

**Adopted Levels, Gammas**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huo Junde	NDS 109,787 (2008)	30-Apr-2007

Q(β<sup>-</sup>)=-8694.0 6; S(n)=14091.3 4; S(p)=5064.4 3; Q(α)=-8210.7 9 [2012Wa38](#)

Note: Current evaluation has used the following Q record -8692 1114089.3 4 5064.1 3 -8211.1 10 [2003Au03](#).

[Additional information 1.](#)

Other reactions: <sup>54</sup>Fe(<sup>14</sup>N,<sup>13</sup>C), <sup>58</sup>Ni(p,αγ), <sup>27</sup>Al(<sup>28</sup>Si,Xα), see [1985Zh06](#).

<sup>55</sup>Co Levels

[1993Ag01](#) reported that the compound nucleus <sup>55</sup>Co was formed at an excitation energy of 84 MeV with L(max)≈42 in <sup>27</sup>Al(<sup>28</sup>Si,Xα).

IAS and IAR were investigated in (p,γ), (p,p), and (<sup>3</sup>He,d).

Cross Reference (XREF) Flags

<b>A</b>	<sup>55</sup> Ni ε decay	<b>F</b>	<sup>54</sup> Fe( <sup>3</sup> He,d),(pol <sup>3</sup> He,d)	<b>K</b>	<sup>54</sup> Fe( <sup>12</sup> C, <sup>11</sup> B)
<b>B</b>	<sup>54</sup> Fe(p,γ)	<b>G</b>	<sup>54</sup> Fe( <sup>3</sup> He,dγ)	<b>L</b>	<sup>58</sup> Ni(p,α),(pol p,α)
<b>C</b>	<sup>54</sup> Fe(p,p),(p,p') res	<b>H</b>	<sup>54</sup> Fe(α,t)	<b>M</b>	<sup>54</sup> Fe( <sup>16</sup> O, <sup>15</sup> N)
<b>D</b>	<sup>54</sup> Fe(d,n)	<b>I</b>	(HI,xnγ)		
<b>E</b>	<sup>54</sup> Fe(d,nγ)	<b>J</b>	<sup>54</sup> Fe( <sup>7</sup> Li, <sup>6</sup> He)		

E(level) <sup>†</sup>	J <sup>π</sup> &	T <sub>1/2</sub> <sup>C</sup>	XREF	Comments
0.0	7/2 <sup>-a</sup>	17.53 h 3	<b>AB DEFGHIJK M</b>	%ε+%β <sup>+</sup> =100 μ=+4.822 3 ( <a href="#">2005St24</a> ); g=1.378 1 ( <a href="#">2000Sp08</a> ) T <sub>1/2</sub> : weighted average of 17.54 h 4 ( <a href="#">1974Ro18</a> ) and 17.52 h 3 ( <a href="#">1982Gr10</a> ). See also <a href="#">1952Ru23</a> , <a href="#">1977Mi21</a> , and <a href="#">1979La19</a> . μ: Value from <a href="#">1973Ca06</a> (nuclear resonance on oriented nuclei). Other: 4.3 3 ( <a href="#">1961Ch12</a> ). See also <a href="#">1960Ba20</a> .
2165.89 5	3/2 <sup>-a</sup>	98 fs 8	<b>B DEFGHIJKLM</b>	T=1/2 ( <a href="#">1972Sh04</a> ) XREF: D(2160)H(2190)M(2130). T <sub>1/2</sub> : value from (p,γ) and ( <sup>3</sup> He,dγ).
2565.85 3	3/2 <sup>-a</sup>	0.39 ps 9	<b>B DEFGHIJKLM</b>	T=1/2 ( <a href="#">1972Sh04</a> ) XREF: D(2560)H(2610)K(2570)M(2500). T <sub>1/2</sub> : other: 0.43 ps +8-6 ( <sup>3</sup> He,dγ).
2659.48 6	5/2 <sup>-</sup>	21 fs 3	<b>B DE G L</b>	T=1/2 ( <a href="#">1972Sh04</a> ) XREF: D(2700). J <sup>π</sup> : J=5/2 from 4120γ(θ) from 3/2 <sup>-</sup> 6780 and 2659γ(θ) to 7/2 <sup>-</sup> g.s., M1+E2 transition to 7/2 <sup>-</sup> g.s.
2918.58 6	7/2 <sup>-</sup>	47 fs 11	<b>B E G LM</b>	XREF: M(2900). J <sup>π</sup> : J=7/2 from γ(θ) from 5/2 7319 and to 7/2 <sup>-</sup> g.s. in (p,γ); π=- from M1+E2 γ to 7/2 <sup>-</sup> g.s.
2922.25 12	1/2 <sup>+</sup>	49 fs +180-3	<b>B G L</b>	XREF: L(2925). J <sup>π</sup> : (pol p,α) ( <a href="#">1980Ta06</a> ); E1 γ to 3/2 <sup>-</sup> 2166 level. T <sub>1/2</sub> : other: >170 fs (p,α).
2939.10 <sup>@</sup> 8	1/2 <sup>-a</sup>	120 fs 49	<b>B DEFG JKL</b>	T=1/2 ( <a href="#">1972Sh04</a> ) XREF: F(2935)K(2950). T <sub>1/2</sub> : other: 132 fs 45 ( <sup>3</sup> He,dγ).
2960.1 4			<b>B</b>	
2973.47 20	11/2 <sup>-</sup>		<b>I</b>	J <sup>π</sup> : E2 γ to 7/2 <sup>-</sup> g.s., and no γ to states with J<7/2.
2976.34 18	9/2 <sup>-</sup> ,(7/2)	49 fs 18	<b>B G L</b>	J <sup>π</sup> : from γ(θ) to 7/2 <sup>-</sup> g.s. in (p,γ); if J=7/2, multipolarity will be uncertain; if J=9/2, observed transition strengths of a M1/E2

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**Adopted Levels, Gammas (continued)**

<sup>55</sup>Co Levels (continued)

E(level) <sup>†</sup>	J <sup>π</sup> &	T <sub>1/2</sub> <sup>c</sup>	XREF	Comments
2990 80	(3/2) <sup>-</sup>		H	transition are quite typical; whereas the M2 transition strength of a E1/M2 transition will be above the recommended upper limit. So for J=9/2, the negative parity is suggested. Analyzing power in (p,α) suggests J <sup>π</sup> =(9/2 <sup>-</sup> ). J <sup>π</sup> : π=- from L=1 in ( <sup>16</sup> O, <sup>15</sup> N) and (α,t); J=(3/2) from σ(θ) in (α,t).
3303.11 7	5/2 <sup>-a</sup>	52 fs 11	B EFG JKLM	XREF: K(3300)M(3220). T <sub>1/2</sub> : other: 70 fs 16 ( <sup>3</sup> He,dγ).
3323.23 10	1/2 <sup>-a</sup>	44 fs 5	B DEFG J	T=1/2 (1972Sh04) XREF: D(3330).
3335 20	(5/2) <sup>-</sup>		D GH	T <sub>1/2</sub> : other: 38 fs 11 ( <sup>3</sup> He,dγ). T=1/2 (1972Sh04) XREF: D(3330)H(3340).
3552.9? 10	(3/2,5/2)		B	E(level): from ( <sup>3</sup> He,dγ). J <sup>π</sup> : from L(α,t)=3; (d,n) results favor 5/2 <sup>-</sup> . E(level): this level is not fed from any resonance levels, but is populated only as a cascade transition via 4548(5/2 <sup>-</sup> ) level (observed only by 1980UI01). J <sup>π</sup> : from γ(θ) in (p,γ). J <sup>π</sup> : from (pol p,α).
3562.98 6	(3/2 <sup>+</sup> )	30 fs +42-14	B L	XREF: D(3660).
3643.01 8	3/2 <sup>-a</sup>	240 fs +99-71	B EFG J L	E(level): from ( <sup>16</sup> O, <sup>15</sup> N).
3650	1/2 <sup>-</sup> ,3/2 <sup>-</sup>		D H M	J <sup>π</sup> : L(d,n)=1.
3682 2			B	J <sup>π</sup> : L( <sup>3</sup> He,d)=1.
3704 10	1/2 <sup>-</sup> ,3/2 <sup>-</sup>		F	XREF: D(3720).
3725.01 7	5/2 <sup>-</sup>	40 fs 6	B DE G L	J <sup>π</sup> : from M1+E2 γ to 7/2 <sup>-</sup> and 3/2 <sup>-</sup> .
3736.54 22	13/2 <sup>-</sup>		I L	J <sup>π</sup> : E2 γ to (11/2) <sup>-</sup> 2973.
3774.61 22	15/2 <sup>-</sup>		I L	
3859.28 14		71 fs +57-21	B E L	T=1/2 (1972Sh04)
3866 20			G	E(level): from ( <sup>3</sup> He,dγ).
3870.9 7	1/2 <sup>-</sup> ,3/2 <sup>-</sup>		D GH	J <sup>π</sup> : L(α,t)=1.
3933?	(3/2) <sup>-</sup>		G	T=1/2 (1972Sh04) J <sup>π</sup> : from ( <sup>3</sup> He,dγ). 1972Sh04 show that the 3/2 <sup>-</sup> state (4721 level) is observed to decay to the 3933 level with a significant strength and is associated with a ΔT=1, ΔJ=0.
3942.09 11	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	>120 fs	B EFG L	J <sup>π</sup> : L( <sup>3</sup> He,d)=1. T <sub>1/2</sub> : from (p,γ) and ( <sup>3</sup> He,dγ).
3980?			D	
4164.24 12	1/2 <sup>-a</sup>	32 fs 4	B EFG J LM	T=1/2 (1972Sh04) XREF: M(4140).
4177.33 9	5/2 <sup>-a</sup>	11 fs 3	B D FGH JKL	T <sub>1/2</sub> : other: 38 fs 11 ( <sup>3</sup> He,dγ). XREF: D(4190)H(4200)K(4170).
4264.1 4			B D L	T <sub>1/2</sub> : other: <11 fs ( <sup>3</sup> He,dγ). XREF: D(4290).
4325.3 13			L	
4339.2 <sup>‡</sup> 9			D H L	XREF: D(4390)H(4370).
4474.0 3			B L	
4490.6 <sup>‡</sup> 13			D L	XREF: D(4500).
4513.78 24	17/2 <sup>-</sup>		I L	J <sup>π</sup> : E2 γ to 3773 13/2 <sup>-</sup> . M1+E2 γ to 15/2 <sup>-</sup> .
4537.0 14			L	
4548.28 10	5/2 <sup>-</sup>	31 fs 7	B F L	J <sup>π</sup> : L( <sup>3</sup> He,d)=3, γ(θ) in (p,γ).
4587.50 23			B D H L	XREF: D(4580)H(4570).

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**Adopted Levels, Gammas (continued)** $^{55}\text{Co}$  Levels (continued)

E(level) <sup>†</sup>	J <sup>π&amp;</sup>	T <sub>1/2</sub> <sup>c</sup>	XREF	Comments
4628.23 12	1/2 <sup>-</sup> , 3/2 <sup>-</sup>	9 fs 4	B D FG L	XREF: D(4650). J <sup>π</sup> : L( <sup>3</sup> He,d)=1.
4686.3 4	15/2 <sup>-</sup>		I L	
4712.6 7	1/2 <sup>-</sup> , 3/2 <sup>-</sup>	0.21 ps +14-10	G LM	XREF: L(4715)M(4700). E(level): from ( <sup>3</sup> He,dγ). J <sup>π</sup> : M1 γ to 3/2 <sup>-</sup> .
4721.44 10	3/2 <sup>-a</sup>	<21 fs	B EFG J L	T=3/2 (1981Ka38) XREF: E(4720)F(4726)J(4724). E(level): identified as analog state of g.s. (3/2 <sup>-</sup> ) in <sup>55</sup> Fe in ( <sup>3</sup> He,d) and (p,γ) reactions; ΔE(Coul.)=8954 keV 3 in (p,γ), 8986 keV in ( <sup>3</sup> He,d). T <sub>1/2</sub> : other: <23 fs ( <sup>3</sup> He,dγ).
4748.13 10	3/2 <sup>-a</sup>	21 fs 7	B DEFGH L	T=3/2 (1981Ka38) XREF: D(4750)F(4752)H(4740). Identified as analog state of g.s. (3/2 <sup>-</sup> ) in <sup>55</sup> Fe in (p,γ) and ( <sup>3</sup> He,d). ΔE(Coul.)=8980 keV 3 in (p,γ), 8986 keV 16 in ( <sup>3</sup> He,d). T <sub>1/2</sub> : other: 26 fs +23-19 ( <sup>3</sup> He,dγ).
4851.3 <sup>‡</sup> 8			F L	XREF: F(4858).
4872.5 6			B L	XREF: L(4869).
4882.5 15			L	
4903.5 15			L	
4920.8 5	(15/2 <sup>-</sup> )		D I L	XREF: D(4940).
4961.10 20	(1/2)	6 fs 4	B H L	XREF: H(4950). J <sup>π</sup> : from σ(θ) in (α,t).
4988.21 15		<4 fs	B L	
5064.8 <sup>‡</sup>			D L	XREF: D(5050).
5081?			L	
5099.26 21		<11 fs	B D F L	XREF: D(5110)F(5110).
5122.11 17			B L	
5172.55 15	1/2 <sup>-a</sup>	7 fs +7-3	B DEFGH J L	T=3/2 (1981Ka38) XREF: H(5150). Identified as analog state of 411 (1/2 <sup>-</sup> ) keV in <sup>55</sup> Fe in (p,γ), ( <sup>3</sup> He,d) and ( <sup>3</sup> He,dγ). T <sub>1/2</sub> : other: <28 fs ( <sup>3</sup> He,dγ).
5188.8 <sup>‡</sup> 15	(1/2) <sup>-</sup>		D L	J <sup>π</sup> : J=1/2 from σ(θ), π=- from L(d,n)=1.
5242 10			G	E(level): evaluator regards this level as a possible doublet. One member decays to ground state and has J≥3/2; the other decays to 2166(3/2 <sup>-</sup> ) level and has J <sup>π</sup> =3/2 <sup>-</sup> .
5258.99 16		11 fs 6	B F L	XREF: F(5263)L(5256).
5267.9 16			L	
5293.0 7			B L	
5309.5 15			L	
5320? 80	5/2 <sup>-</sup> , 7/2 <sup>-</sup>		H	J <sup>π</sup> : L(α,t)=3.
5351.00 25			B F L	XREF: F(5354)L(5349).
5365.0 <sup>‡</sup> 17			D L	XREF: D(5380).
5426.6 18			L	
5431.7 4	17/2 <sup>-</sup>		I	
5460.76 21		<6 fs	B D L	XREF: D(5480).
5483.8 <sup>‡</sup> 17	-		H L	XREF: H(5490). J <sup>π</sup> : L(α,t)=(1,3).
5526.1 16			L	
5541.1 <sup>‡</sup> 17			G L	

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**Adopted Levels, Gammas (continued)** $^{55}\text{Co}$  Levels (continued)

E(level) <sup>†</sup>	J <sup>π&amp;</sup>	T <sub>1/2</sub> <sup>c</sup>	XREF	Comments
5560.0 3	1/2 <sup>-</sup> , 3/2 <sup>-</sup>		B D F L	XREF: F(5550)L(5556). J <sup>π</sup> : L( <sup>3</sup> He,d)=1.
5642.1 <sup>‡</sup> 19			D LM	XREF: M(5610).
5672.7 <sup>‡</sup> 16			D L	
5697.2 17			L	
5716.6 10			B L	XREF: L(5713).
5743 2	5/2 <sup>-a</sup>		D FGH KL	T=3/2 (1981Ka38) XREF: F(5749)G(5737)H(5720)K(5740). E(level): (p,α). Identified as analog state of 931 (J <sup>π</sup> =5/2 <sup>-</sup> ) level in <sup>55</sup> Fe in ( <sup>3</sup> He,d) and (d,n).
5763.8 <sup>‡</sup> 17	(5/2 <sup>-</sup> )		D G J L	XREF: D(5760)G(5758). J <sup>π</sup> : σ(θ) in ( <sup>7</sup> Li, <sup>6</sup> He).
5781.5 <sup>‡</sup> 16			F L	XREF: F(5792).
5860 <sup>‡</sup>			F L	XREF: F(5856).
5883 10	1/2 <sup>-</sup> , 3/2 <sup>-</sup>		F	E(level): from ( <sup>3</sup> He,d). J <sup>π</sup> : L( <sup>3</sup> He,d)=1.
5932.6 <sup>#</sup> 11			D L	XREF: D(5910).
5942.8 <sup>#</sup> 11			B L	
5959.7 <sup>‡</sup> 17			D L	
5985.8 <sup>‡</sup> 17	7/2 <sup>+</sup> , 9/2 <sup>+</sup>		F H LM	XREF: F(5990)H(6010)M(6000). J <sup>π</sup> : L(α,t)=L( <sup>16</sup> O, <sup>15</sup> N)=4.
6008.4 <sup>#</sup> 13	1/2 <sup>-</sup> , 3/2 <sup>-</sup>		B F L	XREF: F(6012). J <sup>π</sup> : L( <sup>3</sup> He,d)=1.
6035.4 <sup>‡</sup> 17			D L	XREF: D(6040).
6062.6 17			L	
6068.8 9	9/2 <sup>+</sup> a	<17.5 fs	B D F JKL	XREF: D(6080)F(6066)J(6080)L(6073). E(level): antianalog of 3814 (9/2 <sup>+</sup> ) in <sup>55</sup> Fe.
6093.5 <sup>‡</sup> 17	(7/2 <sup>-</sup> )		F L	XREF: F(6099). J <sup>π</sup> : L( <sup>3</sup> He,d)=3 and σ(θ) in ( <sup>3</sup> He,d).
6126.6 19			L	
6144.6 <sup>#</sup> 11			B L	
6149.90 17	(5/2 <sup>+</sup> )		B F	J <sup>π</sup> : L( <sup>3</sup> He,d)=2 and σ(θ) in ( <sup>3</sup> He,d).
6167.1 <sup>‡</sup> 18			D L	XREF: D(6170).
6176.5 11			B D	XREF: D(6170).
6205.29 16	(5/2 <sup>+</sup> )		B D F L	XREF: D(6190). J <sup>π</sup> : L( <sup>3</sup> He,d)=2, σ(θ) in ( <sup>3</sup> He,d).
6217.7 <sup>‡</sup> 21			D L	XREF: D(6220).
6250.1 19			L	
6268.22 10	3/2 <sup>-</sup>		B D F L	XREF: D(6280)F(6263)L(6263). J <sup>π</sup> : M1+E2 γ to 1/2 <sup>-</sup> 2104.
6328.29 11	(3/2 <sup>-</sup> )		D F L	XREF: D(6340). J <sup>π</sup> : L( <sup>3</sup> He,d)=1, σ(θ) in ( <sup>3</sup> He,d).
6332.6 5	(17/2 <sup>-</sup> )		I	
6340.9 <sup>‡</sup> 20	(5/2 <sup>-</sup> , 7/2 <sup>-</sup> )		H L	J <sup>π</sup> : L(α,t)=(3).
6361.3 20			L	
6369.36 23	(5/2 <sup>+</sup> )		B F	J <sup>π</sup> : L( <sup>3</sup> He,d)=2, σ(θ) in ( <sup>3</sup> He,d).
6376.7 <sup>‡</sup> 24			L	
6405 <sup>‡</sup> 3			D L	XREF: D(6390).
6426.3 <sup>‡</sup> 36			L	

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**Adopted Levels, Gammas (continued)**

<sup>55</sup>Co Levels (continued)

E(level) <sup>†</sup>	J <sup>π&amp;</sup>	XREF	Comments
6446.6 <sup>‡</sup> 19	(5/2) <sup>-</sup>	F L	J <sup>π</sup> : L( <sup>3</sup> He,d)=3, σ(θ) in ( <sup>3</sup> He,d).
6464.8 11	(23/2 <sup>-</sup> )	D I	XREF: D(6470). J <sup>π</sup> : γ(E2) to (19/2) <sup>-</sup> 4514 level in (HI,xny).
6486?		L	
6508.2 19		L	E(level): possible doublet (1974Go31).
6513.45 9	3/2,(5/2)	B F	J <sup>π</sup> : γ(θ) to 7/2 <sup>-</sup> , 1/2 <sup>-</sup> , and 3/2 <sup>-</sup> in (p,γ).
6531?		L	
6541.1 <sup>‡</sup> 21		D L	
6576.3 <sup>‡</sup> 20		H L	XREF: H(6560).
6596.5 3	19/2 <sup>-</sup>	I	
6603.4 <sup>‡</sup> 19	7/2 <sup>+</sup> ,9/2 <sup>+</sup>	F L	XREF: F(6600). J <sup>π</sup> : L( <sup>3</sup> He,d)=4.
6627?		L	
6641.6 4	19/2 <sup>-</sup>	I	
6652.2 <sup>‡</sup> 19		D L	XREF: D(6660).
6673.0 <sup>#</sup> 11	(5/2) <sup>-</sup>	B F	J <sup>π</sup> : σ(θ) and L=3 in ( <sup>3</sup> He,d).
6689.10 16		B	
6701.26 16	5/2	B	J <sup>π</sup> : γ(θ) to 7/2 <sup>-</sup> g.s., 3/2 <sup>-</sup> 2166, and 3/2 <sup>+</sup> 3563 levels.
6713.26 14	(1/2) <sup>-</sup>	B F	XREF: F(6709). E(level): identified as analog of 1919 state in <sup>55</sup> Fe; ΔE(Coul.)=9038 keV 15 in ( <sup>3</sup> He,d).
6755.40 17	5/2	B D F	J <sup>π</sup> : γ(θ) to 3/2 <sup>-</sup> 2166, 1/2 <sup>+</sup> 2922, 1/2 <sup>-</sup> ,(3/2) <sup>-</sup> 2939, 1/2 <sup>-</sup> 3323, 3/2 <sup>-</sup> 3643, 1/2 <sup>-</sup> ,3/2 <sup>-</sup> 3943, and 5461 levels are isotropic, which suggests J=1/2; L=1 in ( <sup>3</sup> He,d): π=-. XREF: D(6740)F(6750). J <sup>π</sup> : γ(θ) to 7/2 <sup>-</sup> g.s. and 3/2 <sup>-</sup> 2166 lead to J=3/2 or 5/2; when J=3/2, the recommended upper limits will be exceeded for E2/M3 and M2/E3 transitions to 7/2 <sup>-</sup> g.s.; also, one cannot assign parity from strengths of primary transitions to 7/2 <sup>-</sup> g.s. and 3/2 <sup>-</sup> 2166; so J=5/2 is proposed.
6780.16 11	5/2 <sup>-</sup>	B F	XREF: F(6775). J <sup>π</sup> : γ(θ) analyses and M1+E2 γ to 7/2 <sup>-</sup> g.s., 3/2 <sup>-</sup> 2166, 3/2 <sup>-</sup> 2566, and 5/2 <sup>-</sup> 2659 in (p,γ);
6801.8 <sup>#</sup> 11	( <sup>+</sup> )	B D H	J <sup>π</sup> : L(α,t)=(2+4).
6825.4 11		B	
6834.28 9	3/2 <sup>-</sup>	B F	XREF: F(6830). E(level): identified as analog state of 3/2 <sup>-</sup> 2052 state in <sup>55</sup> Fe; ΔE(Coul.)=9026 keV 18 in ( <sup>3</sup> He,d).
6835.7? 6	5/2 <sup>(-)</sup>	B D	J <sup>π</sup> : γ(θ) and M1+E2 γ to 3/2 <sup>-</sup> 2166, 3/2 <sup>-</sup> 2566, 5/2 <sup>-</sup> 3725, 3/2 <sup>-</sup> 4164, and 3/2 <sup>-</sup> 4721. XREF: D(6850). J <sup>π</sup> : γ(θ) of γ to 7/2 <sup>-</sup> g.s. allows J=5/2 or 9/2 (1972Ma26). The resonance strength 0.37 eV 5 determined by 1972Ma26 ruled out J=9/2. π=(-) from L=(3) in ( <sup>3</sup> He,d).
6876.33 19	7/2 <sup>-</sup> ,9/2	B D	XREF: D(6850). J <sup>π</sup> : γ(θ) to 7/2 <sup>-</sup> g.s. allows J=7/2 or 9/2; RUL rules out 7/2 <sup>+</sup> .
6885.8 11		B	
6893.3 <sup>#</sup> 11	(5/2) <sup>-</sup>	B D F	XREF: D(6900)F(6896). E(level): identified as analog state of 2144 (5/2 <sup>-</sup> ) state in <sup>55</sup> Fe in ( <sup>3</sup> He,d). ΔE(Coul.)=9014 keV 17 in ( <sup>3</sup> He,d).
6917.35 9	5/2 <sup>-</sup>	B F J	J <sup>π</sup> : σ(θ) and L=3 in ( <sup>3</sup> He,d). E(level): identified as analog state of 2144(5/2 <sup>-</sup> ) state in <sup>55</sup> Fe. ΔE(Coul.)=9014 keV 17 in ( <sup>3</sup> He,d).
6939.9 11		B	J <sup>π</sup> : L( <sup>3</sup> He,d)=3. M1+E2 γ to 4721, 3/2 <sup>-</sup> gives J <sup>π</sup> =5/2 <sup>-</sup> .

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**Adopted Levels, Gammas (continued)**

<sup>55</sup>Co Levels (continued)

E(level) <sup>†</sup>	J <sup>π</sup> &	XREF	Comments
6944.19 21	(1/2 <sup>-</sup> )	BC	J <sup>π</sup> : σ(θ) in (p,p).
6951.14 10		B	
7008.19 9		B	
7025.34 15		B	
7038.23 20	(1/2 <sup>-</sup> , 3/2 <sup>-</sup> )	B F	XREF: F(7045).
7101.54 8	5/2	B	J <sup>π</sup> : L( <sup>3</sup> He,d)=(1).
7110 10	(9/2) <sup>+</sup>	D F H J	J <sup>π</sup> : γ(θ) to 7/2 <sup>-</sup> g.s. allows J=3/2 or 5/2; γ(θ) to 5/2 <sup>-</sup> 2659 rules out 3/2. XREF: D(7090)H(7050)J(7130).
7153.2 3		B J	E(level): from ( <sup>3</sup> He,d).
7193.15 9	5/2	B	J <sup>π</sup> : σ(θ) and L=4 in ( <sup>3</sup> He,d).
7233.48 25	(3/2)	B	XREF: J(7130).
7236.9 70	(1/2 <sup>-</sup> )	C	J <sup>π</sup> : γ(θ) to 7/2 <sup>-</sup> g.s., 3/2 <sup>-</sup> 2566, 3/2 <sup>+</sup> 3563.
7239 3	7/2 <sup>+</sup> , 9/2 <sup>+</sup>	F	J <sup>π</sup> : γ(θ) to 3/2 <sup>-</sup> 2165 analysis.
7239.26 10	(3/2 <sup>-</sup> )	B	J <sup>π</sup> : L( <sup>3</sup> He,d)=4.
7261.2 11	(1/2 <sup>-</sup> )	B	E(level): identified as analog state of 2471(3/2 <sup>-</sup> ) state in <sup>55</sup> Fe; ΔE(Coul.)=8993 keV 3 in <sup>55</sup> Fe- <sup>55</sup> Co pair.
7269.16 7	3/2 <sup>-</sup>	BCD F	XREF: C(7277)D(7280)F(7275).
7284.4 3		B	E(level): identified as analog state of 2471(3/2 <sup>-</sup> ) state in <sup>55</sup> Fe; ΔE(Coul.)=9052 keV 16 in ( <sup>3</sup> He,d), 9031 keV 3 in (p,γ).
7293.35 10	5/2 <sup>-</sup>	B F	J <sup>π</sup> : J=3/2 from γ(θ) to 3/2 <sup>-</sup> 2166, 5/2 <sup>-</sup> 2659, 5/2 <sup>-</sup> 3303, 5/2 <sup>-</sup> 3725, and 3/2 <sup>-</sup> 4721; π=- from corresponding M1+E2 multipolarities in (p,γ).
7319.56 14	5/2	B	J <sup>π</sup> : γ(θ) and M1+E2 γ to 3/2 <sup>-</sup> 2166, 7/2 <sup>-</sup> 2918, 3/2 <sup>-</sup> 4721, and 3/2 <sup>-</sup> 4747 in (p,γ).
7325.37 13		B F	J <sup>π</sup> : from γ(θ) to 7/2 <sup>-</sup> g.s., 3/2 <sup>-</sup> 2566, 7/2 <sup>-</sup> 2918, and 5/2 <sup>-</sup> 3303.
7328.2 70	(1/2 <sup>-</sup> )	C	J <sup>π</sup> : from (p,p)(p,p'), see 1971Li04.
7332.27 23		B	
7335.8 10		B	
7345.7 10		B	
7361.1 10		B	
7364.1 11		B	
7372.1 10		B	
7374.6 11		B	
7381.4 <sup>#</sup> 11	1/2 <sup>-</sup>	BC	
7393.1 <sup>#</sup> 10		B	
7402.8 <sup>#</sup> 11		B F	
7455.6 70	1/2 <sup>-</sup>	C	
7457.3 20	1/2 <sup>-</sup>	BC	
7460.1 10	3/2 <sup>(-)</sup>	B F	XREF: F(7467).
7496.7		B	J <sup>π</sup> : L( <sup>3</sup> He,d)=(1), σ(θ) in ( <sup>3</sup> He,d).
7500.5 20		B	
7519.2 10	1/2 <sup>-</sup>	B	
7525.1 20		B F	XREF: F(7534).
7529.4 6	19/2 <sup>-</sup>	I	
7564.41 17		BC	
7578.37 25	(3/2) <sup>+</sup>	B F	J <sup>π</sup> : σ(θ) and L=2 in ( <sup>3</sup> He,d).
7595.28 25	(3/2 <sup>-</sup> )	BC	
7611.38 23		B	
7622.3 <sup>#</sup> 20	3/2 <sup>+</sup> , 5/2 <sup>+</sup>	B D F	XREF: D(7600).
7627.7 5	(5/2)	B D	J <sup>π</sup> : L( <sup>3</sup> He,d)=2. XREF: D(7600).

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**Adopted Levels, Gammas (continued)** $^{55}\text{Co}$  Levels (continued)

E(level) <sup>†</sup>	J <sup>π&amp;</sup>	XREF	Comments
7633.65 23	(5/2 <sup>-</sup> )	B D	E(level): identified by <a href="#">1989Di08</a> as analog state of 2573-keV (5/2 <sup>-</sup> ) state in $^{55}\text{Fe}$ . ΔE(Coul.)=8991 keV in $^{55}\text{Fe}$ - $^{55}\text{Co}$ pair ( <a href="#">1989Di08</a> ). XREF: D(7600).
7642.55 23	(1/2 <sup>-</sup> )	B	E(level): identified by <a href="#">1989Di08</a> as analog state of 2872-keV (5/2 <sup>-</sup> ,7/2 <sup>-</sup> ) state in $^{55}\text{Fe}$ . ΔE(Coul.)=8997 keV in $^{55}\text{Fe}$ - $^{55}\text{Co}$ pair ( <a href="#">1989Di08</a> ).
7650.84 22	(5/2 <sup>-</sup> )	B F	E(level): identified by <a href="#">1989Di08</a> as analog state of 2872-keV and 2939-keV (5/2 <sup>-</sup> ,7/2 <sup>-</sup> ) states in $^{55}\text{Fe}$ . ΔE(Coul.)=9014 keV and 8947 keV, respectively, in $^{55}\text{Fe}$ - $^{55}\text{Co}$ pair ( <a href="#">1989Di08</a> ).
7662.96 22	(1/2 <sup>-</sup> )	BC	J <sup>π</sup> : σ(θ) and L=3 in ( $^3\text{He}$ ,d).
7680.3 3	(5/2)	B	E(level): identified by <a href="#">1989Di08</a> as analog state of 2939-keV (5/2 <sup>-</sup> ,7/2 <sup>-</sup> ) state in $^{55}\text{Fe}$ . ΔE(Coul.)=8977 keV in $^{55}\text{Fe}$ - $^{55}\text{Co}$ pair ( <a href="#">1989Di08</a> ).
7703.98 20	(5/2 <sup>-</sup> )	BC F	XREF: F(7707). E(level): identified by <a href="#">1989Di08</a> as analog state of 2939-keV (5/2 <sup>-</sup> ,7/2 <sup>-</sup> ) state in $^{55}\text{Fe}$ . ΔE(Coul.)=9001 keV in $^{55}\text{Fe}$ - $^{55}\text{Co}$ pair ( <a href="#">1989Di08</a> ).
7747.1 3	(5/2)	BC	J <sup>π</sup> : σ(θ) and L=3 in ( $^3\text{He}$ ,d). E(level): identified by <a href="#">1989Di08</a> as analog state of 2939-keV (5/2 <sup>-</sup> ,7/2 <sup>-</sup> ) state in $^{55}\text{Fe}$ . ΔE(Coul.)=9044 keV in $^{55}\text{Fe}$ - $^{55}\text{Co}$ pair ( <a href="#">1989Di08</a> ).
7748.9 <sup>#</sup> 10	(5/2 <sup>-</sup> )	B F	J <sup>π</sup> : σ(θ) and L=3 in ( $^3\text{He}$ ,d).
7764.7 70	3/2 <sup>-</sup>	BC F	XREF: B(7767)F(7768).
7765.6 70	1/2 <sup>-</sup>	C F	XREF: F(7768).
7779.1 70	1/2 <sup>+</sup>	BC	
7791.5 10		B	
7806.1 5		B	
7815.86 23	1/2 <sup>-</sup>	BC	
7833.2 3	21/2 <sup>-</sup>		I
7836.7 70	1/2 <sup>-</sup>	C	
7855.4? 21			I
7867.6 3	(5/2)	B	E(level): identified by <a href="#">1989Di08</a> as analog state of 3109-keV (5/2 <sup>-</sup> ,7/2 <sup>-</sup> ) state in $^{55}\text{Fe}$ . ΔE(Coul.)=8996 keV in $^{55}\text{Fe}$ - $^{55}\text{Co}$ pair ( <a href="#">1989Di08</a> ).
7876.86 23	(5/2 <sup>-</sup> ) <sup>b</sup>	BC	E(level): identified by <a href="#">1989Di08</a> as analog state of 3109-keV (5/2 <sup>-</sup> ,7/2 <sup>-</sup> ) state in $^{55}\text{Fe}$ . ΔE(Coul.)=9003 keV in $^{55}\text{Fe}$ - $^{55}\text{Co}$ pair ( <a href="#">1989Di08</a> ).
7881.0 3	(3/2 <sup>-</sup> )	C F	XREF: F(7888). J <sup>π</sup> : σ(θ) and L=2 in ( $^3\text{He}$ ,d).
7885.1 3	(7/2)	B	E(level): identified by <a href="#">1989Di08</a> as analog state of 3109-keV (5/2 <sup>-</sup> ,7/2 <sup>-</sup> ) state in $^{55}\text{Fe}$ . ΔE(Coul.)=9012 keV in $^{55}\text{Fe}$ - $^{55}\text{Co}$ pair ( <a href="#">1989Di08</a> ).
7889.0 <sup>#</sup> 10		B	
7895.7 <sup>#</sup> 10		B	
7909.0 <sup>#</sup> 10		B	
7920.7 5	19/2 <sup>-</sup>		I
7930.8 <sup>#</sup> 10		B	
7938.83 23	(3/2 <sup>-</sup> )	B	
7941.1 <sup>#</sup> 10		B	
7946.4 <sup>#</sup> 10		B	
7951.9 <sup>#</sup> 10		B	
7955.7 70	1/2 <sup>+</sup>	C	
7965.10 21	1/2 <sup>-</sup>	BC	
7966.8 3	(5/2 <sup>+</sup> )	BC F	J <sup>π</sup> : σ(θ) and L=2 in ( $^3\text{He}$ ,d).
7976.85 10	(5/2 <sup>+</sup> )	B	
7984.6 <sup>#</sup> 10		B	

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**Adopted Levels, Gammas (continued)**

<sup>55</sup>Co Levels (continued)

E(level) <sup>†</sup>	J <sup>π</sup> &	XREF	Comments
8007.3 <sup>#</sup> 10		B	
8016.9 <sup>#</sup> 10		B	
8020.6 4	(5/2) <sup>-</sup>	B F	XREF: F(8026). J <sup>π</sup> : σ(θ) and L=3 in ( <sup>3</sup> He,d).
8029.8 70	1/2 <sup>-</sup>	C	
8030.3 70	1/2 <sup>-</sup>	C	
8050.8 <sup>#</sup> 10		B	
8056.7 3	1/2 <sup>-</sup>	BC	
8065.9 70	3/2 <sup>-</sup>	C	
8067.0 3	3/2 <sup>-</sup>	BC	
8071.5 3	(7/2) <sup>-</sup>	B F	XREF: F(8068). J <sup>π</sup> : σ(θ) and L=3 in ( <sup>3</sup> He,d).
8075.5 <sup>#</sup> 10		B	
8089.0 70	(3/2) <sup>+</sup>	C	
8090.0? 14		I	
8096.8 <sup>#</sup> 10		B	
8105.94 23	(5/2) <sup>-</sup>	BC F	J <sup>π</sup> : σ(θ) and L=3 in ( <sup>3</sup> He,d).
8124.1 70	(1/2) <sup>-</sup>	C	
8130.6 <sup>#</sup> 3	5/2 <sup>+</sup>	C F	XREF: F(8131). J <sup>π</sup> : σ(θ) and L=2 in ( <sup>3</sup> He,d).
8134.1 <sup>#</sup> 3	1/2 <sup>-</sup>	BC	
8137.1 <sup>#</sup> 10	5/2 <sup>-b</sup>	B	
8140.6 <sup>#</sup> 10	3/2 <sup>-b</sup>	B	
8144.91 25	1/2 <sup>-</sup>	C	
8155.6 <sup>#</sup> 10	7/2 <sup>-b</sup>	B	
8158.7 5	21/2 <sup>-</sup>	I	
8168.3 <sup>#</sup> 10	5/2 <sup>+b</sup>	B	
8172.0 <sup>#</sup> 10	5/2 <sup>+</sup>	B	
8173.5 70	(1/2) <sup>-</sup>	C F	J <sup>π</sup> : σ(θ) and L=1 in ( <sup>3</sup> He,d).
8180.3 <sup>#</sup> 10		B	
8191.0 4	1/2 <sup>-</sup>	BC	
8200.0 <sup>#</sup> 10	5/2 <sup>-b</sup>	B	
8204.6 <sup>#</sup> 10		B	
8208.7 <sup>#</sup> 10		B	
8212.2 70	1/2 <sup>+</sup>	C	
8215.4 70	(3/2) <sup>+</sup>	C	
8221.5 <sup>#</sup> 10		B	
8235.3 70	(5/2) <sup>+</sup>	C F	XREF: F(8231). J <sup>π</sup> : σ(θ) and L=2 in ( <sup>3</sup> He,d).
8240.4 3		B	
8261.8 <sup>#</sup> 10	3/2 <sup>-b</sup>	B	
8273.4 3	(5/2) <sup>b</sup>	B	
8283.9 3	3/2 <sup>-</sup>	BC	
8286.5 70	3/2 <sup>-</sup>	C	
8288.3 20	3/2 <sup>-</sup>	C	
8291.0 3	(5/2) <sup>-</sup>	B F	J <sup>π</sup> : σ(θ) and L=3 in ( <sup>3</sup> He,d).
8294.8 3	3/2 <sup>-</sup>	BC	E(level): identified by <a href="#">1989Di08</a> as analog state of 3552-keV (3/2 <sup>-</sup> ) state in <sup>55</sup> Fe. ΔE(Coul.)=8978 keV in <sup>55</sup> Fe- <sup>55</sup> Co pair ( <a href="#">1989Di08</a> ).
8299.8 20	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	BC	E(level): identified by <a href="#">1989Di08</a> as analog state of 3552-keV (3/2 <sup>-</sup> ) state in <sup>55</sup> Fe.

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**Adopted Levels, Gammas (continued)**

<u><sup>55</sup>Co Levels (continued)</u>					
E(level) <sup>†</sup>	J <sup>π&amp;</sup>	T <sub>1/2</sub> <sup>c</sup>	XREF	Comments	
ΔE(Coul.)=8983 keV in <sup>55</sup> Fe- <sup>55</sup> Co pair (1989Di08).					
8308.5 <sup>#</sup> 10			B		
8336.7 <sup>#</sup> 10	5/2 <sup>+</sup> <sup>b</sup>		B		
8348.9 3	23/2 <sup>-</sup>			I	
8356.0 <sup>#</sup> 10			B		
8360.0 7	7/2,9/2 <sup>b</sup>		B		
8369.3 <sup>#</sup> 10	3/2 <sup>-</sup> <sup>b</sup>		B		
8374.0 5	1/2 <sup>-</sup> ,3/2 <sup>-</sup>		C F		XREF: F(8380). J <sup>π</sup> : L( <sup>3</sup> He,d)=1.
8384.0 3	5/2 <sup>+</sup>		BC		
8388.5 20	3/2 <sup>-</sup>		C		
8390.8 3	5/2 <sup>+</sup>		BC		
8395.1 20	3/2 <sup>-</sup>		C		
8400.8 8				I	
8412.0 3	(3/2) <sup>b</sup>		B		
8417.9 3	5/2 <sup>+</sup> <sup>b</sup>		BC		
8421.3 20	(5/2) <sup>+</sup>		C F		XREF: F(8418). J <sup>π</sup> : σ(θ) and L=2 in ( <sup>3</sup> He,d).
8431.3 4	3/2 <sup>-</sup> <sup>b</sup>		B		
8435.7 5	3/2 <sup>+</sup> , (5/2 <sup>+</sup> )		BC		
8440.0 3			B		
8444.8 20	(1/2,3/2) <sup>-</sup>		C		
8456.7 5	(1/2,3/2)		B		E(level): identified by 1989Di08 as analog state of 3801-keV (3/2 <sup>-</sup> ) state in <sup>55</sup> Fe. ΔE(Coul.)=8891 keV in <sup>55</sup> Fe- <sup>55</sup> Co pair (1989Di08).
8457.4 20	3/2 <sup>+</sup> , (5/2 <sup>+</sup> )		C		
8463.9 5	9/2 <sup>+</sup>		B		E(level): identified by 1989Di08 as analog state of 3814-keV (7/2 <sup>+</sup> ,9/2 <sup>+</sup> ) state in <sup>55</sup> Fe. ΔE(Coul.)=8885 keV in <sup>55</sup> Fe- <sup>55</sup> Co pair (1989Di08).
8465.6 10			B		
8467.3 7	9/2 <sup>+</sup>	<6 fs	B	M	T=3/2 (1981Ka38) XREF: M(8440). E(level): identified by 1989Di08 as IAR of 3814(7/2 <sup>+</sup> ,9/2 <sup>+</sup> ) state in <sup>55</sup> Fe; ΔE(Coul.)=8885 keV in <sup>55</sup> Fe- <sup>55</sup> Co pair from (p,γ). J <sup>π</sup> : from analyzing power in (pol <sup>3</sup> He,d).
8468.7 4	7/2 <sup>+</sup>	<6 fs	B	M	XREF: M(8440). E(level): identified by 1989Di08 as IAR of 3814(7/2 <sup>+</sup> ,9/2 <sup>+</sup> ) in <sup>55</sup> Fe; ΔE(Coul.)=8889 keV in (p,γ). J <sup>π</sup> : γ(θ) and E1 transitions to 7/2 <sup>-</sup> g.s., M1 to 9/2 <sup>+</sup> .
8476.4 7	9/2 <sup>+</sup>		BC	J M	XREF: J(8490)M(8440). E(level): identified by 1989Di08 as IAR of 3814(9/2 <sup>+</sup> ) in <sup>55</sup> Fe; ΔE(Coul.)=8898 keV in <sup>55</sup> Fe- <sup>55</sup> Co. J <sup>π</sup> : γ(θ) and E1 transitions to 7/2 <sup>-</sup> g.s. and 7/2 <sup>-</sup> 2918.
8476.7 20	1/2 <sup>-</sup>		C	J	XREF: J(8490). E(level): identified as IAR of 3791 (1/2 <sup>-</sup> ) state in <sup>55</sup> Fe.
8478.7 5	5/2		B		
8494.1 20	1/2 <sup>-</sup>		C	H J	XREF: H(8500)J(8490).
8503.8 20	3/2 <sup>-</sup>		C	H	XREF: H(8500).
8505.3 3	3/2 <sup>+</sup>		B	H	XREF: H(8500).
8507.4 20	5/2 <sup>+</sup>		C		
8514.8 <sup>#</sup> 10	5/2 <sup>-</sup> <sup>b</sup>		B		
8532.4 <sup>#</sup> 10	5/2 <sup>-</sup> <sup>b</sup>		B		
8557.0 4	7/2 <sup>-</sup> <sup>b</sup>		B		

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**Adopted Levels, Gammas (continued)**

<sup>55</sup>Co Levels (continued)

E(level) <sup>†</sup>	J <sup>π</sup> &	XREF	Comments
8559.3 5	7/2,9/2 <sup>b</sup>	B	
8561.5 <sup>#</sup> 10		B	
8565.3 20	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	C F	XREF: F(8557). J <sup>π</sup> : L( <sup>3</sup> He,d)=1.
8566.8 20	3/2 <sup>-</sup>	C	
8569.0 20	1/2 <sup>+</sup>	C	
8575.2 20	3/2 <sup>+</sup> <sup>b</sup>	C	
8583.6 5	5/2 <sup>+</sup>	BC	
8596.5 <sup>#</sup> 10		B	
8605.4 <sup>#</sup> 10	3/2 <sup>-</sup>	B	E(level): identified as analog state of 3907-keV (1/2 <sup>-</sup> ,3/2 <sup>-</sup> ) state in <sup>55</sup> Fe by <a href="#">1989Di08</a> . ΔE(Coul.)=8957 keV in <sup>55</sup> Fe- <sup>55</sup> Co pair ( <a href="#">1989Di08</a> ).
8628.1 20	3/2 <sup>-</sup>	C	
8635.2 <sup>#</sup> 10	(3/2) <sup>b</sup>	B	
8644.2 4	5/2 <sup>+</sup>	C	J <sup>π</sup> : σ(θ) and L=2 in ( <sup>3</sup> He,d).
8649.2 20	3/2 <sup>+</sup>	C	
8652.4 5		B	
8659.1 20	1/2 <sup>-</sup>	C	
8662.1 20	3/2 <sup>+</sup> <sup>b</sup>	C	
8663 10	(9/2) <sup>+</sup>	F	E(level): from ( <sup>3</sup> He,d). J <sup>π</sup> : σ(θ) and L=4 in ( <sup>3</sup> He,d).
8667.6 20	3/2 <sup>-</sup>	C	
8680.0 4	1/2 <sup>+</sup>	BC	
8683.1 3		B	
8687.1 5	(21/2)	I	
8688.9 20	3/2 <sup>+</sup> ,5/2 <sup>+</sup>	C	
8689.7 4	23/2 <sup>-</sup>	I	
8692.5 3		B	
8697 10	(9/2) <sup>+</sup>	F	E(level): from ( <sup>3</sup> He,d). J <sup>π</sup> : σ(θ) and L=4 in ( <sup>3</sup> He,d).
8703.6 5	9/2 <sup>+</sup> <sup>b</sup>	B	
8706.8 3	3/2,5/2 <sup>b</sup>	B	
8710.8 <sup>#</sup> 10		B	
8717.7 <sup>#</sup> 10		B	
8720.4 20	1/2 <sup>+</sup>	C	
8724.8 20	(5/2 <sup>+</sup> )	C	
8729.6 <sup>#</sup> 10	3/2 <sup>+</sup> <sup>b</sup>	B	
8745.4 20	(5/2) <sup>+</sup>	C	J <sup>π</sup> : σ(θ) and L=2 in ( <sup>3</sup> He,d).
8745.6 4	3/2 <sup>-</sup>	BC	
8750.1 <sup>#</sup> 10	5/2 <sup>-</sup>	BC	
8752.2 20	3/2 <sup>+</sup>	C	
8753.9 4	5/2 <sup>-</sup>	BC	
8757.3 <sup>#</sup> 10		B	
8766.1 <sup>#</sup> 10		B	
8768.6 <sup>#</sup> 10		B	
8773.2 20	1/2 <sup>+</sup>	C	
8790.2 <sup>#</sup> 10	(5/2,7/2)	B	E(level): identified by <a href="#">1989Di08</a> as analog state of 4057-keV (5/2 <sup>-</sup> ,7/2 <sup>-</sup> ) state in <sup>55</sup> Fe. ΔE(Coul.)=8969 keV in <sup>55</sup> Fe- <sup>55</sup> Co pair ( <a href="#">1989Di08</a> ).
8798.3 5	3/2 <sup>-</sup>	BC	
8799.7 20	5/2 <sup>-</sup>	C	E(level): identified as IAR of 4028 (5/2 <sup>-</sup> ) state in <sup>55</sup> Fe.
8801.9 20	5/2 <sup>+</sup>	C	

Continued on next page (footnotes at end of table)

**Adopted Levels, Gammas (continued)**

<sup>55</sup>Co Levels (continued)

E(level) <sup>†</sup>	J <sup>π&amp;</sup>	XREF	Comments
8803.44 24	7/2 <sup>-</sup>	BC	E(level): identified by 1989Di08 as analog state of 4057-keV (5/2 <sup>-</sup> ,7/2 <sup>-</sup> ) state in <sup>55</sup> Fe. ΔE(Coul.)=8982 keV in <sup>55</sup> Fe- <sup>55</sup> Co pair (1989Di08).
8813.8 20	5/2 <sup>+</sup>	C J	
8825.6 <sup>#</sup> 10	7/2 <sup>-</sup>	BC F	XREF: F(8814). J <sup>π</sup> : σ(θ) and L=3 in ( <sup>3</sup> He,d). E(level): identified by 1989Di08 as analog state of 4057-keV (5/2 <sup>-</sup> ,7/2 <sup>-</sup> ) state in <sup>55</sup> Fe. ΔE(Coul.)=9004 keV in <sup>55</sup> Fe- <sup>55</sup> Co pair (1989Di08).
8834.7 <sup>#</sup> 10	(5/2 <sup>-</sup> )	BC	E(level): identified by 1989Di08 as analog state of 4057-keV (5/2 <sup>-</sup> ,7/2 <sup>-</sup> ) state in <sup>55</sup> Fe. ΔE(Coul.)=9013 keV in <sup>55</sup> Fe- <sup>55</sup> Co pair (1989Di08).
8844.6 20	1/2 <sup>-</sup>	C	
8854.4 20	5/2 <sup>-</sup>	C	
8855.67 23	5/2 <sup>+</sup>	BC	
8879.4 20	3/2 <sup>-</sup>	C	
8883.4 20	5/2 <sup>+</sup>	C	
8886.3 20	5/2 <sup>+</sup>	C	
8895.5 20	1/2 <sup>+</sup>	C	
8898.0 20	1/2 <sup>-</sup>	C F	XREF: F(8901).
8912.9 20	5/2 <sup>+</sup>	C	
8918.0 20	(5/2 <sup>+</sup> )	C	
8921.3 20	(5/2 <sup>+</sup> )	C	
8934.9 20	3/2 <sup>+</sup>	C	
8937.4 20	(1/2 <sup>-</sup> )	C	
8941.0 20	3/2 <sup>-</sup>	C	
8953.2 20	7/2 <sup>+</sup>	C M	XREF: M(8960). J <sup>π</sup> : L( <sup>16</sup> O, <sup>15</sup> N)=4.
8962.0 20	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	C	
8963.5 20	(3/2 <sup>+</sup> ),5/2 <sup>+</sup>	C	
8981.4 20	1/2 <sup>+</sup>	C	
8989.6 20	3/2 <sup>+</sup>	C	
9003.4 20	(5/2 <sup>+</sup> )	C F	J <sup>π</sup> : σ(θ) and L=2 in ( <sup>3</sup> He,d).
9006.8 20	3/2 <sup>+</sup> ,5/2 <sup>+</sup>	C	
9015.2 <sup>#</sup> 20	5/2 <sup>+</sup>	B	
9020.3 20	1/2 <sup>+</sup>	C	
9030.8 20	1/2 <sup>+</sup> ,3/2 <sup>-</sup>	C	
9044.2 20	3/2 <sup>-</sup>	C	
9046.3 20	(1/2 <sup>-</sup> )	C	
9053.4 20	3/2 <sup>+</sup> ,5/2 <sup>+</sup>	C	
9063.6 20	5/2 <sup>+</sup>	C F	XREF: F(9065).
9074.0 20	5/2 <sup>+</sup>	C	
9077.3 20	1/2 <sup>+</sup>	C	
9085.2 20	(5/2 <sup>-</sup> )	C	
9091.1 20	3/2 <sup>-</sup>	C	
9105.2 20	(9/2 <sup>+</sup> )	C	
9110.7 20	1/2 <sup>+</sup>	C	
9124.8 20	5/2 <sup>+</sup>	C F	Identified as IAR of 4463(5/2 <sup>+</sup> ) state in <sup>55</sup> Fe. ΔE(Coul.)=8910 keV 16 in <sup>55</sup> Fe- <sup>55</sup> Co pair from ( <sup>3</sup> He,d). J <sup>π</sup> : σ(θ) and L=2 in ( <sup>3</sup> He,d).
9139.4 20	5/2 <sup>+</sup>	C	
9145.2 20	3/2 <sup>+</sup> ,5/2 <sup>+</sup>	C	
9169.8 20	1/2 <sup>+</sup>	C	
9179.6 20	(5/2 <sup>+</sup> )	C	
9183.8 20	(3/2 <sup>-</sup> )	C	
9190.5 20	1/2 <sup>+</sup>	C	
9194.4 20	3/2 <sup>+</sup>	C	

Continued on next page (footnotes at end of table)

**Adopted Levels, Gammas (continued)**

<sup>55</sup>Co Levels (continued)

E(level) <sup>†</sup>	J <sup>π</sup> &	XREF	Comments
9206.0 20	3/2 <sup>-</sup>	C	
9209.0 20	1/2 <sup>-</sup>	C	
9213.7 20	(5/2 <sup>+</sup> )	C	
9217.6 20	1/2 <sup>+</sup>	C	
9225.4 20	3/2 <sup>-</sup> , (9/2 <sup>+</sup> )	C	
9228.5 20	3/2 <sup>-</sup> , (5/2 <sup>+</sup> )	B	
9231.0 20		C	
9237.7 20	3/2 <sup>-</sup>	C	
9242.0 20	3/2 <sup>+</sup> , (5/2 <sup>+</sup> )	C	
9244.1 20	5/2 <sup>-</sup>	C	
9247.2 20	5/2 <sup>+</sup>	C	
9251.6 20	1/2 <sup>-</sup>	C	
9258.2 20	(3/2 <sup>+</sup> )	C	
9263.9 20	1/2 <sup>-</sup>	C	
9273.8 20	1/2 <sup>+</sup>	C	
9278.9 20	(3/2 <sup>+</sup> ), 5/2 <sup>+</sup>	C	
9290.6 20	3/2 <sup>-</sup>	C	
9291.0 20	5/2 <sup>+</sup>	C	
9293.5 20	3/2 <sup>+</sup>	C	
9301.9 20	5/2 <sup>+</sup>	C	
9302.9 20	1/2 <sup>-</sup>	C	
9312.3 20	3/2 <sup>-</sup>	C F	XREF: F(9303). J <sup>π</sup> : from (p,p),(p,p'). L( <sup>3</sup> He,d)=(1).
9329.0 20	5/2 <sup>-</sup>	C	
9337.9 20	3/2 <sup>-</sup>	C	
9345.0 20	5/2 <sup>+</sup>	C	
9358.8 20	3/2 <sup>-</sup>	C	
9362.7 20	3/2 <sup>+</sup>	C	
9372.4 20	1/2 <sup>-</sup>	C	
9378.9 20	1/2 <sup>+</sup>	C	
9382.7 20	(5/2 <sup>+</sup> )	C	
9390.0 20	3/2 <sup>-</sup>	C	
9397.8 20	1/2 <sup>+</sup> , (5/2 <sup>+</sup> )	C	
9400.4 20	1/2 <sup>+</sup>	C	
9418.1 20	3/2 <sup>+</sup>	C	
9424.6 20	(7/2 <sup>+</sup> )	C F	J <sup>π</sup> : σ(θ) and L=4 in ( <sup>3</sup> He,d).
9429.1 20	5/2 <sup>+</sup>	C	
9447.6 20	1/2 <sup>+</sup> , 3/2 <sup>-</sup>	C	
9448.1 20	(3/2 <sup>+</sup> )	C	
9453.1 20	(3/2 <sup>+</sup> )	C	
9454.3 20	(5/2 <sup>-</sup> )	C	
9457.8 20	(5/2 <sup>+</sup> )	C F	XREF: F(9463).
9485.5 20	3/2 <sup>-</sup>	C	
9486.2 20	5/2 <sup>+</sup>	C	
9492.8 20	3/2 <sup>-</sup>	C	
9496.8 20	5/2 <sup>-</sup>	C	
9505.1 20	(1/2 <sup>-</sup> )	C	
9510.0 20	1/2 <sup>+</sup>	C	
9540	7/2 <sup>+</sup> , 9/2 <sup>+</sup>	F	J <sup>π</sup> : L( <sup>3</sup> He,d)=4.
9557.8 7	1/2 <sup>+</sup>	C	
9601	7/2 <sup>+</sup> , 9/2 <sup>+</sup>	F	J <sup>π</sup> : L( <sup>3</sup> He,d)=4.
9642		F	
9651.1 7	1/2 <sup>+</sup>	C	
9698.7 4	25/2 <sup>-</sup>	I	
9721	(9/2 <sup>+</sup> )	F	J <sup>π</sup> : L( <sup>3</sup> He,d)=4 and independent model analysis of the angular correlation data in

Continued on next page (footnotes at end of table)

**Adopted Levels, Gammas (continued)**

<sup>55</sup>Co Levels (continued)

E(level) <sup>†</sup>	J <sup>π</sup> &	XREF	Comments
9726.7 7	1/2 <sup>+</sup>	C	( <sup>3</sup> He,d).
9758 10	(9/2) <sup>+</sup>	F	J <sup>π</sup> : L( <sup>3</sup> He,d)=4 and independent model analysis of the angular correlation data in ( <sup>3</sup> He,d).
9782.3 10		I	
9793 10	(5/2 <sup>+</sup> )	F	J <sup>π</sup> : L( <sup>3</sup> He,d)=(2) and independent model analysis of the angular correlation data in ( <sup>3</sup> He,d).
9807.3 7	1/2 <sup>+</sup>	C	
9863? 10		F	
9899? 10		F	
9942? 10		F	
10113.1 7	(23/2)	I	
10545.6 6	(23/2)	I	
10580.0 5	25/2 <sup>-</sup>	I	
10759.9 10		I	
11470.1 5	25/2 <sup>-</sup>	I	
11908.2 5	25/2	I	
11962.9 8	(27/2)	I	
12118.8 8		I	
12363.2 5	27/2	I	
12613.5 14		I	
12835.5 8	(27/2)	I	
13163.0 12		I	
13339.3 6	29/2	I	
13516.7 8	(27/2 <sup>-</sup> )	I	
13685 3		I	
13818.6 10		I	
14125 3		I	
14672.6 6	31/2	I	
14730 3		I	
14881.5 9		I	

<sup>†</sup> Levels connected by gammas are from least-squares fit; others from (p,p),(p,p') res, except as noted.

<sup>‡</sup> From (p,α).

# From (p,γ).

@ g.s. transition with branching of 5% 2 is reported by 1975Ca36 in (<sup>3</sup>He,dγ) but is not confirmed by 1976Ne01, and is not consistent with RUL (B(M3)(W.u.) would be 7×10<sup>4</sup>).

& Adopted J<sup>π</sup> for resonance states (E(level)>5064 keV) are mainly taken from (p,p),(p,p') res based on σ(θ) multichannel and multilevel R-matrix analyses. Evaluator notes that sometimes the differences between cross sections for J=L+1/2 and J=L-1/2 are not very significant. So if any other arguments are available, they will be used.

<sup>a</sup> From analyzing power in (pol <sup>3</sup>He,d).

<sup>b</sup> From (p,γ).

<sup>c</sup> From (p,γ), DSA, except as noted.

Adopted Levels, Gammas (continued)

E <sub>i</sub> (level)	J <sup>π</sup> <sub>i</sub>	γ( <sup>55</sup> Co)		γ( <sup>55</sup> Co)		Mult. <sup>b</sup>	δ <sup>c</sup>	I <sub>(γ+ce)</sub>	Comments
		E <sub>γ</sub> <sup>†</sup>	I <sub>γ</sub> <sup>@</sup>	E <sub>f</sub>	J <sup>π</sup> <sub>f</sub>				
2165.89	3/2 <sup>-</sup>	2165.84 9	100.0	0.0	7/2 <sup>-</sup>	E2			B(E2)(W.u.)=9.8 8
2565.85	3/2 <sup>-</sup>	2565.789 35	100.0	0.0	7/2 <sup>-</sup>	E2			B(E2)(W.u.)=1.05 25
2659.48	5/2 <sup>-</sup>	2659.43 14	100.0	0.0	7/2 <sup>-</sup>	M1+E2			δ: δ=-0.33 8 or -2.4 4.
2918.58	7/2 <sup>-</sup>	754.5 <sup>‡</sup> 4		2165.89	3/2 <sup>-</sup>				I <sub>γ</sub> : no information on I <sub>γ</sub> is available.
		2918.43 10	100.0	0.0	7/2 <sup>-</sup>	M1+E2	+2.9 5		
2922.25	1/2 <sup>+</sup>	357.2 <sup>‡</sup> 5		2565.85	3/2 <sup>-</sup>				I <sub>γ</sub> : no information on I <sub>γ</sub> is available.
		756.2 4	100.0	2165.89	3/2 <sup>-</sup>	E1			E <sub>γ</sub> : (p,γ) and ( <sup>3</sup> He,dγ).
2939.10	1/2 <sup>-</sup>	373.20 24	36 3	2565.85	3/2 <sup>-</sup>	M1(+E2)	0.0 4		B(M1)(W.u.)=0.9 +7-3
		773.14 24	100 3	2165.89	3/2 <sup>-</sup>	M1+E2	0.19 10		B(M1)(W.u.)=0.27 +20-8; B(E2)(W.u.)=34 +48-28
									E <sub>γ</sub> : see comments 2939 level.
2960.1		794.1 6	100.0	2165.89	3/2 <sup>-</sup>				
		2960.0 6	61.29	0.0	7/2 <sup>-</sup>				
2973.47	11/2 <sup>-</sup>	2973.4 <sup>#</sup> 2	100 <sup>#</sup> 3	0.0	7/2 <sup>-</sup>	E2			<a href="#">Additional information 2.</a>
2976.34	9/2 <sup>-</sup> , (7/2)	411 <sup>‡</sup>	0.000	2565.85	3/2 <sup>-</sup>				E <sub>γ</sub> : was observed in ( <sup>3</sup> He,dγ). But no I <sub>γ</sub> is available.
		2976.2 5	100.0	0.0	7/2 <sup>-</sup>	M1+E2			
3303.11	5/2 <sup>-</sup>	737.4 5	20 <sup>a</sup> 4	2565.85	3/2 <sup>-</sup>				
		3302.98 10	100 <sup>a</sup> 4	0.0	7/2 <sup>-</sup>	M1+E2	+0.30 5		B(M1)(W.u.)=0.0089 20; B(E2)(W.u.)=0.15 6
3323.23	1/2 <sup>-</sup>	662.4 <sup>‡</sup> 10	9.259	2659.48	5/2 <sup>-</sup>				
		757.3 <sup>‡</sup> 3	76 15	2565.85	3/2 <sup>-</sup>	M1			B(M1)(W.u.)=0.47 12
		1157.4 <sup>‡</sup> 5	100 15	2165.89	3/2 <sup>-</sup>	M1			B(M1)(W.u.)=0.17 4
3335	(5/2) <sup>-</sup>	3335 <sup>‡</sup> 20	100.0	0.0	7/2 <sup>-</sup>				
3552.9?	(3/2,5/2)	1387	100.0	2165.89	3/2 <sup>-</sup>				
3562.98	(3/2 <sup>+</sup> )	640.9 4	8.5 25	2922.25	1/2 <sup>+</sup>				
		903.51 13	4.9 25	2659.48	5/2 <sup>-</sup>				
		997.11 14	100 4	2565.85	3/2 <sup>-</sup>				
		3562.83 11	8.5 25	0.0	7/2 <sup>-</sup>				
3643.01	3/2 <sup>-</sup>	703.8 5	18 6	2939.10	1/2 <sup>-</sup>				
		983.56 20	21 6	2659.48	5/2 <sup>-</sup>				
		1076.6 <sup>‡</sup> 6	23 6	2565.85	3/2 <sup>-</sup>				
		1476.7 6	100 9	2165.89	3/2 <sup>-</sup>				
		3642.88 19	16 8	0.0	7/2 <sup>-</sup>				
3725.01	5/2 <sup>-</sup>	806.46 17	37 8	2918.58	7/2 <sup>-</sup>				
		1159.14 16	48 8	2565.85	3/2 <sup>-</sup>	M1(+E2)	-0.03 3		B(M1)(W.u.)=0.092 21; B(E2)(W.u.)<0.4
		3724.85 14	100 8	0.0	7/2 <sup>-</sup>	M1+E2	+0.20 8		B(M1)(W.u.)=0.0055 11; B(E2)(W.u.)=0.03 3
3736.54	13/2 <sup>-</sup>	763.2 <sup>#</sup> 1	100 <sup>#</sup> 10	2973.47	11/2 <sup>-</sup>	M1(+E2)	+0.01 <sup>d</sup> 8		<a href="#">Additional information 3.</a>
3774.61	15/2 <sup>-</sup>	(37.9 <sup>#</sup> 3)	<sup>#</sup>	3736.54	13/2 <sup>-</sup>			7.0 6	E <sub>γ</sub> , I <sub>(γ+ce)</sub> : from γγ data.
		801.0 <sup>#</sup> 1	100 <sup>#</sup> 3	2973.47	11/2 <sup>-</sup>	E2			<a href="#">Additional information 4.</a>
3859.28		1199.8 4	66 9	2659.48	5/2 <sup>-</sup>				

Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>b</sup></u>	<u>δ<sup>c</sup></u>	<u>Comments</u>
3859.28		1693.3 4 3859.1 4	13 6 100 9	2165.89 0.0	3/2 <sup>-</sup> 7/2 <sup>-</sup>			
3870.9	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	1305 <sup>‡</sup> 1705 <sup>‡</sup>	92.31 100.0	2565.85 2165.89	3/2 <sup>-</sup> 3/2 <sup>-</sup>			
3933?	(3/2 <sup>-</sup> )	1367 <sup>‡e</sup> 1767 <sup>‡e</sup>	100.0 26.58	2565.85 2165.89	3/2 <sup>-</sup> 3/2 <sup>-</sup>			
3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	1003.0 4 1376.2 3 1776.1 3	9 4 100 6 22 4	2939.10 2565.85 2165.89	1/2 <sup>-</sup> 3/2 <sup>-</sup> 3/2 <sup>-</sup>			
4164.24	1/2 <sup>-</sup>	1598.2 4	100.0	2565.85	3/2 <sup>-</sup>	M1+E2	-0.27 4	B(M1)(W.u.)=0.157 20; B(E2)(W.u.)=9 3
4177.33	5/2 <sup>-</sup>	4177.19 14	100.0	0.0	7/2 <sup>-</sup>	M1+E2	+0.28 4	B(M1)(W.u.)=0.025 7; B(E2)(W.u.)=0.24 9
4264.1		4264.0 7	100.0	0.0	7/2 <sup>-</sup>			
4474.0		4473.9 6	100.0	0.0	7/2 <sup>-</sup>			
4513.78	17/2 <sup>-</sup>	739.0 <sup>#</sup> 1 777.9 <sup>#</sup> 2	100 <sup>#</sup> 3 7.1 <sup>#</sup> 3	3774.61 3736.54	15/2 <sup>-</sup> 13/2 <sup>-</sup>	M1+E2 E2	-0.22 <sup>d</sup> 4	Additional information 5. Additional information 6.
4548.28	5/2 <sup>-</sup>	1982.4 3 2382.3 3 4548.02 25	25 9 42 9 100 10	2565.85 2165.89 0.0	3/2 <sup>-</sup> 3/2 <sup>-</sup> 7/2 <sup>-</sup>	M1+E2 M1+E2	+0.25 15	δ: δ=-0.09 5 or -2.6 5. B(M1)(W.u.)=0.0043 12; B(E2)(W.u.)=0.03 3
4587.50		4587.1 6	100.0	0.0	7/2 <sup>-</sup>			
4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	2462.2 4	100.0	2165.89	3/2 <sup>-</sup>			
4686.3	15/2 <sup>-</sup>	949.6 <sup>#</sup> 3 1713 <sup>#</sup> 1	94 <sup>#</sup> 11 100 <sup>#</sup> 17	3736.54 2973.47	13/2 <sup>-</sup> 11/2 <sup>-</sup>			DCO=0.68 36.
4712.6	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	1773.5 <sup>‡</sup> 2146.7 <sup>‡</sup> 8	100 <sup>a</sup> 9 52 <sup>a</sup> 9	2939.10 2565.85	1/2 <sup>-</sup> 3/2 <sup>-</sup>	M1 M1		B(M1)(W.u.)=0.012 9 B(M1)(W.u.)=0.004 3
4721.44	3/2 <sup>-</sup>	1399 <sup>‡</sup> 2 1418.3 3 1782.3 4 2155.5 3	10 <sup>a</sup> 4 29 <sup>a</sup> 5 21 <sup>a</sup> 5 100 <sup>a</sup> 5	3323.23 3303.11 2939.10 2565.85	1/2 <sup>-</sup> 5/2 <sup>-</sup> 1/2 <sup>-</sup> 3/2 <sup>-</sup>			
4748.13	3/2 <sup>-</sup>	806.1 4 1023.1 4 1809.1 <sup>‡</sup> 4 1826.0 <sup>‡</sup> 5 2088.6 3 2182.2 3 2582.2 3	48 & 10 57 & 10 71 & 10 48 & 10 100 & 15 67 & 10 86 & 15	3942.09 3725.01 2939.10 2922.25 2659.48 2565.85 2165.89	1/2 <sup>-</sup> ,3/2 <sup>-</sup> 5/2 <sup>-</sup> 1/2 <sup>-</sup> 1/2 <sup>+</sup> 5/2 <sup>-</sup> 3/2 <sup>-</sup> 3/2 <sup>-</sup>			
4872.5		4872.2 8	100	0.0	7/2 <sup>-</sup>			
4920.8	(15/2 <sup>-</sup> )	1146.1 <sup>#</sup> 4	100 <sup>#</sup>	3774.61	15/2 <sup>-</sup>	(D)		Additional information 7.

Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

E <sub>i</sub> (level)	J <sup>π</sup> <sub>i</sub>	E <sub>γ</sub> <sup>†</sup>	I <sub>γ</sub> <sup>@</sup>	E <sub>f</sub>	J <sup>π</sup> <sub>f</sub>	Mult. <sup>b</sup>	δ <sup>c</sup>	Comments
4961.10	(1/2)	2022.0 5	32 8	2939.10	1/2 <sup>-</sup>			
		2395.1 5	100 8	2565.85	3/2 <sup>-</sup>			
4988.21		1685 4	9.2 23	3303.11	5/2 <sup>-</sup>			
		2422.3 4	5.7 23	2565.85	3/2 <sup>-</sup>			
		4987.9 4	100 5	0.0	7/2 <sup>-</sup>			
5099.26		1796.1 5	1.0×10 <sup>2</sup> 4	3303.11	5/2 <sup>-</sup>			
		2160.2 5	7.×10 <sup>1</sup> 4	2939.10	1/2 <sup>-</sup>			
		2439.8 5	7.×10 <sup>1</sup> 4	2659.48	5/2 <sup>-</sup>			
5122.11		2556.2 4	100 15	2565.85	3/2 <sup>-</sup>			
		5121.8 4	43 15	0.0	7/2 <sup>-</sup>			
5172.55	1/2 <sup>-</sup>	1008.4 4	18 4	4164.24	1/2 <sup>-</sup>			
		1230.5 4	35 4	3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		2606.4 <sup>‡</sup> 20	100 11	2565.85	3/2 <sup>-</sup>			
		3006.55 22	51 7	2165.89	3/2 <sup>-</sup>			
5242		5242 <sup>‡</sup> 10	100.0	0.0	7/2 <sup>-</sup>			
5258.99		1533.9 4	31 10	3725.01	5/2 <sup>-</sup>			
		2693.0 4	100 13	2565.85	3/2 <sup>-</sup>			
		3093.0 4	30 10	2165.89	3/2 <sup>-</sup>			
		5258.7 4	24 10	0.0	7/2 <sup>-</sup>			
5293.0		2727.1 9	100.0	2565.85	3/2 <sup>-</sup>			
5351.00		1173.6 5	60 17	4177.33	5/2 <sup>-</sup>			
		2411.9 5	100 17	2939.10	1/2 <sup>-</sup>			
		5350.7 5	72 17	0.0	7/2 <sup>-</sup>			
5431.7	17/2 <sup>-</sup>	745.2 <sup>#</sup> 6	10 <sup>#</sup> 3	4686.3	15/2 <sup>-</sup>			
		917.8 <sup>#</sup> 5	15 <sup>#</sup> 3	4513.78	17/2 <sup>-</sup>	(D)		Additional information 8.
		1657.2 <sup>#</sup> 4	100 <sup>#</sup> 29	3774.61	15/2 <sup>-</sup>	M1+E2	-0.31 7	Additional information 9.
5460.76		2157.6 5	100 19	3303.11	5/2 <sup>-</sup>			
		2801.2 5	55 19	2659.48	5/2 <sup>-</sup>			
		3294.7 5	27 19	2165.89	3/2 <sup>-</sup>			
5560.0	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	5559.7 5	100.0	0.0	7/2 <sup>-</sup>			
5716.6		3057 1	100.0	2659.48	5/2 <sup>-</sup>			
6068.8	9/2 <sup>+</sup>	6068 2	100.0	0.0	7/2 <sup>-</sup>			
6149.90	(5/2) <sup>+</sup>	1188.8 6	20.25	4961.10	(1/2)			
		1521.7 5	6.6	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		1985.7 5	9.4	4164.24	1/2 <sup>-</sup>			
		2207.8 5	46.6	3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		2506.8 4	13.7	3643.01	3/2 <sup>-</sup>			
		3210.7 4	100.0	2939.10	1/2 <sup>-</sup>			
		3583.9 4	50.9	2565.85	3/2 <sup>-</sup>			
		3983.8 4	5.8	2165.89	3/2 <sup>-</sup>			



Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>b</sup></u>	<u>δ<sup>c</sup></u>	<u>Comments</u>
6205.29	(5/2) <sup>+</sup>	2642.2 4	17.5	3562.98	(3/2 <sup>+</sup> )	(M1+E2)	-0.035 15	
		3245.1 7	13.3	2960.1				
		3283.1 5	2.02	2922.25	1/2 <sup>+</sup>			
		3286.6 4	1.35	2918.58	7/2 <sup>-</sup>			
		3545.7 4	27.0	2659.48	5/2 <sup>-</sup>	E1+M2	-0.05 4	
		3639.3 4	41.6	2565.85	3/2 <sup>-</sup>	E1(+M2)	-0.05 5	
		4039.2 4	100.0	2165.89	3/2 <sup>-</sup>	E1(+M2)	-0.00 3	
		6204.9 4	22.7	0.0	7/2 <sup>-</sup>	E1+M2	-0.07 4	
6268.22	3/2 <sup>-</sup>	1280.0 4	9.7	4988.21				
		1546.8 4	22.8	4721.44	3/2 <sup>-</sup>			
		1719.9 4	6.25	4548.28	5/2 <sup>-</sup>			
		2090.8 3	7.11	4177.33	5/2 <sup>-</sup>	M1+E2	-0.65 5	
		2104.0 4	12.9	4164.24	1/2 <sup>-</sup>	M1+E2	+0.09 3	
		2543.1 3	5.82	3725.01	5/2 <sup>-</sup>			
		2705.2 3	4.96	3562.98	(3/2 <sup>+</sup> )			
		3329.1 4	5.39	2939.10	1/2 <sup>-</sup>			
		3349.6 3	13.4	2918.58	7/2 <sup>-</sup>			
		3608.6 3	19.6	2659.48	5/2 <sup>-</sup>	M1(+E2)	-0.03 4	
		4102.1 3	100.0	2165.89	3/2 <sup>-</sup>	M1+E2	+0.25 25	
		6267.81 25	7.54	0.0	7/2 <sup>-</sup>			
6328.29	(3/2) <sup>-</sup>	1340.0 5	10.3	4988.21				
		1580.1 4	38.5	4748.13	3/2 <sup>-</sup>			
		1606.9 4	13.2	4721.44	3/2 <sup>-</sup>	M1+E2		δ: δ=+0.25 11 or +1.9 4.
		2150.8 4	89.7	4177.33	5/2 <sup>-</sup>	M1(+E2)	+0.03 4	
		2164.1 4	48.3	4164.24	1/2 <sup>-</sup>			
		2386.2 4	56.9	3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		3005.0 4	60.3	3323.23	1/2 <sup>-</sup>			
		3025.1 3	74.7	3303.11	5/2 <sup>-</sup>	M1+E2	-0.19 5	
		3389.1 4	8.05	2939.10	1/2 <sup>-</sup>			
		3409.6 3	19.5	2918.58	7/2 <sup>-</sup>			
		3668.7 3	100.0	2659.48	5/2 <sup>-</sup>			
		3762.3 3	46.6	2565.85	3/2 <sup>-</sup>	M1+E2		δ: δ=+0.08 3 or +5.7 13.
		4162.2 3	8.62	2165.89	3/2 <sup>-</sup>			
6332.6	(17/2) <sup>-</sup>	900.6 <sup>#</sup> 8	25 <sup>#</sup> 8	5431.7	17/2 <sup>-</sup>			
		1412 <sup>#</sup> 1	17 <sup>#</sup> 8	4920.8	(15/2) <sup>-</sup>			
		1646 <sup>#</sup> 1	8 <sup>#</sup> 8	4686.3	15/2 <sup>-</sup>			
		1819 <sup>#</sup> 1	100 <sup>#</sup> 17	4513.78	17/2 <sup>-</sup>	(D)		ΔJ=(0) from DCO=0.98 14.
6369.36	(5/2) <sup>+</sup>	1496.8 8	6.70	4872.5				
		2806.3 5	82.7	3562.98	(3/2 <sup>+</sup> )	D(+Q)	+0.01 2	
		3447.1 5	6.96	2922.25	1/2 <sup>+</sup>			
		3450.7 5	54.9	2918.58	7/2 <sup>-</sup>			

Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>b</sup></u>	<u>δ<sup>c</sup></u>	<u>Comments</u>
6369.36	(5/2) <sup>+</sup>	3709.7 5	100.0	2659.48	5/2 <sup>-</sup>	E1(+M2)	+0.03 4	
		3803.3 5	6.44	2565.85	3/2 <sup>-</sup>			
6464.8	(23/2 <sup>-</sup> )	1951		4513.78	17/2 <sup>-</sup>	(E2)		E <sub>γ</sub> : observed only in (HI,xny).
6513.45	3/2,(5/2)	1792.0 4	26.3	4721.44	3/2 <sup>-</sup>			
		1885.2 4	5.21	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		2571.3 4	5.21	3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		3190.2 3	23.1	3323.23	1/2 <sup>-</sup>			
		3210.24 20	7.44	3303.11	5/2 <sup>-</sup>			
		3574.3 3	100.0	2939.10	1/2 <sup>-</sup>			
		3947.44 20	5.71	2565.85	3/2 <sup>-</sup>			
		4347.35 20	10.9	2165.89	3/2 <sup>-</sup>			
		6513.01 18	64.3	0.0	7/2 <sup>-</sup>			
6596.5	19/2 <sup>-</sup>	1675 <sup>#</sup> 1	4 <sup>#</sup> 4	4920.8	(15/2 <sup>-</sup> )			
		2082.7 <sup>#</sup> 3	100 <sup>#</sup> 4	4513.78	17/2 <sup>-</sup>	M1+E2	-0.5 <sup>d</sup> 2	<a href="#">Additional information 10.</a>
		2822 <sup>#</sup> 1	34 <sup>#</sup> 1	3774.61	15/2 <sup>-</sup>	E2		<a href="#">Additional information 11.</a>
6641.6	19/2 <sup>-</sup>	1208 <sup>#</sup> 1	1.5 <sup>#</sup> 5	5431.7	17/2 <sup>-</sup>			<a href="#">Additional information 12.</a>
		2127.6 <sup>#</sup> 3	100 <sup>#</sup> 5	4513.78	17/2 <sup>-</sup>	M1+E2	-0.6 <sup>d</sup> +I-2	<a href="#">Additional information 13.</a>
		2868 <sup>#</sup> 1	13 <sup>#</sup> 1	3774.61	15/2 <sup>-</sup>	E2		<a href="#">Additional information 14.</a>
6689.10		2140.8 5	66.7	4548.28	5/2 <sup>-</sup>			
		2511.6 4	100.0	4177.33	5/2 <sup>-</sup>			
		3365.8 5	61.1	3323.23	1/2 <sup>-</sup>			
		3749.9 4	61.1	2939.10	1/2 <sup>-</sup>			
		3770.4 4	66.7	2918.58	7/2 <sup>-</sup>			
		4029.5 4	72.2	2659.48	5/2 <sup>-</sup>			
		4123.1 4	38.9	2565.85	3/2 <sup>-</sup>			
		4523.0 4	88.9	2165.89	3/2 <sup>-</sup>			
6701.26	5/2	3138.2 4	13.3	3562.98	(3/2 <sup>+</sup> )	D+Q	+0.16 3	
		3779.0 5	4.01	2922.25	1/2 <sup>+</sup>			
		3782.6 4	6.90	2918.58	7/2 <sup>-</sup>			
		4041.6 4	3.21	2659.48	5/2 <sup>-</sup>			
		4135.2 4	3.05	2565.85	3/2 <sup>-</sup>			
		4535.1 4	100.0	2165.89	3/2 <sup>-</sup>	D(+Q)	+0.02 2	
		6700.8 4	30.0	0.0	7/2 <sup>-</sup>	D+Q	+0.12 3	
6713.26	(1/2) <sup>-</sup>	1252.5 5	20.3	5460.76				
		1752.1 5	14.8	4961.10	(1/2)			
		2085.0 5	4.0	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		2549.0 5	7.0	4164.24	1/2 <sup>-</sup>			
		2771.1 4	37.8	3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		3070.1 4	6.8	3643.01	3/2 <sup>-</sup>			
		3390.0 4	30.5	3323.23	1/2 <sup>-</sup>			

Adopted Levels, Gammas (continued)

$\gamma(^{55}\text{Co})$ (continued)									
$E_i(\text{level})$	$J_i^\pi$	$E_\gamma^\dagger$	$I_\gamma^@$	$E_f$	$J_f^\pi$	Mult. <sup>b</sup>	$\delta^c$		
6713.26	(1/2) <sup>-</sup>	3774.0	4	9.0	2939.10	1/2 <sup>-</sup>			
		3791.0	5	14.0	2922.25	1/2 <sup>+</sup>			
		4147.2	4	6.0	2565.85	3/2 <sup>-</sup>			
		4547.1	4	100.0	2165.89	3/2 <sup>-</sup>			
6755.40	5/2	3192.3	4	0.44	3562.98	(3/2 <sup>+</sup> )			
		3836.7	4	2.5	2918.58	7/2 <sup>-</sup>			
		4095.8	4	0.44	2659.48	5/2 <sup>-</sup>			
		4189.4	4	1.1	2565.85	3/2 <sup>-</sup>			
		4589.3	4	4.47	2165.89	3/2 <sup>-</sup>	D+Q	+0.09 2	
		6754.9	4	100.0	0.0	7/2 <sup>-</sup>	D(+Q)	+0.02 2	
6780.16	5/2 <sup>-</sup>	2231.9	4	7.05	4548.28	5/2 <sup>-</sup>			
		2838.0	4	12.3	3942.09	1/2 <sup>-</sup> , 3/2 <sup>-</sup>			
		3055.1	3	23.8	3725.01	5/2 <sup>-</sup>			
		3137.0	3	13.7	3643.01	3/2 <sup>-</sup>			
		3456.9	4	44.1	3323.23	1/2 <sup>-</sup>			
		3841.0	4	15.0	2939.10	1/2 <sup>-</sup>			
		3861.5	3	7.5	2918.58	7/2 <sup>-</sup>			
		4120.5	3	66.1	2659.48	5/2 <sup>-</sup>	M1+E2	+0.21 4	
		4214.1	3	100.0	2565.85	3/2 <sup>-</sup>	M1+E2	+0.43 3	
		4614.0	3	96.9	2165.89	3/2 <sup>-</sup>	M1+E2	-0.02 1	
		6779.7	3	54.2	0.0	7/2 <sup>-</sup>	E2(+M3)	-0.2 2	
		6834.28	3/2 <sup>-</sup>	1373.5	5	28.5	5460.76		
				1712.1	4	4.43	5122.11		
				1846.0	4	4.75	4988.21		
1873.2	5			18.0	4961.10	(1/2)			
2112.8	4			7.60	4721.44	3/2 <sup>-</sup>	M1(+E2)	-0.03 4	
2206.0	4			7.91	4628.23	1/2 <sup>-</sup> , 3/2 <sup>-</sup>			
2246.9	6			1.58	4587.50				
2286.0	4			9.18	4548.28	5/2 <sup>-</sup>			
2670.1	4			7.28	4164.24	1/2 <sup>-</sup>	M1+E2	-1.3 +12-6	
2892.1	4			2.53	3942.09	1/2 <sup>-</sup> , 3/2 <sup>-</sup>			
3109.2	3			26.9	3725.01	5/2 <sup>-</sup>	M1+E2	-0.14 4	
3191.1	3			3.80	3643.01	3/2 <sup>-</sup>			
3271.2	3			2.85	3562.98	(3/2 <sup>+</sup> )			
3511.0	4			42.1	3323.23	1/2 <sup>-</sup>	M1+E2	-0.08 4	
3531.0	3			7.91	3303.11	5/2 <sup>-</sup>			
3895.1	3			8.86	2939.10	1/2 <sup>-</sup>			
3915.6	3			9.81	2918.58	7/2 <sup>-</sup>			
4174.64	25			100.0	2659.48	5/2 <sup>-</sup>			
4268.24	25	7.91	2565.85	3/2 <sup>-</sup>	M1+E2	-0.45 13			
4668.15	25	14.6	2165.89	3/2 <sup>-</sup>	M1+E2	-0.21 +8-4			
6835.7?	5/2 <sup>(-)</sup>	6835.2	6	100.0	0.0	7/2 <sup>-</sup>			

Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>b</sup></u>	<u>δ<sup>c</sup></u>	<u>Comments</u>
6876.33	7/2 <sup>-</sup> ,9/2	3017.0 5	0.74	3859.28				
		3233.2 5	1.0	3643.01	3/2 <sup>-</sup>			
		3313.2 4	0.96	3562.98	(3/2 <sup>+</sup> )			
		4216.7 4	0.64	2659.48	5/2 <sup>-</sup>			
		4710.2 4	2.87	2165.89	3/2 <sup>-</sup>			
		6876.0 7	100.0	0.0	7/2 <sup>-</sup>			
6917.35	5/2 <sup>-</sup>	1456.5 5	5.58	5460.76				
		1566.2 5	17.3	5351.00				
		1658.3 5	26.4	5258.99				
		1795.2 4	2.54	5122.11				
		1818.0 5	24.4	5099.26				
		2169.1 4	41.6	4748.13	3/2 <sup>-</sup>			
		2195.9 4	53.8	4721.44	3/2 <sup>-</sup>	M1+E2	-0.23 4	
		2443.1 6	11.2	4474.0				
		2740.8 3	26.9	4177.33	5/2 <sup>-</sup>	M1+E2		δ: δ=+0.27 7 or +1.15 9.
		3057.9 4	40.1	3859.28				
		3192.2 3	44.7	3725.01	5/2 <sup>-</sup>	M1+E2	+0.22 8	
		3274.2 3	6.60	3643.01	3/2 <sup>-</sup>			
		3354.20 25	11.2	3562.98	(3/2 <sup>+</sup> )			
		4257.65 23	4.06	2659.48	5/2 <sup>-</sup>			
		4351.25 24	100.0	2565.85	3/2 <sup>-</sup>	M1+E2	-0.09 2	
		4751.16 24	2.54	2165.89	3/2 <sup>-</sup>			
		6916.80 22	88.8	0.0	7/2 <sup>-</sup>	M1+E2	+0.10 3	
6944.19	(1/2 <sup>-</sup> )	3381.1 5	4.60	3562.98	(3/2 <sup>+</sup> )			
		3620.9 5	36.5	3323.23	1/2 <sup>-</sup>			
		4004.9 5	4.60	2939.10	1/2 <sup>-</sup>			
		4021.9 5	6.67	2922.25	1/2 <sup>+</sup>			
		4378.1 5	6.35	2565.85	3/2 <sup>-</sup>			
		4778.0 5	100.0	2165.89	3/2 <sup>-</sup>			
6951.14		1778.6 4	13.6	5172.55	1/2 <sup>-</sup>			
		2229.7 4	7.17	4721.44	3/2 <sup>-</sup>			
		2786.9 4	8.68	4164.24	1/2 <sup>-</sup>			
		3226.0 3	5.66	3725.01	5/2 <sup>-</sup>			
		3388.0 3	14.7	3562.98	(3/2 <sup>+</sup> )			
		3627.9 4	35.1	3323.23	1/2 <sup>-</sup>			
		3647.9 3	14.0	3303.11	5/2 <sup>-</sup>			
		4011.9 4	82.3	2939.10	1/2 <sup>-</sup>			
		4032.4 3	29.4	2918.58	7/2 <sup>-</sup>			
		4291.5 3	22.6	2659.48	5/2 <sup>-</sup>			
		4385.1 3	18.1	2565.85	3/2 <sup>-</sup>			
		4785.0 3	100.0	2165.89	3/2 <sup>-</sup>			
		6950.6 3	26.0	0.0	7/2 <sup>-</sup>			

**Adopted Levels, Gammas (continued)**

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>
7008.19		1835.6 3	22.6	5172.55	1/2 <sup>-</sup>	7101.54	5/2	3376.43 25	3.69	3725.01	5/2 <sup>-</sup>
		1886.0 4	13.8	5122.11				3458.4 3	5.65	3643.01	3/2 <sup>-</sup>
		2260.0 4	11.3	4748.13	3/2 <sup>-</sup>			3538.44 23	4.42	3562.98	(3/2 <sup>+</sup> )
		2286.7 4	33.3	4721.44	3/2 <sup>-</sup>			3798.30 23	3.44	3303.11	5/2 <sup>-</sup>
		2380.0 4	38.4	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			4125.0 5	1.72	2976.34	9/2 <sup>-</sup> , (7/2)
		2459.9 4	11.3	4548.28	5/2 <sup>-</sup>			4182.84 23	13.76	2918.58	7/2 <sup>-</sup>
		2844.0 4	27.0	4164.24	1/2 <sup>-</sup>			4441.89 22	76.41	2659.48	5/2 <sup>-</sup>
		3066.0 4	100.0	3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			4535.49 23	2.95	2565.85	3/2 <sup>-</sup>
		3283.1 3	22.6	3725.01	5/2 <sup>-</sup>			4935.40 23	14.50	2165.89	3/2 <sup>-</sup>
		3365.0 3	51.6	3643.01	3/2 <sup>-</sup>			7101.03 21	100.0	0.0	7/2 <sup>-</sup>
		3445.1 3	13.8	3562.98	(3/2 <sup>+</sup> )	7153.2		3293.8 8	2.95	3859.28	
		3684.9 4	98.1	3323.23	1/2 <sup>-</sup>			3510.1 8	2.95	3643.01	3/2 <sup>-</sup>
		4069.0 4	74.8	2939.10	1/2 <sup>-</sup>			4493.6 7	5.76	2659.48	5/2 <sup>-</sup>
		4089.5 3	12.6	2918.58	7/2 <sup>-</sup>			4587.2 7	2.81	2565.85	3/2 <sup>-</sup>
		4348.5 3	18.2	2659.48	5/2 <sup>-</sup>			4987.1 7	25.98	2165.89	3/2 <sup>-</sup>
		4442.1 3	30.8	2565.85	3/2 <sup>-</sup>			7152.7 7	100.0	0.0	7/2 <sup>-</sup>
		7007.7 3	48.4	0.0	7/2 <sup>-</sup>	7193.15	5/2	2564.9 4	1.07	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>
7025.34		1926.0 5	2.24	5099.26				3550.0 3	2.45	3643.01	3/2 <sup>-</sup>
		2037.1 5	2.80	4988.21				3630.03 22	4.91	3562.98	(3/2 <sup>+</sup> )
		2303.9 4	3.17	4721.44	3/2 <sup>-</sup>			4270.9 4	0.92	2922.25	1/2 <sup>+</sup>
		2437.9 6	1.87	4587.50				4274.43 22	6.29	2918.58	7/2 <sup>-</sup>
		3166.0 5	1.87	3859.28				4533.48 21	0.46	2659.48	5/2 <sup>-</sup>
		3462.2 4	2.99	3562.98	(3/2 <sup>+</sup> )			4627.08 21	33.44	2565.85	3/2 <sup>-</sup>
		4365.7 4	13.8	2659.48	5/2 <sup>-</sup>			5026.99 22	3.83	2165.89	3/2 <sup>-</sup>
		4459.3 4	11.6	2565.85	3/2 <sup>-</sup>			7192.61 20	100.0	0.0	7/2 <sup>-</sup>
		4859.2 4	100.0	2165.89	3/2 <sup>-</sup>	7233.48	(3/2)	3670.3 7	1.65	3562.98	(3/2 <sup>+</sup> )
		7024.8 4	46.3	0.0	7/2 <sup>-</sup>			3910.2 7	1.79	3323.23	1/2 <sup>-</sup>
7038.23	(1/2 <sup>-</sup> ,3/2 <sup>-</sup> )	1745.2 10	25.37	5293.0				4311.2 7	9.08	2922.25	1/2 <sup>+</sup>
		2316.8 6	18.91	4721.44	3/2 <sup>-</sup>			4314.7 7	1.1	2918.58	7/2 <sup>-</sup>
		2410.0 7	31.34	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			4573.8 7	18.98	2659.48	5/2 <sup>-</sup>
		2489.9 6	100.0	4548.28	5/2 <sup>-</sup>			4667.4 7	3.16	2565.85	3/2 <sup>-</sup>
		2860.8 6	12.44	4177.33	5/2 <sup>-</sup>			5067.3 7	100.0	2165.89	3/2 <sup>-</sup>
		3178.8 7	82.59	3859.28				7232.9 7	1.79	0.0	7/2 <sup>-</sup>
		3735.0 6	20.40	3303.11	5/2 <sup>-</sup>	7239.26	(3/2 <sup>-</sup> )	1980.2 5	1.33	5258.99	
		4099.0 6	5.97	2939.10	1/2 <sup>-</sup>			2251.0 4	7.45	4988.21	
		4472.2 6	31.84	2565.85	3/2 <sup>-</sup>			2491.0 4	4.79	4748.13	3/2 <sup>-</sup>
		4872.1 6	70.65	2165.89	3/2 <sup>-</sup>			2611.0 4	9.57	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>
		7037.7 6	98.01	0.0	7/2 <sup>-</sup>			3061.8 3	10.9	4177.33	5/2 <sup>-</sup>
7101.54	5/2	2473.3 4	1.97	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			3075.0 4	7.45	4164.24	1/2 <sup>-</sup>
		2553.2 4	8.11	4548.28	5/2 <sup>-</sup>			3297.1 4	11.70	3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>
		2924.08 25	2.21	4177.33	5/2 <sup>-</sup>			3596.1 3	23.67	3643.01	3/2 <sup>-</sup>
		3242.2 4	6.88	3859.28				3676.1 3	7.713	3562.98	(3/2 <sup>+</sup> )

Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>b</sup></u>	<u>δ<sup>c</sup></u>		
7239.26	(3/2 <sup>-</sup> )	3916.0	4	5.59	3323.23	1/2 <sup>-</sup>			
		3936.0	3	14.36	3303.11	5/2 <sup>-</sup>			
		4300.0	4	23.40	2939.10	1/2 <sup>-</sup>			
		4317.0	4	9.04	2922.25	1/2 <sup>+</sup>			
		4579.6	3	10.64	2659.48	5/2 <sup>-</sup>			
		4673.2	3	18.35	2565.85	3/2 <sup>-</sup>			
7269.16	3/2 <sup>-</sup>	5073.1	3	100.0	2165.89	3/2 <sup>-</sup>			
		1709.1	5	5.33	5560.0	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		2010.1	4	25.78	5258.99				
		2308.0	5	26.67	4961.10	(1/2)			
		2521.0	4	18.67	4748.13	3/2 <sup>-</sup>			
		2547.7	3	24.00	4721.44	3/2 <sup>-</sup>	M1+E2	-0.35 1	
		2640.9	4	19.11	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		2720.8	3	13.78	4548.28	5/2 <sup>-</sup>			
		3091.69	21	43.11	4177.33	5/2 <sup>-</sup>	M1+E2	+0.27 3	
		3104.9	4	17.78	4164.24	1/2 <sup>-</sup>			
		3544.03	21	79.56	3725.01	5/2 <sup>-</sup>	M1+E2	+0.21 4	
		3706.05	20	10.67	3562.98	(3/2 <sup>+</sup> )			
		3965.90	19	18.22	3303.11	5/2 <sup>-</sup>	M1+E2	+0.17 10	
		4350.44	19	7.556	2918.58	7/2 <sup>-</sup>			
		4609.49	18	100.0	2659.48	5/2 <sup>-</sup>	M1+E2	+0.06 5	
		5103.00	18	28.89	2165.89	3/2 <sup>-</sup>	M1+E2	-0.34 4	
7284.4		7268.62	16	5.33	0.0	7/2 <sup>-</sup>			
		3641.2	8	43.02	3643.01	3/2 <sup>-</sup>			
		3961.0	8	61.13	3323.23	1/2 <sup>-</sup>			
		4345.1	8	57.74	2939.10	1/2 <sup>-</sup>			
		4365.6	8	6.42	2918.58	7/2 <sup>-</sup>			
		4624.7	8	59.62	2659.48	5/2 <sup>-</sup>			
		4718.3	8	49.43	2565.85	3/2 <sup>-</sup>			
		5118.2	8	100.0	2165.89	3/2 <sup>-</sup>			
		7293.35	5/2 <sup>-</sup>	1733.3	5	5.25	5560.0	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	
				2194.0	5	8.53	5099.26		
2305.1	4			29.84	4988.21				
2545.2	4			20.0	4748.13	3/2 <sup>-</sup>	M1+E2	-0.34 4	
2571.9	4			20.0	4721.44	3/2 <sup>-</sup>	M1+E2	+0.78 11	
2665.1	4			6.56	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
2705.9	6			4.92	4587.50				
2745.0	4			23.28	4548.28	5/2 <sup>-</sup>	M1+E2	+0.12 6	
2819.1	6			6.89	4474.0				
3650.2	3			4.59	3643.01	3/2 <sup>-</sup>			
4374.6	3			100.0	2918.58	7/2 <sup>-</sup>	M1(+E2)	0.00 2	
4633.69	25			7.54	2659.48	5/2 <sup>-</sup>			

**Adopted Levels, Gammas (continued)**

$\gamma(^{55}\text{Co})$  (continued)

$E_i(\text{level})$	$J_i^\pi$	$E_\gamma^\dagger$	$I_\gamma^@$	$E_f$	$J_f^\pi$	Mult. <sup>b</sup>	$\delta^c$	Comments
7293.35	5/2 <sup>-</sup>	5127.2 3 7292.82 24	65.57 24.92	2165.89 0.0	3/2 <sup>-</sup> 7/2 <sup>-</sup>	M1+E2	+0.03 2	
7319.56	5/2	3055.3 7 3460.2 5 4016.3 3 4343.1 5 4400.8 3 4753.5 3 7319.0 3	1.34 1.22 2.93 4.39 4.15 7.93 100.0	4264.1 3859.28 3303.11 2976.34 2918.58 2565.85 0.0	5/2 <sup>-</sup>  9/2 <sup>-</sup> , (7/2) 7/2 <sup>-</sup> 3/2 <sup>-</sup> 7/2 <sup>-</sup>			
7325.37		2203.2 6 2337.1 6 2603.9 5 2697.1 6 3147.9 5 3161.1 6 3383.2 6 3682.2 5 3762.2 5 4002.1 5 4022.1 5 4348.8 7 4386.1 5 4403.1 6 4406.6 5 4665.7 5 4759.3 5 5159.2 5 7324.8 5	27.65 4.61 11.98 6.91 6.91 6.45 43.78 4.61 10.14 18.43 32.72 7.83 14.29 17.97 13.82 42.86 48.85 41.01 100.0	5122.11 4988.21 4721.44 4628.23 4177.33 4164.24 3942.09 3643.01 3562.98 3323.23 3303.11 2976.34 2939.10 2922.25 2918.58 2659.48 2565.85 2165.89 0.0	  3/2 <sup>-</sup> 1/2 <sup>-</sup> , 3/2 <sup>-</sup> 5/2 <sup>-</sup> 1/2 <sup>-</sup> 1/2 <sup>-</sup> , 3/2 <sup>-</sup> 3/2 <sup>-</sup>  (3/2 <sup>+</sup> ) 1/2 <sup>-</sup> 5/2 <sup>-</sup> 9/2 <sup>-</sup> , (7/2) 1/2 <sup>-</sup> 1/2 <sup>+</sup> 7/2 <sup>-</sup> 5/2 <sup>-</sup> 3/2 <sup>-</sup> 3/2 <sup>-</sup> 7/2 <sup>-</sup>			
7332.27		2344.0 7 2784.0 7 3154.8 7 3390.1 7 3689.1 7 4029.0 7 4393.0 7 4672.6 7 4766.2 7 5166.1 7	3.06 18.04 3.06 5.20 24.46 40.06 79.20 16.51 100.0 16.21	4988.21 4548.28 4177.33 3942.09 3643.01 3303.11 2939.10 2659.48 2565.85 2165.89	 5/2 <sup>-</sup> 5/2 <sup>-</sup> 1/2 <sup>-</sup> , 3/2 <sup>-</sup> 3/2 <sup>-</sup> 5/2 <sup>-</sup> 1/2 <sup>-</sup> 5/2 <sup>-</sup> 3/2 <sup>-</sup> 3/2 <sup>-</sup>			
7529.4	19/2 <sup>-</sup>	2843 <sup>#</sup> 2 3015 <sup>#</sup> 1	75 <sup>#</sup> 12 100 <sup>#</sup> 12	4686.3 4513.78	15/2 <sup>-</sup> 17/2 <sup>-</sup>			
7564.41		2305.4 7	12.50	5258.99				

Additional information 15.

**Adopted Levels, Gammas (continued)**

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>
7564.41		2576.2 10	18.75	4988.21		7611.38		2512.8 8	60.00	5099.26	
		2603.1 7	6.25	4961.10	(1/2)			2983.6 12	25.00	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>
		2713.0 7	25.00	4851.3				3023.6 7	20.00	4587.50	
		2816.4 7	31.25	4748.13	3/2 <sup>-</sup>			3433.7 7	10.00	4177.33	5/2 <sup>-</sup>
		2842.8 9	6.25	4721.44	3/2 <sup>-</sup>			3751.9 9	20.00	3859.28	
		2976.8 12	25.00	4587.50				3968.2 7	65.00	3643.01	3/2 <sup>-</sup>
		3016.0 8	6.25	4548.28	5/2 <sup>-</sup>			4048.2 7	20.00	3562.98	(3/2 <sup>+</sup> )
		3386.9 7	18.75	4177.33	5/2 <sup>-</sup>			4692.5 7	50.00	2918.58	7/2 <sup>-</sup>
		3399.7 7	12.50	4164.24	1/2 <sup>-</sup>			4951.6 7	40.00	2659.48	5/2 <sup>-</sup>
		3839.3 7	18.75	3725.01	5/2 <sup>-</sup>			5445.2 7	45.00	2165.89	3/2 <sup>-</sup>
		3921.4 7	37.50	3643.01	3/2 <sup>-</sup>			7611.0 10	100.0	0.0	7/2 <sup>-</sup>
		4001.4 7	43.75	3562.98	(3/2 <sup>+</sup> )	7627.7	(5/2)	5061.6 6	69.23	2565.85	3/2 <sup>-</sup>
		4240.8 7	87.50	3323.23	1/2 <sup>-</sup>			5461.5 7	23.08	2165.89	3/2 <sup>-</sup>
		4261.2 6	12.50	3303.11	5/2 <sup>-</sup>			7627.0 10	100.0	0.0	7/2 <sup>-</sup>
		4624.9 7	43.75	2939.10	1/2 <sup>-</sup>	7633.65	(5/2 <sup>-</sup> )	2645.3 10	3.80	4988.21	
		4641.8 8	18.75	2922.25	1/2 <sup>+</sup>			3774.2 9	5.06	3859.28	
		4904.8 8	100.0	2659.48	5/2 <sup>-</sup>			3908.5 7	1.27	3725.01	5/2 <sup>-</sup>
		4998.5 6	6.25	2565.85	3/2 <sup>-</sup>			3990.5 7	1.27	3643.01	3/2 <sup>-</sup>
		5398.4 7	25.00	2165.89	3/2 <sup>-</sup>			4330.3 6	2.53	3303.11	5/2 <sup>-</sup>
		7564.1 10	68.75	0.0	7/2 <sup>-</sup>			4657.1 8	2.53	2976.34	9/2 <sup>-</sup> , (7/2)
7578.37	(3/2) <sup>+</sup>	2830.2 7	12.00	4748.13	3/2 <sup>-</sup>			4714.8 6	2.53	2918.58	7/2 <sup>-</sup>
		2856.6 9	4.00	4721.44	3/2 <sup>-</sup>			5067.6 6	3.80	2565.85	3/2 <sup>-</sup>
		3104.3 10	12.00	4474.0				5467.5 7	3.80	2165.89	3/2 <sup>-</sup>
		3314.2 14	8.00	4264.1				7633.3 10	100.0	0.0	7/2 <sup>-</sup>
		3853.2 7	16.00	3725.01	5/2 <sup>-</sup>	7642.55	(1/2 <sup>-</sup> )	2681.3 7	13.51	4961.10	(1/2)
		3935.2 7	60.00	3643.01	3/2 <sup>-</sup>			2894.5 7	5.40	4748.13	3/2 <sup>-</sup>
		4015.2 6	100.0	3562.98	(3/2 <sup>+</sup> )			3014.2 7	5.40	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>
		5012.4 7	60.00	2565.85	3/2 <sup>-</sup>			3465.1 7	10.81	4177.33	5/2 <sup>-</sup>
		5412.2 6	72.00	2165.89	3/2 <sup>-</sup>			4079.6 7	8.11	3562.98	(3/2 <sup>+</sup> )
		7578.0 10	56.00	0.0	7/2 <sup>-</sup>			4319.0 7	21.62	3323.23	1/2 <sup>-</sup>
7595.28	(3/2 <sup>-</sup> )	1953.1 18	29.17	5642.1				4703.1 7	27.03	2939.10	1/2 <sup>-</sup>
		2473.2 8	12.50	5122.11				4719.9 8	100.0	2922.25	1/2 <sup>+</sup>
		2966.8 7	8.333	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			4982.9 7	18.92	2659.48	5/2 <sup>-</sup>
		3417.8 7	58.33	4177.33	5/2 <sup>-</sup>			5476.5 7	59.46	2165.89	3/2 <sup>-</sup>
		3870.2 9	37.50	3725.01	5/2 <sup>-</sup>	7650.84	(5/2) <sup>-</sup>	2300.0 8	9.76	5351.00	
		3952.2 7	50.00	3643.01	3/2 <sup>-</sup>			2391.7 7	2.44	5258.99	
		4292.0 7	29.17	3303.11	5/2 <sup>-</sup>			2662.5 10	12.20	4988.21	
		4672.6 8	12.50	2922.25	1/2 <sup>+</sup>			2902.7 7	4.88	4748.13	3/2 <sup>-</sup>
		4935.6 7	50.00	2659.48	5/2 <sup>-</sup>			3063.1 12	9.76	4587.50	
		5029.3 7	29.17	2565.85	3/2 <sup>-</sup>			3791.3 9	9.76	3859.28	
		5429.2 10	100.0	2165.89	3/2 <sup>-</sup>			3925.7 7	4.88	3725.01	5/2 <sup>-</sup>
7611.38		2352.2 7	45.00	5258.99				4347.5 6	12.20	3303.11	5/2 <sup>-</sup>



Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sup>π</sup><sub>i</sub></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sup>π</sup><sub>f</sub></u>
7650.84	(5/2) <sup>-</sup>	4674.3 8	7.32	2976.34	9/2 <sup>-</sup> , (7/2)
		4732.0 6	60.98	2918.58	7/2 <sup>-</sup>
		5084.8 6	9.76	2565.85	3/2 <sup>-</sup>
		7650.5 10	100.0	0.0	7/2 <sup>-</sup>
7662.96	(1/2) <sup>-</sup>	2941.4 7	4.88	4721.44	3/2 <sup>-</sup>
		3034.5 7	4.88	4628.23	1/2 <sup>-</sup> , 3/2 <sup>-</sup>
		3485.5 7	12.20	4177.33	5/2 <sup>-</sup>
		3498.3 7	12.20	4164.24	1/2 <sup>-</sup>
		4100.0 7	17.07	3562.98	(3/2 <sup>+</sup> )
		4339.4 7	14.63	3323.23	1/2 <sup>-</sup>
		4723.5 7	14.63	2939.10	1/2 <sup>-</sup>
		5003.3 7	12.20	2659.48	5/2 <sup>-</sup>
		5097.1 6	100.0	2565.85	3/2 <sup>-</sup>
		5497.0 7	51.22	2165.89	3/2 <sup>-</sup>
7680.3	(5/2)	2120.3 9	10.34	5560.0	1/2 <sup>-</sup> , 3/2 <sup>-</sup>
		3820.8 9	31.03	3859.28	
		3955.1 7	20.69	3725.01	5/2 <sup>-</sup>
		4037.2 6	100.0	3643.01	3/2 <sup>-</sup>
		5114.2 6	10.34	2565.85	3/2 <sup>-</sup>
		7679.9 10	34.48	0.0	7/2 <sup>-</sup>
7703.98	(5/2) <sup>-</sup>	2581.9 8	32.00	5122.11	
		2955.9 7	8.00	4748.13	3/2 <sup>-</sup>
		2982.3 9	8.00	4721.44	3/2 <sup>-</sup>
		3155.5 7	36.00	4548.28	5/2 <sup>-</sup>
		3539.3 7	8.00	4164.24	1/2 <sup>-</sup>
		3978.9 7	4.00	3725.01	5/2 <sup>-</sup>
		4060.9 7	8.00	3643.01	3/2 <sup>-</sup>
		4380.3 7	36.00	3323.23	1/2 <sup>-</sup>
		4400.7 7	24.00	3303.11	5/2 <sup>-</sup>
		4764.5 7	100.0	2939.10	1/2 <sup>-</sup>
		5044.3 7	28.00	2659.48	5/2 <sup>-</sup>
		5138.1 7	56.00	2565.85	3/2 <sup>-</sup>
		5537.9 7	40.00	2165.89	3/2 <sup>-</sup>
		7703.7 10	8.00	0.0	7/2 <sup>-</sup>
7747.1	(5/2)	2998.9 6	3.13	4748.13	3/2 <sup>-</sup>
		4103.9 7	9.38	3643.01	3/2 <sup>-</sup>
		5087.3 7	7.81	2659.48	5/2 <sup>-</sup>
		5181.1 6	35.94	2565.85	3/2 <sup>-</sup>
		7746.7 10	100.0	0.0	7/2 <sup>-</sup>
7806.1		4080.9 7	28.21	3725.01	5/2 <sup>-</sup>
		5639.9 7	100.0	2165.89	3/2 <sup>-</sup>
7815.86	1/2 <sup>-</sup>	3651.2 7	4.17	4164.24	1/2 <sup>-</sup>

Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

E <sub>i</sub> (level)	J <sup>π</sup> <sub>i</sub>	E <sub>γ</sub> <sup>†</sup>	I <sub>γ</sub> <sup>@</sup>	E <sub>f</sub>	J <sup>π</sup> <sub>f</sub>	Mult. <sup>b</sup>	δ <sup>c</sup>	Comments		
7815.86	1/2 <sup>-</sup>	3956.7	9	2.08	3859.28					
		4090.8	7	4.17	3725.01	5/2 <sup>-</sup>				
		4172.8	7	4.17	3643.01	3/2 <sup>-</sup>				
		4492.2	7	4.17	3323.23	1/2 <sup>-</sup>				
		4876.3	7	41.67	2939.10	1/2 <sup>-</sup>				
		4897.1	6	4.17	2918.58	7/2 <sup>-</sup>				
		5156.1	7	33.33	2659.48	5/2 <sup>-</sup>				
		5649.8	7	10.42	2165.89	3/2 <sup>-</sup>				
		7815.6	10	100.0	0.0	7/2 <sup>-</sup>				
		7833.2	21/2 <sup>-</sup>	1191.6 <sup>#</sup>	4	4.9 <sup>#</sup>	5	6641.6	19/2 <sup>-</sup>	Additional information 16.
1236.1 <sup>#</sup>	4			9.0 <sup>#</sup>	5	6596.5	19/2 <sup>-</sup>	(M1+E2) -0.4 <sup>d</sup> 2 Additional information 17.		
2402 <sup>#</sup>	1			5.0 <sup>#</sup>	5	5431.7	17/2 <sup>-</sup>	Additional information 18.		
3319.3 <sup>#</sup>	3			100 <sup>#</sup>	5	4513.78	17/2 <sup>-</sup>	E2 Additional information 19.		
7855.4?		3169 <sup>#e</sup>	2	100 <sup>#</sup>	4686.3	15/2 <sup>-</sup>				
7867.6	(5/2)	3279.4	12	40.74	4587.50					
		3689.5	7	48.15	4177.33	5/2 <sup>-</sup>				
		4224.0	7	100.0	3643.01	3/2 <sup>-</sup>				
		5301.1	6	48.15	2565.85	3/2 <sup>-</sup>				
		5701.0	7	14.81	2165.89	3/2 <sup>-</sup>				
		7868.7	6	70.37	0.0	7/2 <sup>-</sup>				
		7876.86	(5/2 <sup>-</sup> )	3128.7	7	12.12	4748.13	3/2 <sup>-</sup>		
				3155.1	9	12.12	4721.44	3/2 <sup>-</sup>		
				3289.1	12	9.09	4587.50			
				3402.8	10	6.06	4474.0			
3612.7	14			15.15	4264.1					
4233.7	7			9.09	3643.01	3/2 <sup>-</sup>				
4313.7	7			12.12	3562.98	(3/2 <sup>+</sup> )				
4900.3	8			12.12	2976.34	9/2 <sup>-</sup> ,(7/2)				
4958.0	6			24.24	2918.58	7/2 <sup>-</sup>				
5217.0	7			9.091	2659.48	5/2 <sup>-</sup>				
5310.8	6	81.82	2565.85	3/2 <sup>-</sup>						
7876.5	10	100.0	0.0	7/2 <sup>-</sup>						
7881.0	(3/2 <sup>-</sup> )	3938.4	7	25.71	3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>				
		4237.8	7	100.0	3643.01	3/2 <sup>-</sup>				
		4317.8	7	20.00	3562.98	(3/2 <sup>+</sup> )				
		4941.3	7	17.14	2939.10	1/2 <sup>-</sup>				
		5221.6	7	37.14	2659.48	5/2 <sup>-</sup>				
		5314.9	6	31.43	2565.85	3/2 <sup>-</sup>				
		5714.8	7	22.86	2165.89	3/2 <sup>-</sup>				
		7880.6	10	25.71	0.0	7/2 <sup>-</sup>				
7885.1	(7/2)	3336.6	8	25.00	4548.28	5/2 <sup>-</sup>				

Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

E <sub>i</sub> (level)	J <sup>π</sup> <sub>i</sub>	E <sub>γ</sub> <sup>†</sup>	I <sub>γ</sub> <sup>@</sup>	E <sub>f</sub>	J <sup>π</sup> <sub>f</sub>	Mult. <sup>b</sup>	δ <sup>c</sup>	Comments
7885.1	(7/2)	3707.6 7	54.17	4177.33	5/2 <sup>-</sup>			
		4160.0 7	45.83	3725.01	5/2 <sup>-</sup>			
		4581.8 7	54.17	3303.11	5/2 <sup>-</sup>			
		4908.6 8	100.0	2976.34	9/2 <sup>-</sup> ,(7/2)			
		4966.3 7	58.33	2918.58	7/2 <sup>-</sup>			
		5225.4 7	41.67	2659.48	5/2 <sup>-</sup>			
		7884.8 10	37.50	0.0	7/2 <sup>-</sup>			
7920.7	19/2 <sup>-</sup>	1324 <sup>#</sup> 1	3 <sup>#</sup> 2	6596.5	19/2 <sup>-</sup>			
		1588 <sup>#</sup> 1	11 <sup>#</sup> 2	6332.6	(17/2 <sup>-</sup> )			Additional information 20.
7938.83	(3/2 <sup>-</sup> )	3407.9 <sup>##</sup> 7	100 <sup>##</sup> 5	4513.78	17/2 <sup>-</sup>	M1+E2	+0.12 <sup>d</sup> 7	Additional information 21.
		4213.7 7	7.69	3725.01	5/2 <sup>-</sup>			
		4295.8 7	15.38	3643.01	3/2 <sup>-</sup>			
		4615.2 7	41.03	3323.23	1/2 <sup>-</sup>			
		4635.6 6	7.69	3303.11	5/2 <sup>-</sup>			
		4999.3 7	23.08	2939.10	1/2 <sup>-</sup>			
		5016.1 8	17.95	2922.25	1/2 <sup>+</sup>			
		5279.1 7	20.51	2659.48	5/2 <sup>-</sup>			
		5372.9 6	100.0	2565.85	3/2 <sup>-</sup>			
		5772.4 7	10.26	2165.89	3/2 <sup>-</sup>			
		7938.5 10	12.82	0.0	7/2 <sup>-</sup>			
7965.10	1/2 <sup>-</sup>	3217.0 7	25.00	4748.13	3/2 <sup>-</sup>			
		4240.0 7	37.50	3725.01	5/2 <sup>-</sup>			
		4322.0 7	100.0	3643.01	3/2 <sup>-</sup>			
		4402.0 7	37.50	3562.98	(3/2 <sup>+</sup> )			
		4641.4 7	62.50	3323.23	1/2 <sup>-</sup>			
		4661.8 6	37.50	3303.11	5/2 <sup>-</sup>			
		4988.6 8	25.00	2976.34	9/2 <sup>-</sup> ,(7/2)			
		5025.5 7	87.50	2939.10	1/2 <sup>-</sup>			
		5042.4 8	100.0	2922.25	1/2 <sup>+</sup>			
		5305.3 7	56.25	2659.48	5/2 <sup>-</sup>			
		5799.0 7	43.75	2165.89	3/2 <sup>-</sup>			
		7964.8 10	12.50	0.0	7/2 <sup>-</sup>			
		7966.8	(5/2 <sup>+</sup> )	3218.6 7	6.67	4748.13	3/2 <sup>-</sup>	
3338.3 7	15.56			4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
3418.2 8	4.44			4548.28	5/2 <sup>-</sup>			
4323.6 7	15.56			3643.01	3/2 <sup>-</sup>			
5307.0 7	35.56			2659.48	5/2 <sup>-</sup>			
5400.8 6	31.11			2565.85	3/2 <sup>-</sup>			
5800.6 7	13.33			2165.89	3/2 <sup>-</sup>			
7966.4 10	100.0			0.0	7/2 <sup>-</sup>			
7976.85	(5/2 <sup>+</sup> )	3388.8 12	6.10	4587.50				

Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>		
7976.85	(5/2 <sup>+</sup> )	4117.1 9	3.66	3859.28			
		4673.2 6	4.88	3303.11	5/2 <sup>-</sup>		
		5053.8 8	7.32	2922.25	1/2 <sup>+</sup>		
		7976.25 10	100.0	0.0	7/2 <sup>-</sup>		
8020.6	(5/2 <sup>-</sup> )	3432.8 12	4.60	4587.50			
		3546.6 10	2.30	4474.0			
		4078.1 7	2.30	3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>		
		5044.0 8	4.60	2976.34	9/2 <sup>-</sup> ,(7/2)		
		5101.8 6	1.15	2918.58	7/2 <sup>-</sup>		
		8020.2 10	100.0	0.0	7/2 <sup>-</sup>		
8056.7	1/2 <sup>-</sup>	3582.7 10	34.48	4474.0			
		3879.2 7	48.28	4177.33	5/2 <sup>-</sup>		
		4413.6 7	51.72	3643.01	3/2 <sup>-</sup>		
		4493.6 7	20.69	3562.98	(3/2 <sup>+</sup> )		
		4733.0 7	65.52	3323.23	1/2 <sup>-</sup>		
		5117.2 7	44.83	2939.10	1/2 <sup>-</sup>		
		5890.6 7	100.0	2165.89	3/2 <sup>-</sup>		
8067.0	3/2 <sup>-</sup>	3479.2 12	13.33	4587.50			
		4423.8 7	70.00	3643.01	3/2 <sup>-</sup>		
		4743.4 7	20.00	3323.23	1/2 <sup>-</sup>		
		5407.2 7	53.33	2659.48	5/2 <sup>-</sup>		
		5501.0 6	76.67	2565.85	3/2 <sup>-</sup>		
		5900.8 7	100.0	2165.89	3/2 <sup>-</sup>		
		8071.5	(7/2 <sup>-</sup> )	3893.9 7	44.44	4177.33	5/2 <sup>-</sup>
		4212.0 9	51.85	3859.28			
8071.5	(7/2 <sup>-</sup> )	4346.3 7	40.74	3725.01	5/2 <sup>-</sup>		
		4768.2 6	40.74	3303.11	5/2 <sup>-</sup>		
		5094.9 8	18.52	2976.34	9/2 <sup>-</sup> ,(7/2)		
		5152.6 6	74.07	2918.58	7/2 <sup>-</sup>		
		8071.1 10	100.0	0.0	7/2 <sup>-</sup>		
		8090.0?		2658#e 2	75# 25	5431.7	17/2 <sup>-</sup>
				3169#e 2	100# 50	4920.8	(15/2 <sup>-</sup> )
				3577#e 3	75# 50	4513.78	17/2 <sup>-</sup>
8105.94	(5/2 <sup>-</sup> )	3384.2 9	47.06	4721.44	3/2 <sup>-</sup>		
		3477.4 7	41.18	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>		
		3518.2 12	35.29	4587.50			
		3841.8 14	29.41	4264.1			
		4246.5 9	41.18	3859.28			
		4462.8 7	82.35	3643.01	3/2 <sup>-</sup>		
		4542.8 7	35.29	3562.98	(3/2 <sup>+</sup> )		
		4802.6 6	47.06	3303.11	5/2 <sup>-</sup>		

Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sup>π</sup><sub>i</sub></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sup>π</sup><sub>f</sub></u>	<u>Comments</u>
8105.94	(5/2) <sup>-</sup>	5166.4 7	35.29	2939.10	1/2 <sup>-</sup>	
		5540.0 6	100.0	2565.85	3/2 <sup>-</sup>	
		5939.8 7	94.12	2165.89	3/2 <sup>-</sup>	
8130.6	5/2 <sup>+</sup>	3408.8 9	35.48	4721.44	3/2 <sup>-</sup>	
		3502.1 7	54.84	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	
		3542.8 12	19.35	4587.50		
		4567.5 7	16.13	3562.98	(3/2 <sup>+</sup> )	
		5564.6 6	100.0	2565.85	3/2 <sup>-</sup>	
		5964.4 7	54.84	2165.89	3/2 <sup>-</sup>	
		8130.2 10	41.94	0.0	7/2 <sup>-</sup>	
8134.1	1/2 <sup>-</sup>	4490.9 7	100.0	3643.01	3/2 <sup>-</sup>	
		4810.3 7	38.71	3323.23	1/2 <sup>-</sup>	
		5215.2 6	54.84	2918.58	7/2 <sup>-</sup>	
		5568.0 6	29.03	2565.85	3/2 <sup>-</sup>	
		5967.9 7	67.74	2165.89	3/2 <sup>-</sup>	
		8133.7 10	32.26	0.0	7/2 <sup>-</sup>	
8144.91	1/2 <sup>-</sup>	3980.6 7	21.43	4164.24	1/2 <sup>-</sup>	
		4419.8 7	32.14	3725.01	5/2 <sup>-</sup>	
		4501.8 7	42.86	3643.01	3/2 <sup>-</sup>	
		4821.2 7	100.0	3323.23	1/2 <sup>-</sup>	
		4841.6 6	25.00	3303.11	5/2 <sup>-</sup>	
		5205.3 7	53.57	2939.10	1/2 <sup>-</sup>	
		5485.2 7	46.43	2659.48	5/2 <sup>-</sup>	
		5978.8 7	35.71	2165.89	3/2 <sup>-</sup>	
8158.7	21/2 <sup>-</sup>	1516.7 <sup>#</sup> 6	32 <sup>#</sup> 5	6641.6	19/2 <sup>-</sup>	<a href="#">Additional information 22.</a>
		1562.1 <sup>#</sup> 6	70 <sup>#</sup> 5	6596.5	19/2 <sup>-</sup>	<a href="#">Additional information 23.</a>
		2728 <sup>#</sup> 1	100 <sup>#</sup> 16	5431.7	17/2 <sup>-</sup>	<a href="#">Additional information 24.</a>
		3645 <sup>#</sup> 2	84 <sup>#</sup> 11	4513.78	17/2 <sup>-</sup>	<a href="#">Additional information 25.</a>
8191.0	1/2 <sup>-</sup>	4026.3 7	23.91	4164.24	1/2 <sup>-</sup>	
		4248.6 7	30.43	3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	
		4548.0 7	21.74	3643.01	3/2 <sup>-</sup>	
		5251.5 7	100.0	2939.10	1/2 <sup>-</sup>	
		5625.1 10	41.30	2565.85	3/2 <sup>-</sup>	
8240.4		4597.2 7	27.50	3643.01	3/2 <sup>-</sup>	
		4677.2 7	62.50	3562.98	(3/2 <sup>+</sup> )	
		5580.5 7	17.50	2659.48	5/2 <sup>-</sup>	
		5674.3 6	12.50	2565.85	3/2 <sup>-</sup>	
		6074.2 7	32.50	2165.89	3/2 <sup>-</sup>	
		8240.0 10	100.0	0.0	7/2 <sup>-</sup>	
8273.4	(5/2)	3799.3 11	20.00	4474.0		
		4009.2 14	15.56	4264.1		

Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>b</sup></u>	<u>Comments</u>
8273.4	(5/2)	4548.2 7	13.33	3725.01	5/2 <sup>-</sup>		
		4710.2 7	17.78	3562.98	(3/2 <sup>+</sup> )		
		4970.0 6	24.44	3303.11	5/2 <sup>-</sup>		
		5707.3 6	6.67	2565.85	3/2 <sup>-</sup>		
		8273.0 10	100.0	0.0	7/2 <sup>-</sup>		
8283.9	3/2 <sup>-</sup>	4106.3 7	79.41	4177.33	5/2 <sup>-</sup>		
		4119.2 7	14.71	4164.24	1/2 <sup>-</sup>		
		4720.8 7	11.76	3562.98	(3/2 <sup>+</sup> )		
		5624.1 7	44.12	2659.48	5/2 <sup>-</sup>		
		5717.9 6	61.76	2565.85	3/2 <sup>-</sup>		
		8283.6 10	100.0	0.0	7/2 <sup>-</sup>		
8291.0	(5/2) <sup>-</sup>	3569.2 9	24.24	4721.44	3/2 <sup>-</sup>		
		3662.5 7	9.09	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>		
		4727.9 7	33.33	3562.98	(3/2 <sup>+</sup> )		
		5368.2 8	48.48	2922.25	1/2 <sup>+</sup>		
		5725.0 6	100.0	2565.85	3/2 <sup>-</sup>		
		8290.6 6	75.76	0.0	7/2 <sup>-</sup>		
8294.8	3/2 <sup>-</sup>	4651.7 7	100.0	3643.01	3/2 <sup>-</sup>		
		4971.1 7	6.25	3323.23	1/2 <sup>-</sup>		
		5355.2 7	43.75	2939.10	1/2 <sup>-</sup>		
		5728.8 6	78.13	2565.85	3/2 <sup>-</sup>		
		6128.7 7	84.38	2165.89	3/2 <sup>-</sup>		
		8348.9	23/2 <sup>-</sup>	515.5 <sup>#</sup> 2	3.1 <sup>#</sup> 12	7833.2	21/2 <sup>-</sup>
1707.2 <sup>#</sup> 4	100 <sup>#</sup> 6	6641.6		19/2 <sup>-</sup>	E2	<a href="#">Additional information 27.</a>	
1752.4 <sup>#</sup> 3	81 <sup>#</sup> 6	6596.5		19/2 <sup>-</sup>	E2	<a href="#">Additional information 28.</a>	
8360.0	7/2,9/2	5383.3 8	26.58	2976.34	9/2 <sup>-</sup> ,(7/2)		
		8359.5 10	100.0	0.0	7/2 <sup>-</sup>		
8374.0	1/2 <sup>-</sup> ,3/2 <sup>-</sup>	5070.6 6	74.42	3303.11	5/2 <sup>-</sup>		
		5714.1 7	100.0	2659.48	5/2 <sup>-</sup>		
		8373.5 10	58.14	0.0	7/2 <sup>-</sup>		
8384.0	5/2 <sup>+</sup>	3635.8 7	27.78	4748.13	3/2 <sup>-</sup>		
		3662.2 9	27.78	4721.44	3/2 <sup>-</sup>		
		3755.5 7	16.67	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>		
		4820.9 7	22.22	3562.98	(3/2 <sup>+</sup> )		
		5818.0 6	100.0	2565.85	3/2 <sup>-</sup>		
		6217.8 7	61.11	2165.89	3/2 <sup>-</sup>		
		8383.6 10	22.22	0.0	7/2 <sup>-</sup>		
8390.8	5/2 <sup>+</sup>	5067.0 7	21.74	3323.23	1/2 <sup>-</sup>		
		5468.0 8	21.74	2922.25	1/2 <sup>+</sup>		
		5731.0 7	15.22	2659.48	5/2 <sup>-</sup>		
		5824.8 6	45.65	2565.85	3/2 <sup>-</sup>		

Adopted Levels, Gammas (continued)

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>b</sup></u>
8390.8	5/2 <sup>+</sup>	6224.6 7	100.0	2165.89	3/2 <sup>-</sup>	
		8390.4 10	13.04	0.0	7/2 <sup>-</sup>	
8400.8		1804 <sup>#</sup> 1	100 <sup>#</sup> 20	6596.5	19/2 <sup>-</sup>	
		3887 <sup>#</sup> 2	80 <sup>#</sup> 10	4513.78	17/2 <sup>-</sup>	
8412.0	(3/2)	4247.3 7	28.57	4164.24	1/2 <sup>-</sup>	
		4769.0 7	75.00	3643.01	3/2 <sup>-</sup>	
		5088.4 7	100.0	3323.23	1/2 <sup>-</sup>	
		5108.8 6	21.43	3303.11	5/2 <sup>-</sup>	
		5472.5 7	7.143	2939.10	1/2 <sup>-</sup>	
		5493.3 6	21.43	2918.58	7/2 <sup>-</sup>	
		5752.3 7	67.86	2659.48	5/2 <sup>-</sup>	
8417.9	5/2 <sup>+</sup>	3669.6 7	35.48	4748.13	3/2 <sup>-</sup>	
		3696.0 9	32.26	4721.44	3/2 <sup>-</sup>	
		5851.8 6	90.32	2565.85	3/2 <sup>-</sup>	
		6251.6 7	100.0	2165.89	3/2 <sup>-</sup>	
		8417.4 6	64.52	0.0	7/2 <sup>-</sup>	
8431.3	3/2 <sup>-</sup>	5107.6 7	15.15	3323.23	1/2 <sup>-</sup>	
		5128.0 6	24.24	3303.11	5/2 <sup>-</sup>	
		5508.6 8	100.0	2922.25	1/2 <sup>+</sup>	
		5865.3 10	12.12	2565.85	3/2 <sup>-</sup>	
8435.7	3/2 <sup>+</sup> , (5/2 <sup>+</sup> )	5132.3 6	14.67	3303.11	5/2 <sup>-</sup>	
		5775.8 7	18.67	2659.48	5/2 <sup>-</sup>	
		8435.2 10	100.0	0.0	7/2 <sup>-</sup>	
8440.0		3691.9 7	9.38	4748.13	3/2 <sup>-</sup>	
		3718.3 9	9.38	4721.44	3/2 <sup>-</sup>	
		4275.3 7	56.25	4164.24	1/2 <sup>-</sup>	
		4497.6 7	21.88	3942.09	1/2 <sup>-</sup> , 3/2 <sup>-</sup>	
		5500.5 7	43.75	2939.10	1/2 <sup>-</sup>	
		5780.3 7	21.88	2659.48	5/2 <sup>-</sup>	
		5874.1 6	50.00	2565.85	3/2 <sup>-</sup>	
		8439.7 10	100.0	0.0	7/2 <sup>-</sup>	
8456.7	(1/2, 3/2)	4893.6 7	100.0	3562.98	(3/2 <sup>+</sup> )	
		5517.2 7	78.57	2939.10	1/2 <sup>-</sup>	
8463.9	9/2 <sup>+</sup>	2395.4 21	9.52	6068.8	9/2 <sup>+</sup>	
		5487.2 8	4.76	2976.34	9/2 <sup>-</sup> , (7/2)	
		5544.9 6	4.76	2918.58	7/2 <sup>-</sup>	
		8463.4 10	100.0	0.0	7/2 <sup>-</sup>	
8465.6		8464.9 10	100.0	0.0	7/2 <sup>-</sup>	
8467.3	9/2 <sup>+</sup>	2398.5 17	4.×10 <sup>1</sup> 3	6068.8	9/2 <sup>+</sup>	M1
		3879.9 12		4587.50		
		4128.0 14		4339.2		

**Adopted Levels, Gammas (continued)**

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>b</sup></u>
8467.3	9/2 <sup>+</sup>	5548.2 14	48 8	2918.58	7/2 <sup>-</sup>	E1
		8466.3 14	100 4	0.0	7/2 <sup>-</sup>	E1
8468.7	7/2 <sup>+</sup>	2399.4 17	36 4	6068.8	9/2 <sup>+</sup>	M1
		3881.1 12		4587.50		
		4129.2 14		4339.2		
		4743.7 7		3725.01	5/2 <sup>-</sup>	
		5492.3 8		2976.34	9/2 <sup>-</sup> , (7/2)	
		5549.1 14	45 4	2918.58	7/2 <sup>-</sup>	E1
		5809.1 7		2659.48	5/2 <sup>-</sup>	
		8467.2 14	100.0	0.0	7/2 <sup>-</sup>	E1
8476.4	9/2 <sup>+</sup>	2407.4 17	37.7 19	6068.8	9/2 <sup>+</sup>	M1
		4002.8 10		4474.0		
		4137.2 14		4339.2		
		5557.1 14	51 4	2918.58	7/2 <sup>-</sup>	E1
		8475.2 14	100 4	0.0	7/2 <sup>-</sup>	E1
8478.7	5/2	4619.1 9	100.0	3859.28		
		5818.8 7	40.00	2659.48	5/2 <sup>-</sup>	
		8478.2 10	60.00	0.0	7/2 <sup>-</sup>	
8505.3	3/2 <sup>+</sup>	3956.8 8	8.57	4548.28	5/2 <sup>-</sup>	
		4340.6 7	17.14	4164.24	1/2 <sup>-</sup>	
		5181.7 7	14.29	3323.23	1/2 <sup>-</sup>	
		5582.6 8	22.86	2922.25	1/2 <sup>+</sup>	
		5845.6 7	40.00	2659.48	5/2 <sup>-</sup>	
		6339.2 7	82.86	2165.89	3/2 <sup>-</sup>	
		8505.0 10	100.0	0.0	7/2 <sup>-</sup>	
8557.0	7/2 <sup>-</sup>	4008.4 8	22.73	4548.28	5/2 <sup>-</sup>	
		4697.5 9	65.91	3859.28		
		5638.1 6	38.64	2918.58	7/2 <sup>-</sup>	
		8556.6 10	100.0	0.0	7/2 <sup>-</sup>	
8559.3	7/2,9/2	5582.6 8	90.24	2976.34	9/2 <sup>-</sup> , (7/2)	
		5640.3 6	53.66	2918.58	7/2 <sup>-</sup>	
		8558.8 10	100.0	0.0	7/2 <sup>-</sup>	
8583.6	5/2 <sup>+</sup>	5923.6 7	9.30	2659.48	5/2 <sup>-</sup>	
		6017.4 6	6.98	2565.85	3/2 <sup>-</sup>	
		8583.0 10	100.0	0.0	7/2 <sup>-</sup>	
8644.2	5/2 <sup>+</sup>	3896.0 7	7.60	4748.13	3/2 <sup>-</sup>	
		3922.4 9	7.60	4721.44	3/2 <sup>-</sup>	
		5984.4 7	11.39	2659.48	5/2 <sup>-</sup>	
		8643.6 10	100.0	0.0	7/2 <sup>-</sup>	
8652.4		5328.8 7	66.67	3323.23	1/2 <sup>-</sup>	
		5712.9 7	100.0	2939.10	1/2 <sup>-</sup>	
		8652.2 10	41.67	0.0	7/2 <sup>-</sup>	



**Adopted Levels, Gammas (continued)**

$\gamma(^{55}\text{Co})$  (continued)

$E_i(\text{level})$	$J_i^\pi$	$E_\gamma^\dagger$	$I_\gamma^\oplus$	$E_f$	$J_f^\pi$	Mult. <sup>b</sup>	$\delta^c$	Comments
8680.0	1/2 <sup>+</sup>	3931.8 7	6.67	4748.13	3/2 <sup>-</sup>			
		5757.2 8	100.0	2922.25	1/2 <sup>+</sup>			
		6020.1 7	11.11	2659.48	5/2 <sup>-</sup>			
		6113.9 6	33.33	2565.85	3/2 <sup>-</sup>			
		8679.6 10	71.11	0.0	7/2 <sup>-</sup>			
8683.1		4054.6 7	12.50	4628.23	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		4134.5 8	12.50	4548.28	5/2 <sup>-</sup>			
		4209.0 10	15.63	4474.0				
		4418.9 14	18.75	4264.1				
		5119.9 7	25.00	3562.98	(3/2 <sup>+</sup> )			
		5760.3 8	100.0	2922.25	1/2 <sup>+</sup>			
		6117.1 6	31.25	2565.85	3/2 <sup>-</sup>			
		6516.9 7	50.00	2165.89	3/2 <sup>-</sup>			
		8682.7 10	50.00	0.0	7/2 <sup>-</sup>			
		8687.1	(21/2)	766.4 <sup>#</sup> 3	100 <sup>#</sup> 4	7920.7	19/2 <sup>-</sup>	D(+Q)
2091 <sup>#</sup> 2	15 <sup>#</sup> 4			6596.5	19/2 <sup>-</sup>			Additional information 30.
8689.7	23/2 <sup>-</sup>	340.5 <sup>#</sup> 2	5.5 <sup>#</sup> 9	8348.9	23/2 <sup>-</sup>	M1+E2		Additional information 31.
		856.6 <sup>#</sup> 2	100 <sup>#</sup> 9	7833.2	21/2 <sup>-</sup>	M1+E2	-0.25 <sup>d</sup> 6	Additional information 32.
		1160.2 <sup>#</sup> 5	3.6 <sup>#</sup> 9	7529.4	19/2 <sup>-</sup>			Additional information 33.
8692.5		2095 <sup>#</sup> 1	47 <sup>#</sup> 4	6596.5	19/2 <sup>-</sup>			
		4749.9 7	37.50	3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		4967.2 7	45.83	3725.01	5/2 <sup>-</sup>			
		5715.8 8	45.83	2976.34	9/2 <sup>-</sup> , (7/2)			
		5773.6 6	37.50	2918.58	7/2 <sup>-</sup>			
		6032.6 7	66.67	2659.48	5/2 <sup>-</sup>			
		6126.4 6	37.50	2565.85	3/2 <sup>-</sup>			
		6526.4 7	45.83	2165.89	3/2 <sup>-</sup>			
8703.6	9/2 <sup>+</sup>	8692.0 10	100.0	0.0	7/2 <sup>-</sup>			
		4115.8 12	3.61	4587.50				
		4761.1 7	4.82	3942.09	1/2 <sup>-</sup> ,3/2 <sup>-</sup>			
		5727.0 8	12.05	2976.34	9/2 <sup>-</sup> , (7/2)			
		8703.2 10	100.0	0.0	7/2 <sup>-</sup>			
8706.8	3/2,5/2	3985.0 9	3.57	4721.44	3/2 <sup>-</sup>			
		5143.6 7	1.19	3562.98	(3/2 <sup>+</sup> )			
		5784.0 8	2.38	2922.25	1/2 <sup>+</sup>			
		5787.9 6	1.19	2918.58	7/2 <sup>-</sup>			
		6140.7 6	5.95	2565.85	3/2 <sup>-</sup>			
		6540.6 7	4.76	2165.89	3/2 <sup>-</sup>			
		8706.4 10	100.0	0.0	7/2 <sup>-</sup>			
8745.6	3/2 <sup>-</sup>	5422.1 6	100.0	3323.23	1/2 <sup>-</sup>			

Adopted Levels, Gammas (continued)

$\gamma(^{55}\text{Co})$  (continued)

$E_i(\text{level})$	$J_i^\pi$	$E_\gamma^\dagger$	$I_\gamma^\oplus$	$E_f$	$J_f^\pi$	Mult. <sup>b</sup>	$\delta^c$	Comments
8745.6	3/2 <sup>-</sup>	6085.6 7	47.17	2659.48	5/2 <sup>-</sup>			
		6579.3 7	18.87	2165.89	3/2 <sup>-</sup>			
		8745.1 10	22.64	0.0	7/2 <sup>-</sup>			
8750.1	5/2 <sup>-</sup>	8749.4 10	100.0	0.0	7/2 <sup>-</sup>			
8753.9	5/2 <sup>-</sup>	4205.2 8	64.00	4548.28	5/2 <sup>-</sup>			
		4894.3 9	48.00	3859.28				
		5028.6 7	32.00	3725.01	5/2 <sup>-</sup>			
		5777.2 7	100.0	2976.34	9/2 <sup>-</sup> , (7/2)			
		6587.6 6	56.00	2165.89	3/2 <sup>-</sup>			
		8753.4 10	100.0	0.0	7/2 <sup>-</sup>			
8798.3	3/2 <sup>-</sup>	4633.6 7	11.59	4164.24	1/2 <sup>-</sup>			
		5155.2 7	33.33	3643.01	3/2 <sup>-</sup>			
		6632.2 10	100.0	2165.89	3/2 <sup>-</sup>			
8803.44	7/2 <sup>-</sup>	4055.2 7	7.50	4748.13	3/2 <sup>-</sup>			
		4081.6 9	7.50	4721.44	3/2 <sup>-</sup>			
		4539.2 14	25.00	4264.1				
		4625.8 7	10.00	4177.33	5/2 <sup>-</sup>			
		5160.2 7	50.00	3643.01	3/2 <sup>-</sup>			
		5479.6 7	7.50	3323.23	1/2 <sup>-</sup>			
		6143.6 7	15.00	2659.48	5/2 <sup>-</sup>			
		6237.4 6	12.50	2565.85	3/2 <sup>-</sup>			
		6637.2 7	15.00	2165.89	3/2 <sup>-</sup>			
		8803.0 10	100.0	0.0	7/2 <sup>-</sup>			
8855.67	5/2 <sup>+</sup>	4307.0 8	5.56	4548.28	5/2 <sup>-</sup>			
		4591.4 14	5.56	4264.1				
		5130.4 7	9.26	3725.01	5/2 <sup>-</sup>			
		5212.4 7	3.70	3643.01	3/2 <sup>-</sup>			
		5292.4 7	11.11	3562.98	(3/2 <sup>+</sup> )			
		5552.2 6	16.67	3303.11	5/2 <sup>-</sup>			
		5936.7 6	3.70	2918.58	7/2 <sup>-</sup>			
		6289.5 6	5.56	2565.85	3/2 <sup>-</sup>			
		6689.4 7	24.07	2165.89	3/2 <sup>-</sup>			
		8855.2 10	100.0	0.0	7/2 <sup>-</sup>			
9698.7	25/2 <sup>-</sup>	1008.7 <sup>#</sup> 3	20.6 <sup>#</sup> 6	8689.7	23/2 <sup>-</sup>	M1+E2	-0.19 <sup>d</sup> 8	Additional information 34.
		1349.9 <sup>#</sup> 2	100 <sup>#</sup> 6	8348.9	23/2 <sup>-</sup>	M1+E2	-0.35 <sup>d</sup> 7	Additional information 35.
		1539.9 <sup>#</sup> 6	4.7 <sup>#</sup> 6	8158.7	21/2 <sup>-</sup>			Additional information 36.
		1865.8 <sup>#</sup> 8	11.8 <sup>#</sup> 6	7833.2	21/2 <sup>-</sup>	E2		Additional information 37.
9782.3		1433 <sup>#</sup> 1	83 <sup>#</sup> 17	8348.9	23/2 <sup>-</sup>			Additional information 38.
		3187 <sup>#</sup> 2	100 <sup>#</sup> 17	6596.5	19/2 <sup>-</sup>			Additional information 39.
10113.1	(23/2)	1426.0 <sup>#</sup> 5	100 <sup>#</sup> 4	8687.1	(21/2)	(M1+E2)		Additional information 40.

**Adopted Levels, Gammas (continued)**

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sup>π</sup><sub>i</sub></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sup>π</sup><sub>f</sub></u>	<u>Mult.<sup>b</sup></u>	<u>δ<sup>c</sup></u>	<u>Comments</u>
10113.1	(23/2)	1712 <sup>#</sup> 1	12 <sup>#</sup> 4	8400.8				
10545.6	(23/2)	1859 <sup>#</sup> 1	73 <sup>#</sup> 18	8687.1 (21/2)				Additional information 41.
		2626 <sup>#</sup> 1	100 <sup>#</sup> 9	7920.7 19/2 <sup>-</sup>				Additional information 42.
		2714 <sup>#</sup> 2	91 <sup>#</sup> 18	7833.2 21/2 <sup>-</sup>				Additional information 43.
10580.0	25/2 <sup>-</sup>	880 <sup>#</sup> 1	10 <sup>#</sup> 3	9698.7 25/2 <sup>-</sup>				
		1889.5 <sup>#</sup> 6	100 <sup>#</sup> 7			M1+E2	-0.6 <sup>d</sup> 2	Additional information 44.
		2231 <sup>#</sup> 1	97 <sup>#</sup> 10	8348.9 23/2 <sup>-</sup>		M1+E2	-1.2 <sup>d</sup> +7-10	Additional information 45.
10759.9		2411 <sup>#</sup> 2	59 <sup>#</sup> 10	8348.9 23/2 <sup>-</sup>				
		2927 <sup>#</sup> 2	100 <sup>#</sup> 20	7833.2 21/2 <sup>-</sup>				
11470.1	25/2 <sup>-</sup>	924.7 <sup>#</sup> 3	29 <sup>#</sup> 8	10545.6 (23/2)		D+Q		ΔJ=(1) from DCO=0.62 19.
		2781 <sup>#</sup> 2	62 <sup>#</sup> 20	8689.7 23/2 <sup>-</sup>				Additional information 46.
		2783 <sup>#</sup> 2	100 <sup>#</sup> 12	8687.1 (21/2)				Additional information 47.
		3640 <sup>#</sup> 2	25 <sup>#</sup> 8	7833.2 21/2 <sup>-</sup>				Additional information 48.
11908.2	25/2	1363 <sup>#</sup> 1	67 <sup>#</sup> 33	10545.6 (23/2)				Additional information 49.
		3222 <sup>#</sup> 2	100 <sup>#</sup> 33	8687.1 (21/2)				Additional information 50.
		3560 <sup>#</sup> 2	67 <sup>#</sup> 33	8348.9 23/2 <sup>-</sup>				
		4075 <sup>#</sup> 3	100 <sup>#</sup> 33	7833.2 21/2 <sup>-</sup>				
11962.9	(27/2)	2264 <sup>#</sup> 1	100 <sup>#</sup> 10	9698.7 25/2 <sup>-</sup>				Additional information 51.
		3274 <sup>#</sup> 2	90 <sup>#</sup> 5	8689.7 23/2 <sup>-</sup>				Additional information 52.
		3615 <sup>#</sup> 2	45 <sup>#</sup> 10	8348.9 23/2 <sup>-</sup>				Additional information 53.
12118.8		1359 <sup>#</sup> 1	40 <sup>#</sup> 10	10759.9				Additional information 54.
		2420 <sup>#</sup> 1	100 <sup>#</sup> 10	9698.7 25/2 <sup>-</sup>				
12363.2	27/2	455.0 <sup>#</sup> 1	22 <sup>#</sup> 4	11908.2 25/2		D+Q		Additional information 55.
		893.2 <sup>#</sup> 2	100 <sup>#</sup> 4	11470.1 25/2 <sup>-</sup>		M1+E2	-0.24 <sup>d</sup> 10	Additional information 56.
		1782.9 <sup>#</sup> 3	87 <sup>#</sup> 4	10580.0 25/2 <sup>-</sup>		D(+Q)	-0.1 <sup>d</sup> 2	Additional information 57.
		1818 <sup>#</sup> 1	43 <sup>#</sup> 9	10545.6 (23/2)				Additional information 58.
		4013 <sup>#</sup> 3	17 <sup>#</sup> 4	8348.9 23/2 <sup>-</sup>				
12613.5		2915 <sup>#</sup> 3	67 <sup>#</sup> 18	9698.7 25/2 <sup>-</sup>				
		3925 <sup>#</sup> 3	100 <sup>#</sup> 17	8689.7 23/2 <sup>-</sup>				
		4263 <sup>#</sup> 3	100 <sup>#</sup> 34	8348.9 23/2 <sup>-</sup>				
12835.5	(27/2)	2255 <sup>#</sup> 2	100 <sup>#</sup> 10	10580.0 25/2 <sup>-</sup>				Additional information 59.
		2722 <sup>#</sup> 1	70 <sup>#</sup> 20	10113.1 (23/2)				Additional information 60.
		3138 <sup>#</sup> 2	80 <sup>#</sup> 10	9698.7 25/2 <sup>-</sup>		D+Q		ΔJ=(1) from A <sub>2</sub> =0.49 8.

**Adopted Levels, Gammas (continued)**

γ(<sup>55</sup>Co) (continued)

<u>E<sub>i</sub>(level)</u>	<u>J<sup>π</sup><sub>i</sub></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>@</sup></u>	<u>E<sub>f</sub></u>	<u>J<sup>π</sup><sub>f</sub></u>	<u>Mult.<sup>b</sup></u>	<u>δ<sup>c</sup></u>	<u>Comments</u>
13163.0		4812 <sup>#</sup> 2	100 <sup>#</sup> 29	8348.9	23/2 <sup>-</sup>			
13339.3	29/2	976.1 <sup>#</sup> 2	100 <sup>#</sup> 3	12363.2	27/2	M1+E2	-0.2 <sup>d</sup> 1	Additional information 61.
13516.7	(27/2 <sup>-</sup> )	1398 <sup>#</sup> 1	29 <sup>#</sup> 12	12118.8		(M1+E2)		Additional information 62.
		2936 <sup>#</sup> 3	29 <sup>#</sup> 6	10580.0	25/2 <sup>-</sup>			
		3818 <sup>#</sup> 1	100 <sup>#</sup> 6	9698.7	25/2 <sup>-</sup>	(M1+E2)		Additional information 63.
13685		5336 <sup>#</sup> 3	100 <sup>#</sup>	8348.9	23/2 <sup>-</sup>			
13818.6		1856 <sup>#</sup> 1	58 <sup>#</sup> 8	11962.9	(27/2)			
		4119 <sup>#</sup> 2	100 <sup>#</sup> 8	9698.7	25/2 <sup>-</sup>			
14125		4426 <sup>#</sup> 3	100 <sup>#</sup> 20	9698.7	25/2 <sup>-</sup>			
14672.6	31/2	1333.2 <sup>#</sup> 3	2.1 <sup>#</sup> 2	13339.3	29/2	M1+E2	≈-0.3 <sup>d</sup>	δ: or ≈-3.0. Additional information 64.
		1837 <sup>#</sup> 1	100 <sup>#</sup>	12835.5	(27/2)			
14730		5031 <sup>#</sup> 3	100 <sup>#</sup>	9698.7	25/2 <sup>-</sup>			
14881.5		1063 <sup>#</sup> 1	43 <sup>#</sup> 14	13818.6				
		1365 1	29 14	13516.7	(27/2 <sup>-</sup> )			Additional information 65.
		1718 <sup>#</sup> 1	29 <sup>#</sup> 14	13163.0				
		2268 <sup>#</sup> 2	100 <sup>#</sup> 27	12613.5				Additional information 66.
		2919 <sup>#</sup> 2	71 <sup>#</sup> 14	11962.9	(27/2)			

<sup>†</sup> E<sub>γ</sub>'s are from (p,γ), except as noted.

<sup>‡</sup> From (<sup>3</sup>He,dγ).

<sup>#</sup> From (HI,xnγ).

<sup>@</sup> Photon branchings are from (p,γ), except as noted.

<sup>&</sup> From (<sup>3</sup>He,dγ).

<sup>a</sup> Weighted average of available values in (p,γ), (<sup>3</sup>He,dγ), and (d,nγ).

<sup>b</sup> Based on γ(θ), in (p,γ), (HI,xnγ), and (<sup>3</sup>He,dγ).

<sup>c</sup> From (p,γ); phase convention of 1970Kr03, except as noted.

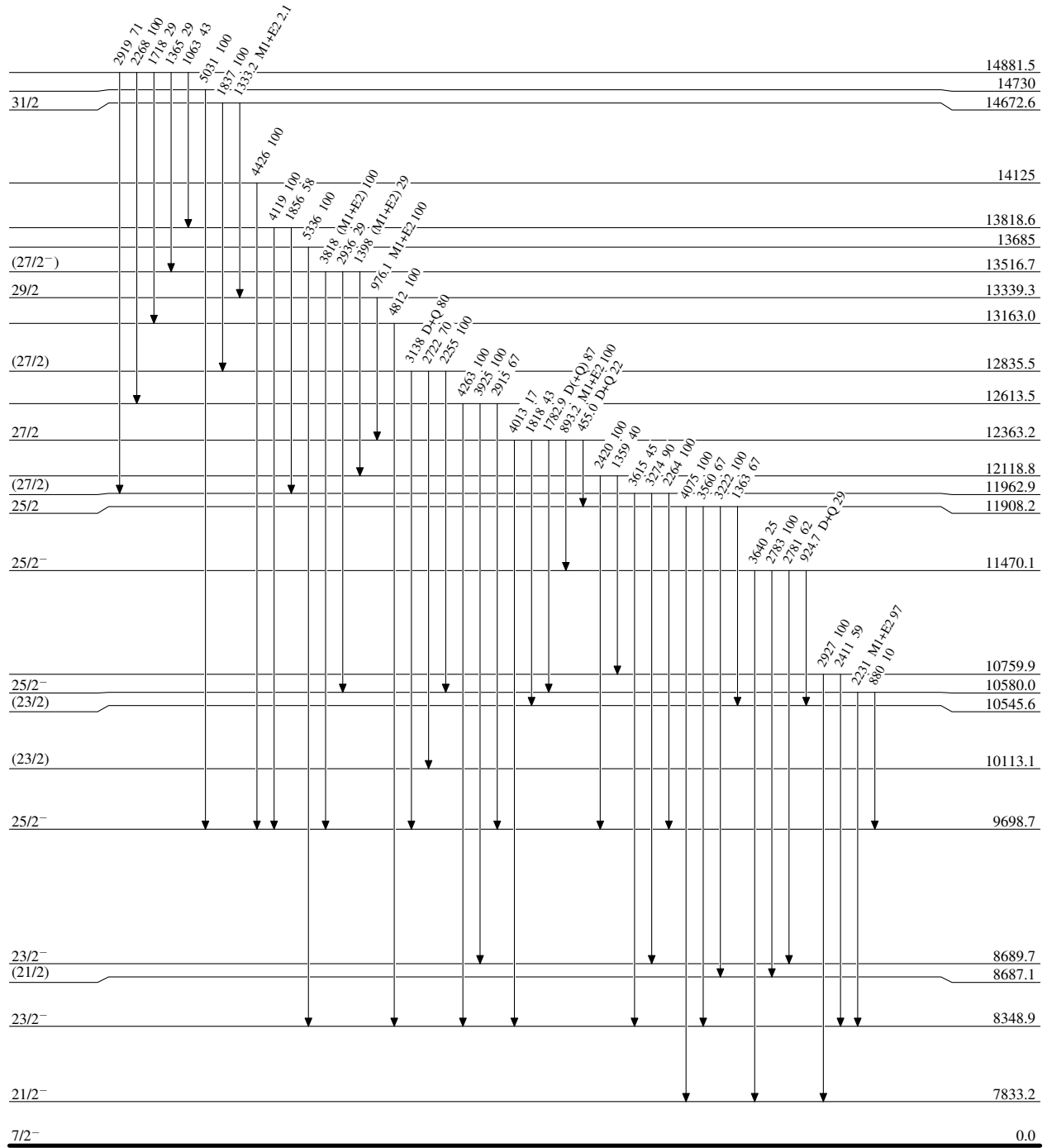
<sup>d</sup> From (HI,xnγ).

<sup>e</sup> Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

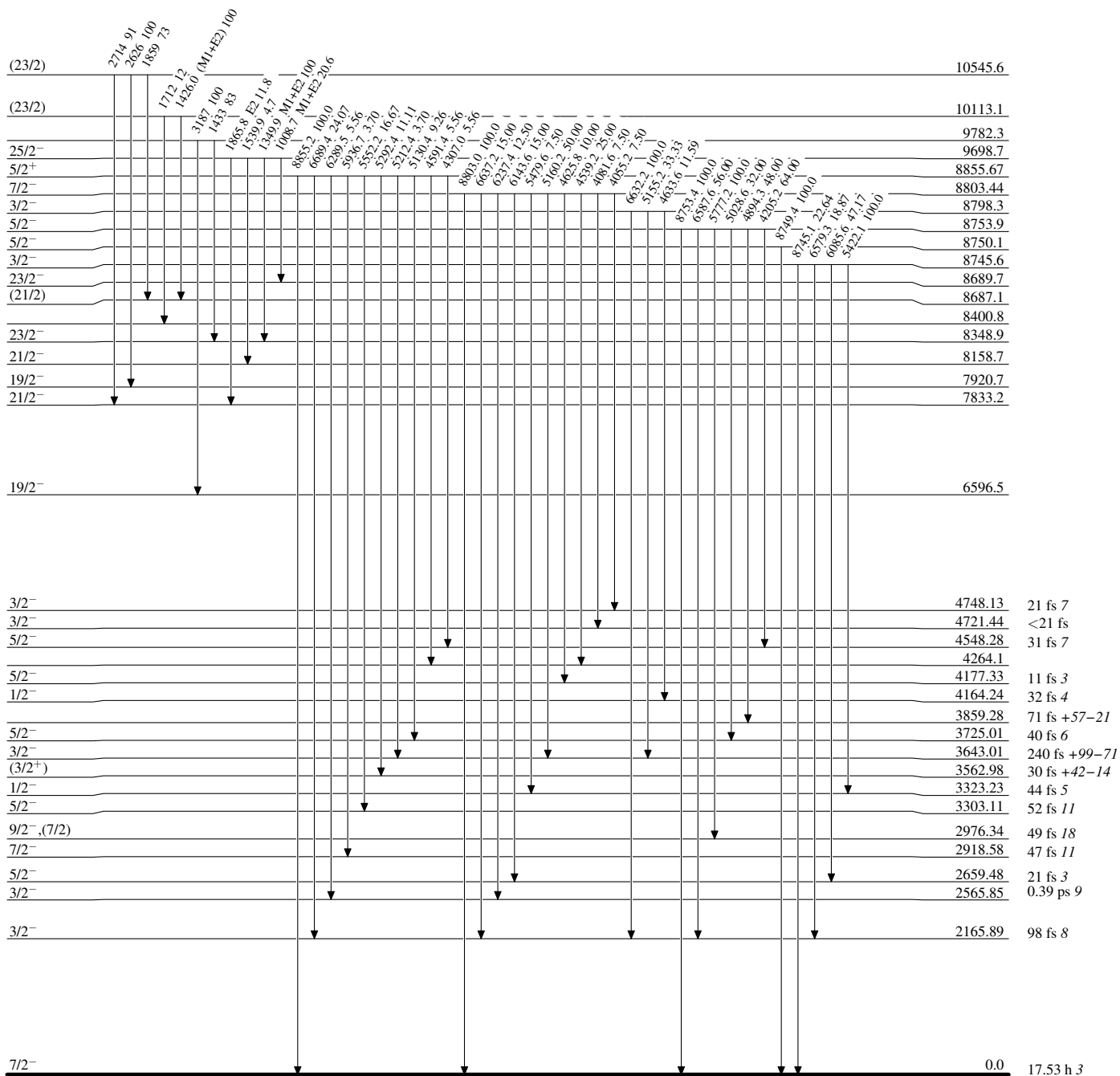
Intensities: Relative photon branching from each level



**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

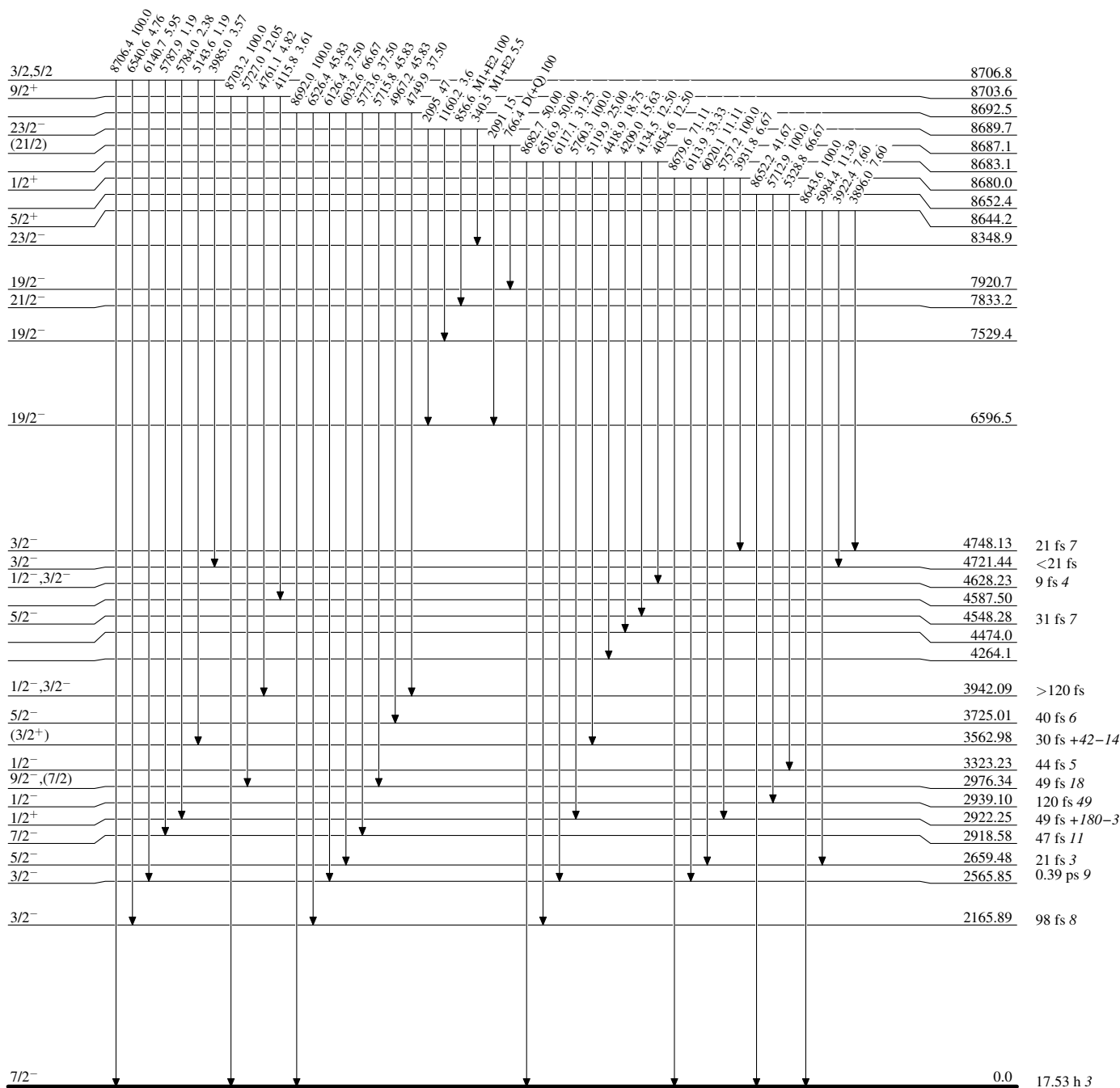


<sup>55</sup>Co<sub>28</sub>

**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

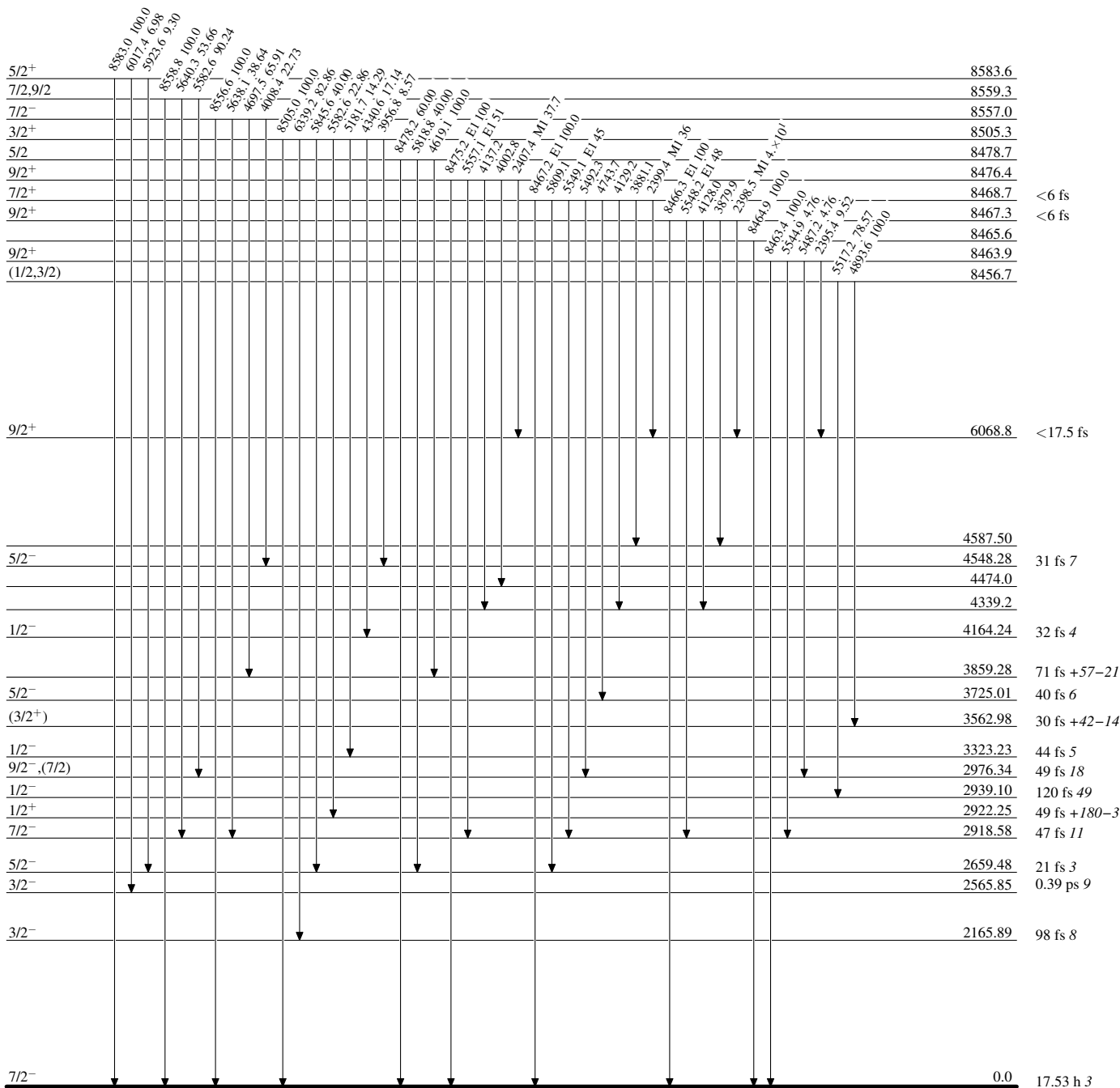


$^{55}_{27}\text{Co}_{28}$

**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level



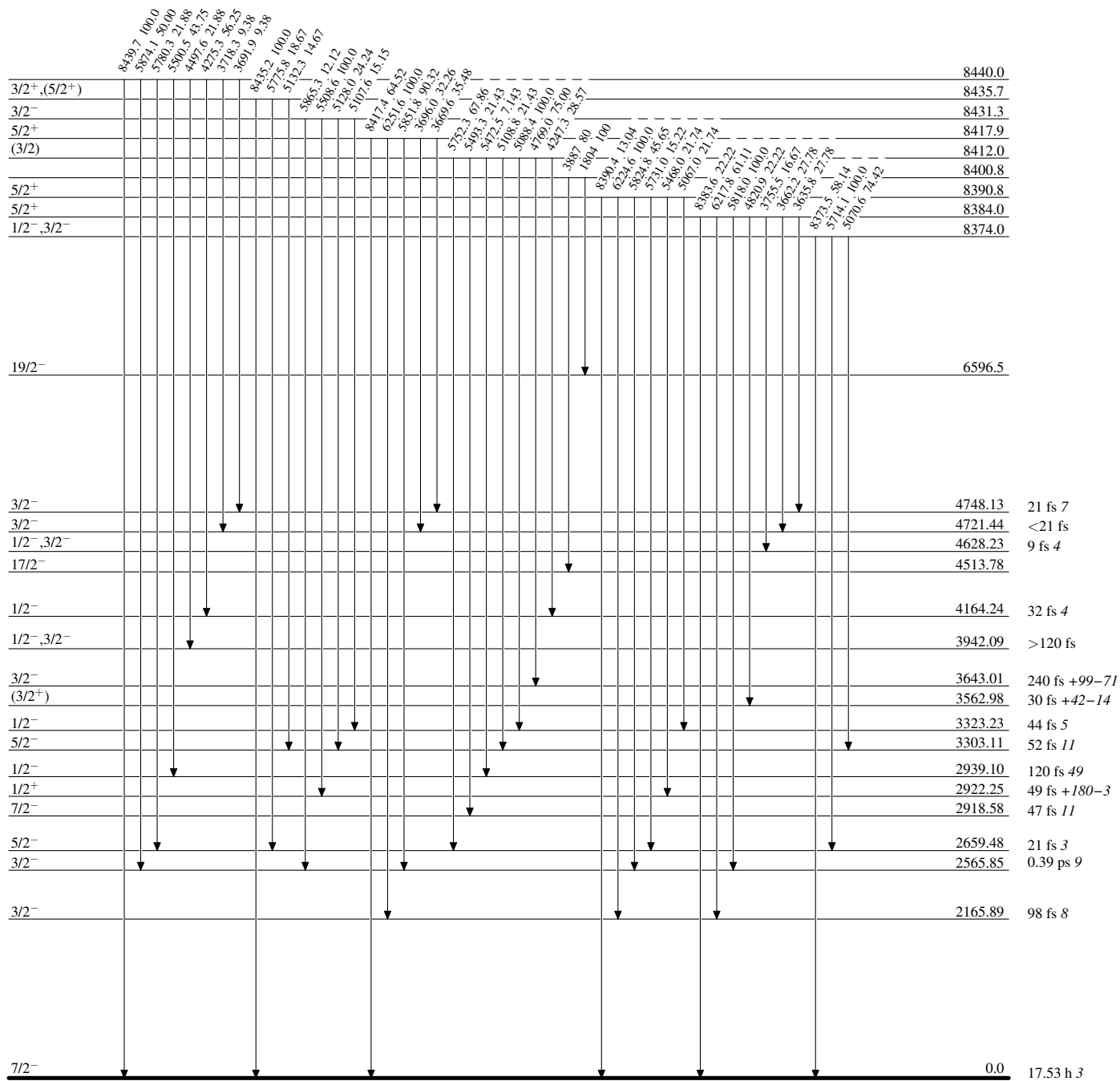
$^{55}_{27}\text{Co}_{28}$



**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

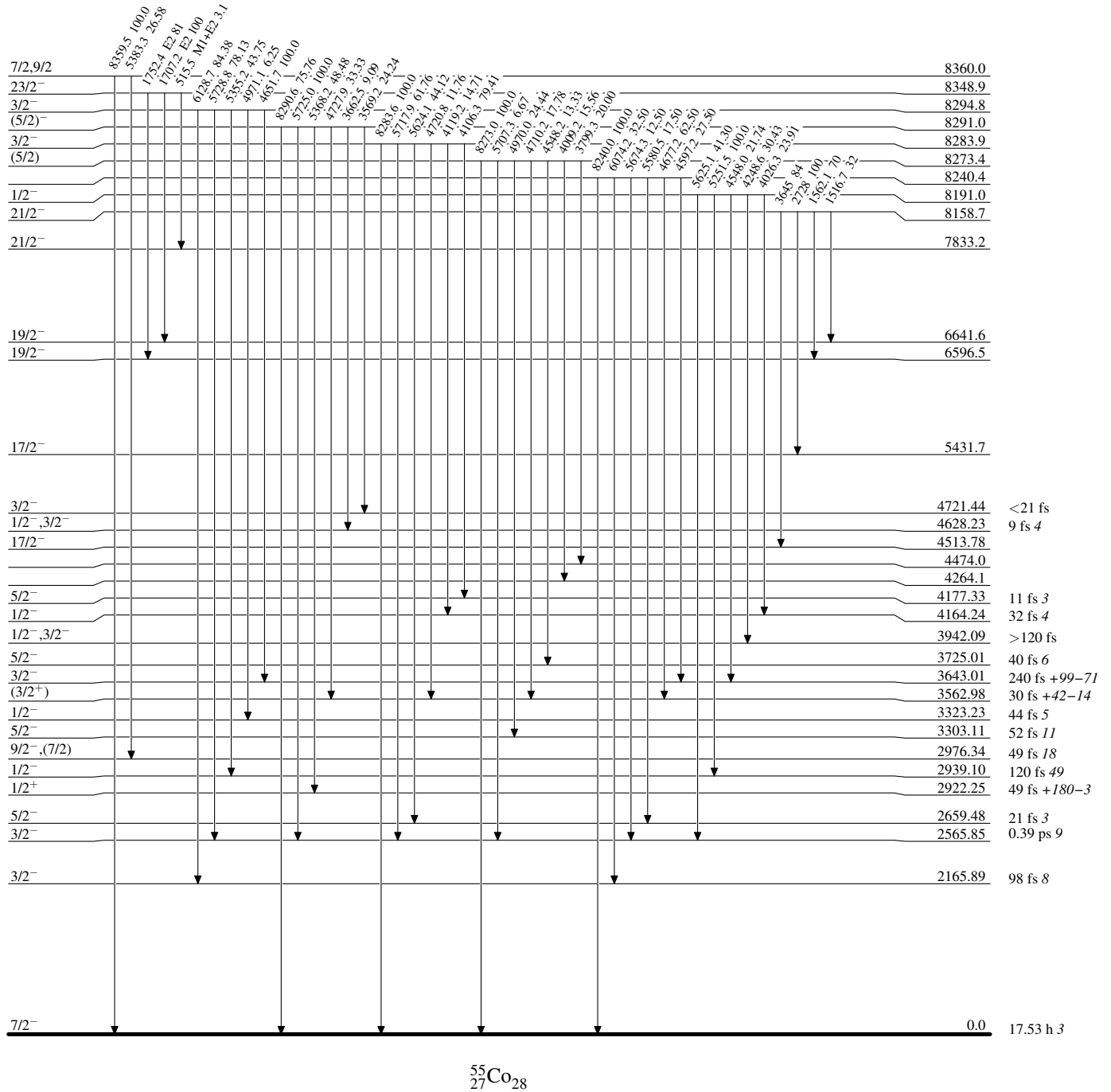


<sup>55</sup>Co<sub>28</sub>

**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level



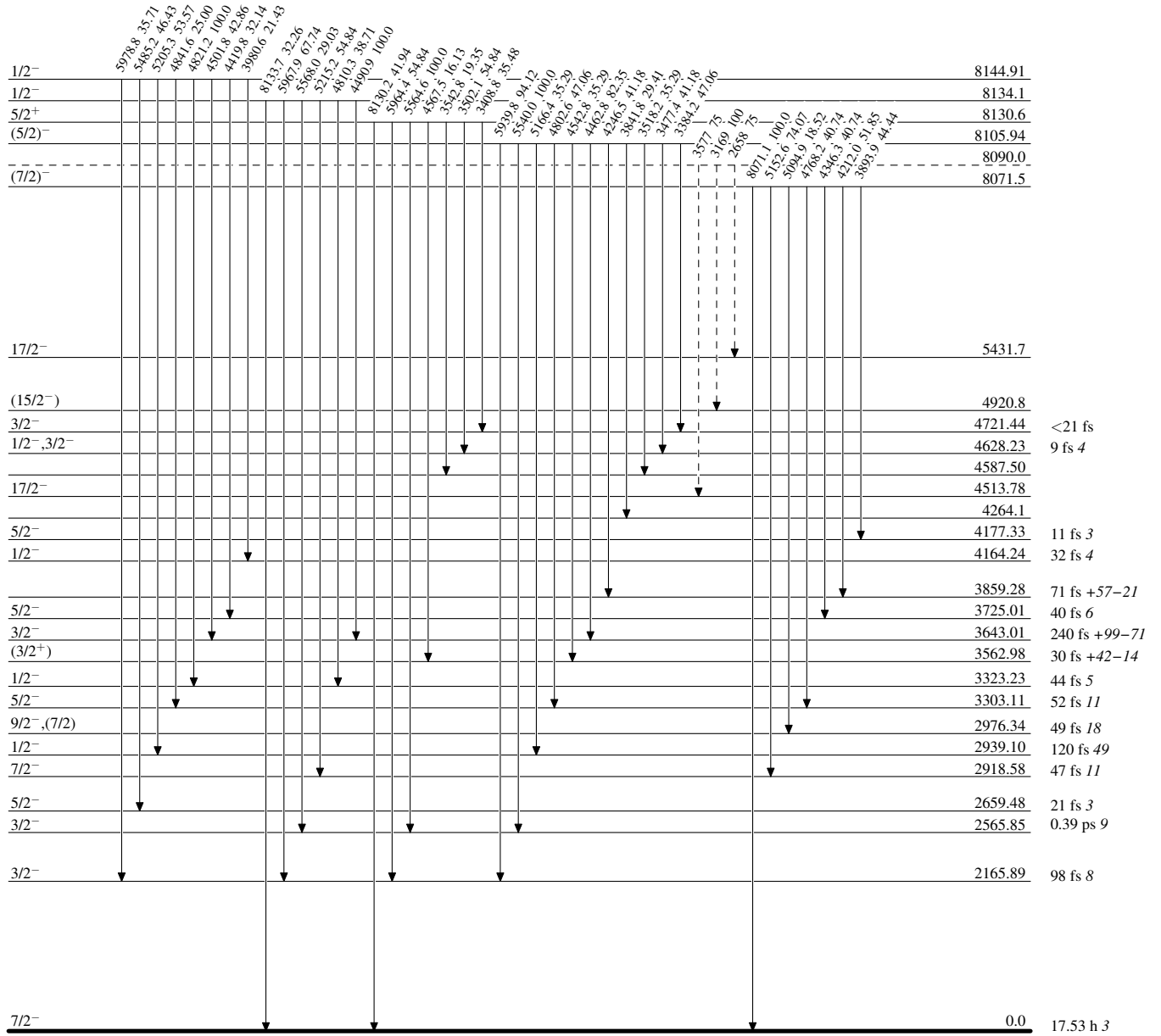
**Adopted Levels, Gammas**

Legend

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

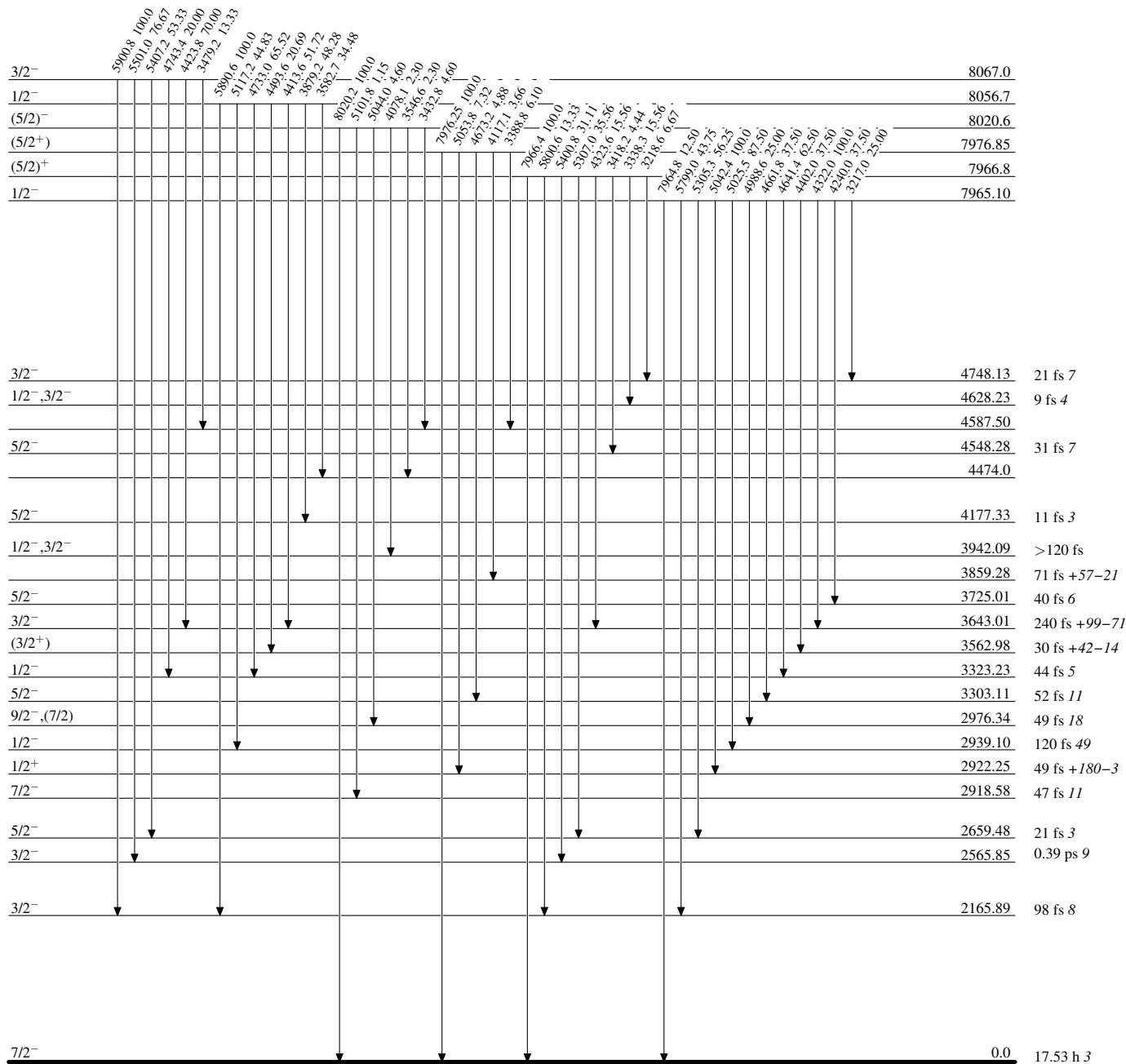
-----▶  $\gamma$  Decay (Uncertain)



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

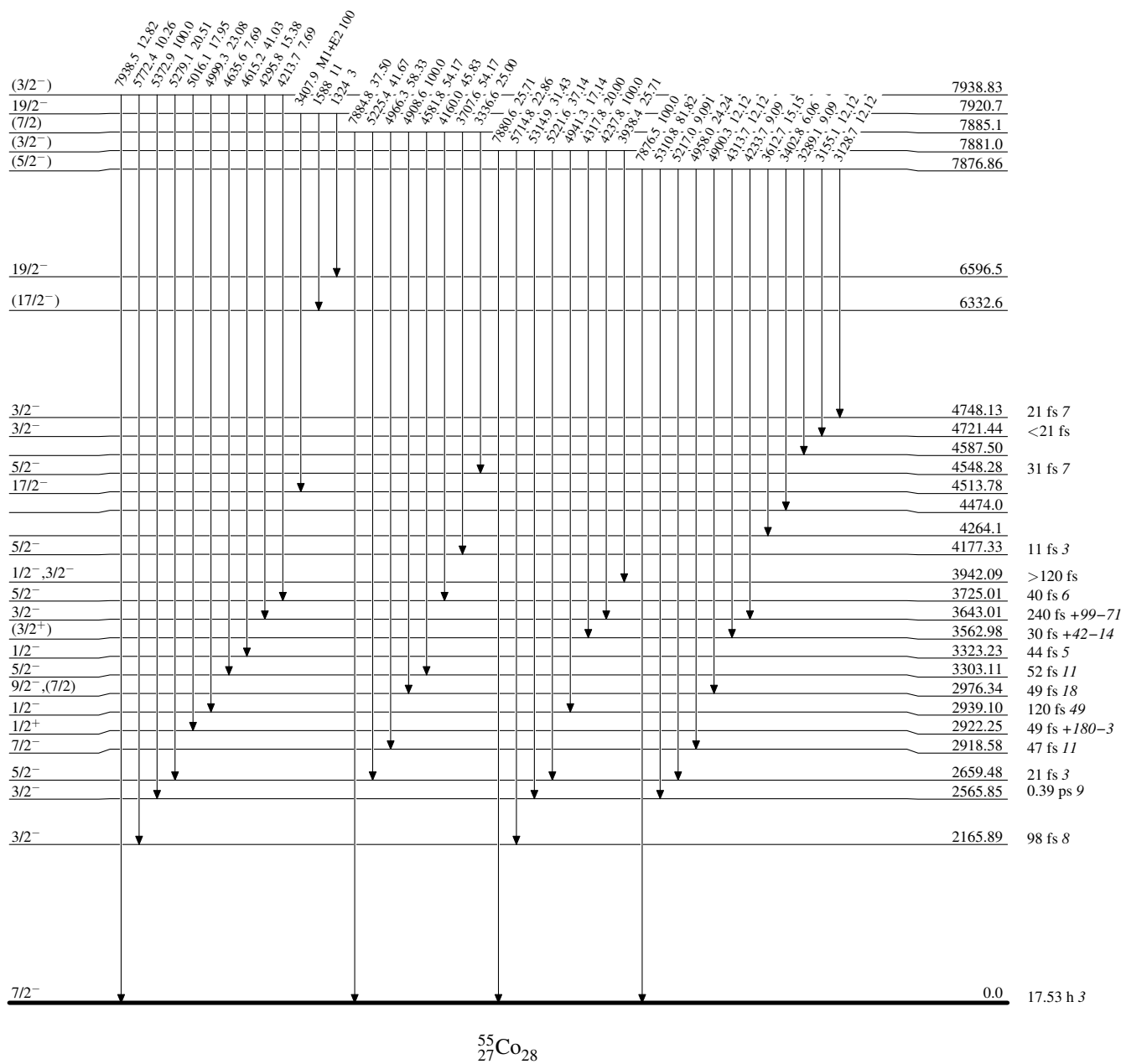


$^{55}_{27}\text{Co}_{28}$

**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level



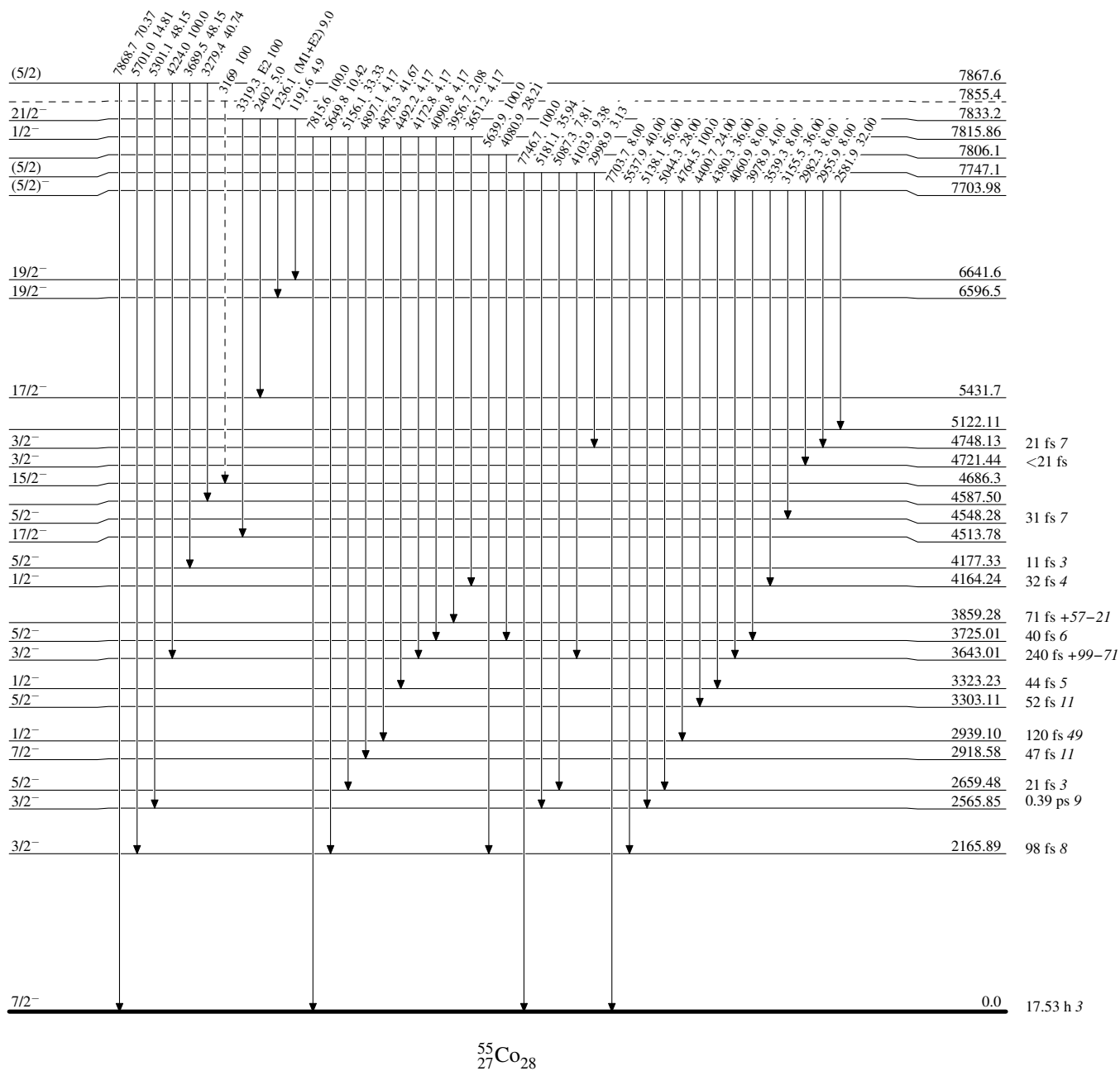
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

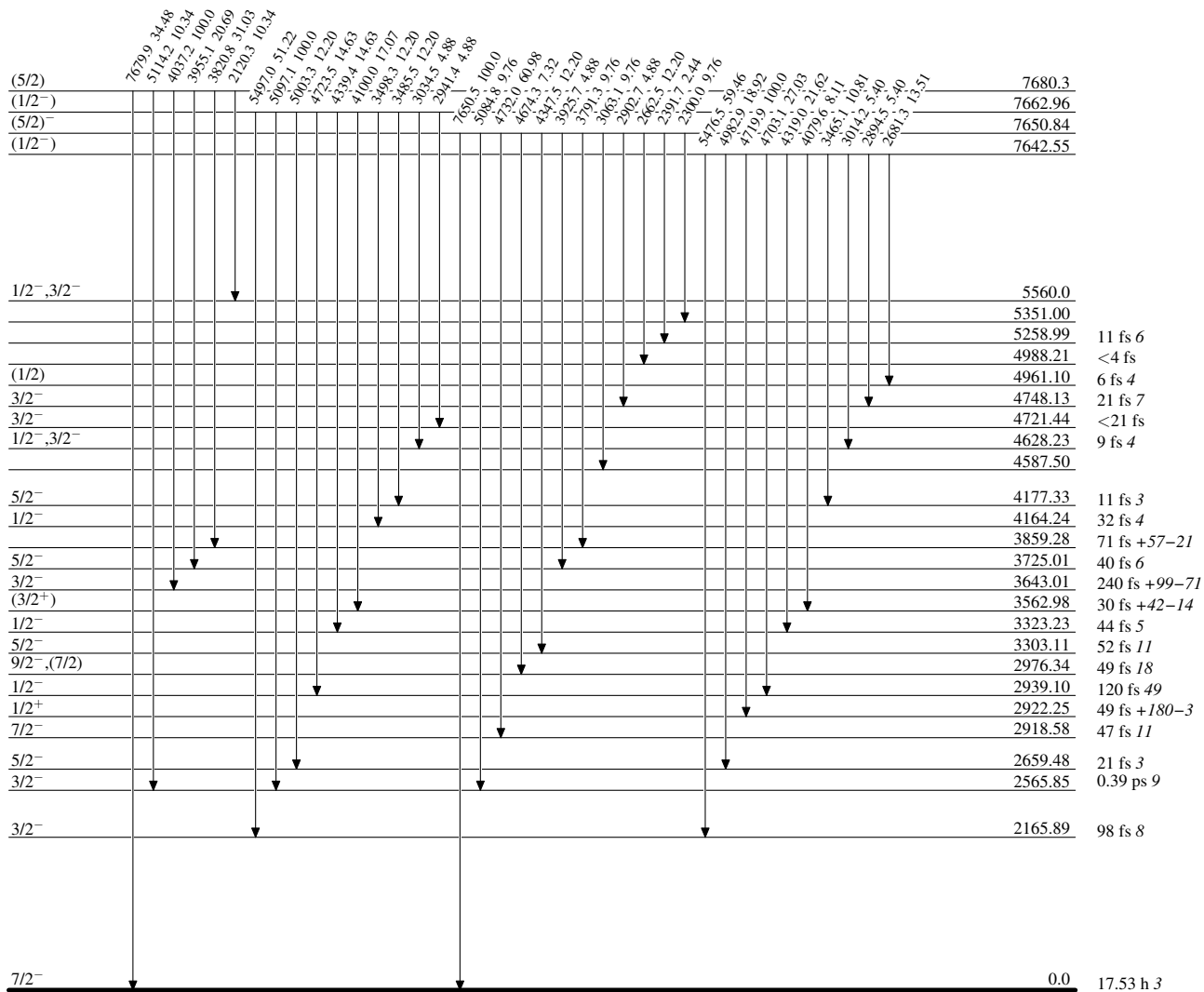
-----▶  $\gamma$  Decay (Uncertain)



**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

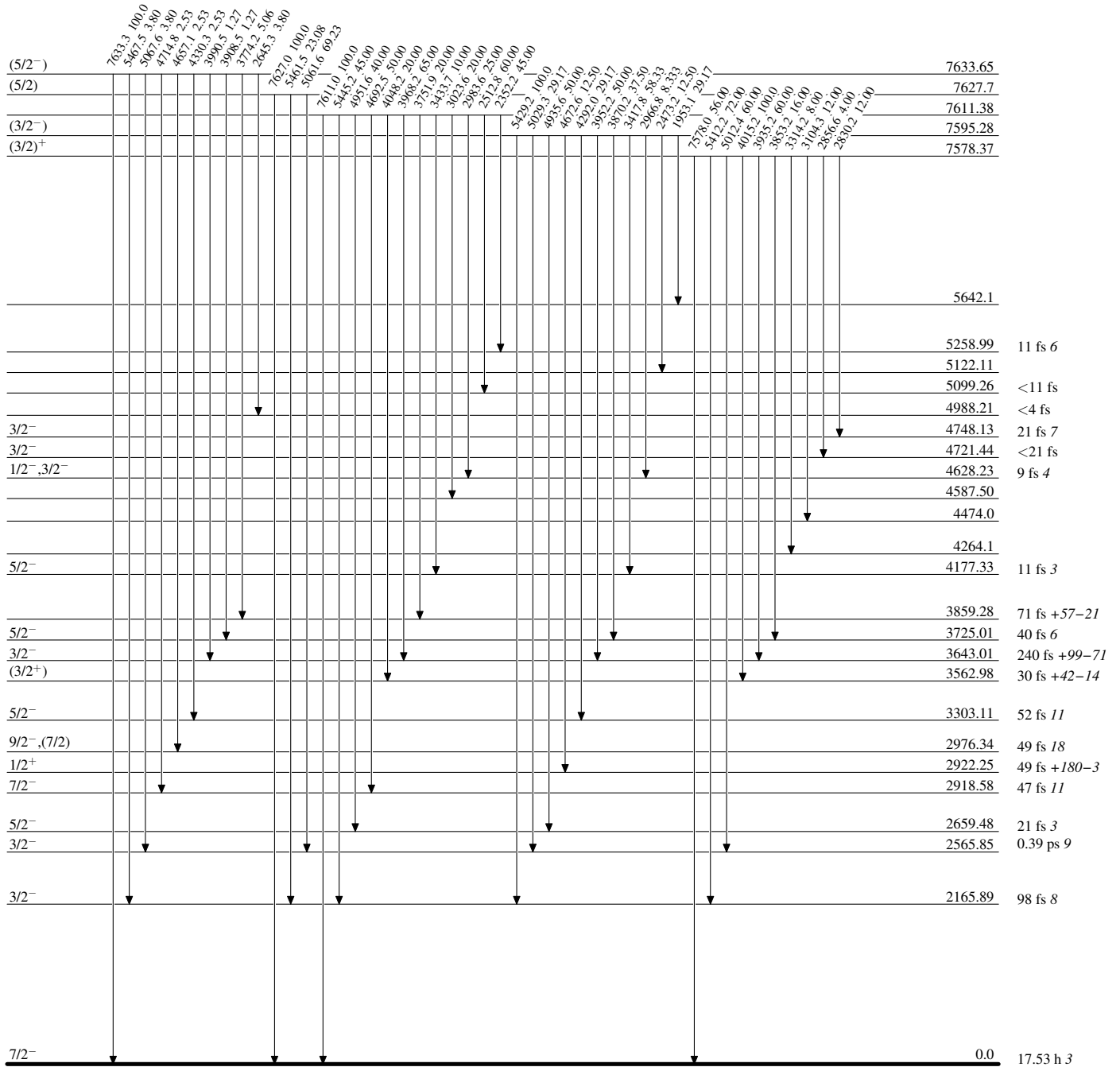


$^{55}_{27}\text{Co}_{28}$

**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

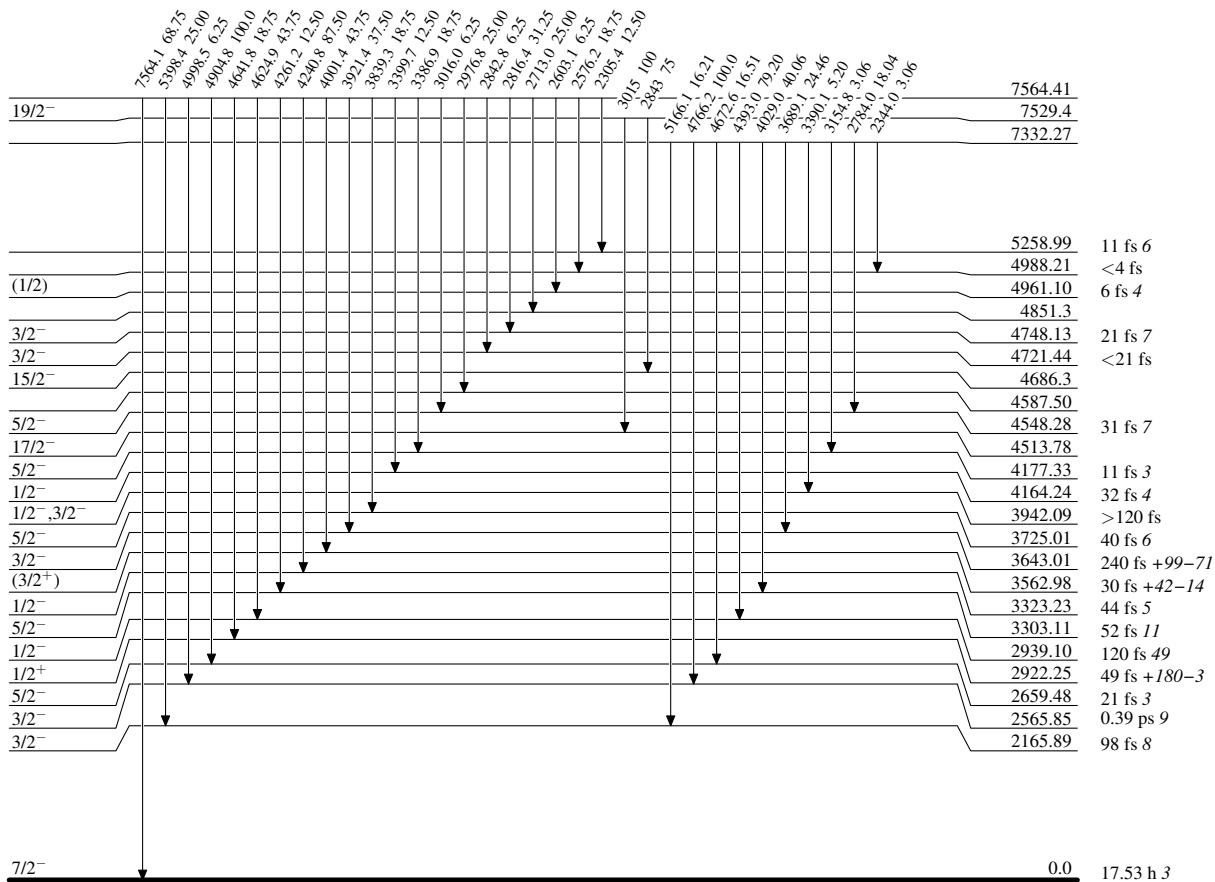




**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

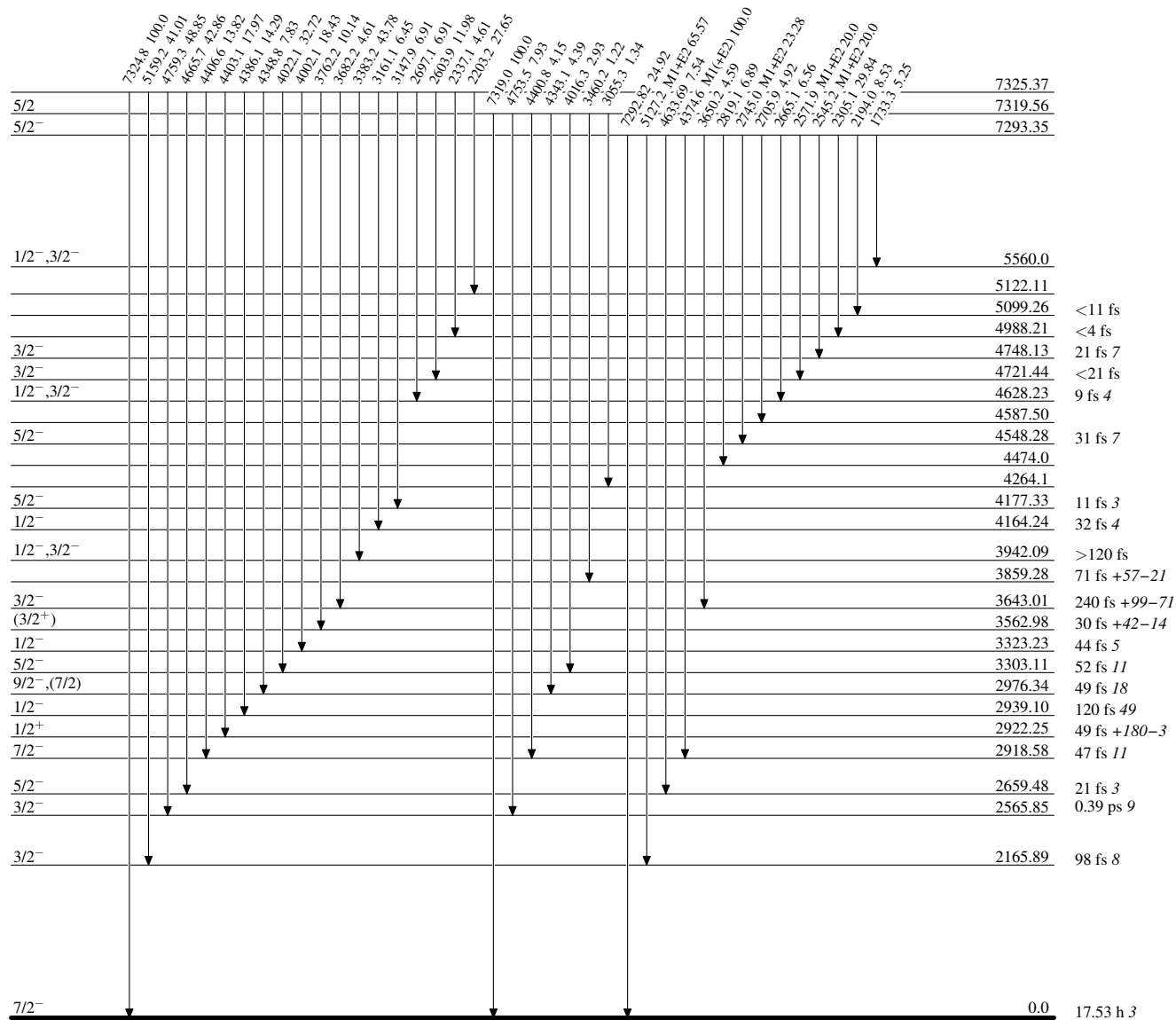


$^{55}_{27}\text{Co}_{28}$

**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

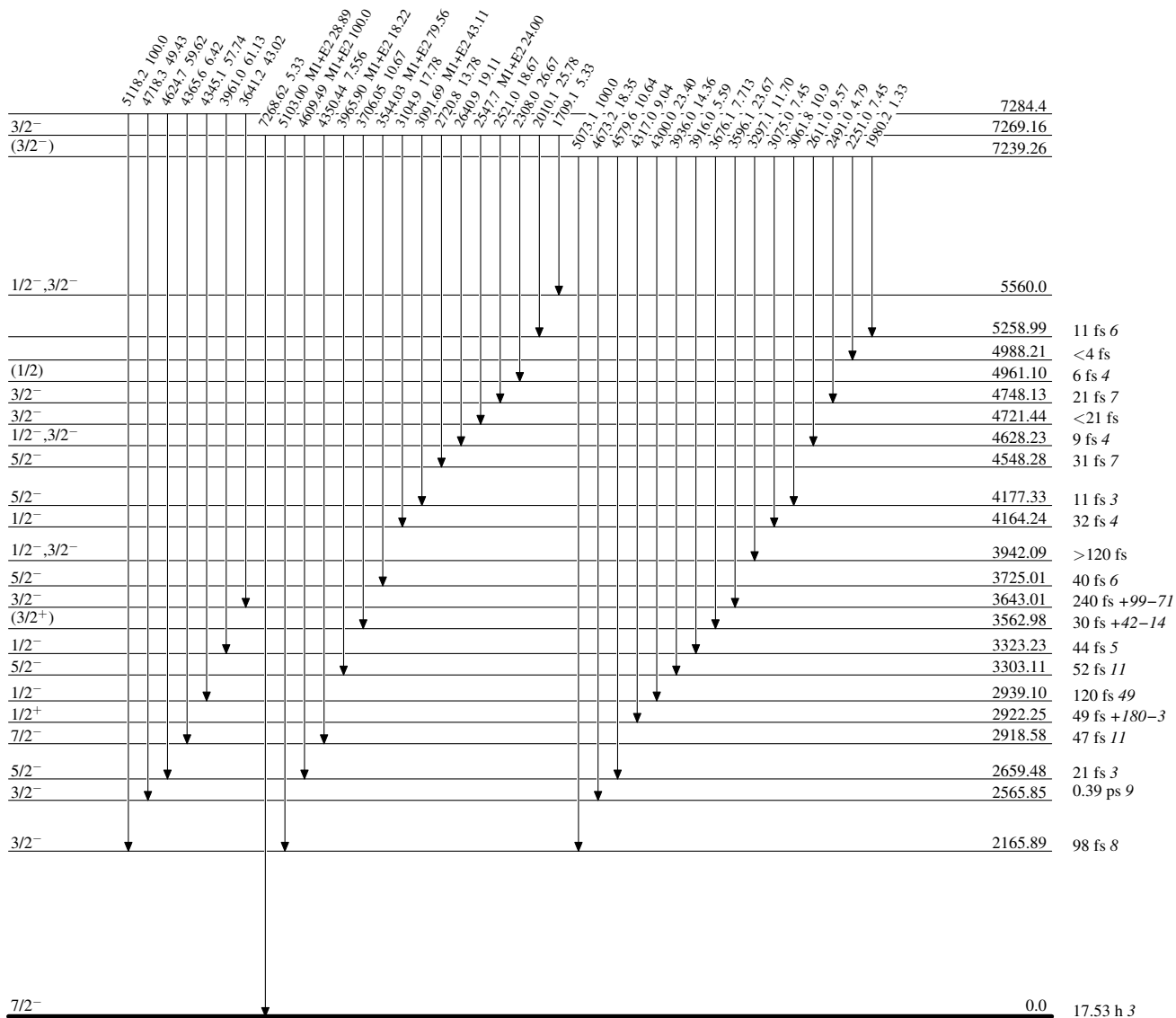


<sup>55</sup>Co<sub>28</sub>

**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

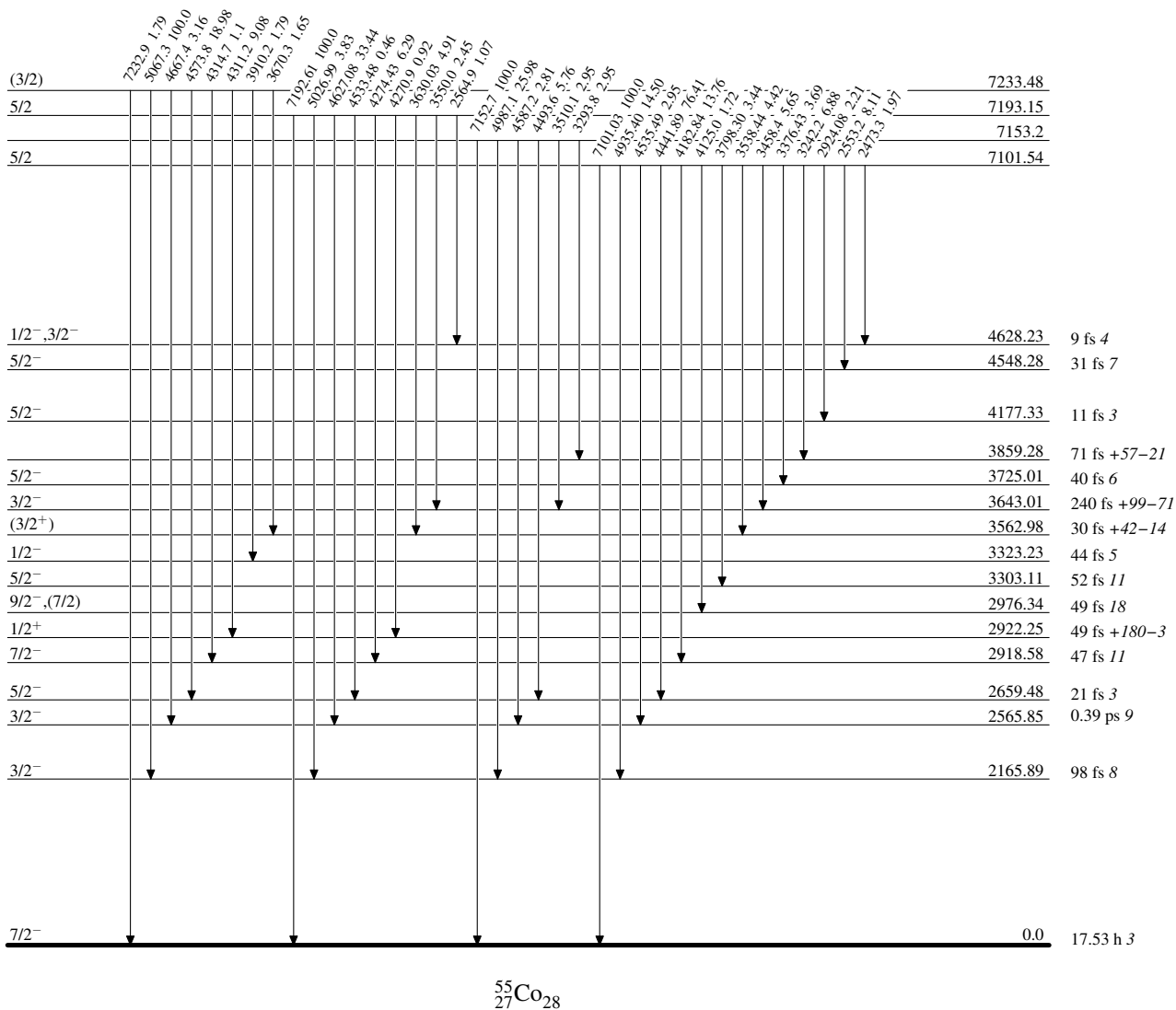


<sup>55</sup>Co<sub>28</sub>

Adopted Levels, Gammas

Level Scheme (continued)

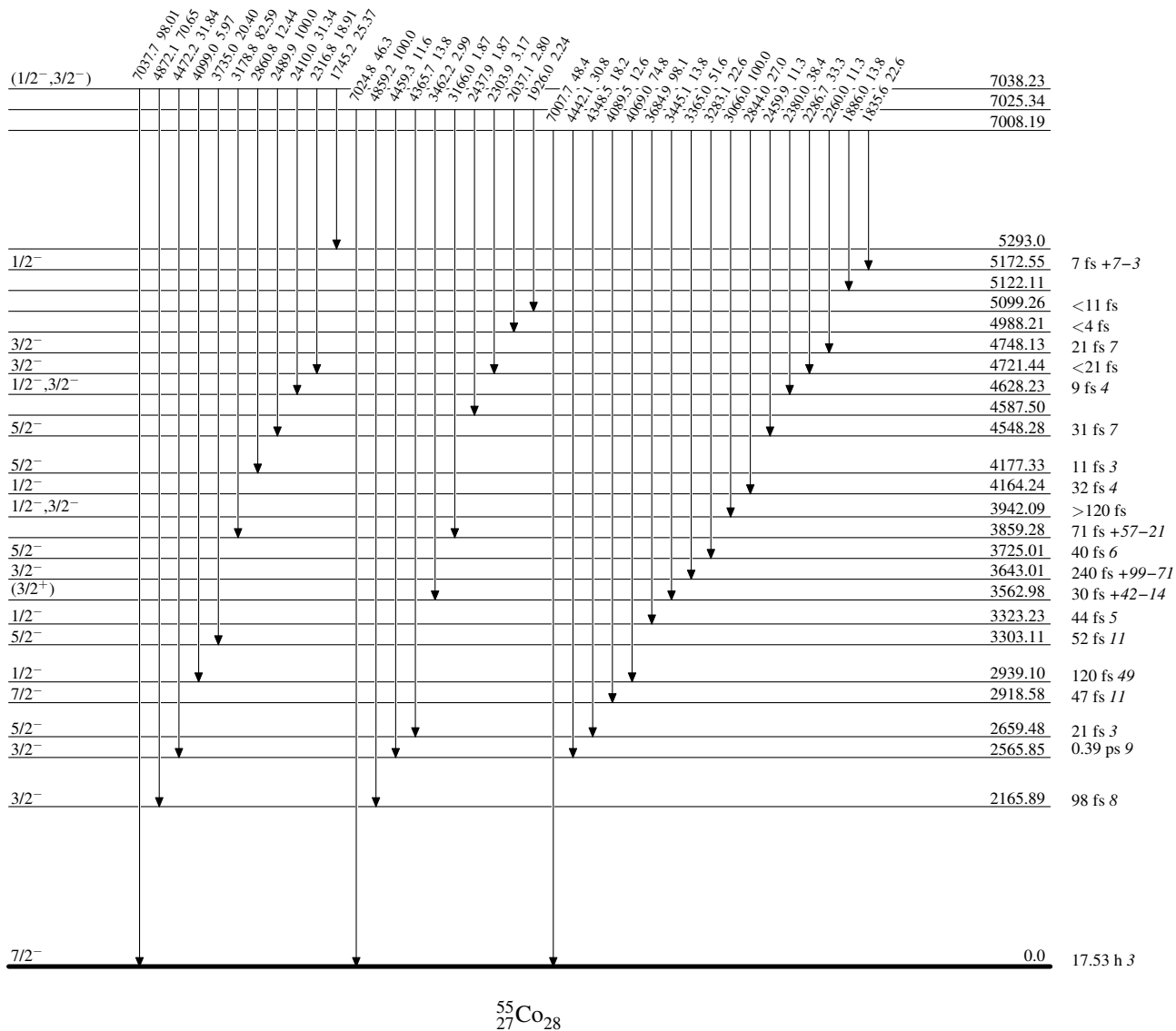
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

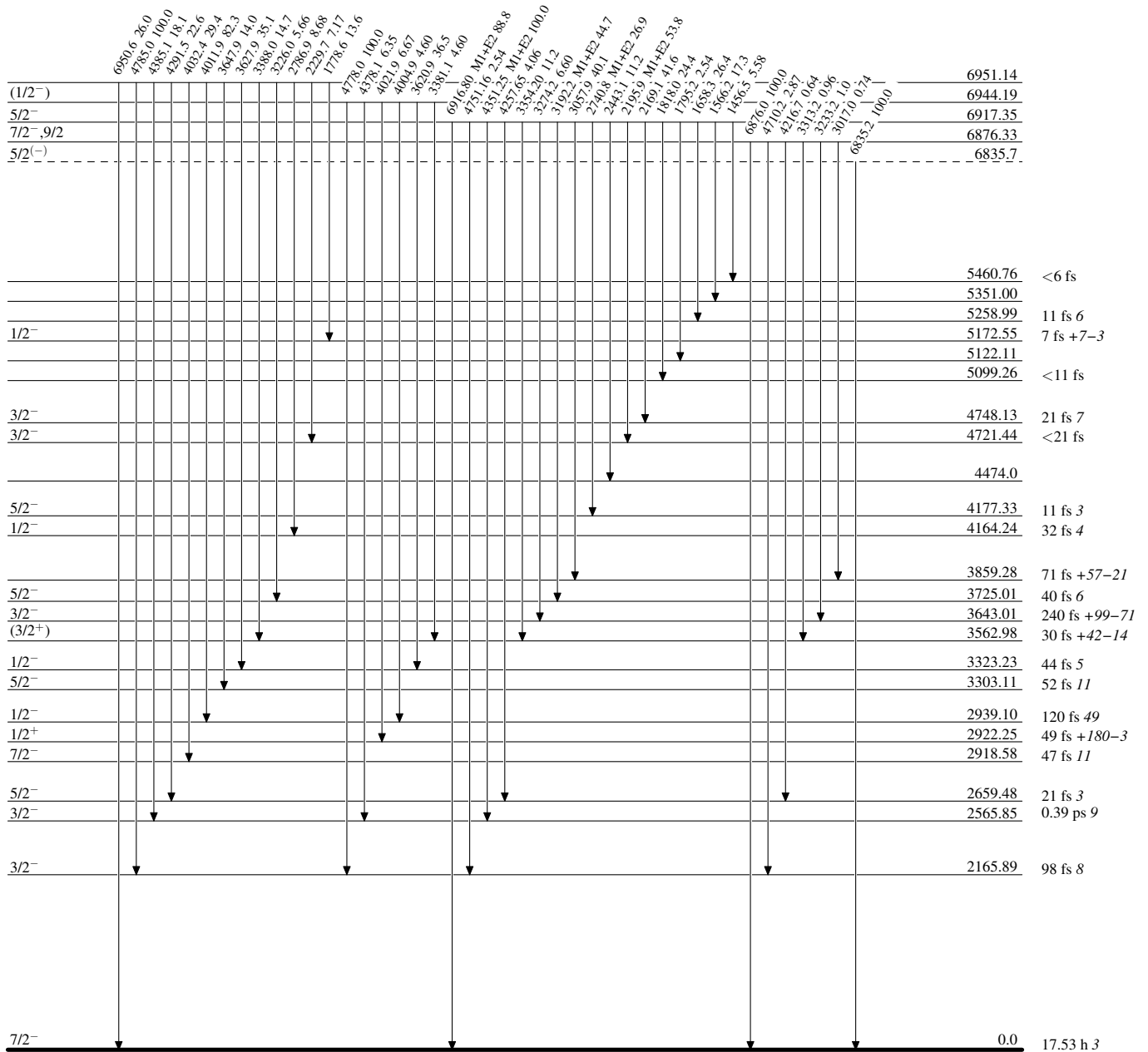
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

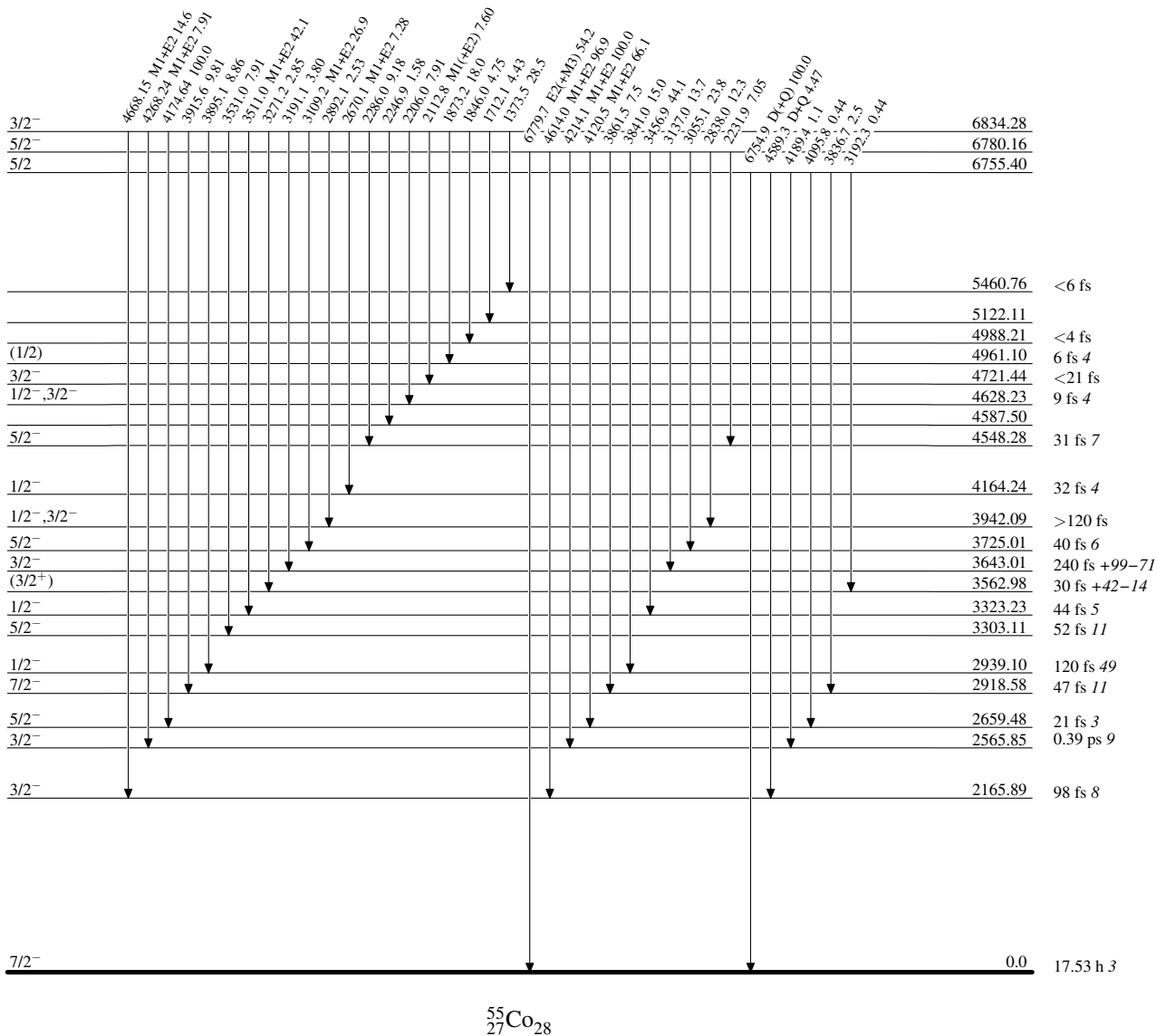
Intensities: Relative photon branching from each level



**Adopted Levels, Gammas**

**Level Scheme (continued)**

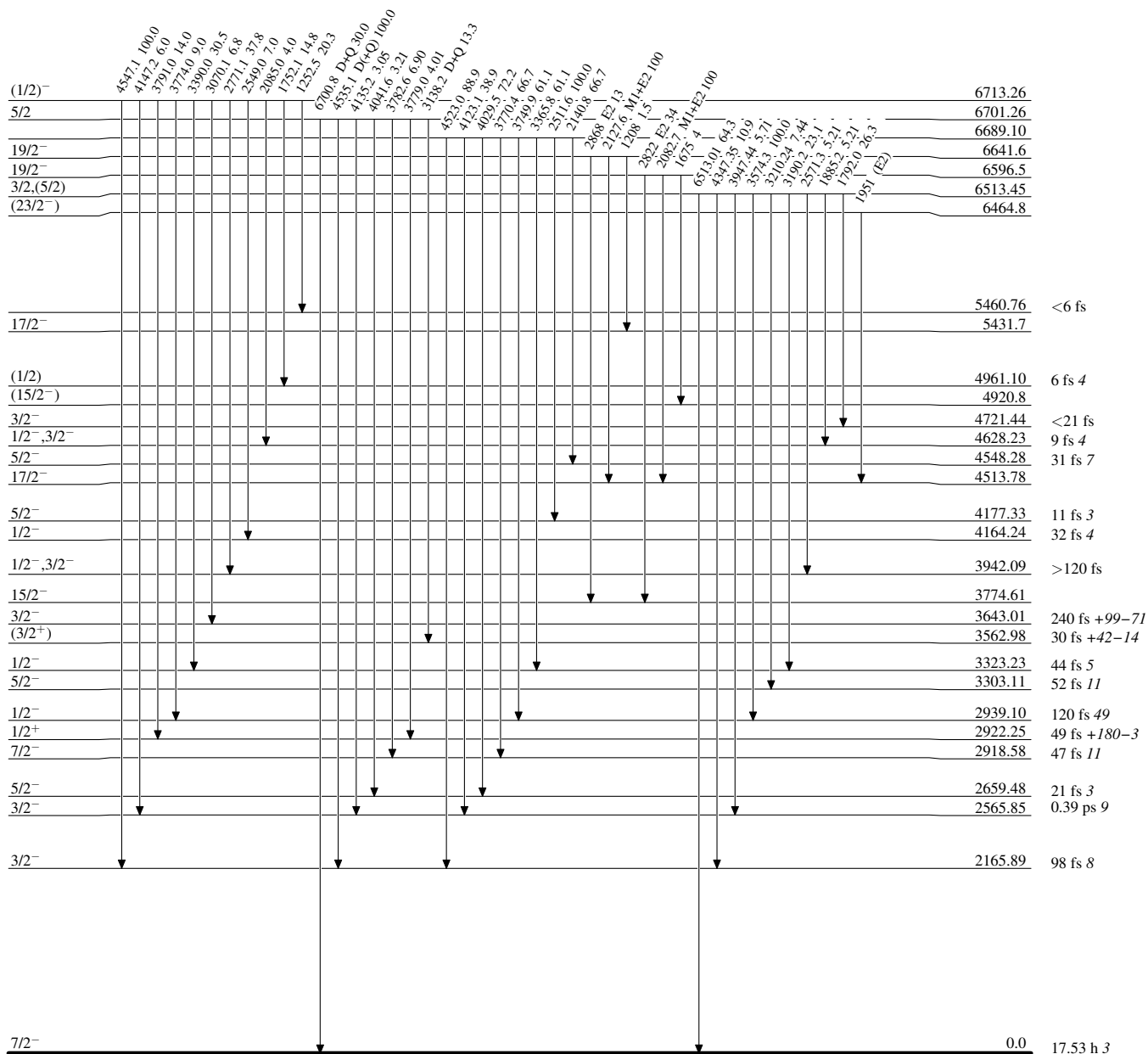
Intensities: Relative photon branching from each level



**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

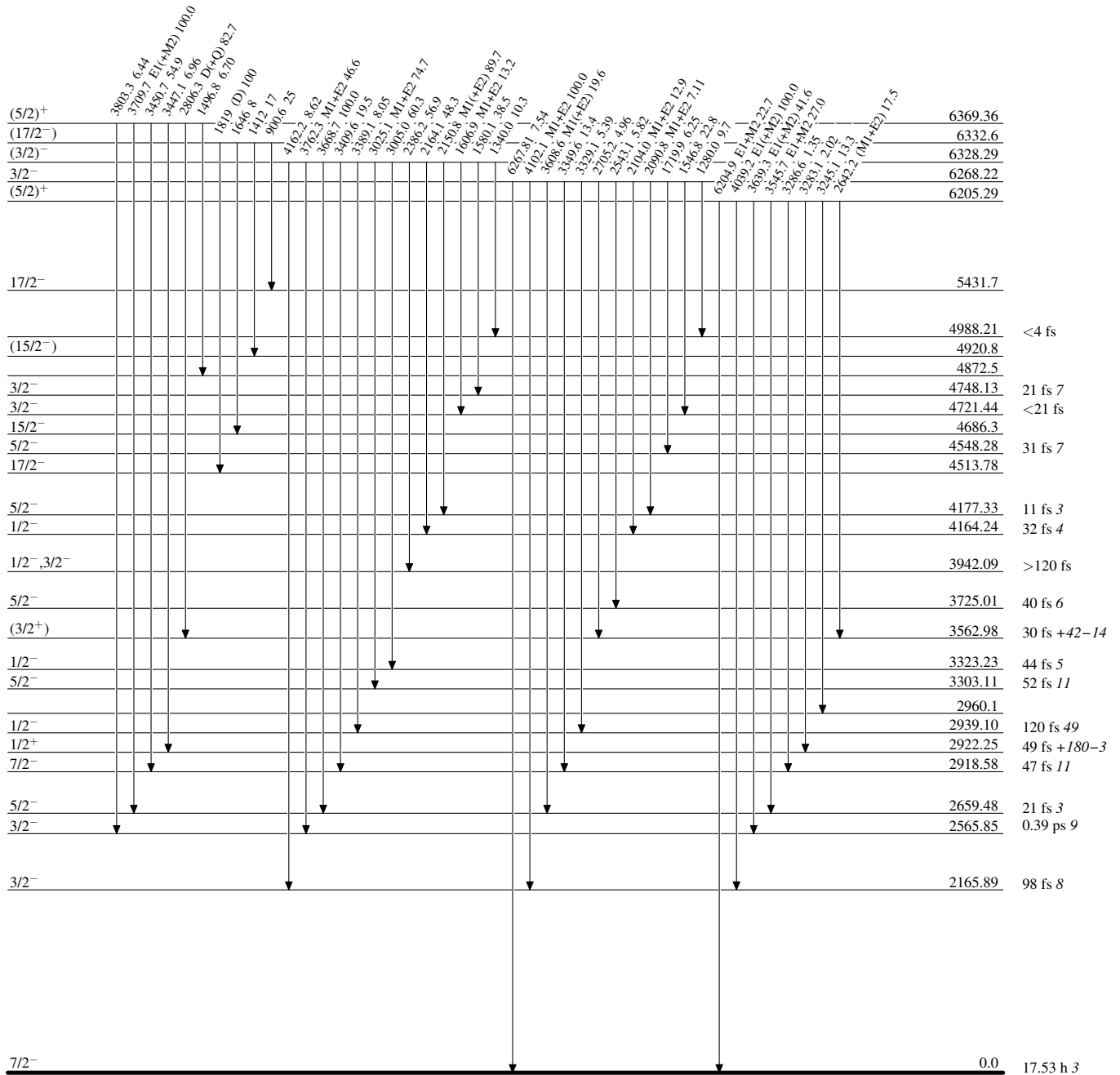




**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

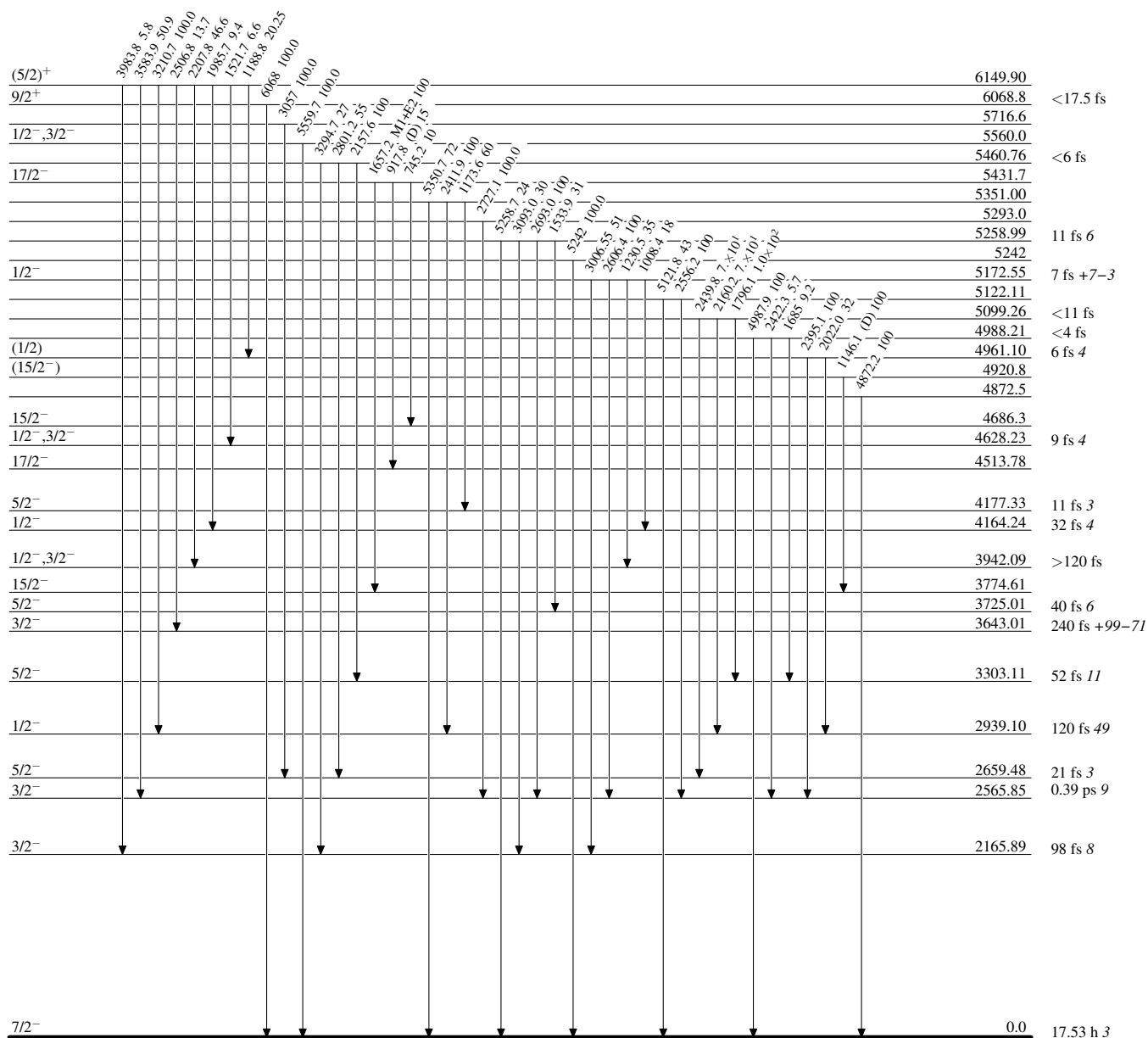


<sup>55</sup>Co<sub>28</sub>

**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level



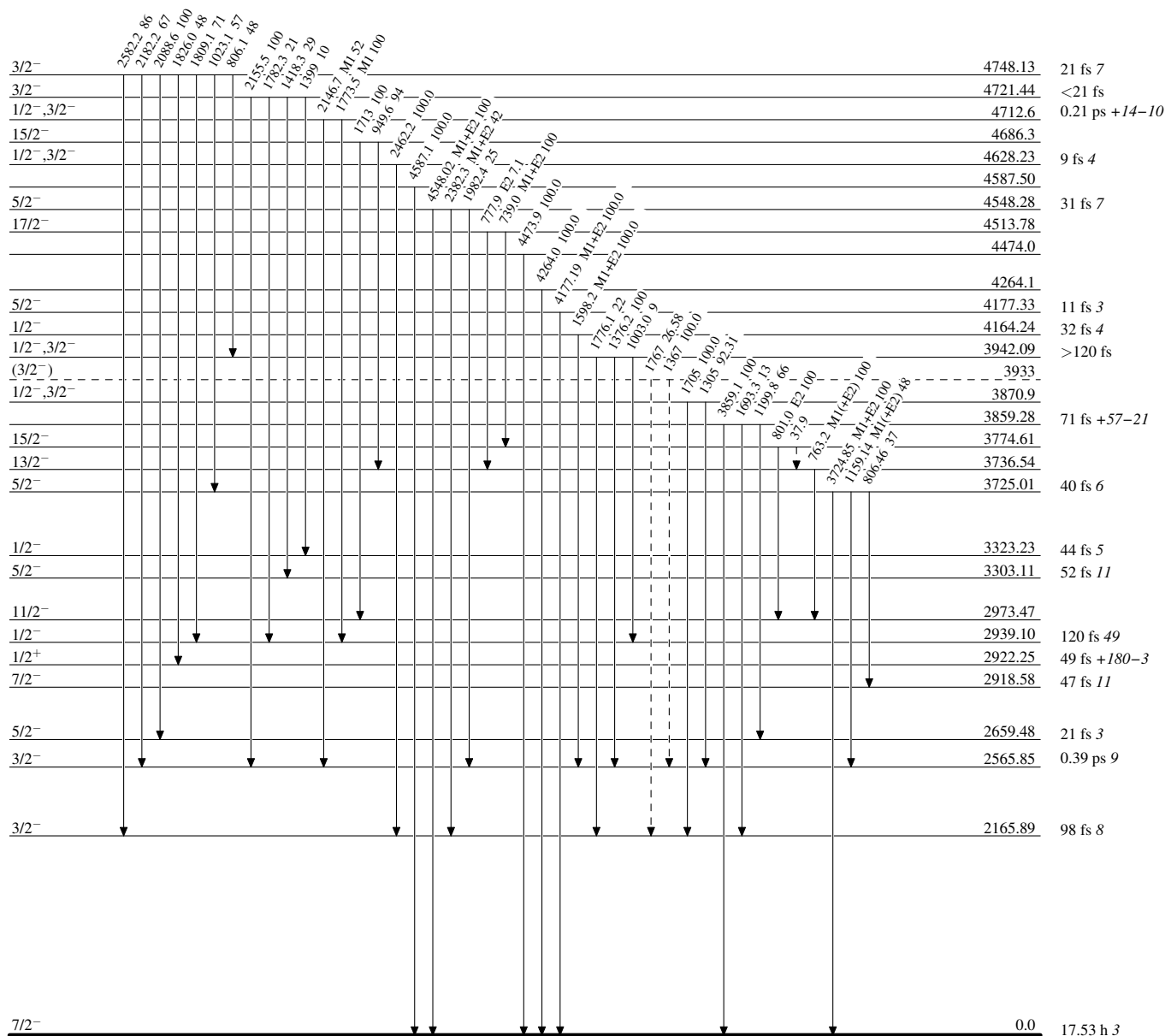
**Adopted Levels, Gammas**

Legend

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

-----▶  $\gamma$  Decay (Uncertain)



**Adopted Levels, Gammas**

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

