^{9}Be(^{46}Ar,5nγ) 2009Ni17

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 157, 1 (2019)	15-Apr-2019

2009Ni17 (also 2005Id03): ^{46}Ar beam produced by fragmentation of E=63 MeV/nucleon primary beam of ^{48}Ca on a ^{9}Be target at RIKEN. Isotope separation following fragmentation achieved with an Aluminum energy degrader at momentum-dispersive focal plane and reduced secondary beam energy to ≈30 MeV/nucleon. Particle identification of secondary beam performed by time-of-flight (TOF), (E-ΔE method). Purity of ^{46}Ar beam=99%. E(^{46}Ar)=4.0 MeV/nucleon. Measured Eγ, Iγ, $\gamma\gamma$, (^{46}Ar)γ coin with the GRAPE system, consisting of 18 HPGe detectors. Two PPAC counters were used for Doppler correction. Comparison with shell-model calculations.

2009Ni17 and 2005Id03 are conference articles.

All data are from 2009Ni17.

^{50}Ti Levels

E(level)[†]	J$^{\pi}$[‡]
0.0[#]	0$^+$
1553.5[#] *7*	2$^+$
2674.4[#] *8*	4$^+$
3196.9[#] *9*	6$^+$
6134.9[@] *11*	(7)$^+$
6539.3[@] *12*	(8)$^+$
6769.7[@] *12*	(9)$^+$
7573.1[@] *13*	(10)$^+$
8796.8[@] *17*	(11$^+$)

[†] From Eγ data.
[‡] From Adopted Levels.
[#] Seq.(A): Yrast sequence.
[@] Seq.(B): γ cascade based on 7$^+$.

γ(^{50}Ti)

E$_\gamma$[†]	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Comments
230.39 *30*	6769.7	(9)$^+$	6539.3	(8)$^+$	Additional information 5.
404.4 *4*	6539.3	(8)$^+$	6134.9	(7)$^+$	E$_\gamma$: from Adopted Gammas. 2009Ni17 list 404.5 from literature.
522.5 *4*	3196.9	6$^+$	2674.4	4$^+$	Additional information 3.
803.4 *4*	7573.1	(10)$^+$	6769.7	(9)$^+$	Additional information 6.
1120.9 *4*	2674.4	4$^+$	1553.5	2$^+$	Additional information 2.
1223.7 *11*	8796.8	(11$^+$)	7573.1	(10)$^+$	
1553.5 *7*	1553.5	2$^+$	0.0	0$^+$	Additional information 1.
2938.0 *7*	6134.9	(7)$^+$	3196.9	6$^+$	Additional information 4.
3340[‡]	6539.3	(8)$^+$	3196.9	6$^+$	E$_\gamma$: weak γ shown in level scheme figure 3 of 2002Ja16, where prompt γ rays of 1554 and 1121 keV in ^{50}Ti were seen in ^{208}Pb(^{48}Ca,Xγ) reaction. 2002Ja16 do not give any source reference for 3340γ. No such γ is given by 2009Ni17 and 2005Id03, thus not listed in Adopted Levels, Gammas dataset.

[†] From 2009Ni17, uncertainties quoted in 2009Ni17 are statistical. The authors state 0.3 keV systematic uncertainty, which is included by the evaluators in quadrature.
[‡] Placement of transition in the level scheme is uncertain.

Legend

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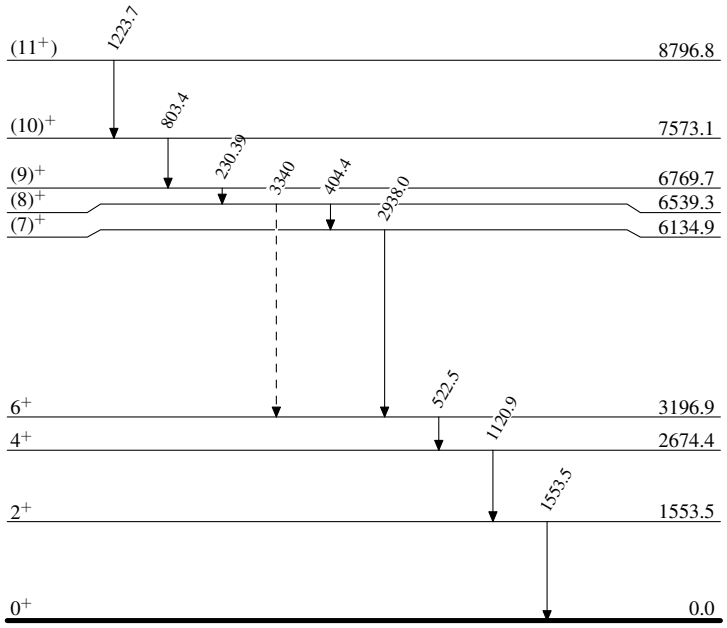
Level Scheme

- - - - - - ► γ Decay (Uncertain)



$^{50}_{22}Ti_{28}$

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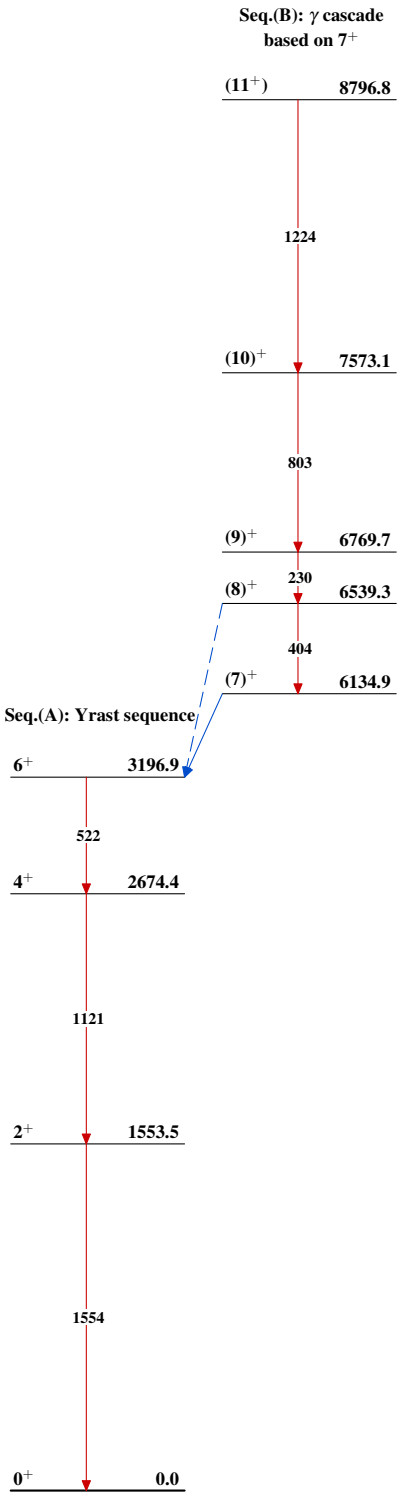

$^{50}_{22}Ti_{28}$