^{183}W(^{20}Ne,4nγ),^{194}Pt(^{12}C,7nγ) 1994La35,1985We05

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	01-Dec-2015

1994La35: E=115 MeV. Measured Eγ, Iγ, $\gamma\gamma$, $\gamma\gamma(\theta)$(DCO), using twelve OSIRIS detectors in OSIRIS geometry.
1985We05: ^{194}Pt(^{12}C,7nγ) E=106 MeV, Eγ, Iγ, $\gamma\gamma$, $\gamma(\theta)$, γn coin. The authors report five γ rays placed amongst six levels at 310, 910, 1472, 1871, 2274 and 2354, defining yrast cascade $(13/2^+)$-$(17/2^+)$-$(21/2^+)$-$(25/2^+)$-$(29/2^+)$.
All data are from 1994La35 unless otherwise stated.

^{199}Po Levels

E(level)†	J$^\pi$‡	Comments
310# *2*	$13/2^+$	Additional information 1. E(level): from Adopted Levels.
909.2# *1*	$17/2^+$	
1024.9 *2*	$15/2^+$	
1471.5# *1*	$21/2^+$	
1601.9 *1*	$19/2^+$	
1728.0 *2*		
1870.44# *19*	$25/2^+$	
1891.6 *2*	$21/2^+$	
2104.2 *2*	$25/2^+$	
2177.0 *2*	$23/2^+$	
2271.1 *2*	27/2	J$^\pi$: $(29/2^+)$ proposed by 1985We05, based on mult(402γ)=stretched E2 is not supported by DCO(401γ) values from 1994La35 and 1994JiZZ.
2297.6 *2*		
2352.5 *2*	$(27/2^+)$	J$^\pi$: (27/2) in Adopted Levels.
2699.6 *3*		
2720.9 *2*	$29/2^+$	
2762.4 *2*	$29/2^+$	
2977.9 *3*	$(31/2^+)$	J$^\pi$: $(31/2^+,29/2^-)$ in Adopted Levels.
3008.2 *3*	$(31/2^+)$	J$^\pi$: (31/2) in Adopted Levels.
3146.0 *3*	$(33/2^+)$	
3409.3 *3*		
3556.6 *4*	$(35/2^+)$	J$^\pi$: $(35/2^+,33/2^-)$ in Adopted Levels.
3646.7 *4*		
3686.4 *4*		
3930.9 *5*		

† From least-squares fit to Eγ values.
‡ From 1994La35, same as in Adopted Levels, except that parentheses have been added on most of the assignments since strong arguments are generally lacking. Exceptions are noted.
# Band(A): $\nu i_{13/2}$.

γ(^{199}Po)

DCO(Q) corresponds to gate on ΔJ=2, Q transition(s) unless stated otherwise; DCO(D) corresponds to gate on ΔJ=1, dipole transition(s).
A_2 and A_4 values are from 1985We05.

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$^{183}W(^{20}Ne,4n\gamma),^{194}Pt(^{12}C,7n\gamma)$ 1994La35,1985We05 (continued)

$\gamma(^{199}Po)$ (continued)

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ	$I_{(\gamma+ce)}$	Comments
(116[@])	#	1024.9	$15/2^+$	909.2	$17/2^+$			1.5 *5*	
(130[@])	#	1601.9	$19/2^+$	1471.5	$21/2^+$			2.0 *6*	
175.5 *2*	4.5 *4*	2352.5	$(27/2^+)$	2177.0	$23/2^+$				
285.3 *2*	3.3 *4*	2177.0	$23/2^+$	1891.6	$21/2^+$	D(+Q)	0.00 *+15−12*		DCO(D)=0.56 *16*; DCO(D)=1.00 *20*; DCO(Q)=2.2 *5* Mult.: ΔJ=1, dipole (E1) in 1994JiZZ.
289.7 *1*	12.2 *6*	1891.6	$21/2^+$	1601.9	$19/2^+$	D(+Q)	−0.01 *+6−5*		DCO(D)=0.54 *6*; DCO(D)=0.64 *18*; DCO(Q)=1.69 *15*; DCO(Q)=2.1 *4*
347.1[@] *3*		2699.6		2352.5	$(27/2^+)$				weak transition.
374.3 *3*	2.8 *4*	3930.9		3556.6	$(35/2^+)$				
383.6 *2*	8.0 *4*	3146.0	$(33/2^+)$	2762.4	$29/2^+$	(Q)			DCO(D)=0.86 *29*; DCO(Q)=1.28 *20*; DCO(Q)=1.10 *18*; DCO(Q)=0.60 *20*
399.0 *2*	59 *3*	1870.44	$25/2^+$	1471.5	$21/2^+$	Q			DCO(Q)=1.00 *12*; A_2=+0.07 *11*; A_4=−0.5 *2* Additional information 4.
400.6 *2*	21 *2*	2271.1	27/2	1870.44	$25/2^+$	D+Q			DCO(Q)=2.14 *20*; A_2=+0.29 *8*; A_4=−0.28 *10* Additional information 5. Mult.: stretched quadrupole suggested from A_2 and A_4 values of 1985We05 is inconsistent with ΔJ=1, D+Q suggested by DCO values from 1994La35 and 1994JiZZ. δ: −5.7 *30* or −0.14 *+7−20*.
402.0 *3*	5 *1*	2699.6		2297.6					
406.0 *2*	7.3 *7*	2297.6		1891.6	$21/2^+$				DCO(D)=0.44 *12*; DCO(D)=0.73 *15*; DCO(Q)=1.16 *20*
419.9 *2*	6.5 *5*	1891.6	$21/2^+$	1471.5	$21/2^+$	D+Q			DCO(Q)=1.43 *22* δ: −0.98 *42* or +2.4 *10*.
425.1 *3*	4.0 *4*	3146.0	$(33/2^+)$	2720.9	$29/2^+$				
448.9 *3*	5.0 *6*	2177.0	$23/2^+$	1728.0					
450		2720.9	$29/2^+$	2271.1	27/2				E_γ: from figure 3 of 1994La35.
482.1 *1*	19 *1*	2352.5	$(27/2^+)$	1870.44	$25/2^+$	D(+Q)	+0.05 *+9−10*		DCO(Q)=1.48 *14* Additional information 6.
491.3 *2*	5.7 *4*	2762.4	$29/2^+$	2271.1	27/2				
540.4 *2*	8.2 *5*	3686.4		3146.0	$(33/2^+)$				
562.3 *1*	100 *3*	1471.5	$21/2^+$	909.2	$17/2^+$	Q			DCO(Q)=1.04 *5*; A_2=+0.14 *10*; A_4=−0.09 *12* Additional information 3.
576.9 *3*	6[#] *1*	1601.9	$19/2^+$	1024.9	$15/2^+$	Q			DCO(D)=0.38 *10*
578.7 *2*	6.6 *6*	3556.6	$(35/2^+)$	2977.9	$(31/2^+)$	(Q)			DCO(D)=0.71 *15*;

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$^{183}W(^{20}Ne,4n\gamma),^{194}Pt(^{12}C,7n\gamma)$ 1994La35,1985We05 (continued)

$\gamma(^{199}Po)$ (continued)

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	Comments
							DCO(Q)=0.94 *20*; DCO(Q)=0.96 *15*
599.2 *1*		909.2	$17/2^+$	310	$13/2^+$	Q	A_2=+0.21 *13*; A_4=−0.19 *17* Additional information 2. I_γ: 100 IN $^{194}Pt(^{12}C,7n\gamma)$.
616.7 *3*	5 *1*	2720.9	$29/2^+$	2104.2	$25/2^+$		
625.4 *2*	9 *1*	2977.9	$(31/2^+)$	2352.5	$(27/2^+)$	(Q)	DCO(D)=0.61 *10*; DCO(Q)=1.00 *12* Mult.: ΔJ=1, D+Q in 1994JiZZ.
632.7 *1*	14.4 *7*	2104.2	$25/2^+$	1471.5	$21/2^+$	Q	DCO(Q)=0.97 *10*
646.9 *2*	5.6 *6*	3409.3		2762.4	$29/2^+$		
655.7 *2*	7.3 *7*	3008.2	$(31/2^+)$	2352.5	$(27/2^+)$	(Q)	DCO(D)=0.69 *18*; DCO(Q)=1.03 *25*
658.2 *2*	8.8 *7*	2762.4	$29/2^+$	2104.2	$25/2^+$	(Q)	DCO(Q)=0.95 *12*; DCO(Q)=0.90 *15*
668.8 *3*	5.8 *6*	3646.7		2977.9	$(31/2^+)$		
692.7 *1*	16 *1*	1601.9	$19/2^+$	909.2	$17/2^+$	D+Q	DCO(Q)=3.0 *4* δ: −0.48 *+8−13* or −1.6 *3*.
705.5 *2*	10 *1*	2177.0	$23/2^+$	1471.5	$21/2^+$	D+Q	DCO(Q)=1.22 *16* δ: +0.20 *+13−9* or +6.5 *38*.
714.9 *3*	5[#] *1*	1024.9	$15/2^+$	310	$13/2^+$	D+Q	δ: −1.9 *+6−11* or −0.41 *+16−42*.
818.8[@] *2*	6.3 *6*	1728.0		909.2	$17/2^+$		
850.5 *2*	8 *1*	2720.9	$29/2^+$	1870.44	$25/2^+$	Q	DCO(Q)=1.10 *16* E_γ: doublet in 1994JiZZ.

[†] Intensity in coin with 599.2γ without any timing condition.
[‡] From DCO values. Mult=Q corresponds to ΔJ=2, quadrupole (most likely E2) transition; mult=D+Q corresponds to ΔJ=1 dipole+quadrupole (most likely M1+E2) transition.
[#] From γγ coin.
[@] γ not reported by 1994JiZZ.

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Level Scheme

Intensities: Relative I_γ

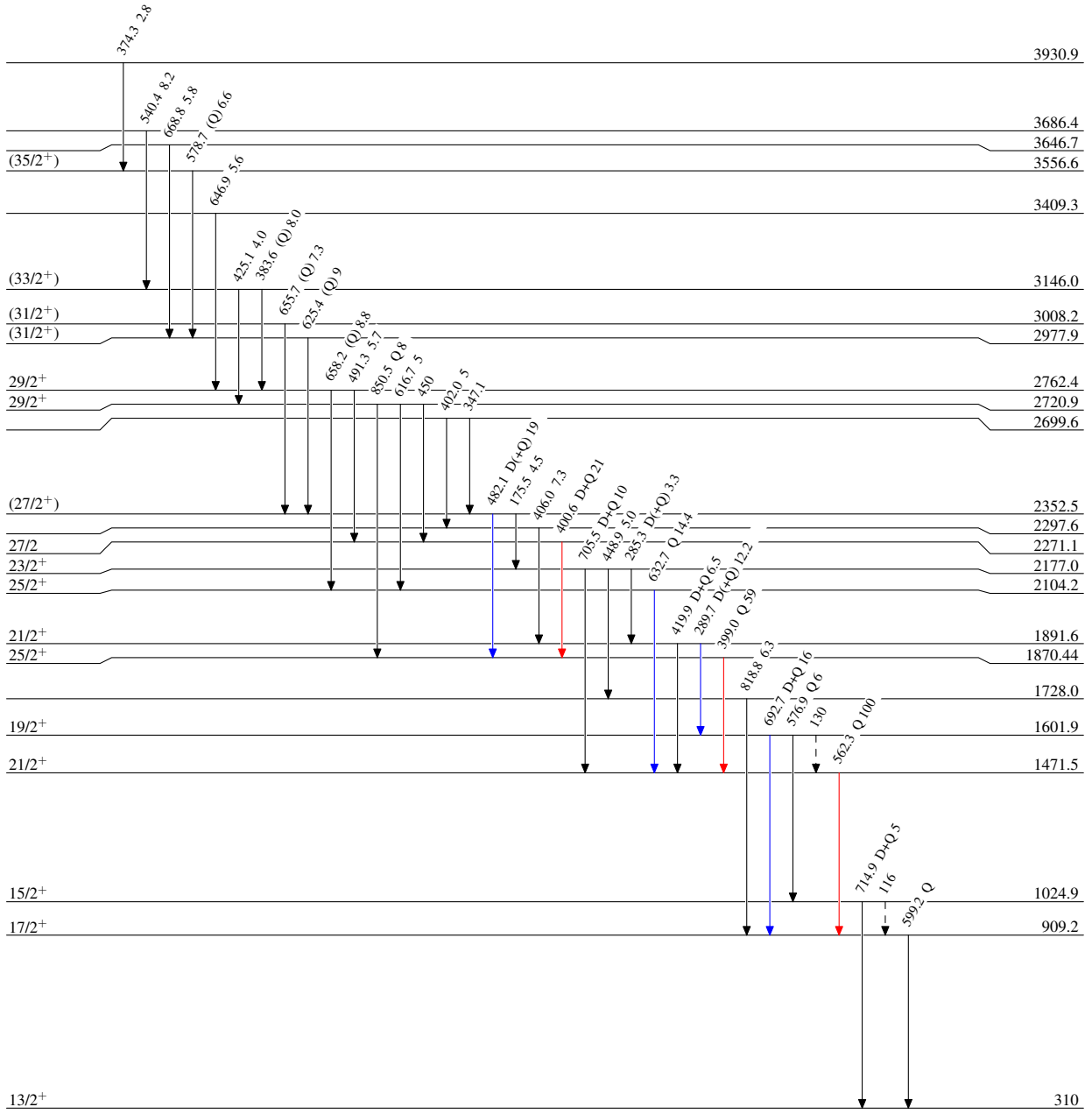
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

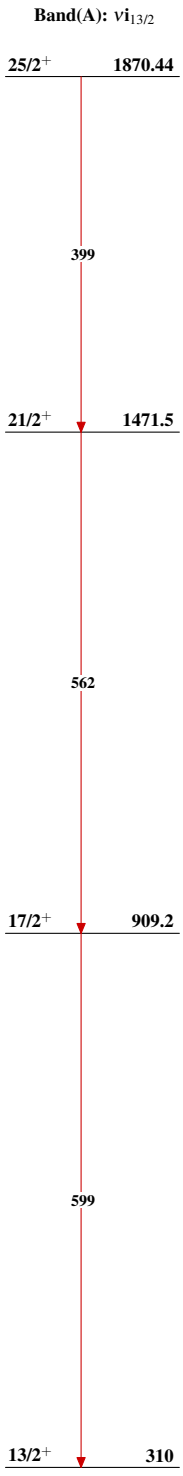
$I_\gamma > 10\% \times I_\gamma^{max}$

γ Decay (Uncertain)



$^{199}_{84}Po_{115}$

$^{183}W(^{20}Ne,4n\gamma),^{194}Pt(^{12}C,7n\gamma)$ 1994La35,1985We05



$^{199}_{84}Po_{115}$