

$^{110}\text{Pd}(^{19}\text{F},4n\gamma)$ [2006Si16,1991Hu09](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	J. Katakura	NDS 112, 495 (2011)	1-Jan-2010

[2006Si16](#): $^{110}\text{Pd}(^{19}\text{F},4n\gamma)$ E=75 MeV. Measured E_γ , I_γ , $\gamma\gamma$.

[1991Hu09](#): $^{110}\text{Pd}(^{19}\text{F},4n\gamma)$ E=74 MeV, Compton-suppressed Ge, $\gamma\gamma$ -coin, $\gamma(\theta)$, excitation function.

Others; [1988Ma49](#): $^{96}\text{Zr}(^{34}\text{S},p4n\gamma)$ E=160 MeV, $^{110}\text{Cd}(^{18}\text{O},p2n\gamma)$ E=80 MeV, enriched target 96.8% for ^{96}Zr and 93.3% for ^{110}Cd , Compton-suppressed Ge, $\gamma\gamma$ -coin, $\gamma(\theta)$, excitation function; [1977YoZQ](#): $^{116}\text{Sn}(^{12}\text{C},p2n\gamma)$ semi γ , $p\gamma$ -coin, proposed a band up to 23/2 built on a $1h11/2$ state; [1993Su31](#): $^{109}\text{Ag}(^{19}\text{F},p2n\gamma)$ E=75 MeV. Measured E_γ , I_γ , $\gamma\gamma$.

XUNDL data set compiled by M.Mitchell and B. Singh (McMaster), May 9, 2006 is consulted.

 ^{125}Cs Levels

E(level) [†]	J $\pi^{\ddagger}$	Comments
0.0	1/2 ⁽⁺⁾	
77.1 ³	3/2 ⁽⁺⁾	
84.7 ³	5/2 ⁽⁺⁾	
253.0 ^{g 3}	(7/2 ⁺)	
266.0 ^{c 11}	(11/2 ⁻)	
540.6 ^{@ 11}	(9/2 ⁺)	E(level): From 1991Hu09 . On the basis of systematics, 2006Si16 propose that the 9/2 ⁺ bandhead lies at ≈ 600 keV, is isomeric, and decays to the 7/2 ⁺ and 5/2 ⁺ states rather than to the 11/2-isomer. See 2006Si16 for details.
631.7 ^{c 11}	(15/2 ⁻)	
683.2 ^{g 5}	(11/2 ⁺)	
820.3? ¹²		Tentative level proposed by 1991Hu09 but not confirmed by 2006Si16 .
849.9 ^{# 11}	(11/2 ⁺)	
1196.5 ^{@ 11}	(13/2 ⁺)	
1203.7 ^{c 11}	(19/2 ⁻)	
1278.8 ^{b 11}	(17/2 ⁻)	
1293.5 ^{g 6}	(15/2 ⁺)	
1574.7 ^{# 11}		
1753.8 ^{h 11}	(19/2 ⁻)	
1899.0 ^{b 11}	(21/2 ⁻)	
1962.9 ^{c 12}	(23/2 ⁻)	
1986.4 ^{@ 11}		
2055.2 ^{g 6}	(19/2 ⁺)	
2318.1 ^{& 12}	(17/2 ⁺)	
2396.4 ^{a 12}	(19/2 ⁺)	
2424.5 ^{h 11}	(23/2 ⁻)	
2425.3 ^{# 11}	(19/2 ⁺)	
2518.2 ^{& 12}	(21/2 ⁺)	
2570.7 ^{d 12}	(23/2 ⁻)	
2690.9 ^{b 12}	(25/2 ⁻)	
2698.7 ^{a 12}	(23/2 ⁺)	
2832.8 ^{c 12}	(27/2 ⁻)	
2895.8 ^{@ 12}	(21/2 ⁺)	
2919.5 ⁷	(23/2 ⁺)	
2943.8 ^{g 7}	(23/2 ⁺)	
2945.3 ^{& 12}	(25/2 ⁺)	
3178.1 ^{d 12}	(27/2 ⁻)	
3240.9 ^{e 14}	(25/2 ⁺)	

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$^{110}\text{Pd}(^{19}\text{F},4\text{n}\gamma)$ [2006Si16,1991Hu09](#) (continued) ^{125}Cs Levels (continued)

E(level) [†]	J π [‡]	Comments
3243.9 ^h 12	(27/2 ⁻)	
3257.1 ^a 12	(27/2 ⁺)	
3278.4? 12		
3385.4 [#] 12	(23/2 ⁻)	
3499.1 ^e 13	(27/2 ⁺)	
3553.4 ^b 12	(29/2 ⁻)	
3616.5 ^{&} 12	(29/2 ⁺)	
3723.8 ^c 12	(31/2 ⁻)	
3840.4 ^e 13	(29/2 ⁺)	
3964.4? 12		
3975.9 ^d 12	(31/2 ⁻)	
4009.8 ^a 12	(31/2 ⁺)	
4212.2 ^e 13	(31/2 ⁺)	
4358.2 ^b 12	(33/2 ⁻)	
4450.8 ^{&} 12	(33/2 ⁺)	
4593.1 ^c 13	(35/2 ⁻)	
4603.9 ^e 13	(33/2 ⁺)	
4920.3 ^d 12	(35/2 ⁻)	
4925.3 ^a 12	(35/2 ⁺)	
5028.0 ^e 13	(35/2 ⁺)	
5212.7 ^b 12	(37/2 ⁻)	
5428.8 ^{&} 13	(37/2 ⁺)	
5495.4 ^e 14	(37/2 ⁺)	
5518.8 ^c 13	(39/2 ⁻)	
5936.6 ^a 14	(39/2 ⁺)	
6188.9 ^b 14	(41/2 ⁻)	
6468.7 ^{&} 15	(41/2 ⁺)	
6520.1 ^c 13	(43/2 ⁻)	
7273.0 ^b 15	(45/2 ⁻)	
7600.1 ^c 17	(47/2 ⁻)	
8759.1 ^c 20	(51/2 ⁻)	
10003.1 ^c 22	(55/2 ⁻)	
11310.1 ^c 24	(59/2 ⁻)	
0+x ^f	(23/2 ⁺)	Additional information 1. E(level): x $\approx$ 3 MeV (2006Si16) from systematics.
611.0+x ^f 10	(27/2 ⁺)	
1354.0+x ^f 15	(31/2 ⁺)	
2187.0+x ^f 18	(35/2 ⁺)	
3030.0+x ^f 20	(39/2 ⁺)	
3901.0+x ^f 23	(43/2 ⁺)	
4850.0+x ^f 25	(47/2 ⁺)	
5829+x ^f 3	(51/2 ⁺)	

[†] From a least-squares fit by evaluators to E γ 's.[‡] From Adopted Levels.[#] Band(A): $\pi g_{9/2}$, $\alpha=+1/2$. Strongly-coupled band.

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$^{110}\text{Pd}(^{19}\text{F},4n\gamma)$ **2006Si16,1991Hu09 (continued)** ^{125}Cs Levels (continued)

@ Band(a): $\pi g_{9/2}$, $\alpha=-1/2$. Strongly-coupled band.

& Band(B): 3-qp band, $\alpha=+1/2$. $\pi h_{11/2} \otimes \nu h_{11/2} \otimes \nu g_{7/2}$, Strongly-coupled band.

^a Band(b): 3-qp band, $\alpha=-1/2$. $\pi h_{11/2} \otimes \nu h_{11/2} \otimes \nu g_{7/2}$, Strongly-coupled band.

^b Band(C): Yrast band, $\pi h_{11/2}$, $\alpha=+1/2$.

^c Band(c): Yrast band, $\pi h_{11/2}$, $\alpha=-1/2$.

^d Band(D): $\pi h_{11/2} \otimes (\gamma \text{ vibrational band})$.

^e Band(E): $\Delta J=1$ band based on $(25/2^+)$.

^f Band(F): 3-qp decoupled band based on $(23/2^+)$. Configuration= $(\pi g_{9/2}/\pi g_{7/2}) \otimes (\pi h_{11/2}^2/\nu h_{11/2}^2)$ with preference for $\pi g_{7/2} \otimes \nu h_{11/2}^2$ configuration from TAC calculations for lower part of the band.

^g Band(G): $\pi g_{7/2}$, $\alpha=-1/2$.

^h Band(H): Band based on $19/2^-$, $\alpha=-1/2$.

 $\gamma(^{125}\text{Cs})$

E_γ [†]	I_γ ^c	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [#]	δ ^d	Comments
(13)		266.0	(11/2 ⁻)	253.0	(7/2 ⁺)	(M2)		E_γ : From adopted level energy difference. Mult.: From adopted gammas.
77.1 3		77.1	3/2 ⁽⁺⁾	0.0	1/2 ⁽⁺⁾			E_γ : From Adopted Levels.
78		2396.4	(19/2 ⁺)	2318.1	(17/2 ⁺)			
84.6 3		84.7	5/2 ⁽⁺⁾	0.0	1/2 ⁽⁺⁾			E_γ : From Adopted Levels.
121.7 3	19 2	2518.2	(21/2 ⁺)	2396.4	(19/2 ⁺)	D+Q	+0.30 6	$A_2=-0.21$ 3, $A_4=-0.04$ 4 (1991Hu09).
168.3 3	87 9	253.0	(7/2 ⁺)	84.7	5/2 ⁽⁺⁾	E2(+M1)	>1.11	Mult.: From adopted gammas. $A_2=+0.089$ 12, $A_4=-0.04$ 4 (1991Hu09).
176.0 3	64 6	253.0	(7/2 ⁺)	77.1	3/2 ⁽⁺⁾	E2		Mult.: From adopted gammas. A_2 , A_4 values suggest D+Q and $\delta=+24$ 2 which is inconsistent with (7/2 ⁺) to 3/2 ⁽⁺⁾ transition. Long $T_{1/2}$ of 266 level could result in large attenuation in $\gamma(\theta)$ through 13-keV transition. $A_2=+0.115$ 13, $A_4=+0.019$ 16 (1991Hu09). $A_2=-0.353$ 21, $A_4=-0.04$ 3 (1991Hu09).
180.5 3	22 2	2698.7	(23/2 ⁺)	2518.2	(21/2 ⁺)	D+Q	-0.7 3	$A_2=-0.41$ 3, $A_4=-0.06$ 4 (1991Hu09).
235 [‡]		4593.1	(35/2 ⁻)	4358.2	(33/2 ⁻)	@	@	
246.5 3	17 1	2945.3	(25/2 ⁺)	2698.7	(23/2 ⁺)	D+Q	-0.34 19	
258 [‡]		3499.1	(27/2 ⁺)	3240.9	(25/2 ⁺)	@	@	
274.6 3	5 1	540.6	(9/2 ⁺)	266.0	(11/2 ⁻)			
302 [‡]		2698.7	(23/2 ⁺)	2396.4	(19/2 ⁺)	@	@	
307 [‡]		5518.8	(39/2 ⁻)	5212.7	(37/2 ⁻)	@	@	
309.3 3	5 1	849.9	(11/2 ⁺)	540.6	(9/2 ⁺)			
311.8 3	20 1	3257.1	(27/2 ⁺)	2945.3	(25/2 ⁺)	D+Q	-0.2 4	$A_2=-0.395$ 24, $A_4=+0.02$ 3 (1991Hu09).
331 [‡]		6520.1	(43/2 ⁻)	6188.9	(41/2 ⁻)	@	@	
342 [‡]		3840.4	(29/2 ⁺)	3499.1	(27/2 ⁺)	@	@	
346.5 3	4 1	1196.5	(13/2 ⁺)	849.9	(11/2 ⁺)	D+Q	+0.14 1	$A_2=-0.02$ 7, $A_4=0$ (1991Hu09).
359.5 3	8 1	3616.5	(29/2 ⁺)	3257.1	(27/2 ⁺)	D+Q	-0.19 3	$A_2=-0.55$ 4, $A_4=0$ (1991Hu09).
365.7 3	100	631.7	(15/2 ⁻)	266.0	(11/2 ⁻)	Q		$A_2=+0.210$ 13, $A_4=+0.004$ 15 (1991Hu09); $A_2=+0.27$ 3 (1988Ma49).
372 [‡]		4212.2	(31/2 ⁺)	3840.4	(29/2 ⁺)	@	@	
378.1 3	6 1	1574.7		1196.5	(13/2 ⁺)			
392 [‡]		4603.9	(33/2 ⁺)	4212.2	(31/2 ⁺)	@	@	
393.4 3	4 1	4009.8	(31/2 ⁺)	3616.5	(29/2 ⁺)	D+Q	+0.39 14	$A_2=-0.76$ 11, $A_4=+0.012$ 15 (1991Hu09).
411.7 3	2 1	1986.4		1574.7				
424 [‡]		5028.0	(35/2 ⁺)	4603.9	(33/2 ⁺)	@	@	

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$^{110}\text{Pd}(^{19}\text{F},4\text{n}\gamma)$ **2006Si16,1991Hu09** (continued) $\gamma(^{125}\text{Cs})$ (continued)

E_γ [†]	I_γ ^c	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. #	δ^d	Comments
430.2 3	7 1	683.2	(11/2 ⁺)	253.0	(7/2 ⁺)	Q		$A_2=+0.52$ 6, $A_4=+0.07$ 7 (1991Hu09).
438.9 3	2 1	2425.3	(19/2 ⁺)	1986.4				
441.1 3	2 1	4450.8	(33/2 ⁺)	4009.8	(31/2 ⁺)			
458.5 ^e 5	<1	1278.8	(17/2 ⁻)	820.3?				
468 [‡]		5495.4	(37/2 ⁺)	5028.0	(35/2 ⁺)	@	@	
470.2 3	≈1	2895.8	(21/2 ⁺)	2425.3	(19/2 ⁺)			
474.3 [‡] 3	<2	4925.3	(35/2 ⁺)	4450.8	(33/2 ⁺)	@	@	
474.7 [‡] 3	9 2	1753.8	(19/2 ⁻)	1278.8	(17/2 ⁻)	D+Q @	-0.23 @ 1	
489.2 3	<2	3385.4	(23/2 ⁻)	2895.8	(21/2 ⁺)			
504 [‡]		5428.8	(37/2 ⁺)	4925.3	(35/2 ⁺)	@	@	
508 [‡]		5936.6	(39/2 ⁺)	5428.8	(37/2 ⁺)	@	@	
525.6 3	2 1	2424.5	(23/2 ⁻)	1899.0	(21/2 ⁻)			
532 [‡]		6468.7	(41/2 ⁺)	5936.6	(39/2 ⁺)	@	@	
542 [‡]		3240.9	(25/2 ⁺)	2698.7	(23/2 ⁺)	@	@	
554 [‡]		3499.1	(27/2 ⁺)	2945.3	(25/2 ⁺)	@	@	
554.3 ^e 5	<1	820.3?		266.0	(11/2 ⁻)			See comment on 820.5 level.
558.4 3	<2	3257.1	(27/2 ⁺)	2698.7	(23/2 ⁺)			
569 [‡]		5495.4	(37/2 ⁺)	4925.3	(35/2 ⁺)	@	@	
572.2 3	64 3	1203.7	(19/2 ⁻)	631.7	(15/2 ⁻)	Q		$A_2=+0.299$ 15, $A_4=+0.033$ 19 (1991Hu09); $A_2=+0.22$ 3 (1988Ma49).
578 [‡]		5028.0	(35/2 ⁺)	4450.8	(33/2 ⁺)	@	@	
583 [‡]		3840.4	(29/2 ⁺)	3257.1	(27/2 ⁺)	@	@	
583.9 3	<2	849.9	(11/2 ⁺)	266.0	(11/2 ⁻)			
594 [‡]		4603.9	(33/2 ⁺)	4009.8	(31/2 ⁺)	@	@	
596 [‡]		4212.2	(31/2 ⁺)	3616.5	(29/2 ⁺)	@	@	
607.0 3	<2	3178.1	(27/2 ⁻)	2570.7	(23/2 ⁻)			
610.3 3	7	1293.5	(15/2 ⁺)	683.2	(11/2 ⁺)	Q		$A_2=+0.28$ 7, $A_4=-0.06$ 9 (1991Hu09).
611 [‡]		611.0+x	(27/2 ⁺)	0+x	(23/2 ⁺)	@	@	
620 1	<2	5212.7	(37/2 ⁻)	4593.1	(35/2 ⁻)	&	&	
620.5 3	5	1899.0	(21/2 ⁻)	1278.8	(17/2 ⁻)	Q &	&	
634.3 3	<2	4358.2	(33/2 ⁻)	3723.8	(31/2 ⁻)			
647.1 3	26	1278.8	(17/2 ⁻)	631.7	(15/2 ⁻)	D+Q	-0.30 7	$A_2=-0.700$ 23, $A_4=+0.06$ 3 (1991Hu09).
655.8 3	2 1	1196.5	(13/2 ⁺)	540.6	(9/2 ⁺)	Q		$A_2=+0.67$ 16, $A_4=+0.12$ 20 (1991Hu09).
670 [‡]		6188.9	(41/2 ⁻)	5518.8	(39/2 ⁻)	@	@	
670.2 3	<2	2424.5	(23/2 ⁻)	1753.8	(19/2 ⁻)	(Q)		
671.1 3	<2	3616.5	(29/2 ⁺)	2945.3	(25/2 ⁺)			
686.0 ^e 3	<2	3964.4?		3278.4?				E_γ : Not reported in 2006Si116. Questionable.
695.3 3	17	1899.0	(21/2 ⁻)	1203.7	(19/2 ⁻)	D+Q	-0.25 1	$A_2=-0.64$ 3, $A_4=0$ (1991Hu09).
720.4 3	2 1	3553.4	(29/2 ⁻)	2832.8	(27/2 ⁻)	D+Q	-0.35 2	$A_2=-0.75$ 19, $A_4=0$ (1991Hu09).
725.0 3	≈1	1574.7		849.9	(11/2 ⁺)			
728.1 3	5 1	2690.9	(25/2 ⁻)	1962.9	(23/2 ⁻)			
743 [‡]		1354.0+x	(31/2 ⁺)	611.0+x	(27/2 ⁺)	@	@	
752.8 3	<2	4009.8	(31/2 ⁺)	3257.1	(27/2 ⁺)			
753 [‡]		7273.0	(45/2 ⁻)	6520.1	(43/2 ⁻)	@	@	
759.5 3	35 3	1962.9	(23/2 ⁻)	1203.7	(19/2 ⁻)	Q ^a	^a	$A_2=+0.34$ 7 (1988Ma49).
761.7 3	5 1	2055.2	(19/2 ⁺)	1293.5	(15/2 ⁺)	(Q) ^a	^a	
764.6 3	3 1	2518.2	(21/2 ⁺)	1753.8	(19/2 ⁻)	D+Q	-0.25 15	$A_2=-0.62$ 13, $A_4=+0.13$ 16 (1991Hu09).
789.9 3	<2	1986.4		1196.5	(13/2 ⁺)			
791.9 3	5 1	2690.9	(25/2 ⁻)	1899.0	(21/2 ⁻)	Q		$A_2=+0.31$ 10, $A_4=+0.08$ 12 (1991Hu09).
797.5 3	<2	3975.9	(31/2 ⁻)	3178.1	(27/2 ⁻)			

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$^{110}\text{Pd}(^{19}\text{F},4\text{n}\gamma)$ **2006Si16,1991Hu09** (continued) $\gamma(^{125}\text{Cs})$ (continued)

E_γ [†]	I_γ ^c	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. #	δ^d	Comments
801 ^{‡e}		3499.1	(27/2 ⁺)	2698.7	(23/2 ⁺)	@	@	
804.9 3	<2	4358.2	(33/2 ⁻)	3553.4	(29/2 ⁻)			
819.4 3	<2	3243.9	(27/2 ⁻)	2424.5	(23/2 ⁻)			
833 [‡]		2187.0+x	(35/2 ⁺)	1354.0+x	(31/2 ⁺)	@	@	
834.2 3	<2	4450.8	(33/2 ⁺)	3616.5	(29/2 ⁺)			
843 [‡]		3030.0+x	(39/2 ⁺)	2187.0+x	(35/2 ⁺)	@	@	
850.7 3	<2	2425.3	(19/2 ⁺)	1574.7				
854.5 3	<1	5212.7	(37/2 ⁻)	4358.2	(33/2 ⁻)			
862.7 3	3 1	3553.4	(29/2 ⁻)	2690.9	(25/2 ⁻)			
864.3 3	2 1	2919.5	(23/2 ⁺)	2055.2	(19/2 ⁺)			
869 1		4593.1	(35/2 ⁻)	3723.8	(31/2 ⁻)	Q ^b	b	A ₂ =0.15 10 (1988Ma49).
869.9 3	28 3	2832.8	(27/2 ⁻)	1962.9	(23/2 ⁻)	Q ^b	b	A ₂ =+0.54 15 (1988Ma49).
871 [‡]		3901.0+x	(43/2 ⁺)	3030.0+x	(39/2 ⁺)	@	@	
888.6 3	<2	2943.8	(23/2 ⁺)	2055.2	(19/2 ⁺)			
891.2 3	12 1	3723.8	(31/2 ⁻)	2832.8	(27/2 ⁻)	Q		A ₂ =+0.32 4, A ₄ =-0.02 5 (1991Hu09); A ₂ =+0.37 10 (1988Ma49).
895 [‡]		3840.4	(29/2 ⁺)	2945.3	(25/2 ⁺)	@	@	
909.2 3	<2	2895.8	(21/2 ⁺)	1986.4				
915.5 3	<2	4925.3	(35/2 ⁺)	4009.8	(31/2 ⁺)			
925.7 3	2 1	5518.8	(39/2 ⁻)	4593.1	(35/2 ⁻)			
944.2 3	<2	4920.3	(35/2 ⁻)	3975.9	(31/2 ⁻)			
949 [‡]		4850.0+x	(47/2 ⁺)	3901.0+x	(43/2 ⁺)	@	@	
955 [‡]		4212.2	(31/2 ⁺)	3257.1	(27/2 ⁺)	@	@	
960.5 3	<2	3385.4	(23/2 ⁻)	2425.3	(19/2 ⁺)			
976 [‡]		6188.9	(41/2 ⁻)	5212.7	(37/2 ⁻)	@	@	
978.0 3	<2	5428.8	(37/2 ⁺)	4450.8	(33/2 ⁺)			
979 [‡]		5829+x	(51/2 ⁺)	4850.0+x	(47/2 ⁺)	@	@	
987 [‡]		4603.9	(33/2 ⁺)	3616.5	(29/2 ⁺)	@	@	
1001.3 3	<2	6520.1	(43/2 ⁻)	5518.8	(39/2 ⁻)			
1011 [‡]		5936.6	(39/2 ⁺)	4925.3	(35/2 ⁺)	@	@	
1018 ^{‡e}		5028.0	(35/2 ⁺)	4009.8	(31/2 ⁺)	@	@	
1040 [‡]		6468.7	(41/2 ⁺)	5428.8	(37/2 ⁺)	@	@	
1045 ^{‡e}		5495.4	(37/2 ⁺)	4450.8	(33/2 ⁺)	@	@	
1080 [‡]		7600.1	(47/2 ⁻)	6520.1	(43/2 ⁻)	@	@	Placed by 1988Ma49 as deexciting the 43/2 ⁻ -member of yrast band. 2006Si16 place it from the 47/2 ⁻ -member of this band, with a 1002γ, not reported by 1988Ma49, being the 43/2 ⁻ to 39/2 ⁻ -transition.
1084 [‡]		7273.0	(45/2 ⁻)	6188.9	(41/2 ⁻)	@	@	
1117.4 3	9 1	2396.4	(19/2 ⁺)	1278.8	(17/2 ⁻)	D+Q	-0.03 1	A ₂ =-0.29 4, A ₄ =0 (1991Hu09).
1122.0 3	2 1	1753.8	(19/2 ⁻)	631.7	(15/2 ⁻)	Q		A ₂ =+0.52 20, A ₄ =0 (1991Hu09).
1143.0 3	≈1	3975.9	(31/2 ⁻)	2832.8	(27/2 ⁻)			
1159 [‡]		8759.1	(51/2 ⁻)	7600.1	(47/2 ⁻)	@	@	
1196.8 3	<2	4920.3	(35/2 ⁻)	3723.8	(31/2 ⁻)			
1215.4 3	≈1	3178.1	(27/2 ⁻)	1962.9	(23/2 ⁻)			
1221.0 3	<1	2424.5	(23/2 ⁻)	1203.7	(19/2 ⁻)			
1244 [‡]		10003.1	(55/2 ⁻)	8759.1	(51/2 ⁻)	@	@	
1307 [‡]		11310.1	(59/2 ⁻)	10003.1	(55/2 ⁻)	@	@	
1315.5 ^e 3	<1	3278.4?		1962.9	(23/2 ⁻)			E _γ : Not reported in 2006Si116. Questionable.

Continued on next page (footnotes at end of table)

$^{110}\text{Pd}(^{19}\text{F},4\text{n}\gamma)$ [2006Si16](#),[1991Hu09](#) (continued) $\gamma(^{125}\text{Cs})$ (continued)

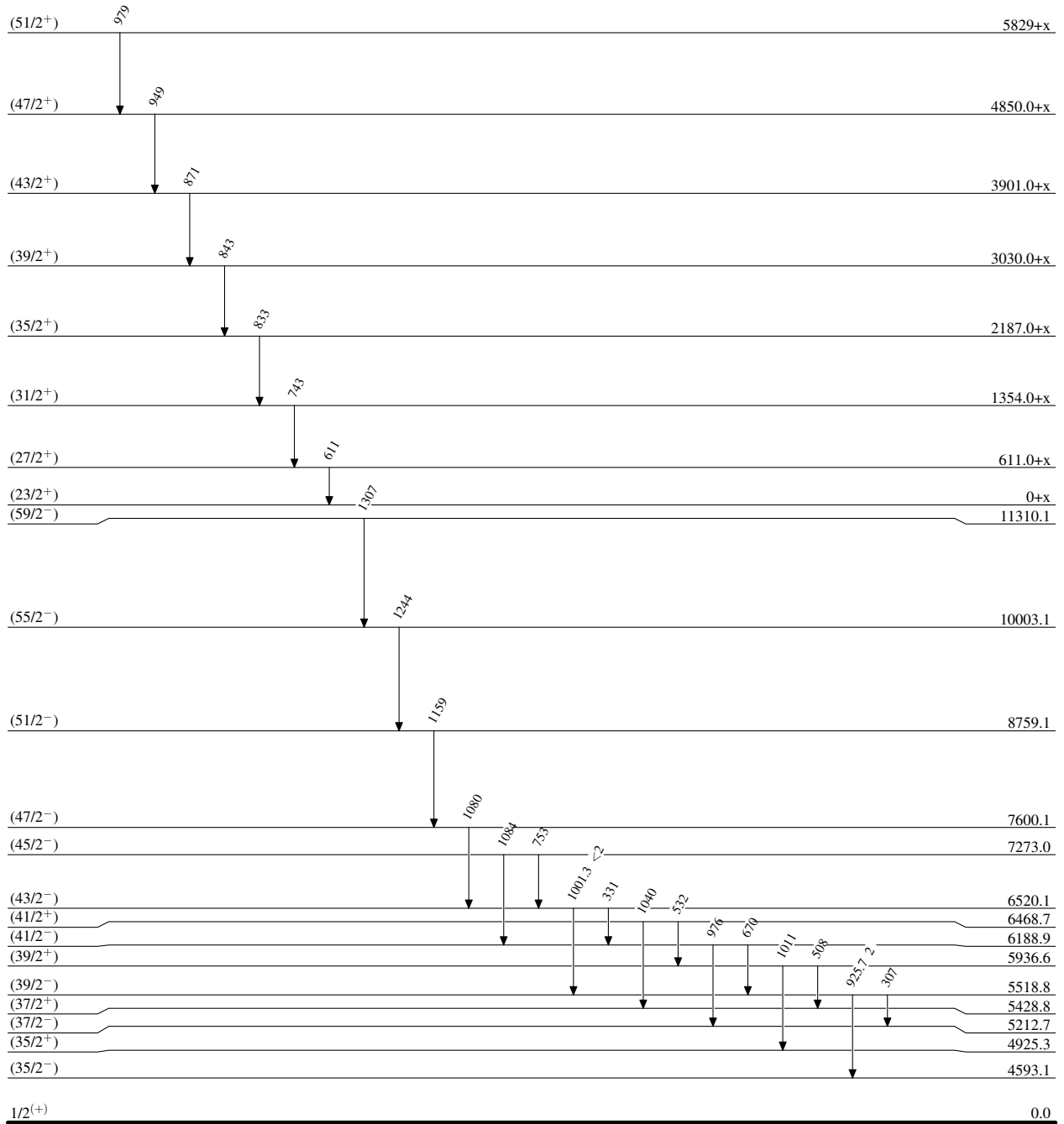
E_γ [†]	I_γ ^c	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [#]	δ ^d	Comments
1366.6 3	2 1	2570.7	(23/2 ⁻)	1203.7	(19/2 ⁻)	Q		$A_2=+0.22$ 18, $A_4=0$ (1991Hu09).
1686.4 3	4 2	2318.1	(17/2 ⁺)	631.7	(15/2 ⁻)	D+Q	+0.07 3	$A_2=-0.13$ 10, $A_4=+0.03$ 13 (1991Hu09).

[†] From [1991Hu09](#).[‡] From [2006Si16](#).[#] From $\gamma(\theta)$, unless otherwise noted.[@] $A_2=-0.61$ 4, $A_4=-0.01$ 6 for 474.3+474.7 doublet ([1991Hu09](#)).[&] $A_2=+0.04$ 8, $A_4=0$ for 620+620.5 doublet ([1991Hu09](#)).^a $A_2=+0.346$ 21, $A_4=+0.013$ 25 for 759.5+761.7 doublet ([1991Hu09](#)).^b $A_2=+0.38$ 3, $A_4=-0.01$ 3 for 869+869.9 doublet ([1991Hu09](#)).^c Relative to $I(365.7\gamma)=100$ from $^{110}\text{Pd}(^{19}\text{F},4\text{n}\gamma)$ $E=74$ MeV from ([1991Hu09](#)), unless otherwise noted.^d From [1991Hu09](#).^e Placement of transition in the level scheme is uncertain.

$^{110}\text{Pd}(^{19}\text{F},4\text{n}\gamma) \quad 2006\text{Si16},1991\text{Hu09}$ Level SchemeIntensities: Relative I_γ

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



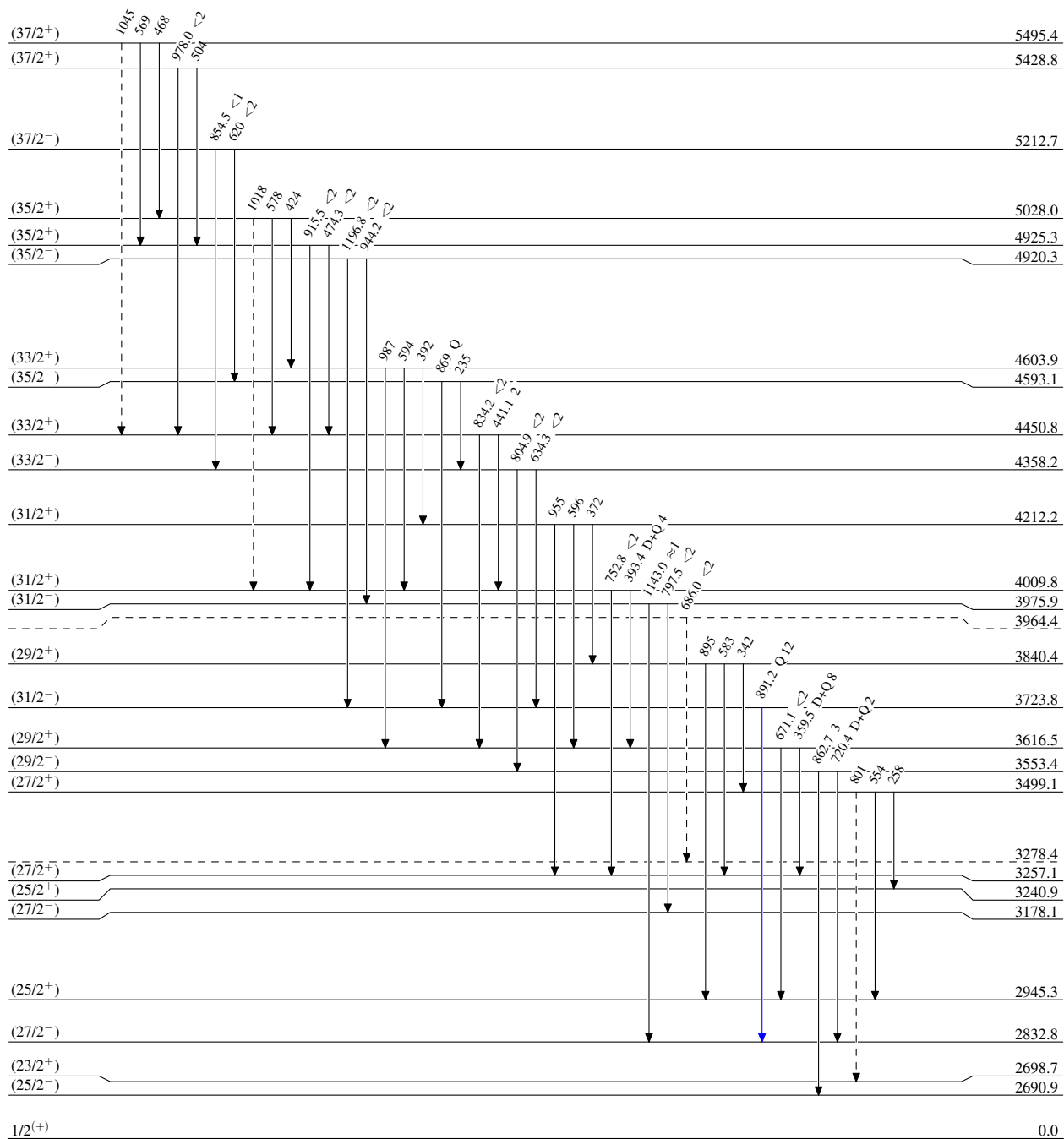
$^{110}\text{Pd}(^{19}\text{F}, 4n\gamma)$ 2006Si16,1991Hu09

Legend

Level Scheme (continued)

Intensities: Relative I_γ

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$
 $\cdots\cdots\cdots$ γ Decay (Uncertain)



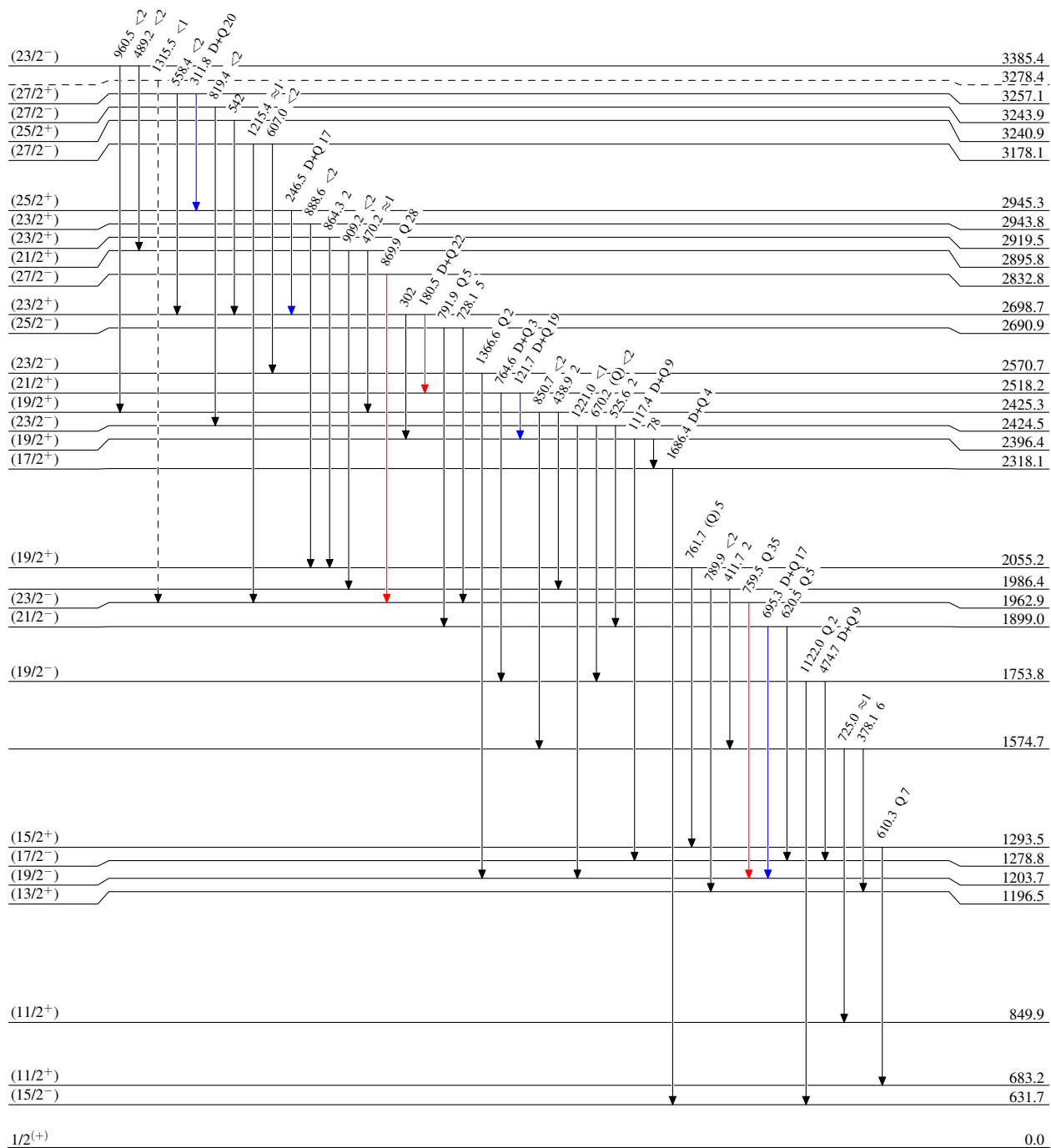
$^{110}\text{Pd}(^{19}\text{F},4n\gamma)$ 2006Si16,1991Hu09

Legend

Level Scheme (continued)

Intensities: Relative I_γ

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$
 $\cdots$ γ Decay (Uncertain)



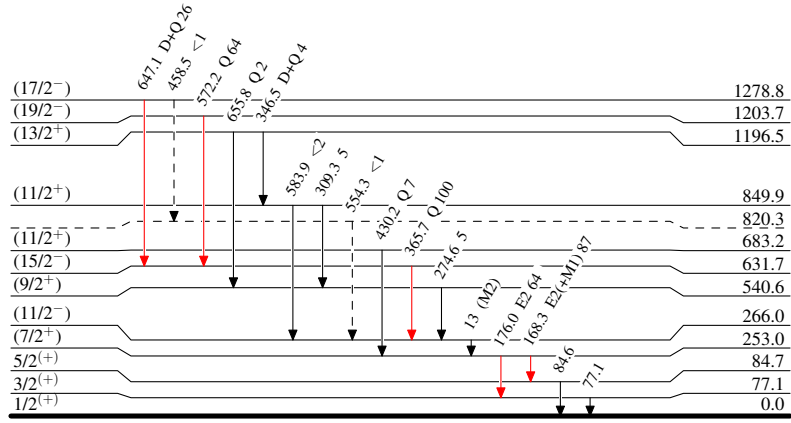
$^{110}\text{Pd}(^{19}\text{F},4n\gamma)$ 2006Si16,1991Hu09

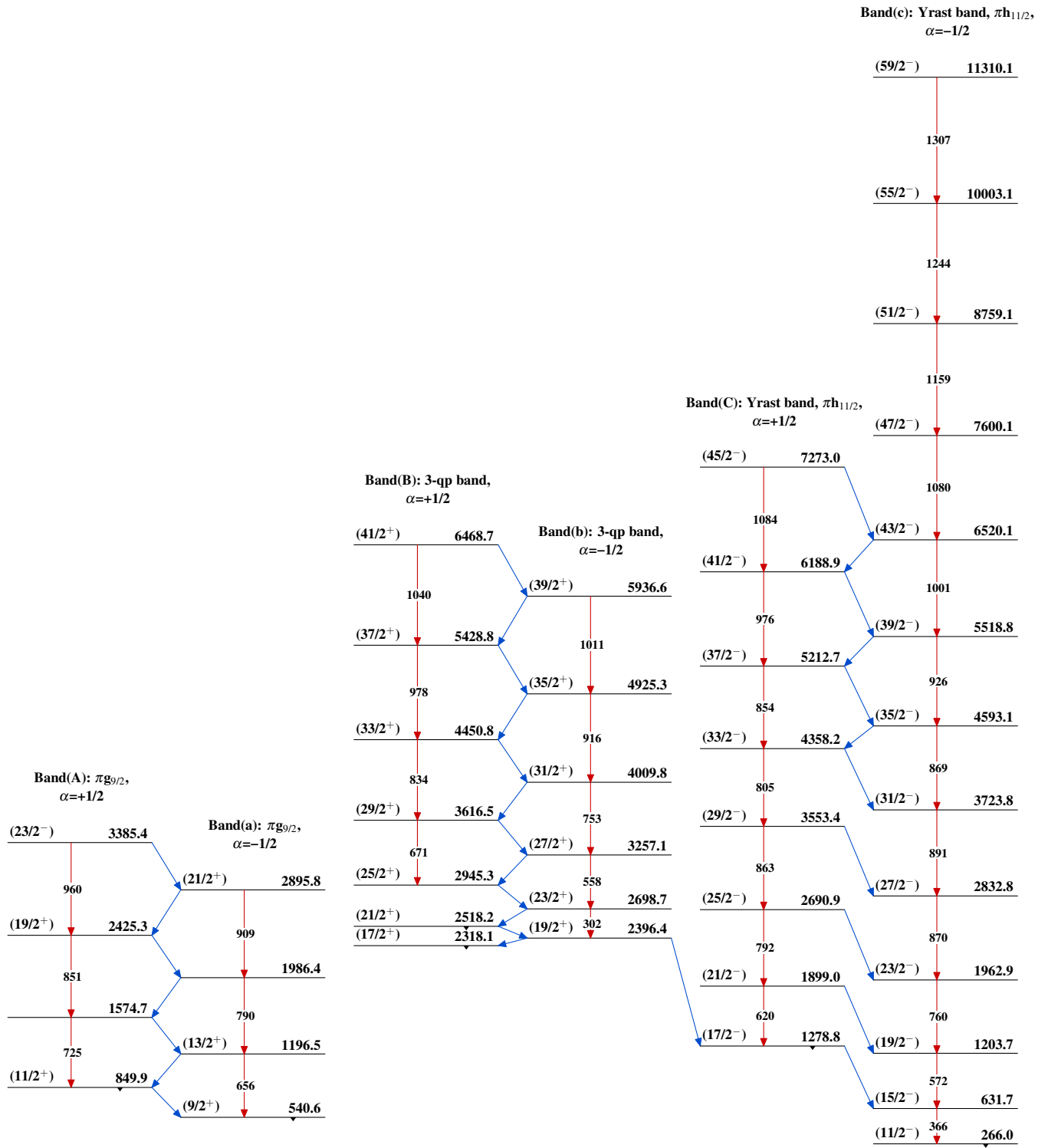
Level Scheme (continued)

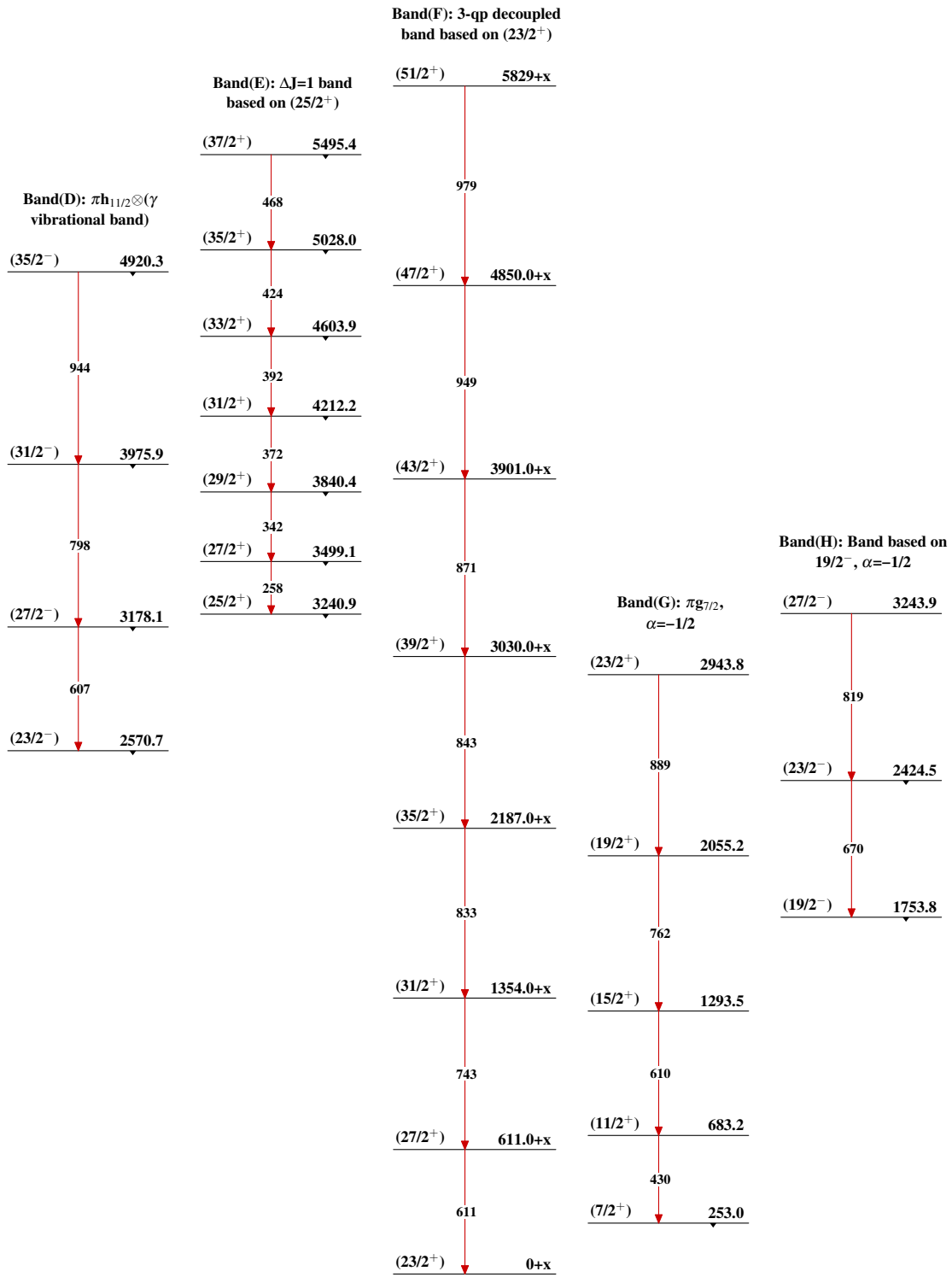
Intensities: Relative I_γ

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
 $-\cdots-\cdots$ γ Decay (Uncertain)

 $^{125}_{55}\text{Cs}_{70}$

$^{110}\text{Pd}(^{19}\text{F},4\text{n}\gamma) \quad 2006\text{Si16},1991\text{Hu09}$ 

$^{110}\text{Pd}(^{19}\text{F},4n\gamma)$ 2006Si16,1991Hu09 (continued) $^{125}_{55}\text{Cs}_{70}$