^{28}Si(^{24}Mg,2$\alpha\gamma$) 1998UrZY

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 190,1 (2023)	20-Jun-2023

1998UrZY: ^{28}Si(^{24}Mg,2$\alpha\gamma$) E=115 MeV. Measured γ, $\gamma\gamma$-coin, $\gamma\gamma(\theta)$(DCO) using GASP array. Also thesis by C. A. Ur (University of Bucharest, 1998), but copy of thesis was not available. See also 2000UrZX.

Note that there are significant differences in the upper part of level scheme between 2000Ol06 and 1998UrZY (see companion dataset for ^{44}Ti) with regard to level energies and J^π assignments. With the exception of yrast band and low-spin negative parity states, other J^π assignments in 2000Ol06 are not considered (by the evaluators) as well established, although, given without parentheses by 2000Ol06. In particular, mult=M3 implied for 2906 γ (from 13362, 15$^-$ to 10457, 12$^-$) is very unlikely in the presence of 1815 transition implied as E2.

^{44}Ti Levels

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
0.0@	0$^+$	4015.0@ *6*	6$^+$	6571.8# *7*	(8$^+$)	9722.9# *7*	(11$^-$)
1083.0@ *4*	2$^+$	4060.8 *5*	5$^-$	6923.4# *6*	(8$^-$)	10463.7# *7*	(12$^-$)
2454.3@ *5*	4$^+$	4499.6# *6*	(6$^+$)	7407.9# *7*	(9$^-$)	11085.9# *8*	(13$^-$)
3175.9 *4*	3$^-$	5151.1# *6*	(6$^-$)	7670.0@ *7*	10$^+$	11536.3# *8*	
3364.5 *5*	4$^+$	5670.6# *6*	(7$^-$)	8038.4@ *7*	12$^+$	11546.7# *8*	
3645.6 *5*	4$^-$	6508.0@ *6*	8$^+$	8860.9# *7*	(10$^-$)	13369.6# *9*	

† From a least-squares fit to Eγ data, assuming Δ(Eγ)=0.5 keV.
‡ As proposed by 1998UrZY.
# New level proposed by 1998UrZY.
@ Band(A): Yrast g.s. band.

γ(^{44}Ti)

E$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	E$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
368.5	8038.4	12$^+$	7670.0	10$^+$	1606.4	4060.8	5$^-$	2454.3	4$^+$
415.2	4060.8	5$^-$	3645.6	4$^-$	1609.6	5670.6	(7$^-$)	4060.8	5$^-$
469.7	3645.6	4$^-$	3175.9	3$^-$	1737.3	7407.9	(9$^-$)	5670.6	(7$^-$)
696.7	4060.8	5$^-$	3364.5	4$^+$	1772.4	6923.4	(8$^-$)	5151.1	(6$^-$)
721.3	3175.9	3$^-$	2454.3	4$^+$	1822.8	13369.6		11546.7	
884.9	4060.8	5$^-$	3175.9	3$^-$	1824	11546.7		9722.9	(11$^-$)
1072.6	11536.3		10463.7	(12$^-$)	1937.3	8860.9	(10$^-$)	6923.4	(8$^-$)
1082.9	1083.0	2$^+$	0.0	0$^+$	2008.4	6508.0	8$^+$	4499.6	(6$^+$)
1090.4	5151.1	(6$^-$)	4060.8	5$^-$	2045.4	4499.6	(6$^+$)	2454.3	4$^+$
1098.2	7670.0	10$^+$	6571.8	(8$^+$)	2072.2	6571.8	(8$^+$)	4499.6	(6$^+$)
1135.0	4499.6	(6$^+$)	3364.5	4$^+$	2092.6	3175.9	3$^-$	1083.0	2$^+$
1162.1	7670.0	10$^+$	6508.0	8$^+$	2281.8	3364.5	4$^+$	1083.0	2$^+$
1252.5	6923.4	(8$^-$)	5670.6	(7$^-$)	2315.0	9722.9	(11$^-$)	7407.9	(9$^-$)
1362.8	11085.9	(13$^-$)	9722.9	(11$^-$)	2425.3	10463.7	(12$^-$)	8038.4	12$^+$
1371.1	2454.3	4$^+$	1083.0	2$^+$	2492.9	6508.0	8$^+$	4015.0	6$^+$
1452.9	8860.9	(10$^-$)	7407.9	(9$^-$)	3047.5	11085.9	(13$^-$)	8038.4	12$^+$
1505.5	5151.1	(6$^-$)	3645.6	4$^-$	3175.9	3175.9	3$^-$	0.0	0$^+$
1560.6	4015.0	6$^+$	2454.3	4$^+$	3497.8	11536.3		8038.4	12$^+$
1602.6	10463.7	(12$^-$)	8860.9	(10$^-$)	3507.9	11546.7		8038.4	12$^+$

† From 1998UrZY.

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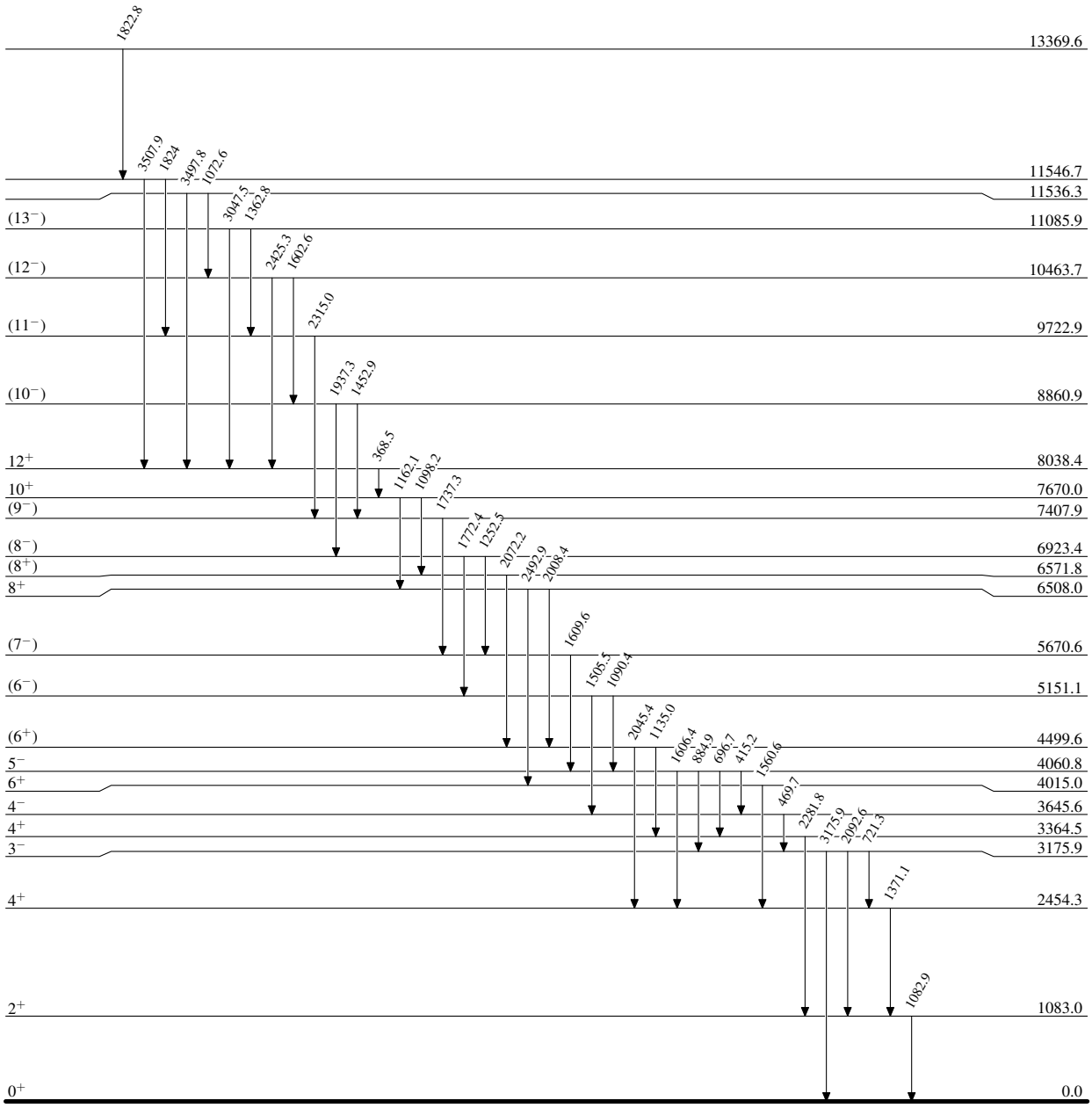
Level Scheme



$^{44}_{22}Ti_{22}$

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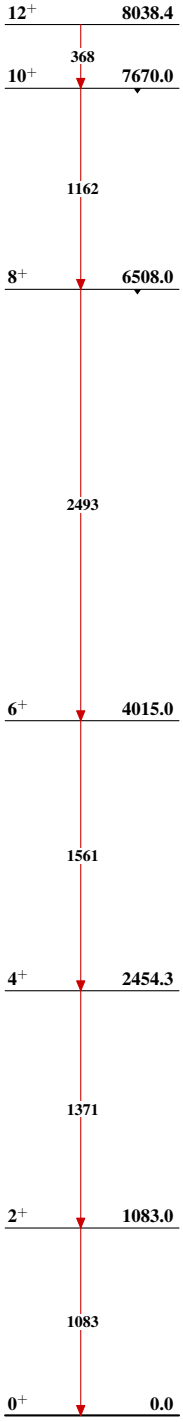
Band(A): Yrast g.s. band



$^{44}_{22}Ti_{22}$