(HI,xnγ) 1990Ny02

	History		
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 134, 149 (2016)	15-Apr-2015

^{154}Sm(^{34}S,5n), E=163 MeV; measured $\gamma\gamma$ coin using 7 Ge detectors At various angles In ORNL spin spectrometer, 6 with NaI anti-Compton shields; remaining 64 NaI detectors selected 5n channel by gating on sum-energy and multiplicity.

^{170}Yb(^{16}O,3n), E=82,84 MeV; 85.4% ^{170}Yb target, Pb stopper; 4 Ge detectors (3 coaxial, 1 planar) from NORDBALL detector array with anti-Compton shields; measured $\gamma\gamma$ coin with 150 ns overlap coin time; searched for low-energy photons and x-rays and for isomeric states.

^{170}Yb(^{16}O,3n), E=81 MeV; 85% ^{170}Yb target; measured $\gamma\gamma(\theta)$, θ=0°−90° (5 angles) using a Ge detector and a 6-NaI detector multiplicity filter. measured $\gamma(\theta)$ (5 angles, 0° to 90°).

^{183}Pt Levels

E(level)†	Jπ‡	$T_{1/2}$	Comments
0.0&	1/2−		
34.50‡@ 8	7/2−		
96& 1	5/2−		
149.6@ 8	(9/2)−		
195.5# 10	(9/2)+	>150 ns	$T_{1/2}$: from γ-161γ delayed coin.
243.5# 11	(11/2)+		
289.0@ 8	(11/2)−		
314.0& 15	9/2−		
316.6# 12	(13/2+)		
448.8@ 10	(13/2)−		
477.9# 13	(15/2+)		
590.1# 14	(17/2+)		
627.0& 18	13/2−		
628.5@ 11	(15/2)−		
824.7@ 12	(17/2)−		
834.2# 14	(19/2+)		
966.2# 15	(21/2+)		
1010.7& 20	17/2−		
1037.5@ 15	(19/2)−		
1262.4@ 16	(21/2−)		
1280.1# 16	(23/2+)		
1421.2# 16	(25/2+)		
1443.8& 23	21/2−		
1500.7@ 18	(23/2−)		
1747.8@ 19	(25/2−)		
1790.9# 17	(27/2+)		
1900.4& 25	25/2−		
1936.3# 18	(29/2+)		
2004.9@ 21	(27/2−)		
2267.9@ 21	(29/2−)		
2340.8# 18	(31/2+)		
2374& 3	29/2−		
2503.0# 20	(33/2+)		

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(HI,xnγ) 1990Ny02 (continued)

^{183}Pt Levels (continued)

E(level)[†]	Jπ[‡]	E(level)[†]	Jπ[‡]	E(level)[†]	Jπ[‡]	E(level)[†]	Jπ[‡]
2541.2[@] 23	(31/2⁻)	3122.7[#] 21	(37/2⁺)	3793.7[#] 23	(41/2⁺)	4949[@] 3	(47/2⁻)
2817.9[@] 24	(33/2⁻)	3396[@] 3	(37/2⁻)	4018[@] 3	(41/2⁻)	5257?[#] 3	(49/2⁺)
2872[&] 3	33/2⁻	3423[&] 3	37/2⁻	4025[&] 4	41/2⁻		
2919.1[#] 20	(35/2⁺)	3543.4[#] 21	(39/2⁺)	4289[@] 3	(43/2⁻)		
3108.2[@] 25	(35/2⁻)	3697[@] 3	(39/2⁻)	4507.7[#] 25	(45/2⁺)		

[†] From least-squares fit to Eγ, assuming 1 keV uncertainty in Eγ and fixing E(35 level) to the adopted value.
[‡] From Adopted Levels.
[#] Band(A): 9/2[624] band.
[@] Band(B): 7/2[514] band.
[&] Band(C): 1/2[521] g.s. band.

γ(^{183}Pt)

Eγ[‡]	Iγ[†]	Ei(level)	Jπi	Ef	Jπf	Mult.[#]	δ[@]	Comments
48.0[b] 2		243.5	(11/2)⁺	195.5	(9/2)⁺			
73		316.6	(13/2⁺)	243.5	(11/2)⁺			
96		96	5/2⁻	0.0	1/2⁻			
112.2	2.7 5	590.1	(17/2⁺)	477.9	(15/2⁺)	D+Q	−0.6 +30−4	Mult.: A_2=−0.61 5, A_4=+0.03 6.
115.0	6.3 9	149.6	(9/2)⁻	34.50	7/2⁻	D(+Q)	−0.10 +22−10	Mult.,δ: from A_2=−0.34 7, A_4=−0.02 8. Note, however, that conversion electron data In ε decay indicates significantly larger δ and rules out Δπ=yes.
121		316.6	(13/2⁺)	195.5	(9/2)⁺			
132.1	5.0 5	966.2	(21/2⁺)	834.2	(19/2⁺)	D+Q		Mult.: A_2=−0.14 4, A_4=−0.14 5.
139.3	5.2 5	289.0	(11/2)⁻	149.6	(9/2)⁻	D+Q		Mult.: A_2=−0.27 5, A_4=+0.20 7.
141.2	1.6 5	1421.2	(25/2⁺)	1280.1	(23/2⁺)	D+Q		Mult.: A_2=−0.3 1, A_4=+0.1 2.
147[e]		1936.3	(29/2⁺)	1790.9	(27/2⁺)			
160.0	2.6 5	448.8	(13/2)⁻	289.0	(11/2)⁻	D+Q	−2.5 2	Mult.: A_2=−0.65 7, A_4=+0.25 8.
161		195.5	(9/2)⁺	34.50	7/2⁻			
161.2	32 3	477.9	(15/2⁺)	316.6	(13/2⁺)	D+Q	−1.7 5	Mult.: A_2=−0.47 3, A_4=+0.05 3.
164[e]		2503.0	(33/2⁺)	2340.8	(31/2⁺)			
179.6		628.5	(15/2)⁻	448.8	(13/2)⁻			
196		824.7	(17/2)⁻	628.5	(15/2)⁻			
[x]198[a]								
[x]204[a]								
205[e]		3122.7	(37/2⁺)	2919.1	(35/2⁺)			
214[e]		1037.5	(19/2)⁻	824.7	(17/2)⁻			
[x]217[a]								
218.0	25.2 9	314.0	9/2⁻	96	5/2⁻	Q		Mult.: A_2=+0.29 3, A_4=−0.13 4.
[x]232[a]								
234.5	22.5 9	477.9	(15/2⁺)	243.5	(11/2)⁺	Q		Mult.: A_2=+0.35 4, A_4=−0.08 5.
239[e]		1500.7	(23/2⁻)	1262.4	(21/2⁻)			
[x]244[a]								
244.2	5.4 9	834.2	(19/2⁺)	590.1	(17/2⁺)	D+Q	−1.1 +3−5	Mult.: A_2=−0.82 4, A_4=+0.12 4.
254.6	30 2	289.0	(11/2)⁻	34.50	7/2⁻	Q		Mult.: A_2=+0.23 4, A_4=−0.05 5.
259[e]		2004.9	(27/2⁻)	1747.8	(25/2⁻)			

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(HI,xnγ) 1990Ny02 (continued)

$\gamma(^{183}Pt)$ (continued)

E_γ[‡]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	Comments
273.5	100[&] 5	590.1	$(17/2^+)$	316.6	$(13/2^+)$	Q		Mult.: A_2=+0.20 3, A_4=−0.03 4.
275[e]		2541.2	$(31/2^-)$	2267.9	$(29/2^-)$			
290[e]		3108.2	$(35/2^-)$	2817.9	$(33/2^-)$			
299.2	47[&] 2	448.8	$(13/2)^-$	149.6	$(9/2)^-$	Q		Mult.: A_2=+0.28 3, A_4=−0.07 4.
313.0		627.0	$13/2^-$	314.0	$9/2^-$			
314		1280.1	$(23/2^+)$	966.2	$(21/2^+)$			
339.4	38 2	628.5	$(15/2)^-$	289.0	$(11/2)^-$	Q		Mult.: A_2=+0.21 3, A_4=+0.03 4.
356.4	41 2	834.2	$(19/2^+)$	477.9	$(15/2^+)$	Q		Mult.: A_2=+0.32 3, A_4=−0.07 5.
369.5	1.4 5	1790.9	$(27/2^+)$	1421.2	$(25/2^+)$	D+Q	−1.4 +5−10	Mult.: A_2=−0.94 7, A_4=+0.20 7.
376[d]	101[d] 5	824.7	$(17/2)^-$	448.8	$(13/2)^-$			E_γ: for doublet; 376.1 shown In level scheme In 1990Ny02 for this placement and 376.5 for alternative placement. Mult.: A_2=+0.33 3, A_4=−0.08 4 for doublet.
376[d]	101[d] 5	966.2	$(21/2^+)$	590.1	$(17/2^+)$	(Q)		Mult.: A_2=+0.33 3, A_4=−0.08 4 for doublet. E_γ: see comment on 376γ from 825 level.
384.7	37 2	1010.7	$17/2^-$	627.0	$13/2^-$	Q		Mult.: A_2=+0.30 3, A_4=−0.04 5.
404.1	6.8 7	2340.8	$(31/2^+)$	1936.3	$(29/2^+)$	D+Q		Mult.: A_2=−0.36 4, A_4=+0.08 6.
409.0	45 3	1037.5	$(19/2)^-$	628.5	$(15/2)^-$	Q		Mult.: A_2=+0.25 3, A_4=−0.07 5.
416		2919.1	$(35/2^+)$	2503.0	$(33/2^+)$			
421		3543.4	$(39/2^+)$	3122.7	$(37/2^+)$			
432.1	39[&] 3	1443.8	$21/2^-$	1010.7	$17/2^-$	Q		Mult.: A_2=+0.38 6, A_4=−0.06 7.
437.7	32[&] 3	1262.4	$(21/2^-)$	824.7	$(17/2)^-$			Mult.: A_2=+0.04 5, A_4=+0.15 8.
445.9	34 2	1280.1	$(23/2^+)$	834.2	$(19/2^+)$	Q		Mult.: A_2=+0.18 4, A_4=+0.03 5.
454.8	68 3	1421.2	$(25/2^+)$	966.2	$(21/2^+)$	Q		Mult.: A_2=+0.33 3, A_4=−0.02 4.
456.6	32 2	1900.4	$25/2^-$	1443.8	$21/2^-$	Q		Mult.: A_2=+0.39 4, A_4=−0.09 5.
463.2	34 2	1500.7	$(23/2^-)$	1037.5	$(19/2)^-$	Q		Mult.: A_2=+0.33 4, A_4=−0.02 6.
473.1	16.2 9	2374	$29/2^-$	1900.4	$25/2^-$	Q		Mult.: A_2=+0.32 4, A_4=−0.08 5.
485.4	25 2	1747.8	$(25/2^-)$	1262.4	$(21/2^-)$	Q		Mult.: A_2=+0.22 4, A_4=+0.01 5.
498.4	11.7 9	2872	$33/2^-$	2374	$29/2^-$	Q		Mult.: A_2=+0.3 1, A_4=0.0 1.
504.2	21.6 9	2004.9	$(27/2^-)$	1500.7	$(23/2^-)$	Q		Mult.: A_2=+0.28 4, A_4=−0.04 5.
511		1790.9	$(27/2^+)$	1280.1	$(23/2^+)$			
515.0	60 4	1936.3	$(29/2^+)$	1421.2	$(25/2^+)$	(Q)		Mult.: A_2=+0.20 4, A_4=+0.06 5.
520.1	19.8 9	2267.9	$(29/2^-)$	1747.8	$(25/2^-)$	Q		Mult.: A_2=+0.30 4, A_4=−0.08 5.
536.3	26.1 9	2541.2	$(31/2^-)$	2004.9	$(27/2^-)$	Q		Mult.: A_2=+0.33 4, A_4=+0.07 5.
550[d]	24[d&] 3	2340.8	$(31/2^+)$	1790.9	$(27/2^+)$	(Q)		Mult.: A_2=+0.46 8, A_4=−0.2 1 for doubly placed G.
550[d]	24[d&] 3	2817.9	$(33/2^-)$	2267.9	$(29/2^-)$	(Q)		Mult.: A_2=+0.46 8, A_4=−0.2 1 for doublet.
551	22 3	3423	$37/2^-$	2872	$33/2^-$	(Q)		Mult.: A_2=+0.2 1, A_4=0.0 1.
567[d]	49[d] 3	2503.0	$(33/2^+)$	1936.3	$(29/2^+)$	(Q)		Mult.: A_2=+0.29 3, A_4=−0.03 5 for doubly placed G.
567[d]	49[d] 3	3108.2	$(35/2^-)$	2541.2	$(31/2^-)$	(Q)		Mult.: A_2=+0.29 3, A_4=−0.03 5 for doublet.
578[c]		2919.1	$(35/2^+)$	2340.8	$(31/2^+)$			
578[c]		3396	$(37/2^-)$	2817.9	$(33/2^-)$			
589		3697	$(39/2^-)$	3108.2	$(35/2^-)$			
592		4289	$(43/2^-)$	3697	$(39/2^-)$			
602		4025	$41/2^-$	3423	$37/2^-$			
620.0	16 2	3122.7	$(37/2^+)$	2503.0	$(33/2^+)$	Q		Mult.: A_2=+0.25 5, A_4=−0.16 7.
622		4018	$(41/2^-)$	3396	$(37/2^-)$			
624		3543.4	$(39/2^+)$	2919.1	$(35/2^+)$			
660		4949	$(47/2^-)$	4289	$(43/2^-)$			
671		3793.7	$(41/2^+)$	3122.7	$(37/2^+)$			
714		4507.7	$(45/2^+)$	3793.7	$(41/2^+)$			
749[e]		5257?	$(49/2^+)$	4507.7	$(45/2^+)$			

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(HI,xnγ) 1990Ny02 (continued)

γ(^{183}Pt) (continued)

† From ^{170}Yb(^{16}O,3nγ).
‡ Uncertainty not stated by authors.
# From $\gamma\gamma(\theta)$. The large negative mixing ratios are consistent with M1+E2 but not E1+M2, because the transitions are prompt.
@ From authors′ analysis of $\gamma(\theta)$.
& Includes contaminant.
a These transitions were observed in coincidence with each other and with Pt x-rays. They are assigned to ^{183}Pt because they were seen in both reactions used to populate 183PT..
b Transition inferred but not observed in this reaction. Eγ is from Adopted Gammas.
c Multiply placed.
d Multiply placed with undivided intensity.
e Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

(HI,xnγ) 1990Ny02

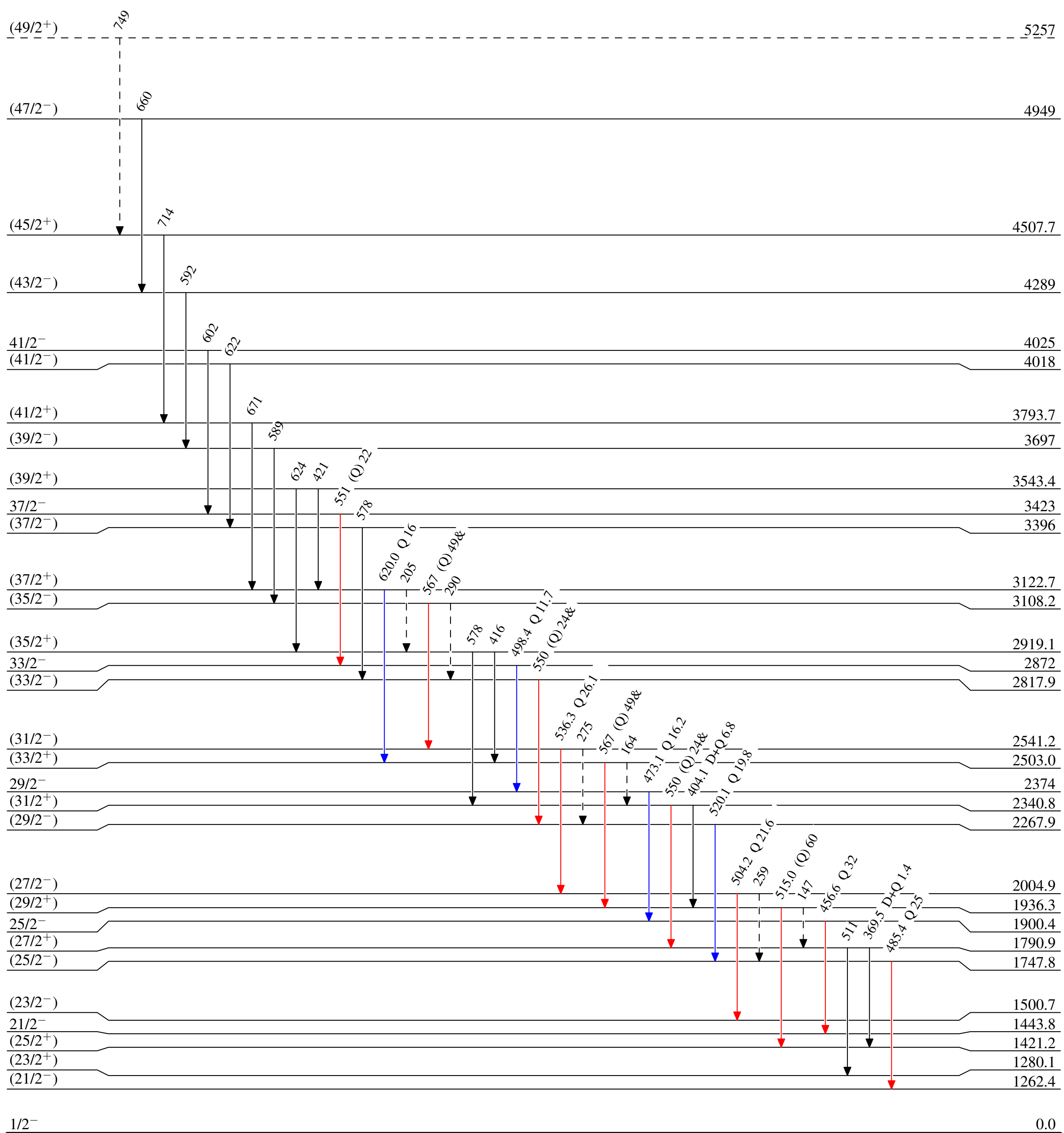
Level Scheme

Intensities: Relative I_γ

& Multiply placed: undivided intensity given

Legend

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

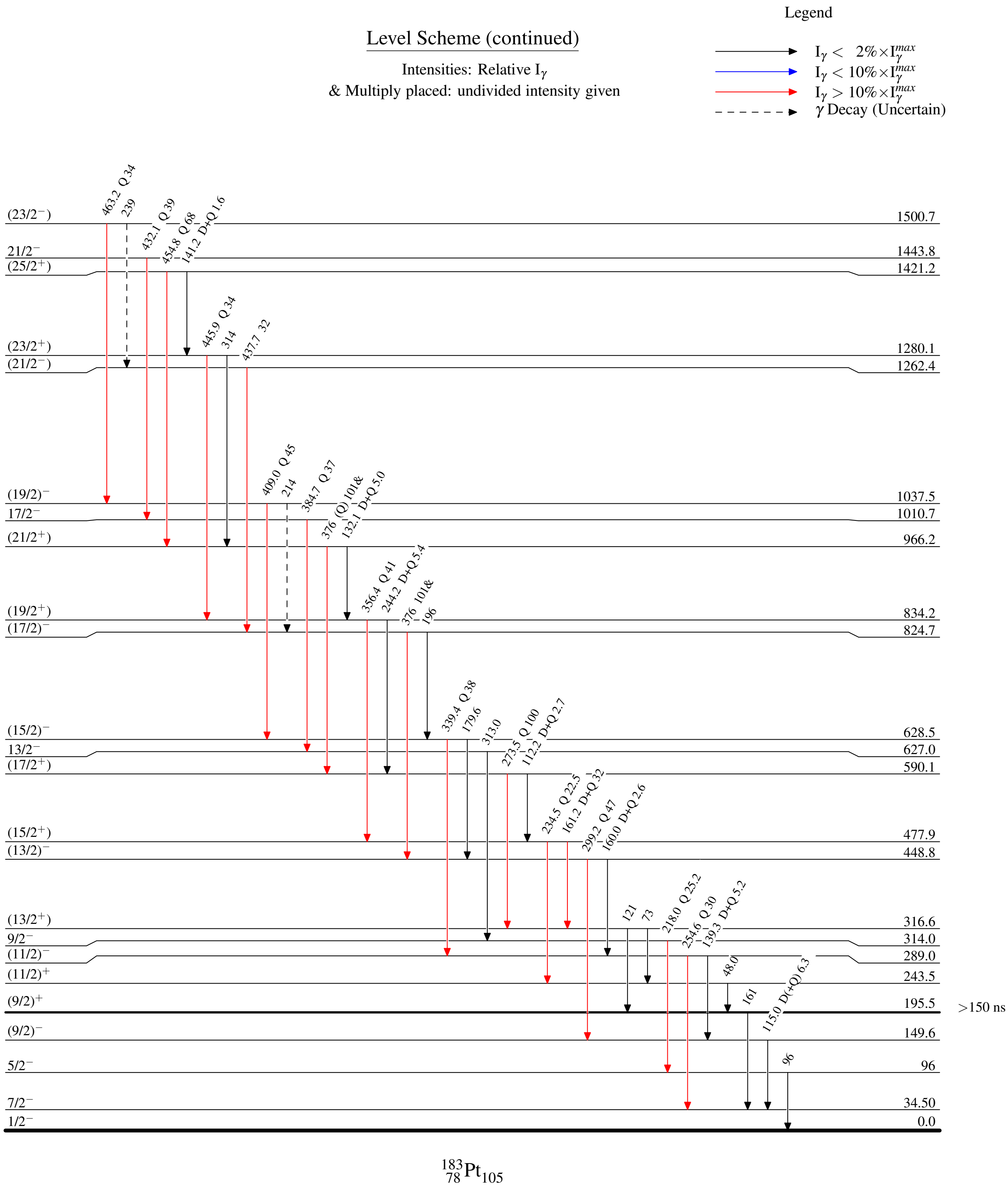


$^{183}_{78}Pt_{105}$

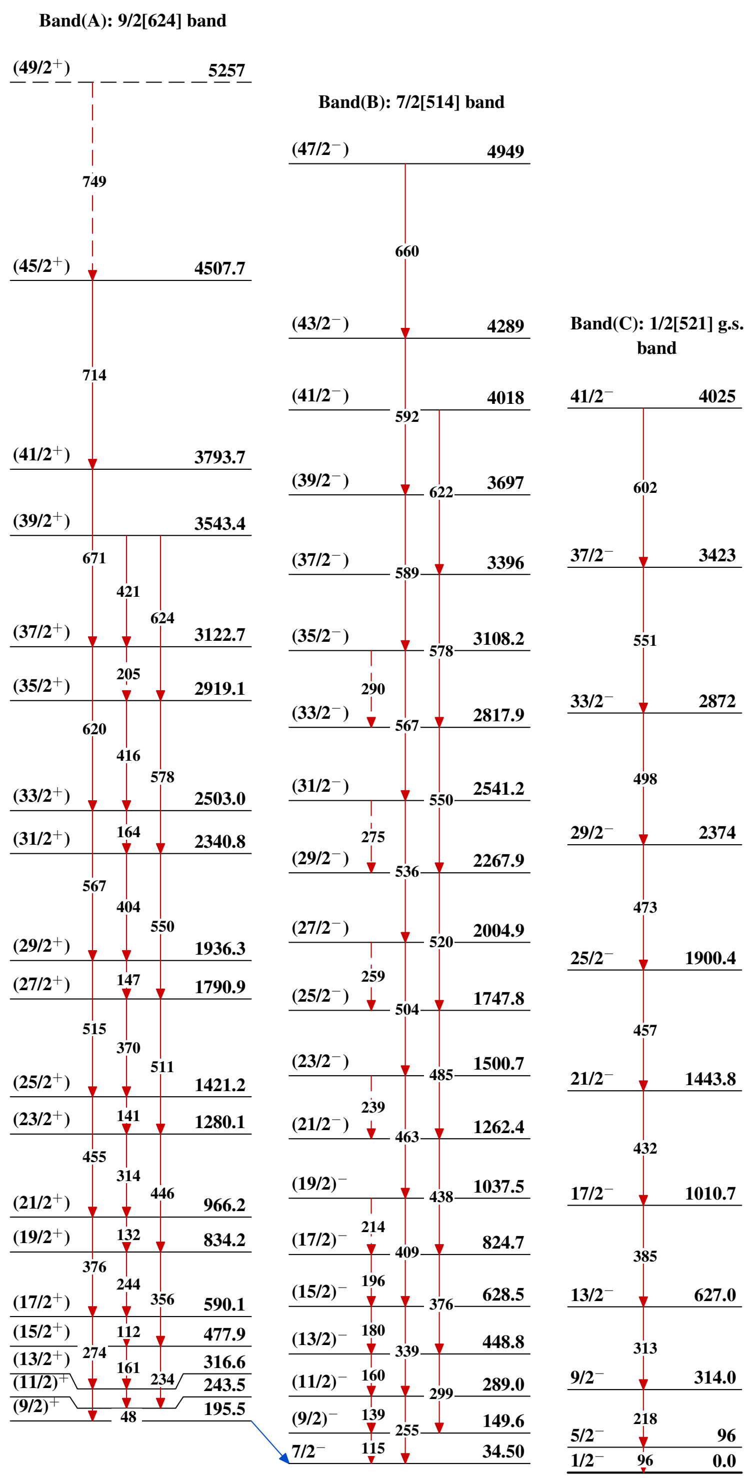
(HI,xnγ) 1990Ny02

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given



(HI,xnγ) 1990Ny02



$^{183}_{78}Pt_{105}$