^{198}Pt(^{136}Xe,Xγ) 2004Va03,2004Re11

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao	NDS 133, 221 (2016)	1-Dec-2015

E=850 MeV. Deep inelastic collisions. Measured Eγ, Iγ, $\gamma\gamma$ with the GAMMASPHERE detector array consisting of 103 Compton-suppressed Ge detectors, 70 of which were electrically segmented into two D-shaped halves to improve the Doppler correction. A new isomer of 36 ns half-life at ≈3017 keV discovered in this work.

^{198}Pt Levels

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	Comments
0[@]	0$^+$		
407.0[@] *10*	2$^+$		
775.0[#b] *14*	2$^+$		
985.0[@] *14*	4$^+$		
1248.0[#] *17*	(3$^+$)		
1287.0[b] *15*	4$^+$		
1367.2 *16*	(5$^-$)		
1502.3[&] *18*	(7$^-$)		
1714.8[@] *16*	(6$^+$)		
1741.2[#] *19*			
1945.0[b] *18*	6$^+$		
1996.3[#] *21*			
2089.4[&] *19*	(9$^-$)		
2160.4[a] *19*	(8$^-$)		
2527.7[@] *18*	(8$^+$)		
2680.4[a] *22*	(10$^-$)		
2747.0[b] *20*	8$^+$		
2912.5[&] *18*	(11$^-$)		
3017.4[a] *24*	(12$^-$)	36 ns *2*	E(level): It is assumed that the isomer decays directly by 337γ, but possibility of a low-energy γ transition preceding 337γ is not ruled out. T$_{1/2}$: (Target like recoil fragments)γ(t) (2004Va03,2004Re11); 407γ and 658γ double γ-ray gates.

[†] From least-squares fit to Eγ's (by evaluator); Δ(Eγ)=1 keV assumed.
[‡] From Adopted Levels.
[#] From 2004Re11.
[@] Band(A): g.s. Band.
[&] Band(B): Band based on (7$^-$), α=1.
[a] Band(b): Band based on (8$^-$), α=0.
[b] Band(C): 2$^+$ band.

γ(^{198}Pt)

E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
104[‡]	3017.4	(12$^-$)	2912.5	(11$^-$)
135	1502.3	(7$^-$)	1367.2	(5$^-$)
302[†]	1287.0	4$^+$	985.0	4$^+$
337	3017.4	(12$^-$)	2680.4	(10$^-$)

Continued on next page (footnotes at end of table)

^{198}Pt(^{136}Xe,Xγ) 2004Va03,2004Re11 (continued)

γ(^{198}Pt) (continued)

E_γ	E_i(level)	J_i^π	E_f	J_f^π	E_γ	E_i(level)	J_i^π	E_f	J_f^π
368†	775.0	2^+	407.0	2^+	578	985.0	4^+	407.0	2^+
374†	1741.2		1367.2	(5^-)	587	2089.4	(9^-)	1502.3	(7^-)
382	1367.2	(5^-)	985.0	4^+	658†	1945.0	6^+	1287.0	4^+
385	2912.5	(11^-)	2527.7	(8^+)	658	2160.4	(8^-)	1502.3	(7^-)
407	407.0	2^+	0	0^+	730	1714.8	(6^+)	985.0	4^+
473†	1248.0	(3^+)	775.0	2^+	752	2912.5	(11^-)	2160.4	(8^-)
494†	1996.3		1502.3	(7^-)	802†	2747.0	8^+	1945.0	6^+
512†	1287.0	4^+	775.0	2^+	813†	2527.7	(8^+)	1714.8	(6^+)
520	2680.4	(10^-)	2160.4	(8^-)	823	2912.5	(11^-)	2089.4	(9^-)

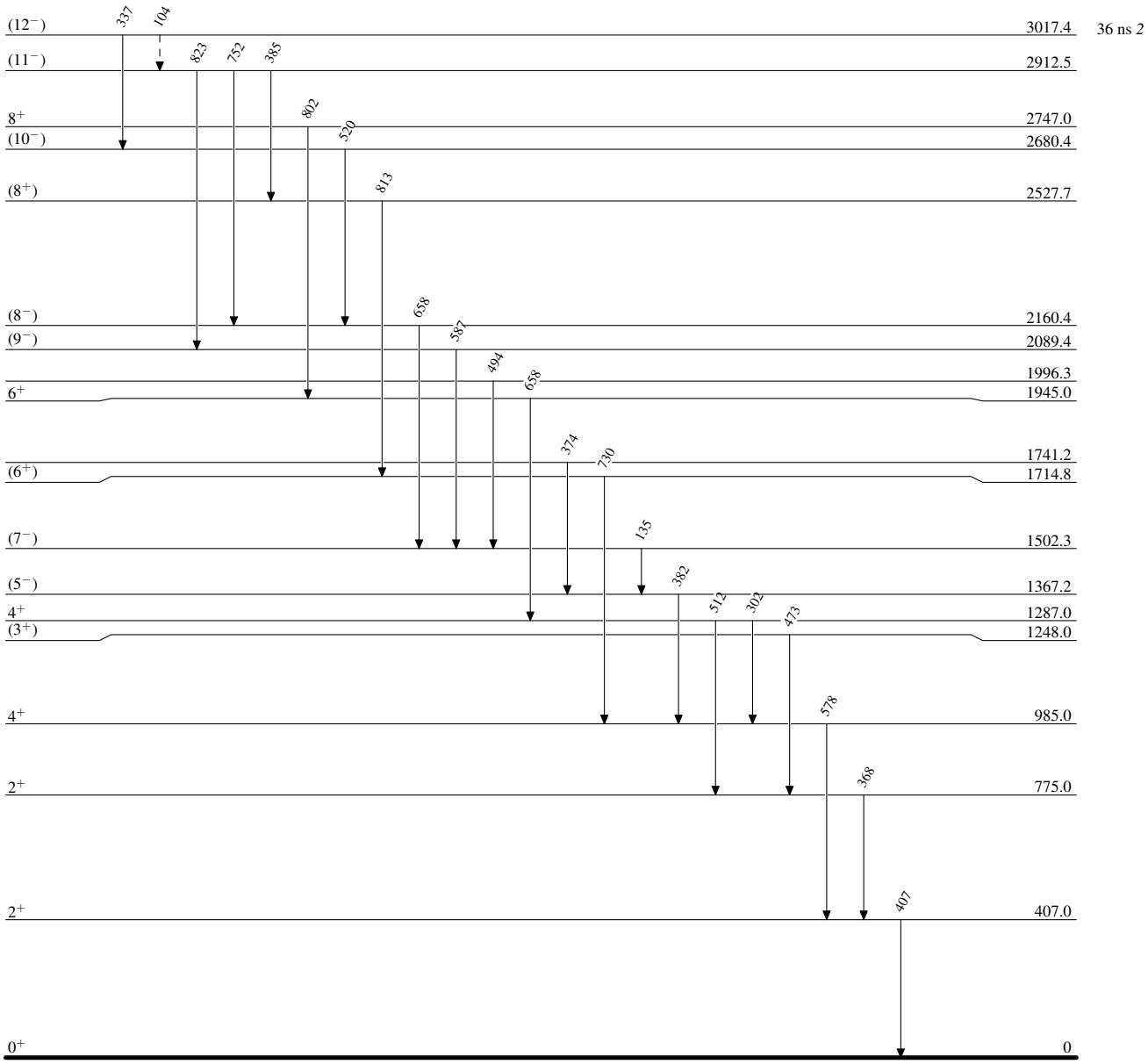
† From 2004Re11.
‡ Placement of transition in the level scheme is uncertain.

Legend

^{198}Pt(^{136}Xe,Xγ) 2004Va03,2004Re11

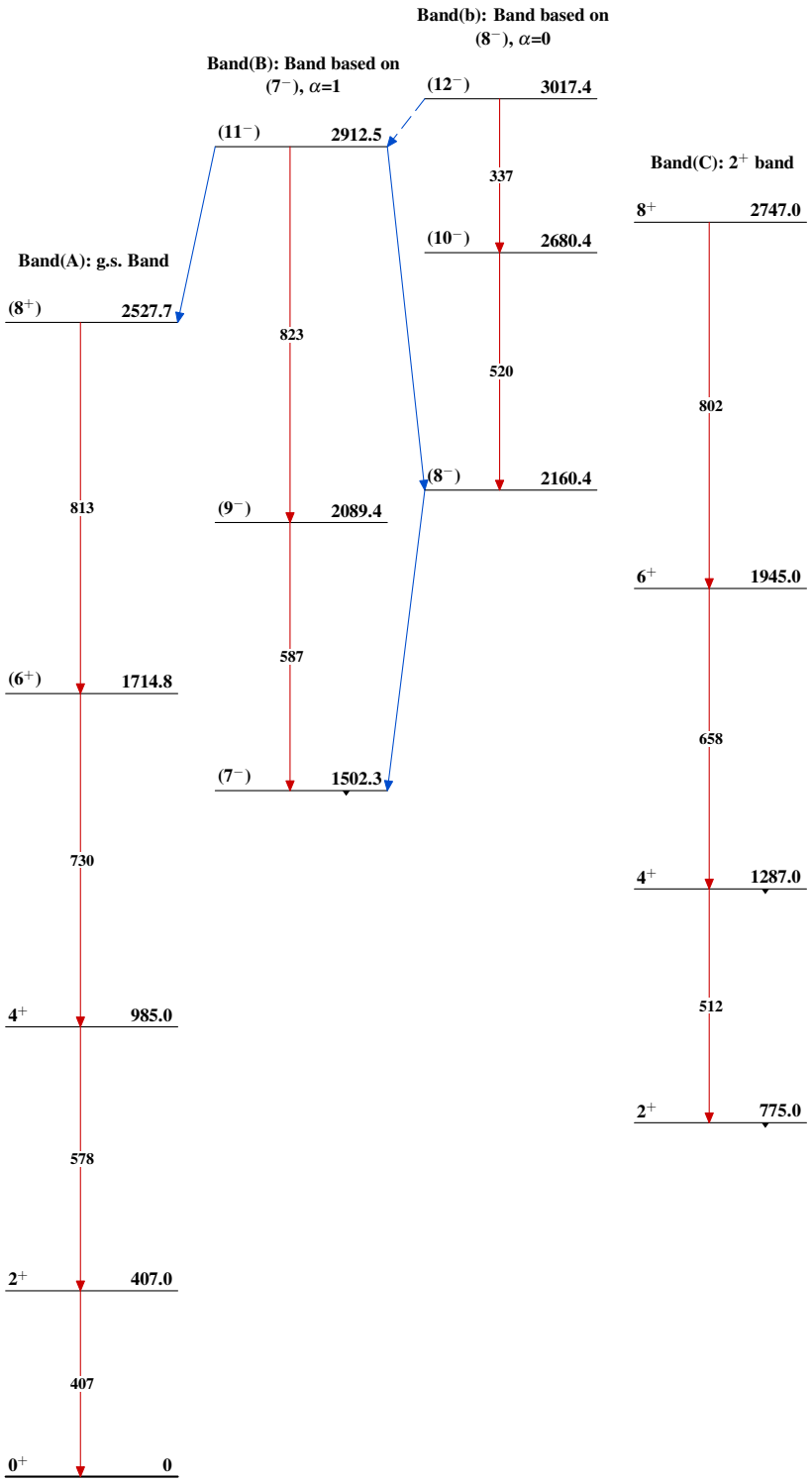
Level Scheme

γ Decay (Uncertain)



$^{198}_{78}Pt_{120}$

^{198}Pt(^{136}Xe,Xγ) 2004Va03,2004Re11



$^{198}_{78}Pt_{120}$