(HI,xnγ) 1994To05,1995Li22

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	ENSDF	1-Mar-2009

1994To05, 1992JuZX: ^{92}Mo(^{32}S,α2pnγ) E(^{32}s)= 145 MeV.

Measured: γγ, Nordball system with 15 Compton-suppressed Ge detectors and a Si detector inner ball. Coin with evaporated charged particles.

1995Li22: ^{92}Mo(^{28}Si,xnγ) E(^{28}Si)=100− 120 MeV.

Measured: γγ, array with 7 Compton-suppressed Ge detectors + 14 elements BGO crystal ball serving as a multiplicity filter.

The level scheme is from 1994To05. 1995Li22 agree up to 39/2$^-$ for the band A, up to 27/2$^+$ for the band C. They propose three other bands. The gammas of their band 4 are given in 1994To05, but 1994To05 has two levels around 2183 kev (21/2$^+$) and the 627γ don′t deexcite the same level as the 967γ. The three first levels of the band 2 of 1995Li22 are also given by 1994To05 (band C).

^{117}Xe Levels

E(level)	Jπ†	E(level)	Jπ†	E(level)	Jπ†	E(level)	Jπ†
0	5/2$^+$	713.76& *10*	11/2$^+$	1926.95‡ *22*	23/2$^-$	3506.6 *7*	
205.60 *10*	7/2$^-$	818.27@ *13*	(11/2$^+$)	1972.05# *20*	21/2$^-$	3652.7‡ *3*	31/2$^-$
221.4& *7*	(5/2$^+$)	989.71& *14*	(13/2$^+$)	2179.8 *7*		3956.87& *25*	(31/2$^+$)
229.88‡ *17*	11/2$^-$	1123.0@ *7*	(13/2$^+$)	2181.7& *15*		4578.6‡ *3*	35/2$^-$
263.46& *8*	7/2$^+$	1212.85‡ *20*	19/2$^-$	2546.76& *20*	23/2$^+$	4801.9& *11*	(35/2$^+$)
271.46@ *8*	7/2$^+$	1249.26& *14*	15/2$^+$	2667.9 *11*		5478.6‡ *11*	(39/2$^-$)
313.60# *15*	9/2$^-$	1276.44# *18*	17/2$^-$	2743.0‡ *11*	(25/2$^-$)	6414.6‡ *15*	(43/2$^-$)
507.70& *10*	9/2$^+$	1432.1@ *8*	(15/2$^+$)	2748.66# *24*	27/2$^-$	7423.6?‡ *18*	(47/2$^-$)
540.61@ *10*	9/2$^+$	1554.7& *10*	(17/2$^+$)	2837.9 *7*			
630.66‡ *18*	15/2$^-$	1768.0@ *12*	(17/2$^+$)	3210.87& *23*	27/2$^+$		
699.91# *17*	13/2$^-$	1864.86& *18*	19/2$^+$	3313.8 *11*			

† As given by 1994To05, mainly based on bands and syst.

‡ Band(A): Band #5 νh$_{11/2}$,[532]5/2$^-$ band, α=−1/2.

Band(B): Band #6 νh$_{11/2}$,[532]5/2$^-$ band, α=+1/2.

@ Band(C): Band #3 d5/2,5/2$^+$[402].

& Band(D): Band #1 g7/2,5/2$^+$[413].

γ(^{117}Xe)

Eγ†	Iγ	Ei(level)	Jiπ	Ef	Jfπ	Comments
24		229.88	11/2$^-$	205.60	7/2$^-$	
83.8 *1*	3.9 *3*	313.60	9/2$^-$	229.88	11/2$^-$	
108.0 *1*	1.3 *2*	313.60	9/2$^-$	205.60	7/2$^-$	Eγ: 1992JuZX propose the placement of this transition because coin between 108γ with 205γ and 386γ but the 108γ is also in coin with the 84γ in ^{117}Cs decay (1986Ma41).
205.6 *1*	97.8 *10*	205.60	7/2$^-$	0	5/2$^+$	
221 *1*		221.4	(5/2$^+$)	0	5/2$^+$	
236 *1*	1.8 *3*	507.70	9/2$^+$	271.46	7/2$^+$	
244 *1*	1	507.70	9/2$^+$	263.46	7/2$^+$	
263.4 *1*	29.0 *3*	263.46	7/2$^+$	0	5/2$^+$	
269.1 *1*	2.7 *3*	540.61	9/2$^+$	271.46	7/2$^+$	
271.5 *1*	18.4 *5*	271.46	7/2$^+$	0	5/2$^+$	
277.2 *1*	2.1 *4*	540.61	9/2$^+$	263.46	7/2$^+$	

Continued on next page (footnotes at end of table)

(HI,xnγ) 1994To05,1995Li22 (continued)

γ(^{117}Xe) (continued)

E_γ †	I_γ	E_i(level)	J_i^π	E_f	J_f^π
277.9 *5*		818.27	$(11/2^+)$	540.61	$9/2^+$
286 *1*		507.70	$9/2^+$	221.4	$(5/2^+)$
305 *1*		1123.0	$(13/2^+)$	818.27	$(11/2^+)$
309 *1*		1432.1	$(15/2^+)$	1123.0	$(13/2^+)$
386.4 *1*	14.5 *7*	699.91	$13/2^-$	313.60	$9/2^-$
400.7 *1*	100	630.66	$15/2^-$	229.88	$11/2^-$
442.4 *1*	8.7 *6*	713.76	$11/2^+$	271.46	$7/2^+$
450 *1*		989.71	$(13/2^+)$	540.61	$9/2^+$
450.2 *1*	18.6 *6*	713.76	$11/2^+$	263.46	$7/2^+$
470.0 *1*	14.4 *4*	699.91	$13/2^-$	229.88	$11/2^-$
482.0 *1*	5.0 *10*	989.71	$(13/2^+)$	507.70	$9/2^+$
507.7 *1*	4.5 *5*	507.70	$9/2^+$	0	$5/2^+$
535.5 *1*	24.6 *8*	1249.26	$15/2^+$	713.76	$11/2^+$
541.1 *5*	1	540.61	$9/2^+$	0	$5/2^+$
546.8 *1*	3.9 *3*	818.27	$(11/2^+)$	271.46	$7/2^+$
555 *1*	1.8 *4*	818.27	$(11/2^+)$	263.46	$7/2^+$
565 *1*	4.8 *3*	1554.7	$(17/2^+)$	989.71	$(13/2^+)$
576.6 *1*	16.0 *20*	1276.44	$17/2^-$	699.91	$13/2^-$
582 *1*		1123.0	$(13/2^+)$	540.61	$9/2^+$
582.3 *1*	72.0 *12*	1212.85	$19/2^-$	630.66	$15/2^-$
614 *1*	2.4 *5*	1432.1	$(15/2^+)$	818.27	$(11/2^+)$
615.6 *1*	28.8 *6*	1864.86	$19/2^+$	1249.26	$15/2^+$
627 *1*	3.6 *6*	2181.7		1554.7	$(17/2^+)$
645 *1*		1768.0	$(17/2^+)$	1123.0	$(13/2^+)$
645.6 *1*	7.1 *4*	1276.44	$17/2^-$	630.66	$15/2^-$
658.1 *1*	5.6 *4*	2837.9		2179.8	
664.1 *1*	9.6 *12*	3210.87	$27/2^+$	2546.76	$23/2^+$
668.7 *1*	5.4 *4*	3506.6		2837.9	
681.9 *1*	24.3 *6*	2546.76	$23/2^+$	1864.86	$19/2^+$
695.5 *1*	6.7 *5*	1972.05	$21/2^-$	1276.44	$17/2^-$
714.1 *1*	51.8 *10*	1926.95	$23/2^-$	1212.85	$19/2^-$
746.0 *1*	3.0 *6*	3956.87	$(31/2^+)$	3210.87	$27/2^+$
758 *1*	3.1 *9*	3506.6		2748.66	$27/2^-$
759.3 *1*	8.1 *14*	1972.05	$21/2^-$	1212.85	$19/2^-$
767 *1*		3313.8		2546.76	$23/2^+$
771 *1*	2 *1*	2743.0	$(25/2^-)$	1972.05	$21/2^-$
803 *1*		2667.9		1864.86	$19/2^+$
821.7 *1*	29.0 *7*	2748.66	$27/2^-$	1926.95	$23/2^-$
845 *1*	2.7 *7*	4801.9	$(35/2^+)$	3956.87	$(31/2^+)$
900 *1*	5.0 *15*	5478.6	$(39/2^-)$	4578.6	$35/2^-$
904.0 *1*	15.1 *14*	3652.7	$31/2^-$	2748.66	$27/2^-$
911 *1*	2.9 *6*	2837.9		1926.95	$23/2^-$
925.9 *1*	12.9 *7*	4578.6	$35/2^-$	3652.7	$31/2^-$
936 *1*	0.8	6414.6	$(43/2^-)$	5478.6	$(39/2^-)$
967 *1*	4.4 *5*	2179.8		1212.85	$19/2^-$
1009 *1*	1.0 *5*	7423.6?	$(47/2^-)$	6414.6	$(43/2^-)$

† From 1994To05.

(HI,xnγ) 1994To05,1995Li22

Level Scheme

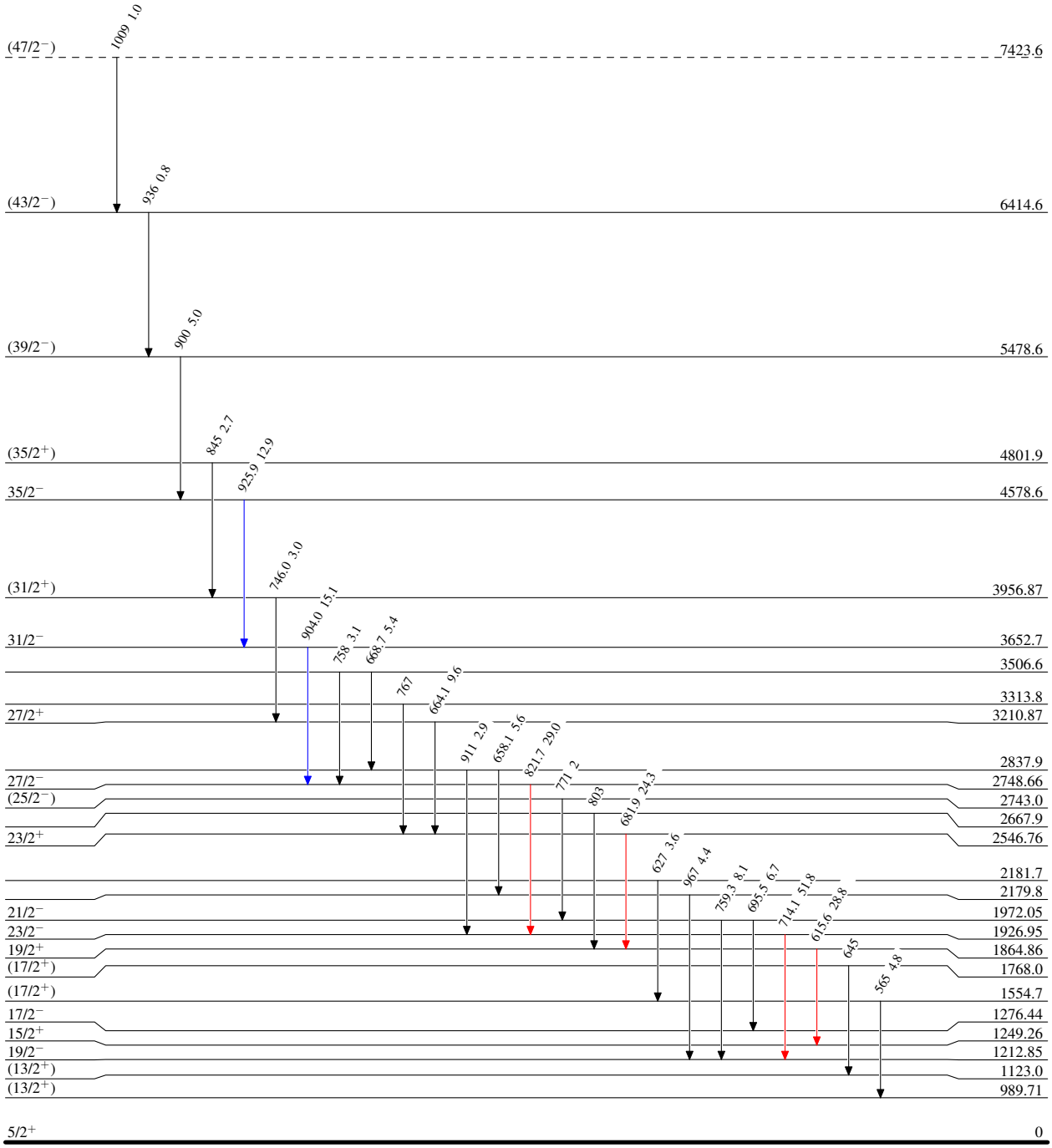
Intensities: Relative I_γ

Legend

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

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

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



$^{117}_{54}Xe_{63}$

(HI,xnγ) 1994To05,1995Li22

Level Scheme (continued)

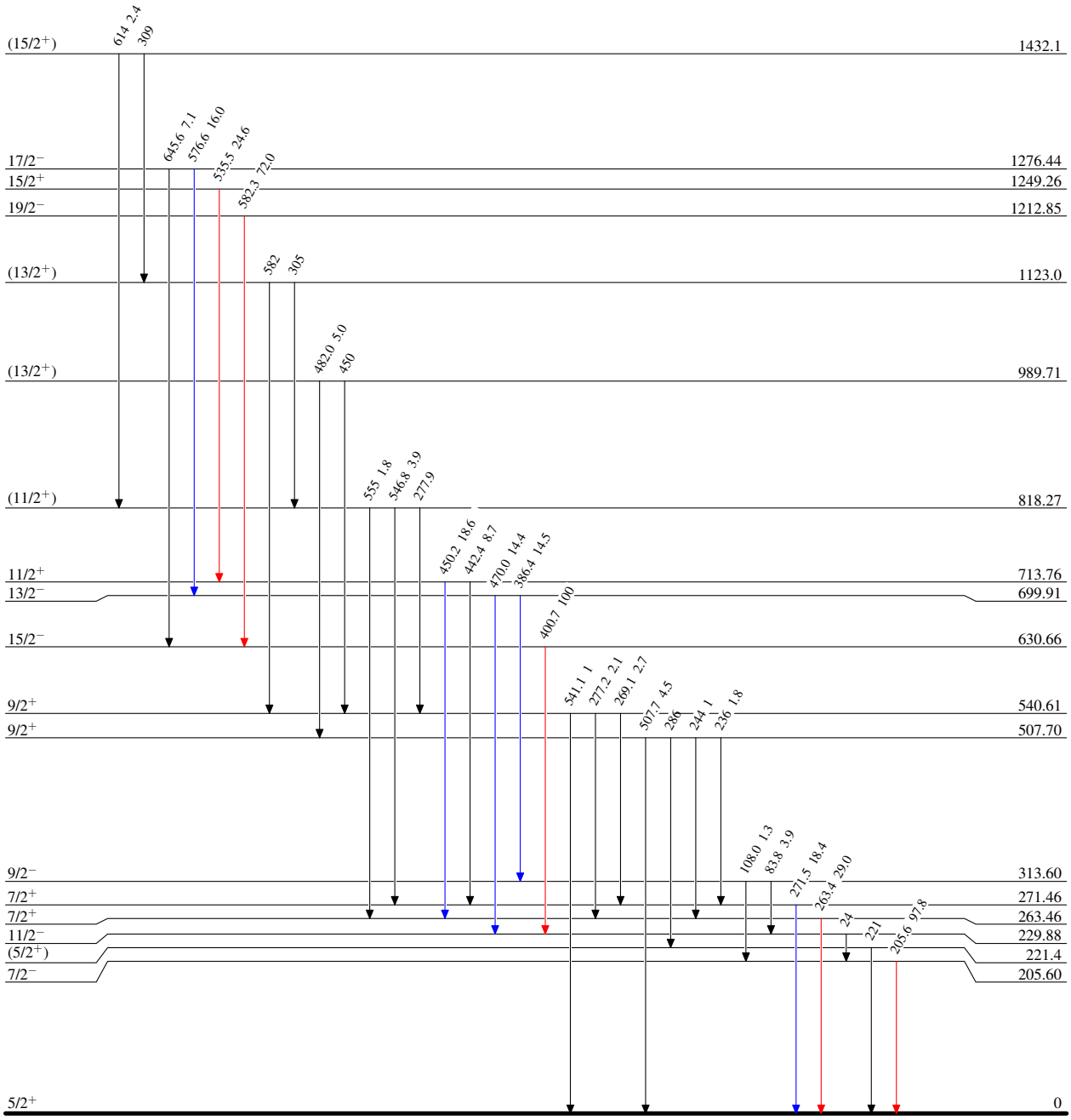
Intensities: Relative I_γ

Legend

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

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

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



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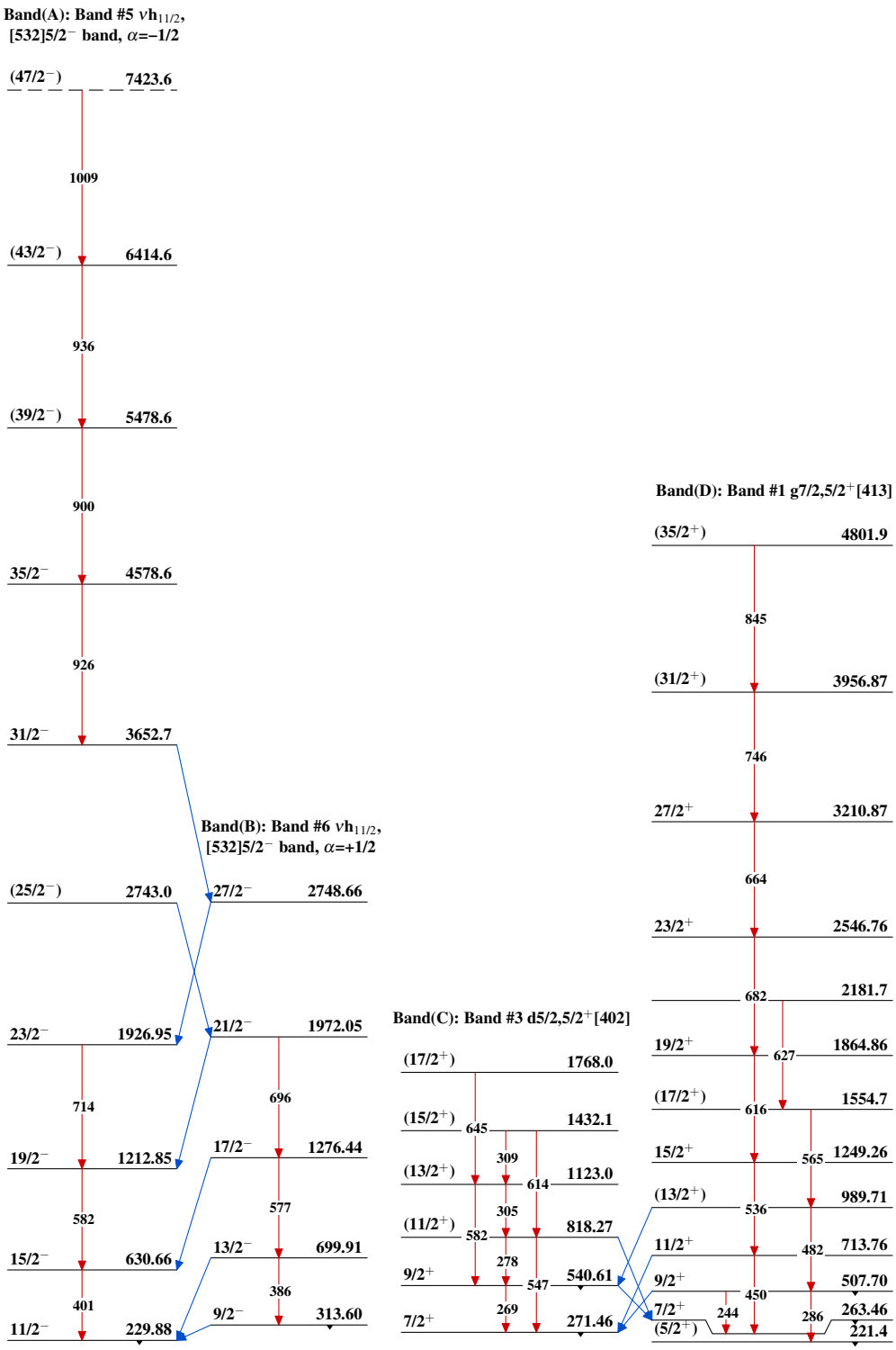

$^{117}_{54}Xe_{63}$