$^{136}Xe(^{15}N,4n\gamma)$ 1995Ur01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	N. Nica and B. Singh	NDS 181, 1 (2022)	9-Mar-2022

Additional information 1.

1995Ur01: E=78 MeV; measured Eγ, Iγ, $\gamma\gamma$, $\gamma\gamma$(t), $\gamma\gamma(\theta)$(DCO) using TESSA 3 array with 16 Ge detectors; measured Eγ and $\gamma\gamma$ coincidence matrices with Orsay electron spectrometer and 4 Compton-suppressed Ge detectors.

^{147}Pm Levels

E(level)[†]	J^{π}[‡]	$T_{1/2}$	Comments
0.0[@]	7/2$^+$		
408.21[@] *8*	9/2$^+$		
649.30[a] *8*	11/2$^-$	27 ns *3*	%IT=100 $T_{1/2}$: From $\gamma\gamma$(t) (1995Ur01).
667.19[@] *9*	11/2$^+$		
970.16[&] *14*	11/2$^-$		
1051.11[a] *12*	15/2$^-$		
1072.41[@] *13*	13/2$^+$		
1159.37[&] *12*	13/2$^-$		
1245.87 *19*	13/2$^-$		
1392.71[@] *11*	15/2$^+$		
1406.16[&] *14*	15/2$^-$		
1627.71[a] *13*	19/2$^-$		
1659.43[&] *14*	17/2$^-$		
1699.02 *21*	15/2$^+$[#]		
1794.74 *19*	17/2$^-$		
1831.68[@] *17*	17/2$^+$		
1984.47[&] *17*	19/2$^-$		
2079.07 *14*	19/2$^+$		
2250.54[@] *19*	(19/2$^+$)		
2307.95[&] *18*	21/2$^-$		
2330.33[a] *15*	23/2$^-$		
2405.41[d] *18*	23/2$^-$		
2459.51[@] *21*	(21/2$^+$)		
2548.89 *15*	23/2$^-$		
2622.77 *15*	23/2$^+$		
2685.94[d] *16*	25/2$^-$		
2706.78[&] *25*	(23/2$^-$)		
2782.74[@] *22*	(23/2$^+$)		
2850.04[e] *15*	27/2$^-$		
2899.32 *16*	25/2$^+$		
3051.1[@] *4*	(25/2$^+$)		
3052.3[&] *3*	(25/2$^-$)		
3124.45[a] *17*	27/2$^-$		
3277.45[b] *16*	27/2$^+$		
3335.8[&] *4*	(27/2$^-$)		
3357.81[c] *16*	29/2$^+$		
3405.05[d] *23*	29/2$^-$		
3463.73[e] *17*	31/2$^-$		

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$^{136}Xe(^{15}N,4n\gamma)$ 1995Ur01 (continued)

^{147}Pm Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
3611.0 *4*		4286.94[b] *19*	35/2+	5458.5 *4*		6687.1 *3*	49/2(+)
3687.33[b] *16*	31/2+	4320.47[c] *20*	37/2+	5645.30[c] *24*	45/2+	7004.1[c] *3*	51/2+
3694.86[c] *17*	33/2+	4512.5[d] *4*	(37/2−)	5808.2[b] *3*	(43/2+)	7554.1 *4*	(51/2)
3840.3[d] *3*	(33/2−)	4857.5[e] *4*	(39/2−)	5985.1 *3*	(43/2+)	7779.8?[c] *5*	
3949.4[a] *4*	(31/2−)	5013.17[c] *22*	41/2+	6130.2 *4*		7977.5? *5*	
4133.1 *4*	(33/2+)	5021.24[b] *21*	39/2+	6185.7 *5*			
4229.0[e] *3*	35/2−	5218.1 *3*		6377.8[c] *3*	47/2+		

† From least-squares fit (evaluators) to Eγ values.
‡ From 1995Ur01, based on multipolarities deduced from ce and γγ(θ) data, assuming stretched transitions and increasing spins with excitation energy.
# Postulated by 1995Ur01 based on feeding and decay pattern.
@ Band(A): g.s. band.
& Band(a): Alternating parity band. This band exhibits alternating parity relative to the g.s. band.
[a] Band(B): $\pi h_{11/2}$ band.
[b] Band(C): Band based on 27/2+.
[c] Band(D): Band based on 29/2+.
[d] Seq.(E): γ cascade based on 23/2−.
[e] Seq.(F): γ cascade based on 27/2−.

$\gamma(^{147}Pm)$

DCO ratios were measured with four detectors at 90° and eight at 35° with respect to the beam direction. As stated by authors, analysis of these data was carried out using formalism in 1989Kr01, where in Table 1, typical values of DCO ratios are listed for various multipolarities of gating transitions and those of transitions for which unknown multipolarities were deduced. 1995Ur01 do not supply information for specific gating transitions and expected DCO values for the present experiment. Evaluator has assigned mult=Q for all the cases where 1995Ur01 assigned E2, based only on the DCO data, with evaluator's consideration in all such cases that gating transition(s) were likely stretched quadrupoles for which expected DCO ratios are ≈1.0 for transitions of unknown multipolarities.

Eγ	Iγ†	Ei(level)	Jπi	Ef	Jπf	Mult.‡	α@	Comments
(58.9)		3463.73	31/2−	3405.05	29/2−	[M1+E2]	11.9 *48*	α(K)=5.0 *11*; α(L)=5.3 *45*; α(M)=1.2 *11* Presence of this transition deduced from γγ-coin data.
80.3 *3*	1.6 *4*	3357.81	29/2+	3277.45	27/2+	M1+E2	4.0 *11*	α(K)exp=2.8 *6* α(K)=2.30 *17*; α(L)=1.31 *96*; α(M)=0.30 *23* α(K)exp: from intensity balance.
102.2 *3*	0.2 *1*	1072.41	13/2+	970.16	11/2−	[E1]	0.252	
137.0 *3*	1.7 *4*	2685.94	25/2−	2548.89	23/2−	D+Q		DCO=1.6 *4*
143.6 *2*	2.8 *5*	2548.89	23/2−	2405.41	23/2−	D+Q		DCO=1.2 *2*
153.0 *3*	0.4 *2*	1984.47	19/2−	1831.68	17/2+			
164.1 *1*	40.5 *10*	2850.04	27/2−	2685.94	25/2−	D+Q		DCO=1.86 *9*
167.0 *3*	0.5 *2*	1794.74	17/2−	1627.71	19/2−			
189.0 *3*	1.5 *4*	1159.37	13/2−	970.16	11/2−	M1+E2	0.252 *8*	α(K)exp=0.5 *2* α(K)=0.198 *23*; α(L)=0.042 *12*; α(M)=0.0093 *28* Mult.: α(K)exp marginally overlaps M1 or E2

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^{136}Xe(^{15}N,4nγ) 1995Ur01 (continued)

γ(^{147}Pm) (continued)

E_γ	I_γ †	E_i(level)	J^π_i	E_f	J^π_f	Mult. ‡	α @	Comments
								when compared to theoretical α(K)(E2)=0.18 and α(K)(M1)=0.22.
194.6 *3*	0.9 *3*	1245.87	13/2$^-$	1051.11	15/2$^-$	M1+E2	0.230 *10*	α(K)exp=0.14 *4* α(K)=0.182 *22*; α(L)=0.0379 *98*; α(M)=0.0084 *24*
209.0 *3*	0.7 *2*	2459.51	(21/2$^+$)	2250.54	(19/2$^+$)			
218.4 *3*	1.1 *3*	2548.89	23/2$^-$	2330.33	23/2$^-$			
223.6 *3*	1.2 *3*	3687.33	31/2$^+$	3463.73	31/2$^-$			
228.8 *3*	0.3 *1*	2307.95	21/2$^-$	2079.07	19/2$^+$			
231.1 *1*	30.7 *8*	3694.86	33/2$^+$	3463.73	31/2$^-$	D		DCO=1.6 *1*
233.3 *2*	4.8 *5*	3357.81	29/2$^+$	3124.45	27/2$^-$	D		DCO=1.9 *1*
233.4 *3*	1.0 *2*	1392.71	15/2$^+$	1159.37	13/2$^-$			
241.1 *1*	84.2 *20*	649.30	11/2$^-$	408.21	9/2$^+$	E1	0.0248	α(K)exp=0.023 *3*; DCO=1.15 *3* α(K)=0.0212 *3*; α(L)=0.00288 *4*; α(M)=0.000611 *9*
246.8 *2*	2.4 *4*	1406.16	15/2$^-$	1159.37	13/2$^-$	M1	0.1252	α(K)exp=0.16 *6*; DCO=1.6 *2* α(K)=0.1065 *15*; α(L)=0.01470 *21*; α(M)=0.00313 *5* Mult.: α(K)exp overlaps M1 when compared to theoretical α(K)(E2)=0.077 and α(K)(M1)=0.107.
253.2 *2*	2.1 *4*	1659.43	17/2$^-$	1406.16	15/2$^-$	M1+E2	0.105 *12*	α(K)exp=0.09 *3*; DCO=1.5 *3* α(K)=0.085 *15*; α(L)=0.0154 *17*; α(M)=0.0034 *5*
259.0 *2*	3.0 *5*	667.19	11/2$^+$	408.21	9/2$^+$	M1+E2	0.098 *12*	α(K)exp=0.07 *2* α(K)=0.080 *14*; α(L)=0.0143 *14*; α(M)=0.0031 *4*
266.7 *2*	2.4 *5*	1659.43	17/2$^-$	1392.71	15/2$^+$	E1	0.0191	α(K)exp=0.03 *2*; DCO=1.7 *2* α(K)=0.01630 *23*; α(L)=0.00220 *4*; α(M)=0.000468 *7*
276.4 *3*	0.8 *2*	2899.32	25/2$^+$	2622.77	23/2$^+$			
280.4 *2*	2.9 *5*	2685.94	25/2$^-$	2405.41	23/2$^-$			
284.3 *3*	1.9 *3*	2079.07	19/2$^+$	1794.74	17/2$^-$			
292.4 *3*	1.5 *4*	2622.77	23/2$^+$	2330.33	23/2$^-$			
301.2 *1*	10.5 *5*	2850.04	27/2$^-$	2548.89	23/2$^-$	Q		DCO=0.9 *1*
302.9 *3*	0.7 *3*	970.16	11/2$^-$	667.19	11/2$^+$			
316.9 *2*	2.2 *5*	7004.1	51/2$^+$	6687.1	49/2$^{(+)}$	D		DCO=2.1 *4* Mult.: ΔJ=1 transition from DCO.
320.3 *3*	1.1 *4*	1392.71	15/2$^+$	1072.41	13/2$^+$			
323.4 *3*	0.8 *2*	2782.74	(23/2$^+$)	2459.51	(21/2$^+$)			
323.5 *3*	0.9 *2*	2307.95	21/2$^-$	1984.47	19/2$^-$			
325.0 *3*	1.8 *3*	1984.47	19/2$^-$	1659.43	17/2$^-$			
329.5 *1*	5.7 *5*	3687.33	31/2$^+$	3357.81	29/2$^+$	D+Q		DCO=1.9 *2*
333.8 *2*	2.0 *4*	1406.16	15/2$^-$	1072.41	13/2$^+$	E1	0.01080	α(K)exp=0.007 *4*; DCO=1.8 *4* α(K)=0.00924 *13*; α(L)=0.001236 *18*; α(M)=0.000262 *4*
337.1 *1*	9.5 *5*	3694.86	33/2$^+$	3357.81	29/2$^+$	Q		DCO=0.95 *6*
345.6 *3*	0.6 *2*	3052.3	(25/2$^-$)	2706.78	(23/2$^-$)			
355.6 *1*	47.0 *15*	2685.94	25/2$^-$	2330.33	23/2$^-$	D+Q		DCO=1.89 *6*
377.0 *3*	0.3 *1*	3840.3	(33/2$^-$)	3463.73	31/2$^-$			
377.5 *3*	0.5 *2*	6185.7		5808.2	(43/2$^+$)			
378.1 *3*	0.2 *1*	3277.45	27/2$^+$	2899.32	25/2$^+$			
380.0 *3*	0.7 *3*	2079.07	19/2$^+$	1699.02	15/2$^+$			
393.0 *3*	0.5 *2*	6377.8	47/2$^+$	5985.1	(43/2$^+$)			
398.8 *3*	0.9 *3*	2706.78	(23/2$^-$)	2307.95	21/2$^-$			
401.8 *1*	100.0	1051.11	15/2$^-$	649.30	11/2$^-$	E2 #	0.0226	

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^{136}Xe(^{15}N,4nγ) 1995Ur01 (continued)

γ(^{147}Pm) (continued)

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	α[@]	Comments
405.3 *2*	2.9 *5*	1072.41	13/2+	667.19	11/2+	M1+E2	0.028 *6*	α(K)exp=0.03 *1*; DCO=1.1 *2*
408.2 *1*	88.2 *20*	408.21	9/2+	0.0	7/2+	M1+E2	0.027 *6*	α(K)exp=0.026 *2*; DCO=1.39 *3* α(K)=0.023 *6*; α(L)=0.0035 *4*; α(M)=0.00076 *7* δ<0.53 from α(K)exp.
409.9 *1*	5.0 *10*	3687.33	31/2+	3277.45	27/2+	Q		DCO=0.96 *8*
419.0 *3*	0.3 *1*	2250.54	(19/2+)	1831.68	17/2+			
419.5 *3*	1.2 *3*	2079.07	19/2+	1659.43	17/2−			
425.5 *3*	0.7 *2*	1831.68	17/2+	1406.16	15/2−			
435.0 *2*	2.5 *5*	3840.3	(33/2−)	3405.05	29/2−			
436.1 *3*	0.8 *2*	1406.16	15/2−	970.16	11/2−			
439.0 *3*	0.2 *1*	1831.68	17/2+	1392.71	15/2+			
451.4 *2*	4.0 *5*	2079.07	19/2+	1627.71	19/2−	D		DCO=1.1 *1* Mult.: ΔJ=0 transition.
453.0 *3*	0.8 *3*	1699.02	15/2+	1245.87	13/2−			
458.5 *1*	5.6 *6*	3357.81	29/2+	2899.32	25/2+	Q		DCO=1.05 *7*
475.5 *3*	0.6 *2*	2459.51	(21/2+)	1984.47	19/2−			
492.2 *1*	8.0 *7*	1159.37	13/2−	667.19	11/2+	E1	0.00427	α(K)exp=0.004 *2*; DCO=1.8 *2* α(K)=0.00366 *6*; α(L)=0.000481 *7*; α(M)=0.0001020 *15*
500.0 *2*	3.2 *4*	1659.43	17/2−	1159.37	13/2−	(Q)		DCO=1.3 *3*
507.8 *1*	12.0 *8*	3357.81	29/2+	2850.04	27/2−	D		DCO=2.2 *2*
519.7 *1*	5.8 *6*	2850.04	27/2−	2330.33	23/2−	Q		DCO=1.1 *1*
532.2 *3*	0.7 *3*	2782.74	(23/2+)	2250.54	(19/2+)			
543.7 *1*	7.5 *5*	2622.77	23/2+	2079.07	19/2+	Q		DCO=1.03 *14*
548.9 *3*	1.0 *4*	1794.74	17/2−	1245.87	13/2−			
550.0[&] *3*	0.5 *3*	7554.1	(51/2)	7004.1	51/2+			
561.9 *2*	2.5 *4*	970.16	11/2−	408.21	9/2+	E1	0.00318	α(K)exp=0.004 *2* α(K)=0.00272 *4*; α(L)=0.000356 *5*; α(M)=7.53×10^{-5} *11*
569.0 *1*	5.5 *5*	2899.32	25/2+	2330.33	23/2−	D		DCO=1.95 *15*
576.6 *1*	96.2 *15*	1627.71	19/2−	1051.11	15/2−	Q		DCO=1.02 *2*
578.5 *2*	2.4 *4*	1984.47	19/2−	1406.16	15/2−	Q		DCO=1.1 *2*
590.0 *3*	0.4 *2*	5808.2	(43/2+)	5218.1				
591.0 *3*	0.9 *2*	2250.54	(19/2+)	1659.43	17/2−			
591.6 *3*	0.5 *2*	3051.1	(25/2+)	2459.51	(21/2+)			
592.2 *3*	1.2 *3*	4286.94	35/2+	3694.86	33/2+			
596.6 *3*	1.2 *4*	1245.87	13/2−	649.30	11/2−	M1+E2	0.010 *3*	α(K)exp=0.011 *4*; DCO=0.9 *2* α(K)=0.0087 *23*; α(L)=0.00124 *23*; α(M)=0.00027 *5*
599.6 *1*	9.5 *15*	4286.94	35/2+	3687.33	31/2+	Q		DCO=1.0 *1*
613.7 *1*	46.0 *20*	3463.73	31/2−	2850.04	27/2−	Q		DCO=1.06 *4*
625.6 *1*	39.0 *20*	4320.47	37/2+	3694.86	33/2+	Q		DCO=1.12 *8*
626.3 *2*	4.0 *10*	7004.1	51/2+	6377.8	47/2+	Q		DCO=1.1 *2*
627.5 *3*	0.3 *1*	2459.51	(21/2+)	1831.68	17/2+			
628.5 *2*	2.1 *4*	4857.5	(39/2−)	4229.0	35/2−			
629.0 *3*	0.8 *3*	3335.8	(27/2−)	2706.78	(23/2−)			
632.1 *1*	21.1 *12*	5645.30	45/2+	5013.17	41/2+	Q		DCO=0.96 *5*
648.0 *3*	0.9 *3*	1699.02	15/2+	1051.11	15/2−			
648.5 *2*	2.0 *4*	2307.95	21/2−	1659.43	17/2−			
649.3 *1*	16.5 *5*	649.30	11/2−	0.0	7/2+	M2	0.0298	α(K)exp=0.019 *5* α(K)=0.0251 *4*; α(L)=0.00371 *6*; α(M)=0.000798 *12*
654.7 *1*	5.0 *8*	3277.45	27/2+	2622.77	23/2+	Q		DCO=1.15 *11*
664.2 *2*	4.6 *5*	1072.41	13/2+	408.21	9/2+	E2	0.00596	α(K)exp=0.004 *2* α(K)=0.00499 *7*; α(L)=0.000761 *11*;

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^{136}Xe(^{15}N,4nγ) 1995Ur01 (continued)

γ(^{147}Pm) (continued)

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	α[@]	Comments
								α(M)=0.0001637 *23* δ(E2/M1)>1.5 from α(K)exp; ΔJ^π requires E2.
667.2 *1*	15.3 *12*	667.19	11/2$^+$	0.0	7/2$^+$	E2[#]	0.00589	
672.2 *2*	2.5 *5*	4512.5	(37/2$^-$)	3840.3	(33/2$^-$)			
686.3 *2*	2.2 *6*	2079.07	19/2$^+$	1392.71	15/2$^+$	Q		DCO=1.0 *2*
692.7 *1*	28.2 *10*	5013.17	41/2$^+$	4320.47	37/2$^+$	Q		DCO=1.11 *7*
702.6 *1*	77.5 *25*	2330.33	23/2$^-$	1627.71	19/2$^-$	Q		DCO=1.01 *3*
703.5 *3*	0.8 *2*	2782.74	(23/2$^+$)	2079.07	19/2$^+$			
718.9 *2*	4.5 *5*	3405.05	29/2$^-$	2685.94	25/2$^-$	Q		DCO=1.15 *9*
722.4 *3*	1.4 *3*	2706.78	(23/2$^-$)	1984.47	19/2$^-$	(Q)		DCO=0.8 *3*
725.5 *1*	7.5 *8*	1392.71	15/2$^+$	667.19	11/2$^+$	E2	0.00483	DCO=0.96 *6* Mult.: ΔJ=2, Q from DCO; E2 from Adopted Gammas based on ce data from (p,2nγ) (1977Ko24).
732.5 *1*	6.0 *6*	6377.8	47/2$^+$	5645.30	45/2$^+$	D+Q		DCO=2.3 *3*
734.3 *1*	7.2 *6*	5021.24	39/2$^+$	4286.94	35/2$^+$	Q		DCO=0.94 *8*
743.6 *3*	1.4 *3*	1794.74	17/2$^-$	1051.11	15/2$^-$			
744.3 *3*	1.9 *4*	3052.3	(25/2$^-$)	2307.95	21/2$^-$			
759.3 *3*	1.1 *3*	1831.68	17/2$^+$	1072.41	13/2$^+$	(Q)		DCO=0.9 *3*
761.0 *3*	1.5 *5*	3611.0		2850.04	27/2$^-$			
765.3 *2*	4.3 *6*	4229.0	35/2$^-$	3463.73	31/2$^-$	(Q)		DCO=0.9 *2*
775.3 *3*	1.6 *4*	4133.1	(33/2$^+$)	3357.81	29/2$^+$			
775.7 *3*	0.4 *2*	7779.8?		7004.1	51/2$^+$			
777.7 *2*	4.3 *5*	2405.41	23/2$^-$	1627.71	19/2$^-$	Q		DCO=0.9 *1*
787.0 *3*	1.2 *4*	5808.2	(43/2$^+$)	5021.24	39/2$^+$	(Q)		DCO=0.9 *3*
794.1 *1*	9.0 *5*	3124.45	27/2$^-$	2330.33	23/2$^-$	Q		DCO=1.04 *6*
824.9 *3*	0.8 *2*	3949.4	(31/2$^-$)	3124.45	27/2$^-$	(Q)		DCO=1.3 *2*
857.8 *3*	1.2 *3*	2250.54	(19/2$^+$)	1392.71	15/2$^+$			
867.0 *3*	1.0 *3*	7554.1	(51/2)	6687.1	49/2$^{(+)}$	D+Q		DCO=2.0 *5*
897.6 *3*	0.6 *2*	5218.1		4320.47	37/2$^+$			
921.2 *1*	14.2 *8*	2548.89	23/2$^-$	1627.71	19/2$^-$	Q		DCO=1.07 *8*
972.0 *2*	2.1 *5*	5985.1	(43/2$^+$)	5013.17	41/2$^+$	D		DCO=2.0 *4* Mult.: ΔJ=1 transition from DCO.
973.4 *3*	0.5 *2*	7977.5?		7004.1	51/2$^+$			
1041.8 *1*	6.3 *9*	6687.1	49/2$^{(+)}$	5645.30	45/2$^+$	Q		DCO=1.2 *2*
1117.0 *3*	0.6 *2*	6130.2		5013.17	41/2$^+$			
1138.0 *3*	0.4 *2*	5458.5		4320.47	37/2$^+$			E_γ: from Fig. 8 in 1995Ur01. Eγ=1038.0 in Table 1 of 1995Ur01 seems a misprint.

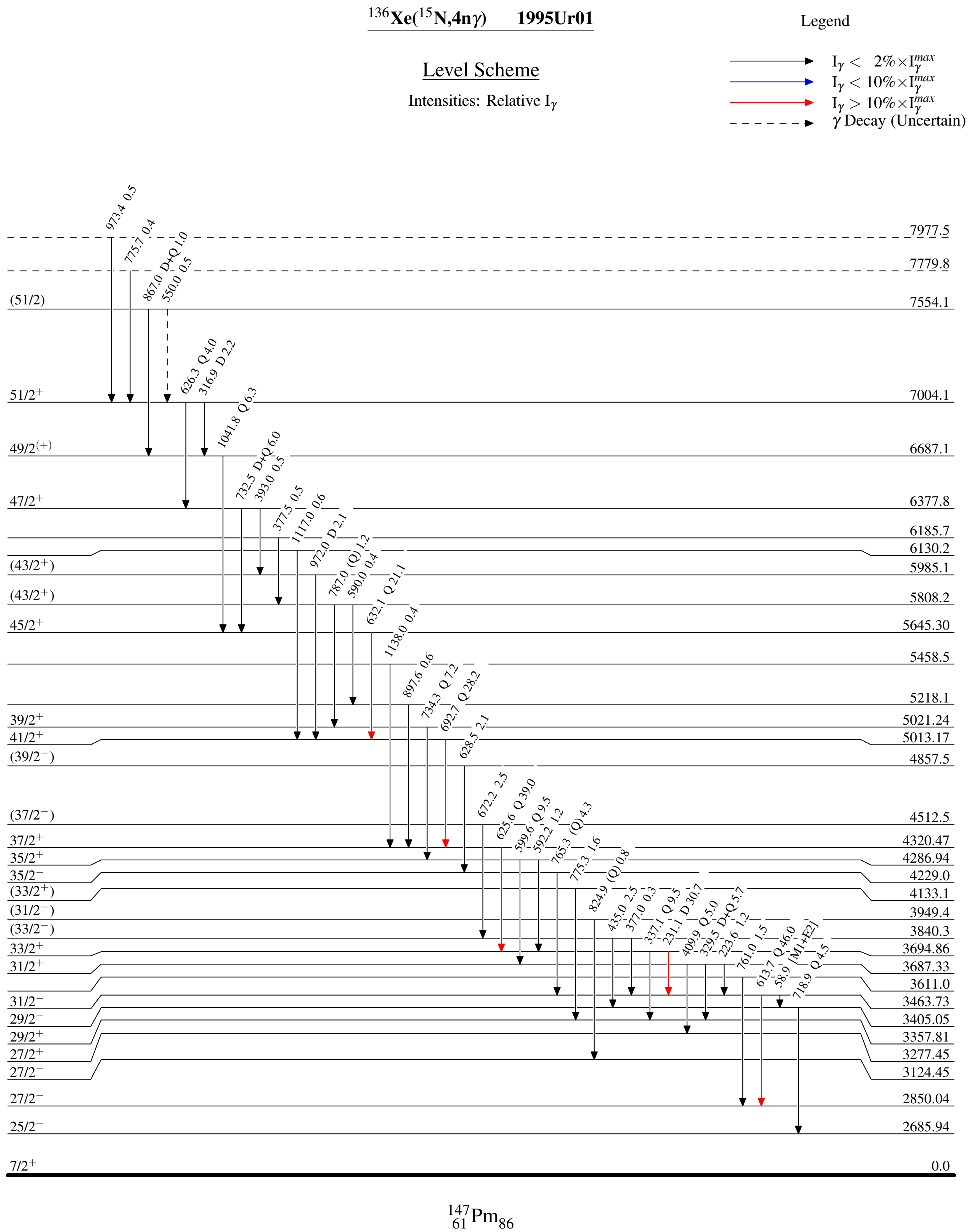
[†] Relative values in 1995Ur01 divided by a factor of 10.

[‡] Based on DCO ratios and α(K)exp data (1995Ur01). When only the DCO values are available, 1995Ur01 assign E1 for ΔJ=1, dipole and E2 for ΔJ=2, quadrupole, and M1+E2 for unstretched ΔJ=1 transitions. Evaluators assign here D, Q and D+Q, respectively, except for transitions below ≈450 keV for which (E2) and (M1+E2) are assigned from RUL (for E2 and M2) assuming level half-lives are lower than 10 ns or so. The α(K)exp values were measured from ratio of electron to γ intensities with gates in ce-γ and $\gamma\gamma$ coincidence matrices.

[#] From Adopted Gammas which from (p,2nγ) results in 1977Ko24, used as a ΔJ=2, E2 reference for DCO for other transitions.

[@] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

[&] Placement of transition in the level scheme is uncertain.

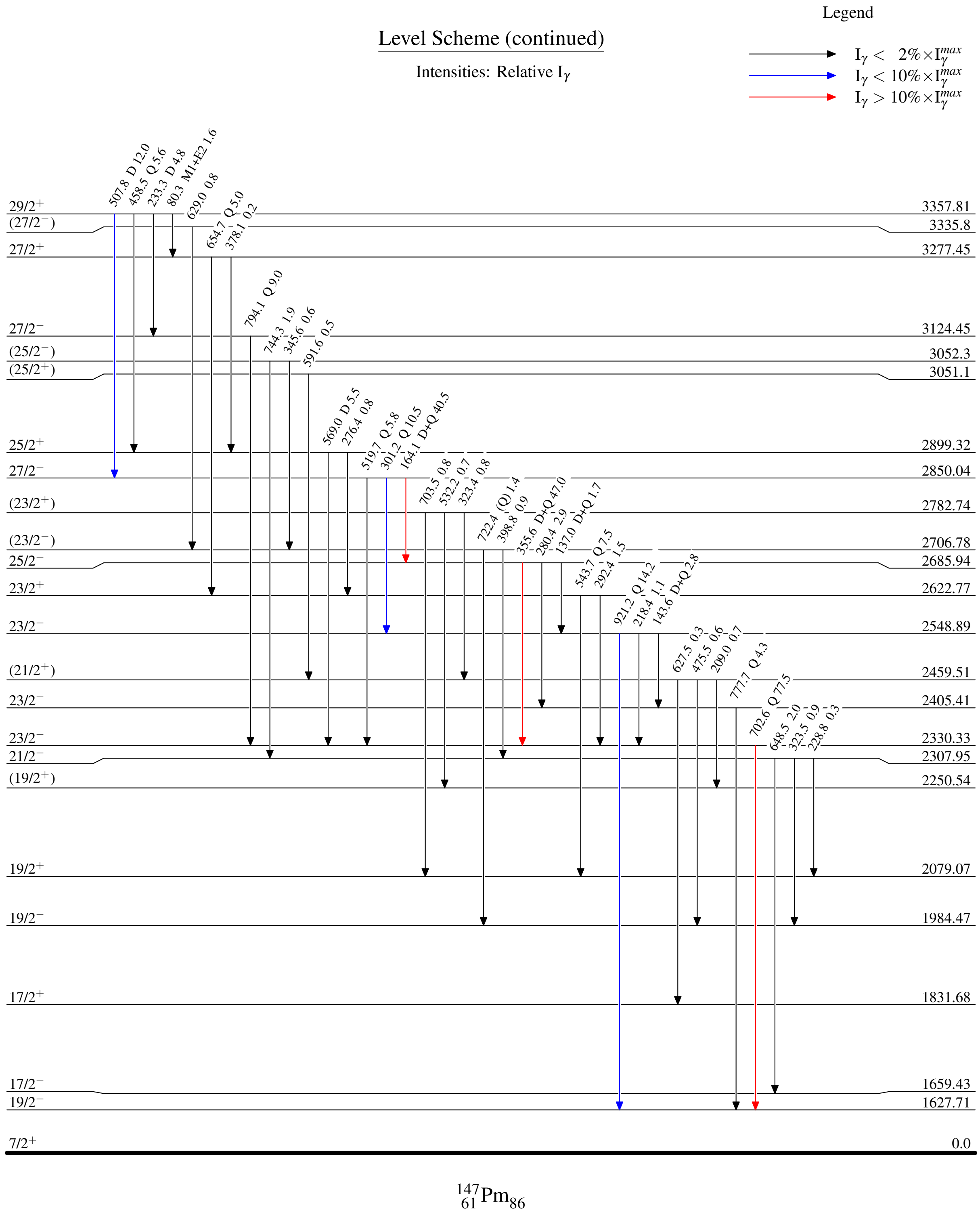


^{136}Xe(^{15}N,4nγ) 1995Ur01
Level Scheme
Intensities: Relative I_γ
Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)
7977.5
7779.8
(51/2) 7554.1
51/2+ 7004.1
49/2(+) 6687.1
47/2+ 6377.8
6185.7
6130.2
(43/2+) 5985.1
(43/2+) 5808.2
45/2+ 5645.30
5458.5
5218.1
39/2+ 5021.24
41/2+ 5013.17
(39/2−) 4857.5
(37/2−) 4512.5
37/2+ 4320.47
35/2+ 4286.94
35/2− 4229.0
(33/2+) 4133.1
(31/2−) 3949.4
(33/2−) 3840.3
33/2+ 3694.86
31/2+ 3687.33
3611.0
31/2− 3463.73
29/2− 3405.05
29/2+ 3357.81
27/2+ 3277.45
27/2− 3124.45
27/2− 2850.04
25/2− 2685.94
7/2+ 0.0
973.4 0.5
775.7 0.4
867.0 D+Q 1.0
550.0 0.5
626.3 Q 4.0
316.9 D 2.2
1041.8 Q 6.3
732.5 D+Q 6.0
393.0 0.5
377.5 0.5
1117.0 0.6
972.0 D 2.1
787.0 (Q) 1.2
590.0 0.4
632.1 Q 21.1
1138.0 0.4
897.6 0.6
734.3 Q 7.2
692.7 Q 28.2
628.5 2.1
672.2 2.5
625.6 Q 39.0
599.6 Q 9.5
592.2 1.2
765.3 (Q) 4.3
775.3 1.6
824.9 (Q) 0.8
435.0 2.5
377.0 0.3
337.1 Q 9.5
231.1 D 30.7
409.9 Q 5.0
329.5 D+Q 5.7
223.6 1.2
761.0 1.5
613.7 Q 46.0
58.9 [M1+E2]
718.9 Q 4.5
$^{147}_{61}Pm_{86}$

$^{136}Xe(^{15}N,4n\gamma)$ 1995Ur01

Level Scheme (continued)

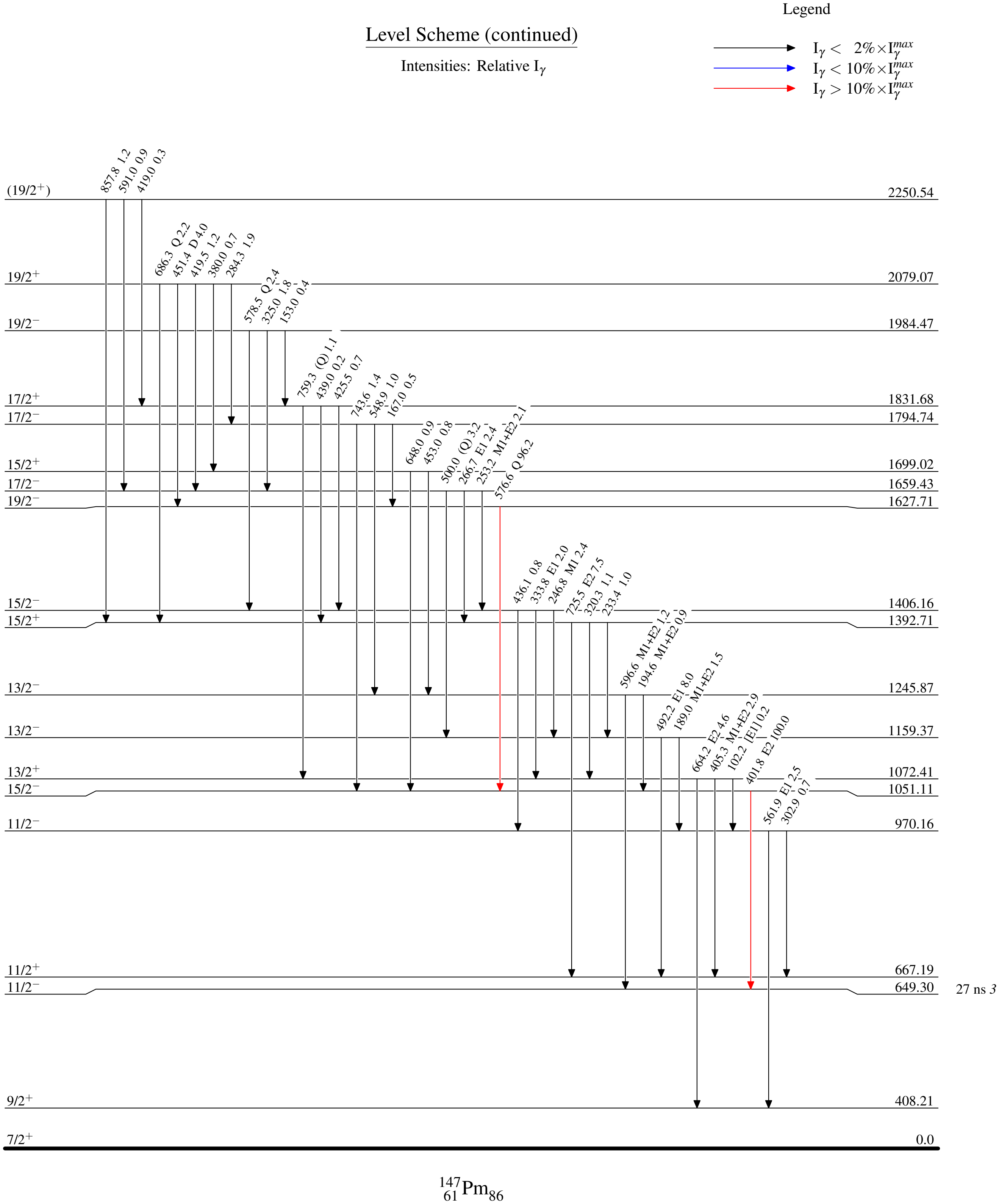
Intensities: Relative I_γ



$^{136}Xe(^{15}N,4n\gamma)$ 1995Ur01

Level Scheme (continued)

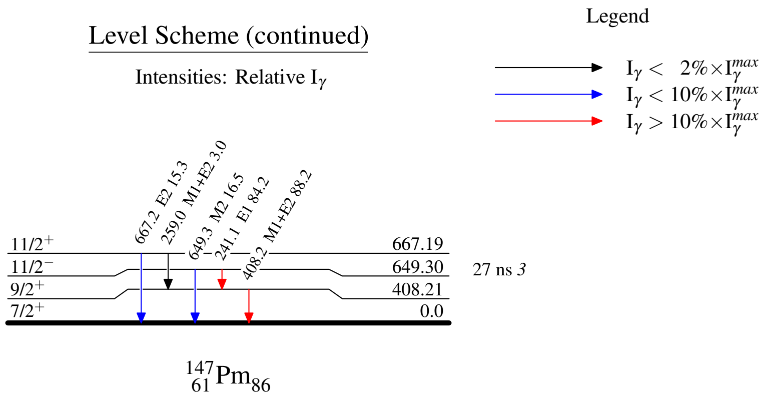
Intensities: Relative I_γ



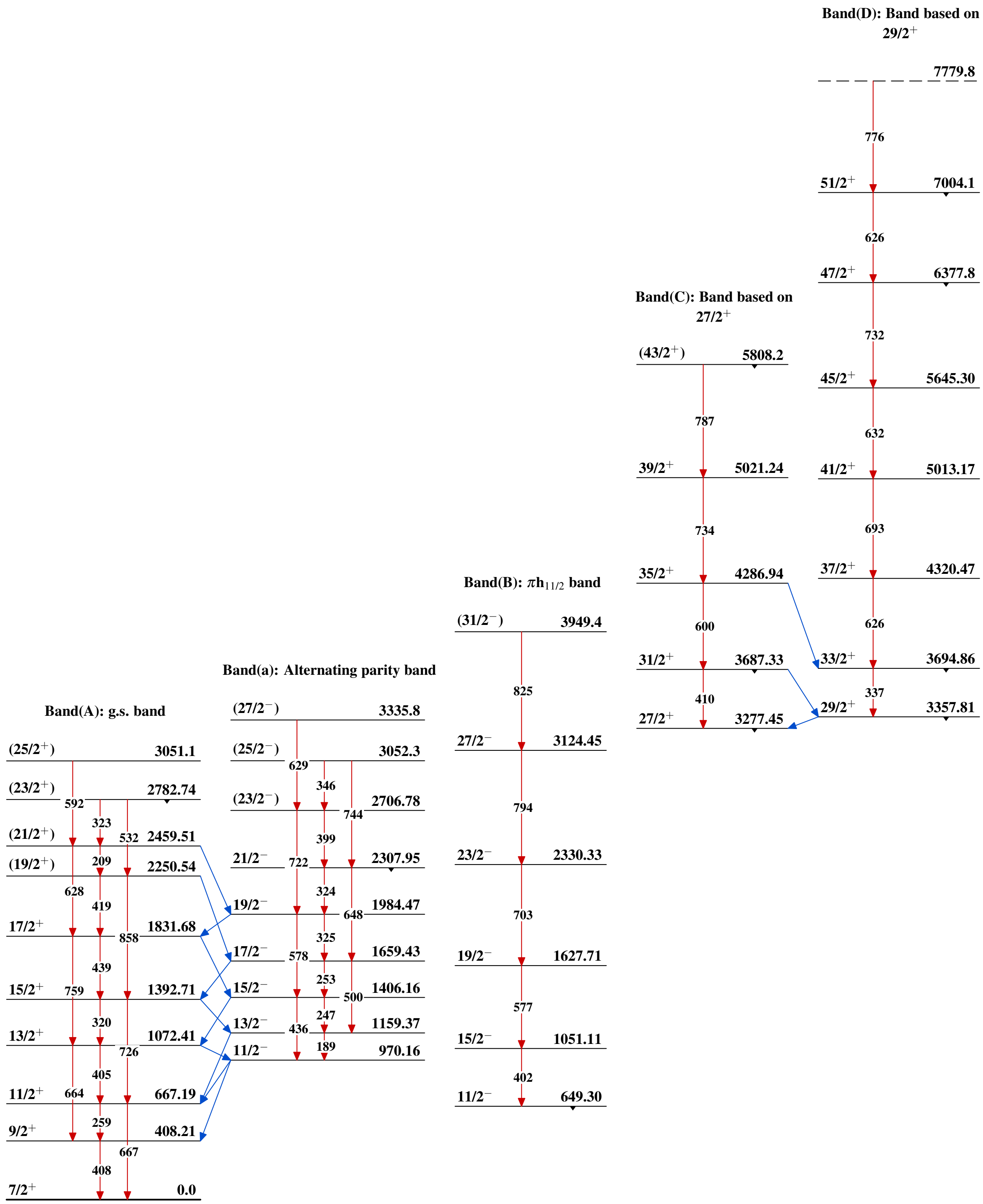
$^{136}Xe(^{15}N,4n\gamma)$ 1995Ur01

Level Scheme (continued)

Intensities: Relative I_γ

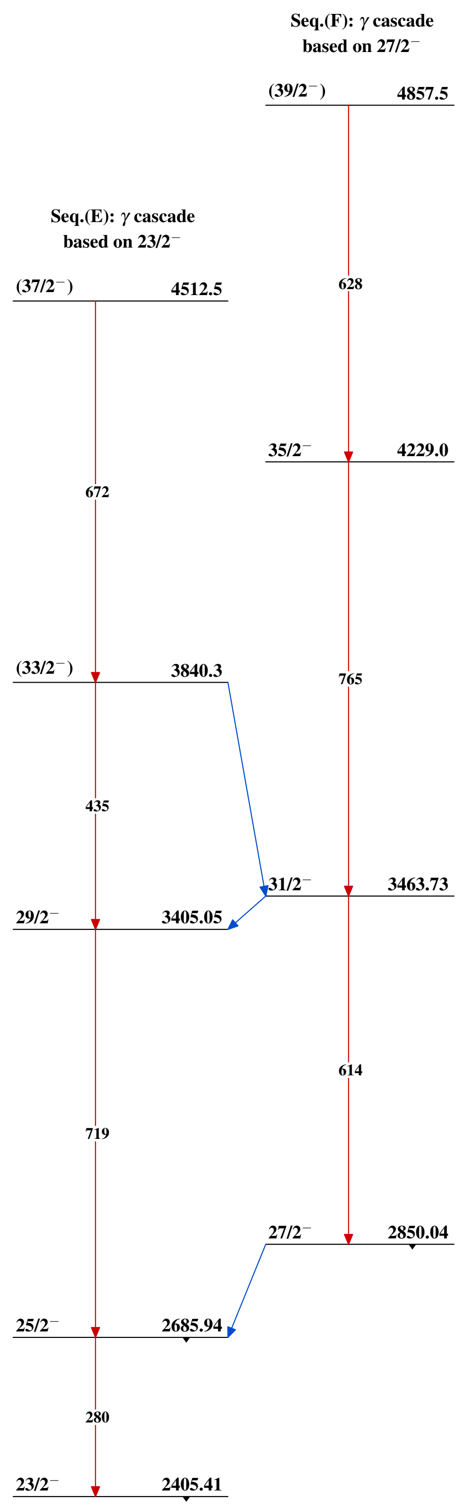


$^{136}Xe(^{15}N,4n\gamma)$ 1995Ur01



$^{147}_{61}Pm_{86}$

^{136}Xe(^{15}N,4nγ) 1995Ur01 (continued)



$^{147}_{61}Pm_{86}$