^{208}Pb(^{18}O,Xγ) 2005Ve09

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 110, 507 (2009)	1-Oct-2008

Also ^{238}U(^{12}C,Xγ) reaction.

Additional information 1.

E(^{18}O)=85 MeV, E(^{12}C)=90 MeV Measured Eγ, Iγ, $\gamma\gamma$ using Euroball III and IV arrays of 15 seven-element 'Clusters', 26 four-element 'Clovers' and 30 tapered single-crystal Ge detectors, all detectors are Compton-suppressed.

^{145}Ce Levels

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
0#	(5/2$^-$)	1112.8# *6*	(17/2$^-$)	2015.3@ *7*	(23/2$^+$)	3320.5 *8*	
70.0 *3*	(7/2$^-$)	1126.2@ *6*	(15/2$^+$)	2688.4@ *7*	(27/2$^+$)	3475.8@ *8*	(31/2$^+$)
167.5# *5*	(9/2$^-$)	1495.0@ *6*	(19/2$^+$)	2810.7 *7*		3921.5& *8*	(33/2$^+$)
548.2# *6*	(13/2$^-$)	1840.8# *7*	(21/2$^-$)	3267.9& *8*	(29/2$^+$)	4590.5& *9*	(37/2$^+$)

† Deduced by evaluators from least-squares fit to γ-ray energies assuming an uncertainty of 0.30 keV for all γ rays.

‡ Jπ assignments are based on the assumption that in yrast decays spin values increase with excitation energy. Also, they are based on the analogy to the level structure of neighboring isotones.

Band(A): Band based on 5/2$^-$. Configuration=$\nu f_{7/2}^{-3}$ for 5/2$^-$ and 7/2$^-$ states. Above 9/2$^-$, configuration=$\nu h_{9/2}$ coupled to quadrupole modes.

@ Band(B): Band based on (15/2$^+$). Configuration=$\nu h_{9/2}$ coupled to octupole modes as suggested by interband E1 transitions.

& Band(C): Band based on (29/2$^+$). Possible configuration=$\nu f_{7/2}\nu h_{9/2}\nu i_{13/2}$.

γ(^{145}Ce)

Eγ	Ei(level)	Jiπ	Ef	Jfπ	Eγ	Ei(level)	Jiπ	Ef	Jfπ
70.0	70.0	(7/2$^-$)	0	(5/2$^-$)	564.6	1112.8	(17/2$^-$)	548.2	(13/2$^-$)
97.5	167.5	(9/2$^-$)	70.0	(7/2$^-$)	578.0	1126.2	(15/2$^+$)	548.2	(13/2$^-$)
174.4	2015.3	(23/2$^+$)	1840.8	(21/2$^-$)	579.5	3267.9	(29/2$^+$)	2688.4	(27/2$^+$)
368.8	1495.0	(19/2$^+$)	1126.2	(15/2$^+$)	653.6	3921.5	(33/2$^+$)	3267.9	(29/2$^+$)
380.7	548.2	(13/2$^-$)	167.5	(9/2$^-$)	669.0	4590.5	(37/2$^+$)	3921.5	(33/2$^+$)
382.2	1495.0	(19/2$^+$)	1112.8	(17/2$^-$)	673.1	2688.4	(27/2$^+$)	2015.3	(23/2$^+$)
445.7	3921.5	(33/2$^+$)	3475.8	(31/2$^+$)	727.9	1840.8	(21/2$^-$)	1112.8	(17/2$^-$)
509.8	3320.5		2810.7		787.4	3475.8	(31/2$^+$)	2688.4	(27/2$^+$)
520.4	2015.3	(23/2$^+$)	1495.0	(19/2$^+$)	795.4	2810.7		2015.3	(23/2$^+$)

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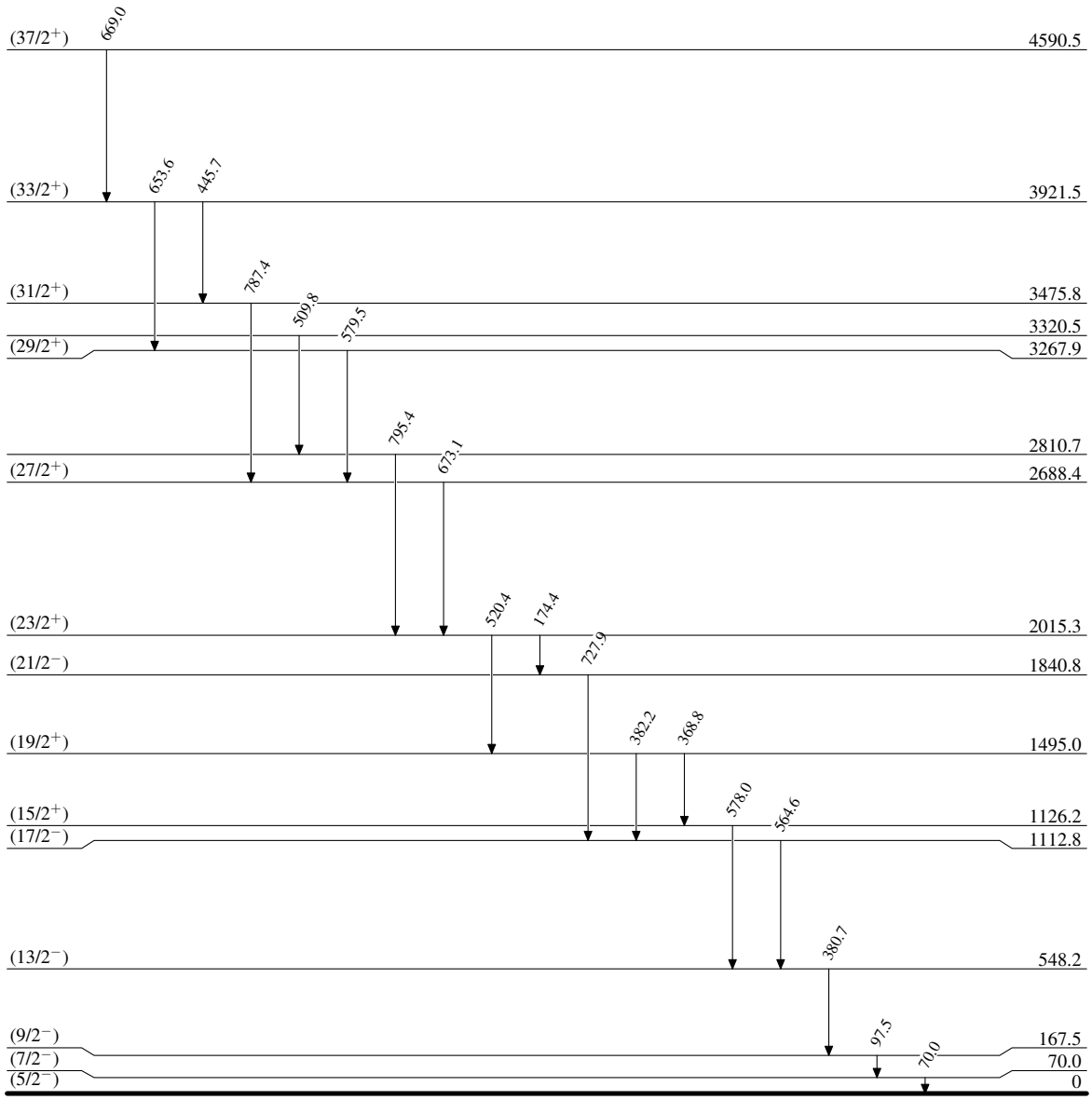
Level Scheme



$^{145}_{58}Ce_{87}$

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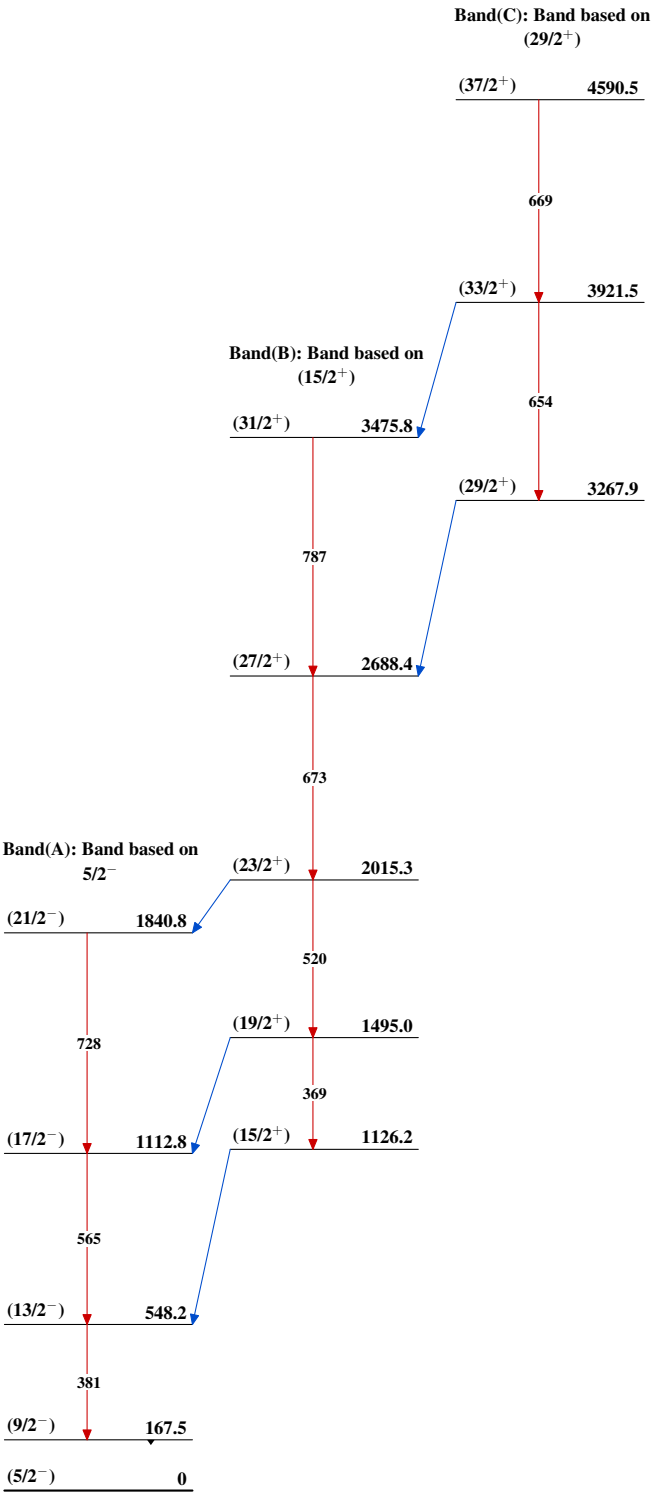

$^{145}_{58}Ce_{87}$