100†	1620.12	9/2$^-$	M1		
		1257.2† *2*	54†	1441.15	11/2$^-$	M1+E2	+0.61 *20*	
2706.92	1/2$^+$	1416.8	100	1289.83	3/2$^-$	[E1]		B(E1)(W.u.)=2.1×10^{-4} *+13−6*

Adopted Levels, Gammas (continued)

γ(^{53}Mn) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ	Comments
2761.0		2382.9	100	377.89	5/2$^-$			
2875.96	3/2$^-$	468.4	1	2407.03	3/2$^-$	D		
		1586.1	2	1289.83	3/2$^-$	D,E2		
		2497.6	100	377.89	5/2$^-$	M1+(E2)	−0.4 *3*	B(M1)(W.u.)=2.5×10^{-5} *10*
		2875.3	17	0.0	7/2$^-$	E2		B(E2)(W.u.)=0.0008 *3*
2912.88	3/2$^-$	1622.7	100	1289.83	3/2$^-$	M1+E2	−0.5 *3*	
		2535.0	43	377.89	5/2$^-$	D,E2		
2946.9	(9/2)$^-$	(1507[@])	<5[@]	1441.15	11/2$^-$			
		2946.6[#] *4*	100[@]	0.0	7/2$^-$	M1+E2	+1.0[&] *+11−3*	B(M1)(W.u.)=0.007 *4*; B(E2)(W.u.)=1.8 *8*
2967.3		2967.3	100	0.0	7/2$^-$			
2978.1		2978.1	100	0.0	7/2$^-$			
3007.13	(5/2)$^+$	1717.5	100	1289.83	3/2$^-$	D+Q	−0.7[&] *−7+4*	
		2629.3	72	377.89	5/2$^-$			
		3007.3	28	0.0	7/2$^-$			
3097.23	3/2$^-$	425.6	6	2671.17	1/2$^-$	D		
		1476		1620.12	9/2$^-$			
		1807.0	8	1289.83	3/2$^-$	D,E2		
		2719.0	100	377.89	5/2$^-$	M1+E2		δ: −0.8 *5* or +1.2 (p,γ).
		3096.7	25	0.0	7/2$^-$	D,E2		
3101.9		2722.4[†] *16*		377.89	5/2$^-$			
3127.37	(5/2$^-$)	2748.8[#] *4*	100[#]	377.89	5/2$^-$	D,E2		
		3127.0		0.0	7/2$^-$			
3182.08	(3/2$^-$,5/2$^-$)	1892.0	34	1289.83	3/2$^-$	M1+E2	−0.51 *21*	
		2804.1	100	377.89	5/2$^-$	M1+(E2)	−0.1 *3*	
		3181.9	13	0.0	7/2$^-$	D,E2		
3199.94	5/2$^-$	793.8	6	2407.03	3/2$^-$			
		1910.7	89	1289.83	3/2$^-$			
		2822.7	100	377.89	5/2$^-$			
		3200.8	83	0.0	7/2$^-$			
3248.9	(9/2)$^-$	3248.8[#]	100[#]	0.0	7/2$^-$	M1+E2	+4.5[&] *+31−19*	
3381.10	7/2$^-$	3003	100	377.89	5/2$^-$			
		3381	11	0.0	7/2$^-$			
3426.0	13/2$^-$	728.3[†] *3*	100[†]	2697.71	11/2$^-$	M1+E2	−0.98[†] *−36+20*	B(M1)(W.u.)=0.04 *3*; B(E2)(W.u.)=1.6×10^2 *12* δ: other: −0.16 *+18−26* (HI,xnγ).
3439.4	15/2$^-$	746.1[‡] *4*	100	2693.29	15/2$^-$	M1+E2	+0.15[†] *−17+10*	B(M1)(W.u.)=0.23 *4*; B(E2)(W.u.)=2.E+1 *5*
		875.8[‡] *5*	63	2562.99	13/2$^-$	D,E2		
3466.32	(3/2$^-$,5/2,7/2$^-$)	3088	72	377.89	5/2$^-$			
		3466	100	0.0	7/2$^-$			
3480.0	1/2$^-$	297.7	23	3182.08	(3/2$^-$,5/2$^-$)	M1		

Adopted Levels, Gammas (continued)

γ(^{53}Mn) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ
3480.0	1/2⁻	567.0	5	2912.88	3/2⁻	D,E2	
		604.1	9	2875.96	3/2⁻	D,E2	
		1072.5	100	2407.03	3/2⁻	D+(Q)	−0.01 *11*
		2190.6	91	1289.83	3/2⁻	D+(Q)	0.00 *5*
3532.28	(3/2⁻,5/2,7/2⁻)	2242.9	100	1289.83	3/2⁻		
3595.2	(5/2⁻,7/2⁻)	3217.6	100	377.89	5/2⁻		
		3595.0	28	0.0	7/2⁻		
3666.19	5/2⁻	3666.3	100	0.0	7/2⁻		
3704.9	(5/2⁻,7/2⁻)	1142.0† *10*	27† *11*	2562.99	13/2⁻		
		2084.6† *10*	100† *11*	1620.12	9/2⁻		
3709.7	7/2⁻	2089	100	1620.12	9/2⁻		
		2269	25	1441.15	11/2⁻		
		2420	40	1289.83	3/2⁻		
		3332	85	377.89	5/2⁻		
3898.09	1/2⁻	800.7	30	3097.23	3/2⁻		
		2607.5	100	1289.83	3/2⁻		
		3519.9	56	377.89	5/2⁻		
3955.0	7/2⁻	1269	39	2686.16	7/2⁻		
		2334	86	1620.12	9/2⁻		
		3577	100	377.89	5/2⁻		
		3955	53	0.0	7/2⁻		
3960.1	(5/2⁻,7/2⁻)	2670	36	1289.83	3/2⁻		
		3582	79	377.89	5/2⁻		
		3960	100	0.0	7/2⁻		
3999.1	(3/2⁻,5/2,7/2⁻)	3621	100	377.89	5/2⁻		
4062.2?	(7/2⁻)	1489.4	13	2573.10	7/2⁻		
		2772.3	28	1289.83	3/2⁻		
		4062.4	100	0.0	7/2⁻		
4066.21		2776.6	100	1289.83	3/2⁻		
		3687.9	89	377.89	5/2⁻		
4069.2	3/2⁺,5/2⁺	2779	100	1289.83	3/2⁻		
4083.0	(3/2,5/2,7/2⁻)	2793	18	1289.83	3/2⁻		
		3705	100	377.89	5/2⁻		
4149.0		1452†		2697.71	11/2⁻		
		1584.3† *5*		2562.99	13/2⁻		
4168.7		1471†	100†	2697.71	11/2⁻		
4238.0		1673†	100†	2562.99	13/2⁻		
4266.3	(5/2⁻,7/2⁻)	3888.1	75	377.89	5/2⁻		
		4266.1	100	0.0	7/2⁻		
4300.1	5/2⁻,7/2⁻	1727	27	2573.10	7/2⁻		

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Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ	Comments
4300.1	$5/2^-,7/2^-$	1893	34	2407.03	$3/2^-$			
		3010	100	1289.83	$3/2^-$			
4310.0		884†	†	3426.0	$13/2^-$			
		1747†	†	2562.99	$13/2^-$			
4348.2	$1/2^-,3/2^-$	3970.0	100	377.89	$5/2^-$			
4362.0	$1/2^-,3/2,5/2,7/2^-$	2088	57	2273.90	$5/2^-$			
		3072	61	1289.83	$3/2^-$			
		3984	100	377.89	$5/2^-$			
4384.5	$17/2^-$	944.7‡ *5*	100	3439.4	$15/2^-$	D(+Q)	−0.08 *2*	δ: from (HI,xnγ).
		1691.0‡ *3*	50	2693.29	$15/2^-$	M1+E2		If M1, B(M1)(W.u.)>0.013; if E2, B(E2)(W.u.)>11.
		1821‡	36	2562.99	$13/2^-$			
4427.81	$3/2^-$	1515.4	61	2912.88	$3/2^-$			
		1756.5	15	2671.17	$1/2^-$			
		2020.6	29	2407.03	$3/2^-$			
		4050.0	100	377.89	$5/2^-$			
4522.1	$(3/2^+,5/2^+)$	4144	100	377.89	$5/2^-$			
4552.1	$(5/2^-,7/2^-)$	3262	16	1289.83	$3/2^-$			
		4552	100	0.0	$7/2^-$			
4560.1	$3/2^-,5/2$	3270	100	1289.83	$3/2^-$			
		4560	23	0.0	$7/2^-$			
4572.6	$1/2^-,3/2^-$	2165.3	100	2407.03	$3/2^-$			
		3282.5	85	1289.83	$3/2^-$			
4635.1	$(5/2^-,7/2^-)$	2228	47	2407.03	$3/2^-$			
		3345	100	1289.83	$3/2^-$			
		4635	86	0.0	$7/2^-$			
4719.2	$1/2^-$	2445	11	2273.90	$5/2^-$			
		3429	100	1289.83	$3/2^-$			
4763.8	$(3/2^-,5/2,7/2^-)$	3472	81	1289.83	$3/2^-$			
		4389	100	377.89	$5/2^-$			
		4762	97	0.0	$7/2^-$			
4780.3	$(1/2^-,3/2^-)$	1868.1	32	2912.88	$3/2^-$			
		2506.6	27	2273.90	$5/2^-$			
		4401.8	100	377.89	$5/2^-$			
4793.2	$(3/2^-,5/2,7/2^-)$	2107	45	2686.16	$7/2^-$			
		3503	100	1289.83	$3/2^-$			
4856.5		472‡	100	4384.5	$17/2^-$			
4988.1	$1/2,3/2^-,5/2^-$	2317	67	2671.17	$1/2^-$			
		2581	100	2407.03	$3/2^-$			
5094.6	$(1/2^-,3/2^-)$	2687.2	27	2407.03	$3/2^-$	D+Q	−0.86 *21*	
		4716.7	100	377.89	$5/2^-$			

Adopted Levels, Gammas (continued)

γ(^{53}Mn) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ	Comments
5316.3		2308.5	54	3007.13	$(5/2)^+$			
		4026.5	100	1289.83	$3/2^-$			
5370.8	≥9/2	2797.9	50	2573.10	$7/2^-$			
		3096.8	17	2273.90	$5/2^-$			
		4992.3	100	377.89	$5/2^-$			
5434.3	$(7/2^-)$	3027.5	13	2407.03	$3/2^-$			
		3159.5	100	2273.90	$5/2^-$			
		5434.5	48	0.0	$7/2^-$			
5490.8	$1/2^-$	3082.7	62	2407.03	$3/2^-$			
		3217.1	100	2273.90	$5/2^-$			
		5112.1	95	377.89	$5/2^-$			
5578.7		3304.3	35	2273.90	$5/2^-$			
		5200.7	100	377.89	$5/2^-$			
5614.9	$(19/2^-)$	1230.3‡ *5*	100	4384.5	$17/2^-$	M1+E2	−0.16 *+3−8*	B(M1)(W.u.)>0.22 Mult.: from γ(θ) and linear polarization (1977JuZX).
		2175‡	<16	3439.4	$15/2^-$	E2		
5998.1	$3/2^-$,5/2,$7/2^-$	3591	68	2407.03	$3/2^-$			
		4708	76	1289.83	$3/2^-$			
		5620	100	377.89	$5/2^-$			
6084.5		1228‡	100	4856.5				
6533.9	$21/2^-$	918.9‡ *4*	16 *6*	5614.9	$(19/2^-)$			If M1, B(M1)(W.u.)=0.12 *+26−7*.
		2149.6‡ *7*	100 *6*	4384.5	$17/2^-$	E2		B(E2)(W.u.)=2.8 *16*
7004.7	$(23/2^-)$	470.8‡ *1*	100	6533.9	$21/2^-$	M1+E2	−0.05 *+10−11*	B(M1)(W.u.)=0.153 *24*
		(1390‡)	<12	5614.9	$(19/2^-)$			If E2, B(E2)(W.u.)<0.3.
7461.0		3112.9	10	4348.2	$1/2^-$,$3/2^-$			
		3394.8	5	4066.21				
		4278.8	2	3182.08	$(3/2^-,5/2^-)$			
		4363.9	5	3097.23	$3/2^-$			
		4453.9	2	3007.13	$(5/2)^+$			
		4548.1	12	2912.88	$3/2^-$			
		4585.2	10	2875.96	$3/2^-$			
		4699.8	2	2761.0				
		4754.3	3	2706.92	$1/2^+$			
		4772.7	2	2686.16	$7/2^-$			
		5053.8	5	2407.03	$3/2^-$			
		6171.1	100	1289.83	$3/2^-$			
		7082.8	3	377.89	$5/2^-$			
7494.5		2060.0	11	5434.3	$(7/2^-)$			
		2178.1	3	5316.3				
		2921.5	3	4572.6	$1/2^-$,$3/2^-$			

Adopted Levels, Gammas (continued)

γ(^{53}Mn) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ
7494.5		3066.4	32	4427.81	3/2$^-$		
		3228.0	26	4266.3	(5/2$^-$,7/2$^-$)		
		3428.0	11	4066.21			
		3961.6	16	3532.28	(3/2$^-$,5/2,7/2$^-$)		
		4293.5	16	3199.94	5/2$^-$		
		4397.4	68	3097.23	3/2$^-$	D+(Q)	−0.07 *2*
		4487.1	42	3007.13	(5/2)$^+$		
		4527.0	5	2967.3			
		4581.0	5	2912.88	3/2$^-$		
		4618.7	26	2875.96	3/2$^-$	D+(Q)	−0.1 *3*
		4787.8	16	2706.92	1/2$^+$		
		4823.2	53	2671.17	1/2$^-$	D+(Q)	+0.1 *1*
		5087.4	100	2407.03	3/2$^-$	D+(Q)	−0.07 *5*
		5220.3	5	2273.90	5/2$^-$		
		6204.6	58	1289.83	3/2$^-$	D+Q	−0.35 *5*
		7116.3	5	377.89	5/2$^-$		
		7494.0	21	0.0	7/2$^-$	D+(Q)	+0.02 *6*
7528.2		2157.4	10	5370.8	≥9/2		
		2211.9	3	5316.3			
		2747.9	13	4780.3	(1/2$^-$,3/2$^-$)		
		3261.8	6	4266.3	(5/2$^-$,7/2$^-$)		
		3465.7	10	4062.2?	(7/2$^-$)		
		3630.5	19	3898.09	1/2$^-$		
		3861.8	3	3666.19	5/2$^-$		
		3932.8	6	3595.2	(5/2$^-$,7/2$^-$)		
		4048.3	29	3480.0	1/2$^-$	D+(Q)	+0.20 *1*
		4327.3	13	3199.94	5/2$^-$		
		4431.2	6	3097.23	3/2$^-$		
		4550.0	10	2978.1			
		4615.4	3	2912.88	3/2$^-$		
		4652.5	3	2875.96	3/2$^-$		
		4839.6	2	2686.16	7/2$^-$		
		4857.0	10	2671.17	1/2$^-$	D+Q	+0.30 *5*
		4954.4	2	2573.10	7/2$^-$		
		5121.2	3	2407.03	3/2$^-$		
		5254.1	36	2273.90	5/2$^-$	D+(Q)	−0.07 *3*
		6238.4	29	1289.83	3/2$^-$	D+(Q)	−0.07 *3*
		7150.1	100	377.89	5/2$^-$	D+(Q)	+0.07 *3*
		7528.1	3	0.0	7/2$^-$		
7546.7	1/2$^-$	1968.0	4	5578.7			
		2056.1	8	5490.8	1/2$^-$		
		2230.2	4	5316.3			

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Adopted Levels, Gammas (continued)

γ(^{53}Mn) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ	Comments
7546.7	1/2⁻	2452.0	4	5094.6	(1/2⁻,3/2⁻)			
		3480.5	2	4066.21				
		4066.7	23	3480.0	1/2⁻			
		4364.5	76	3182.08	(3/2⁻,5/2⁻)			
		4449.6	19	3097.23	3/2⁻			
		4633.8	50	2912.88	3/2⁻			
		4671.0	100	2875.96	3/2⁻			
		4840.0	12	2706.92	1/2⁺			
		4875.4	35	2671.17	1/2⁻			
		5098.5	4	2448.1				
		5139.6	34	2407.03	3/2⁻			
		6256.8	15	1289.83	3/2⁻			
		7168.6	2	377.89	5/2⁻			
7921.2	5/2⁻	3494.1	1	4427.81	3/2⁻			
		3854.1	1	4066.21				
		3966.1	1	3955.0	7/2⁻			
		4326.1	1	3595.2	(5/2⁻,7/2⁻)			
		4721.1	1	3199.94	5/2⁻			
		4739.1	1	3182.08	(3/2⁻,5/2⁻)			
		5235.4	1	2686.16	7/2⁻			
		5348.1	3	2573.10	7/2⁻			
		5647.1	6	2273.90	5/2⁻			
		6631.2	13	1289.83	3/2⁻			
		7542.3	13	377.89	5/2⁻			
		7921.1	100	0.0	7/2⁻	M1+E2	−3.5	
7928.4	5/2⁻	2833.8	16	5094.6	(1/2⁻,3/2⁻)			
		4218.6	12	3709.7	7/2⁻			
		4395.6	2	3532.28	(3/2⁻,5/2,7/2⁻)			
		4546.6	3	3381.10	7/2⁻			
		4829.6	2	3097.23	3/2⁻			
		5051.6	6	2875.96	3/2⁻			
		5167.3	<2	2761.0				
		5241.6	3	2686.16	7/2⁻			
		5355.0	3	2573.10	7/2⁻			
		5521.4	9	2407.03	3/2⁻	M1+E2	−1.9	
		5653.6	3	2273.90	5/2⁻			
		6638.6	12	1289.83	3/2⁻			
		7550.3	10	377.89	5/2⁻	M1+E2	+0.2	
		7928.3	100	0.0	7/2⁻	M1+E2	−0.16	
7964.5	(25/2⁻)	960.9‡ *4*	100	7004.7	(23/2⁻)	M1+E2	−0.05 *+12−11*	B(M1)(W.u.)>0.095.
		(1432‡)	<45	6533.9	21/2⁻			

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Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
7977	$3/2^-$	3550	4	4427.81	$3/2^-$
		3629	2	4348.2	$1/2^-,3/2^-$
		3894	2	4069.2	$3/2^+,5/2^+$
		3915	6	4062.2?	$(7/2^-)$
		4017	2	3955.0	$7/2^-$
		4596	15	3381.10	$7/2^-$
		4879	9	3097.23	$3/2^-$
		4970	4	3007.13	$(5/2)^+$
		5064	4	2912.88	$3/2^-$
		5101	21	2875.96	$3/2^-$
		5270	9	2706.92	$1/2^+$
		5291	4	2686.16	$7/2^-$
		5306	9	2671.17	$1/2^-$
		5570	2	2407.03	$3/2^-$
		5703	100	2273.90	$5/2^-$
		6687	15	1289.83	$3/2^-$
		7599	2	377.89	$5/2^-$
		7977	2	0.0	$7/2^-$
8007.1	$5/2^-$	3941	2	4066.21	
		4109	2	3898.09	$1/2^-$
		4541	10	3466.32	$(3/2^-,5/2,7/2^-)$
		4626	12	3381.10	$7/2^-$
		4825	2	3182.08	$(3/2^-,5/2^-)$
		4909	4	3097.23	$3/2^-$
		5094	2	2912.88	$3/2^-$
		5131	2	2875.96	$3/2^-$
		5321	4	2686.16	$7/2^-$
		5733	12	2273.90	$5/2^-$
		6717	4	1289.83	$3/2^-$
		7629	100	377.89	$5/2^-$
		8007	44	0.0	$7/2^-$
8025.7	$5/2^-$	3726	2	4300.1	$5/2^-,7/2^-$
		4071	6	3955.0	$7/2^-$
		4431	2	3595.2	$(5/2^-,7/2^-)$
		4826	2	3199.94	$5/2^-$
		4844	2	3182.08	$(3/2^-,5/2^-)$
		4925	3	3097.23	$3/2^-$
		5453	7	2573.10	$7/2^-$
		5752	27	2273.90	$5/2^-$
		6736	2	1289.83	$3/2^-$
		7648	12	377.89	$5/2^-$
		8026	100	0.0	$7/2^-$

$^{53}_{25}Mn_{28}$-20

Adopted Levels, Gammas (continued)

γ(^{53}Mn) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ
8028.5	5/2$^-$	3393.6	4	4635.1	(5/2$^-$,7/2$^-$)		
		3506.6	4	4522.1	(3/2$^+$,5/2$^+$)		
		3601.6	4	4427.81	3/2$^-$		
		3728.6	18	4300.1	5/2$^-$,7/2$^-$		
		3761.6	7	4266.3	(5/2$^-$,7/2$^-$)		
		3962.6	7	4066.21			
		4073.6	62	3955.0	7/2$^-$		
		4433.6	25	3595.2	(5/2$^-$,7/2$^-$)		
		4828.6	100	3199.94	5/2$^-$		
		4846.4	42	3182.08	(3/2$^-$,5/2$^-$)	D+Q	+0.28 *3*
		4931.5	28	3097.23	3/2$^-$	D+(Q)	+0.09 *7*
		5115.7	5	2912.88	3/2$^-$	D+(Q)	+0.05 *7*
		5152.6	<4	2875.96	3/2$^-$		
		5321.6	<4	2706.92	1/2$^+$		
		5342.6	4	2686.16	7/2$^-$		
		5754.6	4	2273.90	5/2$^-$		
		6738.6	17	1289.83	3/2$^-$		
		7650.6	4	377.89	5/2$^-$		
		8028.3	14	0.0	7/2$^-$	D+(Q)	−0.20 *12*
8053.2	5/2$^-$	3970	3	4083.0	(3/2,5/2,7/2$^-$)		
		4098	6	3955.0	7/2$^-$		
		4924	6	3127.37	(5/2$^-$)		
		4955	9	3097.23	3/2$^-$		
		5367	24	2686.16	7/2$^-$		
		5480	24	2573.10	7/2$^-$		
		5646	62	2407.03	3/2$^-$		
		5779	100	2273.90	5/2$^-$		
		6763	9	1289.83	3/2$^-$		
		7675	21	377.89	5/2$^-$		
		8053	32	0.0	7/2$^-$		
8057.1	5/2$^-$	3630	4	4427.81	3/2$^-$		
		3791	4	4266.3	(5/2$^-$,7/2$^-$)		
		4102	12	3955.0	7/2$^-$		
		4462	12	3595.2	(5/2$^-$,7/2$^-$)		
		4676	4	3381.10	7/2$^-$		
		4875	12	3182.08	(3/2$^-$,5/2$^-$)		
		4928	68	3127.37	(5/2$^-$)		
		5181	8	2875.96	3/2$^-$		
		5371	24	2686.16	7/2$^-$		
		5484	8	2573.10	7/2$^-$		
		5650	36	2407.03	3/2$^-$		
		5783	32	2273.90	5/2$^-$		

$^{53}_{25}Mn_{28}$-21

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
8057.1	$5/2^-$	6767	100	1289.83	$3/2^-$
		7679	12	377.89	$5/2^-$
		8057	36	0.0	$7/2^-$
8082.6	$5/2^-$	2085	21	5998.1	$3/2^-$,5/2,$7/2^-$
		2591	18	5490.8	$1/2^-$
		3303	4	4780.3	($1/2^-$,$3/2^-$)
		3364	7	4719.2	$1/2^-$
		3531	29	4552.1	($5/2^-$,$7/2^-$)
		4021	36	4062.2?	($7/2^-$)
		4417	11	3666.19	$5/2^-$
		4883	11	3199.94	$5/2^-$
		4901	4	3182.08	($3/2^-$,$5/2^-$)
		4985	50	3097.23	$3/2^-$
		5676	7	2407.03	$3/2^-$
		5809	100	2273.90	$5/2^-$
		6793	39	1289.83	$3/2^-$
		7705	20	377.89	$5/2^-$
		8083	4	0.0	$7/2^-$
8087.5	$5/2^-$	2090	9	5998.1	$3/2^-$,5/2,$7/2^-$
		3536	9	4552.1	($5/2^-$,$7/2^-$)
		3740	9	4348.2	$1/2^-$,$3/2^-$
		3788	13	4300.1	$5/2^-$,$7/2^-$
		4089	4	3999.1	($3/2^-$,5/2,$7/2^-$)
		4128	4	3955.0	$7/2^-$
		4422	4	3666.19	$5/2^-$
		4622	9	3466.32	($3/2^-$,5/2,$7/2^-$)
		4906	4	3182.08	($3/2^-$,$5/2^-$)
		4959	39	3127.37	($5/2^-$)
		4990	35	3097.23	$3/2^-$
		5081	17	3007.13	$(5/2)^+$
		5212	61	2875.96	$3/2^-$
		5402	83	2686.16	$7/2^-$
		6798	26	1289.83	$3/2^-$
		7709	100	377.89	$5/2^-$
		8087	9	0.0	$7/2^-$
8134.6	$3/2^-$	3147	15	4988.1	1/2,$3/2^-$,$5/2^-$
		4052	4	4083.0	(3/2,5/2,$7/2^-$)
		4073	12	4062.2?	($7/2^-$)
		4935	12	3199.94	$5/2^-$
		4953	92	3182.08	($3/2^-$,$5/2^-$)
		5006	27	3127.37	($5/2^-$)
		5037	23	3097.23	$3/2^-$

$^{53}_{25}Mn_{28}$-22

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ
8134.6	$3/2^-$	5128	4	3007.13	$(5/2)^+$		
		5259	12	2875.96	$3/2^-$		
		5449	4	2686.16	$7/2^-$		
		5464	19	2671.17	$1/2^-$		
		5728	46	2407.03	$3/2^-$		
		6845	100	1289.83	$3/2^-$		
		7756	15	377.89	$5/2^-$		
8138.1	$3/2^-$	3419.3	4	4719.2	$1/2^-$		
		4055.3	13	4083.0	$(3/2,5/2,7/2^-)$		
		4076.3	21	4062.2?	$(7/2^-)$		
		4240.3	21	3898.09	$1/2^-$		
		4471.7	58	3666.19	$5/2^-$		
		4658.2	38	3480.0	$1/2^-$		
		4672.3	13	3466.32	$(3/2^-,5/2,7/2^-)$		
		4956.3	17	3182.08	$(3/2^-,5/2^-)$		
		5009.3	4	3127.37	$(5/2^-)$		
		5040.3	8	3097.23	$3/2^-$		
		5262.3	29	2875.96	$3/2^-$		
		5431.5	17	2706.92	$1/2^+$		
		5452.3	8	2686.16	$7/2^-$		
		5466.9	100	2671.17	$1/2^-$	D+Q	+0.17
		5731.1	42	2407.03	$3/2^-$		
		5864.0	29	2273.90	$5/2^-$		
		6848.3	4	1289.83	$3/2^-$	D+Q	−0.23
		7760.0	4	377.89	$5/2^-$		
8157.2	$5/2^+$	3731	2	4427.81	$3/2^-$		
		4075	13	4083.0	$(3/2,5/2,7/2^-)$		
		4092	4	4066.21			
		4198	6	3960.1	$(5/2^-,7/2^-)$		
		4448	6	3709.7	$7/2^-$		
		5029	4	3127.37	$(5/2^-)$		
		5060	22	3097.23	$3/2^-$		
		5282	6	2875.96	$3/2^-$		
		5451	2	2706.92	$1/2^+$		
		5751	4	2407.03	$3/2^-$		
		6867	9	1289.83	$3/2^-$		
		7779	7	377.89	$5/2^-$		
		8157	100	0.0	$7/2^-$		
8176.8	$3/2^-,5/2^-$	3458	2	4719.2	$1/2^-$		
		3528	4	4650.1			
		3751	7	4427.81	$3/2^-$		
		3878	9	4300.1	$5/2^-,7/2^-$		

$^{53}_{25}Mn_{28}$-23

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ	Comments
8176.8	$3/2^-,5/2^-$	3912	9	4266.3	$(5/2^-,7/2^-)$			
		4112	4	4066.21				
		4512	2	3666.19	$5/2^-$			
		4996	2	3182.08	$(3/2^-,5/2^-)$			
		5049	4	3127.37	$(5/2^-)$			
		5080	4	3097.23	$3/2^-$			
		5171	4	3007.13	$(5/2)^+$			
		5492	28	2686.16	$7/2^-$			
		5771	17	2407.03	$3/2^-$			
		5904	4	2273.90	$5/2^-$			
		6888	100	1289.83	$3/2^-$			
		7800	11	377.89	$5/2^-$			
		8178	4	0.0	$7/2^-$			
8247.4	$3/2^-,5/2^-$	3819	1	4427.81	$3/2^-$			
		4292	1	3955.0	$7/2^-$			
		5334	1	2912.88	$3/2^-$			
		5371	15	2875.96	$3/2^-$			
		5674	3	2573.10	$7/2^-$			
		5840	1	2407.03	$3/2^-$			
		5973	1	2273.90	$5/2^-$			
		6957	3	1289.83	$3/2^-$			
		7869	100	377.89	$5/2^-$			
		8247	7	0.0	$7/2^-$			
8251.0	5/2,3/2	5376.5	13	2875.96	$3/2^-$	D+(Q)	−0.05 *5*	
		7874.1	100	377.89	$5/2^-$	D+(Q)	+0.02 *3*	
8262.9	$5/2^-$	5351.3	50	2912.88	$3/2^-$	D+(Q)	−0.01 *7*	
		5575.9	100	2686.16	$7/2^-$	D+Q	−0.53 *9*	
		6974.3	17	1289.83	$3/2^-$	D+(Q)	+0.20 *7*	
		7886.0	100	377.89	$5/2^-$	D+Q	−0.41 *6*	
8267.1	$(3/2^-,5/2^-)$	5354	19	2912.88	$3/2^-$			
		5581	51	2686.16	$7/2^-$			
		5596	13	2671.17	$1/2^-$			
		5860	30	2407.03	$3/2^-$			
		7889	100	377.89	$5/2^-$			
8293.8	$3/2^-$	4027.0	4	4266.3	$(5/2^-,7/2^-)$			
		4227.0	2	4066.21				
		4395.0	6	3898.09	$1/2^-$			
		4813.9	22	3480.0	$1/2^-$	D+(Q)	−0.07 *3*	
		5111.7	33	3182.08	$(3/2^-,5/2^-)$	D+(Q)	−0.11 *11*	I_γ: from I(5112):I(7005)=5:15, see 1984Pe20.
		5196.0	2	3097.23	$3/2^-$			
		5286.0	6	3007.13	$(5/2)^+$			
		5381.0	12	2912.88	$3/2^-$	D+Q	−0.9 *3*	

$^{53}_{25}Mn_{28}$-24

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ
8293.8	$3/2^-$	5586.7	4	2706.92	$1/2^+$		
		5605.6	14	2686.16	$7/2^-$	Q+(D)	−3.6 *7*
		5622.0	8	2671.17	$1/2^-$		
		6019.7	14	2273.90	$5/2^-$	D+(Q)	+0.04 *5*
		7004.0	100	1289.83	$3/2^-$	D+(Q)	+0.32 *7*
		7915.0	4	377.89	$5/2^-$		
8302.4	$5/2^-$	4241	1	4062.2?	$(7/2^-)$		
		4771	1	3532.28	$(3/2^-,5/2,7/2^-)$		
		4837	1	3466.32	$(3/2^-,5/2,7/2^-)$		
		5121	1	3182.08	$(3/2^-,5/2^-)$		
		5176	4	3127.37	$(5/2^-)$		
		5427	3	2875.96	$3/2^-$		
		5730	1	2573.10	$7/2^-$		
		7013	3	1289.83	$3/2^-$		
		7924	23	377.89	$5/2^-$		
		8302	100	0.0	$7/2^-$		
8325.9	$7/2^-$	5224	9	3097.23	$3/2^-$		
		5753	20	2573.10	$7/2^-$		
		5919	39	2407.03	$3/2^-$		
		6052	22	2273.90	$5/2^-$		
		7036	9	1289.83	$3/2^-$		
		7948	100	377.89	$5/2^-$		
		8326	20	0.0	$7/2^-$		
8329.0	5/2	5755.5	29	2573.10	$7/2^-$	D+(Q)	−0.01 *6*
		5921.9	86	2407.03	$3/2^-$	D+(Q)	−0.00 *3*
		6054.8	29	2273.90	$5/2^-$	D+(Q)	+0.24 *16*
		7039.1	14	1289.83	$3/2^-$	D+(Q)	−0.13 *10*
		7950.8	100	377.89	$5/2^-$	D+(Q)	+0.02 *4*
		8328.9	<14	0.0	$7/2^-$	D+(Q)	−0.06 *11*
8335.7	$3/2^-$	4669	21	3666.19	$5/2^-$		
		4803	11	3532.28	$(3/2^-,5/2,7/2^-)$		
		4869	37	3466.32	$(3/2^-,5/2,7/2^-)$		
		5238	37	3097.23	$3/2^-$		
		5328	21	3007.13	$(5/2)^+$		
		5422	68	2912.88	$3/2^-$		
		5459	32	2875.96	$3/2^-$		
		5628	26	2706.92	$1/2^+$		
		5649	32	2686.16	$7/2^-$		
		5664	53	2671.17	$1/2^-$		
		7045	90	1289.83	$3/2^-$		
		7957	100	377.89	$5/2^-$		
8399.5	$(3/2^-,5/2^-)$	4501	8	3898.09	$1/2^-$		

Adopted Levels, Gammas (continued)

γ(^{53}Mn) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ	Comments
8399.5	(3/2$^-$,5/2$^-$)	5713	8	2686.16	7/2$^-$			
		5728	3	2671.17	1/2$^-$			
		7109	19	1289.83	3/2$^-$			
		8021	100	377.89	5/2$^-$			
		8399	12	0.0	7/2$^-$			
8402.5	3/2$^-$	4055	6	4348.2	1/2$^-$,3/2$^-$			
		4337	6	4066.21				
		4505	22	3898.09	1/2$^-$			
		5396	9	3007.13	(5/2)$^+$			
		5527	9	2875.96	3/2$^-$			
		5696	19	2706.92	1/2$^+$			
		5717	19	2686.16	7/2$^-$			
		5732	34	2671.17	1/2$^-$			
		5996	13	2407.03	3/2$^-$			
		7113	100	1289.83	3/2$^-$			
		8024	63	377.89	5/2$^-$			
		8402	13	0.0	7/2$^-$			
8420.1	3/2$^-$	3869	2	4552.1	(5/2$^-$,7/2$^-$)			
		4359	2	4062.2?	(7/2$^-$)			
		4523	4	3898.09	1/2$^-$			
		4755	2	3666.19	5/2$^-$			
		4889	4	3532.28	(3/2$^-$,5/2,7/2$^-$)			
		4955	2	3466.32	(3/2$^-$,5/2,7/2$^-$)			
		5239	2	3182.08	(3/2$^-$,5/2$^-$)			
		5294	2	3127.37	(5/2$^-$)			
		5319	4	3097.23	3/2$^-$			
		5508	2	2912.88	3/2$^-$			
		5545	2	2875.96	3/2$^-$			
		5735	2	2686.16	7/2$^-$			
		6147	39	2273.90	5/2$^-$			
		7130	11	1289.83	3/2$^-$			
		8042	100	377.89	5/2$^-$			
		8420	2	0.0	7/2$^-$			
8425.1	3/2$^-$	4356.0	6	4069.2	3/2$^+$,5/2$^+$			
		4359.0		4066.21				I_γ: Iγ(4358+4362)=6.
		4527.4	17	3898.09	1/2$^-$			
		4892.3	4	3532.28	(3/2$^-$,5/2,7/2$^-$)			
		5549.4	4	2875.96	3/2$^-$			
		5664.0	2	2761.0				
		6152.2	53	2273.90	5/2$^-$	M1+E2	−0.01	
		6985.0	2	1441.15	11/2$^-$			
		7135.3	3	1289.83	3/2$^-$			

$^{53}_{25}Mn_{28}$-26

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ
8425.1	$3/2^-$	8047.0	100	377.89	$5/2^-$	M1+E2	+0.34
8453.5	$5/2^{(+)}$	5446	100	3007.13	$(5/2)^+$		
		5746	50	2706.92	$1/2^+$		
		8075	33	377.89	$5/2^-$		
		8453	35	0.0	$7/2^-$		
8482.9	$3/2^{(-)}$	3764	33	4719.2	$1/2^-$		
		3931	11	4552.1	$(5/2^-,7/2^-)$		
		4183	33	4300.1	$5/2^-,7/2^-$		
		4217	22	4266.3	$(5/2^-,7/2^-)$		
		4417	11	4066.21			
		4523	11	3955.0	$7/2^-$		
		4585	100	3898.09	$1/2^-$		
		4817	17	3666.19	$5/2^-$		
		4951	11	3532.28	$(3/2^-,5/2,7/2^-)$		
		5283	11	3199.94	$5/2^-$		
		5301	17	3182.08	$(3/2^-,5/2^-)$		
		5386	50	3097.23	$3/2^-$		
		5476	17	3007.13	$(5/2)^+$		
		5570	11	2912.88	$3/2^-$		
		5607	17	2875.96	$3/2^-$		
		5797	17	2686.16	$7/2^-$		
		5812	22	2671.17	$1/2^-$		
		6076	22	2407.03	$3/2^-$		
		6209	28	2273.90	$5/2^-$		
		7193	33	1289.83	$3/2^-$		
		8105	89	377.89	$5/2^-$		
8493.7	$7/2^-$	4428	6	4066.21			
		4539	1	3955.0	$7/2^-$		
		5392	8	3097.23	$3/2^-$		
		5581	1	2912.88	$3/2^-$		
		5921	8	2573.10	$7/2^-$		
		6087	3	2407.03	$3/2^-$		
		8494	100	0.0	$7/2^-$		
8500.6	$(3/2^-,5/2)$	3546	63	4955.3	$1/2^-$		
		3708	19	4793.2	$(3/2^-,5/2,7/2^-)$		
		3721	6	4780.3	$(1/2^-,3/2^-)$		
		4153	25	4348.2	$1/2^-,3/2^-$		
		4201	38	4300.1	$5/2^-,7/2^-$		
		4435	44	4066.21			
		4603	75	3898.09	$1/2^-$		
		4835	38	3666.19	$5/2^-$		
		4969	44	3532.28	$(3/2^-,5/2,7/2^-)$		

$^{53}_{25}Mn_{28}$-27

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
8500.6	(3/2$^-$,5/2)	5399	13	3097.23	3/2$^-$
		5494	13	3007.13	(5/2)$^+$
		5625	25	2875.96	3/2$^-$
		5794	6	2706.92	1/2$^+$
		5815	100	2686.16	7/2$^-$
		6227	44	2273.90	5/2$^-$
		7211	31	1289.83	3/2$^-$
		8122	44	377.89	5/2$^-$
8505.5	7/2$^-$	4240	8	4266.3	(5/2$^-$,7/2$^-$)
		4266	5	4238.0	
		4507	5	3999.1	(3/2$^-$,5/2,7/2$^-$)
		4551	3	3955.0	7/2$^-$
		4656	8	3850.0	
		5125	15	3381.10	7/2$^-$
		5324	8	3182.08	(3/2$^-$,5/2$^-$)
		5404	26	3097.23	3/2$^-$
		5630	8	2875.96	3/2$^-$
		5799	8	2706.92	1/2$^+$
		6099	13	2407.03	3/2$^-$
		6232	100	2273.90	5/2$^-$
		8506	51	0.0	7/2$^-$
8513.3	3/2$^-$,5/2$^-$	4086	2	4427.81	3/2$^-$
		4448	2	4066.21	
		4452	2	4062.2?	(7/2$^-$)
		5133	2	3381.10	7/2$^-$
		5332	3	3182.08	(3/2$^-$,5/2$^-$)
		5387	2	3127.37	(5/2$^-$)
		5417	3	3097.23	3/2$^-$
		5507	2	3007.13	(5/2)$^+$
		5638	2	2875.96	3/2$^-$
		5828	7	2686.16	7/2$^-$
		5842	7	2671.17	1/2$^-$
		5941	3	2573.10	7/2$^-$
		6107	2	2407.03	3/2$^-$
		6240	3	2273.90	5/2$^-$
		7224	14	1289.83	3/2$^-$
		8135	17	377.89	5/2$^-$
		8513	100	0.0	7/2$^-$
8515.3	7/2$^-$	4088	2	4427.81	3/2$^-$
		4450	2	4066.21	
		4454	2	4062.2?	(7/2$^-$)
		5135	2	3381.10	7/2$^-$
8515.3	7/2$^-$	5334	3	3182.08	(3/2$^-$,5/2$^-$)
		5389	2	3127.37	(5/2$^-$)
		5419	3	3097.23	3/2$^-$
		5509	2	3007.13	(5/2)$^+$
		5640	2	2875.96	3/2$^-$
		5830	7	2686.16	7/2$^-$
		5845	7	2671.17	1/2$^-$
		5943	3	2573.10	7/2$^-$
		6109	2	2407.03	3/2$^-$
		6242	3	2273.90	5/2$^-$
		7226	14	1289.83	3/2$^-$
		8137	17	377.89	5/2$^-$
		8515	100	0.0	7/2$^-$
8544.7		3500	13	5044.3	
		4155	1	4384.5	17/2$^-$
		4389	1	4149.0	
		4989	1	3555.2	(11/2$^-$)
		5074	3	3466.32	(3/2$^-$,5/2,7/2$^-$)
		5353	5		
		5448	1	3097.23	3/2$^-$
		7104	9	1441.15	11/2$^-$
		7255	5	1289.83	3/2$^-$
		8167	4	377.89	5/2$^-$
		8545	100	0.0	7/2$^-$
8558.5	(3/2$^-$,5/2$^-$)	3779	27	4780.3	(1/2$^-$,3/2$^-$)
		4661	6	3898.09	1/2$^-$
		5027	3	3532.28	(3/2$^-$,5/2,7/2$^-$)
		5377	6	3182.08	(3/2$^-$,5/2$^-$)
		5432	3	3127.37	(5/2$^-$)
		5683	3	2875.96	3/2$^-$
		5986	37	2573.10	7/2$^-$
		6152	6	2407.03	3/2$^-$
		6285	11	2273.90	5/2$^-$
		7269	31	1289.83	3/2$^-$
		8180	77	377.89	5/2$^-$
		8558	100	0.0	7/2$^-$
8563.4	(3/2$^-$,5/2,7/2$^-$)	4502	10	4062.2?	(7/2$^-$)
		4565	15	3999.1	(3/2$^-$,5/2,7/2$^-$)
		5183	15	3381.10	7/2$^-$
		5382	15	3182.08	(3/2$^-$,5/2$^-$)
		5437	20	3127.37	(5/2$^-$)
		5557	35	3007.13	(5/2)$^+$

$^{53}_{25}Mn_{28}$-28

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
8563.4	$(3/2^-,5/2,7/2^-)$	5688	40	2875.96	$3/2^-$
		5878	55	2686.16	$7/2^-$
		5991	35	2573.10	$7/2^-$
		6157	30	2407.03	$3/2^-$
		7274	50	1289.83	$3/2^-$
		8186	100	377.89	$5/2^-$
		8564	80	0.0	$7/2^-$
8607.5	$(3/2^-,5/2^-)$	4542	2	4066.21	
		5127	3	3480.0	$1/2^-$
		5481	2	3127.37	$(5/2^-)$
		5506	5	3097.23	$3/2^-$
		5732	3	2875.96	$3/2^-$
		5937	8	2671.17	$1/2^-$
		6201	6	2407.03	$3/2^-$
		6334	10	2273.90	$5/2^-$
		7318	11	1289.83	$3/2^-$
		8229	100	377.89	$5/2^-$
		8607	8	0.0	$7/2^-$
8611.4	$(3/2^-,5/2,7/2^-)$	3819	5	4793.2	$(3/2^-,5/2,7/2^-)$
		4546	8	4066.21	
		6205	10	2407.03	$3/2^-$
		6338	15	2273.90	$5/2^-$
		7322	95	1289.83	$3/2^-$
		8233	100	377.89	$5/2^-$
8652.7	$(3/2^-)$	4587	2	4066.21	
		4755	2	3898.09	$1/2^-$
		4987	2	3666.19	$5/2^-$
		5173	3	3480.0	$1/2^-$
		5453	2	3199.94	$5/2^-$
		5471	3	3182.08	$(3/2^-,5/2^-)$
		5646	2	3007.13	$(5/2)^+$
		5946	5	2706.92	$1/2^+$
		6080	5	2573.10	$7/2^-$
		6246	8	2407.03	$3/2^-$
		6379	19	2273.90	$5/2^-$
		8653	100	0.0	$7/2^-$
8673.3	$(3/2^-)$	4325	2	4348.2	$1/2^-,3/2^-$
		4607	2	4066.21	
		4775	2	3898.09	$1/2^-$
		5193	2	3480.0	$1/2^-$
		5576	3	3097.23	$3/2^-$
		5966	3	2706.92	$1/2^+$
8673.3	$(3/2^-)$	6002	3	2671.17	$1/2^-$
		6266	7	2407.03	$3/2^-$
		6399	7	2273.90	$5/2^-$
		7383	21	1289.83	$3/2^-$
		8295	11	377.89	$5/2^-$
		8673	100	0.0	$7/2^-$
8690.9	$(3/2^-,5/2,7/2^-)$	4263	1	4427.81	$3/2^-$
		4343	1	4348.2	$1/2^-,3/2^-$
		4425	1	4266.3	$(5/2^-,7/2^-)$
		5491	3	3199.94	$5/2^-$
		5594	3	3097.23	$3/2^-$
		5684	1	3007.13	$(5/2)^+$
		8313	26	377.89	$5/2^-$
		8691	100	0.0	$7/2^-$
8712.5	$(3/2^-,5/2,7/2^-)$	8334	19	377.89	$5/2^-$
		8712	100	0.0	$7/2^-$
8731.1	$5/2^-$	3938	2	4793.2	$(3/2^-,5/2,7/2^-)$
		4665	2	4066.21	
		5531	2	3199.94	$5/2^-$
		5549	6	3182.08	$(3/2^-,5/2^-)$
		6324	28	2407.03	$3/2^-$
		7441	50	1289.83	$3/2^-$
		8353	10	377.89	$5/2^-$
		8731	100	0.0	$7/2^-$
8743.9	$(3/2^-,5/2,7/2^-)$	4682	5	4062.2?	$(7/2^-)$
		4784	6	3955.0	$7/2^-$
		5278	3	3466.32	$(3/2^-,5/2,7/2^-)$
		5617	8	3127.37	$(5/2^-)$
		6337	5	2407.03	$3/2^-$
		7454	13	1289.83	$3/2^-$
		8366	100	377.89	$5/2^-$
		8744	17	0.0	$7/2^-$
8784.1	$(3/2^-,5/2,7/2^-)$	4004	2	4780.3	$(1/2^-,3/2^-)$
		4718	2	4066.21	
		5118	2	3666.19	$5/2^-$
		5252	3	3532.28	$(3/2^-,5/2,7/2^-)$
		5602	16	3182.08	$(3/2^-,5/2^-)$
		5687	2	3097.23	$3/2^-$
		5777	2	3007.13	$(5/2)^+$
		5871	5	2912.88	$3/2^-$
		6098	9	2686.16	$7/2^-$
		6211	5	2573.10	$7/2^-$

$^{53}_{25}Mn_{28}$-29

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
8784.1	$(3/2^-,5/2,7/2^-)$	6510	14	2273.90	$5/2^-$
		8406	100	377.89	$5/2^-$
		8784	12	0.0	$7/2^-$
8807.7	$(3/2^-,5/2,7/2^-)$	5932	4	2875.96	$3/2^-$
		6235	27	2573.10	$7/2^-$
		6401	6	2407.03	$3/2^-$
		6534	14	2273.90	$5/2^-$
		7518	16	1289.83	$3/2^-$
		8429	100	377.89	$5/2^-$
		8807	6	0.0	$7/2^-$
8816.5	5/2	5634	3	3182.08	$(3/2^-,5/2^-)$
		5689	4	3127.37	$(5/2^-)$
		6243	3	2573.10	$7/2^-$
		8438	16	377.89	$5/2^-$
		8816	100	0.0	$7/2^-$
8837.1	5/2	7547	8	1289.83	$3/2^-$
		8459	96	377.89	$5/2^-$
		8837	100	0.0	$7/2^-$
8845.0	$(3/2^-,5/2^+)$	4779	3	4066.21	
		4846	5	3999.1	$(3/2^-,5/2,7/2^-)$
		4885	8	3955.0	$7/2^-$
		5645	13	3199.94	$5/2^-$
		5663	26	3182.08	$(3/2^-,5/2^-)$
		5718	8	3127.37	$(5/2^-)$
		5743	8	3097.23	$3/2^-$
		5932	5	2912.88	$3/2^-$
		5969	5	2875.96	$3/2^-$
		6138	8	2706.92	$1/2^+$
		6272	10	2573.10	$7/2^-$
		6438	100	2407.03	$3/2^-$
		6571	5	2273.90	$5/2^-$
		7555	21	1289.83	$3/2^-$
		8467	21	377.89	$5/2^-$
		8845	13	0.0	$7/2^-$
8859.7	$(3/2^-,5/2^+)$	4793	7	4066.21	
		5659	7	3199.94	$5/2^-$
		5757	7	3097.23	$3/2^-$
		5983	16	2875.96	$3/2^-$
		6152	14	2706.92	$1/2^+$
		6452	21	2407.03	$3/2^-$
		6585	21	2273.90	$5/2^-$
		8481	100	377.89	$5/2^-$
8859.7	$(3/2^-,5/2^+)$	8859	40	0.0	$7/2^-$
8863.6	5/2	4436	1	4427.81	$3/2^-$
		4798	1	4066.21	
		5767	4	3097.23	$3/2^-$
		5857	3	3007.13	$(5/2)^+$
		5988	3	2875.96	$3/2^-$
		6157	1	2706.92	$1/2^+$
		6291	1	2573.10	$7/2^-$
		6457	5	2407.03	$3/2^-$
		7574	7	1289.83	$3/2^-$
		8486	4	377.89	$5/2^-$
		8864	100	0.0	$7/2^-$
8879.3	5/2	5680	6	3199.94	$5/2^-$
		5698	9	3182.08	$(3/2^-,5/2^-)$
		5783	2	3097.23	$3/2^-$
		6004	2	2875.96	$3/2^-$
		6473	2	2407.03	$3/2^-$
		6606	2	2273.90	$5/2^-$
		7590	28	1289.83	$3/2^-$
		8501	38	377.89	$5/2^-$
		8879	100	0.0	$7/2^-$
8900.9	$(3/2^-,5/2,7/2^-)$	4835	8	4066.21	
		5369	8	3532.28	$(3/2^-,5/2,7/2^-)$
		5804	6	3097.23	$3/2^-$
		5894	10	3007.13	$(5/2)^+$
		6215	8	2686.16	$7/2^-$
		6494	10	2407.03	$3/2^-$
		7611	20	1289.83	$3/2^-$
		8523	100	377.89	$5/2^-$
		8901	28	0.0	$7/2^-$
8918.5	$(3/2^-,5/2^+)$	5538	11	3381.10	$7/2^-$
		5912	4	3007.13	$(5/2)^+$
		6043	21	2875.96	$3/2^-$
		6212	11	2706.92	$1/2^+$
		6233	96	2686.16	$7/2^-$
		6512	11	2407.03	$3/2^-$
		6645	14	2273.90	$5/2^-$
		7629	43	1289.83	$3/2^-$
		8540	46	377.89	$5/2^-$
		8918	100	0.0	$7/2^-$
8921.5	$(3/2^-,5/2,7/2^-)$	5540	15	3381.10	$7/2^-$
		6045	23	2875.96	$3/2^-$

$^{53}_{25}Mn_{28}$-30

Adopted Levels, Gammas (continued)

γ(^{53}Mn) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
8921.5	(3/2$^-$,5/2,7/2$^-$)	6235	40	2686.16	7/2$^-$
		6514	6	2407.03	3/2$^-$
		6647	13	2273.90	5/2$^-$
		8543	13	377.89	5/2$^-$
		8921	100	0.0	7/2$^-$
8923.4	7/2$^-$	5542	30	3381.10	7/2$^-$
		5723	48	3199.94	5/2$^-$
		5741	7	3182.08	(3/2$^-$,5/2$^-$)
		5796	22	3127.37	(5/2$^-$)
		5916	19	3007.13	(5/2)$^+$
		6237	26	2686.16	7/2$^-$
		6516	30	2407.03	3/2$^-$
		6649	26	2273.90	5/2$^-$
		7303	15	1620.12	9/2$^-$
		7482	15	1441.15	11/2$^-$
		8545	100	377.89	5/2$^-$
		8923	33	0.0	7/2$^-$
8924.4	5/2$^-$,7/2$^-$	4964	27	3955.0	7/2$^-$
		5258	31	3666.19	5/2$^-$
		5797	15	3127.37	(5/2$^-$)
		5917	69	3007.13	(5/2)$^+$
		6011	42	2912.88	3/2$^-$
		6048	23	2875.96	3/2$^-$
		6238	12	2686.16	7/2$^-$
		6517	27	2407.03	3/2$^-$
		7634	27	1289.83	3/2$^-$
		8546	100	377.89	5/2$^-$
		8924	12	0.0	7/2$^-$
8936.2	5/2$^-$	4670	2	4266.3	(5/2$^-$,7/2$^-$)
		5270	4	3666.19	5/2$^-$
		5404	2	3532.28	(3/2$^-$,5/2,7/2$^-$)
		5555	4	3381.10	7/2$^-$
		5929	4	3007.13	(5/2)$^+$
		6250	19	2686.16	7/2$^-$
		6265	4	2671.17	1/2$^-$
		6363	4	2573.10	7/2$^-$
		6529	6	2407.03	3/2$^-$
		8558	62	377.89	5/2$^-$
		8936	100	0.0	7/2$^-$
8945.0	5/2,7/2$^-$	5848	1	3097.23	3/2$^-$
		6259	2	2686.16	7/2$^-$
		6538	2	2407.03	3/2$^-$
8945.0	5/2,7/2$^-$	6671	2	2273.90	5/2$^-$
		8567	100	377.89	5/2$^-$
		8945	9	0.0	7/2$^-$
8952.9	(5/2$^-$,7/2$^-$)	5421	3	3532.28	(3/2$^-$,5/2,7/2$^-$)
		5487	3	3466.32	(3/2$^-$,5/2,7/2$^-$)
		5572	5	3381.10	7/2$^-$
		5753	14	3199.94	5/2$^-$
		5771	5	3182.08	(3/2$^-$,5/2$^-$)
		5851	5	3097.23	3/2$^-$
		5946	8	3007.13	(5/2)$^+$
		6077	3	2875.96	3/2$^-$
		6380	3	2573.10	7/2$^-$
		6546	19	2407.03	3/2$^-$
		6679	3	2273.90	5/2$^-$
		7332	19	1620.12	9/2$^-$
		7663	8	1289.83	3/2$^-$
		8575	100	377.89	5/2$^-$
		8953	62	0.0	7/2$^-$
8972.2	(3/2$^-$,5/2,7/2$^-$)	5506	5	3466.32	(3/2$^-$,5/2,7/2$^-$)
		5591	10	3381.10	7/2$^-$
		6286	7	2686.16	7/2$^-$
		6399	7	2573.10	7/2$^-$
		6565	17	2407.03	3/2$^-$
		8594	100	377.89	5/2$^-$
		8972	93	0.0	7/2$^-$
8977.4	(3/2$^-$,5/2,7/2$^-$)	5795	17	3182.08	(3/2$^-$,5/2$^-$)
		5970	11	3007.13	(5/2)$^+$
		8599	100	377.89	5/2$^-$
		8977	14	0.0	7/2$^-$
8981.3	(3/2$^+$,5/2$^+$)	4915	3	4066.21	
		5449	1	3532.28	(3/2$^-$,5/2,7/2$^-$)
		5515	3	3466.32	(3/2$^-$,5/2,7/2$^-$)
		5799	1	3182.08	(3/2$^-$,5/2$^-$)
		5854	1	3127.37	(5/2$^-$)
		5879	1	3101.9	
		5884	1	3097.23	3/2$^-$
		6295	14	2686.16	7/2$^-$
		6707	1	2273.90	5/2$^-$
		8603	100	377.89	5/2$^-$
		8981	8	0.0	7/2$^-$
8993.1	3/2$^-$,5/2	8615	100	377.89	5/2$^-$
		8993	40	0.0	7/2$^-$

$^{53}_{25}Mn_{28}$-31

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
8996.1	(5/2$^-$,7/2)	4730	12	4266.3	(5/2$^-$,7/2$^-$)
		5041	14	3955.0	7/2$^-$
		7375	19	1620.12	9/2$^-$
		8618	25	377.89	5/2$^-$
		8996	100	0.0	7/2$^-$
9002.9	(3/2$^-$,5/2,7/2$^-$)	4655	18	4348.2	1/2$^-$,3/2$^-$
		5471	23	3532.28	(3/2$^-$,5/2,7/2$^-$)
		5537	36	3466.32	(3/2$^-$,5/2,7/2$^-$)
		5622	14	3381.10	7/2$^-$
		5803	32	3199.94	5/2$^-$
		5876	18	3127.37	(5/2$^-$)
		5906	27	3097.23	3/2$^-$
		6729	86	2273.90	5/2$^-$
		7713	23	1289.83	3/2$^-$
		8625	77	377.89	5/2$^-$
		9003	100	0.0	7/2$^-$
9027.4	(3/2$^-$,5/2,7/2$^-$)	4589	4	4438.3	3/2$^-$
		4961	3	4066.21	
		5827	4	3199.94	5/2$^-$
		5900	3	3127.37	(5/2$^-$)
		6020	9	3007.13	(5/2)$^+$
		6151	13	2875.96	3/2$^-$
		7737	7	1289.83	3/2$^-$
		8649	100	377.89	5/2$^-$
		9027	3	0.0	7/2$^-$
9070.6	3/2$^-$	6063	4	3007.13	(5/2)$^+$
		6194	3	2875.96	3/2$^-$
		6363	4	2706.92	1/2$^+$
		6384	3	2686.16	7/2$^-$
		6399	6	2671.17	1/2$^-$
		6663	4	2407.03	3/2$^-$
		6796	3	2273.90	5/2$^-$
		7780	13	1289.83	3/2$^-$
		8692	100	377.89	5/2$^-$
		9070	1	0.0	7/2$^-$
9096.1	3/2$^-$,5/2$^-$	5030	4	4066.21	
		5136	9	3955.0	7/2$^-$
		5198	9	3898.09	1/2$^-$
		5430	17	3666.19	5/2$^-$
		5564	9	3532.28	(3/2$^-$,5/2,7/2$^-$)
		5630	9	3466.32	(3/2$^-$,5/2,7/2$^-$)
		5914	13	3182.08	(3/2$^-$,5/2$^-$)
9096.1	3/2$^-$,5/2$^-$	5995	30	3097.23	3/2$^-$
		6089	44	3007.13	(5/2)$^+$
		6220	13	2875.96	3/2$^-$
		6410	35	2686.16	7/2$^-$
		6689	44	2407.03	3/2$^-$
		6822	13	2273.90	5/2$^-$
		7806	83	1289.83	3/2$^-$
		8717	4	377.89	5/2$^-$
		9096	100	0.0	7/2$^-$
9114.8	3/2$^-$,5/2,7/2$^-$	4848	18	4266.3	(5/2$^-$,7/2$^-$)
		5448	14	3666.19	5/2$^-$
		5648	14	3466.32	(3/2$^-$,5/2,7/2$^-$)
		5932	32	3182.08	(3/2$^-$,5/2$^-$)
		6017	5	3097.23	3/2$^-$
		6202	23	2912.88	3/2$^-$
		6238	14	2875.96	3/2$^-$
		6429	32	2686.16	7/2$^-$
		6541	18	2573.10	7/2$^-$
		6707	36	2407.03	3/2$^-$
		6840	18	2273.90	5/2$^-$
		7824	100	1289.83	3/2$^-$
		8736	73	377.89	5/2$^-$
		9114	59	0.0	7/2$^-$
9120.7	3/2$^-$,5/2$^-$	5038	17	4083.0	(3/2,5/2,7/2$^-$)
		5055	9	4066.21	
		5455	13	3666.19	5/2$^-$
		5655	13	3466.32	(3/2$^-$,5/2,7/2$^-$)
		5939	39	3182.08	(3/2$^-$,5/2$^-$)
		5994	17	3127.37	(5/2$^-$)
		6019	44	3097.23	3/2$^-$
		6208	17	2912.88	3/2$^-$
		6245	35	2875.96	3/2$^-$
		6435	70	2686.16	7/2$^-$
		6450	22	2671.17	1/2$^-$
		6548	17	2573.10	7/2$^-$
		6847	17	2273.90	5/2$^-$
		7831	17	1289.83	3/2$^-$
		8743	100	377.89	5/2$^-$
		9121	13	0.0	7/2$^-$
9139.3	3/2$^-$,5/2$^+$	5056	13	4083.0	(3/2,5/2,7/2$^-$)
		5758	13	3381.10	7/2$^-$
		5957	10	3182.08	(3/2$^-$,5/2$^-$)

Adopted Levels, Gammas (continued)

γ(^{53}Mn) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Comments
9139.3	3/2$^-$,5/2$^+$	6432	5	2706.92	1/2$^+$	
		6453	10	2686.16	7/2$^-$	
		6732	26	2407.03	3/2$^-$	
		6865	21	2273.90	5/2$^-$	
		7849	36	1289.83	3/2$^-$	
		8761	44	377.89	5/2$^-$	
		9139	100	0.0	7/2$^-$	
9153.0	3/2$^-$,5/2$^+$	5255	10	3898.09	1/2$^-$	
		6056	39	3097.23	3/2$^-$	
		6446	42	2706.92	1/2$^+$	
		6746	48	2407.03	3/2$^-$	
		7863	100	1289.83	3/2$^-$	
		8775	45	377.89	5/2$^-$	
		9153	39	0.0	7/2$^-$	
9168.7	3/2$^-$,5/2,7/2$^-$	4731	7	4438.3	3/2$^-$	
		4821	14	4348.2	1/2$^-$,3/2$^-$	
		5170	16	3999.1	(3/2$^-$,5/2,7/2$^-$)	
		5987	23	3182.08	(3/2$^-$,5/2$^-$)	
		6162	21	3007.13	(5/2)$^+$	
		6762	28	2407.03	3/2$^-$	
		7879	100	1289.83	3/2$^-$	
		8791	21	377.89	5/2$^-$	
		9169	2	0.0	7/2$^-$	
9179.5	5/2$^-$	5647	4	3532.28	(3/2$^-$,5/2,7/2$^-$)	
		5713	2	3466.32	(3/2$^-$,5/2,7/2$^-$)	
		5979	12	3199.94	5/2$^-$	
		5997	10	3182.08	(3/2$^-$,5/2$^-$)	
		6052	4	3127.37	(5/2$^-$)	
		6082	10	3097.23	3/2$^-$	
		6266	6	2912.88	3/2$^-$	
		6606	6	2573.10	7/2$^-$	
		7889	28	1289.83	3/2$^-$	
		8801	100	377.89	5/2$^-$	
		9179	16	0.0	7/2$^-$	
9190.3	5/2	5124	39	4066.21		
		6008	39	3182.08	(3/2$^-$,5/2$^-$)	
		6063	18	3127.37	(5/2$^-$)	
		6088	12	3097.23	3/2$^-$	
		6183	42	3007.13	(5/2)$^+$	
		6617	21	2573.10	7/2$^-$	
		7570		1620.12	9/2$^-$	I_γ: I(7570):I(7749):I(9190)=1:21:78, see (p,γ) (1985Di09).
		7749		1441.15	11/2$^-$	I_γ: I(7570):I(7749):I(9190)=1:21:78, see (p,γ) (1985Di09).

$^{53}_{25}Mn_{28}$-33

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Comments
9190.3	5/2	8812	30	377.89	$5/2^-$	
		9190	100	0.0	$7/2^-$	Additional information 1.
9193.3	$9/2^+$	6317	12	2875.96	$3/2^-$	
		6507	7	2686.16	$7/2^-$	
		7574	1	1620.12	$9/2^-$	I_γ: I(7574):I(9195)=1:94, see 1985Di09.
		7752	20	1441.15	$11/2^-$	
		7903	16	1289.83	$3/2^-$	
		8815	10	377.89	$5/2^-$	
		9193	100	0.0	$7/2^-$	
9197.2	$3/2^-$,5/2,$7/2^-$	6015	12	3182.08	$(3/2^-,5/2^-)$	
		6190	12	3007.13	$(5/2)^+$	
		6790	21	2407.03	$3/2^-$	
		7907	40	1289.83	$3/2^-$	
		8819	100	377.89	$5/2^-$	
		9197	49	0.0	$7/2^-$	
9200.1	$3/2^-$,5/2,$7/2^-$	5134	3	4066.21		
		5201	2	3999.1	$(3/2^-,5/2,7/2^-)$	
		5302	2	3898.09	$1/2^-$	
		5819	2	3381.10	$7/2^-$	
		6000	3	3199.94	$5/2^-$	
		6098	2	3097.23	$3/2^-$	
		6627	3	2573.10	$7/2^-$	
		7910	5	1289.83	$3/2^-$	
		8822	100	377.89	$5/2^-$	
		9200	45	0.0	$7/2^-$	
9204.1	$9/2^+$	5306	3	3898.09	$1/2^-$	
		6004	5	3199.94	$5/2^-$	
		6022	3	3182.08	$(3/2^-,5/2^-)$	
		6107	5	3097.23	$3/2^-$	
		6197	9	3007.13	$(5/2)^+$	
		6797	7	2407.03	$3/2^-$	
		6930	10	2273.90	$5/2^-$	
		7763	5	1441.15	$11/2^-$	
		7914	17	1289.83	$3/2^-$	
		8826	5	377.89	$5/2^-$	
		9204	100	0.0	$7/2^-$	
9208.5	$5/2^-$	6332	14	2875.96	$3/2^-$	
		6537	23	2671.17	$1/2^-$	
		6934	18	2273.90	$5/2^-$	
		7918	10	1289.83	$3/2^-$	
		8830	100	377.89	$5/2^-$	
		9208	92	0.0	$7/2^-$	

$^{53}_{25}Mn_{28}$-34

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
9218.9	$3/2^-,5/2^-,7/2^-$	5264	14	3955.0	$7/2^-$
		5687	32	3532.28	$(3/2^-,5/2,7/2^-)$
		6306	36	2912.88	$3/2^-$
		6343	77	2875.96	$3/2^-$
		6812	41	2407.03	$3/2^-$
		6945	32	2273.90	$5/2^-$
		7929	36	1289.83	$3/2^-$
		8841	86	377.89	$5/2^-$
		9219	100	0.0	$7/2^-$
9224.8	$3/2^-,5/2,7/2^-$	5163	4	4062.2?	$(7/2^-)$
		5759	4	3466.32	$(3/2^-,5/2,7/2^-)$
		6349	6	2875.96	$3/2^-$
		6539	8	2686.16	$7/2^-$
		6554	6	2671.17	$1/2^-$
		6652	6	2573.10	$7/2^-$
		7935	29	1289.83	$3/2^-$
		8847	100	377.89	$5/2^-$
		9225	44	0.0	$7/2^-$
9229.7	$5/2^-$	4802	3	4427.81	$3/2^-$
		4964	3	4266.3	$(5/2^-,7/2^-)$
		5168	5	4062.2?	$(7/2^-)$
		5564	3	3666.19	$5/2^-$
		5698	3	3532.28	$(3/2^-,5/2,7/2^-)$
		5750	5	3480.0	$1/2^-$
		5764	5	3466.32	$(3/2^-,5/2,7/2^-)$
		5849	5	3381.10	$7/2^-$
		6048	5	3182.08	$(3/2^-,5/2^-)$
		6103	8	3127.37	$(5/2^-)$
		6133	3	3097.23	$3/2^-$
		6544	14	2686.16	$7/2^-$
		6657	5	2573.10	$7/2^-$
		6823	24	2407.03	$3/2^-$
		6956	14	2273.90	$5/2^-$
		7940	11	1289.83	$3/2^-$
		8852	100	377.89	$5/2^-$
		9230	54	0.0	$7/2^-$
9241.4	$3/2^-,5/2,7/2^-$	4286	2	4955.3	$1/2^-$
		4813	7	4427.81	$3/2^-$
		4893	5	4348.2	$1/2^-,3/2^-$
		5861	13	3381.10	$7/2^-$
		6059	13	3182.08	$(3/2^-,5/2^-)$
		6234	9	3007.13	$(5/2)^+$
9241.4	$3/2^-,5/2,7/2^-$	6967	20	2273.90	$5/2^-$
		7951	18	1289.83	$3/2^-$
		8863	100	377.89	$5/2^-$
		9241	9	0.0	$7/2^-$
9245.4	$3/2^-,5/2^-$	5347	21	3898.09	$1/2^-$
		6045	12	3199.94	$5/2^-$
		6063	24	3182.08	$(3/2^-,5/2^-)$
		6148	15	3097.23	$3/2^-$
		6369	15	2875.96	$3/2^-$
		6971	35	2273.90	$5/2^-$
		7955	38	1289.83	$3/2^-$
		8867	100	377.89	$5/2^-$
		9245	12	0.0	$7/2^-$
9250.3	$5/2^+$	4822	2	4427.81	$3/2^-$
		5167	4	4083.0	$(3/2,5/2,7/2^-)$
		5184	4	4066.21	
		5352	2	3898.09	$1/2^-$
		6050	4	3199.94	$5/2^-$
		6068	4	3182.08	$(3/2^-,5/2^-)$
		6243	11	3007.13	$(5/2)^+$
		6337	4	2912.88	$3/2^-$
		6374	4	2875.96	$3/2^-$
		6579	2	2671.17	$1/2^-$
		6843	4	2407.03	$3/2^-$
		7960	26	1289.83	$3/2^-$
		8872	19	377.89	$5/2^-$
		9250	100	0.0	$7/2^-$
9277.7	$5/2^-$	5380	7	3898.09	$1/2^-$
		5798	7	3480.0	$1/2^-$
		5812	3	3466.32	$(3/2^-,5/2,7/2^-)$
		6096	7	3182.08	$(3/2^-,5/2^-)$
		6151	10	3127.37	$(5/2^-)$
		6181	13	3097.23	$3/2^-$
		6271	10	3007.13	$(5/2)^+$
		6402	7	2875.96	$3/2^-$
		6592	3	2686.16	$7/2^-$
		6607	7	2671.17	$1/2^-$
		6705	13	2573.10	$7/2^-$
		6871	36	2407.03	$3/2^-$
		7004	10	2273.90	$5/2^-$
		7988	100	1289.83	$3/2^-$
		8900	55	377.89	$5/2^-$

$^{53}_{25}Mn_{28}$-35

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
9277.7	$5/2^-$	9278	39	0.0	$7/2^-$
9283	$3/2^-$	4855		4427.81	$3/2^-$
		6155	30	3127.37	$(5/2^-)$
		6185		3097.23	$3/2^-$
		6275	3	3007.13	$(5/2)^+$
		6370		2912.88	$3/2^-$
		6406	10	2875.96	$3/2^-$
		6575	7	2706.92	$1/2^+$
		6596	57	2686.16	$7/2^-$
		6611	27	2671.17	$1/2^-$
		6875	37	2407.03	$3/2^-$
		7008	13	2273.90	$5/2^-$
		7992	40	1289.83	$3/2^-$
		8904	100	377.89	$5/2^-$
		9282	10	0.0	$7/2^-$
9296	$3/2^-$	4341	1	4955.3	$1/2^-$
		4503	1	4793.2	$(3/2^-,5/2,7/2^-)$
		4868	1	4427.81	$3/2^-$
		4996	1	4300.1	$5/2^-,7/2^-$
		5030	1	4266.3	$(5/2^-,7/2^-)$
		5230	1	4066.21	
		5830	3	3466.32	$(3/2^-,5/2,7/2^-)$
		6096	3	3199.94	$5/2^-$
		6169	3	3127.37	$(5/2^-)$
		6199	1	3097.23	$3/2^-$
		7022	4	2273.90	$5/2^-$
		8918	100	377.89	$5/2^-$
		9296	5	0.0	$7/2^-$
9307.2	$7/2^-$	6180	24	3127.37	$(5/2^-)$
		6394	31	2912.88	$3/2^-$
		6431	31	2875.96	$3/2^-$
		6621	28	2686.16	$7/2^-$
		6900	17	2407.03	$3/2^-$
		7866	24	1441.15	$11/2^-$
		8017	31	1289.83	$3/2^-$
		8929	35	377.89	$5/2^-$
		9307	100	0.0	$7/2^-$
9313.9	$5/2^-$	8936	100	377.89	$5/2^-$
		9314	5	0.0	$7/2^-$
9343.4	$3/2^-$	5863	22	3480.0	$1/2^-$
		6216	17	3127.37	$(5/2^-)$
		6246	22	3097.23	$3/2^-$
9343.4	$3/2^-$	6336	91	3007.13	$(5/2)^+$
		6467	100	2875.96	$3/2^-$
		6636	17	2706.92	$1/2^+$
		6657	26	2686.16	$7/2^-$
		6936	48	2407.03	$3/2^-$
		8053	26	1289.83	$3/2^-$
		8965	44	377.89	$5/2^-$
		9343	22	0.0	$7/2^-$
9346.3	$3/2^-,5/2,7/2^-$	5680	8	3666.19	$5/2^-$
		5965	18	3381.10	$7/2^-$
		6146	18	3199.94	$5/2^-$
		6249	18	3097.23	$3/2^-$
		6660	5	2686.16	$7/2^-$
		6939	46	2407.03	$3/2^-$
		7072	13	2273.90	$5/2^-$
		8056	100	1289.83	$3/2^-$
		8968	18	377.89	$5/2^-$
		9346	13	0.0	$7/2^-$
9361.0	$3/2^-,5/2,7/2^-$	5695	3	3666.19	$5/2^-$
		6161	3	3199.94	$5/2^-$
		6179	5	3182.08	$(3/2^-,5/2^-)$
		6264	8	3097.23	$3/2^-$
		6788	10	2573.10	$7/2^-$
		6954	20	2407.03	$3/2^-$
		7087	23	2273.90	$5/2^-$
		8983	100	377.89	$5/2^-$
		9361	80	0.0	$7/2^-$
9416.0	$(3/2^-)$	4988	4	4427.81	$3/2^-$
		5150	6	4266.3	$(5/2^-,7/2^-)$
		5350	12	4066.21	
		5354	12	4062.2?	$(7/2^-)$
		5456	6	3955.0	$7/2^-$
		5884	12	3532.28	$(3/2^-,5/2,7/2^-)$
		5950	12	3466.32	$(3/2^-,5/2,7/2^-)$
		6035	12	3381.10	$7/2^-$
		6289	10	3127.37	$(5/2^-)$
		6409	10	3007.13	$(5/2)^+$
		6503	10	2912.88	$3/2^-$
		6540	16	2875.96	$3/2^-$
		6709	4	2706.92	$1/2^+$
		6730	6	2686.16	$7/2^-$
		6745	18	2671.17	$1/2^-$

$^{53}_{25}Mn_{28}$-36

Adopted Levels, Gammas (continued)

$\gamma(^{53}Mn)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.[a]	δ
9416.0	$(3/2^-)$	6843	6	2573.10	$7/2^-$		
		7009	16	2407.03	$3/2^-$		
		7142	14	2273.90	$5/2^-$		
		8126	100	1289.83	$3/2^-$		
		9038	22	377.89	$5/2^-$		
		9416	6	0.0	$7/2^-$		
9654	$5/2^-,7/2^-$	5988		3666.19	$5/2^-$		
		7247		2407.03	$3/2^-$		
		9276		377.89	$5/2^-$		
		9654		0.0	$7/2^-$		
10552.3	$1/2^-$	7425	8	3127.37	$(5/2^-)$		
		7879	18	2671.17	$1/2^-$		
		10552	100	0.0	$7/2^-$		
10570	$1/2^-$	8163		2407.03	$3/2^-$		
10584.0		7456	59	3127.37	$(5/2^-)$		
		10583	100	0.0	$7/2^-$		
10597	$9/2^+$	7909	15	2686.16	$7/2^-$		
		10597	100	0.0	$7/2^-$	E1(+M2)	−0.05 *5*
10607.2	$7/2^+,9/2^+$	9166	100	1441.15	$11/2^-$		
		10607	67	0.0	$7/2^-$		
10626.8		10627	100	0.0	$7/2^-$		
10638	$9/2^+$	9017	69	1620.12	$9/2^-$		
		10638	100	0.0	$7/2^-$	E1(+M2)	−0.02 *5*
10644.8	$9/2^+$	7699	3	2946.9	$(9/2)^-$		
		8073	13	2573.10	$7/2^-$		
		9025	15	1620.12	$9/2^-$		
		9205	18	1441.15	$11/2^-$		
10644.8	$9/2^+$	10645	100	0.0	$7/2^-$	E1(+M2)	−0.02 *5*
10651.3		8078	24	2573.10	$7/2^-$		
		9210	35	1441.15	$11/2^-$		
		10651	100	0.0	$7/2^-$		
10657	$9/2^+$	9216	15	1441.15	$11/2^-$		
		10279	54	377.89	$5/2^-$		
		10657	100	0.0	$7/2^-$	E1(+M2)	−0.02 *5*
10662.3	$9/2^+$	7966	18	2686.16	$7/2^-$		
		8090	25	2573.10	$7/2^-$		
		9222	38	1441.15	$11/2^-$		
		10663	100	0.0	$7/2^-$	E1(+M2)	−0.02 *5*
10667.8	$9/2^+$	10669	100	0.0	$7/2^-$		
10673.2		8100	28	2573.10	$7/2^-$		
		10673	100	0.0	$7/2^-$		
10686.2		10686	100	0.0	$7/2^-$		
10691.4		10692	100	0.0	$7/2^-$		
10697.3		10697	100	0.0	$7/2^-$		
10721.6		8148	100	2573.10	$7/2^-$		
		9280	70	1441.15	$11/2^-$		
		10721	100	0.0	$7/2^-$		
10721.8		8149	23	2573.10	$7/2^-$		
		10722	100	0.0	$7/2^-$		
10736.5		10736	100	0.0	$7/2^-$		
10747.5		9306	100	1441.15	$11/2^-$		
		10747	89	0.0	$7/2^-$		
11070	$3/2^+,5/2^+$	11070	100	0.0	$7/2^-$		
11159	$3/2^+,5/2^+$	11159		0.0	$7/2^-$		

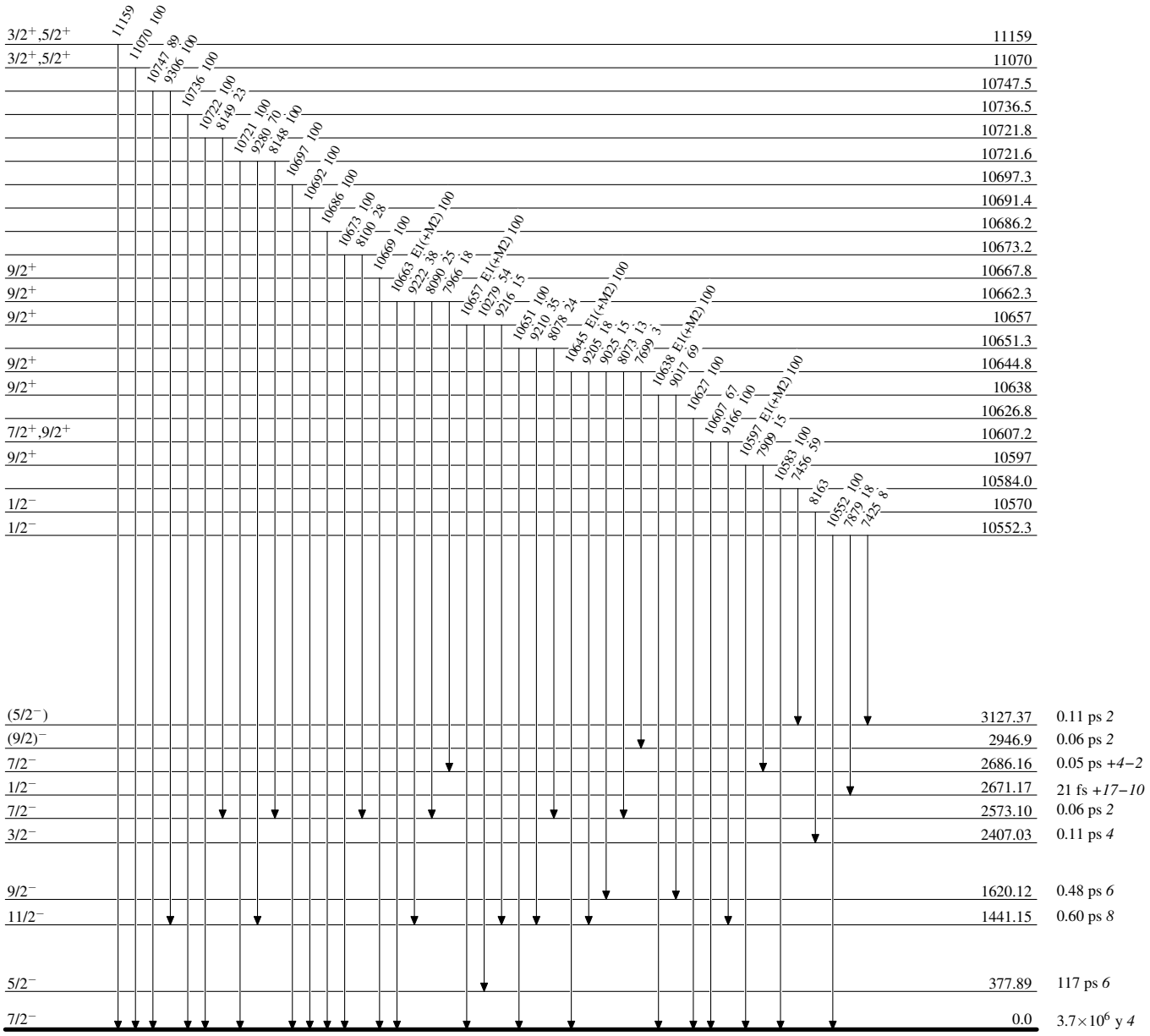
† From (α,pγ).
‡ From (HI,xnγ).
# From ^{53}Fe ε decay.
@ From (p,n), (p,nγ).
& From (p,nγ).
[a] From $\gamma(\theta)$ and linear polarization.

$^{53}_{25}Mn_{28}$-37

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

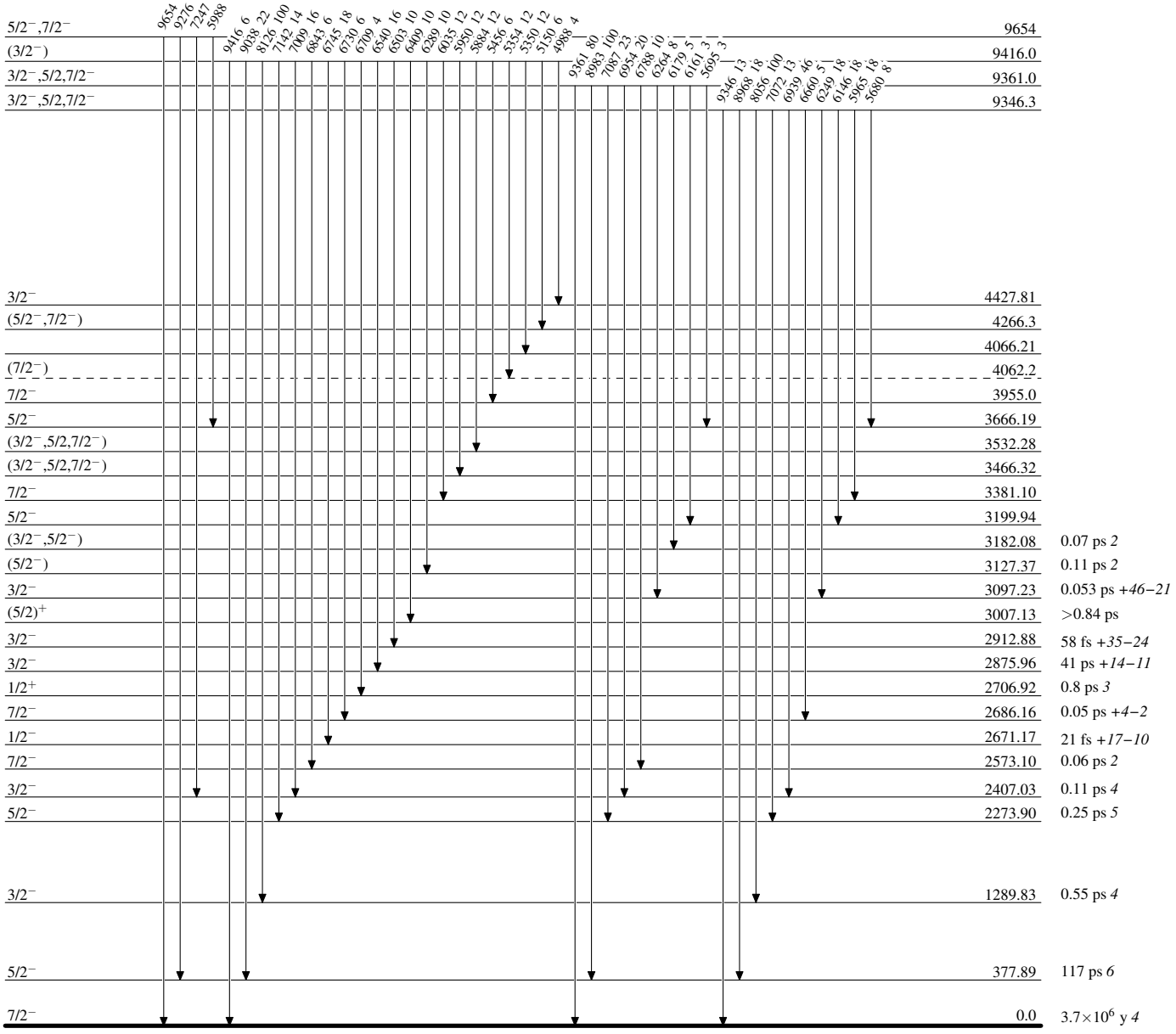


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

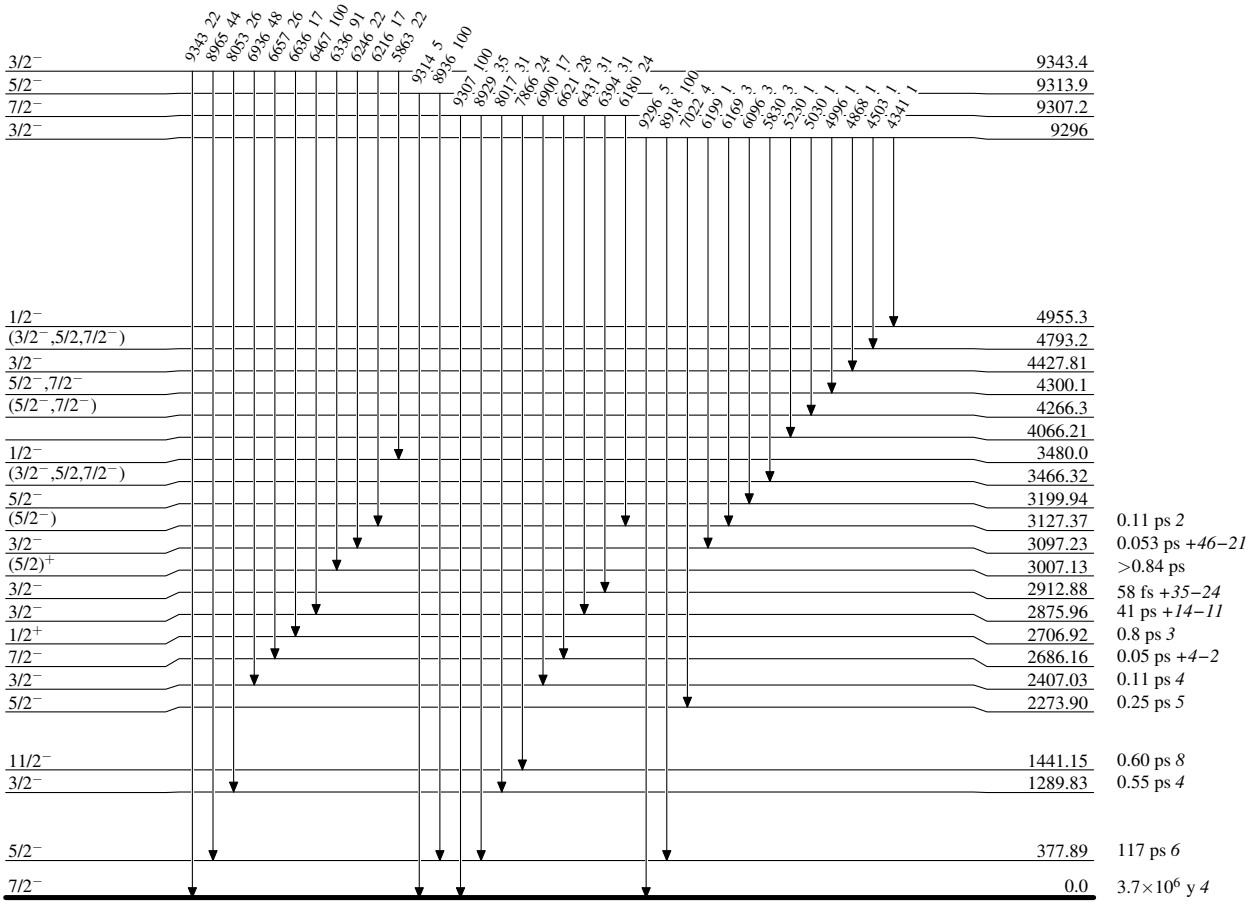


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

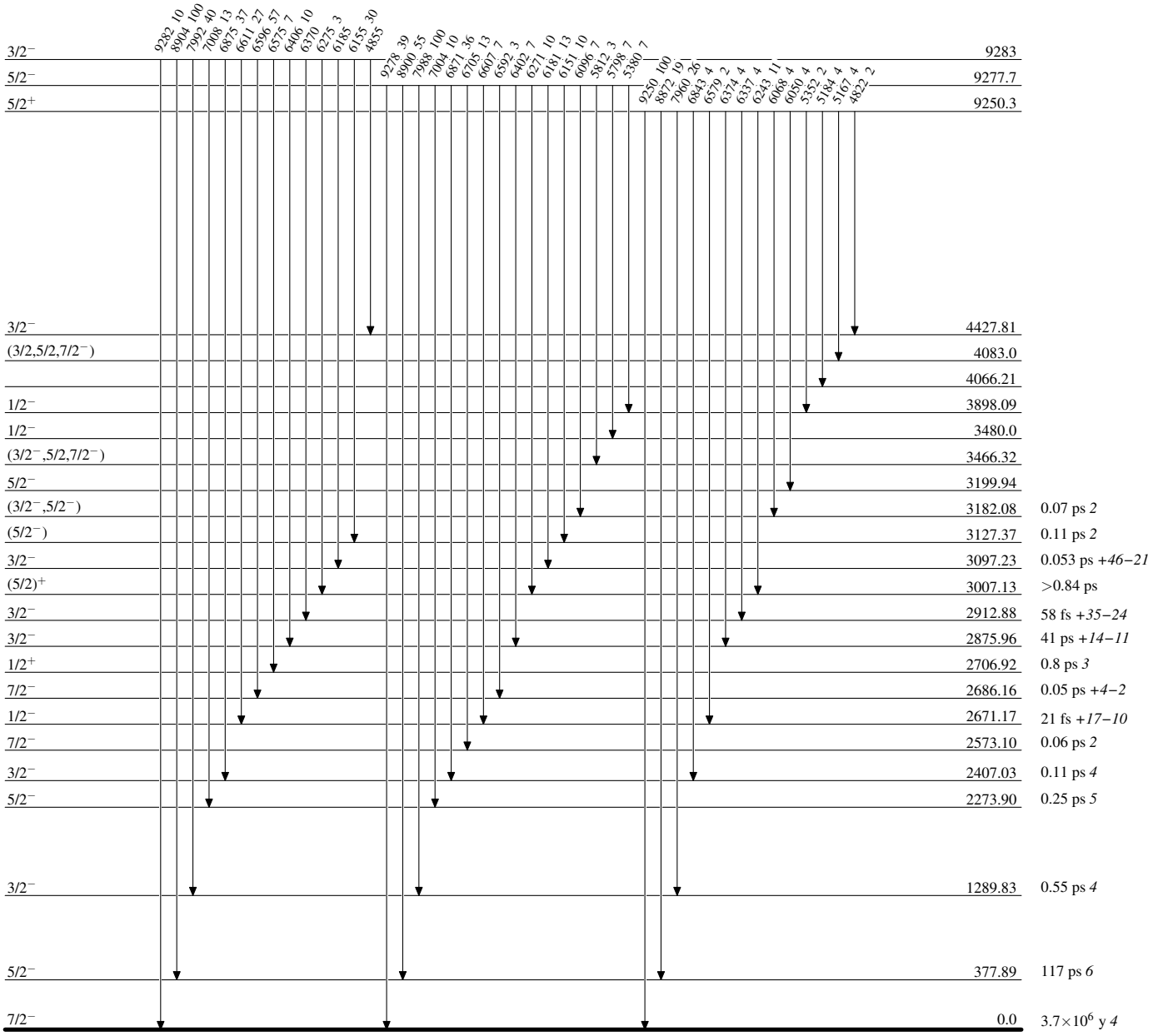


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

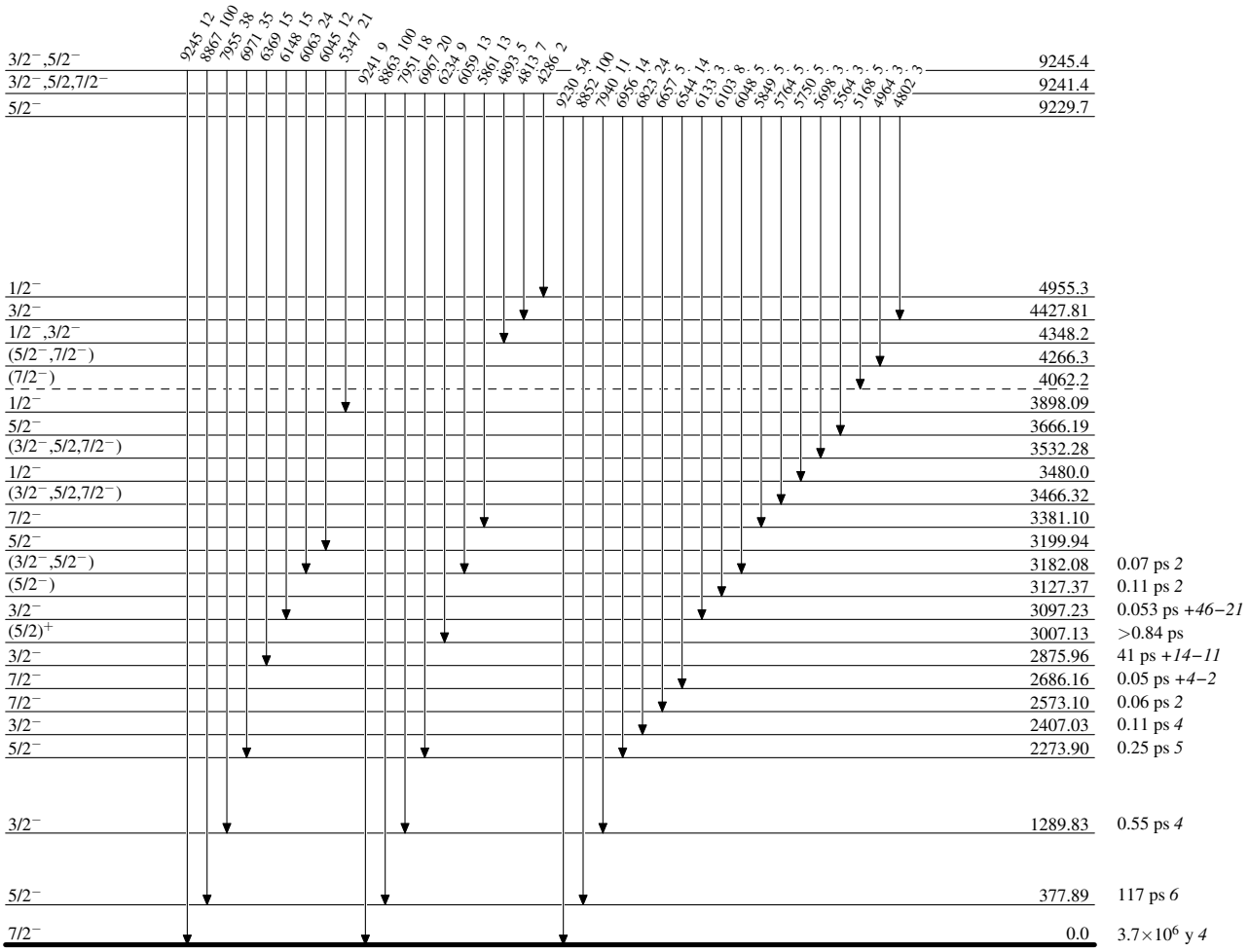


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

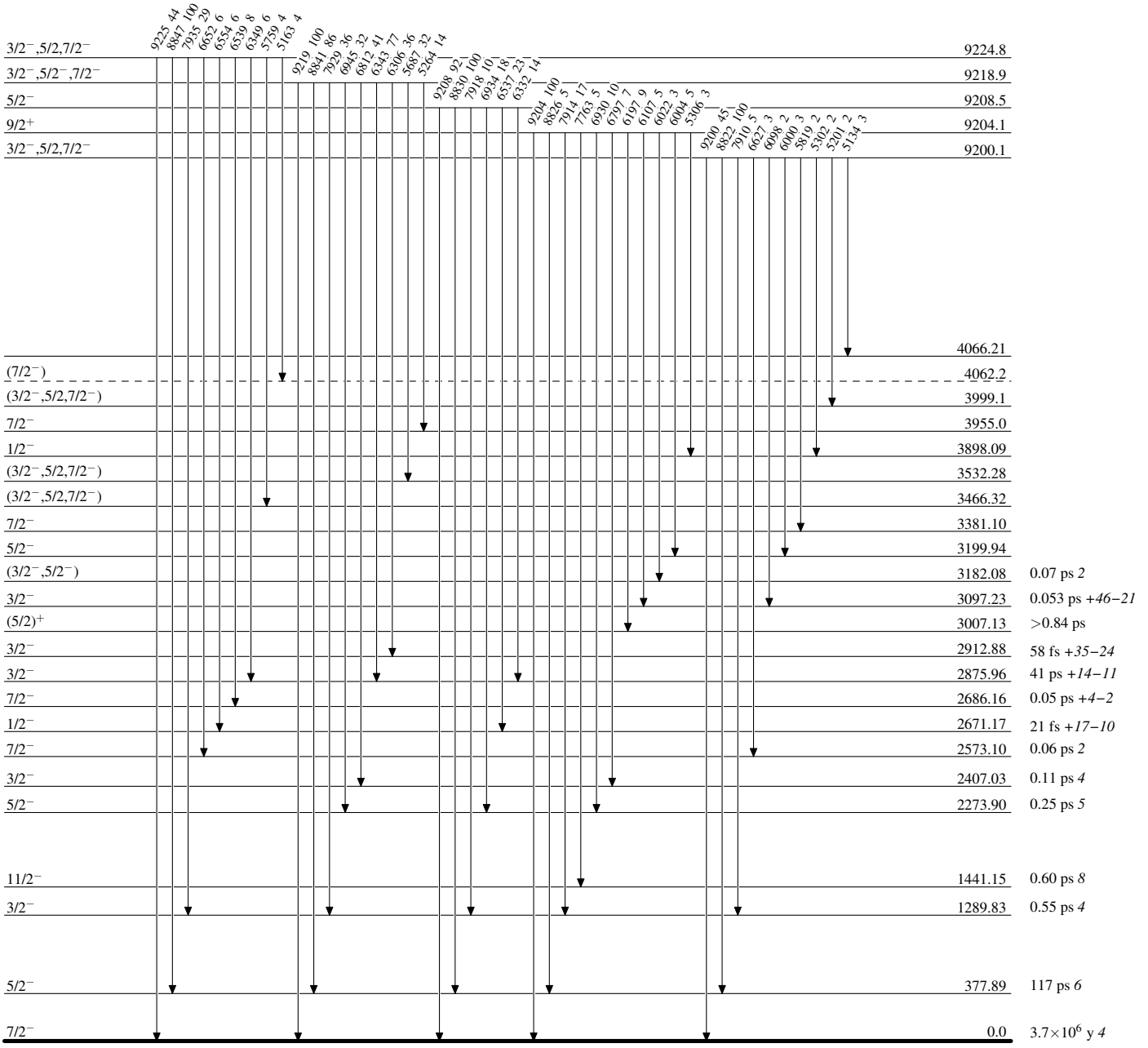


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

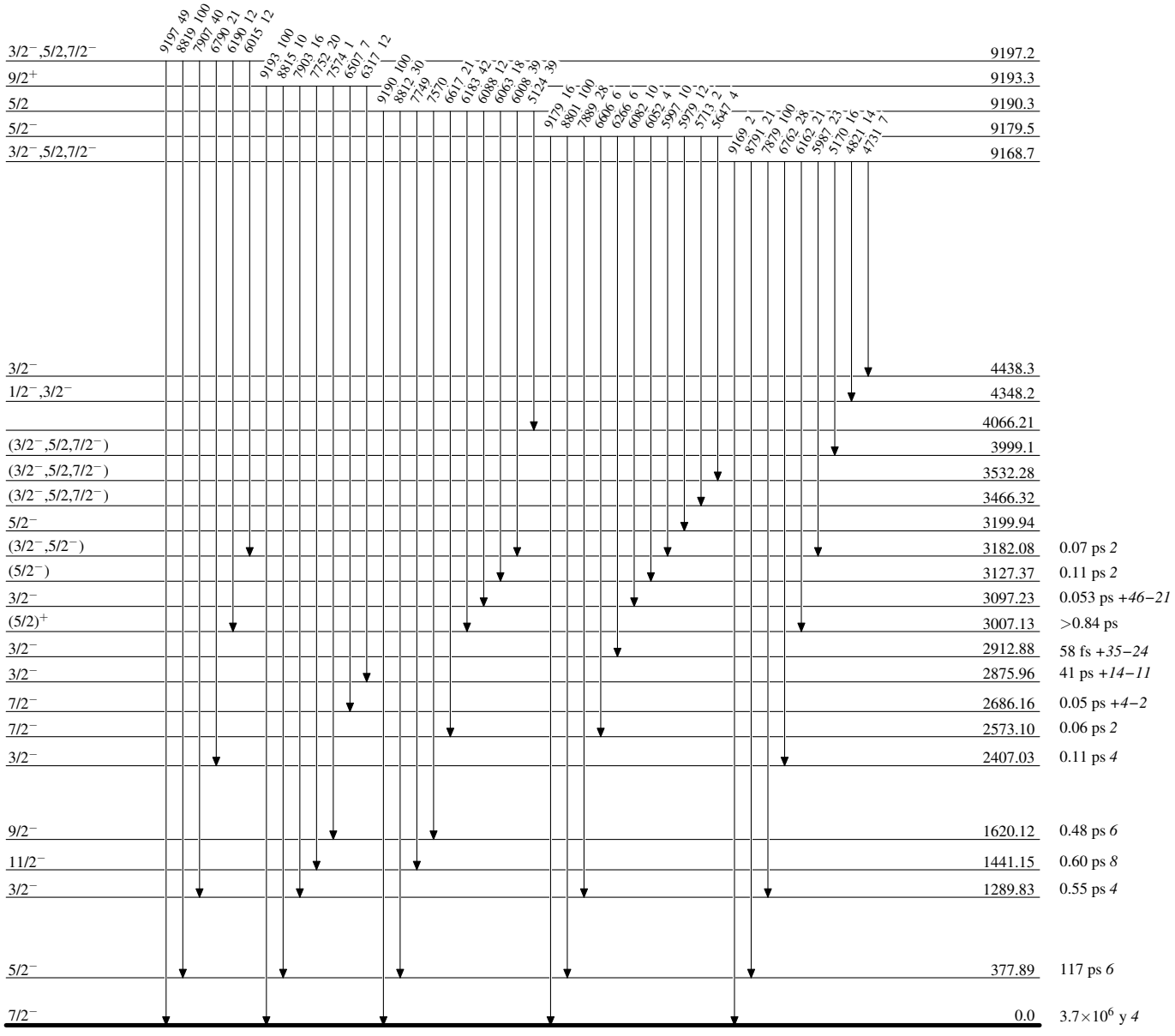


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

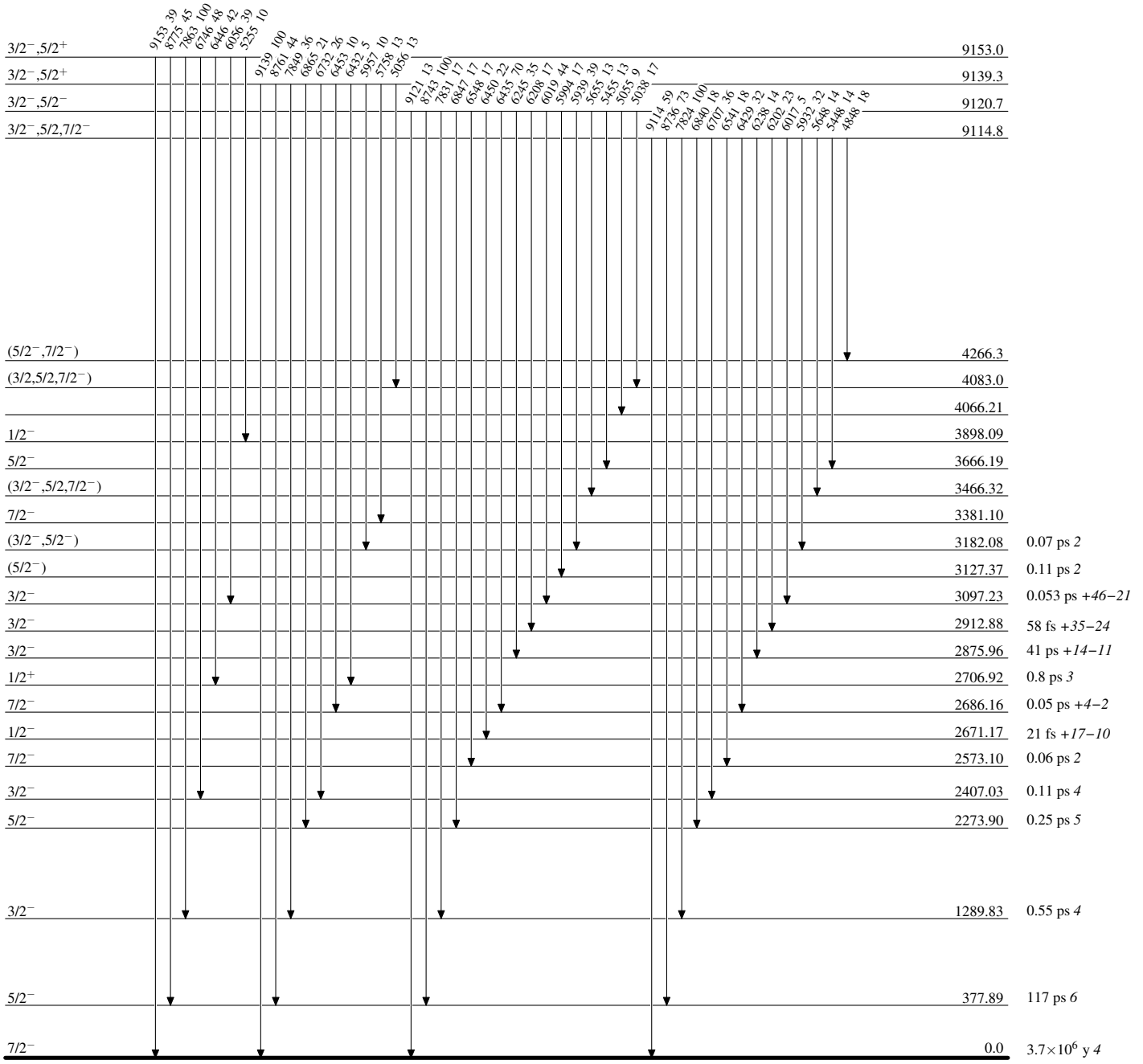


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

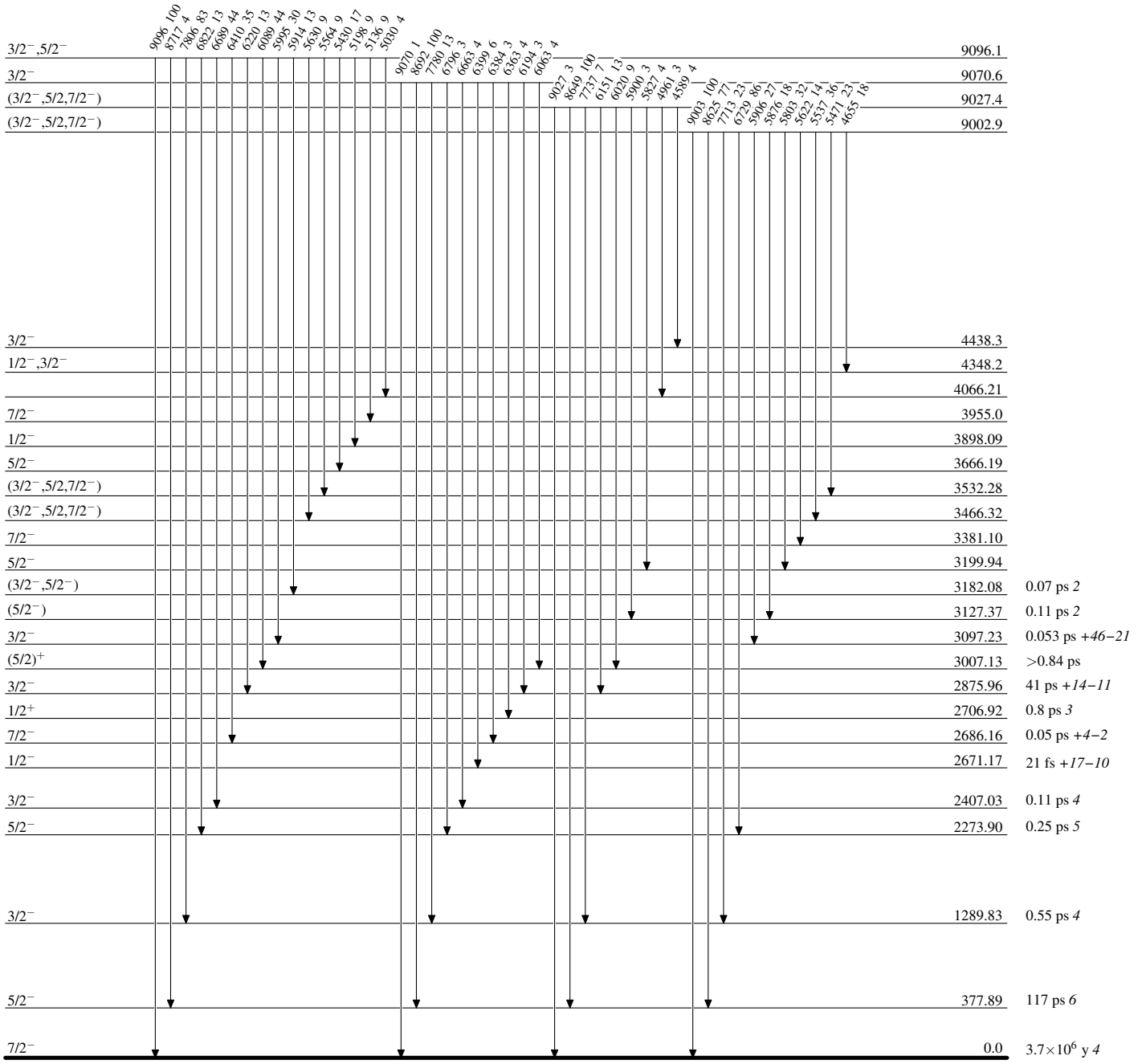


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

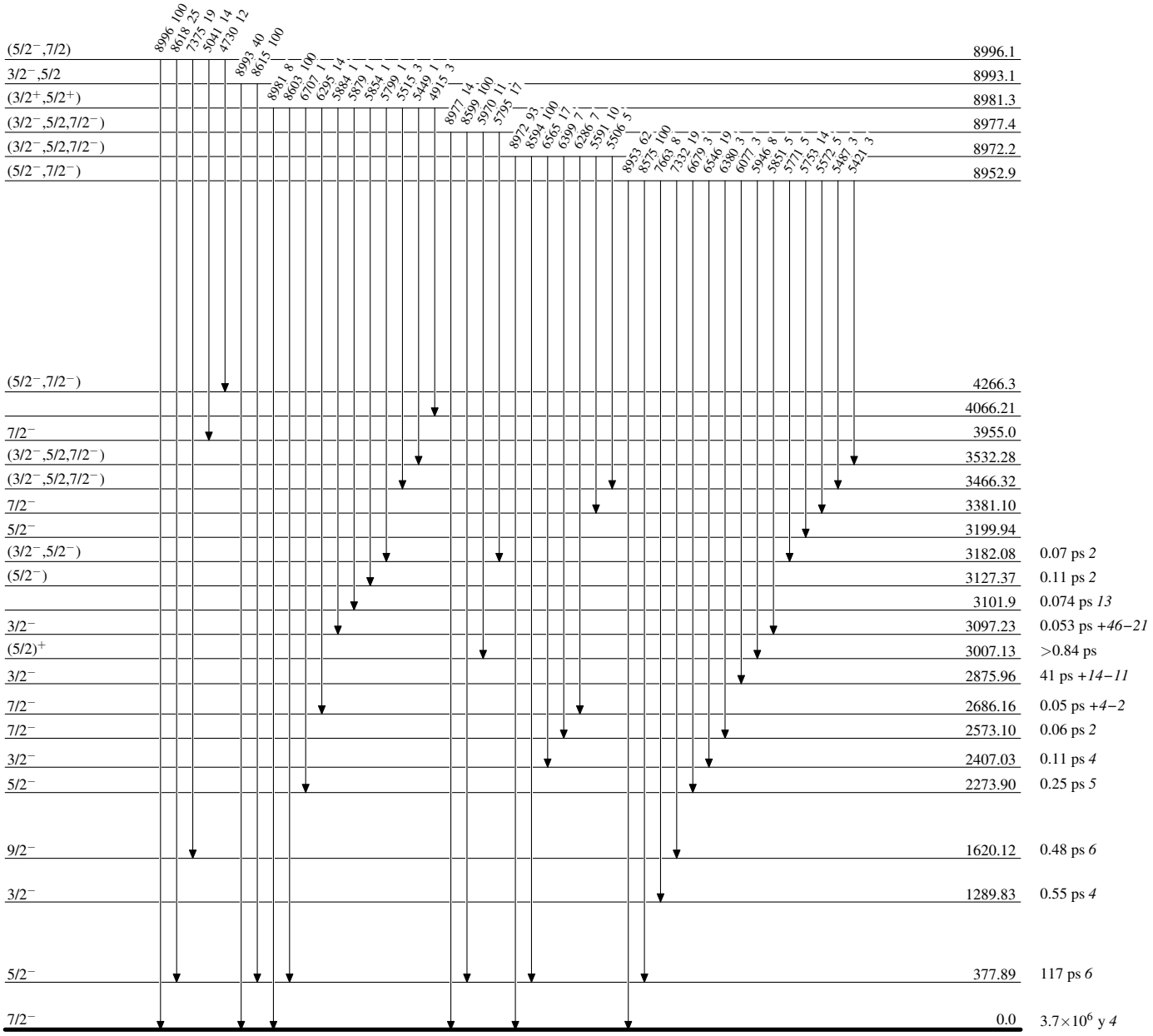


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

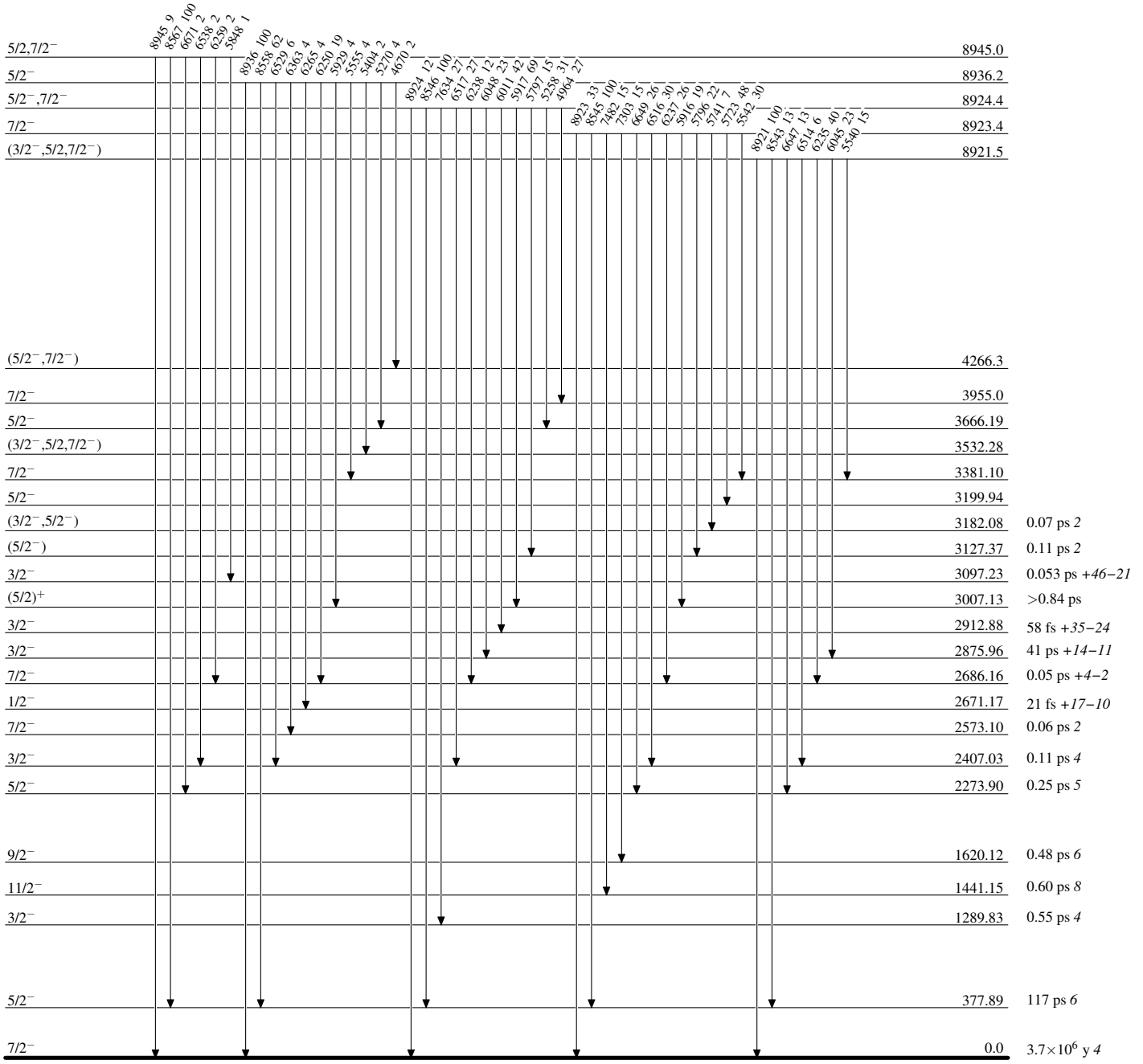


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

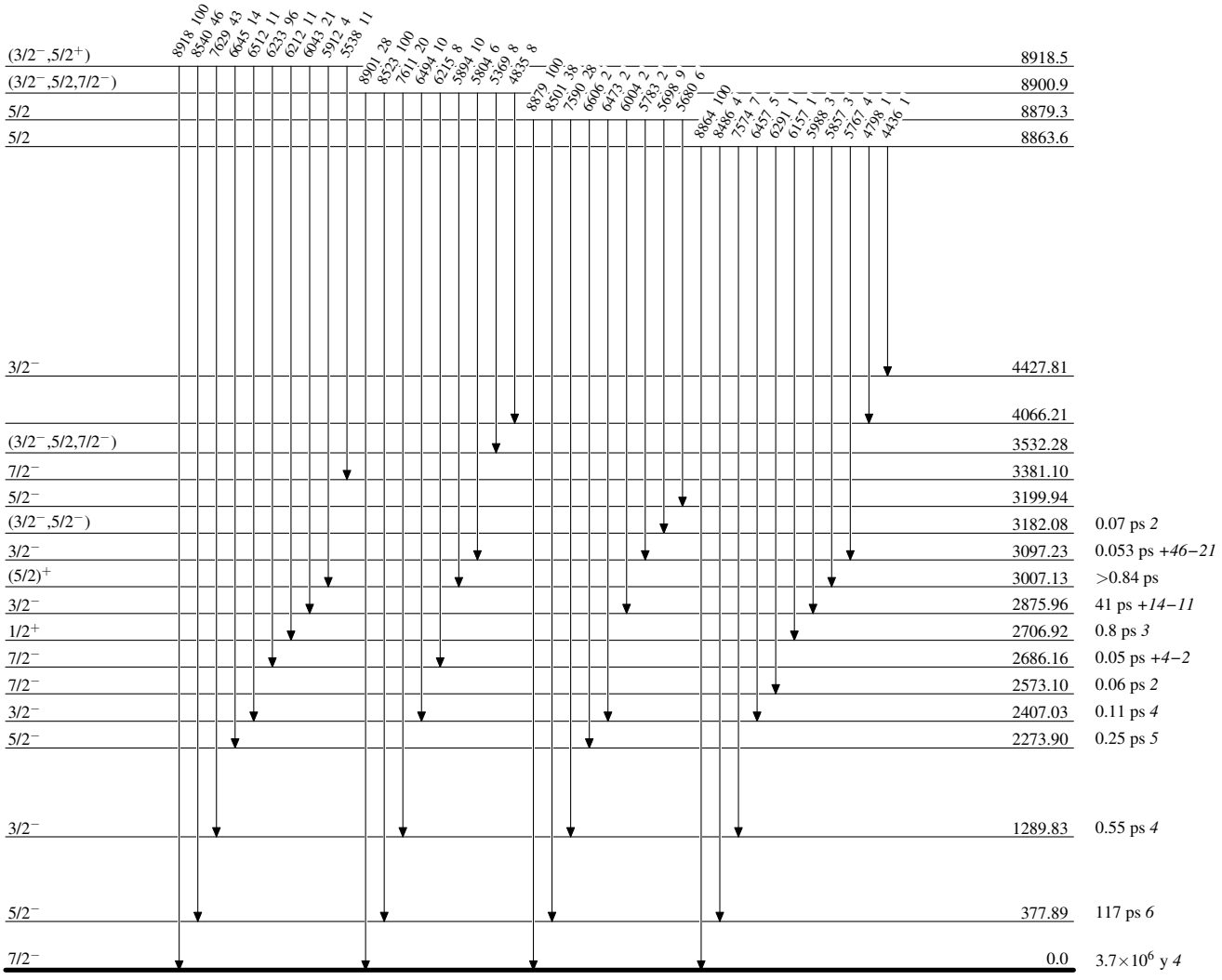


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

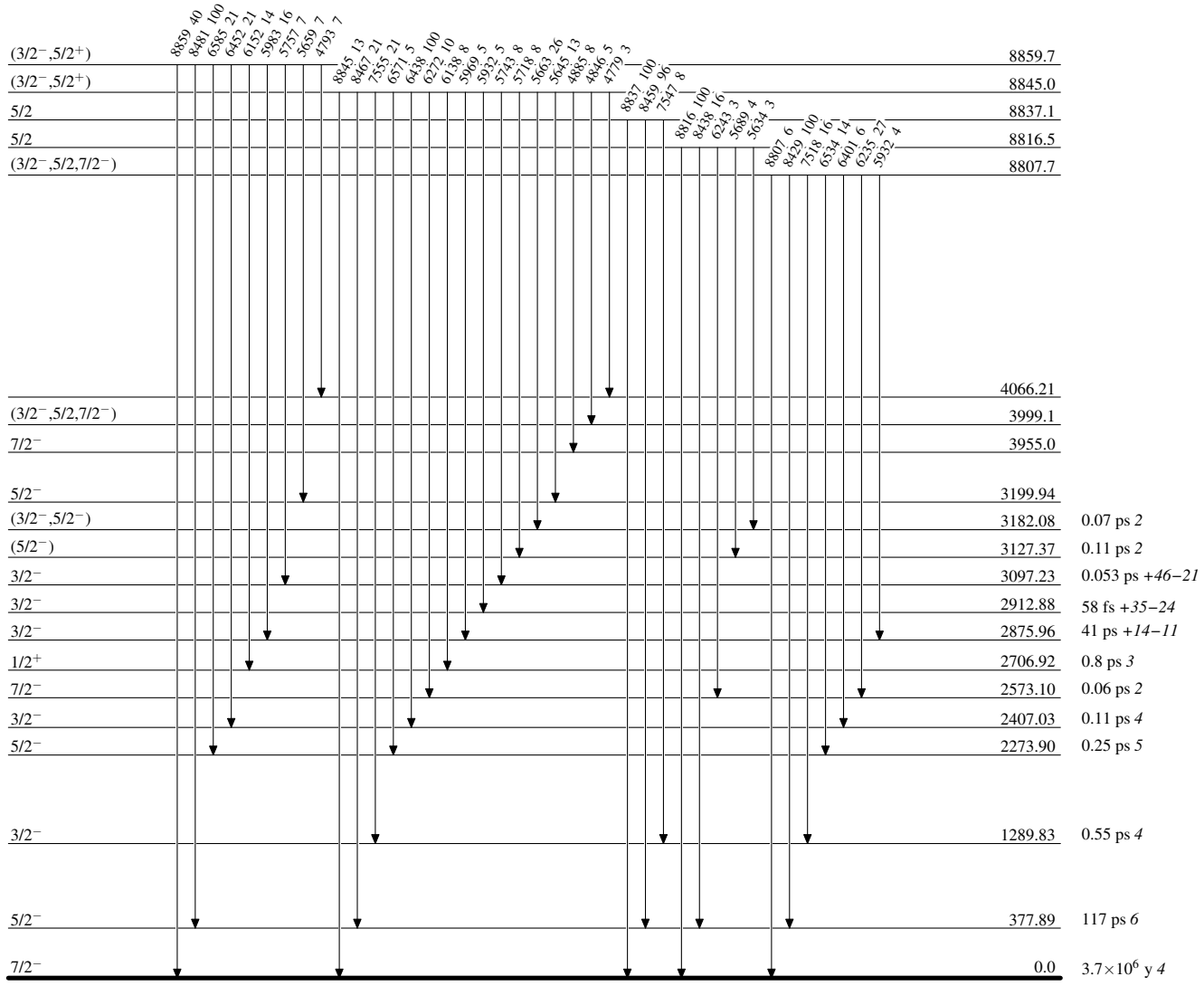


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

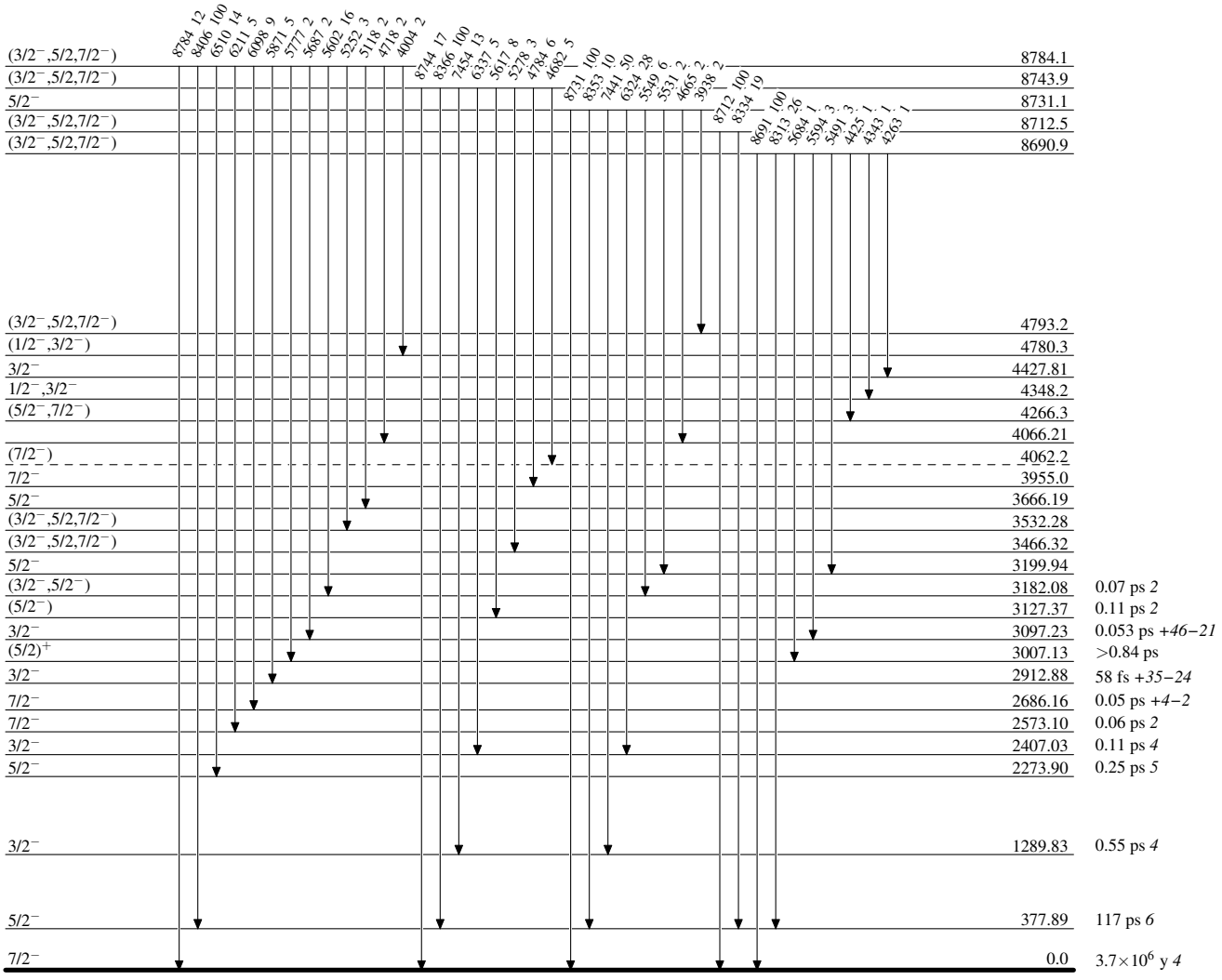


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

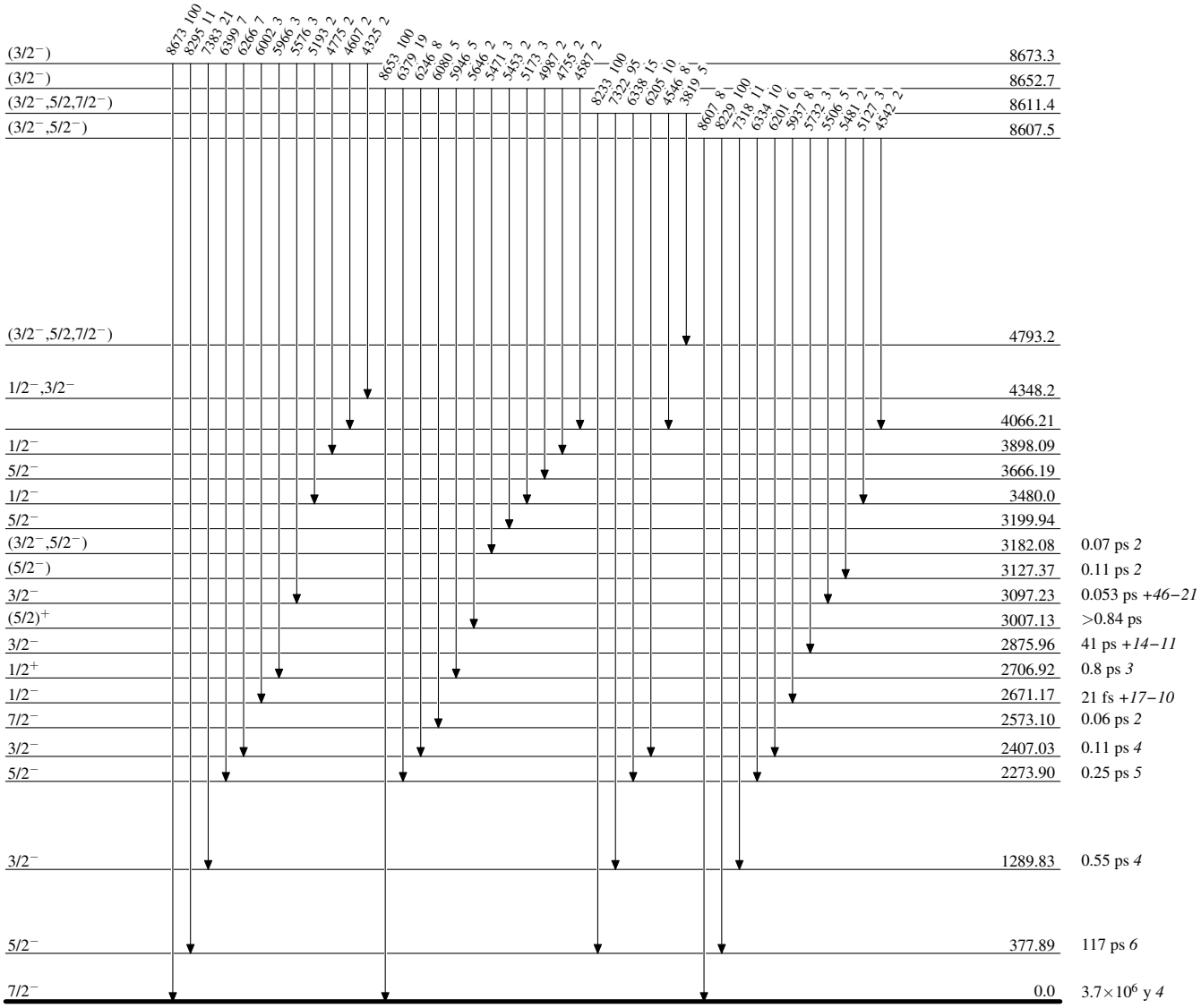


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

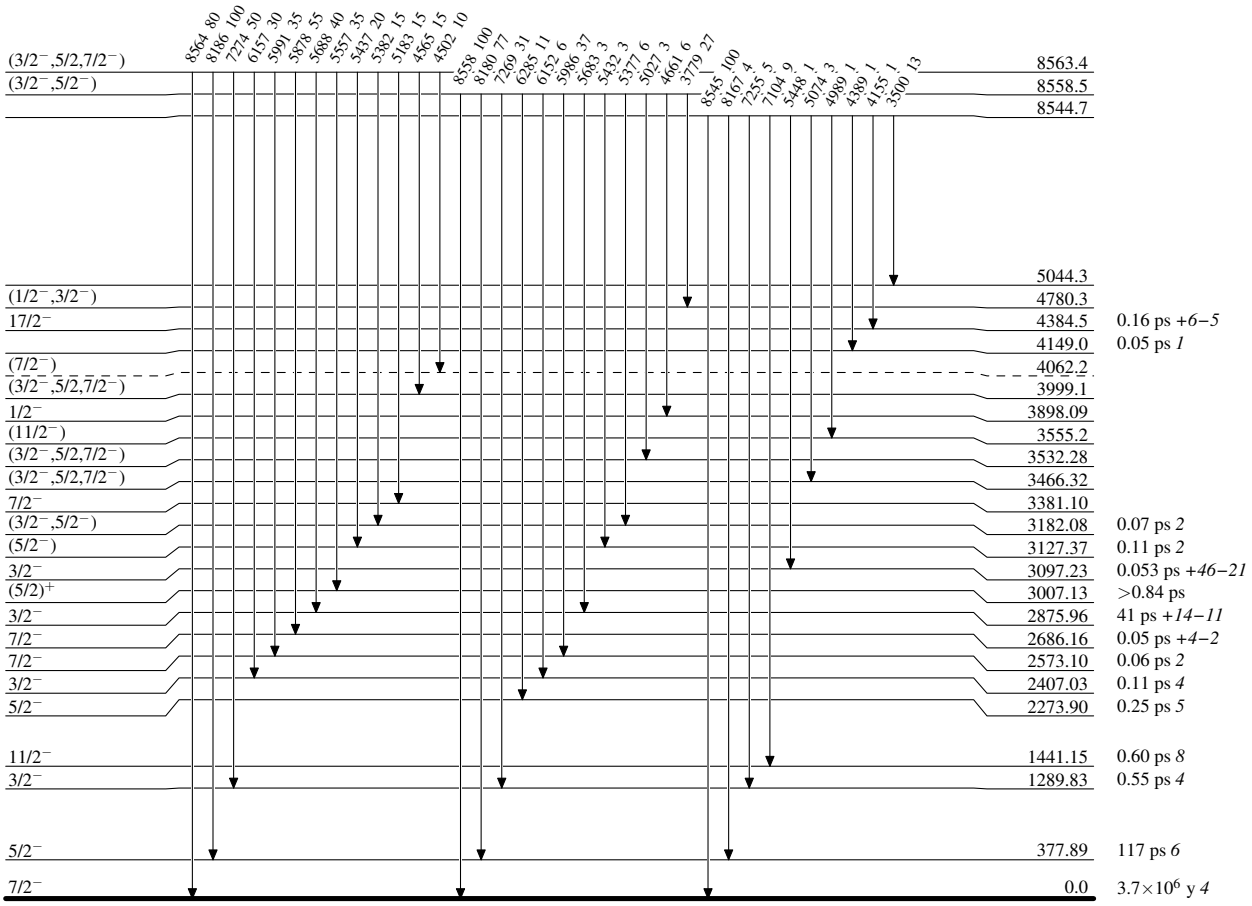


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

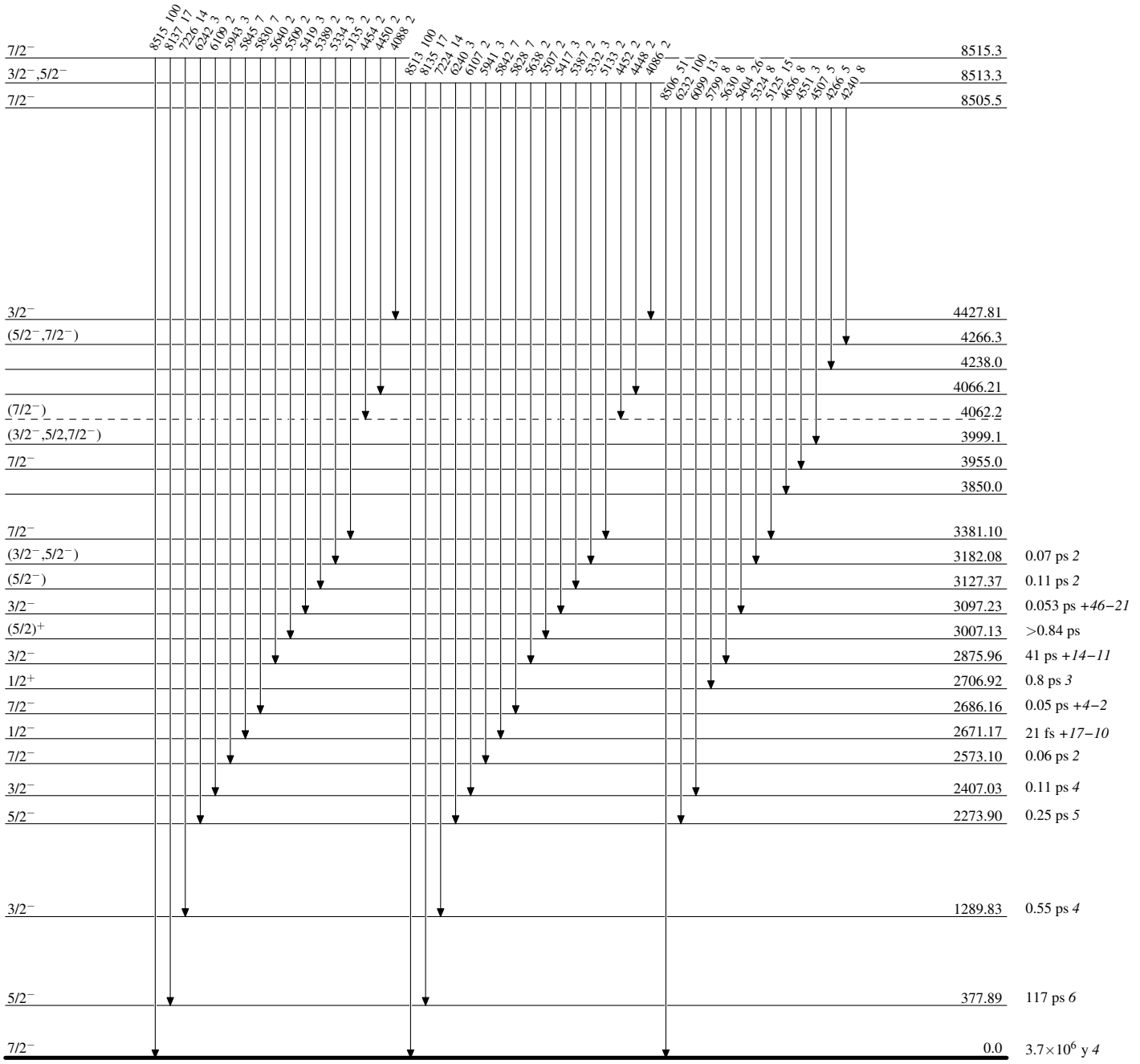


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

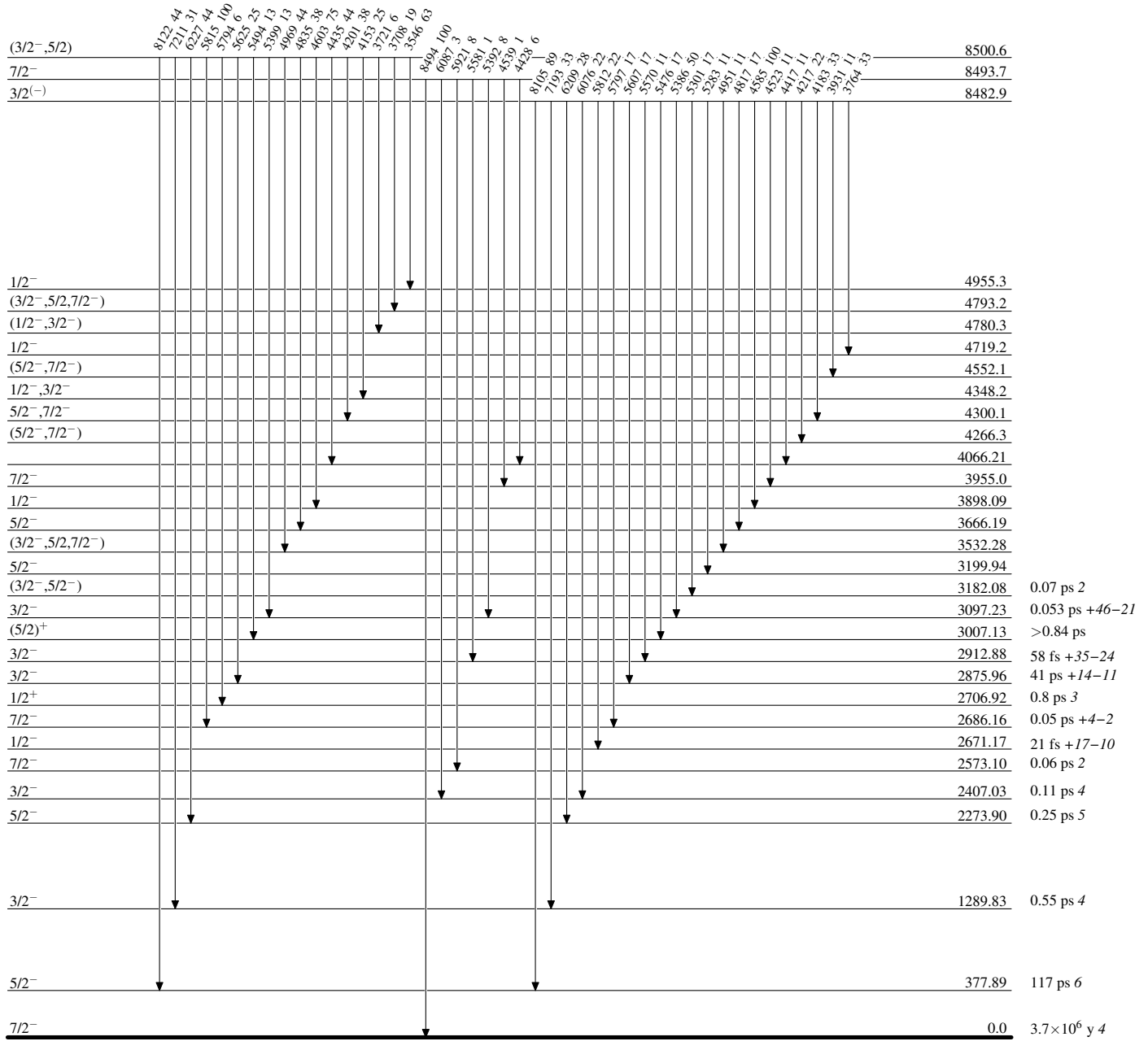


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

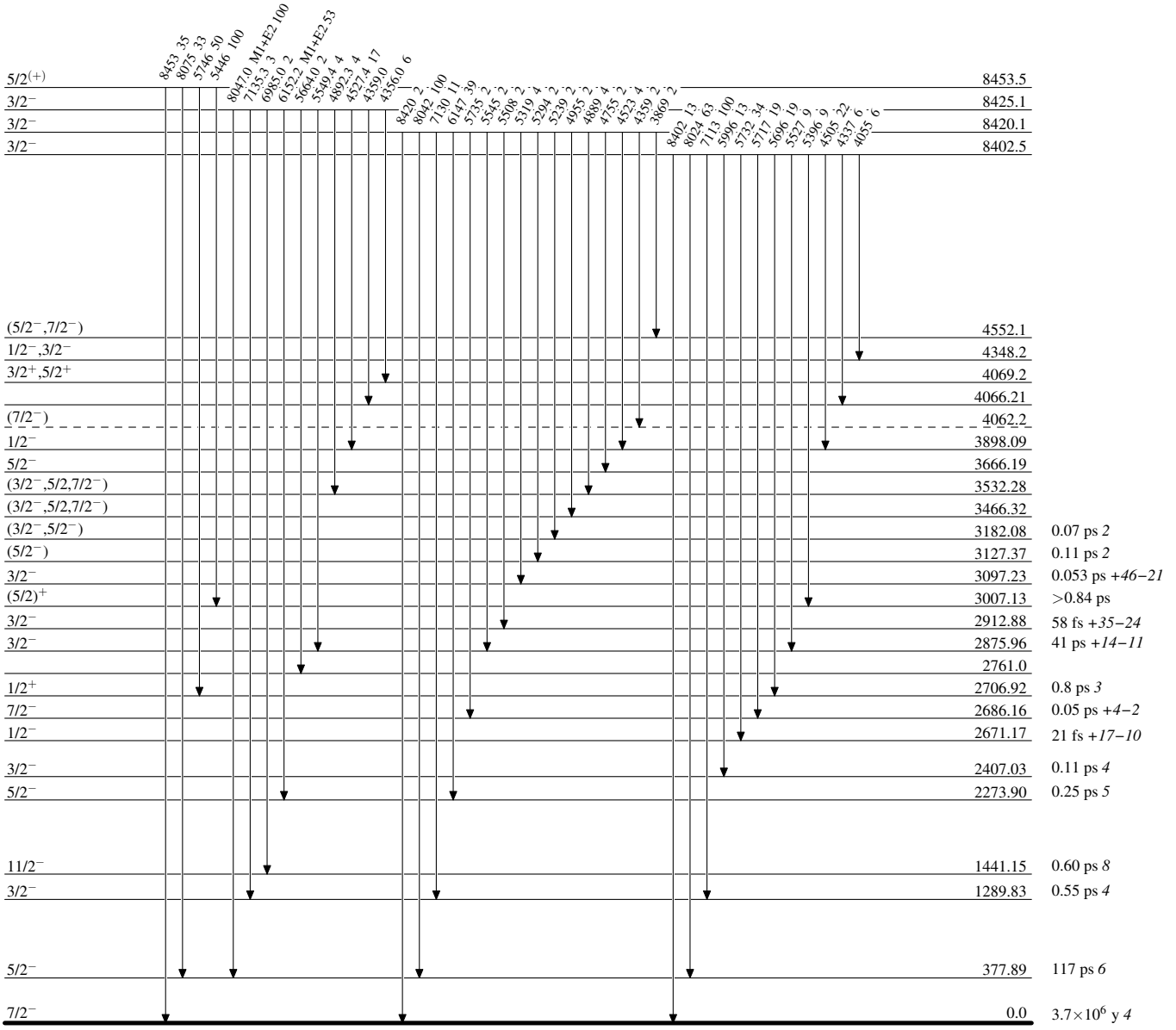


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

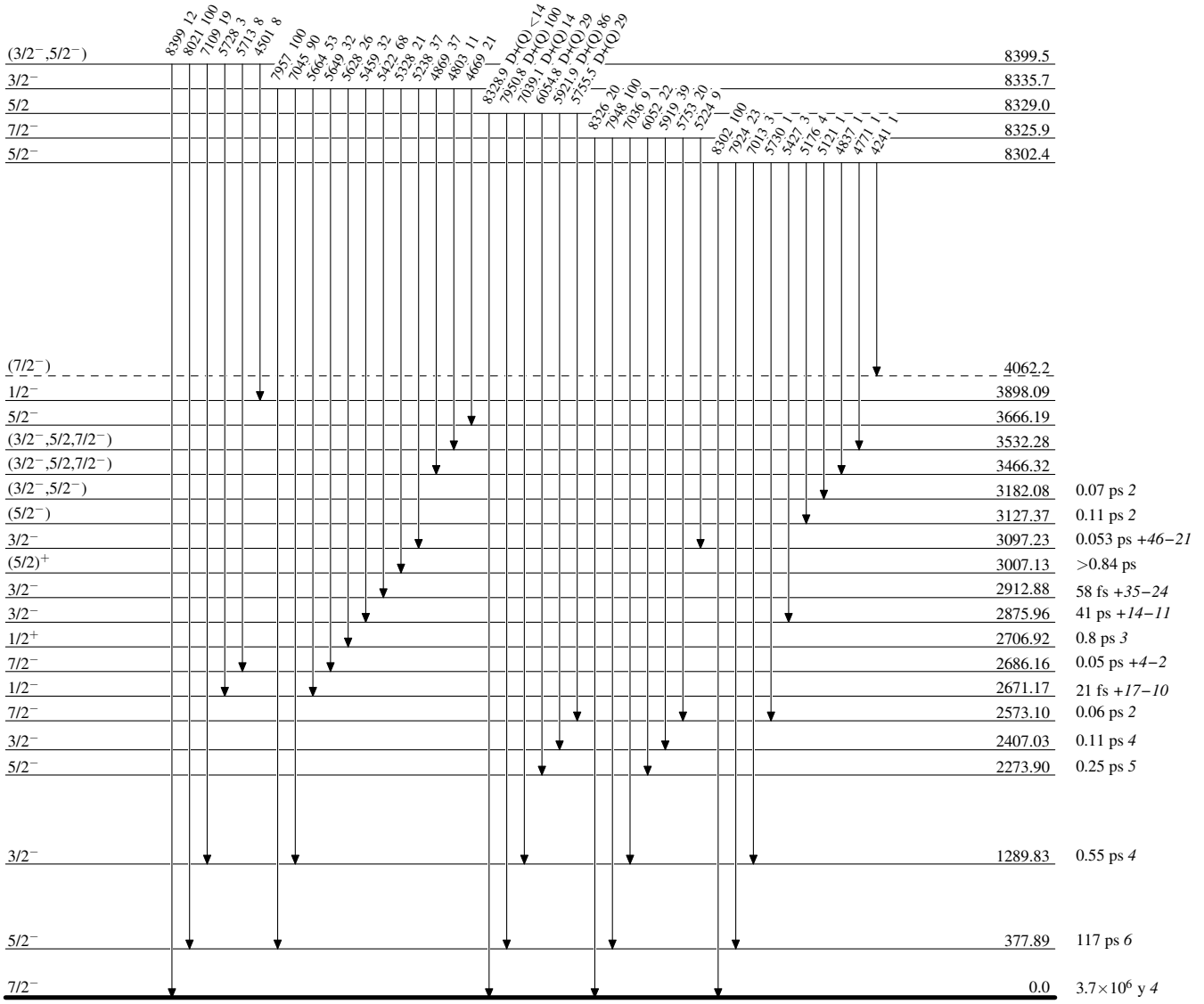


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

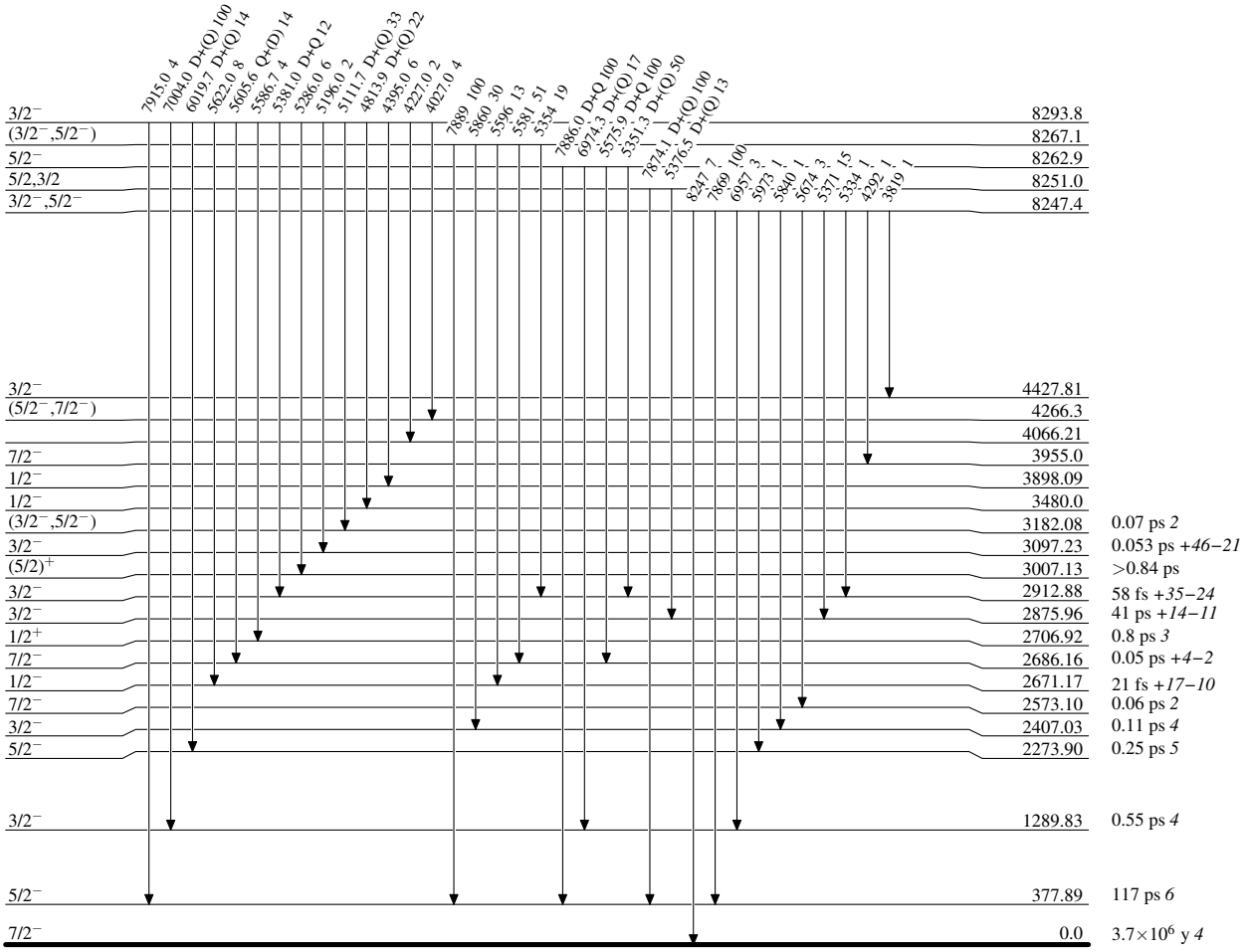


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

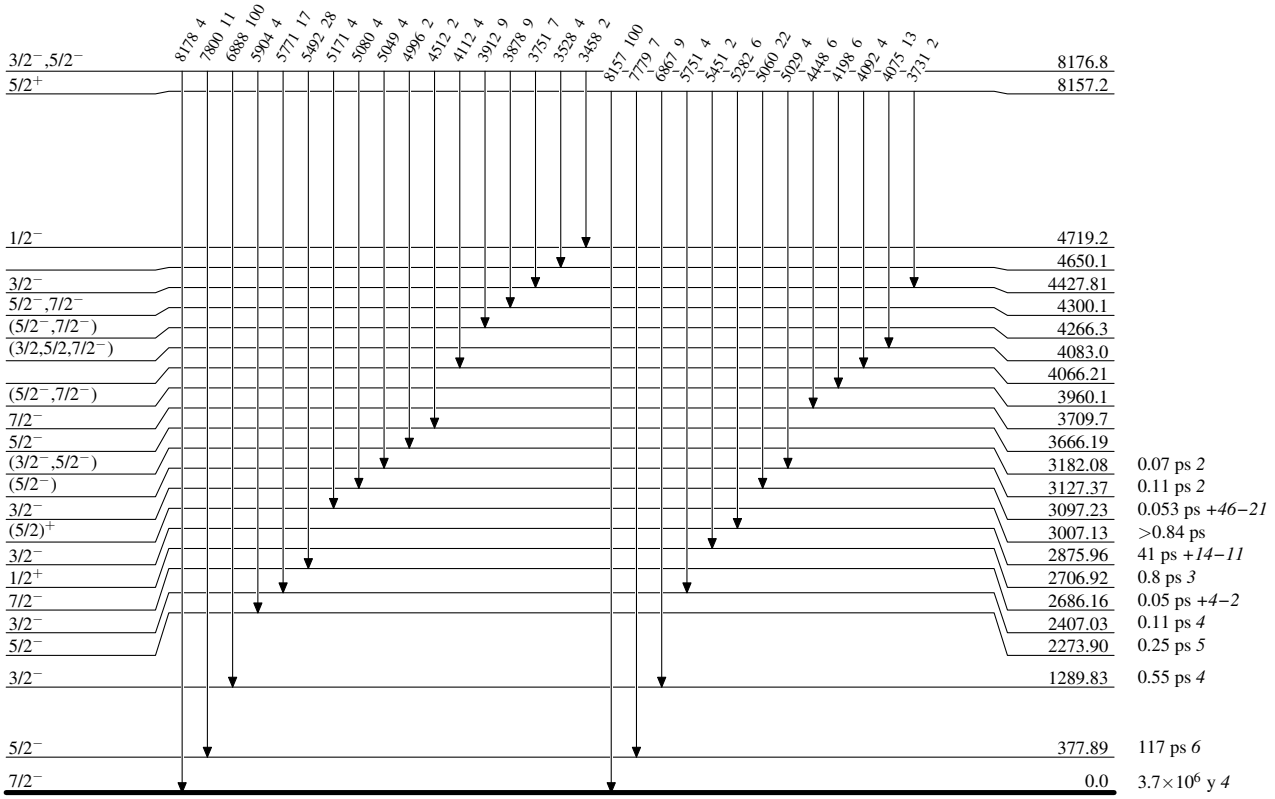


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

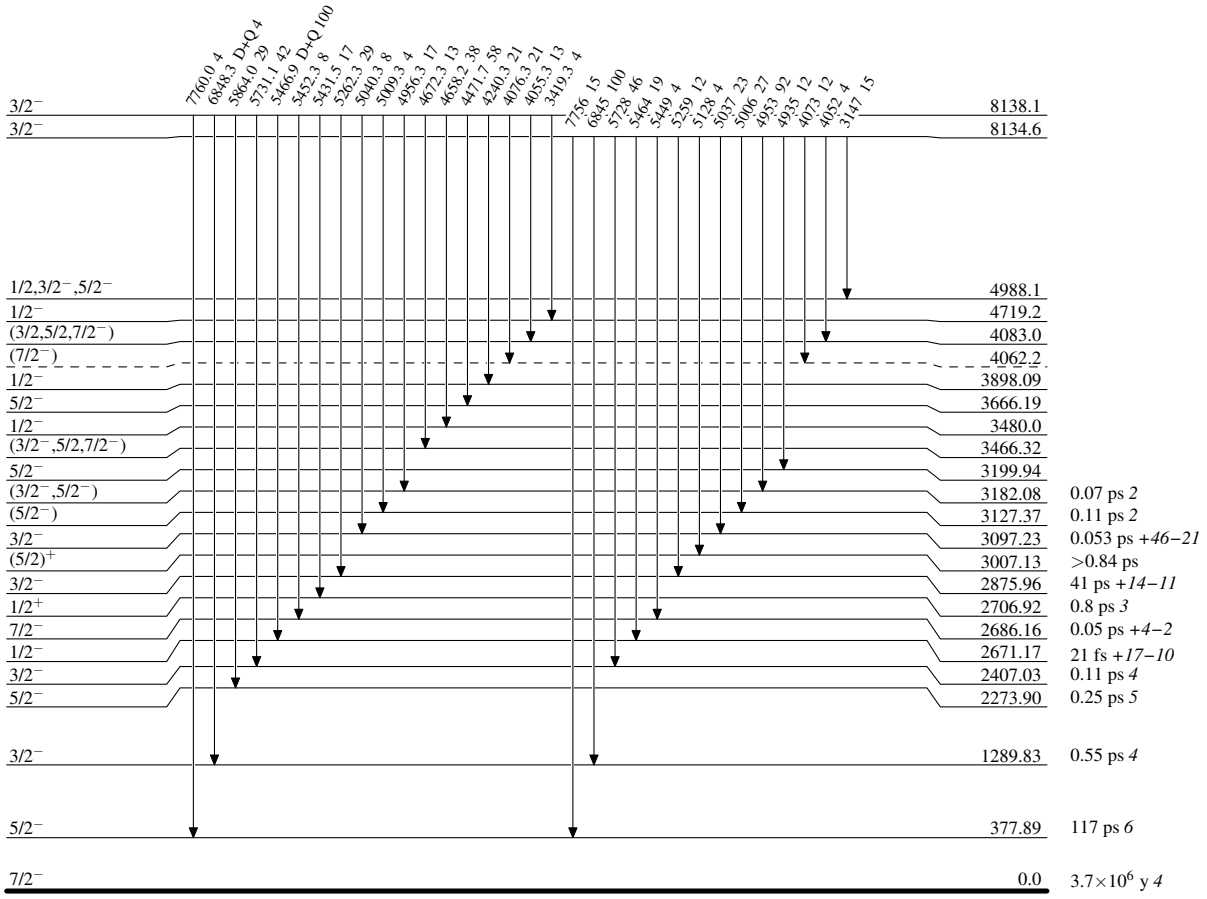


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

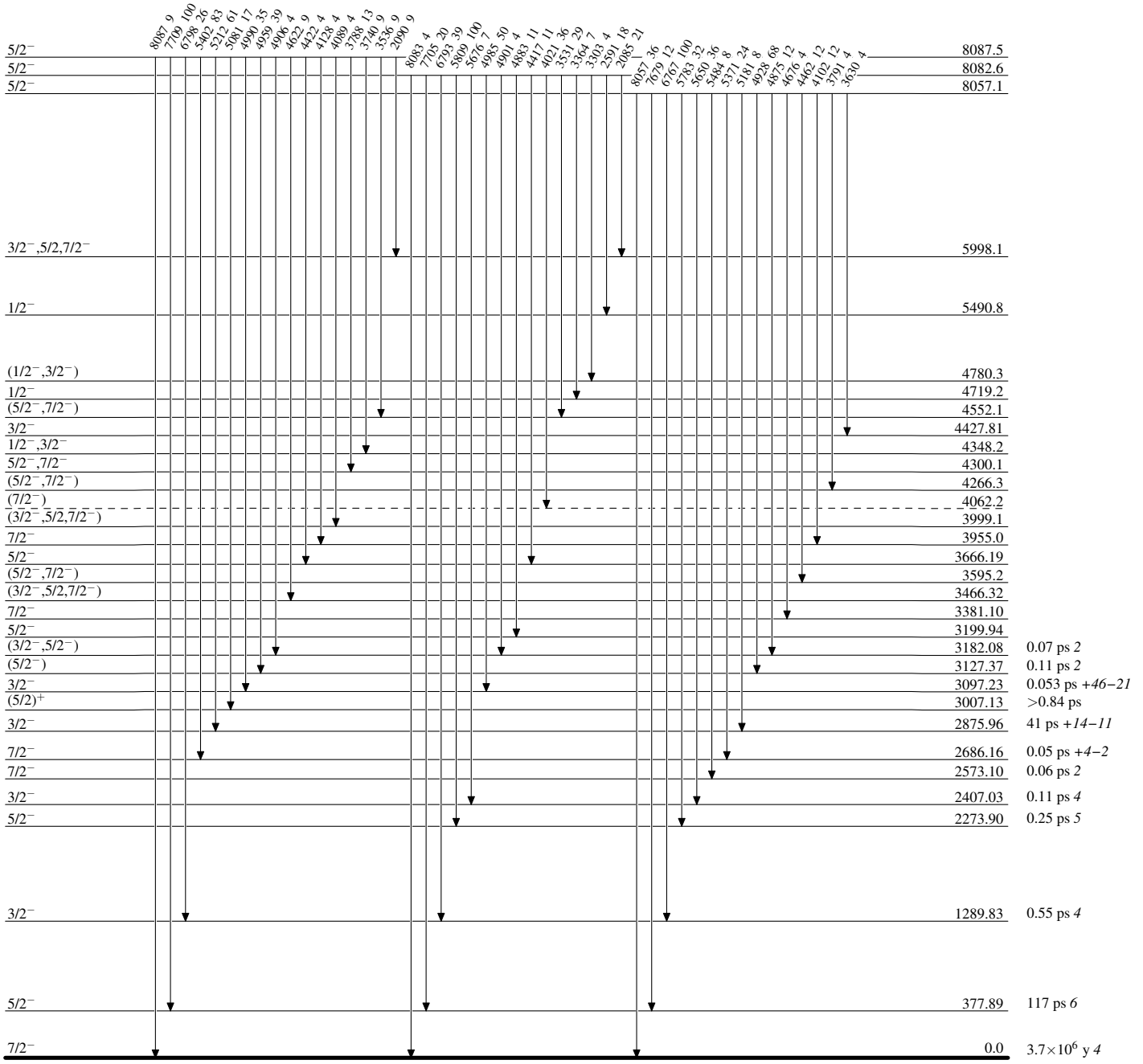


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

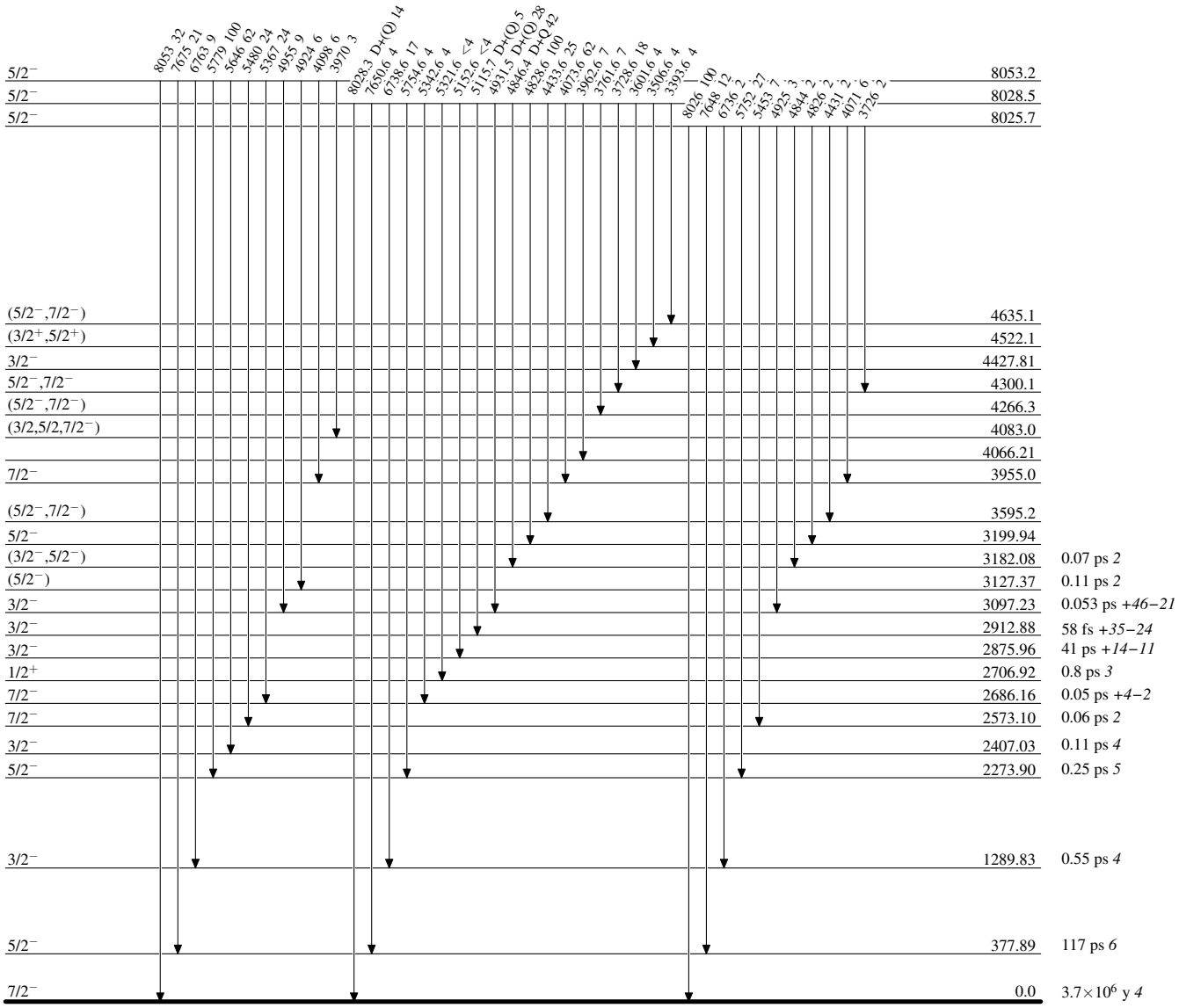


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{53}_{25}Mn_{28}$

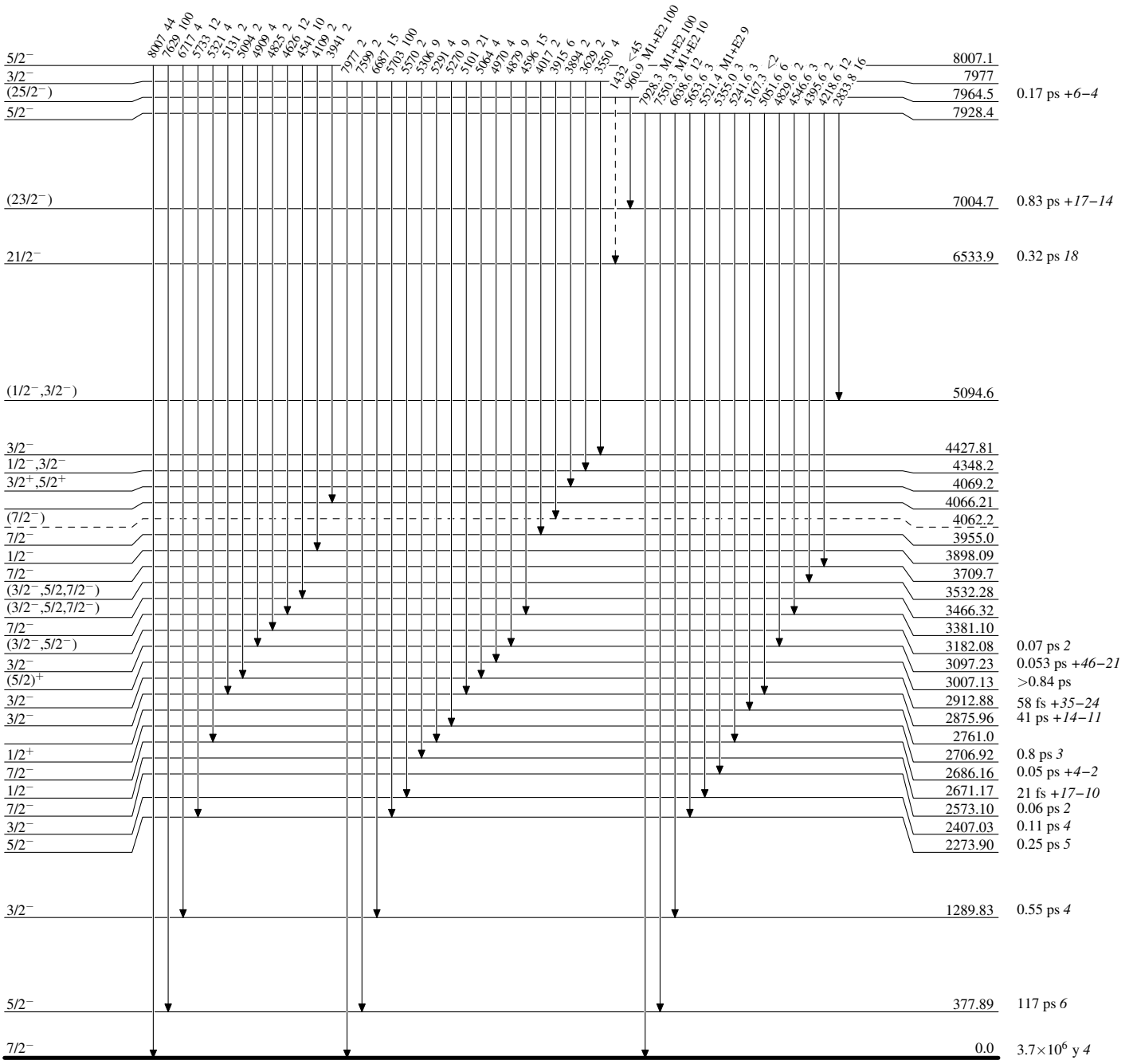
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

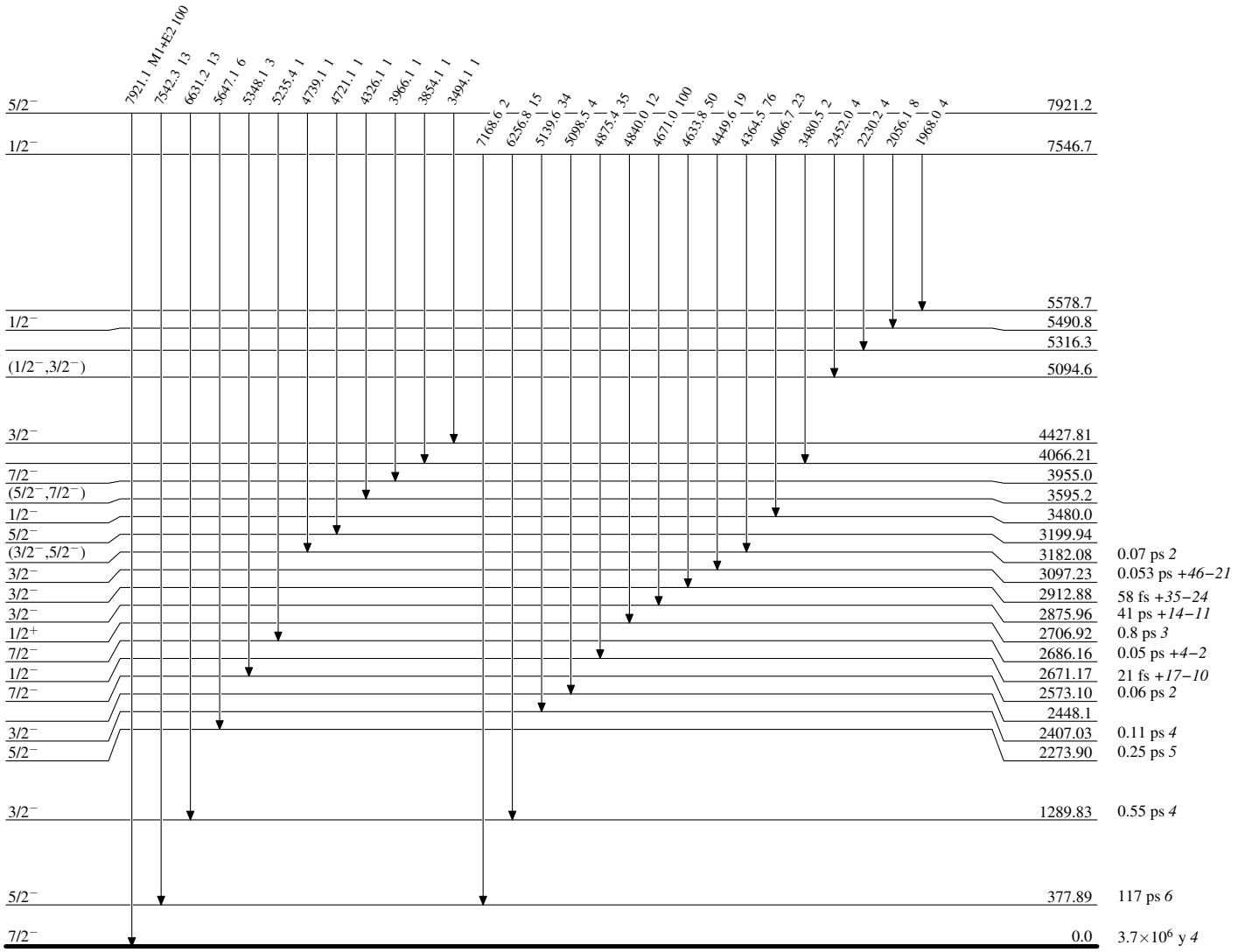


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

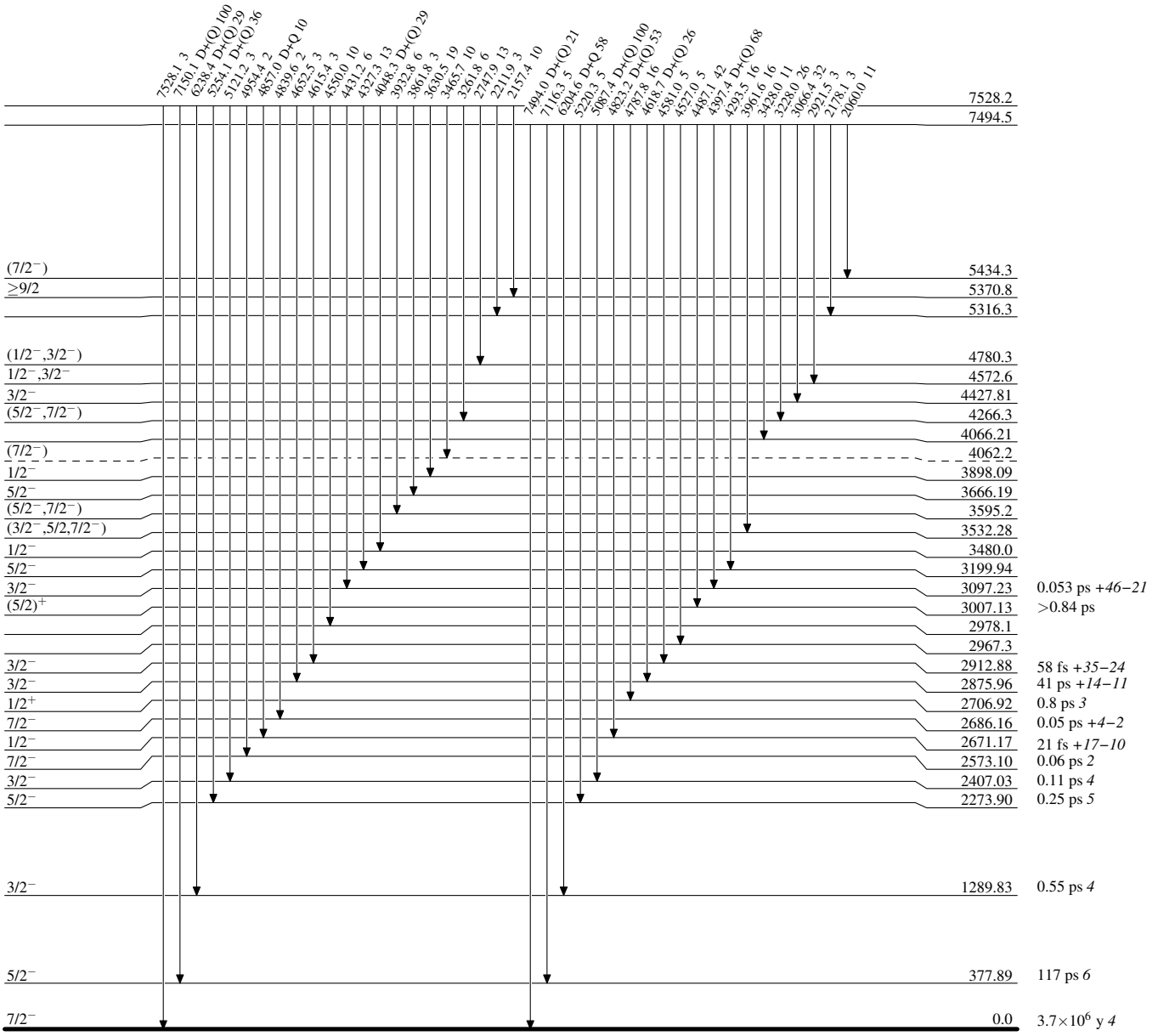


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

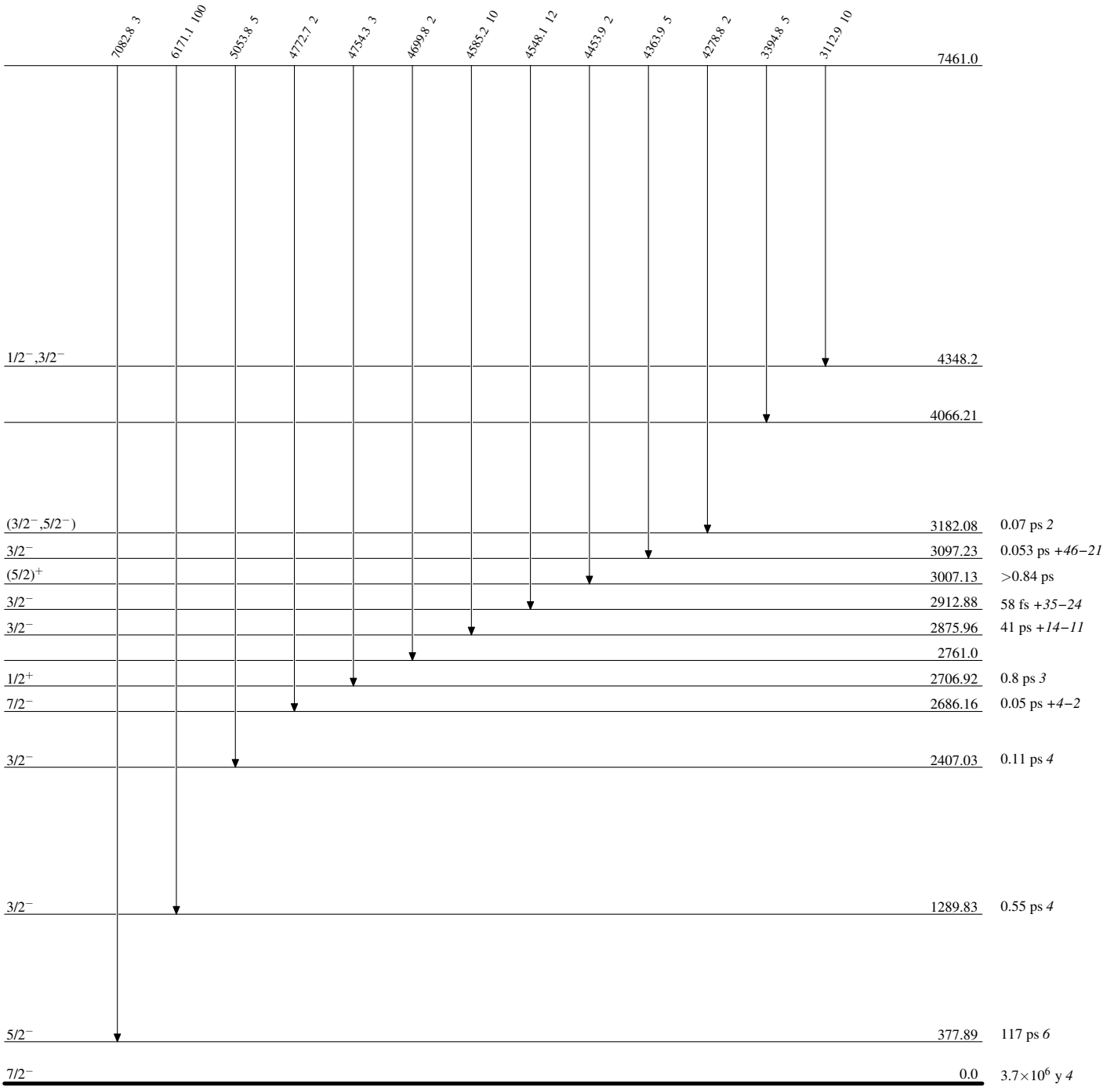
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{53}_{25}Mn_{28}$

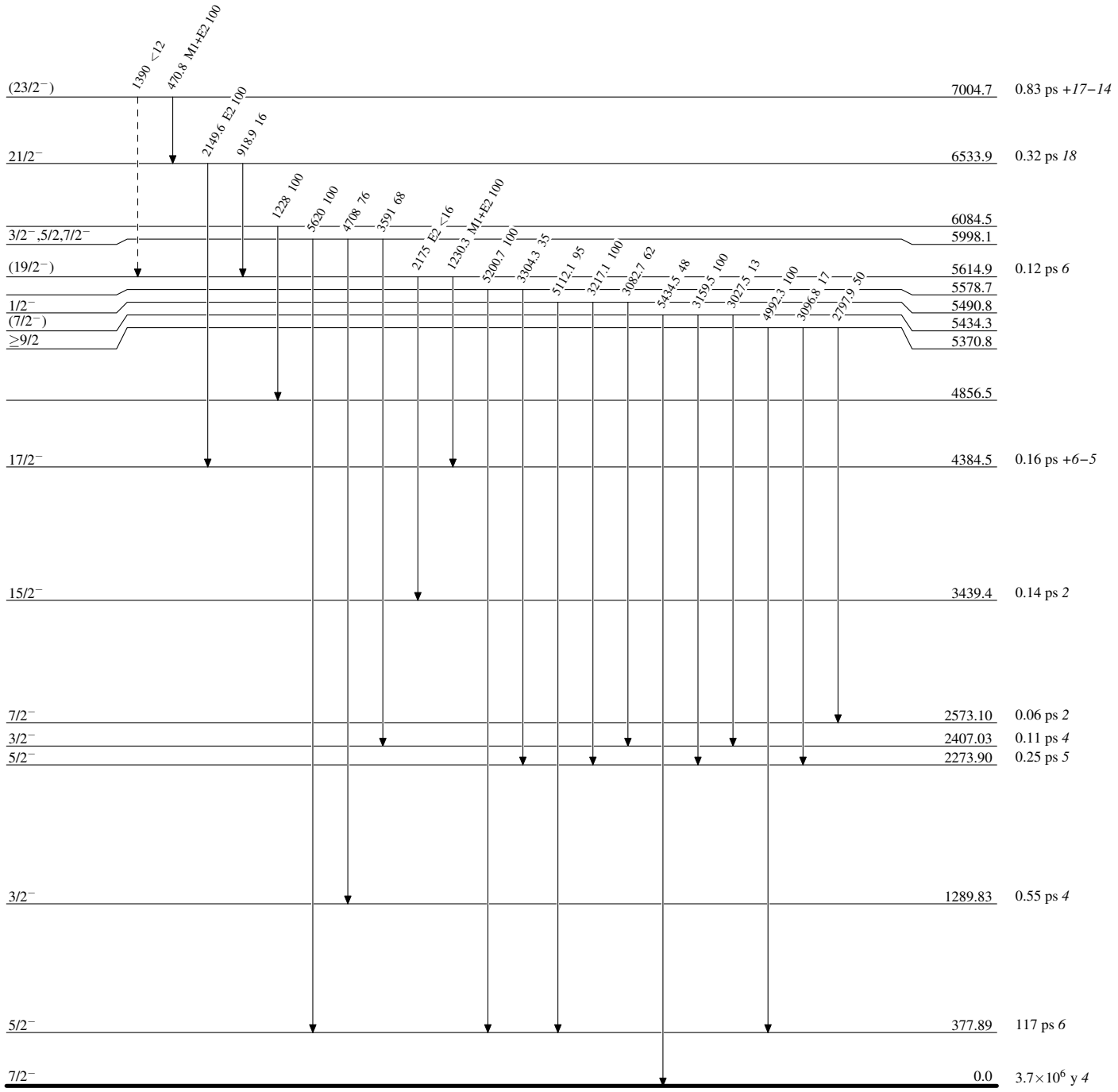
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

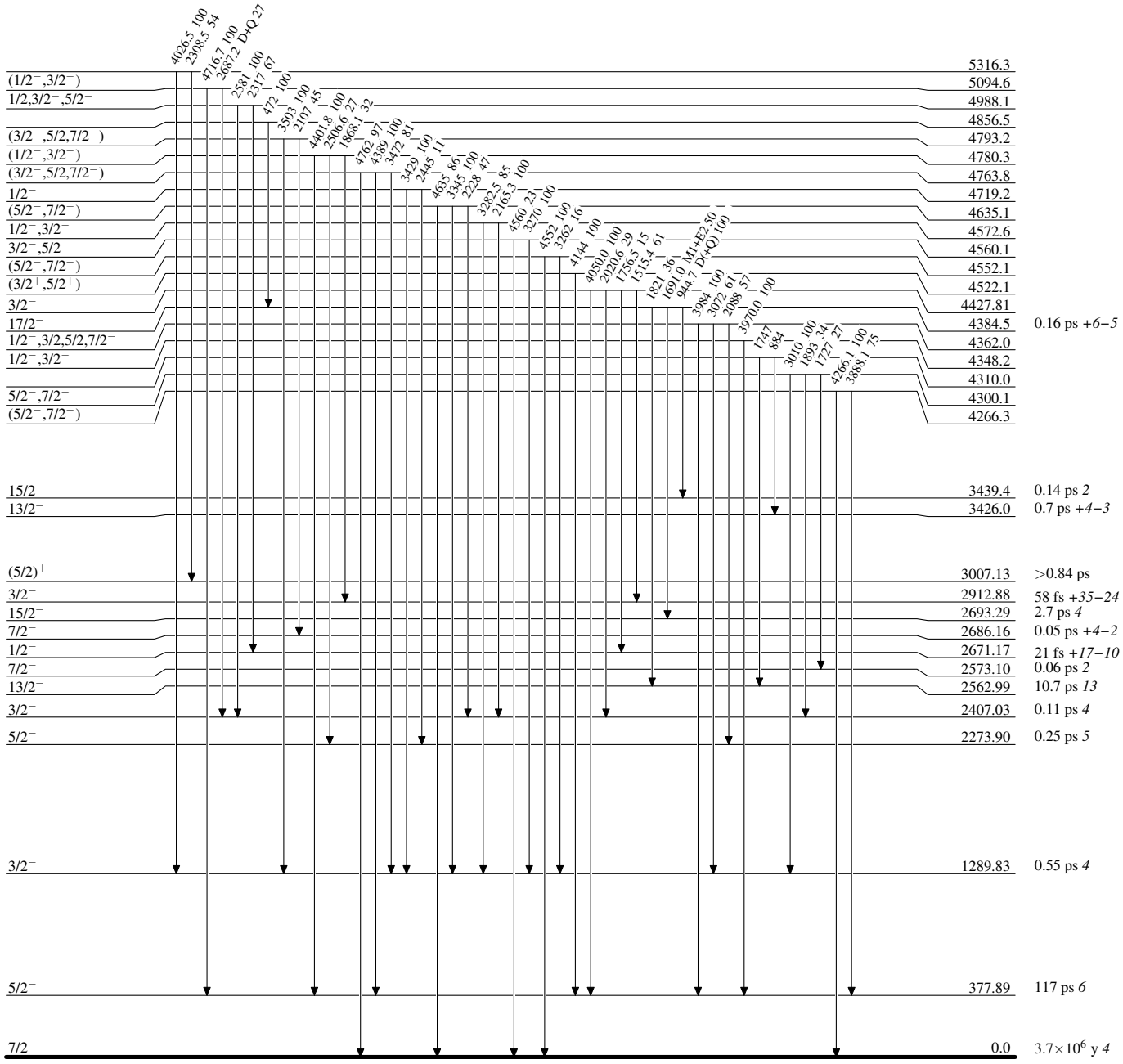


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

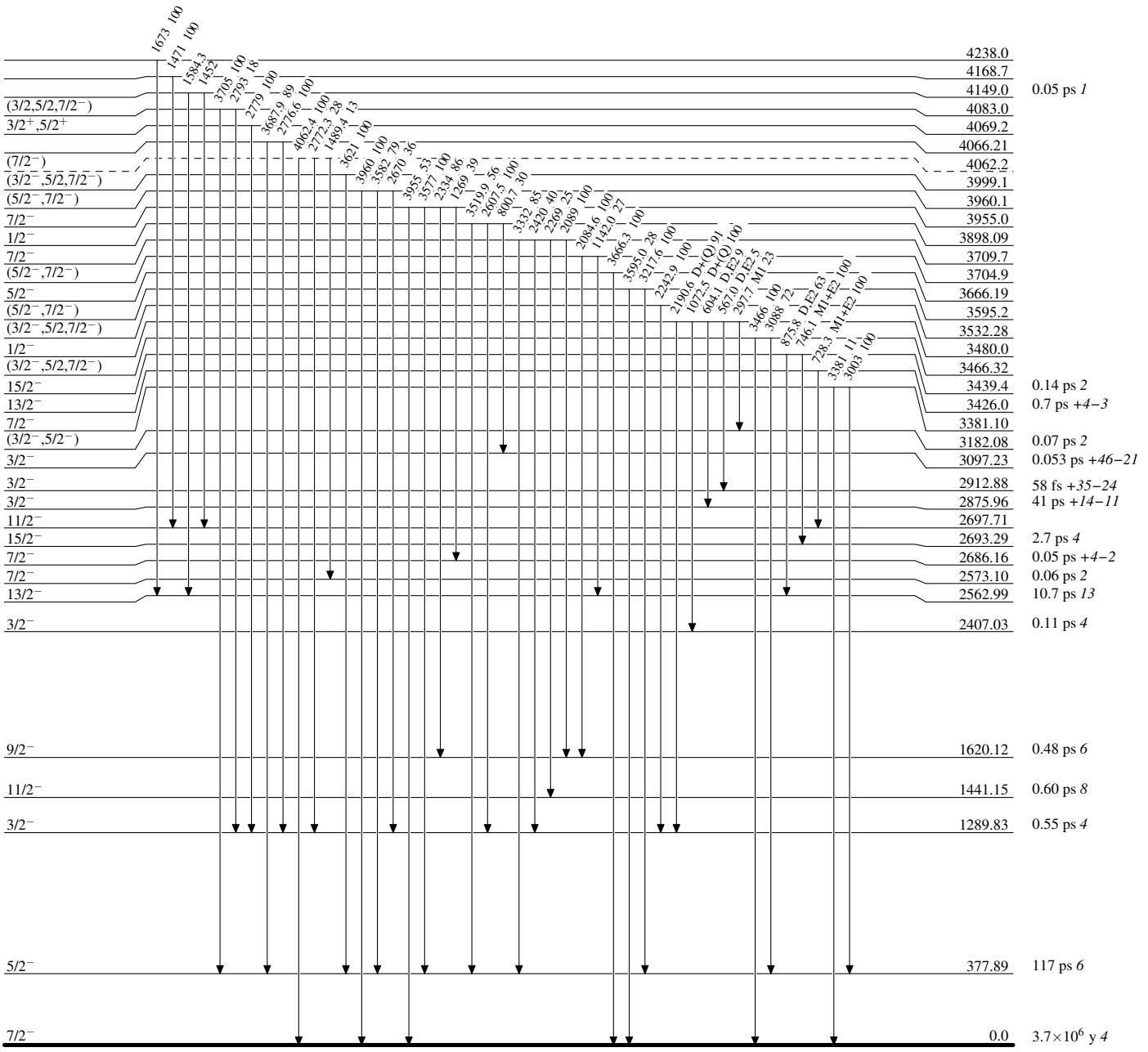


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{53}_{25}Mn_{28}$

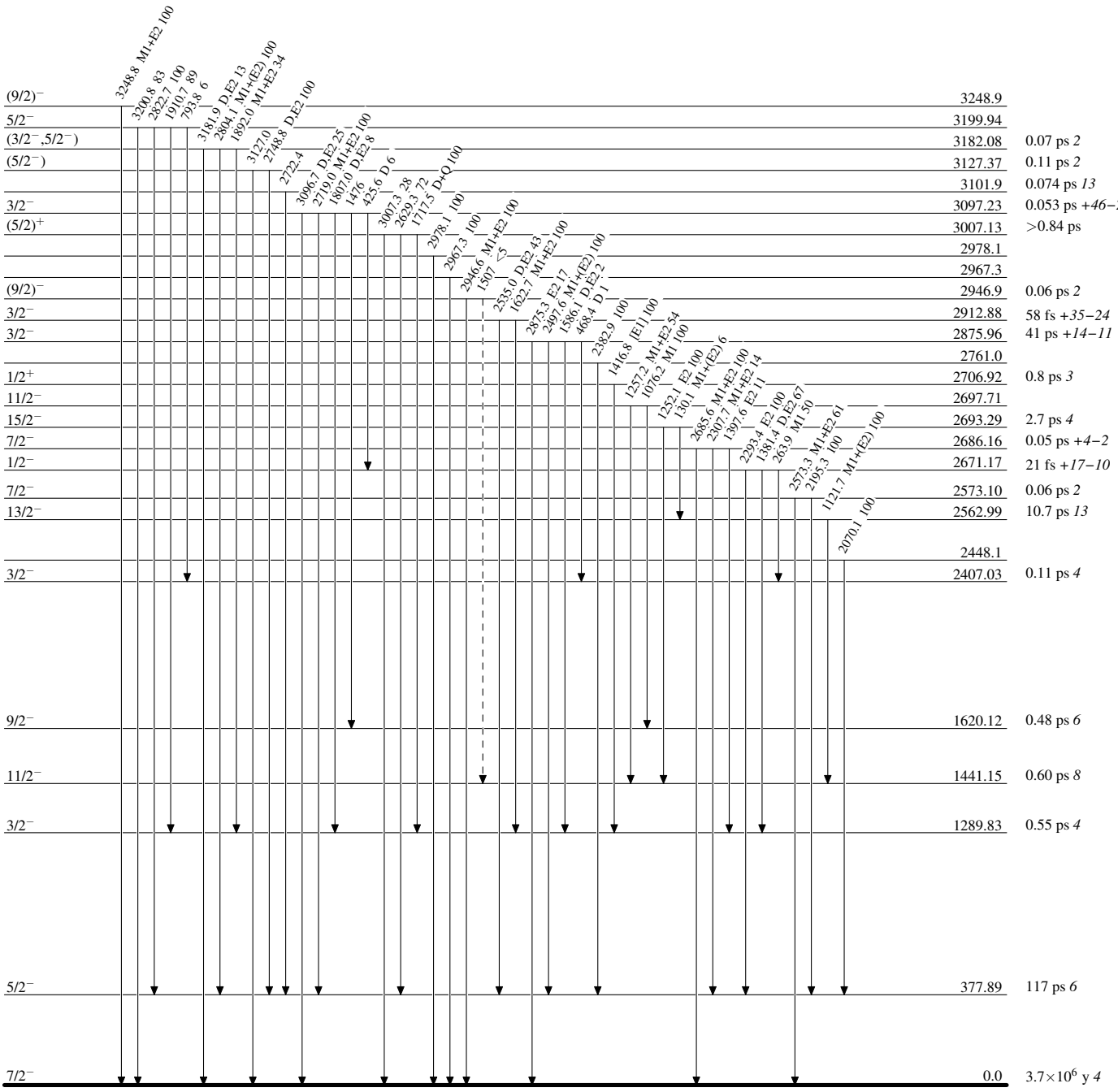
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)

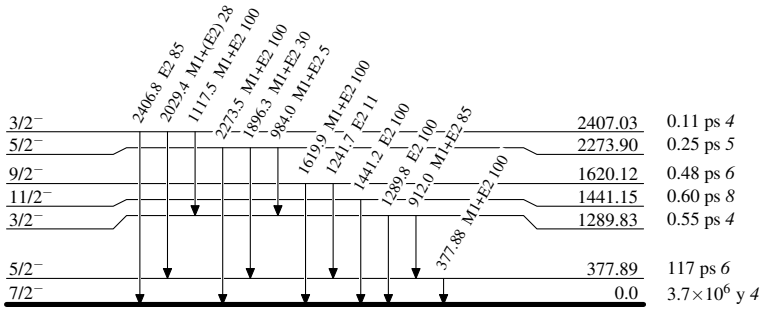


$^{53}_{25}Mn_{28}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{53}_{25}Mn_{28}$