

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Wang Jimin and Huang Xiaolong		NDS 144, 1 (2017)	1-Mar-2016

$Q(\beta^-) = -8041.9$; $S(n) = 13687.6$; $S(p) = 5270.8$; $Q(\alpha) = -8662.2$ 5 [2017Wa10](#)

Other Reactions:

$^{51}\text{V}(\pi^+, \pi^-)$ ([1987Zu03](#)): $E = 292$ MeV; measured $d\sigma/d\Omega(\theta=5^\circ) = 0.77$ 16 $\mu\text{b/sr}$ with $T=5/2$ (double isobaric state),
 $d\sigma/d\Omega(\text{g.s.})(\theta=5^\circ) \leq 0.043$ $\mu\text{b/sr}$.

 ^{51}Mn Levels

IAR and IAS were investigated in $^{50}\text{Cr}(p, p')$, $^{50}\text{Cr}(p, \gamma)$, and $^{50}\text{Cr}({}^3\text{He}, d)$. For proposed IAS in ^{51}Cr - ^{51}Mn , see $^{50}\text{Cr}(p, p')$, (p, γ) IAR.

For unbound states, see $^{50}\text{Cr}(p, \gamma)$, $^{50}\text{Cr}({}^3\text{He}, d)$, $({}^7\text{Li}, {}^6\text{He})$, and $(\text{HI}, x\text{n}\gamma)$. Only IAR of ^{51}Cr shown.

Cross Reference (XREF) Flags

A	^{51}Fe ε decay	E	$^{50}\text{Cr}({}^3\text{He}, d)$, $({}^7\text{Li}, {}^6\text{He})$	I	$^{50}\text{Cr}(p, p)$, $(p, p' \gamma)$, (p, γ) IAR
B	$(\text{HI}, x\text{n}\gamma)$	F	$^{50}\text{Cr}({}^3\text{He}, d\gamma)$	J	$^{24}\text{Mg}({}^{32}\text{S}, \alpha p \gamma)$
C	$^{50}\text{Cr}(p, \gamma)$	G	$^{54}\text{Fe}(p, \alpha)$, $(\text{pol } p, \alpha)$	K	$^{28}\text{Si}({}^{32}\text{S}, 2\alpha p \gamma)$
D	$^{50}\text{Cr}(d, n)$	H	$^{54}\text{Fe}(p, \alpha \gamma)$	L	$\text{U}(p, X)$

E(level) [†]	J ^π #	T _{1/2}	XREF	Comments
0.0 ^c	5/2 ⁻	46.2 min 1	ABCDEF GHI JKL	$\% \varepsilon + \% \beta^+ = 100$ $\Delta \langle r^2 \rangle (^{55}\text{Mn}, ^{51}\text{Mn}) = -0.023 \text{ fm}^2$ 45 (stat) (2010Ch15). The syst uncertainty is approximately 15 %. J^π : $J=5/2$ from atomic beam (1976Fu06) and analysis of hyperfine structure spectrum (2015Ba49); $L=3$ in $^{50}\text{Cr}({}^3\text{He}, d)$. $T_{1/2}$: from $\gamma(t)$ measurement in ^{51}Mn ε decay (1970Er01 , and quoted by 1973Fe12). Other: 46.5 min 2 (1966Gl02). $\mu = 3.5683$ 13 (^{55}Mn standard, Atomic Beam Magnetic Resonance (AB), 1971Jo10 , 1989Ra17 , 2014StZZ) Other: $\mu = +3.577$ 4 (COLLAPS, ^{55}Mn standard, 2015Ba49). $Q = 0.42$ 7 (^{55}Mn standard, AB, 1971Jo10 , 1989Ra17 , 2014StZZ). J^π : $L=3$ in $^{50}\text{Cr}({}^3\text{He}, d)$; $J=7/2$ from $\gamma(\theta)$ in $^{50}\text{Cr}(p, \gamma)$ and $^{54}\text{Fe}(p, \alpha \gamma)$. $T_{1/2}$: other: >0.7 ps in $^{54}\text{Fe}(p, \alpha \gamma)$ (1977No01). J^π : $M1+E2$ γ to $7/2^-$, stretched $E2$ to $5/2^-$. J^π : Stretched $E2$ γ to $7/2^-$ and $\gamma(\theta)$ in $^{50}\text{Cr}(p, \gamma)$ rule out all J except $7/2$, $11/2$. Population in $(\text{HI}, x\text{n}\gamma)$ both directly and by cascade γ 's from higher states suggests $J > 7/2$ (1977No01). XREF: D(1790). J^π : $J=3/2$ from $\gamma(\theta)$ of primary γ 's in (p, γ) from states with known J^π . ($M1$) γ to $5/2^-$, ($E2$) γ to $7/2^-$, γ from $1/2^+$ and $1/2^-$. J^π : $M1$ γ to $5/2^-$, g.s., $E2$ γ to $7/2^-$, 237. $T_{1/2}$: others: 40 fs $+10-7$ in $^{50}\text{Cr}({}^3\text{He}, d\gamma)$, 35 fs $+13-10$ in $^{54}\text{Fe}(p, \alpha \gamma)$. XREF: D(1950). J^π : $L=1$ in $^{50}\text{Cr}({}^3\text{He}, d)$, $J=1/2$ from $\gamma(\theta)$ to $5/2^-$ and D(Q) 4349 γ from $3/2^-$ S(p)+1059. $T_{1/2}$: unweighted average of 0.49 fs $+12-8$ in $^{50}\text{Cr}({}^3\text{He}, d\gamma)$ and 0.26 fs $+10-7$ in $^{54}\text{Fe}(p, \alpha \gamma)$.
237.3 ^d 2	7/2 ⁻	14.1 ^b ps 23	ABC EFGH JK	
1139.8 ^c 3	9/2 ⁻	0.25 [@] ps $+8-6$	BC E GH JK	
1488.5 ^{dh} 4	11/2 ⁻	0.50 [@] ps $+14-10$	BC E GH JK	
1817.1 2	3/2 ⁽⁻⁾	>0.7 [@] ps	CD GH	
1824.6 1	3/2 ⁻	16 ^{&} fs 4	A C EFGH	
1959.1 6	1/2 ⁻	0.38 ps 12	CDEFGH	

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Adopted Levels, Gammas (continued) ^{51}Mn Levels (continued)

E(level) [†]	J ^π #	T _{1/2}	XREF	Comments
2140.4 2	3/2 ⁻	15 ^{&} fs 4	A C EFGH	J ^π : M1+E2 γ to 5/2 ⁻ , L=1 in $^{50}\text{Cr}(^3\text{He},\text{d})$. T _{1/2} : others: 39 fs +17-15 in $^{54}\text{Fe}(\text{p},\alpha\gamma)$ and 36 fs +9-6 in $^{50}\text{Cr}(^3\text{He},\text{d}\gamma)$.
2255.7 1	(5/2 ⁻)	79 [@] fs +33-26	C GH	J ^π : D+Q γ to 7/2 ⁻ gives J=5/2,7/2,9/2; (M1) γ from 3/2 ⁻ (S(p)+1059)-keV res state excludes J≥7/2.
2275.9 2	1/2 ⁺	>1.2 [@] fs	C E GH	J ^π : L=0 in $^{50}\text{Cr}(^3\text{He},\text{d})$. T _{1/2} : other: <3.5 ns from α-γ(t) in (p,αγ).
2310.0 5	5/2 ⁻ [‡]	0.9 [@] ps +6-4	C GH	
2415.9 3	(7/2 ⁻)	4.2 ^{&} fs +28-21	C E GH	J ^π : γ's to 9/2 ⁻ and 5/2 ⁻ are (M1), L=3 in $^{50}\text{Cr}(^3\text{He},\text{d}),(^7\text{Li},^6\text{He})$. T _{1/2} : other: 28 fs +15-13 in (p,αγ).
2450?	1/2 ⁻ ,3/2 ⁻		D	J ^π : L=1 in $^{50}\text{Cr}(\text{d},\text{n})$. E(level): from $^{50}\text{Cr}(\text{d},\text{n})$.
2650?	1/2 ⁻ ,3/2 ⁻		D	J ^π : L=1 in $^{50}\text{Cr}(\text{d},\text{n})$. E(level): from $^{50}\text{Cr}(\text{d},\text{n})$.
2701.6 5	3/2 ⁻ [‡]	>0.5 [@] ps	C GH	T _{1/2} : other: <3.5 ns from αγ(t) in (p,αγ) (1977No01).
2841.4 2	1/2 ⁻	0.27 [@] ps +13-8	C E GH	J ^π : L=1 in $^{50}\text{Cr}(^3\text{He},\text{d})$; J=1/2 based on 3467γ(θ) from 3/2 ⁻ S(p)+1509.
2893.0 4	5/2 ⁻ [‡]		C G	
2913.5 1	3/2 ⁻	<21 [@] fs	A C E GH	J ^π : M1+E2 γ to 5/2 ⁻ , L=1 in $^{50}\text{Cr}(^3\text{He},\text{d})$.
2957.3 ^{ch} 6	13/2 ⁻		B G JK	
2983.5 5	5/2 ⁺		C E GH	J ^π : L=2 in $^{50}\text{Cr}(^3\text{He},\text{d})$; J=5/2 from γ(θ) of primary γ's from resonance states with known J ^π .
3029.5 11	(7/2 [‡])		C G	E(level): from $^{54}\text{Fe}(\text{p},\alpha)$.
3048.6 10	(3/2 ⁻)		C E G	E(level): may be a doublet in ($^3\text{He},\text{d}$) with L=(1),(3) for 3048.6+3058.1. J ^π : from L=(1),(3) in $^{50}\text{Cr}(^3\text{He},\text{d})$; γ's to 7/2 ⁻ and 1/2 ⁺ gives 3/2 ⁻ ,5/2 ⁺ . E(level): see notes of 3048.6 level.
3058.1 10	(5/2 ⁻ ,7/2 ⁻)		C G	J ^π : γ(θ) of primary γ's from resonance states to this level in (p,γ), L=(1),(3) in ($^3\text{He},\text{d}$). J ^π : L=1 in $^{50}\text{Cr}(\text{d},\text{n})$. Level is questionable in (p,α).
3091.5? 10	1/2 ⁻ ,3/2 ⁻		CD G	
3130.5 10	3/2 ⁻ ,5/2 ⁺ [‡]		C E G	
3250.8 ^{dh} 6	15/2 ⁻		B JK	
3281?	(1/2,3/2) [‡]		C G	
3292.3 6	5/2 ⁻ ,7/2 ⁻		C E G	J ^π : L=3 in $^{50}\text{Cr}(^3\text{He},\text{d})$.
3423.3 10	(1/2 ⁻ to 7/2 ⁻)		A C E G	E(level): may be a doublet: one with J ^π =(1/2 ⁻ ,3/2 ⁻) and the other with J ^π =(5/2 ⁻ ,7/2 ⁻). It is not known which of two members of the doublet is fed by the primary γ's in $^{50}\text{Cr}(\text{p},\gamma)$. log ft=4.98 13 from 5/2 ⁻ , but it is not clear which level is fed.
3543.5 14	1/2 ⁻ ,3/2 ⁻		D G	J ^π : L=(1),(3) in $^{50}\text{Cr}(^3\text{He},\text{d})$. XREF: D(3540). J ^π : L=1 in $^{50}\text{Cr}(\text{d},\text{n})$. E(level): from $^{54}\text{Fe}(\text{p},\alpha)$.
3554.1 5	3/2 ⁻		A C E G	XREF: E(3556). J ^π : L=1 in $^{50}\text{Cr}(^3\text{He},\text{d})$, log ft=5.00 14 from 5/2 ⁻ . E(level): from $^{54}\text{Fe}(\text{p},\alpha)$.
3657.9 14			G	
3680.6 ^{ch} 7	17/2 ⁻	1.76 ns 4	B JK	T _{1/2} : From 2005Ma81 in $^{40}\text{Ca}(^{14}\text{N},2\text{pn}\gamma)$. Others: 1.52 ns 21 in (HI,xnγ), 1.43 ns +6-5 from 2000Ek02 in ($^{32}\text{S},2\alpha\text{p}\gamma$).

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Adopted Levels, Gammas (continued) ^{51}Mn Levels (continued)

E(level) [†]	J ^π #	T _{1/2}	XREF	Comments
3694.4 5	1/2 ⁻ , 3/2 ⁻		C E G	J ^π : E2 γ to (13/2 ⁻) and band member. XREF: E(3698). J ^π : L=1 in $^{50}\text{Cr}(^3\text{He},d)$.
3730	(7/2) [‡]		C G	
3824.9 16	7/2 [‡]		C G	E(level): from $^{54}\text{Fe}(p,\alpha)$.
3835.2 15	(7/2) [‡]		C G	E(level): from $^{54}\text{Fe}(p,\alpha)$.
3876.6 17	(3/2,5/2) [‡]		C G	E(level): from $^{54}\text{Fe}(p,\alpha)$.
3893.2 4	1/2 ⁻ , 3/2 ⁻		C E G	XREF: E(3896)G(3896). J ^π : L=1 in $^{50}\text{Cr}(^3\text{He},d)$.
3931.8? 3	3/2,5/2 ⁻		C	J ^π : 1791 $\gamma(\theta)$ is non-isotropic to 3/2 ⁻ 2140, so J $\neq$ 1/2; 2377 $\gamma(\theta)$ from 3/2 ⁻ (S(p)+1059)-keV res state gives $\delta=-0.05$ 3 and +4.9 10 or $\delta=-0.47$ 10 for a J=3/2 or J=5/2 level, respectively; mult (2377 γ)=E1+M2 is not ruled out, since $\delta=-0.05$ 3 is almost consistent with zero, although mult=E1+M2 with $\delta=-0.47$ 10 is not allowed from RUL and $\Gamma_\gamma(2377\gamma)$.
3955.6 27	(7/2,9/2) [‡]		C G	E(level): from $^{54}\text{Fe}(p,\alpha)$.
4000?			C	
4005.9 5	(3/2 ⁻ , 5/2 ⁻)		C	J ^π : J=(3/2,5/2) from $\gamma(\theta)$ of primary γ 's from resonance states, $\pi=(-)$ from (M1) γ from 3/2 ⁻ (S(p)+1059.1)-keV res state to this level.
4017 3	(1/2,3/2 ⁻)		E	J ^π : L($^3\text{He},d$)=(0) (1967Ra14), (1) (1979Pa01).
4046			C	
4052?			C	
4091.2 10	(5/2 ⁻ , 7/2 ⁻)		C E	XREF: E(4095). J ^π : L=(3) in $^{50}\text{Cr}(^3\text{He},d)$.
4139.7 ^{dh} 7	19/2 ⁻	<0.7 ^a ps	B JK	J ^π : γ to 17/2 ⁻ and band member.
4153	(5/2 ⁺) [‡]		C	
4200	(1/2,3/2) [‡]		C	
4206.1 10	(5/2) [‡]		C	
4352.4 10	(1/2 ⁻ , 3/2 ⁻)		C E	XREF: E(4362). J ^π : L=(1) in $^{50}\text{Cr}(^3\text{He},d)$.
4451 2	7/2 ⁻		C E G	XREF: G(4459). IAS of 7/2 ⁻ g.s. in ^{51}Cr . J ^π : L=3 and analyzing power in $^{54}\text{Fe}(\text{pol } p,\alpha)$.
4463?			C	
4488.1 7	(5/2) [‡]		C	
4493 ⁱ 3	5/2 ⁻ , 7/2 ⁻		E	J ^π : L=3 in $^{50}\text{Cr}(^3\text{He},d)$.
4523 ⁱ 3	1/2 ⁻ , 3/2 ⁻		E	J ^π : L=1 in $^{50}\text{Cr}(^3\text{He},d)$.
4532			C	
4540	(3/2,5/2,7/2) [‡]		C	
4601 ⁱ 5			E	
4710 ⁱ 5			E	
4723	(1/2,3/2) [‡]		C	
4731 ⁱ 5	(3/2 ⁺ , 5/2 ⁺)		E	J ^π : L=(2) in $^{50}\text{Cr}(^3\text{He},d)$.
4739?			C	
4776			C	
4883 2	1/2,3/2 ⁻ [‡]		C	
4925	1/2 ⁻ to 7/2 ⁻		C E	E(level): may be a doublet: one with J ^π =1/2 ⁻ , 3/2 ⁻ and the other with J ^π =5/2 ⁻ , 7/2 ⁻ . J ^π : L=1,3 in $^{50}\text{Cr}(^3\text{He},d)$.
5067	(3/2) [‡]		C	
5077 ⁱ 5	1/2 ⁻ , 3/2 ⁻		C E	J ^π : L=1 in $^{50}\text{Cr}(^3\text{He},d)$. J ^π =1/2 ⁻ for IAS of 777 in ^{51}Cr .

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Adopted Levels, Gammas (continued) ^{51}Mn Levels (continued)

E(level) [†]	J ^π #	XREF	Comments
5133 ⁱ 5	1/2 ⁻ , 3/2 ⁻	C E	J ^π : L=1 in $^{50}\text{Cr}(^3\text{He}, \text{d})$. J ^π =3/2 ⁻ for IAS of 749 in ^{51}Cr . IAS of 749 in ^{51}Cr .
5174	(1/2, 3/2, 5/2) [‡]	C	
5188?	(3/2 ⁺ , 5/2 ⁺)	C E	XREF: E(5183, 5192). J ^π : L=(2) for unresolved 5183+5192 in $^{50}\text{Cr}(^3\text{He}, \text{d})$.
5203?		C	
5212?		C	
5230 ⁱ 5		C E	XREF: C(5223).
5258.5 ^h 19	(17/2, 19/2)	K	J ^π : Based on yrast arguments, 2004Ek02 consider the 17/2 spin assignment for this level more likely.
5454 ⁱ 5	1/2 ⁻ , 3/2 ⁻	E	J ^π : L=1 in $^{50}\text{Cr}(^3\text{He}, \text{d})$.
5458.4 ^h 9	19/2 ⁻	K	
5506?		C	
5517 ⁱ 5	(1/2 ⁻ , 3/2 ⁻)	E	J ^π : L=(1) in $^{50}\text{Cr}(^3\text{He}, \text{d})$.
5585?		C	
5596 ⁱ 5	(1/2 ⁻ , 3/2 ⁻)	E	J ^π : L=(1) in $^{50}\text{Cr}(^3\text{He}, \text{d})$.
5639.8 ^{ch} 8	21/2 ⁻	B JK	J ^π : γ to 19/2 ⁻ and band member.
5692 ⁱ 5	(1/2 ⁻ , 3/2 ⁻)	E	J ^π : L=(1) in $^{50}\text{Cr}(^3\text{He}, \text{d})$.
5729 ⁱ 5		E	
5787 ⁱ 5		E	
5867 ⁱ 5		E	
5899 ⁱ 5		E	
5944 ⁱ 5		E	
5975 ⁱ 5		E	
6012 ⁱ 5		E	
6047 ⁱ 5		E	
6072 ⁱ 5		E	
6118 ⁱ 5		E	
6299 ⁱ 5		E	
6309.1 4	3/2 ⁻	C I	IAS of 3/2 ⁻ 1899 in ^{51}Cr . Γ _γ =0.055eV 17 in (p, γ).
6320.6 4		C	
6358.6 5		C	
6372.1 6		C	
6412.1 6		C	
6450.8 6	5/2 ⁻	C I	IAS of 5/2 ⁻ 2002 in ^{51}Cr .
6466.5 6		C	
6471.5 ^d 8	23/2 ⁻	B E JK	J ^π : γ to 21/2 ⁻ and band member.
6682.4 10		C	
6693.6 10	5/2 ⁻	C	
6702.4 10		C	
6722.8 10		C	
6742? 5		E	
6754.0 10	5/2 ⁻	C I	J ^π : D(+Q) γ's to 3/2 ⁻ and 7/2 ⁻ . π=- for probable IAS of 2313 in ^{51}Cr .
6785.5 10		C	
6800.0 10		C	
6803.2 10		C	
6819.7 10		C	
6822.9 ^h 9	21/2 ⁻	K	
6839.7 10		C	
6848.6 10		C	
6916.0 10		C	
6927.0 10		C	

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Adopted Levels, Gammas (continued) ^{51}Mn Levels (continued)

E(level) [†]	J ^π #	T _{1/2}	XREF	Comments
7033.5 3	3/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7045.3 3	1/2 [±]		C	
7064.9 3	3/2 ⁻ $\frac{1}{2}^{\pm}$		C	J ^π : other: 3/2, 5/2 (1967Er05).
7106.1 3	5/2, 7/2 ⁻		C I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 2699 in ^{51}Cr .
7128.6 3	1/2 [±]		C	
7141.4 3	5/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7146.3 3	3/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7162.0 3	1/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7168.8 3	1/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7169.8 3	5/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7174.7 3	5/2 [±]		C	
7175.6 ^{dh} 8	(27/2 ⁻)	69.8 ps 22	B JK	T _{1/2} : from 2004Du25 in ($^{32}\text{S}, \alpha p \gamma$). Others: 90.1 ps 17 in (HI, xny). J ^π : (E2) γ to (23/2 ⁻) and band member.
7175.7 3	5/2 ⁺ $\frac{1}{2}^{\pm}$		C I	Corresponding IAS of ^{51}Cr (2763 level) is 1/2 ⁺ .
7190.4 3	3/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7210.0 3	(5/2) [±]		C	
7213.0 3	(1/2, 3/2) [±]		C	
7221.8 3			C	
7240.4 3	5/2 ⁽⁺⁾ $\frac{1}{2}^{\pm}$		C	
7261.0 3	5/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7262.0 3	3/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7272.8 3	5/2 [±]		C	
7273.7 3	3/2 ⁻		C I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 2829 in ^{51}Cr .
7296.3 3	3/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7297? ^{eh} 3	(15/2 ⁺)		K	
7310.0 3	5/2 ⁺ $\frac{1}{2}^{\pm}$		C	
7313.9 3	3/2 ⁻		C I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of ^{51}Cr (2890 level)(1986Di01).
7339.4 3	3/2 ⁻		C I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 2890 in ^{51}Cr .
7342.4 3	5/2 ⁺ $\frac{1}{2}^{\pm}$		C	
7343.3 3	3/2 ⁻ , 5/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7357.1 3	5/2 ⁻		C I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 2911 in ^{51}Cr .
7369.8 3	3/2 ⁺ , 5/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7370.8 3	3/2 ⁻ $\frac{1}{2}^{\pm}$		C	
7395.3 3	3/2 ⁻ , 5/2 ⁻		C I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 2948 in ^{51}Cr .
7414.9 3	3/2 ⁺ , 5/2 ⁺		C I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). D γ 's to 1/2 and 5/2 ⁻ . Possible IAS of 2970 in ^{51}Cr .
7447.3 3	3/2 ⁻ , 5/2 ⁻ $\frac{1}{2}^{\pm}$		C I	Corresponding IAS of ^{51}Cr (3002 level) is 5/2 ⁻ .
7450.2	3/2 ⁻ $\frac{1}{2}^{\pm}$		C I	Corresponding IAS of ^{51}Cr (3004 level) is 3/2 ⁺ .
7459.0 3	5/2 ⁺		C I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). D γ 's to 3/2 ⁻ and 7/2 ⁻ . $\pi=+$ for probable IAS of 3016 in ^{51}Cr .
7463.0 3			C	
7466.9 3	1/2 ⁻		C I	J ^π : From $\gamma(\theta)$ to low states with known J ^π (1986Di01).

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Adopted Levels, Gammas (continued) ^{51}Mn Levels (continued)

E(level) [†]	J^π [#]	XREF	Comments
IAS of 3056 in ^{51}Cr .			
7500.8 ^{gh} 12	(21/2 ⁻ , 23/2 ⁻)	K	
7513.9 3	5/2 ⁻ $\ddagger$	C	
7528.6 3	3/2 ⁻ , 5/2 ⁻ $\ddagger$	C	
7546.3 3	5/2 ⁺ $\ddagger$	C	
7550.2 3	1/2 ⁻ $\ddagger$	C	
7560.0 3	3/2 ⁻ , 5/2 ⁻	C	D γ 's to 3/2 ⁻ and 5/2 ⁻ . IAS of 3/2 ⁻ , 3126 in ^{51}Cr .
7571.8 3		C	
7586.5 3	(3/2 ⁻)	C	J^π : From $\gamma(\theta)$ to lower states with known J^π (1986Di01). IAS of ^{51}Cr (3135 level).
7599.2 3		C	
7617.9 3	1/2 ⁺ $\ddagger$	C	
7620.8 3	7/2 ⁺ $\ddagger$	C	
7630.6 3	5/2 ⁻ $\ddagger$	C	
7635.5 3		C	
7643.3 3		C	
7666.7 ^h 8	23/2 ⁻	K	
7668.8 3	(5/2, 7/2)	C	J^π : From $\gamma(\theta)$ to lower states with known J^π (1986Di01). IAS of 3204 or 3207 in ^{51}Cr .
7683.5 3		C	
7699.2 3	5/2 ⁺ $\ddagger$	C	
7714.9 3	3/2 ⁻	C	J^π : From $\gamma(\theta)$ to lower states with known J^π (1986Di01). D+Q γ to 5/2 ⁻ , g.s. IAS of 3263 in ^{51}Cr .
7717.9 3	3/2 ⁻	C	possible IAS of ^{51}Cr (3/2 ⁻ , 3263 level). J^π : (p, γ) IAR in 1986Di01 gives 1/2 ⁻ , 3/2, 5/2 ⁻ .
7728.6 3	3/2 ⁻ $\ddagger$	C	
7742.4 3	1/2 ⁺ $\ddagger$	C	
7786.5 3	5/2 ⁻ $\ddagger$	C	Fragments of IAS of 3351 in ^{51}Cr .
7791.4 3	5/2 ⁻ $\ddagger$	C	Fragments of IAS of 3351 in ^{51}Cr .
7798?	1/2 ⁺	C	J^π : From $\gamma(\theta)$ to lower states with known J^π (1986Di01). IAS of 3719 in ^{51}Cr .
7844.3 3		C	
7849.2 3	3/2 ⁻ $\ddagger$	C	
7864.5 ^{fh} 24	(17/2 ⁺)	K	
7887.5 3		C	
7892.1 ^{ch} 8	25/2 ⁻	K	
7894.3 3		C	
7913.9 3		C	
7932.6 3	3/2 ⁻ , 5/2 ⁻ , 7/2 ⁺ $\ddagger$	C	
7943.3 3	3/2 ⁻ $\ddagger$	C	
7967.9 3		C	
8013.9 3	9/2 ⁺ $\ddagger$	C	
8022.8 3		C	
8045.3 3	3/2 ⁻ $\ddagger$	C	
8063.9 3	3/2 ⁺ $\ddagger$	C	
8084.8 ^h 9	21/2 ⁻ , 23/2	K	
8101.2 3		C	
8143.3 3	7/2 ⁻ $\ddagger$	C	
8147.3 3	3/2 ⁻ , 5/2 ⁻ , 7/2 ⁺ $\ddagger$	C	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{51}Mn Levels (continued)

E(level) [†]	J ^π #	XREF	Comments
8168.8 3	3/2 ⁻ , 5/2 ⁺ [‡]	C	
8174.7 3	3/2, 5/2 ⁻ [‡]	C	
8186.5 3		C	
8199.2 3	(3/2 ⁻)	C I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 3767 in ^{51}Cr .
8215.9 3	3/2 ⁻ , 5/2 ⁻ [‡]	C I	Corresponding IAS of ^{51}Cr (3767 level) is (3/2 ⁻).
8256.1 3		C	
8260.0 3	5/2, 7/2 ⁻ , 9/2 ⁺ [‡]	C	
8265.9 3		C	
8268.8 3	5/2 ⁻ [‡]	C	
8282	5/2 ⁺	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 3900 in ^{51}Cr .
8307.1 3	5/2 ⁺	C I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 3927 in ^{51}Cr .
8336	5/2 ⁺	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 3953 in ^{51}Cr .
8340	(5/2 ⁺)	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 3985 in ^{51}Cr .
8352	5/2 ⁺	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 3977 in ^{51}Cr .
8358	5/2 ⁺	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 3977 in ^{51}Cr .
8380.9 3		C	
8389	3/2 ⁺	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 3990 in ^{51}Cr .
8391	5/2 ⁻	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 4005 in ^{51}Cr .
8400.4 3		C	
8403	1/2	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 4040 in ^{51}Cr .
8408	5/2 ⁺	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 4071 in ^{51}Cr .
8415.4 ^{eh} 20	(19/2 ⁺)	K	
8425.0 ^h 12	23/2 ⁻	K	
8453.3 3	9/2 ⁺	C I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 4099 in ^{51}Cr .
8465.5 3	9/2 ⁺	C I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 4155 in ^{51}Cr .
8472.8	9/2 ⁺	I	
8473.0 3		C	
8491	5/2 ⁺	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 4189 in ^{51}Cr .
8492	5/2 ⁺	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 4258 in ^{51}Cr .
8498.7 3		C	
8555.7 3		C	
8556.3 3		C	
8749	1/2 ⁺	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 4289 in ^{51}Cr .
8893	1/2 ⁻	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 4426 in ^{51}Cr .
8915	1/2 ⁺	I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 4609 in ^{51}Cr .

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{51}Mn Levels (continued)

E(level) [†]	J ^π #	T _{1/2}	XREF	Comments
8973.1 ^h 9	25/2 ⁻		K	
9165.2 ^{fh} 14	(21/2 ⁺)		K	
9186	3/2 ⁻		I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 4770 in ^{51}Cr .
9471.3 ^h 9	25/2 ⁻ , 27/2	>0.69 ps	K	T _{1/2} : From 2004Ek02 in ($^{32}\text{S}, 2\alpha p\gamma$).
9515	1/2 ⁻		I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 5205 in ^{51}Cr .
9516	1/2 ⁻		I	J ^π : From $\gamma(\theta)$ to lower states with known J ^π (1986Di01). IAS of 5222 in ^{51}Cr .
9600.2 ^{gh} 10	25/2 ⁻		K	
9677.2 ^h 12	25/2 ⁻		K	
9920.4 ^h 13	25/2 ⁻		K	
9979.2 ^h 11	23/2 ⁽⁺⁾		K	
10468.9 ^h 10	27/2 ⁻		K	
10804.4 ^h 10	27/2 ⁻		K	
10843.1 ^{fh} 11	25/2 ⁽⁺⁾		K	
11062.3 ^h 11	27/2 ⁻		K	
11201.8 ^h 14	(27/2 ⁻)		K	
11203.2	5/2 ⁺		I	
11510.4 ^h 10	29/2 ⁻		K	
11670.6 ^h 14	27/2 ⁻		K	
11781.5 ^h 10	29/2 ⁻		K	
11945.8 ^{eh} 11	27/2 ⁽⁺⁾		K	
12184.8 ^{gh} 11	29/2 ⁻		K	
12433.8 ^h 10	29/2 ⁻		K	
12791.8 ^h 10	31/2 ⁻		K	
12891.8 ^h 18	27/2 ⁻ , 29/2		K	
13169.9 ^h 10	31/2 ⁻		K	
13468.1 ^h 18	29/2 ⁻ , 31/2		K	
13585.2 ^h 10	31/2 ⁻		K	
13963.8 ^h 11	33/2 ⁻		K	
14125.1 ^h 16	31/2 ⁻		K	
14318.0 ^{eh} 16	31/2 ⁽⁺⁾		K	
14924.2 ^{gh} 11	33/2 ⁻		K	
15386.8 ^h 24	31/2, 33/2 ⁻		K	J ^π : (33/2) ⁻ listed in table I of 2004Ek02 under J ^π column for the 3876 transition.
15862.6 ^h 12	(35/2) ⁻		K	Possible configuration= $[\pi(1f_{7/2})^{-3} \otimes \nu(1f_{7/2})^{-3}]_{15+} \otimes \nu(1f_{5/2})$. This configuration is favored by 2004Ek02 for this state, as it accounts for 80% of the yrast 35/2 ⁻ wave function.
17061.7 ^{eh} 19	35/2 ⁽⁺⁾		K	
19636 ^{eh} 3	39/2 ⁽⁺⁾		K	

[†] For bound states, E(level) are from (p, γ), except as noted. For unbound states, E(level) are from (p, γ) and given as S(p)+E(p)(c.m.), where S(p)=5270.8 keV 3 (2012Wa38), E(p)(c.m.)=(50/51)(E(p)(lab)), E(p)(lab) is incident proton energy in lab system, and values of E(p) are taken as follows: 1059-1798, 2031 from 1972Fo25, 1798-2477, 2500 from 1986Di01,

Adopted Levels, Gammas (continued) ^{51}Mn Levels (continued)

2493-3149 from [1988Di03](#), 3170-3351 from [1984Sz02](#), except as noted.

$\ddagger$ From $\gamma(\theta)$'s of primary γ 's from resonance states with known J^π in $^{50}\text{Cr}(\text{p},\gamma)$, transitions with D+Q and large δ are taken as $\Delta\pi=\text{no}$.

From ($^{32}\text{S},2\alpha\text{p}\gamma$) based on R(DCO) and/or R(ang), except as noted.

@ From DSA measurements in $^{54}\text{Fe}(\text{p},\alpha\gamma)$.

& From DSA measurements in $^{50}\text{Cr}(\text{p},\gamma)$.

^a From DSA measurements in (HI,xn γ).

^b From RDM in (HI,xn γ).

^c Band(A): yrast band, $\alpha=+1/2$.

^d Band(a): yrast band, $\alpha=-1/2$.

^e Band(B): band based on $(15/2^+)$, $\alpha=-1/2$.

^f Band(b): band based on $(17/2^+)$, $\alpha=+1/2$.

^g Band(C): γ sequence based on $21/2^-$, $23/2^-$ level at 7500.8keV.

^h From $^{28}\text{Si}(^{32}\text{S},2\alpha\text{p}\gamma)$ based on least-squares fit to $E\gamma$'s.

ⁱ From ($^3\text{He},\text{d}$).

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$

For γ transitions from unbound states, see ⁵⁰Cr(p, γ), and (HI,xn γ).

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\&$	E_f	J_f^π	Mult. ^b	δ^a	Comments
237.3	7/2 ⁻	237.4 [‡] 3	100 [‡] 3	0.0	5/2 ⁻	M1+E2	+0.100 11	B(E2)(W.u.)=47 13; B(M1)(W.u.)=0.116 19 δ : other: +0.16 5 in ⁵⁰ Cr(p, γ) (1974Ne12).
1139.8	9/2 ⁻	902.4 [‡] 4	100.0 [#] 23	237.3	7/2 ⁻	M1+E2	+0.323 22	B(E2)(W.u.)=27 10; B(M1)(W.u.)=0.09 3 other δ : -5.7 21 or -0.36 7 in (p, γ).
		1139.7 [‡] 5	16.3 [#] 23	0.0	5/2 ⁻	E2		B(E2)(W.u.)=15 6 I_γ : other: 12.4 23 in (p, γ), 13.6 30 in (HI,xn γ), 9.4 4 in (³² S,2 $\alpha\gamma$).
1488.5	11/2 ⁻	348.8 [‡] 3	55.1 [‡] 17	1139.8	9/2 ⁻	M1+E2	+0.054 27	B(M1)(W.u.)=0.37 12
		1251.1 [‡] 6	100 [‡] 3	237.3	7/2 ⁻	E2		B(E2)(W.u.)=21 6
		1488	<3	0.0	5/2 ⁻			I_γ : from (p, $\alpha\gamma$).
1817.1	3/2 ⁽⁻⁾	1579.8 3		237.3	7/2 ⁻	(E2)		B(E2)(W.u.) < 0.14
		1817.1 2		0.0	5/2 ⁻	(M1)		B(M1)(W.u.) < 0.0051
1824.6	3/2 ⁻	1587.3 2	4 [@] 3	237.3	7/2 ⁻	E2		B(E2)(W.u.)=12 10
		1824.6 1	100 [@] 3	0.0	5/2 ⁻	M1		Mult.: From (³ He,d γ). B(M1)(W.u.)=0.22 6 Mult.: From (³ He,d γ).
1959.1	1/2 ⁻	1721.8 6	<2 [#]	237.3	7/2 ⁻			B(E2)(W.u.)=4.6 15
		1958.8 [@] 3	100 [@]	0.0	5/2 ⁻	E2+M3		I_γ : $\Gamma_{\gamma 0}/\Gamma_\gamma > 0.98$ in ⁵⁴ Fe(p, $\alpha\gamma$). δ (E2,M3): +0.41 14 or +1.4 4 in (p, γ).
2140.4	3/2 ⁻	1903.1 3	2 [#] 1	237.3	7/2 ⁻	[E2]		B(E2)(W.u.)=2.6 15
		2140.3 [@] 3	100 [#] 1	0.0	5/2 ⁻	M1+E2	-0.08 7	Mult.: 1977No01 give E2 from level scheme. B(M1)(W.u.)=0.15 4 other δ : +0.26 2 or +2.0 9 in (p, γ). δ : +0.20 7 or +2.8 6 in ⁵⁰ Cr(p, γ).
2255.7	(5/2 ⁻)	2018.4 2	100 4	237.3	7/2 ⁻	(M1+E2)		
		2255.7 1	45 4	0.0	5/2 ⁻	[M1,E2]		
2275.9	1/2 ⁺	135.5 2	23	2140.4	3/2 ⁻			
		316.8 6	28 [#] 4	1959.1	1/2 ⁻	(E1)		
		451.3 2	18	1824.6	3/2 ⁻			
		458.8 2	100 [#] 4	1817.1	3/2 ⁽⁻⁾	(E1)		
		2275.9 2	3	0.0	5/2 ⁻			
2310.0	5/2 ⁻	492.9 5	13	1817.1	3/2 ⁽⁻⁾			
		2072.7 5	100 [#] 4	237.3	7/2 ⁻	(M1+E2) ^c		δ : +0.03 4 or -8.4 +20-30 in ⁵⁴ Fe(p, $\alpha\gamma$).
		2310.0 5	18 [#] 4	0.0	5/2 ⁻	(M1+E2) ^c		δ : +0.06 13 or +1.4 3 in ⁵⁴ Fe(p, $\alpha\gamma$).
2415.9	(7/2 ⁻)	275.5 3	22	2140.4	3/2 ⁻			
		598.8 3	41	1817.1	3/2 ⁽⁻⁾			

Adopted Levels, Gammas (continued)
 $\gamma(^{51}\text{Mn})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\&$	E_f	J_f^π	Mult. ^{<i>b</i>}	δ^a	Comments
2415.9	$(7/2)^-$	1276.1 4	100	1139.8	$9/2^-$	(M1+E2)		B(M1)(W.u.)=1.0 8
		2178.6 3	92	237.3	$7/2^-$	(M1+E2)	-0.18 16	δ : $\delta(\text{E2,M1})=+0.0$ 1 in $^{54}\text{Fe}(\text{p},\alpha\gamma)$ and -0.02 10 or $+1.8$ 55 in (p,γ) .
		2415.9 3	16	0.0	$5/2^-$	(M1)		B(M1)(W.u.)=0.18 14
2701.6	$3/2^-$	391.6 5	100 [#] 9	2310.0	$5/2^-$	M1+E2 ^{<i>c</i>}		I_γ : other: <8 in $(\text{p},\alpha\gamma)$.
		425.7 5	11	2275.9	$1/2^+$			δ : -0.11 12 or -3.1 +10-16 in $^{54}\text{Fe}(\text{p},\alpha\gamma)$.
		561.2 5	11	2140.4	$3/2^-$			
		742.5 5	75 [#] 9	1959.1	$1/2^-$	M1+E2 ^{<i>c</i>}		δ : $+0.08$ 8 or -2.1 4 in $^{54}\text{Fe}(\text{p},\alpha\gamma)$.
		877.0 5	18	1824.6	$3/2^-$			
		884.5 5	50	1817.1	$3/2^{(-)}$			
		1562 ^{<i>df</i>}		1139.8	$9/2^-$			E_γ : doubtful placement if J=3/2, since γ to $9/2^-$.
2841.4	$1/2^-$	882.3 3	100	1959.1	$1/2^-$			
		1016.8 3	34	1824.6	$3/2^-$	M1 ^{<i>c</i>}		B(M1)(W.u.)=0.019 10
		1024.3 3	6	1817.1	$3/2^{(-)}$			
2893.0	$5/2^-$	1068.4 4	8	1824.6	$3/2^-$			
		1075.9 4	56	1817.1	$3/2^{(-)}$			
		1753.2 4	97	1139.8	$9/2^-$			
		2655.7 4	17	237.3	$7/2^-$			
		2893.0 4	100	0.0	$5/2^-$			
2913.5	$3/2^-$	2913.5 1	100	0.0	$5/2^-$	M1+E2		$\delta(\text{D,Q})$: $+0.13$ 15 or $+1.8$ 6 in (p,γ) .
2957.3	$13/2^-$	1468.8 [‡] 7	100 [‡] 3	1488.5	$11/2^-$	E2+M1		
		1817.5 [‡] 8	52.4 [‡] 16	1139.8	$9/2^-$	E2		
2983.5	$5/2^+$	2746.2 5	100 [#] 7	237.3	$7/2^-$	D(+Q) ^{<i>c</i>}	+0.04 8	
		2983.5 5	45 [#] 7	0.0	$5/2^-$	D(+Q) ^{<i>c</i>}	-0.37 21	
3029.5	$(7/2)$	2792.2 11	100	237.3	$7/2^-$			E_γ : from E(level) difference.
		3029.5 11	59	0.0	$5/2^-$			E_γ : from E(level) difference.
3048.6	$(3/2^-)$	772.7 10		2275.9	$1/2^+$			
		792.9 10		2255.7	$(5/2^-)$			
		1231.5 10	57	1817.1	$3/2^{(-)}$			
		1908.8 10	61	1139.8	$9/2^-$			
		2811.3 10	100	237.3	$7/2^-$			
3058.1	$(5/2^-, 7/2^-)$	3058.1 10	100	0.0	$5/2^-$			
3130.5	$3/2^-, 5/2^+$	820.5 11	18	2310.0	$5/2^-$			
		854.6 ^{<i>f</i>} 10		2275.9	$1/2^+$			
		874.8 ^{<i>f</i>} 10		2255.7	$(5/2^-)$			
		990.1 10	34	2140.4	$3/2^-$			
		1305.9 10	27	1824.6	$3/2^-$			
		1313.4 10	100	1817.1	$3/2^{(-)}$			
3250.8	$15/2^-$	293.5 [‡] 3	7.4 [‡] 3	2957.3	$13/2^-$	E2+M1		
		1762.2 [‡] 8	100 [‡] 3	1488.5	$11/2^-$	E2		

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)							
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\&$	E_f	J_f^π	Mult. ^{<i>b</i>}	Comments
3292.3	5/2 ⁻ , 7/2 ⁻	1036.6 6	17	2255.7	(5/2 ⁻)		
		1151.9 6	5	2140.4	3/2 ⁻		
		3055.0 6	100	237.3	7/2 ⁻		
		3292.3 6	45	0.0	5/2 ⁻		
3423.3	(1/2 ⁻ to 7/2 ⁻)	1464.2 ^{<i>f</i>} 12	33 5	1959.1	1/2 ⁻		
		3423.3 10	100 5	0.0	5/2 ⁻		
3554.1	3/2 ⁻	3554.1 5	100	0.0	5/2 ⁻		
3680.6	17/2 ⁻	430.1 ^{$\ddagger$} 3	58.1 ^{$\ddagger$} 18	3250.8	15/2 ⁻	M1	B(M1)(W.u.)=5.8×10 ⁻⁵ 3
		723.2 ^{$\ddagger$} 4	100 ^{$\ddagger$} 3	2957.3	13/2 ⁻	E2	B(E2)(W.u.)=0.092 4
3694.4	1/2 ⁻ , 3/2 ⁻	780.9 ^{<i>f</i>} 5	20 4	2913.5	3/2 ⁻		
		1554.0 5	50 8	2140.4	3/2 ⁻		
		1869.8 5	100 12	1824.6	3/2 ⁻		
		3694.4 5	30 6	0.0	5/2 ⁻		
3824.9	7/2	2685.1 16	49	1139.8	9/2 ⁻		E_γ : from E(level) difference.
		3587.6 16	20	237.3	7/2 ⁻		E_γ : from E(level) difference.
		3824.9 16	100	0.0	5/2 ⁻		E_γ : from E(level) difference.
3835.2	(7/2)	1579.5 15	100	2255.7	(5/2 ⁻)		E_γ : from E(level) difference.
		2695.9 15	56	1139.8	9/2 ⁻		E_γ : from E(level) difference.
3876.6	(3/2, 5/2)	1917.5 18	100	1959.1	1/2 ⁻		I_γ : 30% transitions unknown for this level.
							I_γ : 50% transitions unknown for this level.
							E_γ : from E(level) difference.
3893.2	1/2 ⁻ , 3/2 ⁻	1051.8 ^{<i>f</i>} 4	3	2841.4	1/2 ⁻		
		3893.2 4	100	0.0	5/2 ⁻		
3931.8?	3/2, 5/2 ⁻	1791.4 ^{<i>f</i>} 4	100	2140.4	3/2 ⁻		
3955.6	(7/2, 9/2)	2815.8 27	100	1139.8	9/2 ⁻		E_γ : from E(level) difference.
4005.9	(3/2 ⁻ , 5/2 ⁻)	1730.0 6	47	2275.9	1/2 ⁺		
		3768.6 ^{<i>e</i>} 6	100 ^{<i>e</i>}	237.3	7/2 ⁻		
4046		4046	100	0.0	5/2 ⁻		
4052?		1067 ^{<i>f</i>}	100	2983.5	5/2 ⁺		
4091.2	(5/2 ⁻ , 7/2 ⁻)	1950.8 ^{<i>f</i>} 10	100	2140.4	3/2 ⁻		
4139.7	19/2 ⁻	459.2 ^{$\ddagger$} 2	100 ^{$\ddagger$} 3	3680.6	17/2 ⁻	E2+M1	δ : +0.15 +6-5 or +3.5 +10-7 from ²⁸ Si(³² S, 2 α p γ).
		888.4 ^{$\ddagger$} 5	0.9 ^{$\ddagger$} 1	3250.8	15/2 ⁻		
4153	(5/2 ⁺)	2013	49	2140.4	3/2 ⁻		
		2328	100	1824.6	3/2 ⁻		
4200	(1/2, 3/2)	1924	67	2275.9	1/2 ⁺		
		2383	100	1817.1	3/2 ⁽⁻⁾		
4206.1	(5/2)	2381.5 10	35	1824.6	3/2 ⁻		
		2389 1	35	1817.1	3/2 ⁽⁻⁾		
		3968.8 10	100	237.3	7/2 ⁻		
		4206.1 10	63	0.0	5/2 ⁻		

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)						
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\&$	E_f	J_f^π	Comments
4352.4	$(1/2^-, 3/2^-)$	798.3 ^f 12	33	3554.1	$3/2^-$	
		2393.3 ^f 12	56	1959.1	$1/2^-$	
		4352.4 10	100	0.0	$5/2^-$	
4451	$7/2^-$	1320.5 22	83	3130.5	$3/2^-, 5/2^+$	
		2141 ^f 2		2310.0	$5/2^-$	
		2195.3 20	94	2255.7	$(5/2^-)$	
		2491.9 ^f 21		1959.1	$1/2^-$	
		2626.4 20		1824.6	$3/2^-$	
		2633.9 20	100	1817.1	$3/2^{(-)}$	
4488.1	$(5/2)$	2232.4 7	59	2255.7	$(5/2^-)$	
		4250.8 7	100	237.3	$7/2^-$	
4540	$(3/2, 5/2, 7/2)$	1838	100	2701.6	$3/2^-$	
		2581	100	1959.1	$1/2^-$	
		3400 ^f		1139.8	$9/2^-$	
4723	$(1/2, 3/2)$	2021		2701.6	$3/2^-$	
		4723 ^f		0.0	$5/2^-$	
4883	$1/2, 3/2^-$	2042		2841.4	$1/2^-$	
		2743	100	2140.4	$3/2^-$	
		2924	100	1959.1	$1/2^-$	
4925	$1/2^-$ to $7/2^-$	1938 ^f		2983.5	$5/2^+$	
		2011 ^f		2913.5	$3/2^-$	
		2613	100	2310.0	$5/2^-$	
5077	$1/2^-, 3/2^-$	2801 ^f 5		2275.9	$1/2^+$	E_γ : from E(level) difference.
		2821 5	100	2255.7	$(5/2^-)$	E_γ : from E(level) difference.
		3118 5	67	1959.1	$1/2^-$	E_γ : from E(level) difference.
		3260 ^f 5		1817.1	$3/2^{(-)}$	E_γ : from E(level) difference.
5133	$1/2^-, 3/2^-$	2150 ^f 5		2983.5	$5/2^+$	E_γ : from E(level) difference.
		2823 5	55	2310.0	$5/2^-$	E_γ : from E(level) difference.
		2877 5	100	2255.7	$(5/2^-)$	E_γ : from E(level) difference.
		3308 5	38	1824.6	$3/2^-$	E_γ : from E(level) difference.
		3316 5	57	1817.1	$3/2^{(-)}$	E_γ : from E(level) difference.
5174	$(1/2, 3/2, 5/2)$	3216	100	1959.1	$1/2^-$	
		3350	92	1824.6	$3/2^-$	
5188?	$(3/2^+, 5/2^+)$	2137 ^f	82	3048.6	$(3/2^-)$	
		2274 ^f	59	2913.5	$3/2^-$	
		2296 ^f	53	2893.0	$5/2^-$	
		4950 ^f	100	237.3	$7/2^-$	
5203?		5203 ^f	100	0.0	$5/2^-$	
5212?		2298 ^f	63 20	2913.5	$3/2^-$	

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ ^{$\dagger$}	I_γ ^{$\&$}	E_f	J_f^π	Mult. ^{b}	Comments
5212?		4974 ^{ef}	100 ^{e} 20	237.3	7/2 ⁻		
5230		3413 ^{f} 5	60	1817.1	3/2 ⁽⁻⁾		E_γ : from E(level) difference.
		4993 ^{f} 5	100	237.3	7/2 ⁻		E_γ : from E(level) difference.
		5230 ^{f} 5		0.0	5/2 ⁻		E_γ : from E(level) difference.
5258.5	(17/2,19/2)	1577 ^{$\ddagger$} 2	100 ^{$\ddagger$}	3680.6	17/2 ⁻		
5458.4	19/2 ⁻	1318 ^{$\ddagger$} 1	50 ^{$\ddagger$} 13	4139.7	19/2 ⁻		
		2207.7 ^{$\ddagger$} 12	100 ^{$\ddagger$} 13	3250.8	15/2 ⁻	E2	
5506?		1454 ^{f}	100	4052?			
		5268 ^{f}	54	237.3	7/2 ⁻		
5585?		5585 ^{f}	100	0.0	5/2 ⁻		
5639.8	21/2 ⁻	1500.0 ^{$\ddagger$} 6	100 ^{$\ddagger$} 4	4139.7	19/2 ⁻	E2+M1	δ : +0.29 +8-7 or +2.1 5 in ²⁸ Si(³² S,2 α py).
		1959.3 ^{$\ddagger$} 7	1.38 ^{$\ddagger$} 11	3680.6	17/2 ⁻	E2	
6309.1	3/2 ⁻	2303.2 ^{f} 5	3.6	4005.9	(3/2 ⁻ ,5/2 ⁻)	(M1)	
		2377.3 ^{f} 3	5.0	3931.8?	3/2,5/2 ⁻	M1+E2	
		2415.9 4	2.5	3893.2	1/2 ⁻ ,3/2 ⁻	(M1)	
		2755.0 6	2.9	3554.1	3/2 ⁻	(M1)	
		3325.6 6	14.4	2983.5	5/2 ⁺		
		3395.6 4	21.9	2913.5	3/2 ⁻	M1+E2	
		3467.7 5	46.0	2841.4	1/2 ⁻	M1+E2	
		3999.1 6	4.3	2310.0	5/2 ⁻	M1+E2	
		4053.4 4	40.3	2255.7	(5/2 ⁻)	(M1)	
		4168.7 5	9.0	2140.4	3/2 ⁻	M1+E2	
		4350.0 8	97.5	1959.1	1/2 ⁻	M1+E2	
		4484.5 5	100	1824.6	3/2 ⁻	M1+E2	
		4492.0 5	1.1	1817.1	3/2 ⁽⁻⁾	(M1)	
		6071.8 5	4.0	237.3	7/2 ⁻	M3+E2	
		6309.1 4	7.2	0.0	5/2 ⁻	M1+E2	
6320.6		1832.5 8	19.2	4488.1	(5/2)		
		1968.2 12	3.9	4352.4	(1/2 ⁻ ,3/2 ⁻)		
		2427.2 6	53.9	3893.2	1/2 ⁻ ,3/2 ⁻		
		2626.2 6	50.0	3694.4	1/2 ⁻ ,3/2 ⁻		
		2766.5 6	15.4	3554.1	3/2 ⁻		
		3028.3 7	34.6	3292.3	5/2 ⁻ ,7/2 ⁻		
		3407.1 5	7.7	2913.5	3/2 ⁻		
		3479.2 ^{f} 5		2841.4	1/2 ⁻		
		4010.6 6	30.8	2310.0	5/2 ⁻		
		4180.2 5	11.5	2140.4	3/2 ⁻		
		4361.5 8	11.5	1959.1	1/2 ⁻		
		4496.0 5	23.1	1824.6	3/2 ⁻		

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)						
$E_i(\text{level})$	J_i^π	E_γ ^{$\dagger$}	I_γ ^{$\&$}	E_f	J_f^π	Mult. ^{b}
6320.6		4503.5 6	26.9	1817.1	3/2 ⁽⁻⁾	
		6320.6 4	100	0.0	5/2 ⁻	
6358.6		2006.2 11	4.8	4352.4	(1/2 ⁻ , 3/2 ⁻)	
		2664.2 7	4.8	3694.4	1/2 ⁻ , 3/2 ⁻	
		2804.5 7	9.5	3554.1	3/2 ⁻	
		3228.1 11	4.8	3130.5	3/2 ⁻ , 5/2 ⁺	
		4048.6 7	28.6	2310.0	5/2 ⁻	
		4082.7 5	19.1	2275.9	1/2 ⁺	
		4102.9 5	7.1	2255.7	(5/2 ⁻)	
		4218.2 5	14.3	2140.4	3/2 ⁻	
		4399.5 8	19.1	1959.1	1/2 ⁻	
		4541.5 6	100	1817.1	3/2 ⁽⁻⁾	
		6358.6 4	26.2	0.0	5/2 ⁻	
6372.1		2478.9 7	13.8	3893.2	1/2 ⁻ , 3/2 ⁻	
		2818.0 8	13.8	3554.1	3/2 ⁻	
		3079.8 8	27.6	3292.3	5/2 ⁻ , 7/2 ⁻	
		3388.6 8	10.3	2983.5	5/2 ⁺	
		3458.6 6	6.9	2913.5	3/2 ⁻	
		4062.1 8	41.4	2310.0	5/2 ⁻	
		4116 ^{d}		2255.7	(5/2 ⁻)	
		4231.7 6	6.9	2140.4	3/2 ⁻	
		4413.0 8	55.2	1959.1	1/2 ⁻	
		4547.5 ^{f} 6	<3.5	1824.6	3/2 ⁻	
		4555.0 6	100	1817.1	3/2 ⁽⁻⁾	
		6372.1 6	62.1	0.0	5/2 ⁻	
6412.1		3570.7 6	6.2	2841.4	1/2 ⁻	
		3710.5 8	1.2	2701.6	3/2 ⁻	
		4102.1 8	2.5	2310.0	5/2 ⁻	
		4271.7 6	2.5	2140.4	3/2 ⁻	
		4453.0 8	11.1	1959.1	1/2 ⁻	
		4587.5 6	100	1824.6	3/2 ⁻	
6450.8	5/2 ⁻	1238.8 6	7.9	5212?		
		1910.8 6	2.6	4540	(3/2, 5/2, 7/2)	
		3027.5 12	10.5	3423.3	(1/2 ⁻ to 7/2 ⁻)	
		3557.8 7	2.6	2893.0	5/2 ⁻	
		3749.2 8	<2.6	2701.6	3/2 ⁻	
		4140.8 8	7.9	2310.0	5/2 ⁻	
		4195.1 6	5.3	2255.7	(5/2 ⁻)	
		4633.7 6	47.4	1817.1	3/2 ⁽⁻⁾	D+Q
		6213.5 6	100	237.3	7/2 ⁻	D+Q
		6450.8 6	79.0	0.0	5/2 ⁻	Q
6466.5		1583.5 6	15.2	4883	1/2, 3/2 ⁻	

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\&$	E_f	J_f^π	Mult. ^b	δ^a	Comments
6466.5		2375.3 12	6.1	4091.2	(5/2 ⁻ , 7/2 ⁻)			
		2772.1 8	39.4	3694.4	1/2 ⁻ , 3/2 ⁻			
		3553.0 6	48.5	2913.5	3/2 ⁻			
		3625.1 6	27.3	2841.4	1/2 ⁻			
		3764.9 8	39.4	2701.6	3/2 ⁻			
		4190.6 6	6.1	2275.9	1/2 ⁺			
		4210.8 6	9.1	2255.7	(5/2 ⁻)			
		4507.4 8	6.1	1959.1	1/2 ⁻			
		4641.9 6	100	1824.6	3/2 ⁻			
		4649.4 6	3.0	1817.1	3/2 ⁽⁻⁾			
		6466.5 6	3.0	0.0	5/2 ⁻			
6471.5	23/2 ⁻	831.8 [‡] 4	100 [‡] 3	5639.8	21/2 ⁻	E2+M1		δ : +0.16 +6-5 or +3.4 +10-7 from ²⁸ Si(³² S,2 α py).
		1012 [‡] 1	0.28 [‡] 14	5458.4	19/2 ⁻	E2		
		2332.0 [‡] 8	23.1 [‡] 7	4139.7	19/2 ⁻	E2		
6682.4		2988.0 11	14.3	3694.4	1/2 ⁻ , 3/2 ⁻			
		3128.3 11	14.3	3554.1	3/2 ⁻			
		3551.9 14	5.7	3130.5	3/2 ⁻ , 5/2 ⁺			
		3768 ^e	40.0 ^e	2913.5	3/2 ⁻			
		3841.0 10	25.7	2841.4	1/2 ⁻			
		4406.5 10	14.3	2275.9	1/2 ⁺			
		4723.3 12	100	1959.1	1/2 ⁻			
		6682.4 10	71.4	0.0	5/2 ⁻			
6693.6	5/2 ⁻	2868.7 19	2.0	3824.9	7/2			
		3563.1 14	17.7	3130.5	3/2 ⁻ , 5/2 ⁺	D+Q	0.67 28	
		3645.0 14	7.8	3048.6	(3/2 ⁻)	D+Q		δ : +6 3 or -0.59 9 (1972Fo25).
		3780.1 10	2.0	2913.5	3/2 ⁻			
		3800.6 11	2.0	2893.0	5/2 ⁻			
		3992.0 11	2.0	2701.6	3/2 ⁻			
		4277.7 10	25.5	2415.9	(7/2 ⁻)	D+Q		δ : -0.01 4 or -9 3 (1972Fo25).
		4383.6 11	3.9	2310.0	5/2 ⁻			
		4437.9 ^f 10	≤ 5.9	2255.7	(5/2 ⁻)			
		4876.5 10	15.7	1817.1	3/2 ⁽⁻⁾	D(+Q)		
		6456.3 10	100	237.3	7/2 ⁻	D+Q		δ : +0.08 2 or -70 (1972Fo25).
		6693.6 10	19.6	0.0	5/2 ⁻	D+Q		δ : -0.07 9 or +1.5 3 (1972Fo25).
6702.4		3718.9 11	4.0	2983.5	5/2 ⁺			
		4392.4 11	4.0	2310.0	5/2 ⁻			
		4426.5 10	7.9	2275.9	1/2 ⁺			
		4446.7 10	1.3	2255.7	(5/2 ⁻)			
		4743.3 12	7.9	1959.1	1/2 ⁻			
		4885.3 10	6.6	1817.1	3/2 ⁽⁻⁾			
		6702.4 10	100	0.0	5/2 ⁻			
6722.8		1137.8 10	3.7	5585?				

Adopted Levels, Gammas (continued) $\gamma(^{51}\text{Mn})$ (continued)

<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>$E_\gamma^\dagger$</u>	<u>$I_\gamma^\&$</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.^b</u>
6722.8		1839.8 <i>10</i>	11.1	4883	1/2,3/2 ⁻	
		2829.6 <i>11</i>	22.2	3893.2	1/2 ⁻ ,3/2 ⁻	
		3168.7 <i>11</i>	14.8	3554.1	3/2 ⁻	
		3809.3 <i>10</i>	100	2913.5	3/2 ⁻	
		4446.9 <i>10</i>	51.9	2275.9	1/2 ⁺	
		4467.1 <i>10</i>	11.1	2255.7	(5/2 ⁻)	
		4582.4 <i>10</i>	85.2	2140.4	3/2 ⁻	
		4763.7 <i>12</i>	7.4	1959.1	1/2 ⁻	
		4898.2 <i>10</i>	22.2	1824.6	3/2 ⁻	
		4905.7 <i>10</i>	22.2	1817.1	3/2 ⁽⁻⁾	
		6722.8 <i>10</i>	18.5	0.0	5/2 ⁻	
		6754.0 <i>14</i>	4.7	3130.5	3/2 ⁻ ,5/2 ⁺	
		4052.4 <i>11</i>	7.0	2701.6	3/2 ⁻	
		4338.1 <i>10</i>	30.2	2415.9	(7/2) ⁻	D(+Q)
6754.0	5/2 ⁻	4444.0 <i>11</i>	4.7	2310.0	5/2 ⁻	
		4478.1 <i>10</i>	2.3	2275.9	1/2 ⁺	
		4929.4 <i>10</i>	37.2	1824.6	3/2 ⁻	D(+Q)
		4936.9 <i>10</i>	18.6	1817.1	3/2 ⁽⁻⁾	
		6516.7 <i>10</i>	100	237.3	7/2 ⁻	D(+Q)
		6754.0 <i>10</i>	27.9	0.0	5/2 ⁻	D(+Q)
		6785.5 <i>10</i>	3.2	5585?		
		1562 ^d		5230		
		2892.3 <i>11</i>	71.0	3893.2	1/2 ⁻ ,3/2 ⁻	
		3231.4 <i>11</i>	29.0	3554.1	3/2 ⁻	
6785.5		3655.0 ^f <i>11</i>	≤9.7	3130.5	3/2 ⁻ ,5/2 ⁺	
		3872.0 <i>10</i>	29.0	2913.5	3/2 ⁻	
		4645.1 <i>10</i>	41.9	2140.4	3/2 ⁻	
		4826.4 <i>12</i>	35.5	1959.1	1/2 ⁻	
		4960.9 <i>10</i>	100	1824.6	3/2 ⁻	
		6785.5 <i>10</i>	6.5	0.0	5/2 ⁻	
		1917.0 <i>10</i>	62.5	4883	1/2,3/2 ⁻	
		3245.9 <i>11</i>	29.2	3554.1	3/2 ⁻	
		3886.5 <i>10</i>	79.2	2913.5	3/2 ⁻	
		3958.6 <i>10</i>	8.3	2841.4	1/2 ⁻	
6800.0		4490.0 <i>11</i>	16.7	2310.0	5/2 ⁻	
		4524.1 <i>10</i>	16.7	2275.9	1/2 ⁺	
		4659 ^e	12.5 ^e	2140.4	3/2 ⁻	
		4974 ^e	100 ^e	1824.6	3/2 ⁻	
		4982.9 <i>10</i>	50.0	1817.1	3/2 ⁽⁻⁾	
		6800.0 <i>10</i>	41.7	0.0	5/2 ⁻	
		2597.1 <i>14</i>	6.3	4206.1	(5/2)	
		3108.8 <i>11</i>	4.7	3694.4	1/2 ⁻ ,3/2 ⁻	

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)							
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\&$	E_f	J_f^π	Mult. ^b	Comments
6803.2		3249.1 11	4.7	3554.1	3/2 ⁻		
		3889.7 10	6.3	2913.5	3/2 ⁻		
		3961.8 ^f 10	<1.6	2841.4	1/2 ⁻		
		4493.2 11	4.7	2310.0	5/2 ⁻		
		4662.8 10	18.8	2140.4	3/2 ⁻		
		4844.1 12	7.8	1959.1	1/2 ⁻		
		4986.1 10	3.1	1817.1	3/2 ⁽⁻⁾		
		6803.2 10	100	0.0	5/2 ⁻		
		2368.7 10	14.3	4451	7/2 ⁻		
		3527.4 ^f 10	8.6	3292.3	5/2 ⁻ , 7/2 ⁻		
6819.7		3689.2 14	48.6	3130.5	3/2 ⁻ , 5/2 ⁺		
		3771.1 ^f 14	8.6	3048.6	(3/2 ⁻)		
		3836.2 ^f 11	8.6	2983.5	5/2 ⁺		
		3906.2 ^f 10	5.7	2913.5	3/2 ⁻		
		3978.3 10	11.4	2841.4	1/2 ⁻		
		4118.1 11	20.0	2701.6	3/2 ⁻		
		4509.7 11	25.7	2310.0	5/2 ⁻		
		4543.8 10	37.1	2275.9	1/2 ⁺		
		4563 ^e	14.3 ^e	2255.7	(5/2 ⁻)		
		5002.6 10	100	1817.1	3/2 ⁽⁻⁾		
		6819.7 10	14.3	0.0	5/2 ⁻		
		2683.6 9	100	4139.7	19/2 ⁻	E2+M1	
		2388.7 ^f 17	7.3	4451	7/2 ⁻		
		2487.3 14	9.8	4352.4	(1/2 ⁻ , 3/2 ⁻)		
6822.9	21/2 ⁻	2633.6 14	7.3	4206.1	(5/2)		
		3285.6 11	7.3	3554.1	3/2 ⁻		
		3547.4 12	7.3	3292.3	5/2 ⁻ , 7/2 ⁻		
		3781.6 14	2.4	3058.1	(5/2 ⁻ , 7/2 ⁻)		
		3856.2 11	4.9	2983.5	5/2 ⁺		
		3926.2 10	4.9	2913.5	3/2 ⁻		
		4563 ^e	2.4 ^e	2275.9	1/2 ⁺		
		4699.3 10	58.5	2140.4	3/2 ⁻	D+Q	δ : +2.7 3 or +0.10 3 (1972Fo25).
		5015.1 10	100	1824.6	3/2 ⁻	D+Q	δ : +12 3 or -0.17 2 (1972Fo25).
		6839.7 10	39.0	0.0	5/2 ⁻	D+Q	δ : -0.20 5 or -2.3 3 (1972Fo25); -0.05 4 or +6.0 25 (1967Er05).
6839.7		3865.1 11	27.3	2983.5	5/2 ⁺		
		3955.6 11	12.1	2893.0	5/2 ⁻		
		4007.2 10	9.1	2841.4	1/2 ⁻		
		4147.0 11	12.1	2701.6	3/2 ⁻		
		4538.6 11	30.3	2310.0	5/2 ⁻		
		4708.2 10	12.1	2140.4	3/2 ⁻		
		4889.5 12	6.1	1959.1	1/2 ⁻		

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)							
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\&$	E_f	J_f^π	Mult. ^{<i>b</i>}	Comments
6848.6		5031.5 <i>10</i>	100	1817.1	3/2 ⁽⁻⁾		
		6848.6 <i>10</i>	93.9	0.0	5/2 ⁻		
6916.0		2563.6 <i>14</i>	3.5	4352.4	(1/2 ⁻ , 3/2 ⁻)		
		3785.5 <i>14</i>	69.0	3130.5	3/2 ⁻ , 5/2 ⁺		
		3824.5 <i>14</i>	17.2	3091.5?	1/2 ⁻ , 3/2 ⁻		
		4023.0 <i>11</i>	37.9	2893.0	5/2 ⁻		
		4214.4 <i>11</i>	51.7	2701.6	3/2 ⁻	D+Q	δ : -0.03 <i>1</i> or +4.0 <i>5</i> (1967Er05).
		4606.0 <i>11</i>	13.8	2310.0	5/2 ⁻		
		4640.1 ^{<i>f</i>} <i>10</i>	<3.5	2275.9	1/2 ⁺		
		4659 ^{<i>e</i>}	10.3 ^{<i>e</i>}	2255.7	(5/2 ⁻)		
		4775.6 <i>10</i>	17.2	2140.4	3/2 ⁻		
		5098.9 <i>10</i>	24.1	1817.1	3/2 ⁽⁻⁾		
		6916.0 <i>10</i>	100	0.0	5/2 ⁻	D+Q	δ : -0.08 <i>8</i> or -1.4 <i>3</i> (1967Er05).
6927.0		1724.0 <i>10</i>	18.8	5203?			
		3372.9 <i>11</i>	37.5	3554.1	3/2 ⁻		
		3503.7 <i>14</i>	93.8	3423.3	(1/2 ⁻ to 7/2 ⁻)		
		3943.5 <i>11</i>	37.5	2983.5	5/2 ⁺		
		4013.5 <i>10</i>	31.3	2913.5	3/2 ⁻		
		4085.6 <i>10</i>	62.5	2841.4	1/2 ⁻		
		4651.1 <i>10</i>	18.8	2275.9	1/2 ⁺		
		4671.3 <i>10</i>	37.5	2255.7	(5/2 ⁻)		
		4786.6 <i>10</i>	100	2140.4	3/2 ⁻		
		4967.9 <i>12</i>	62.5	1959.1	1/2 ⁻		
		5102.4 <i>10</i>	43.8	1824.6	3/2 ⁻		
		5109.9 <i>10</i>	25.0	1817.1	3/2 ⁽⁻⁾		
		6927.0 <i>10</i>	56.3	0.0	5/2 ⁻		
7033.5	3/2 ⁻	2681.1 <i>10</i>		4352.4	(1/2 ⁻ , 3/2 ⁻)		
		3140.3 <i>5</i>	23.5	3893.2	1/2 ⁻ , 3/2 ⁻		
		3479.4 <i>6</i>	14.7	3554.1	3/2 ⁻		
		4116 ^{<i>d</i>}		2913.5	3/2 ⁻		
		4192.1 <i>4</i>	17.7	2841.4	1/2 ⁻		
		4893.1 <i>4</i>	14.7	2140.4	3/2 ⁻		
		5074.4 <i>7</i>	76.5	1959.1	1/2 ⁻	D(+Q)	
		5208.9 <i>3</i>	29.4	1824.6	3/2 ⁻		
		5216.4 <i>4</i>	2.9	1817.1	3/2 ⁽⁻⁾		
		7033.5 <i>3</i>	100	0.0	5/2 ⁻	D(+Q)	δ : 0.00 <i>5</i> if J(7030)=3/2 (1967Er05) +0.50 <i>5</i> if J(7030)=5/2 (1967Er05).
7045.3	1/2	4769.4 <i>4</i>	100	2275.9	1/2 ⁺	D	
		4904.9 <i>4</i>	30.8	2140.4	3/2 ⁻	D(+Q)	
		5228.2 <i>4</i>	23.1	1817.1	3/2 ⁽⁻⁾	D(+Q)	
7064.9	3/2 ⁻	1876.9 ^{<i>f</i>} <i>3</i>	<3.3	5188?	(3/2 ⁺ , 5/2 ⁺)		
		1987.9 <i>6</i>	3.3	5077	1/2 ⁻ , 3/2 ⁻		
		2139.9 <i>3</i>	10.0	4925	1/2 ⁻ to 7/2 ⁻		

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ [†]	I_γ ^{&}	E_f	J_f^π	Mult. ^b	Comments
7064.9	3/2 ⁻	2333.9 6	6.7	4723	(1/2,3/2)		
		3171.7 5	23.3	3893.2	1/2 ⁻ ,3/2 ⁻		
		3370.5 6	10.0	3694.4	1/2 ⁻ ,3/2 ⁻		
		3510.8 6	10.0	3554.1	3/2 ⁻		
		3768 ^e	6.7 ^e	3292.3	5/2 ⁻ ,7/2 ⁻		
		3934.4 10	6.7	3130.5	3/2 ⁻ ,5/2 ⁺		
		4006.8 10	6.7	3058.1	(5/2 ⁻ ,7/2 ⁻)		
		4081.4 6	6.7	2983.5	5/2 ⁺		
		4151.4 3	3.3	2913.5	3/2 ⁻		
		4223.5 4	13.3	2841.4	1/2 ⁻		
		4649.0 4	3.3	2415.9	(7/2) ⁻		
		4754.9 6	6.7	2310.0	5/2 ⁻		
		4789.0 4	10.0	2275.9	1/2 ⁺		
		4809.2 3	6.7	2255.7	(5/2 ⁻)		
		5240.3 3	86.7	1824.6	3/2 ⁻	D	
		6827.6 4	6.7	237.3	7/2 ⁻		
		7064.9 3	100	0.0	5/2 ⁻	D+Q	δ : -0.28 6 if J(7062)=3/2; -1.0 4 or -4.7 20 if J(7062)=5/2 (1967Er05).
7106.1	5/2,7/2 ⁻	4192.6 3	18.0	2913.5	3/2 ⁻		
		4213.1 5	25.6	2893.0	5/2 ⁻		
		4404.5 6	12.8	2701.6	3/2 ⁻		
		4796.1 6	100	2310.0	5/2 ⁻		
		5289.0 4	25.6	1817.1	3/2 ⁽⁻⁾		
		6868.8 4	46.2	237.3	7/2 ⁻	D(+Q)	
7128.6	1/2	7106.1 3	28.2	0.0	5/2 ⁻	D+Q	
		2776.2 10	1.5	4352.4	(1/2 ⁻ ,3/2 ⁻)		
		4215.1 3	4.4	2913.5	3/2 ⁻		
		4988.2 4	26.1	2140.4	3/2 ⁻	D(+Q)	
		5169.5 7	100	1959.1	1/2 ⁻	D	
		5304.0 3	13.0	1824.6	3/2 ⁻	D(+Q)	
7141.4	5/2 ⁻	2789.0 10	11.9	4352.4	(1/2 ⁻ ,3/2 ⁻)		
		2988.4 3	4.8	4153	(5/2 ⁺)		
		3248.2 5	11.9	3893.2	1/2 ⁻ ,3/2 ⁻		
		3718.1 10	21.4	3423.3	(1/2 ⁻ to 7/2 ⁻)		
		4725.5 4	19.1	2415.9	(7/2) ⁻		
		4885.7 3	45.2	2255.7	(5/2 ⁻)	D+Q	
		6001.6 4	16.7	1139.8	9/2 ⁻		
		6904.1 4	100	237.3	7/2 ⁻	D+Q	
		7141.4 3	7.1	0.0	5/2 ⁻		
		2793.9 10	10.9	4352.4	(1/2 ⁻ ,3/2 ⁻)		
7146.3	3/2 ⁻	2940.2 10	28.3	4206.1	(5/2)		
		4232.8 3	26.1	2913.5	3/2 ⁻	D	
		5187.2 7	100	1959.1	1/2 ⁻	D(+Q)	
		5329.2 4	21.7	1817.1	3/2 ⁽⁻⁾		

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma \&$	E_f	J_f^π	Mult. ^b	Comments
7146.3	3/2 ⁻	6909.0 4	15.2	237.3	7/2 ⁻		
		7146.3 3	15.2	0.0	5/2 ⁻		
7162.0	1/2 ⁻	2237.0 3	3.1	4925	1/2 ⁻ to 7/2 ⁻		
		2439.0 3	1.6	4723	(1/2,3/2)		
		2699.0 3	4.7	4463?			
		3607.9 6	7.8	3554.1	3/2 ⁻		
		4248.5 3	3.1	2913.5	3/2 ⁻		
		4320.6 4	4.7	2841.4	1/2 ⁻		
		4852.0 6	12.5	2310.0	5/2 ⁻		
		4906.3 3	7.8	2255.7	(5/2 ⁻)		
		5021.6 4	4.7	2140.4	3/2 ⁻		
		5202.9 7	4.7	1959.1	1/2 ⁻	D	
		5337.4 3	4.7	1824.6	3/2 ⁻		
		7162.0 3	100	0.0	5/2 ⁻	Q	
7168.8	1/2 ⁻	2705.8 3	6.8	4463?			
		2816.4 10	11.4	4352.4	(1/2 ⁻ ,3/2 ⁻)		
		3275.6 5	18.2	3893.2	1/2 ⁻ ,3/2 ⁻		
		3614.7 6	9.1	3554.1	3/2 ⁻		
		4255.3 3	36.4	2913.5	3/2 ⁻		
		4327.4 4	6.8	2841.4	1/2 ⁻		
		5028.4 4	25.0	2140.4	3/2 ⁻	D+Q	
		5209.7 7	100	1959.1	1/2 ⁻	D	
		5344.2 3	9.1	1824.6	3/2 ⁻		
		7168.8 3	4.6	0.0	5/2 ⁻	Q	
7169.8	5/2 ⁻	3615.7 6	26.8	3554.1	3/2 ⁻		
		5029.4 4	73.2	2140.4	3/2 ⁻		
		5345.2 3	26.8	1824.6	3/2 ⁻		
		6932.5 4	100	237.3	7/2 ⁻	D+Q	
		7169.8 3	17.1	0.0	5/2 ⁻	D+Q	
7174.7	5/2	3349.8 16	12.1	3824.9	7/2		
		4044.2 10	3.0	3130.5	3/2 ⁻ ,5/2 ⁺		
		4261.2 3	100	2913.5	3/2 ⁻		
		4473.1 6	24.2	2701.6	3/2 ⁻		
		4758.8 4	15.2	2415.9	(7/2) ⁻		
		4864.7 6	15.2	2310.0	5/2 ⁻		
		4898.8 4	54.6	2275.9	1/2 ⁺		
		6937.4 4	72.7	237.3	7/2 ⁻	D	
		7174.7 3	87.9	0.0	5/2 ⁻	D+Q	
7175.6	(27/2 ⁻)	704.4 [‡] 4	100 [‡]	6471.5	23/2 ⁻	E2	B(E2)(W.u.)=4.16 I4 Mult.: Q from DCO in (³² S,2 α p γ), not M2 from RUL.
7175.7	5/2 ⁺	2724.7 4	40.9	4451	7/2 ⁻		
		3022.7 3	40.9	4153	(5/2 ⁺)		
		3129.7 3	22.7	4046			

Adopted Levels, Gammas (continued)

<u>$\gamma(^{51}\text{Mn})$ (continued)</u>						
<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>$E_\gamma^\dagger$</u>	<u>$I_\gamma^\&$</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.^b</u>
7175.7	$5/2^+$	4282.7 5	100	2893.0	$5/2^-$	D
		5035.3 4	45.5	2140.4	$3/2^-$	D+Q
		5358.6 4	81.8	1817.1	$3/2^{(-)}$	
7190.4	$3/2^-$	2016.4 3	15	5174	$(1/2, 3/2, 5/2)$	
		2057.4 6	75	5133	$1/2^-, 3/2^-$	
		2113.4 6	55	5077	$1/2^-, 3/2^-$	
		2702.3 8	35	4488.1	$(5/2)$	
		3898.1 7	50	3292.3	$5/2^-, 7/2^-$	
		4488.8 6	20	2701.6	$3/2^-$	
		5050.0 4	100	2140.4	$3/2^-$	D
		5231.3 7	20	1959.1	$1/2^-$	
		5365.8 3	55	1824.6	$3/2^-$	
		6953.1 4	10	237.3	$7/2^-$	
		7190.4 3	100	0.0	$5/2^-$	
		7271.9 8	2.6	4488.1	$(5/2)$	
7210.0	$(5/2)$	4794.1 4	100	2415.9	$(7/2)^-$	
		5069.6 4	82.1	2140.4	$3/2^-$	
		5385.4 3	56.4	1824.6	$3/2^-$	
		2860.6 10	40.0	4352.4	$(1/2^-, 3/2^-)$	
7213.0	$(1/2, 3/2)$	3013.0 3	83.3	4200	$(1/2, 3/2)$	
		4299.5 3	53.3	2913.5	$3/2^-$	
		4937.1 4	100	2275.9	$1/2^+$	
		5395.9 4	56.7	1817.1	$3/2^{(-)}$	
7221.8		4238.3 6	53.9	2983.5	$5/2^+$	
		7221.8 3	100	0.0	$5/2^-$	
7240.4	$5/2^{(+)}$	3234.5 6	29.2	4005.9	$(3/2^-, 5/2^-)$	
		3347.2 5	29.2	3893.2	$1/2^-, 3/2^-$	
		3817.1 10	33.3	3423.3	$(1/2^- \text{ to } 7/2^-)$	
		3948.1 7	75.0	3292.3	$5/2^-, 7/2^-$	
		4326.9 3	16.7	2913.5	$3/2^-$	
		4824.5 4	8.3	2415.9	$(7/2)^-$	
		4964.5 4	8.3	2275.9	$1/2^+$	
		5415.8 3	25.0	1824.6	$3/2^-$	
		5423.3 4	16.7	1817.1	$3/2^{(-)}$	
		7003.1 4	75.0	237.3	$7/2^-$	
		7240.4 3	100	0.0	$5/2^-$	D
		2721.0 3	10.5	4540	$(3/2, 5/2, 7/2)$	
7261.0	$5/2^-$	2810.0 4	15.8	4451	$7/2^-$	
		3215.0 3	26.3	4046		
		4130.5 10	47.4	3130.5	$3/2^-, 5/2^+$	Q
		4347.5 3	5.3	2913.5	$3/2^-$	
		4368.0 5	15.8	2893.0	$5/2^-$	
		4559.4 6	100	2701.6	$3/2^-$	D+Q

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma \&$	E_f	J_f^π	Mult. ^b	δ^a	Comments
7261.0	5/2 ⁻	4845.1	4	5.3	2415.9	(7/2) ⁻		
		4951.0	6	15.8	2310.0	5/2 ⁻		
		4985.1	4	5.3	2275.9	1/2 ⁺		
		5120.6	4	63.2	2140.4	3/2 ⁻		
		5301.9	7	52.6	1959.1	1/2 ⁻		
		5436.4	3	31.6	1824.6	3/2 ⁻		
		5443.9	4	89.5	1817.1	3/2 ⁽⁻⁾		
		7023.7	4	36.8	237.3	7/2 ⁻	D	
		7261.0	3	5.3	0.0	5/2 ⁻	D+Q	
7262.0	3/2 ⁻	2074.0	3	76.5	5188?	(3/2 ⁺ , 5/2 ⁺)		
		2088 ^f	3	<5.9	5174	(1/2, 3/2, 5/2)		
		2129.0	6	23.5	5133	1/2 ⁻ , 3/2 ⁻		
		2185 ^f	5	<5.9	5077	1/2 ⁻ , 3/2 ⁻		
		2337.0	3	5.9	4925	1/2 ⁻ to 7/2 ⁻		
		3055.9	10	23.5	4206.1	(5/2)		
		3210.0	3	5.9	4052?			
		3567.6	6	5.9	3694.4	1/2 ⁻ , 3/2 ⁻		
		4131.5	10	52.9	3130.5	3/2 ⁻ , 5/2 ⁺		
		4369.0	5	11.8	2893.0	5/2 ⁻		
		4420.6	4	11.8	2841.4	1/2 ⁻		
		4560.4	6	70.6	2701.6	3/2 ⁻		
		4846.1	4	11.8	2415.9	(7/2) ⁻		
		4986.1	4	23.5	2275.9	1/2 ⁺		
		5121.6	4	23.5	2140.4	3/2 ⁻	D	
		5302.9	7	47.1	1959.1	1/2 ⁻	D	
		5444.9	4	100	1817.1	3/2 ⁽⁻⁾		
		7024.7	4	64.7	237.3	7/2 ⁻		
		7262.0	3	23.5	0.0	5/2 ⁻		
7272.8	5/2	2195.8	6	10	5077	1/2 ⁻ , 3/2 ⁻		
		2390 ^f	2	<5	4883	1/2, 3/2 ⁻		
		3066.7	10	25	4206.1	(5/2)		
		3379.6	5	30	3893.2	1/2 ⁻ , 3/2 ⁻		
		4289.3	6	100	2983.5	5/2 ⁺	D+Q	δ : +0.49 11 or -6.3 23 (1975Di10).
		4359.3	3	5	2913.5	3/2 ⁻		
		4431.4	4	40	2841.4	1/2 ⁻		
		4571.2	6	15	2701.6	3/2 ⁻		
		4962.8	6	15	2310.0	5/2 ⁻	D+Q	
		5017.1	3	20	2255.7	(5/2 ⁻)		
		5132.4	4	45	2140.4	3/2 ⁻	D+Q	δ : from 1975Di10.
		5313.7	7	35	1959.1	1/2 ⁻		
		5448.2	3	40	1824.6	3/2 ⁻	D+Q	δ : from 1975Di10.
		7035.5	4	25	237.3	7/2 ⁻	D+Q	δ : -0.18 8 or +5 +9-3 (1975Di10).

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^{\dagger}$	$I_\gamma^{\&}$	E_f	J_f^π	Mult. ^b	δ^a	Comments
7272.8	5/2	7272.8 3	90	0.0	5/2 ⁻	D+Q	+0.60 2	δ : from 1975Di10 .
7273.7	3/2 ⁻	3067.6 10	21.7	4206.1	(5/2)			
		3380.5 5	21.7	3893.2	1/2 ⁻ , 3/2 ⁻	D		
		3579.3 6	8.7	3694.4	1/2 ⁻ , 3/2 ⁻	D(+Q)		
		4290.2 6	78.3	2983.5	5/2 ⁺	D(+Q)		
		4432.3 4	26.1	2841.4	1/2 ⁻	D+Q		
		4572.1 6	17.4	2701.6	3/2 ⁻			
		5018.0 3	21.7	2255.7	(5/2 ⁻)			
		5314.6 7	52.2	1959.1	1/2 ⁻	D		
		5449.1 3	43.5	1824.6	3/2 ⁻	D		
		7273.7 3	100	0.0	5/2 ⁻	D		
7296.3	3/2 ⁻	2122.3 3	5.9	5174	(1/2, 3/2, 5/2)			
		2413.3 4	17.7	4883	1/2, 3/2 ⁻	D		
		2808.2 8	17.7	4488.1	(5/2)			
		3742.2 6	8.8	3554.1	3/2 ⁻			
		4312.8 6	20.6	2983.5	5/2 ⁺	D		
		5040.6 3	64.7	2255.7	(5/2 ⁻)	D		
		5155.9 4	8.8	2140.4	3/2 ⁻			
		5337.2 7	100	1959.1	1/2 ⁻	D		
		5471.7 3	17.7	1824.6	3/2 ⁻			
		5479.2 4	2.9	1817.1	3/2 ⁽⁻⁾			
		7296.3 3	29.4	0.0	5/2 ⁻	Q		
7310.0	5/2 ⁺	3157.0 3	29.0	4153	(5/2 ⁺)			
		3485.1 16	32.3	3824.9	7/2	D		
		4326.5 6	45.2	2983.5	5/2 ⁺			
		4396.5 3	25.8	2913.5	3/2 ⁻			
		4894.1 4	12.9	2415.9	(7/2) ⁻			
		5000.0 6	41.9	2310.0	5/2 ⁻			
		5054.3 3	16.1	2255.7	(5/2 ⁻)			
		5492.9 4	100	1817.1	3/2 ⁽⁻⁾			
		7072.7 4	19.4	237.3	7/2 ⁻			
7313.9	3/2 ⁻	3619.5 6	31.4	3694.4	1/2 ⁻ , 3/2 ⁻			
		4472.5 4	45.7	2841.4	1/2 ⁻			
		5173.5 4	100	2140.4	3/2 ⁻			
		5354.8 7	57.1	1959.1	1/2 ⁻			
		5489.3 3	51.4	1824.6	3/2 ⁻			
7339.4	3/2 ⁻	5063.5 4	100	2275.9	1/2 ⁺			
		5522.3 4	22	1817.1	3/2 ⁽⁻⁾			
7342.4	5/2 ⁺	5066.5 4	100	2275.9	1/2 ⁺	Q		
7343.3	3/2 ⁻ , 5/2 ⁻	4359.8 6		2983.5	5/2 ⁺	D		
		5202.9 4		2140.4	3/2 ⁻	D		
		5518.7 3		1824.6	3/2 ⁻	D		
		7343.3 3		0.0	5/2 ⁻	D		

Adopted Levels, Gammas (continued)

<u>$\gamma(^{51}\text{Mn})$ (continued)</u>						
<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_γ ^{$\dagger$}</u>	<u>I_γ ^{$\&$}</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult. ^{b}</u>
7357.1	$5/2^-$	3532.2	16	4.4	3824.9	$7/2$
		4464.1	5	4.4	2893.0	$5/2^-$
		4655.5	6	100	2701.6	$3/2^-$
		5047.1	6	8.7	2310.0	$5/2^-$
		5101.4	3	10.1	2255.7	$(5/2^-)$
		5216.7	4	2.9	2140.4	$3/2^-$
		5540.0	4	8.7	1817.1	$3/2^{(-)}$
		7357.1	3	5.8	0.0	$5/2^-$
						D
						D+Q
7369.8	$3/2^+, 5/2^-$	4321.2	10	18.6	3048.6	$(3/2^-)$
		4386.3	6	100	2983.5	$5/2^+$
		5059.8	6	53.5	2310.0	$5/2^-$
		5545.2	3	60.5	1824.6	$3/2^-$
						D
7370.8	$3/2^-$	2293.8	6	8.7	5077	$1/2^-, 3/2^-$
		2647.8	3	4.4	4723	$(1/2, 3/2)$
		3018.4	10	8.7	4352.4	$(1/2^-, 3/2^-)$
		3164.7	10	8.7	4206.1	$(5/2)$
		3477.6	5	21.7	3893.2	$1/2^-, 3/2^-$
		4078.5	7	39.1	3292.3	$5/2^-, 7/2^-$
		4387.3	6	100	2983.5	$5/2^+$
		4457.3	3	87.0	2913.5	$3/2^-$
		5094.9	4	26.1	2275.9	$1/2^+$
		5230.4	4	56.5	2140.4	$3/2^-$
		5546.2	3	73.9	1824.6	$3/2^-$
		7370.8	3	82.6	0.0	$5/2^-$
						D
7395.3	$3/2^-, 5/2^-$	4103.0	7	100	3292.3	$5/2^-, 7/2^-$
		7395.3	3	61.3	0.0	$5/2^-$
7414.9	$3/2^+, 5/2^+$	2874.9	3	4.8	4540	$(3/2, 5/2, 7/2)$
		3521.7	5	4.8	3893.2	$1/2^-, 3/2^-$
		3590.0	16	33.3	3824.9	$7/2$
		3860.8	6	4.8	3554.1	$3/2^-$
		4501.4	3	9.5	2913.5	$3/2^-$
		4521.9	5	9.5	2893.0	$5/2^-$
		4713.3	6	19.1	2701.6	$3/2^-$
		4999.0	4	42.9	2415.9	$(7/2)^-$
		5104.9	6	100	2310.0	$5/2^-$
		5274.5	4	28.6	2140.4	$3/2^-$
		5455.8	7	71.4	1959.1	$1/2^-$
		5590.3	3	28.6	1824.6	$3/2^-$
		5597.8	4	47.6	1817.1	$3/2^{(-)}$
		7177.6	4	33.3	237.3	$7/2^-$
		7414.9	3	38.1	0.0	$5/2^-$
						D
						Q
						D(+Q)
7447.3	$3/2^-, 5/2^-$	4316.8	10	24.4	3130.5	$3/2^-, 5/2^+$
		5137.3	6	43.9	2310.0	$5/2^-$

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)						
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\&$	E_f	J_f^π	Mult. ^b
7447.3	$3/2^-, 5/2^-$	5171.4 4	61.0	2275.9	$1/2^+$	D
		5630.2 4	100	1817.1	$3/2^{(-)}$	
		7447.3 3	14.6	0.0	$5/2^-$	D
7450.2	$3/2^-$	2962.1 7	7.6	4488.1	$(5/2)$	
		3097.8 10	3.8	4352.4	$(1/2^-, 3/2^-)$	
		4466.7 5	5.7	2983.5	$5/2^+$	
		4608.8 2	9.4	2841.4	$1/2^-$	
		5140.2 5	5.7	2310.0	$5/2^-$	
		5194.5 1	5.7	2255.7	$(5/2^-)$	
		5309.8 2	100	2140.4	$3/2^-$	D
		5625.6 1	28.3	1824.6	$3/2^-$	D
		7212.9 2	3.8	237.3	$7/2^-$	
		7450.2 10	18.9	0.0	$5/2^-$	D
7459.0	$5/2^+$	4328.5 10	37.0	3130.5	$3/2^-, 5/2^+$	
		4475.5 6	59.3	2983.5	$5/2^+$	
		4757.4 6	100	2701.6	$3/2^-$	D+Q
		5009.0 3	11.1	2450?	$1/2^-, 3/2^-$	
		5043.1 4	40.7	2415.9	$(7/2)^-$	
		5149.0 6	22.2	2310.0	$5/2^-$	
		5634.4 3	51.9	1824.6	$3/2^-$	D
		7221.7 4	18.5	237.3	$7/2^-$	D
		7459.0 3	29.6	0.0	$5/2^-$	
		7225.7 4	88.7	237.3	$7/2^-$	
7463.0		7463.0 3	100	0.0	$5/2^-$	
7466.9	$1/2^-$	2583.9 4	2.6	4883	$1/2, 3/2^-$	
		3573.7 5	5.3	3893.2	$1/2^-, 3/2^-$	
		3772.5 6	15.8	3694.4	$1/2^-, 3/2^-$	
		4553.4 3	100	2913.5	$3/2^-$	D+Q
		5191.0 4	10.5	2275.9	$1/2^+$	
		5326.5 4	10.5	2140.4	$3/2^-$	
		5507.8 7	10.5	1959.1	$1/2^-$	
		5649.8 4	81.6	1817.1	$3/2^{(-)}$	D+Q
		7466.9 3	26.3	0.0	$5/2^-$	Q
7500.8	$(21/2^-, 23/2^-)$	2045 $\ddagger$ 2	100 $\ddagger$ 50	5458.4	$19/2^-$	
		3361 $\ddagger$ 2	100 $\ddagger$ 50	4139.7	$19/2^-$	
7513.9	$5/2^-$	3508.0 6	2.3	4005.9	$(3/2^-, 5/2^-)$	
		3689.0 16	13.6	3824.9	$7/2$	D
		4465.3 10	18.2	3048.6	$(3/2^-)$	D+Q
		5203.9 6	36.4	2310.0	$5/2^-$	D+Q
		5373.5 4	45.5	2140.4	$3/2^-$	D
		5696.8 4	11.4	1817.1	$3/2^{(-)}$	
		7276.6 4	100	237.3	$7/2^-$	D

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma \&$	E_f	J_f^π	Mult. ^b
7528.6	$3/2^-, 5/2^-$	2395.6 6	10.5	5133	$1/2^-, 3/2^-$	
		3176.2 10	10.5	4352.4	$(1/2^-, 3/2^-)$	
		3635.4 5	10.5	3893.2	$1/2^-, 3/2^-$	
		3974.5 6	36.8	3554.1	$3/2^-$	
		4236.3 7	31.6	3292.3	$5/2^-, 7/2^-$	
		4615.1 3	15.8	2913.5	$3/2^-$	
		4687.2 4	47.4	2841.4	$1/2^-$	
		4827.0 6	15.8	2701.6	$3/2^-$	
		5218.6 6	26.3	2310.0	$5/2^-$	
		5272.9 3	100	2255.7	$(5/2^-)$	
		5388.2 4	57.9	2140.4	$3/2^-$	D+Q
		5569.5 7	57.9	1959.1	$1/2^-$	D+Q
		7291.3 4	10.5	237.3	$7/2^-$	
		7528.6 3	94.7	0.0	$5/2^-$	D
		7546.3				
		4254.0 7	3.8	3292.3	$5/2^-, 7/2^-$	
7546.3	$5/2$	5236.3 6	11.3	2310.0	$5/2^-$	
		7309.0 4	100	237.3	$7/2^-$	D
		7546.3 3	73.6	0.0	$5/2^-$	D
7550.2	$1/2^-$	3657.0 5	7.5	3893.2	$1/2^-, 3/2^-$	
		3855.8 6	7.5	3694.4	$1/2^-, 3/2^-$	
		3996.1 6	7.5	3554.1	$3/2^-$	
		4636.7 3	100	2913.5	$3/2^-$	D+Q
		4848.6 6	7.5	2701.6	$3/2^-$	
		5409.8 4	67.5	2140.4	$3/2^-$	D+Q
		5591.1 7	10.0	1959.1	$1/2^-$	
		5725.6 3	40.0	1824.6	$3/2^-$	D+Q
		7550.2 3	2.5	0.0	$5/2^-$	
7560.0	$3/2^-, 5/2^-$	3071.9 8	11.1	4488.1	$(5/2)$	
		3353.9 10	7.4	4206.1	$(5/2)$	
		3554.1 6	25.9	4005.9	$(3/2^-, 5/2^-)$	
		3666.8 5	11.1	3893.2	$1/2^-, 3/2^-$	
		4136.7 10	3.7	3423.3	$(1/2^- \text{ to } 7/2^-)$	
		4267.7 7	66.7	3292.3	$5/2^-, 7/2^-$	
		4718.6 4	7.4	2841.4	$1/2^-$	
		4858.4 6	3.7	2701.6	$3/2^-$	
		5304.3 3	51.9	2255.7	$(5/2^-)$	D
		5419.6 4	100	2140.4	$3/2^-$	D
		5600.9 7	7.4	1959.1	$1/2^-$	
		5735.4 3	14.8	1824.6	$3/2^-$	
		7322.7 4	33.3	237.3	$7/2^-$	
		7560.0 3	25.9	0.0	$5/2^-$	D+Q
		7571.8				
		2438.8 6	36.4	5133	$1/2^-, 3/2^-$	
		3120.8 4	22.7	4451	$7/2^-$	

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)						
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\&$	E_f	J_f^π	Mult. ^b
7571.8		3746.9 16	31.8	3824.9	7/2	
		4870.2 6	100	2701.6	3/2 ⁻	
		5295.9 4	86.4	2275.9	1/2 ⁺	
		5431.4 4	36.4	2140.4	3/2 ⁻	
		5747.2 3	72.7	1824.6	3/2 ⁻	
		7334.5 4	59.1	237.3	7/2 ⁻	
		7571.8 3	9.1	0.0	5/2 ⁻	
7586.5	(3/2 ⁻)	3380.4 10	8.1	4206.1	(5/2)	
		3693.3 5	24.3	3893.2	1/2 ⁻ , 3/2 ⁻	
		4673.0 3	83.8	2913.5	3/2 ⁻	
		4745.1 4	100	2841.4	1/2 ⁻	
		5446.1 4	18.9	2140.4	3/2 ⁻	
		5761.9 3	35.1	1824.6	3/2 ⁻	
		5640.1 7	48.3	1959.1	1/2 ⁻	
7599.2		5774.6 3	100	1824.6	3/2 ⁻	
		7599.2 3	24.1	0.0	5/2 ⁻	
		5342.0 4	28.6	2275.9	1/2 ⁺	D
7617.9	1/2	5477.5 4	14.3	2140.4	3/2 ⁻	D
		5800.8 4	100	1817.1	3/2 ⁽⁻⁾	D+Q
7620.8	7/2 ⁺	3665.2 27	4.4	3955.6	(7/2, 9/2)	
		3785.6 15	11.1	3835.2	(7/2)	
		4591.3 11	13.3	3029.5	(7/2)	
		5204.9 4	24.4	2415.9	(7/2) ⁻	D
		6132.3 5	17.8	1488.5	11/2 ⁻	
		6481.0 4	100	1139.8	9/2 ⁻	D
		7383.5 4	51.1	237.3	7/2 ⁻	D
7630.6	5/2 ⁻	3754.0 17	6.5	3876.6	(3/2, 5/2)	
		3805.7 16	6.5	3824.9	7/2	
		4207.3 10	6.5	3423.3	(1/2 ⁻ to 7/2 ⁻)	
		4500.1 10	25.8	3130.5	3/2 ⁻ , 5/2 ⁺	
		4582.0 10	48.4	3048.6	(3/2 ⁻)	D
		5214.7 4	22.6	2415.9	(7/2) ⁻	D
		5320.6 6	29.0	2310.0	5/2 ⁻	D
		5490.2 4	32.3	2140.4	3/2 ⁻	D
		5813.5 4	9.7	1817.1	3/2 ⁽⁻⁾	
		7393.3 4	100	237.3	7/2 ⁻	D+Q
		7630.6 3	35.5	0.0	5/2 ⁻	D
		4505.0 10	100	3130.5	3/2 ⁻ , 5/2 ⁺	
7635.5		5325.5 6	40.5	2310.0	5/2 ⁻	
		7398.2 4	43.2	237.3	7/2 ⁻	
		7635.5 3	86.5	0.0	5/2 ⁻	
7643.3		4729.8 3	60	2913.5	3/2 ⁻	
		5502.9 4	80	2140.4	3/2 ⁻	

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

<u>E_i(level)</u>	<u>J_i^{π}</u>	<u>E_{γ}^{$\dagger$}</u>	<u>I_{γ}^{$\&$}</u>	<u>E_f</u>	<u>J_f^{π}</u>	<u>Mult.^{<i>b</i>}</u>
7643.3		5684.2 7	84	1959.1	1/2 ⁻	
		5818.7 3	100	1824.6	3/2 ⁻	
7666.7	23/2 ⁻	1195.4 ^{$\ddagger$} 6	36 ^{$\ddagger$} 7	6471.5	23/2 ⁻	
		2026.6 ^{$\ddagger$} 7	100 ^{$\ddagger$} 21	5639.8	21/2 ⁻	E2+M1
		2208 ^{$\ddagger$} 1	21 ^{$\ddagger$} 7	5458.4	19/2 ⁻	
7668.8	(5/2,7/2)	7431.5 4	100	237.3	7/2 ⁻	
		7668.8 3	61.3	0.0	5/2 ⁻	
7683.5		4129.4 6	63.2	3554.1	3/2 ⁻	
		4391.2 7	42.1	3292.3	5/2 ⁻ ,7/2 ⁻	
		4700.0 6	94.7	2983.5	5/2 ⁺	
		4842.1 4	100	2841.4	1/2 ⁻	
		5543.1 4	100	2140.4	3/2 ⁻	
		5724.4 7	68.4	1959.1	1/2 ⁻	
		7683.5 3	57.9	0.0	5/2 ⁻	
7699.2	5/2 ⁺	4997.6 6	6.3	2701.6	3/2 ⁻	
		5389.2 6	16.7	2310.0	5/2 ⁻	D
		5443.5 3	6.3	2255.7	(5/2 ⁻)	
		5882.1 4	22.9	1817.1	3/2 ⁽⁻⁾	D
		7461.9 4	56.3	237.3	7/2 ⁻	D
		7699.2 3	100	0.0	5/2 ⁻	D
7714.9	3/2 ⁻	3226.8 8	6.8	4488.1	(5/2)	
		3514.9 3	13.3	4200	(1/2,3/2)	
		3561.9 3	6.8	4153	(5/2 ⁺)	
		5264.9 3	18.3	2450?	1/2 ⁻ ,3/2 ⁻	
		5755.8 7	100	1959.1	1/2 ⁻	
		7714.9 3	21.7	0.0	5/2 ⁻	D+Q
7717.9	3/2 ⁻	5016.3 6	100	2701.6	3/2 ⁻	
7728.6	3/2 ⁻	3235.6 4	4.7	4488.1	(5/2)	
		3522.5 10	9.3	4206.1	(5/2)	
		4745.1 6	14.0	2983.5	5/2 ⁺	
		4887.2 4	11.6	2841.4	1/2 ⁻	
		5312.7 4	37.2	2415.9	(7/2) ⁻	Q
		5769.5 7	100	1959.1	1/2 ⁻	D
		5904.0 3	34.9	1824.6	3/2 ⁻	D+Q
		7728.6 3	20.9	0.0	5/2 ⁻	D+Q
7742.4	1/2	3589.4 3	26.1	4153	(5/2 ⁺)	
		3849.2 5	8.7	3893.2	1/2 ⁻ ,3/2 ⁻	
		4048.0 6	21.7	3694.4	1/2 ⁻ ,3/2 ⁻	
		4828.9 3	17.4	2913.5	3/2 ⁻	
		5040.8 6	26.1	2701.6	3/2 ⁻	
		5432.4 6	13.0	2310.0	5/2 ⁻	
		5602.0 4	91.3	2140.4	3/2 ⁻	D+Q

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)						
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\&$	E_f	J_f^π	Mult. ^b
7742.4	1/2	5783.3 7	91.3	1959.1	1/2 ⁻	D
		5917.8 3	100	1824.6	3/2 ⁻	D+Q
		7505.1 4	4.4	237.3	7/2 ⁻	
		7742.4 3	8.7	0.0	5/2 ⁻	
7786.5	5/2 ⁻	4803.0 6	50.0	2983.5	5/2 ⁺	
		5961.9 3	93.8	1824.6	3/2 ⁻	D+Q
		7549.2 4	100	237.3	7/2 ⁻	D+Q
		7786.5 3	68.8	0.0	5/2 ⁻	D+Q
7791.4	5/2 ⁻	4660.9 10	4.6	3130.5	3/2 ⁻ , 5/2 ⁺	
		4807.9 6	13.6	2983.5	5/2 ⁺	
		5375.5 4	34.1	2415.9	(7/2) ⁻	D+Q
		5535.7 3	13.6	2255.7	(5/2) ⁻	
		5651.0 4	13.6	2140.4	3/2 ⁻	D+Q
		7554.1 4	47.7	237.3	7/2 ⁻	D+Q
		7791.4 3	100	0.0	5/2 ⁻	D+Q
		4713.8 10	100	3130.5	3/2 ⁻ , 5/2 ⁺	
7844.3		5142.7 6	73.3	2701.6	3/2 ⁻	
		5534.3 6	36.7	2310.0	5/2 ⁻	
		6019.7 3	66.7	1824.6	3/2 ⁻	
		7607.0 4	20.0	237.3	7/2 ⁻	
		7844.3 3	36.7	0.0	5/2 ⁻	
		2782.2 3	21.4	5067	(3/2)	
		3496.8 10	14.3	4352.4	(1/2 ⁻ , 3/2 ⁻)	
		3643.1 10	14.3	4206.1	(5/2)	
7849.2	3/2 ⁻	3956.0 5	7.1	3893.2	1/2 ⁻ , 3/2 ⁻	
		4295.1 6	17.9	3554.1	3/2 ⁻	
		4556.9 7	21.4	3292.3	5/2 ⁻ , 7/2 ⁻	
		4865.7 6	42.9	2983.5	5/2 ⁺	
		5539.2 6	10.7	2310.0	5/2 ⁻	
		5593.5 3	32.1	2255.7	(5/2) ⁻	
		5708.8 4	21.4	2140.4	3/2 ⁻	
		6024.6 3	53.6	1824.6	3/2 ⁻	D+Q
		7849.2 3	100	0.0	5/2 ⁻	D+Q
		2754.5 6	7.1	5133	1/2 ⁻ , 3/2 ⁻	
		2820.5 3	7.1	5067	(3/2)	
		3004.5 4	23.2	4883	1/2, 3/2 ⁻	
		3148.5 3	7.1	4739?		
		3286.5 6	7.1	4601?		
7887.5		4193.1 6	14.3	3694.4	1/2 ⁻ , 3/2 ⁻	
		6062.9 3	12.5	1824.6	3/2 ⁻	
		7887.5 3	100	0.0	5/2 ⁻	
		716.8 [‡] 6	55.7 [‡] 25	7175.6	(27/2) ⁻	
		1420.9 [‡] 6	100 [‡] 4	6471.5	23/2 ⁻	E2+M1

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

<u>E_i(level)</u>	<u>J_i^{π}</u>	<u>E_{γ}^{$\dagger$}</u>	<u>I_{γ}^{$\&$}</u>	<u>E_f</u>	<u>J_f^{π}</u>	<u>Mult.^{<i>b</i>}</u>
7892.1	25/2 ⁻	2251.8 ^{$\ddagger$} 10	5.1 ^{$\ddagger$} 25	5639.8	21/2 ⁻	
7894.3		3011.3 4	6.7	4883	1/2,3/2 ⁻	
		4471.0 10	20.0	3423.3	(1/2 ⁻ to 7/2 ⁻)	
		4602.0 7	6.7	3292.3	5/2 ⁻ ,7/2 ⁻	
		4763.8 10	11.1	3130.5	3/2 ⁻ ,5/2 ⁺	
		4980.8 3	11.1	2913.5	3/2 ⁻	
		5935.2 7	20.0	1959.1	1/2 ⁻	
		6069.7 3	100	1824.6	3/2 ⁻	
		7894.3 3	46.7	0.0	5/2 ⁻	
7913.9		2780.9 6	20	5133	1/2 ⁻ ,3/2 ⁻	
		2988.9 3	16	4925	1/2 ⁻ to 7/2 ⁻	
		4219.5 6	20	3694.4	1/2 ⁻ ,3/2 ⁻	
		4490.6 10	32	3423.3	(1/2 ⁻ to 7/2 ⁻)	
		5658.2 3	64	2255.7	(5/2 ⁻)	
		5773.5 4	100	2140.4	3/2 ⁻	
		5954.8 7	68	1959.1	1/2 ⁻	
		7676.6 4	32	237.3	7/2 ⁻	
		7913.9 3	48	0.0	5/2 ⁻	
7932.6	3/2 ⁻ ,5/2 ⁻ ,7/2	4651.6 3	30.6	3281?	(1/2,3/2)	
		5231.0 6	58.3	2701.6	3/2 ⁻	D+Q
		5622.6 6	30.6	2310.0	5/2 ⁻	
		6115.5 4	100	1817.1	3/2 ⁽⁻⁾	
		7932.6 3	58.3	0.0	5/2 ⁻	D+Q
7943.3	3/2 ⁻	3737.2 10	4.4	4206.1	(5/2)	
		4812.8 10	4.4	3130.5	3/2 ⁻ ,5/2 ⁺	
		4959.8 6	2.9	2983.5	5/2 ⁺	
		5667.4 4	4.4	2275.9	1/2 ⁺	
		5802.9 4	8.8	2140.4	3/2 ⁻	D+Q
		6118.7 3	100	1824.6	3/2 ⁻	
		7943.3 3	22.1	0.0	5/2 ⁻	D+Q
7967.9		6143.3 3	40.9	1824.6	3/2 ⁻	
		7967.9 3	100	0.0	5/2 ⁻	
8013.9	9/2	3274.9 3	6	4739?		
		3550.9 3	6	4463?		
		4013.9 3	6	4000?		
		4178.7 15	8	3835.2	(7/2)	
		4283.9 3	4	3730	(7/2)	
		5120.9 5	4	2893.0	5/2 ⁻	
		6525.4 5	54	1488.5	11/2 ⁻	D+Q
		6874.1 4	12	1139.8	9/2 ⁻	D+Q
		7776.6 4	100	237.3	7/2 ⁻	D
8022.8		7785.5 4	60.9	237.3	7/2 ⁻	
		8022.8 3	100	0.0	5/2 ⁻	

Adopted Levels, Gammas (continued) $\gamma(^{51}\text{Mn})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^{\dagger}$	$I_\gamma \&$	E_f	J_f^π	Mult. ^b
8045.3	$3/2^-$	5769.4 4	100	2275.9	$1/2^+$	D+Q
		5904.9 4	71.9	2140.4	$3/2^-$	D+Q
		6220.7 3	62.5	1824.6	$3/2^-$	D+Q
		8045.3 3	78.1	0.0	$5/2^-$	Q
8063.9	$3/2$	2986.9 6	75	5077	$1/2^-, 3/2^-$	
		2996.9 3	15	5067	$(3/2)$	
		3180.9 4	20	4883	$1/2, 3/2^-$	
		3711.5 10	15	4352.4	$(1/2^-, 3/2^-)$	
		3857.8 10	10	4206.1	$(5/2)$	
		4509.8 6	30	3554.1	$3/2^-$	
		4640.6 10	15	3423.3	$(1/2^- \text{ to } 7/2^-)$	
		5362.3 6	10	2701.6	$3/2^-$	
		5753.9 6	10	2310.0	$5/2^-$	
		5808.2 3	30	2255.7	$(5/2^-)$	
		5923.5 4	50	2140.4	$3/2^-$	
		6104.8 7	100	1959.1	$1/2^-$	D+Q
		6239.3 3	85	1824.6	$3/2^-$	
		8063.9 3	25	0.0	$5/2^-$	
8084.8	$21/2^-, 23/2$	1612.8 [‡] 5	100 [‡] 9	6471.5	$23/2^-$	
		2446.0 [‡] 10	14 [‡] 5	5639.8	$21/2^-$	
8101.2		4970.7 10	13.1	3130.5	$3/2^-, 5/2^+$	
		5208.2 5	13.1	2893.0	$5/2^-$	
		5399.6 6	21.3	2701.6	$3/2^-$	
		5845.5 3	6.6	2255.7	$(5/2^-)$	
		5960.8 4	3.3	2140.4	$3/2^-$	
		7863.9 4	6.6	237.3	$7/2^-$	
		8101.2 3	100	0.0	$5/2^-$	
		4851.0 7	30	3292.3	$5/2^-, 7/2^-$	
8143.3	$7/2^-$	4862.3 3	36.7	3281?	$(1/2, 3/2)$	
		5012.8 10	30	3130.5	$3/2^-, 5/2^+$	
		5301.9 4	40	2841.4	$1/2^-$	
		5833.3 6	33.3	2310.0	$5/2^-$	
		7003.5 4	100	1139.8	$9/2^-$	D+Q
		7906.0 4	100	237.3	$7/2^-$	D+Q
		8143.3 3	63.3	0.0	$5/2^-$	D+Q
		2973.3 3	7.1	5174	$(1/2, 3/2, 5/2)$	
8147.3	$3/2^-, 5/2^-, 7/2$	3070.3 6	7.1	5077	$1/2^-, 3/2^-$	
		3408.3 3	23.2	4739?		
		3624.3 4	7.1	4532		
		3659.2 8	7.1	4488.1	$(5/2)$	
		4593.2 6	14.3	3554.1	$3/2^-$	
		6322.7 3	12.5	1824.6	$3/2^-$	
		8147.3 3	100	0.0	$5/2^-$	D+Q

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

<u>E_i(level)</u>	<u>J_i^{π}</u>	<u>E_{γ}^{$\dagger$}</u>	<u>I_{γ}^{$\&$}</u>	<u>E_f</u>	<u>J_f^{π}</u>	<u>Mult.^{<i>b</i>}</u>
8168.8	3/2 ⁻ ,5/2	5752.9 4	21.4	2415.9	(7/2) ⁻	
		5858.8 6	21.4	2310.0	5/2 ⁻	
		7931.5 4	100	237.3	7/2 ⁻	
		8168.8 3	95.2	0.0	5/2 ⁻	D+Q
8174.7	3/2,5/2 ⁻	3000.7 3	4.4	5174	(1/2,3/2,5/2)	
		3291.7 4	19.6	4883	1/2,3/2 ⁻	
		3822.3 10	8.7	4352.4	(1/2 ⁻ ,3/2 ⁻)	
		4281.5 5	4.4	3893.2	1/2 ⁻ ,3/2 ⁻	
		4349.8 16	8.7	3824.9	7/2	
		4480.3 6	8.7	3694.4	1/2 ⁻ ,3/2 ⁻	
		4882.4 7	8.7	3292.3	5/2 ⁻ ,7/2 ⁻	
		6034.3 4	10.9	2140.4	3/2 ⁻	
		6357.6 4	43.5	1817.1	3/2 ⁽⁻⁾	
		8174.7 3	100	0.0	5/2 ⁻	D+Q
8186.5		4033.5 3	7.7	4153	(5/2 ⁺)	
		5345.1 4	11.5	2841.4	1/2 ⁻	
		5484.9 6	38.5	2701.6	3/2 ⁻	
		5770.6 4	11.5	2415.9	(7/2) ⁻	
		5876.5 6	100	2310.0	5/2 ⁻	
		6046.1 4	26.9	2140.4	3/2 ⁻	
		6369.4 4	76.9	1817.1	3/2 ⁽⁻⁾	
		7949.2 4	38.5	237.3	7/2 ⁻	
		8186.5 3	73.1	0.0	5/2 ⁻	
8199.2	(3/2 ⁻)	3025.2 3	60.9	5174	(1/2,3/2,5/2)	
		3274.2 3	21.7	4925	1/2 ⁻ to 7/2 ⁻	
		4504.8 6	47.8	3694.4	1/2 ⁻ ,3/2 ⁻	
		5215.7 6	100	2983.5	5/2 ⁺	
		5285.7 3	17.4	2913.5	3/2 ⁻	
		5357.8 4	34.8	2841.4	1/2 ⁻	
		5923.3 4	30.4	2275.9	1/2 ⁺	
		6240.1 7	82.6	1959.1	1/2 ⁻	
		6382.1 4	30.4	1817.1	3/2 ⁽⁻⁾	
		7961.9 4	8.7	237.3	7/2 ⁻	
8215.9	3/2 ⁻ ,5/2 ⁻	3082.9 6	9.7	5133	1/2 ⁻ ,3/2 ⁻	
		3692.9 4	12.9	4532		
		4062.9 3	9.7	4153	(5/2 ⁺)	
		4322.7 5	9.7	3893.2	1/2 ⁻ ,3/2 ⁻	
		4661.8 6	9.7	3554.1	3/2 ⁻	
		5085.4 10	9.7	3130.5	3/2 ⁻ ,5/2 ⁺	
		5302.4 3	29.0	2913.5	3/2 ⁻	
		5374.5 4	32.3	2841.4	1/2 ⁻	
		6075.5 4	100	2140.4	3/2 ⁻	D+Q
		6256.8 7	54.8	1959.1	1/2 ⁻	D+Q

Adopted Levels, Gammas (continued)

 $\gamma(^{51}\text{Mn})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma \&$	E_f	J_f^π	Mult. ^b
8215.9	3/2 ⁻ , 5/2 ⁻	7978.6 4	22.6	237.3	7/2 ⁻	D
		8215.9 3	22.6	0.0	5/2 ⁻	D+Q
8256.1		5125.6 10	11.8	3130.5	3/2 ⁻ , 5/2 ⁺	
		5946.1 6	100	2310.0	5/2 ⁻	
		6297.0 7	10.5	1959.1	1/2 ⁻	
		8256.1 3	9.2	0.0	5/2 ⁻	
8260.0	5/2, 7/2 ⁻ , 9/2	3737.0 4	30	4532		
		4435.1 16	100	3824.9	7/2	
		4979.0 3	50	3281?	(1/2, 3/2)	
		5418.6 4	35	2841.4	1/2 ⁻	
		8022.7 4		237.3	7/2 ⁻	D+Q
8265.9		4112.9 3	45.7	4153	(5/2 ⁺)	
		4984.9 3	41.3	3281?	(1/2, 3/2)	
		5217.3 10	13.0	3048.6	(3/2 ⁻)	
		5236.4 11	17.4	3029.5	(7/2)	
		8028.6 4	100	237.3	7/2 ⁻	
8268.8	5/2 ⁻	4251.8 4	2.1	4000?		
		4337.0 4	2.1	3931.8?	3/2, 5/2 ⁻	
		4433.6 15	2.1	3835.2	(7/2)	
		4714.7 6	4.2	3554.1	3/2 ⁻	
		4845.5 10	4.2	3423.3	(1/2 ⁻ to 7/2 ⁻)	
		5220.2 10	10.4	3048.6	(3/2 ⁻)	
		5355.3 3	4.2	2913.5	3/2 ⁻	
		5852.9 4	6.3	2415.9	(7/2) ⁻	
		6013.1 3	2.1	2255.7	(5/2 ⁻)	
		6128.4 4	12.5	2140.4	3/2 ⁻	
		6451.7 4	25.0	1817.1	3/2 ⁽⁻⁾	D+Q
		8031.5 4	33.3	237.3	7/2 ⁻	D+Q
		8268.8 3	100	0.0	5/2 ⁻	D+Q
8307.1	5/2 ⁺	3133.1 3	25	5174	(1/2, 3/2, 5/2)	
		3174.1 6	35	5133	1/2 ⁻ , 3/2 ⁻	
		3954.7 10	20	4352.4	(1/2 ⁻ , 3/2 ⁻)	
		4107.1 3	15	4200	(1/2, 3/2)	
		4753.0 6	25	3554.1	3/2 ⁻	
		5176.6 10	50	3130.5	3/2 ⁻ , 5/2 ⁺	
		5465.7 4	60	2841.4	1/2 ⁻	
		5997.1 6	35	2310.0	5/2 ⁻	
		6166.7 4	25	2140.4	3/2 ⁻	
		6348.0 7	55	1959.1	1/2 ⁻	
		6490.0 4	55	1817.1	3/2 ⁽⁻⁾	
		8307.1 3	100	0.0	5/2 ⁻	
8380.9		3604.9 3	62.1	4776		
		3848.9 3	69.0	4532		

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

<u>E_i(level)</u>	<u>J^{π}_i</u>	<u>E_{γ}^{$\dagger$}</u>	<u>I_{γ}^{$\&$}</u>	<u>E_f</u>	<u>J^{π}_f</u>	<u>Mult.^{b}</u>
8380.9		4227.9 3	65.5	4153	(5/2 ⁺)	
		6892.4 5	100	1488.5	11/2 ⁻	
		8143.6 4	48.3	237.3	7/2 ⁻	
8400.4		5507.4 5	58.3	2893.0	5/2 ⁻	
		6911.9 5	72.2	1488.5	11/2 ⁻	
		7260.6 4	47.2	1139.8	9/2 ⁻	
		8163.1 4	100	237.3	7/2 ⁻	
8415.4	(19/2 ⁺)	1119 ^{$\dagger f$} 2	50 ^{$\dagger$} 50	7297?	(15/2 ⁺)	
		3155 ^{$\dagger$} 3	100 ^{$\dagger$} 50	5258.5	(17/2,19/2)	
8425.0	23/2 ⁻	4283 ^{$\dagger$} 2	100 ^{$\dagger$}	4139.7	19/2 ⁻	E2
8453.3	9/2 ⁺	3677.3 3	69.6	4776		
		3921.3 3	65.2	4532		
		4300.3 3	34.8	4153	(5/2 ⁺)	
		5560.3 5	39.1	2893.0	5/2 ⁻	
		6037.4 4	52.2	2415.9	(7/2) ⁻	
		6964.8 5	100	1488.5	11/2 ⁻	
		7313.5 4	34.8	1139.8	9/2 ⁻	
		8216.0 4	39.1	237.3	7/2 ⁻	
8465.5	9/2 ⁺	3689.5 3	100	4776		
		3933.5 3	68.8	4532		
		4312.5 3	87.5	4153	(5/2 ⁺)	
		5572.5 5	87.5	2893.0	5/2 ⁻	
		6049.6 4	87.5	2415.9	(7/2) ⁻	
		6977.0 5	50.0	1488.5	11/2 ⁻	
		7325.7 4	68.8	1139.8	9/2 ⁻	
		8228.2 4	75.0	237.3	7/2 ⁻	
8473.0		3697.0 3	32.6	4776		
		3941.0 3	14.0	4532		
		4320.0 3	16.3	4153	(5/2 ⁺)	
		5580.0 5	14.0	2893.0	5/2 ⁻	
		6057.1 4	11.6	2415.9	(7/2) ⁻	
		6984.5 5	30.2	1488.5	11/2 ⁻	
		7333.2 4	14.0	1139.8	9/2 ⁻	
		8235.7 4	100	237.3	7/2 ⁻	
8498.7		7010.2 5	100	1488.5	11/2 ⁻	
		8261.4 4	49.3	237.3	7/2 ⁻	
8555.7		6139.8 4	33.3	2415.9	(7/2) ⁻	
		7067.2 5	33.3	1488.5	11/2 ⁻	
		7415.9 4	100	1139.8	9/2 ⁻	
		8318.4 4	29.4	237.3	7/2 ⁻	
8556.3		5663.3 5	13.3	2893.0	5/2 ⁻	
		6140.4 4	15.0	2415.9	(7/2) ⁻	
		7067.8 5	25.0	1488.5	11/2 ⁻	

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\&$	E_f	J_f^π	Mult. ^b
8556.3		7416.5 4	100	1139.8	9/2 ⁻	
		8319.0 4	13.3	237.3	7/2 ⁻	
8973.1	25/2 ⁻	1307.0 [‡] 10	16 [‡] 5	7666.7	23/2 ⁻	
		1795 [‡] 2	11 [‡] 5	7175.6	(27/2 ⁻)	
		2150.4 [‡] 10	11 [‡] 5	6822.9	21/2 ⁻	
		2501.8 [‡] 10	100 [‡] 11	6471.5	23/2 ⁻	E2+M1
		3331.3 [‡] 16	16 [‡] 5	5639.8	21/2 ⁻	E2
9165.2	(21/2 ⁺)	1301 ^{‡f} 2	<100 [‡]	7864.5?	(17/2 ⁺)	
		5024 [‡] 4	100 [‡]	4139.7	19/2 ⁻	
9471.3	25/2 ⁻ , 27/2	1386.1 [‡] 5	25 [‡] 4	8084.8	21/2 ⁻ , 23/2	Q
		1579.9 [‡] 6	6.1 [‡] 20	7892.1	25/2 ⁻	D
		2294.7 [‡] 10	100 [‡] 6	7175.6	(27/2 ⁻)	D
9600.2	25/2 ⁻	1175 [‡] 1	<20 [‡]	8425.0	23/2 ⁻	E2+M1
		2100 [‡] 1	60 [‡] 20	7500.8	(21/2 ⁻ , 23/2 ⁻)	E2(+M1)
		2423.8 [‡] 10	100 [‡] 40	7175.6	(27/2 ⁻)	E2+M1
		2776 [‡] 2	40 [‡] 20	6822.9	21/2 ⁻	
		3133 [‡] 2	60 [‡] 20	6471.5	23/2 ⁻	E2+M1
		3955 [‡] 3	40 [‡] 20	5639.8	21/2 ⁻	
9677.2	25/2 ⁻	2853.5 [‡] 11	50 [‡] 17	6822.9	21/2 ⁻	E2
		4038 [‡] 3	100 [‡] 33	5639.8	21/2 ⁻	E2
9920.4	25/2 ⁻	3450 [‡] 2	100 [‡]	6471.5	23/2 ⁻	E2+M1
9979.2	23/2 ⁽⁺⁾	814 [‡] 1	25 [‡] 25	9165.2	(21/2 ⁺)	
		1563 [‡] 2	50 [‡] 25	8415.4	(19/2 ⁺)	
		3158.3 [‡] 12	100 [‡] 25	6822.9	21/2 ⁻	(E1)
		3505 [‡] 3	25 [‡] 25	6471.5	23/2 ⁻	
10468.9	27/2 ⁻	3293.5 [‡] 12	100 [‡] 29	7175.6	(27/2 ⁻)	
		3998 [‡] 2	100 [‡] 29	6471.5	23/2 ⁻	E2
10804.4	27/2 ⁻	1125 [‡] 2	10 [‡] 10	9677.2	25/2 ⁻	
		1831 [‡] 3	20 [‡] 10	8973.1	25/2 ⁻	
		2376 [‡] 3	10 [‡] 10	8425.0	23/2 ⁻	
		2912.7 [‡] 10	100 [‡] 20	7892.1	25/2 ⁻	E2+M1
		3628 [‡] 3	10 [‡] 10	7175.6	(27/2 ⁻)	
10843.1	25/2 ⁽⁺⁾	862 [‡] 2	40 [‡] 20	9979.2	23/2 ⁽⁺⁾	
		1678 [‡] 2	40 [‡] 20	9165.2	(21/2 ⁺)	
		4369.9 [‡] 15	100 [‡] 20	6471.5	23/2 ⁻	(E1)

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ †	I_γ &	E_f	J_f^π	Mult. ^b	Comments
11062.3	27/2 ⁻	2089.4 [±] 2	33 [±] 17	8973.1	25/2 ⁻		
		3169.2 [±] 11	100 [±] 33	7892.1	25/2 ⁻	E2+M1	
11201.8	(27/2 ⁻)	1282.4 [±] 1	50 [±] 50	9920.4	25/2 ⁻		
		3311.4 [±] 3	100 [±] 50	7892.1	25/2 ⁻		
		3532.4 [±] 2	100 [±] 50	7666.7	23/2 ⁻	(E2)	
11510.4	29/2 ⁻	4336.4 [±] 15	100 [±]	7175.6	(27/2 ⁻)	E2+M1	δ : -0.51 +7-9 or -2.3 4 from ²⁸ Si(³² S,2 α p γ).
11670.6	27/2 ⁻	3778.4 [±] 12	100 [±]	7892.1	25/2 ⁻	E2+M1	
11781.5	29/2 ⁻	1312.3 [±] 7	9 [±] 3	10468.9	27/2 ⁻	E2+M1	
		2808.4 [±] 2	9 [±] 3	8973.1	25/2 ⁻		
		4605.8 [±] 15	100 [±] 12	7175.6	(27/2 ⁻)	E2+M1	δ : +0.35 +11-8 or +2.1 5 from ²⁸ Si(³² S,2 α p γ).
11945.8	27/2 ⁽⁺⁾	1102.3 [±] 5	33 [±] 17	10843.1	25/2 ⁽⁺⁾	(E2+M1)	
		1967.3 [±] 8	100 [±] 17	9979.2	23/2 ⁽⁺⁾	E2	
		2271.4 [±] 2	<17 [±]	9677.2	25/2 ⁻		
		2972.4 [±] 2	17 [±] 17	8973.1	25/2 ⁻		
		4053.4 [±] 4	<17 [±]	7892.1	25/2 ⁻		
		4777.4 [±] 4	<17 [±]	7175.6	(27/2 ⁻)		
12184.8	29/2 ⁻	1122.4 [±] 3	7 [±] 7	11062.3	27/2 ⁻	E2+M1	
		1376.4 [±] 2	13 [±] 7	10804.4	27/2 ⁻		
		1717.0 [±] 10	20 [±] 7	10468.9	27/2 ⁻	E2+M1	
		2268.4 [±] 2	<7 [±]	9920.4	25/2 ⁻		
		2585.4 [±] 2	40 [±] 13	9600.2	25/2 ⁻	E2	
		5009.8 [±] 17	100 [±] 20	7175.6	(27/2 ⁻)	E2+M1	δ : +0.12 +8-6 or +5.0 +50-20 from ²⁸ Si(³² S,2 α p γ).
12433.8	29/2 ⁻	1630.4 [±] 1	20 [±] 7	10804.4	27/2 ⁻	E2+M1	
		2512.4 [±] 2	7 [±] 7	9920.4	25/2 ⁻		
		3460.4 [±] 3	7 [±] 7	8973.1	25/2 ⁻		
		5257.8 [±] 17	100 [±] 20	7175.6	(27/2 ⁻)	E2+M1	δ : 0.00 +9-7 or +4.2 +31-19 from ²⁸ Si(³² S,2 α p γ).
12791.8	31/2 ⁻	1010.0 [±] 5	3.5 [±] 17	11781.5	29/2 ⁻	E2+M1	
		5617.2 [±] 18	100 [±] 10	7175.6	(27/2 ⁻)	E2	
12891.8	27/2 ⁻ ,29/2	3420.4 [±] 15	100 [±]	9471.3	25/2 ⁻ ,27/2	D	
13169.9	31/2 ⁻	1388.0 [±] 7	14 [±] 7	11781.5	29/2 ⁻	E2+M1	
		1659.6 [±] 6	36 [±] 14	11510.4	29/2 ⁻	E2+M1	
		2701.4 [±] 3	7 [±] 7	10468.9	27/2 ⁻		
		5995.6 [±] 20	100 [±] 21	7175.6	(27/2 ⁻)	E2	
13468.1	29/2 ⁻ ,31/2	3996.7 [±] 15	100 [±]	9471.3	25/2 ⁻ ,27/2	Q	
13585.2	31/2 ⁻	1151.7 [±] 6	100 [±] 50	12433.8	29/2 ⁻	E2+M1	

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\&$	E_f	J_f^π	Mult. ^b
13585.2	31/2 ⁻	2075.0 [‡] 6	100 [‡] 50	11510.4	29/2 ⁻	E2+M1
		2522 [‡] 1	100 [‡] 50	11062.3	27/2 ⁻	
		2780 [‡] 2	100 [‡] 50	10804.4	27/2 ⁻	
13963.8	33/2 ⁻	1171.8 [‡] 5	100 [‡] 7	12791.8	31/2 ⁻	E2+M1
		2182.4 [‡] 9	7 [‡] 4	11781.5	29/2 ⁻	
		2453.2 [‡] 10	7 [‡] 4	11510.4	29/2 ⁻	E2
14125.1	31/2 ⁻	2350 [‡] 2	100 [‡] 50	11781.5	29/2 ⁻	
		2451 ^{‡f} 2	<50 [‡]	11670.6	27/2 ⁻	
		6944 [‡] 3	50 [‡] 50	7175.6 (27/2 ⁻)		E2
14318.0	31/2 ⁽⁺⁾	2372.2 [‡] 11	100 [‡]	11945.8	27/2 ⁽⁺⁾	E2
14924.2	33/2 ⁻	1340.0 [‡] 10	100 [‡] 33	13585.2	31/2 ⁻	E2+M1
		1754 [‡] 1	67 [‡] 33	13169.9	31/2 ⁻	
		2489.4 [‡] 14	33 [‡] 33	12433.8	29/2 ⁻	
		2741 [‡] 2	33 [‡] 33	12184.8	29/2 ⁻	
		3144 [‡] 3	33 [‡] 33	11781.5	29/2 ⁻	E2
		3417 [‡] 3	33 [‡] 33	11510.4	29/2 ⁻	
15386.8	31/2,33/2 ⁻	2217 [‡] 3	100 [‡] 50	13169.9	31/2 ⁻	E2+M1
		3876 [‡] 3	<50 [‡]	11510.4	29/2 ⁻	
15862.6	(35/2) ⁻	939.5 [‡] 10	100 [‡] 25	14924.2	33/2 ⁻	(E2+M1)
		1898.0 [‡] 10	25 [‡] 25	13963.8	33/2 ⁻	
		2275 [‡] 2	25 [‡] 25	13585.2	31/2 ⁻	
		3071 [‡] 2	25 [‡] 25	12791.8	31/2 ⁻	(E2)
17061.7	35/2 ⁽⁺⁾	2743.6 [‡] 11	100 [‡]	14318.0	31/2 ⁽⁺⁾	E2
19636	39/2 ⁽⁺⁾	2574 [‡] 2	100 [‡]	17061.7	35/2 ⁽⁺⁾	E2

[†] From $E(\text{level})$ differences in $^{50}\text{Cr}(\text{p},\gamma)$, except as noted.

[‡] From $^{28}\text{Si}(^{32}\text{S},2\alpha\text{p}\gamma)$.

From $^{54}\text{Fe}(\text{p},\alpha\gamma)$.

@ From $^{50}\text{Cr}(^3\text{He},\text{d}\gamma)$.

& Relative photon branching from each level. Values from $^{50}\text{Cr}(\text{p},\gamma)$, except as noted.

^a From $^{54}\text{Fe}(\text{p},\alpha\gamma)$ and $^{50}\text{Cr}(\text{p},\gamma)$, except as noted.

^b From $(^{32}\text{S},2\alpha\text{p}\gamma)$, $^{54}\text{Fe}(\text{p},\alpha\gamma)$ and $^{50}\text{Cr}(\text{p},\gamma)$, combined with RUL and level scheme, except as noted.

^c D+Q from $\gamma(\theta)$ in $(\text{p},\alpha\gamma)$ and $\Delta\pi=\text{no}$ from level scheme.

Adopted Levels, Gammas (continued)

$\gamma(^{51}\text{Mn})$ (continued)

^d Multiply placed.

^e Multiply placed with intensity suitably divided.

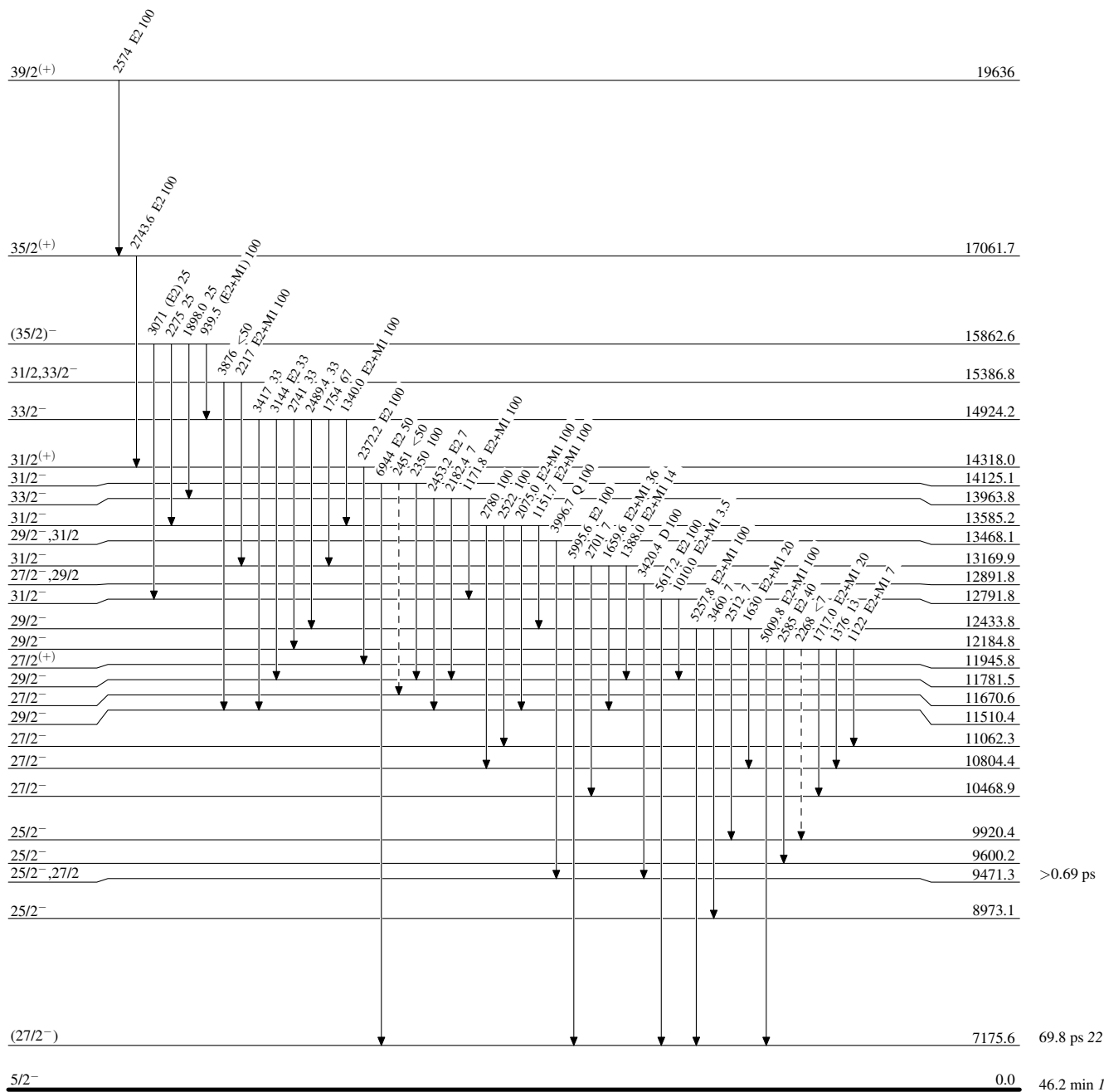
^f Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

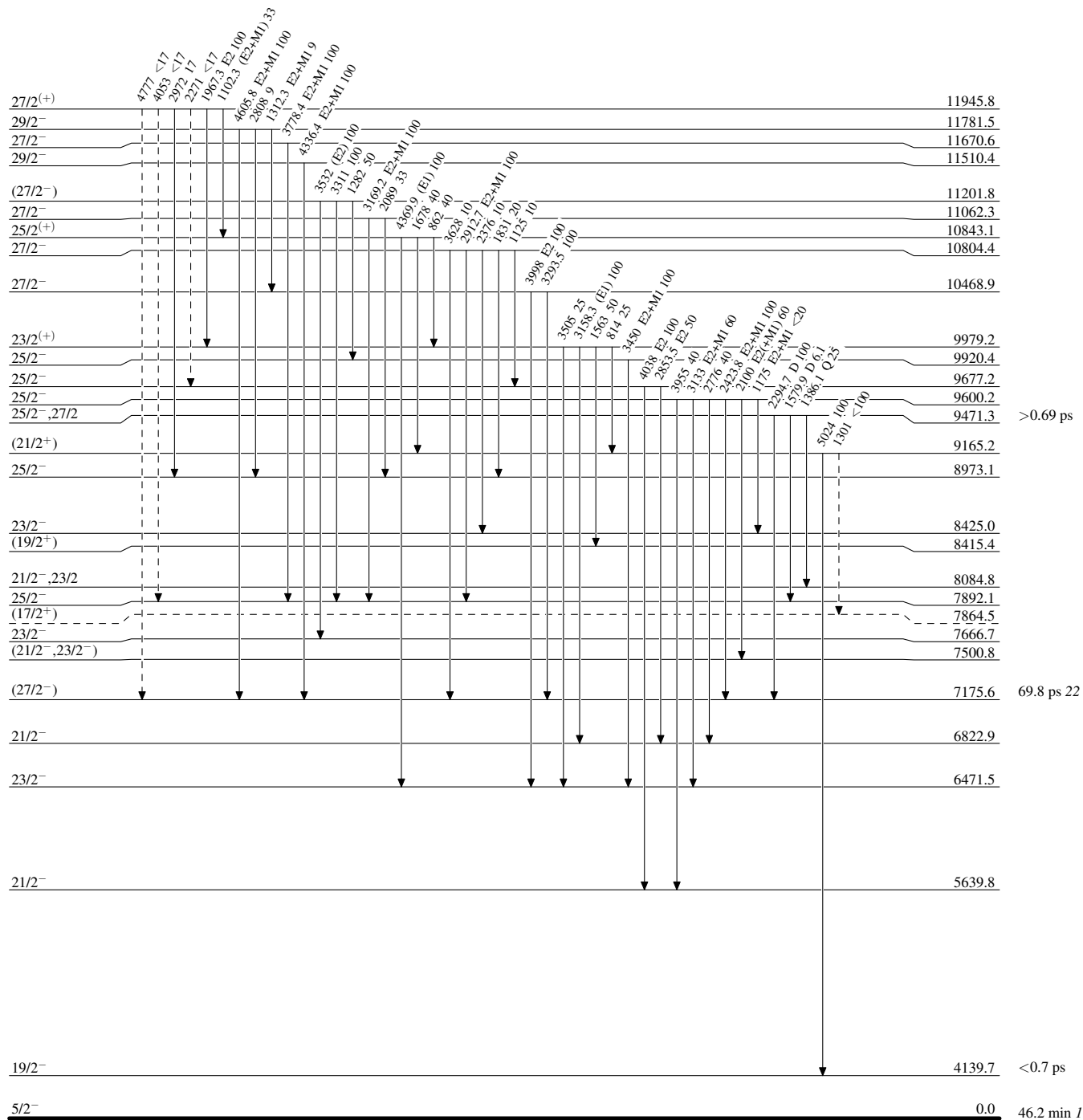
-----> γ Decay (Uncertain)

Adopted Levels, Gammas

Legend

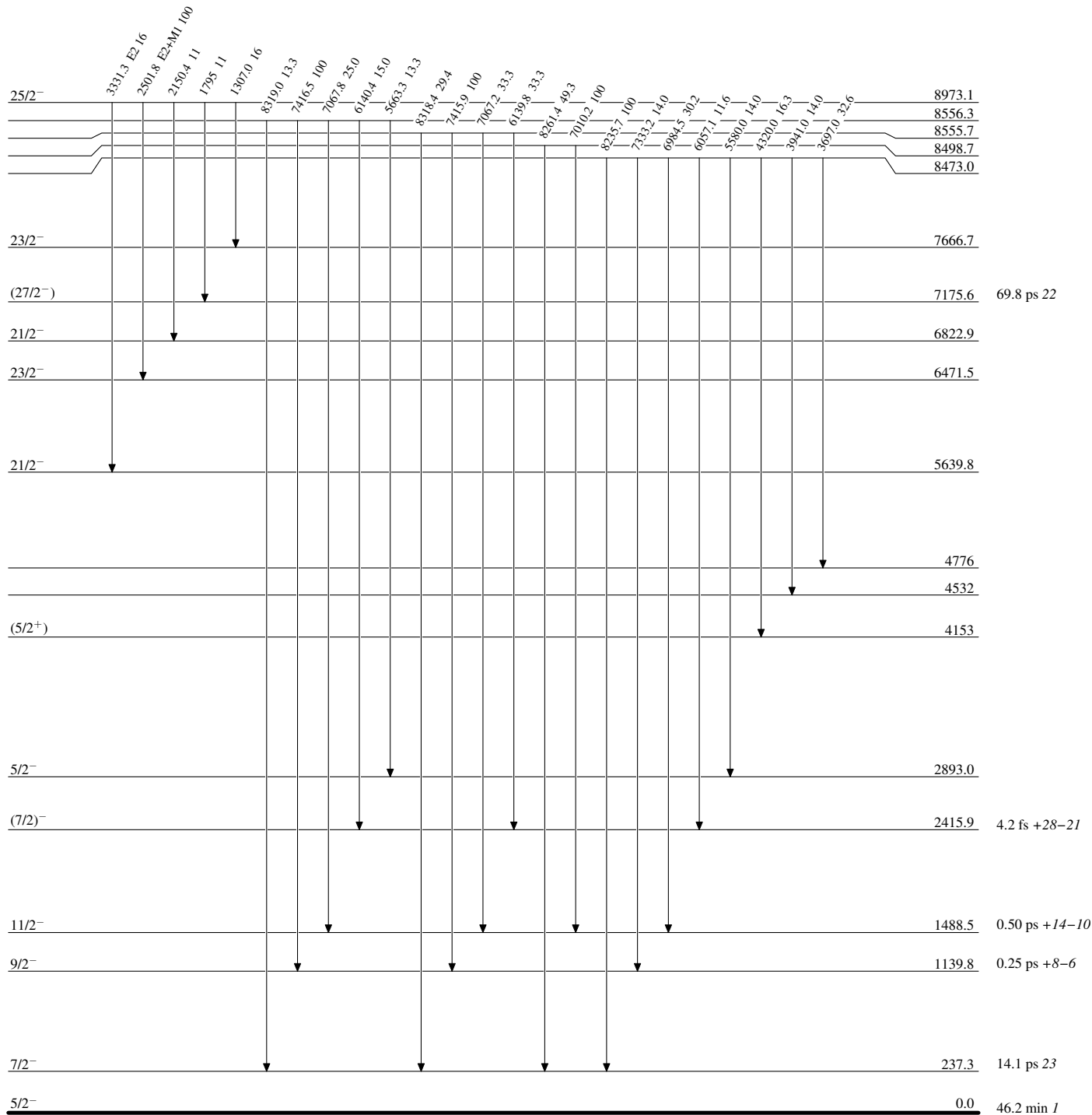
Level Scheme (continued)

Intensities: Relative photon branching from each level

-----► γ Decay (Uncertain)

Adopted Levels, GammasLevel Scheme (continued)

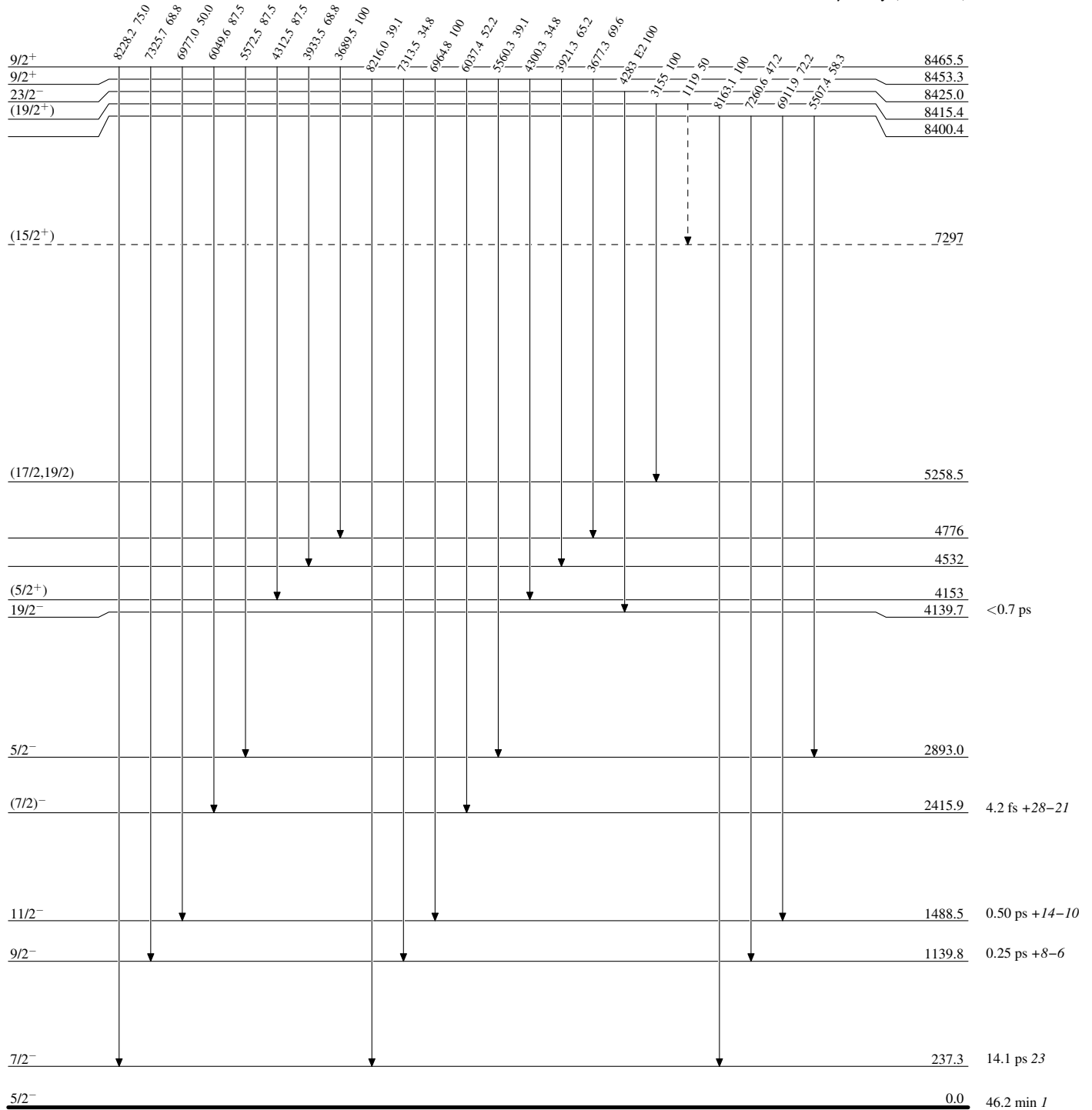
Intensities: Relative photon branching from each level



Adopted Levels, Gammas**Level Scheme (continued)**

Legend

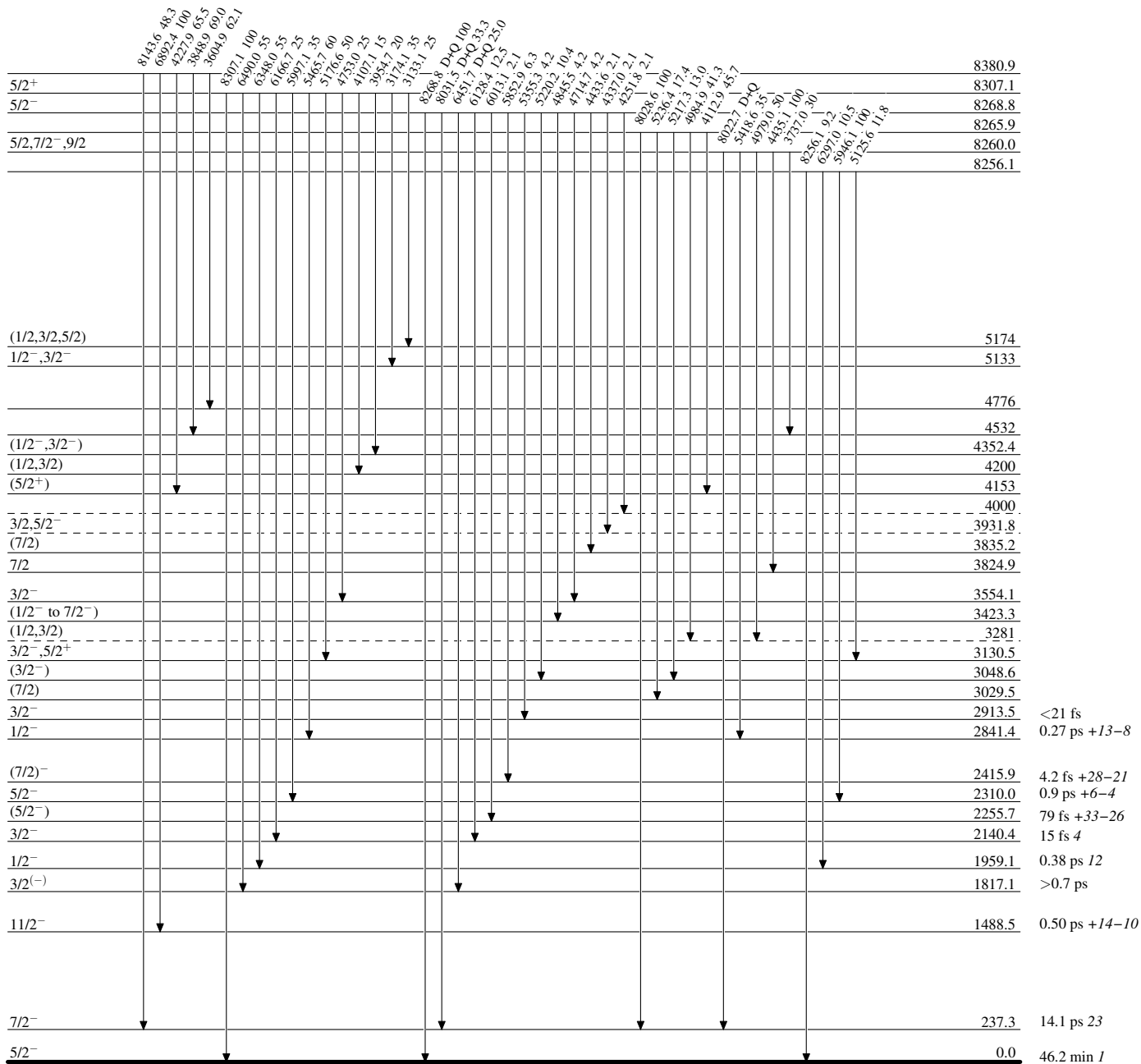
Intensities: Relative photon branching from each level

-----► γ Decay (Uncertain)

Adopted Levels, Gammas

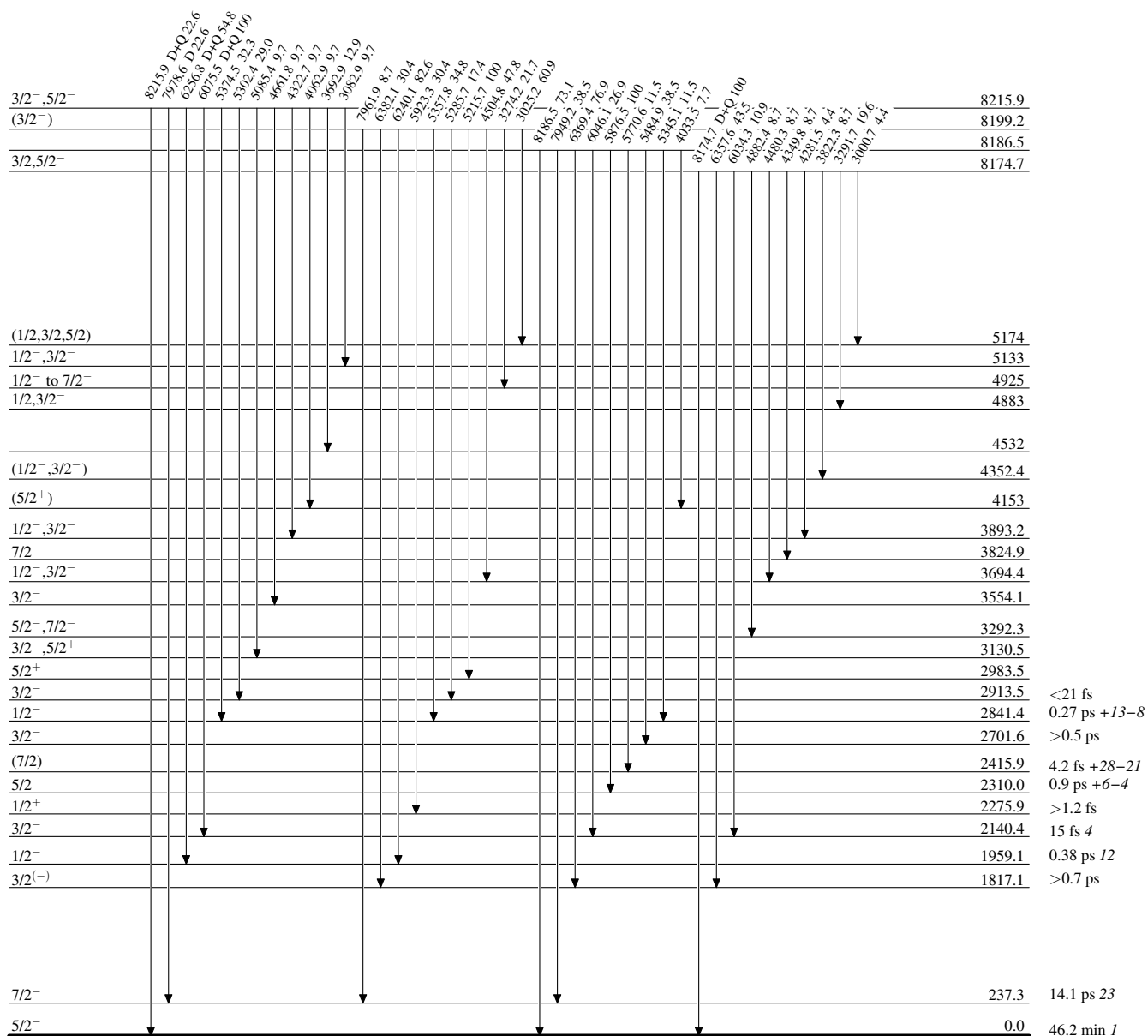
Level Scheme (continued)

Intensities: Relative photon branching from each level

 $^{51}_{25}\text{Mn}_{26}$

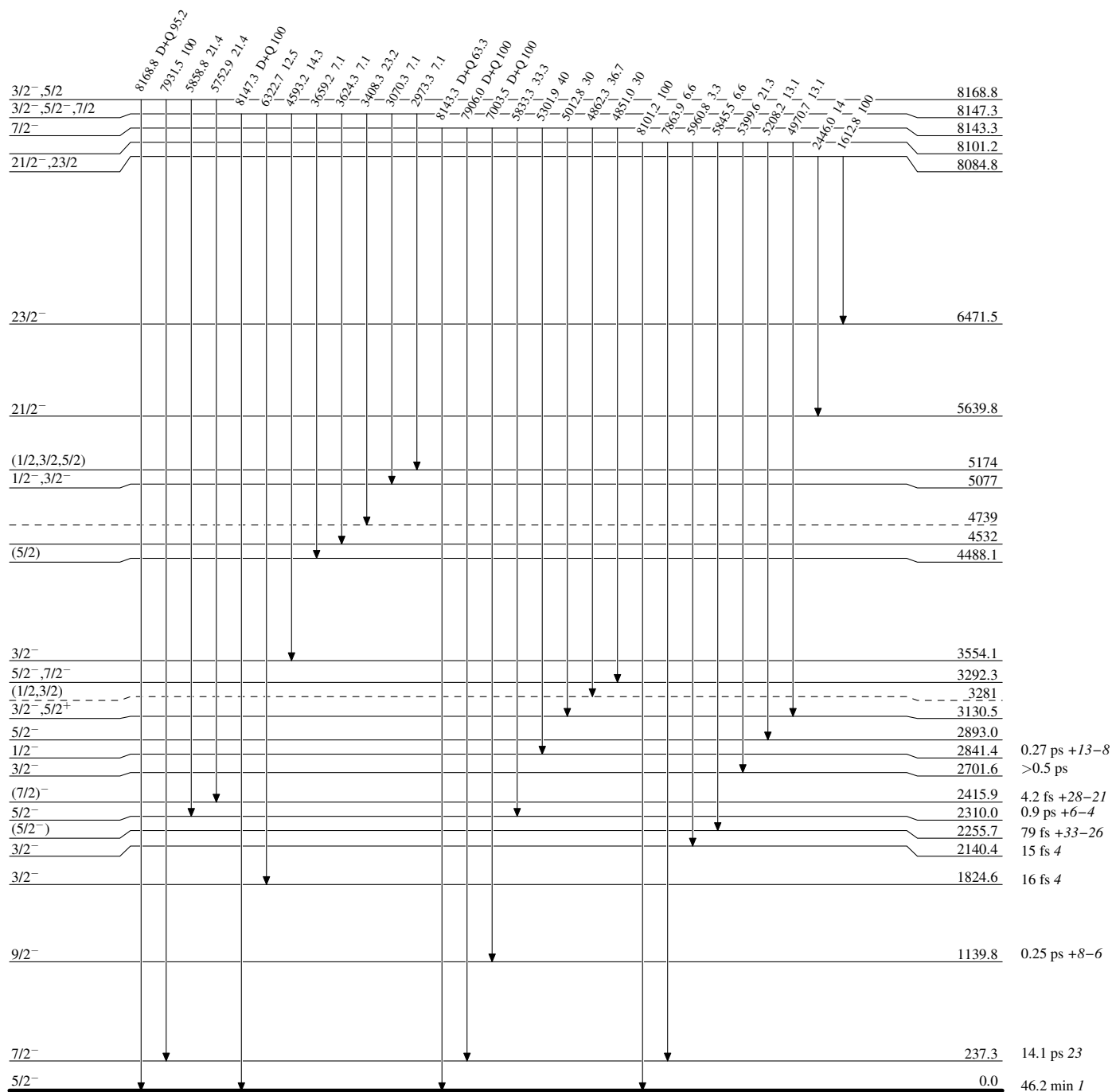
Adopted Levels, GammasLevel Scheme (continued)

Intensities: Relative photon branching from each level

 $^{51}_{25}\text{Mn}_{26}$

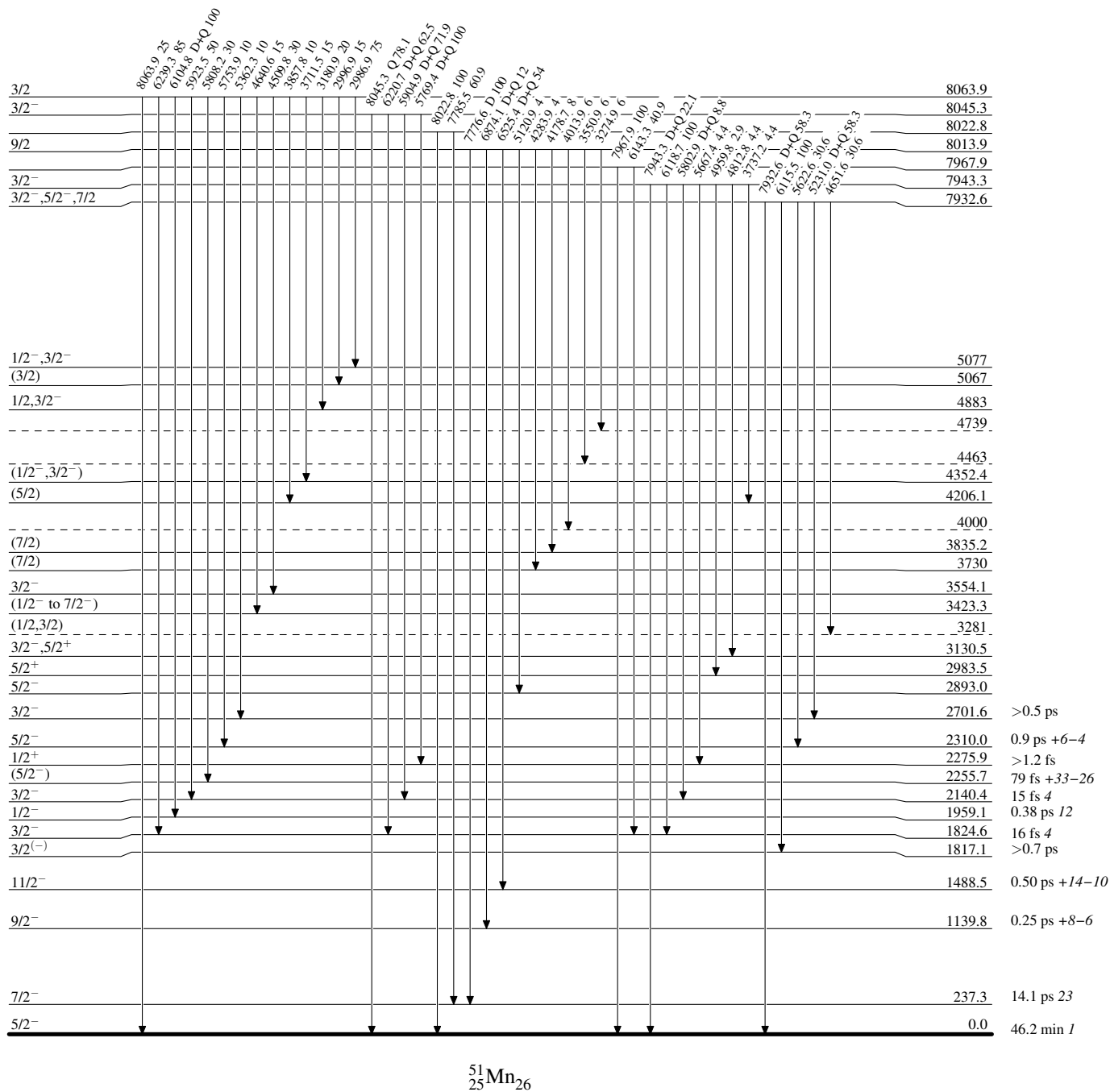
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



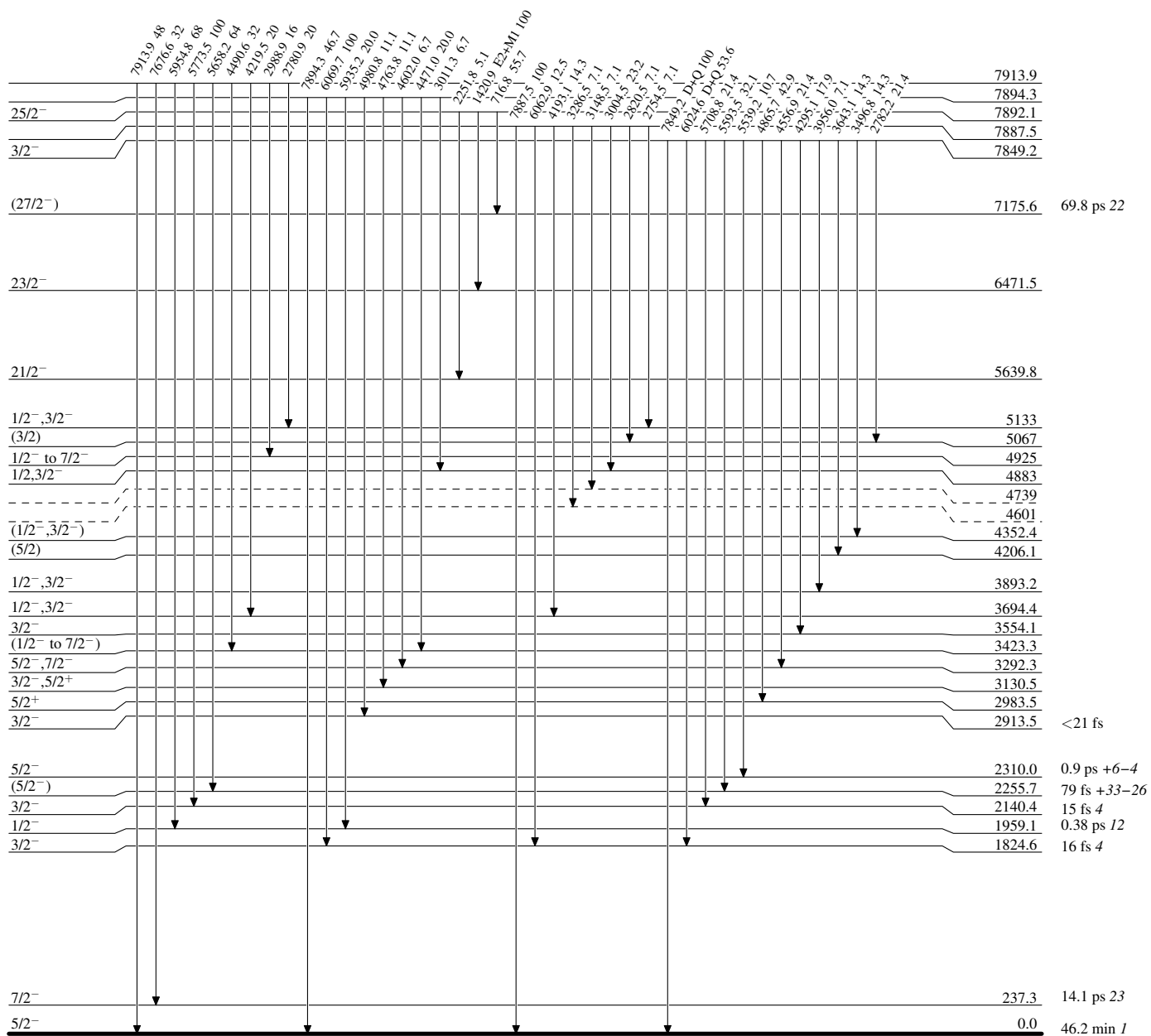
Adopted Levels, GammasLevel Scheme (continued)

Intensities: Relative photon branching from each level



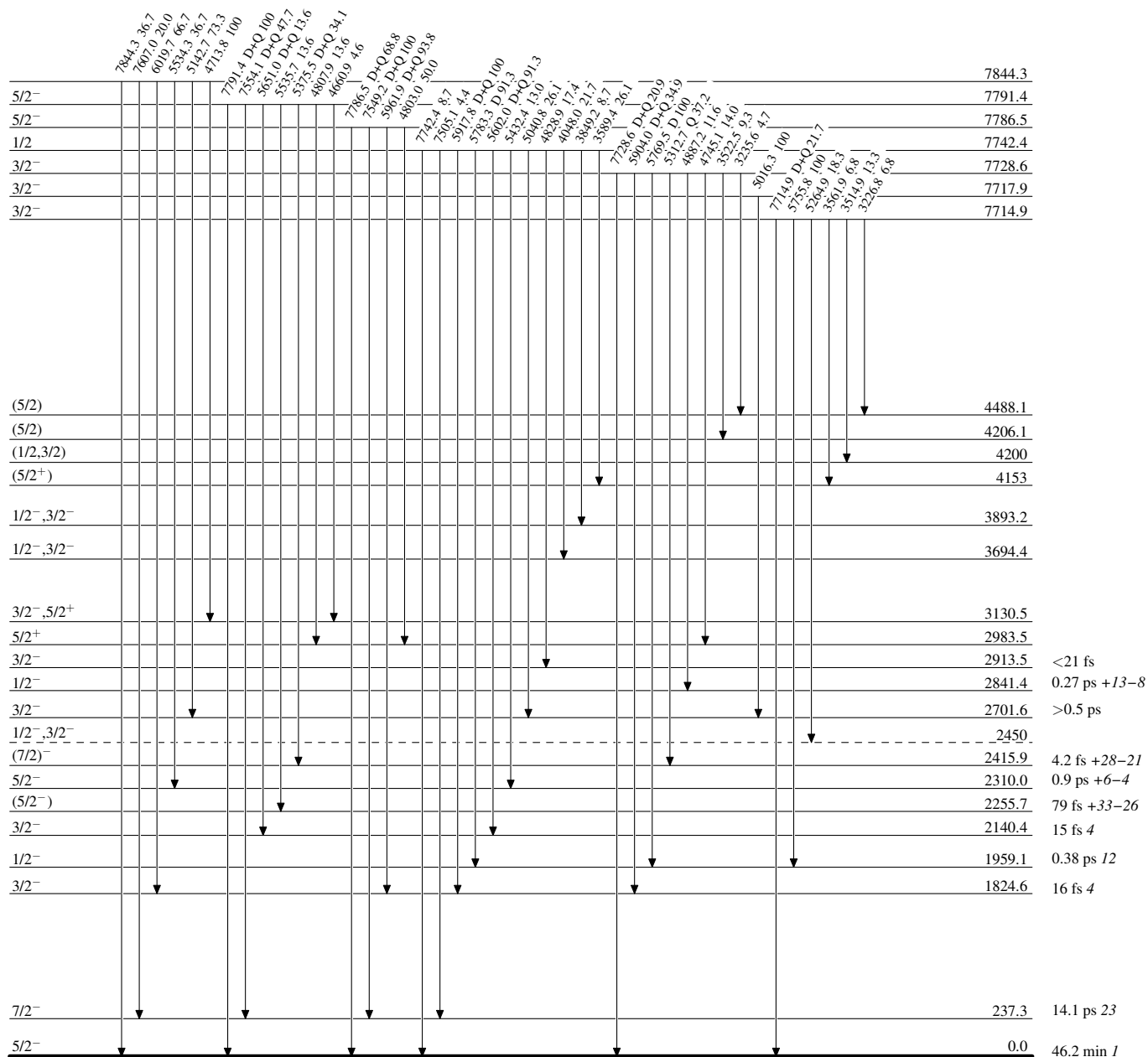
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level

 $^{51}_{25}\text{Mn}_{26}$

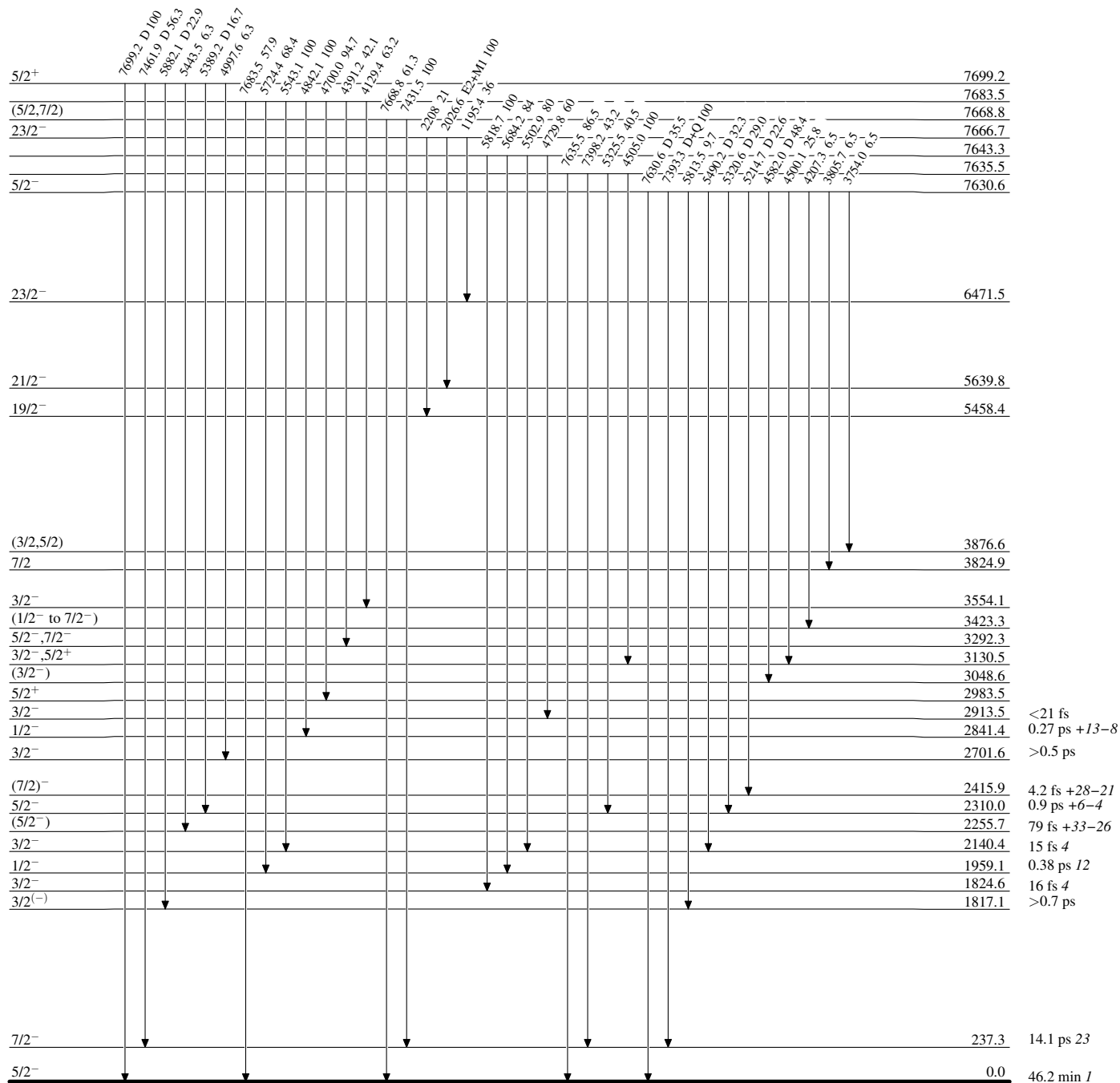
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



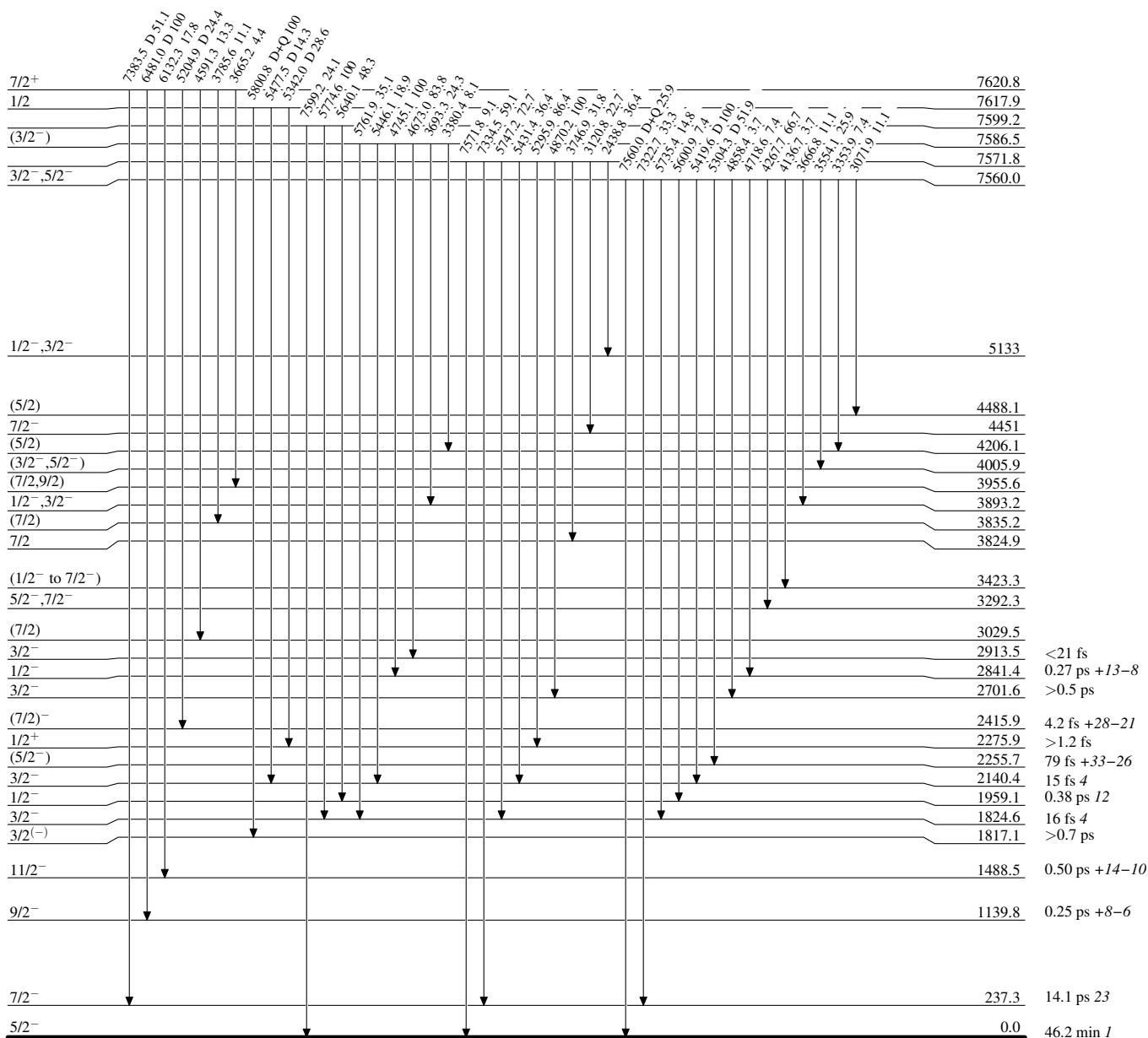
Adopted Levels, GammasLevel Scheme (continued)

Intensities: Relative photon branching from each level



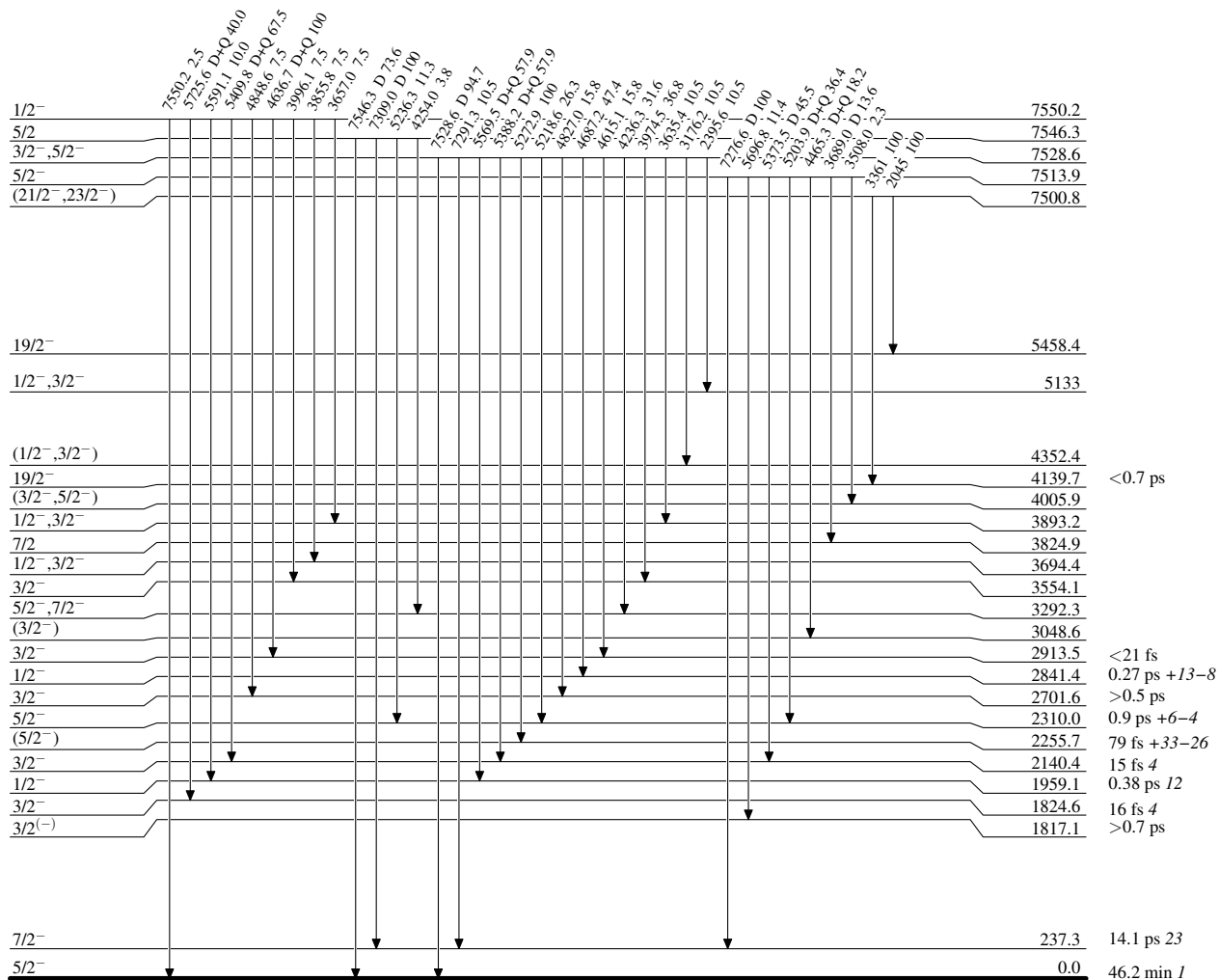
Adopted Levels, GammasLevel Scheme (continued)

Intensities: Relative photon branching from each level

 $^{51}_{25}\text{Mn}_{26}$

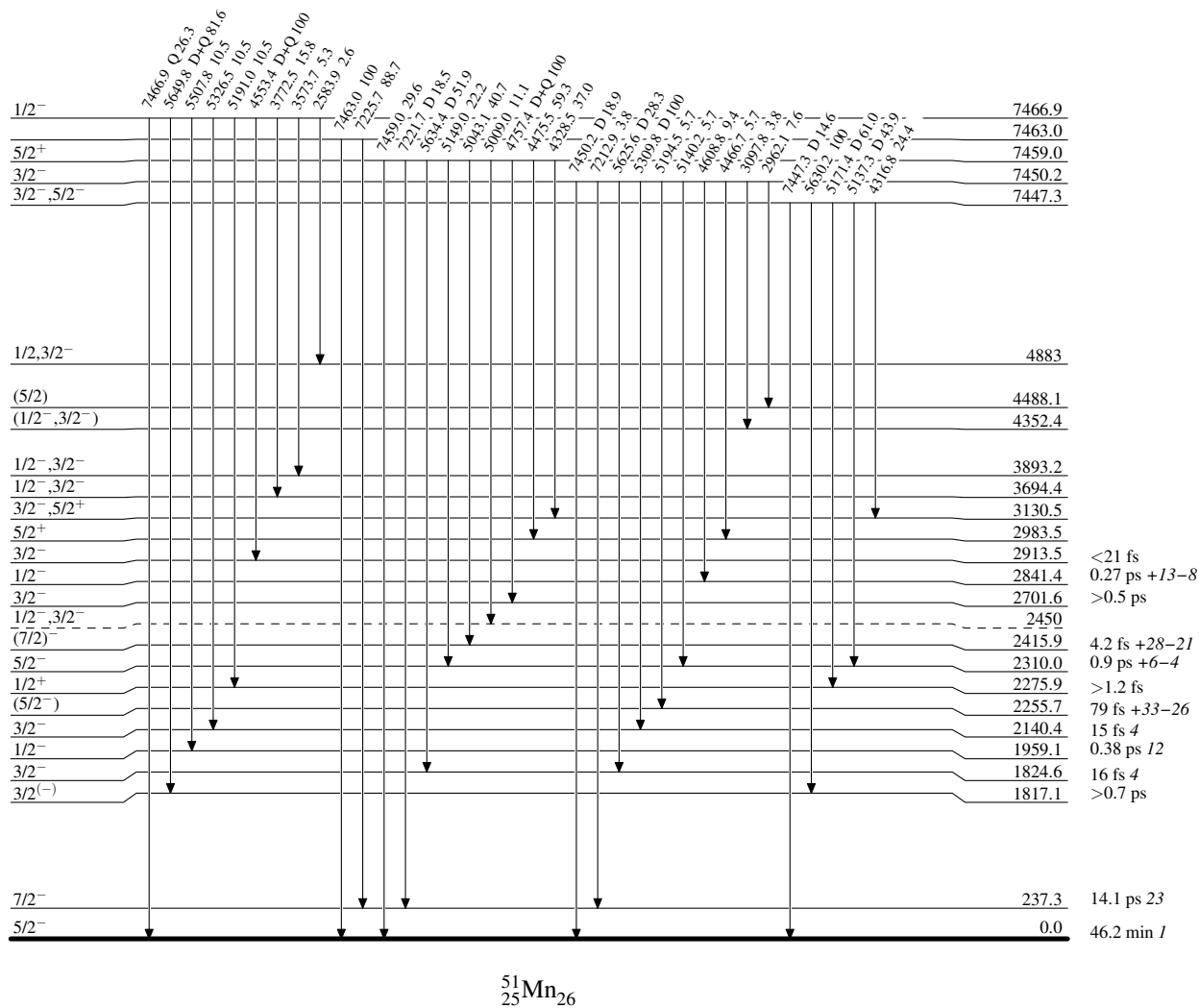
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level

 $^{51}_{25}\text{Mn}_{26}$

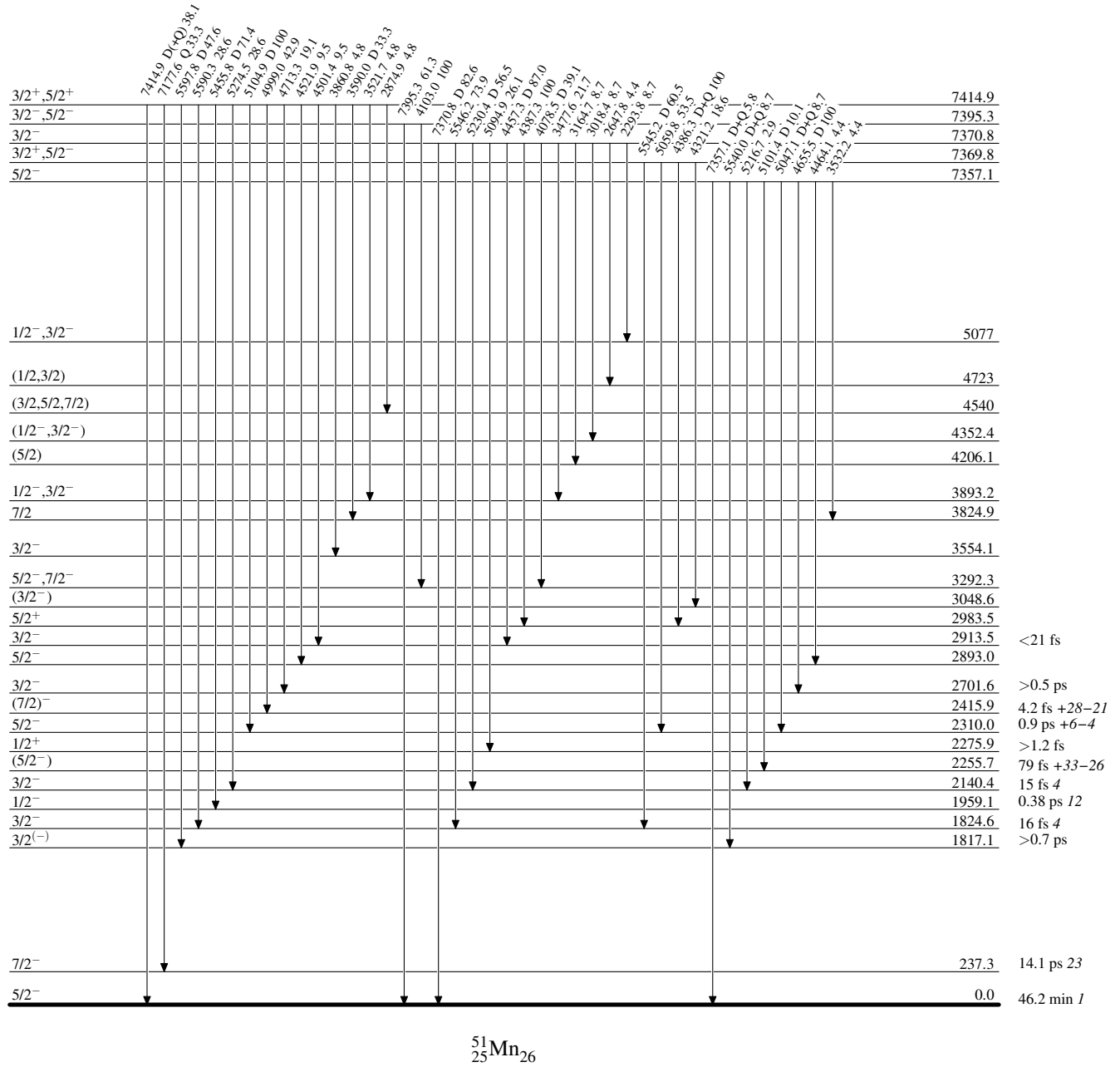
Adopted Levels, GammasLevel Scheme (continued)

Intensities: Relative photon branching from each level



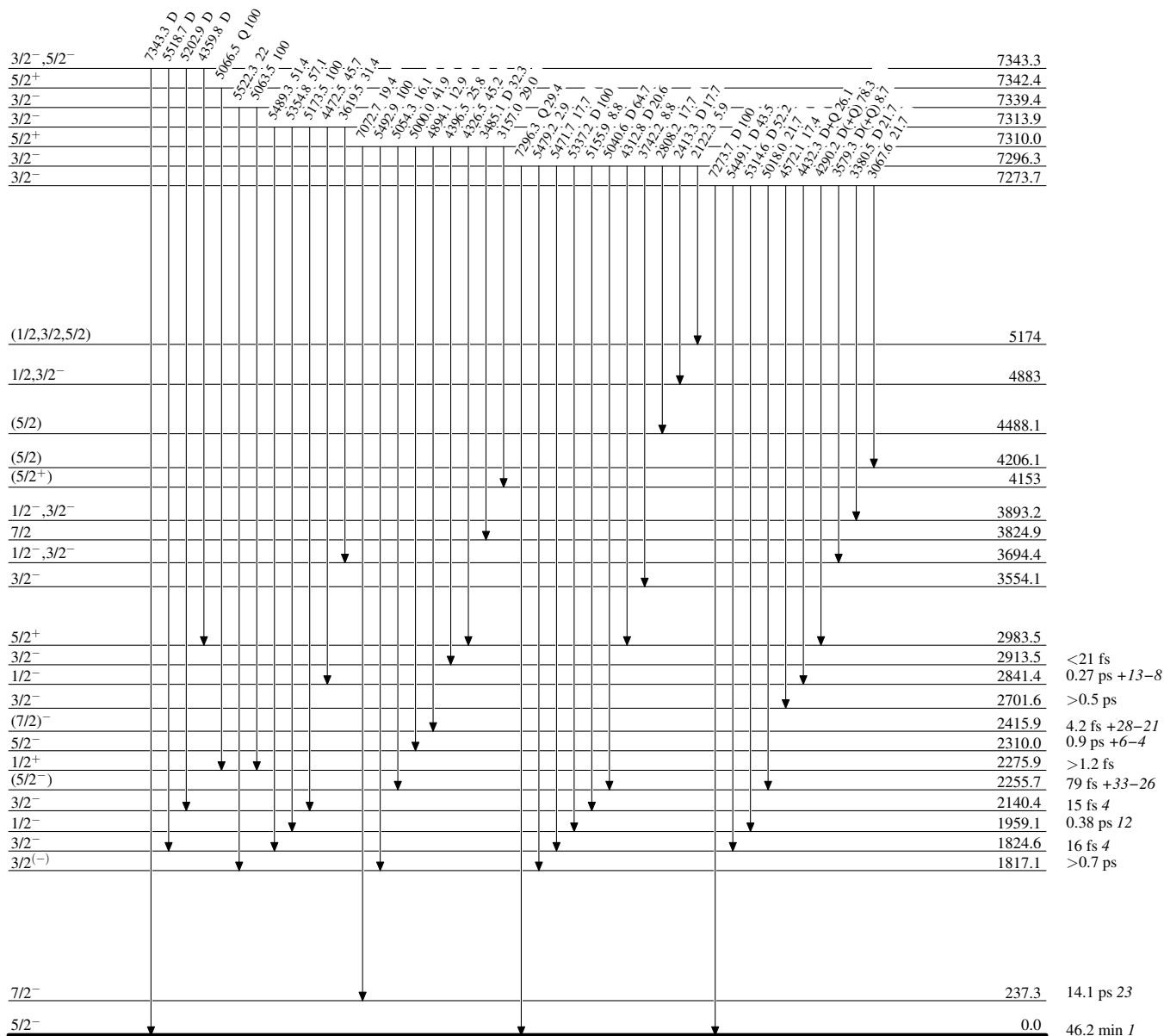
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level

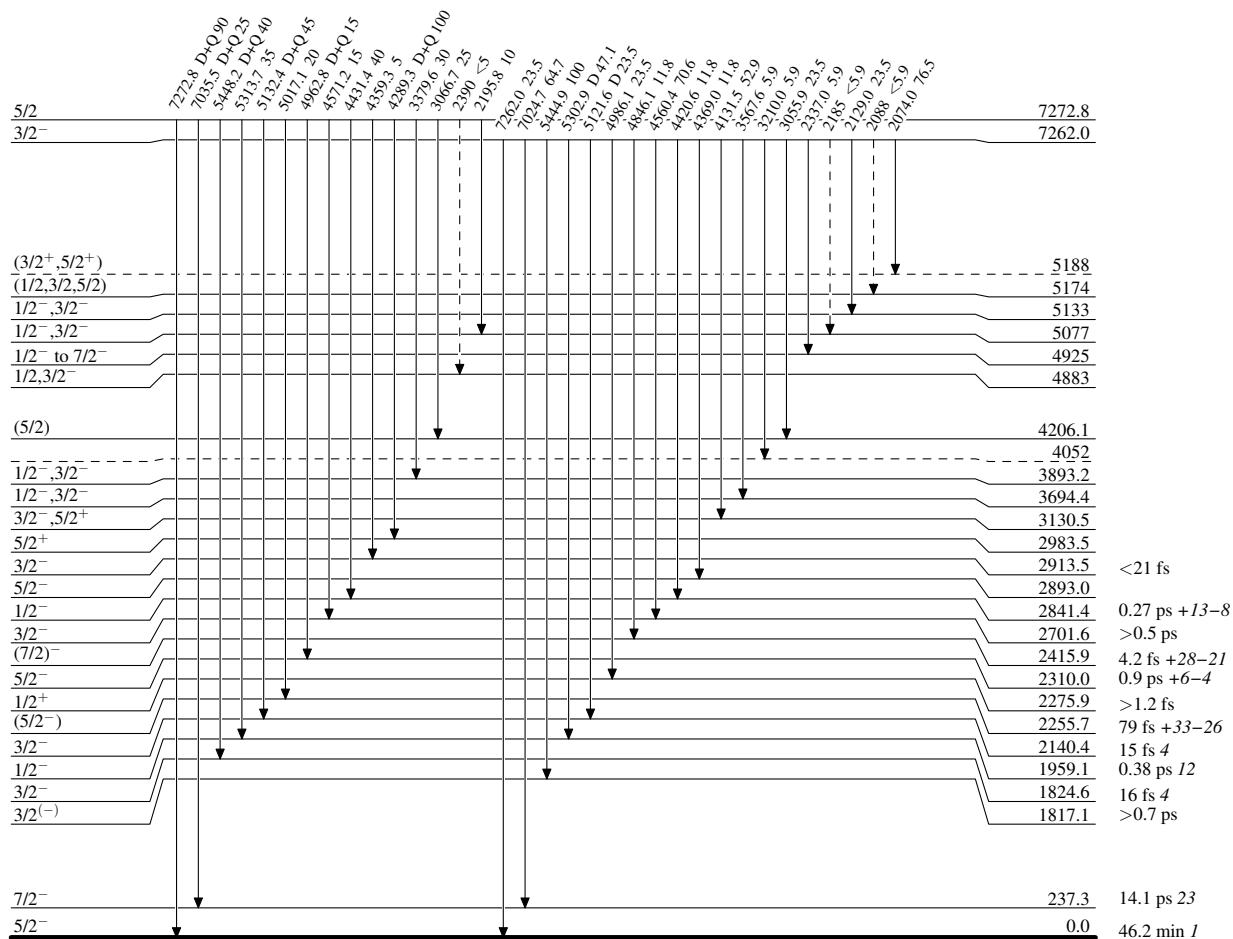


Adopted Levels, Gammas

Legend

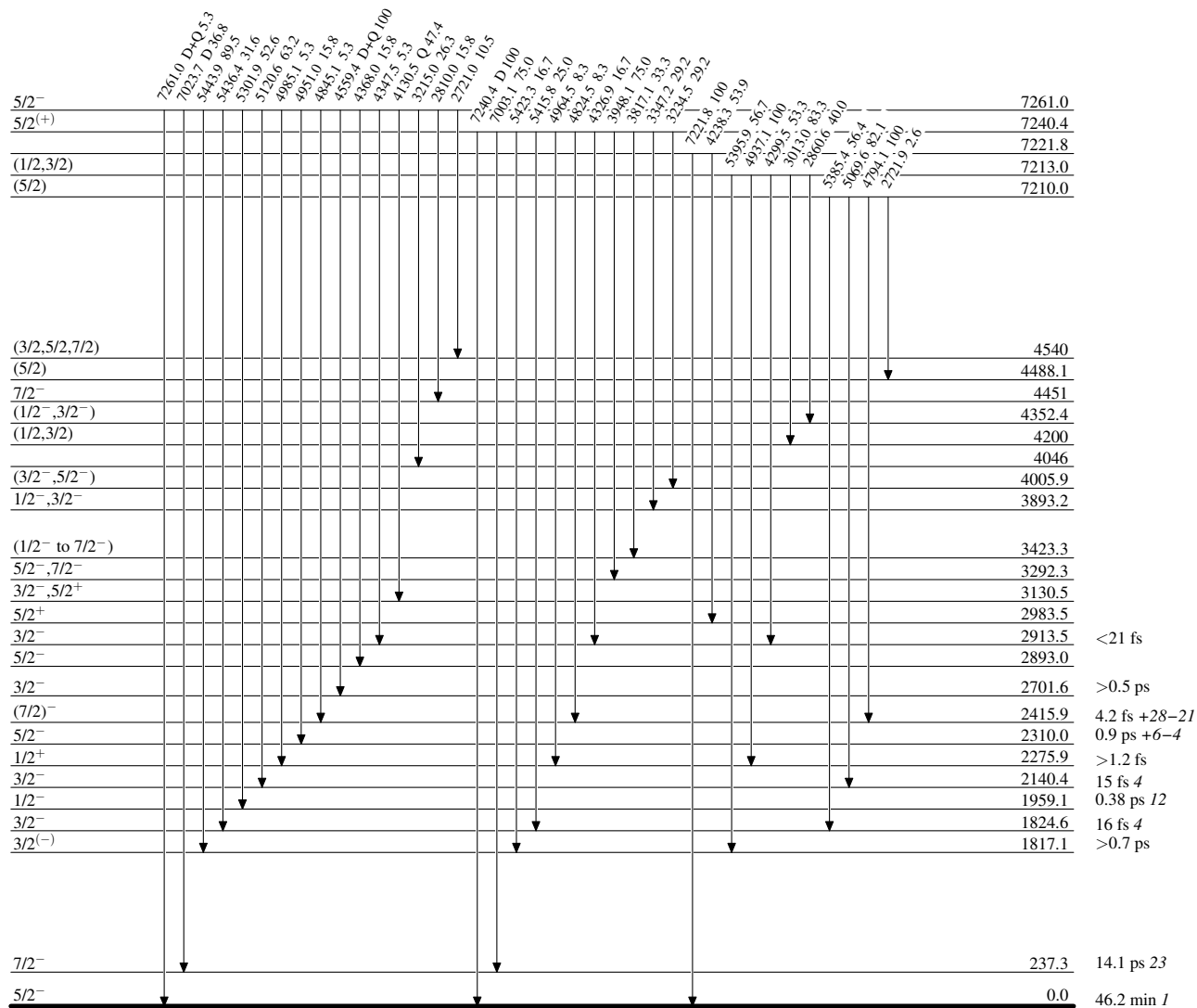
Level Scheme (continued)

Intensities: Relative photon branching from each level

-----► γ Decay (Uncertain) $^{51}_{25}\text{Mn}_{26}$

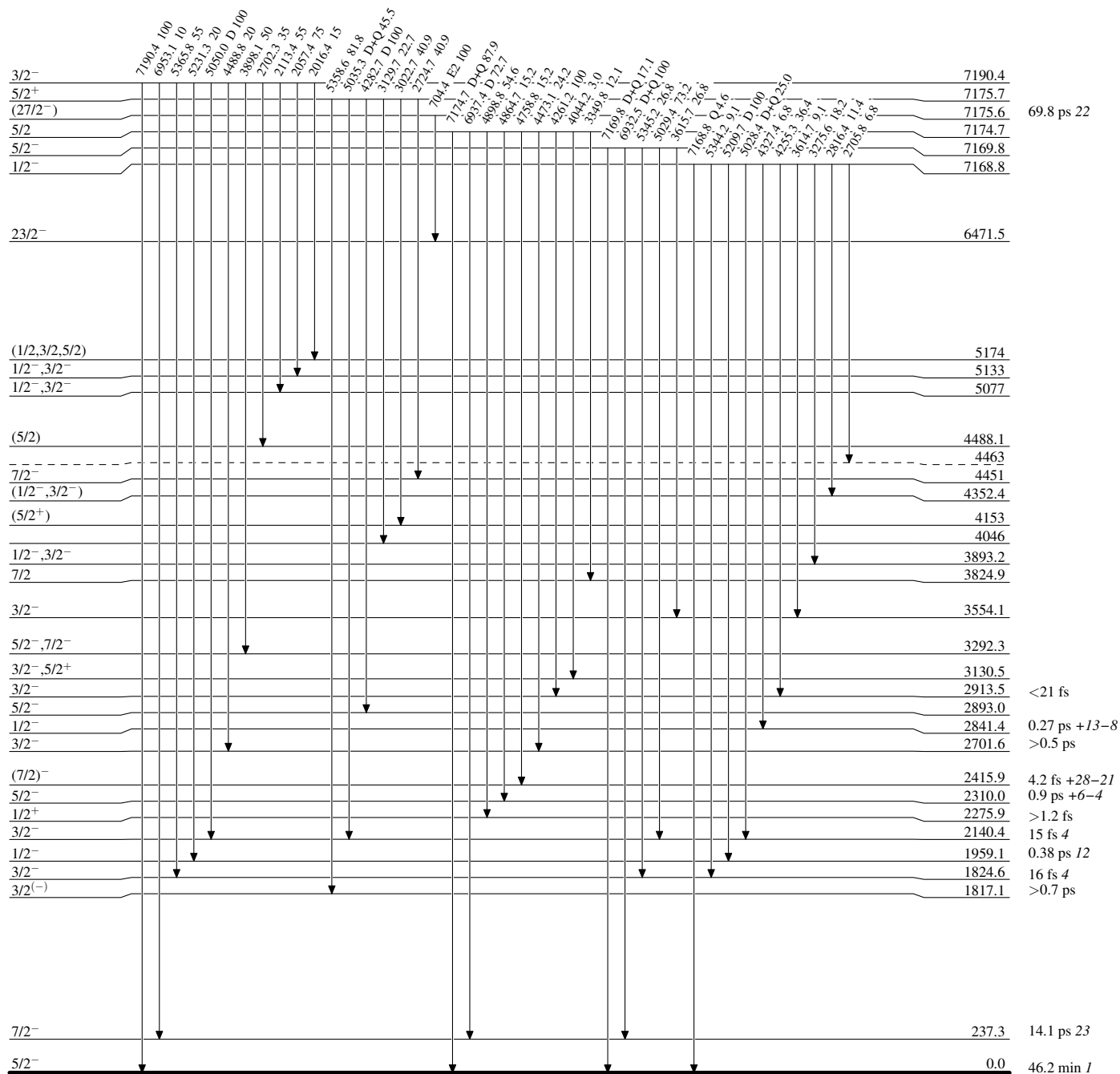
Adopted Levels, GammasLevel Scheme (continued)

Intensities: Relative photon branching from each level

 $^{51}_{25}\text{Mn}_{26}$

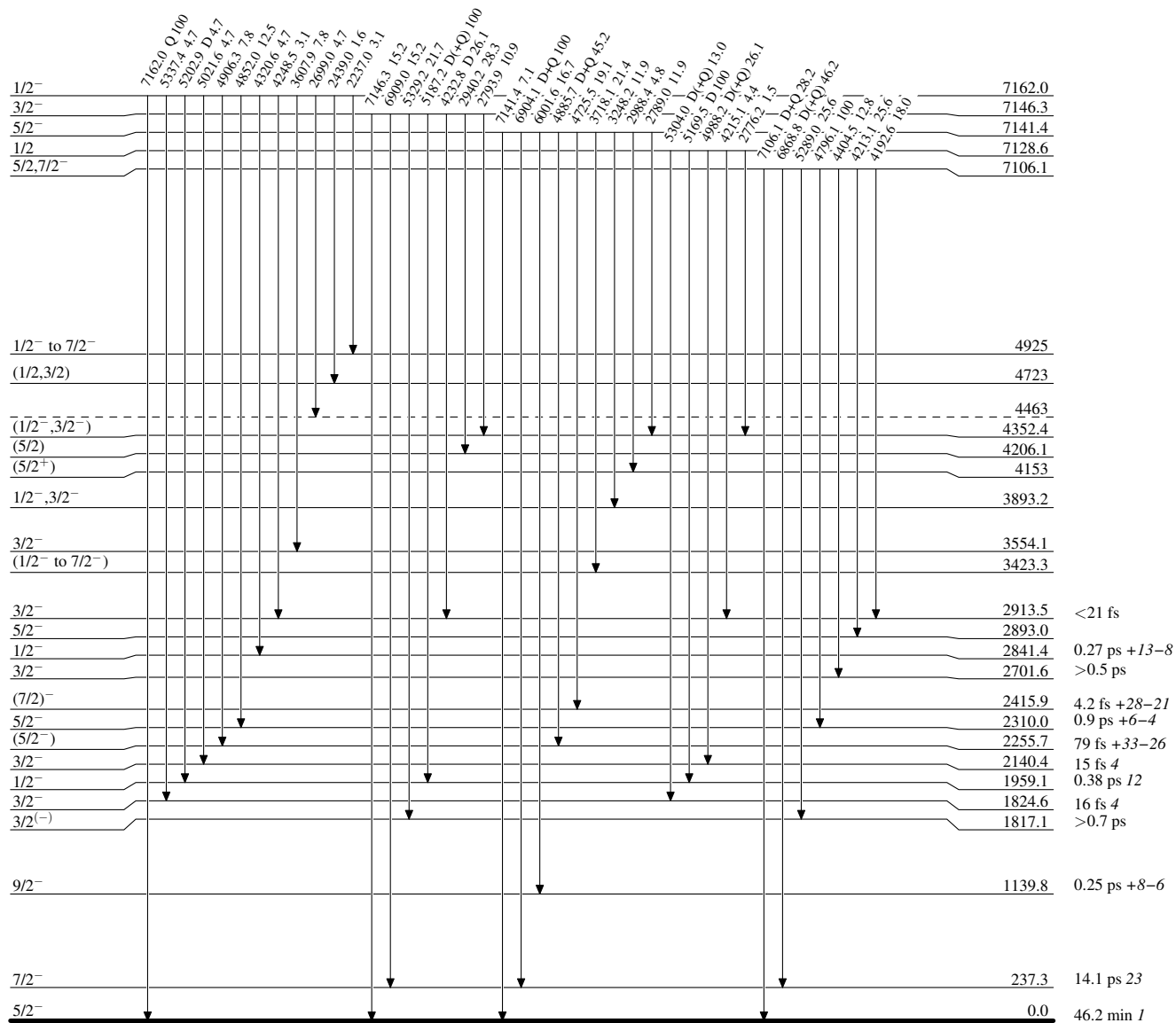
Adopted Levels, GammasLevel Scheme (continued)

Intensities: Relative photon branching from each level

 $^{51}_{25}\text{Mn}_{26}$

Adopted Levels, GammasLevel Scheme (continued)

Intensities: Relative photon branching from each level

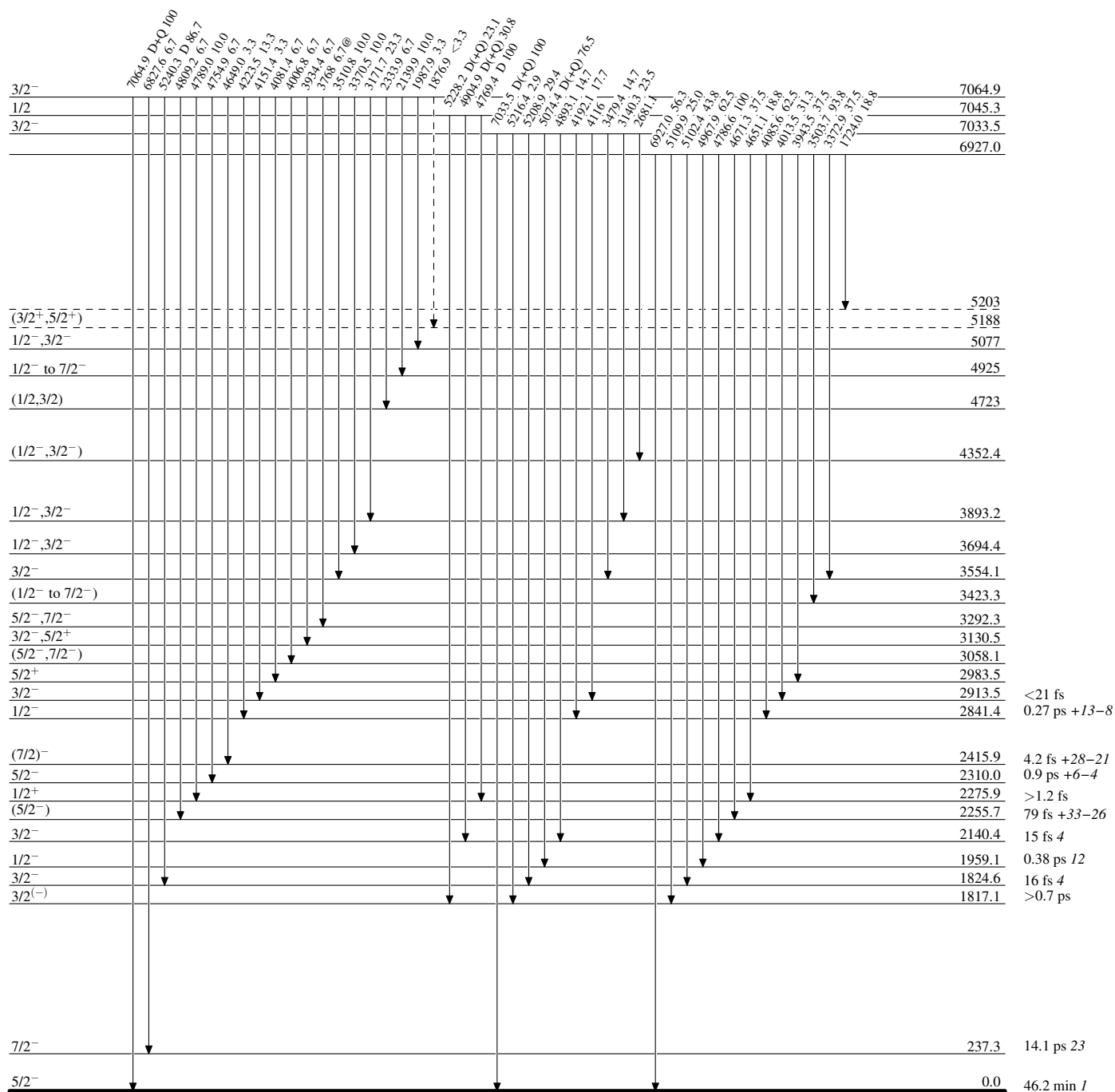
 $^{51}_{25}\text{Mn}_{26}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
 @ Multiplied: intensity suitably divided

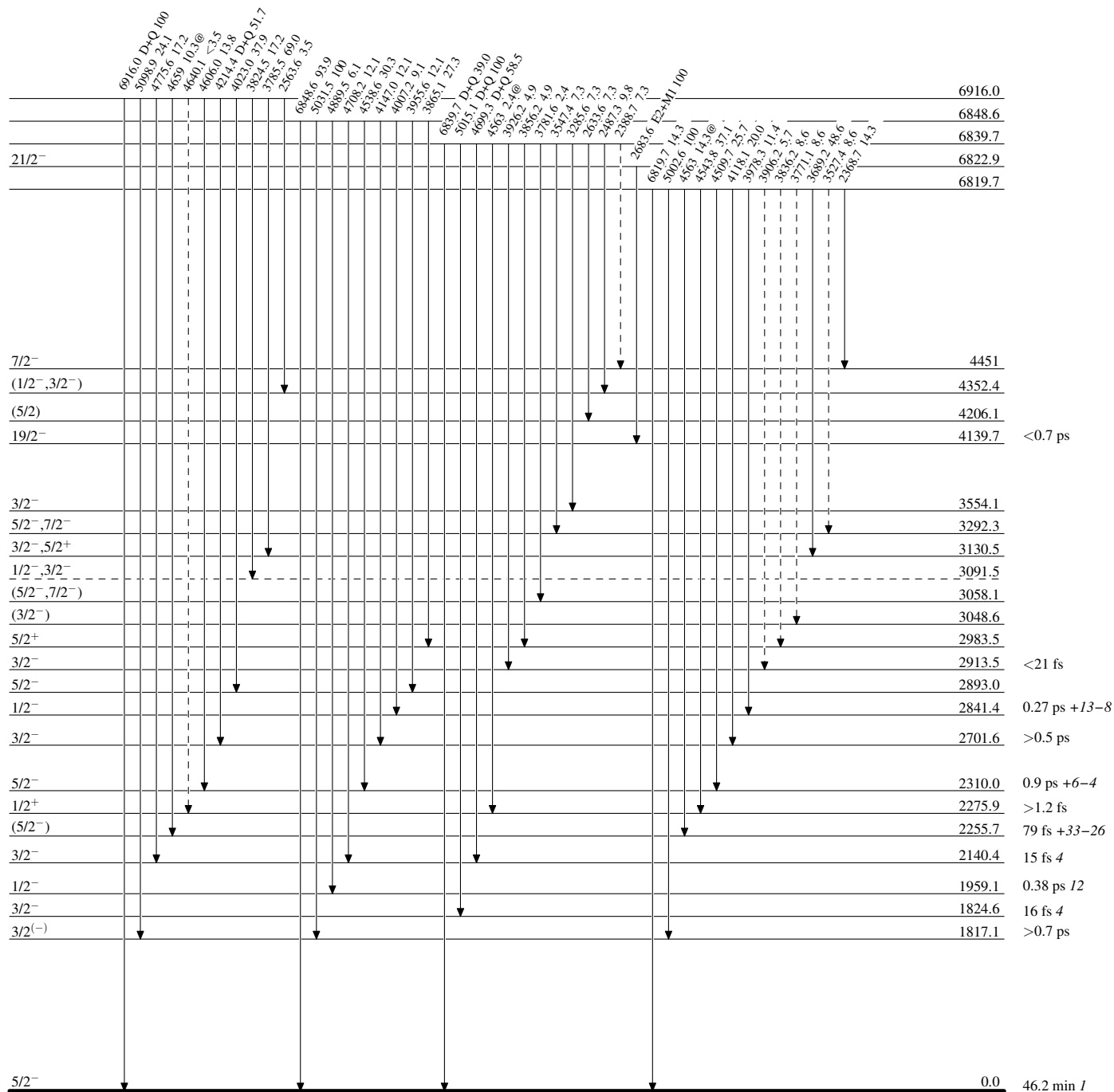
-----► γ Decay (Uncertain) $^{51}_{25}\text{Mn}_{26}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

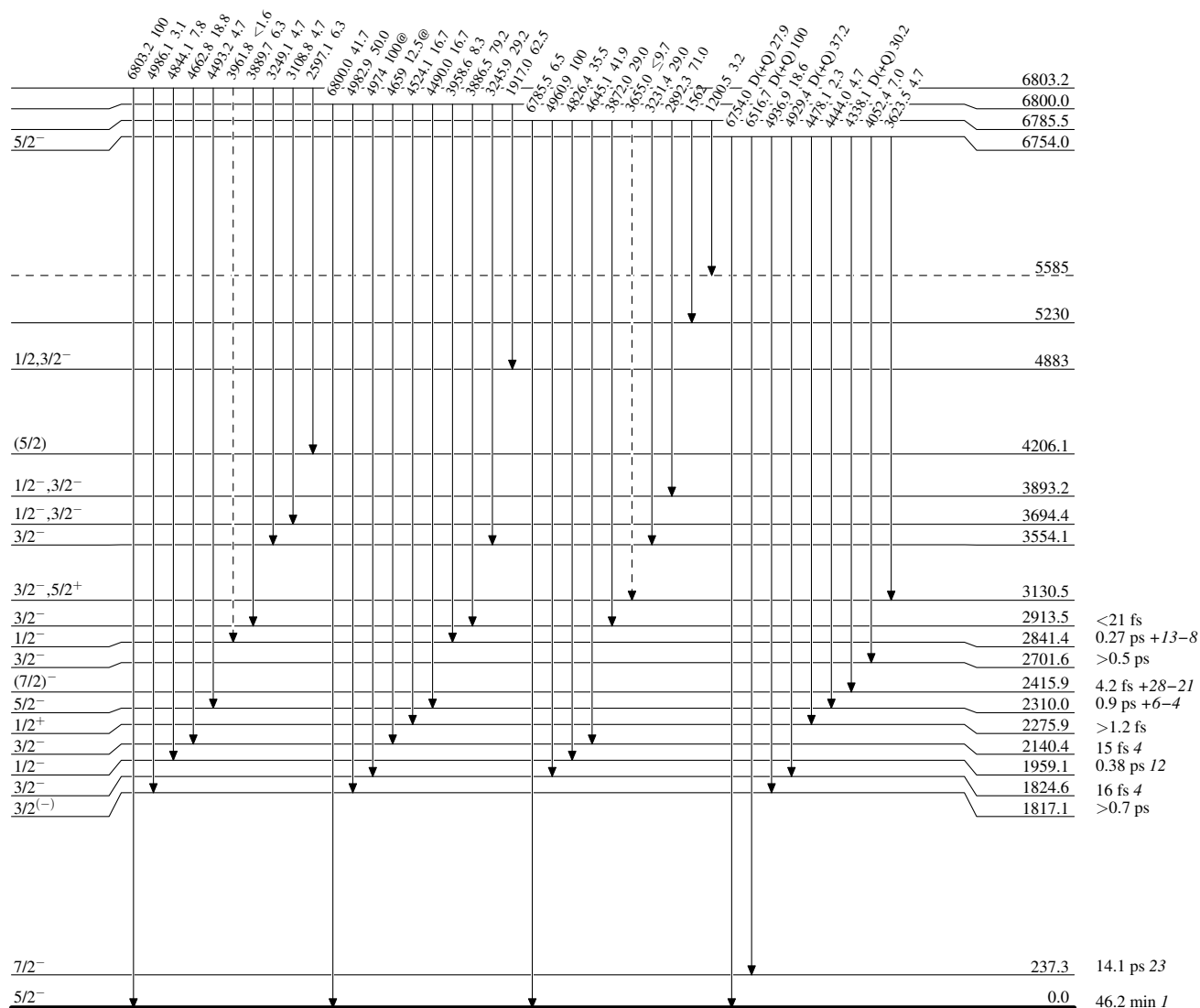
-----► γ Decay (Uncertain) $^{51}_{25}\text{Mn}_{26}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
 @ Multiply placed: intensity suitably divided

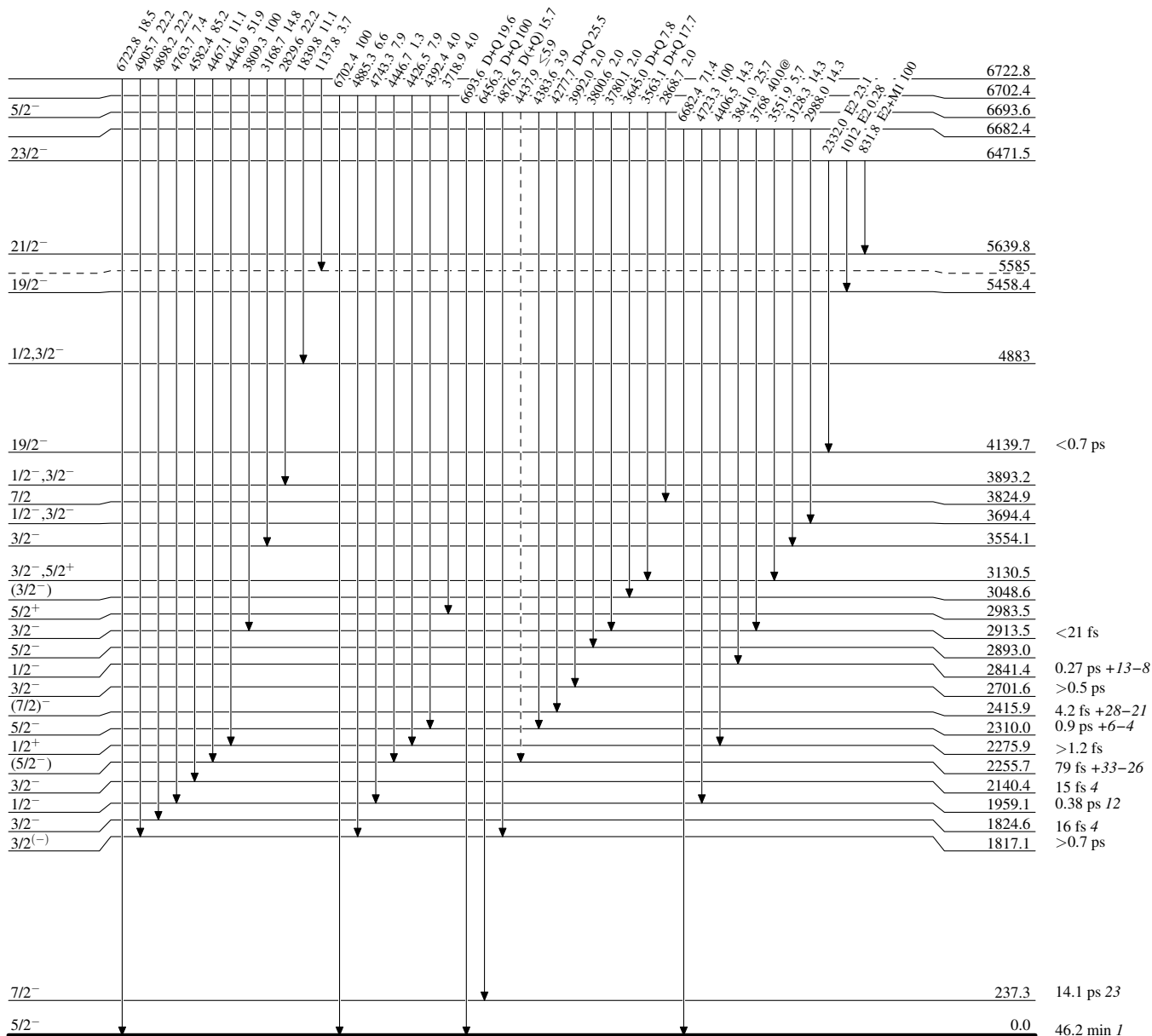
-----► γ Decay (Uncertain) $^{51}_{25}\text{Mn}_{26}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
 @ Multiply placed: intensity suitably divided

-----► γ Decay (Uncertain)

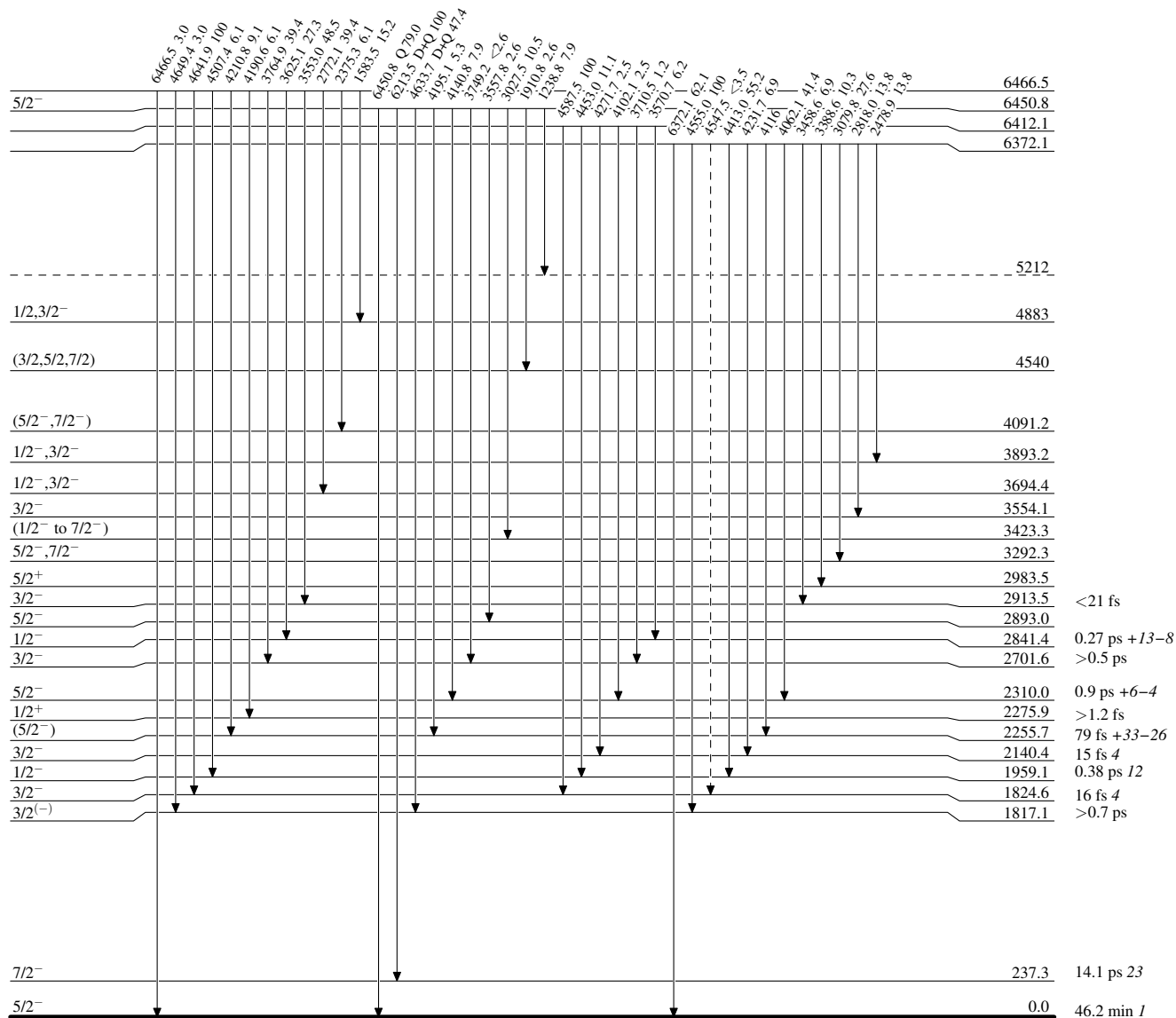
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

@ Multiply placed: intensity suitably divided

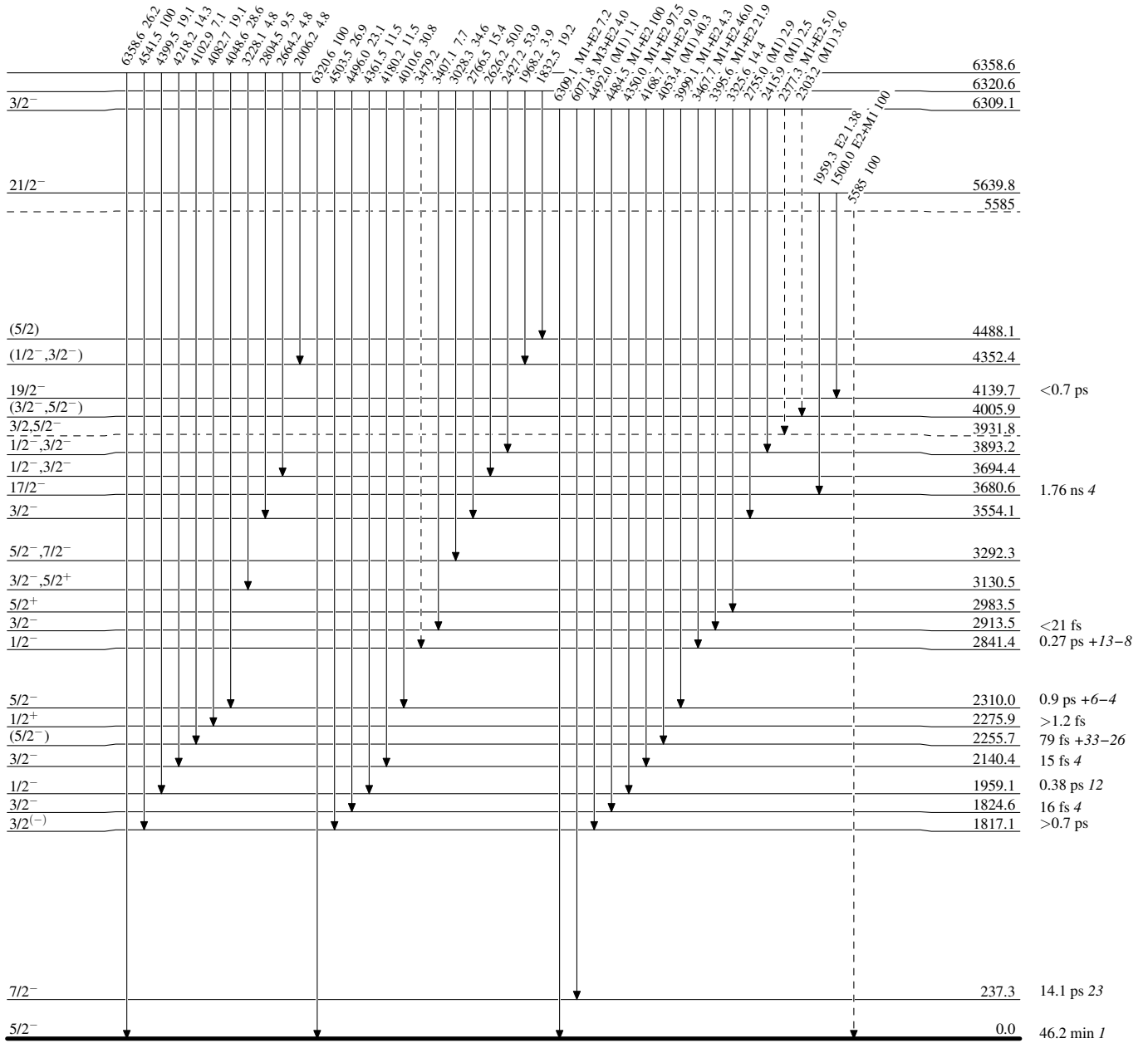
-----► γ Decay (Uncertain)

 $^{51}_{25}\text{Mn}_{26}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
 @ Multiply placed: intensity suitably divided

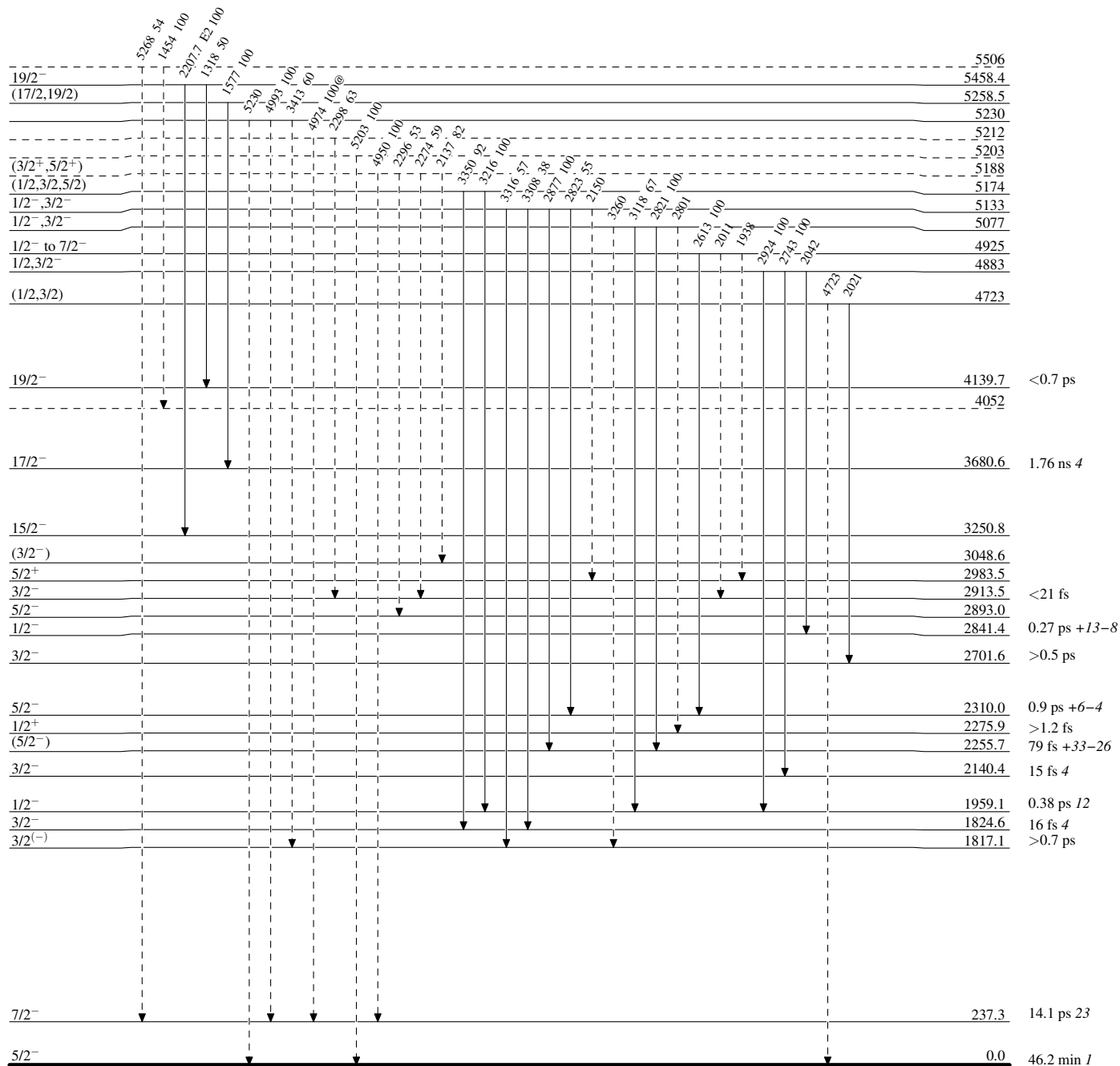
-----► γ Decay (Uncertain)

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
 @ Multiply placed: intensity suitably divided

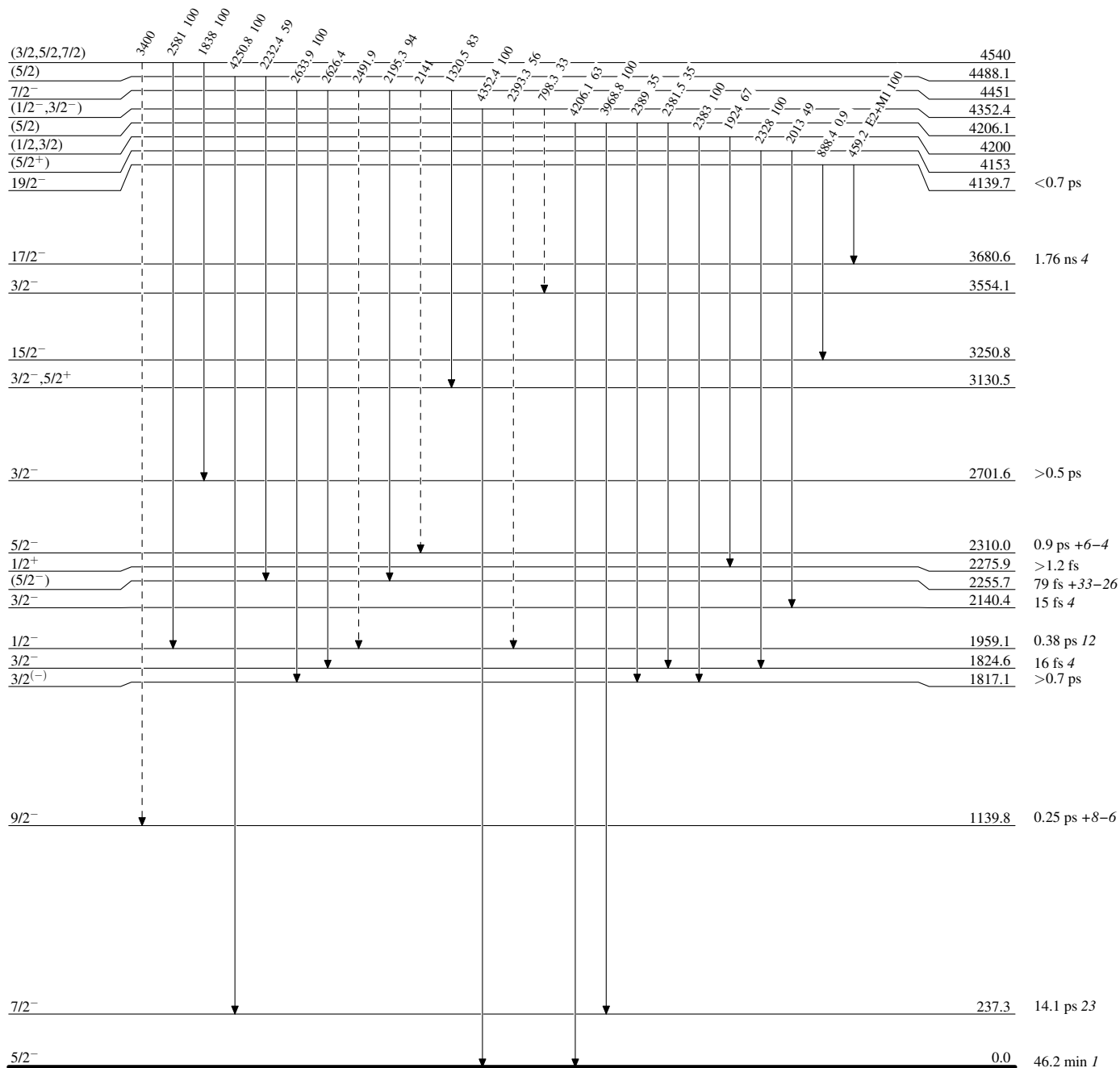
-----► γ Decay (Uncertain) $^{51}_{25}\text{Mn}_{26}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
 @ Multiply placed: intensity suitably divided

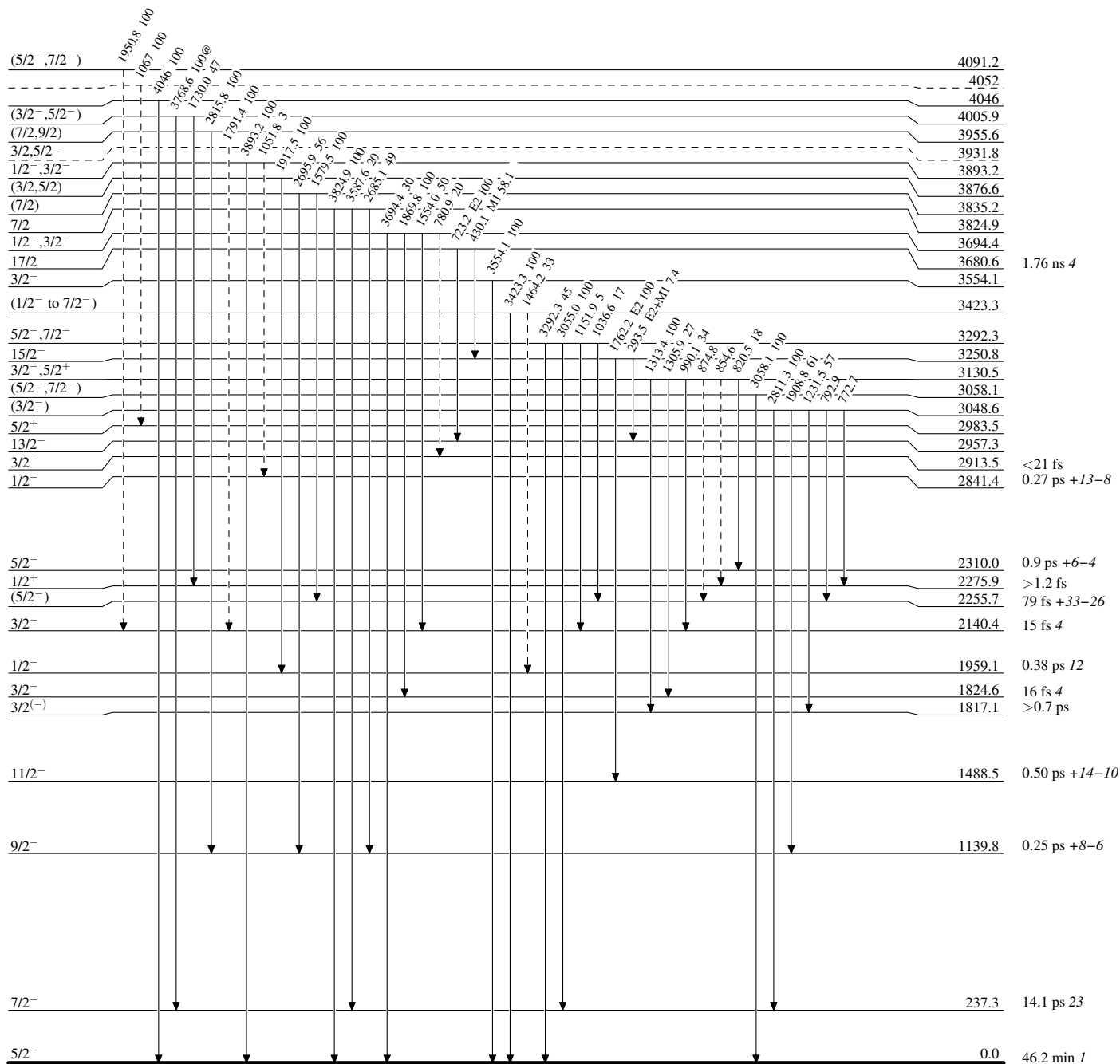
-----► γ Decay (Uncertain) $^{51}_{25}\text{Mn}_{26}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
 @ Multiply placed: intensity suitably divided

-----► γ Decay (Uncertain) $^{51}_{25}\text{Mn}_{26}$

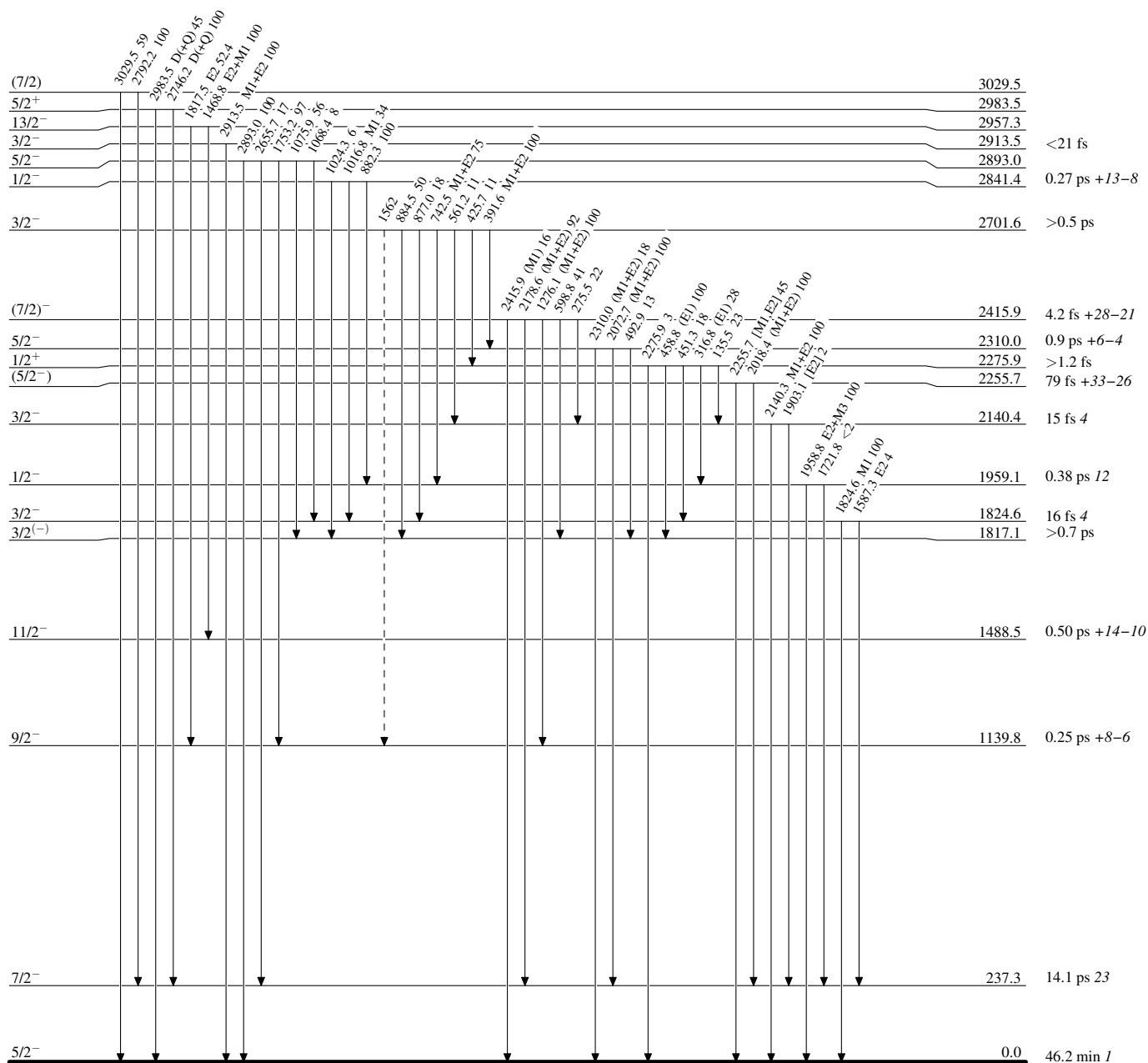
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

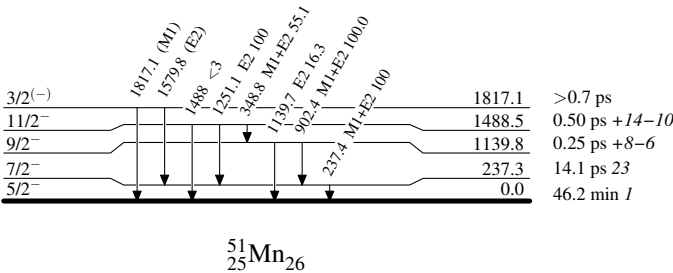
@ Multiply placed: intensity suitably divided

-----► γ Decay (Uncertain)

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



Adopted Levels, Gammas