

$^9\text{Be}(^{46}\text{Ar},4n\gamma)$ 2009Ni17

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Wang Jimin and Huang Xiaolong		NDS 144,1 (2017)	1-Mar-2016

2009Ni17: ^{46}Ar beam produced by fragmentation of E=63 MeV/nucleon primary beam of ^{48}Ca on a ^9Be target. Isotope separation following fragmentation achieved with an Aluminium energy degrader at momentum-dispersive focal plane and reduced secondary beam energy to ≈ 30 MeV/nucleon. Particle identification of secondary beam performed by tof -E- ΔE method. Purity of ^{46}Ar beam=99%. E(^{46}Ar)=4.0 MeV/nucleon. Measured E_γ , I_γ , $\gamma\gamma$, (^{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.

^{51}Ti Levels

E(level)	J^π ‡	Comments
0.0 [†]	3/2 ⁻	
1437.2 [†] 7	7/2 ⁻	
2344.1 [†] 10	(11/2) ⁻	
2753.7 [†] 11	(15/2) ⁻	
3646.4 [†] 24	(13/2) ⁻	
4407.2 [†] 24	(15/2) ⁻	J^π : assigned by 2009Ni17 based on shell-model calculations.
5245 [†] 4	(17/2) ⁻	J^π : assigned by 2009Ni17 based on shell-model calculations.

[†] Seq.(A): γ cascade.

‡ From Adopted Levels,except as noted.

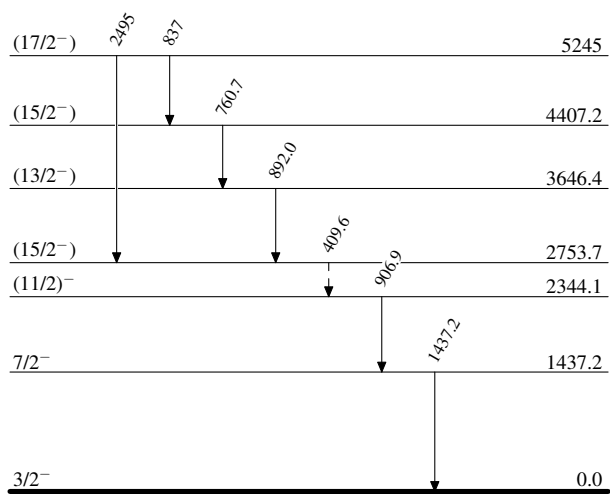
$\gamma(^{51}\text{Ti})$

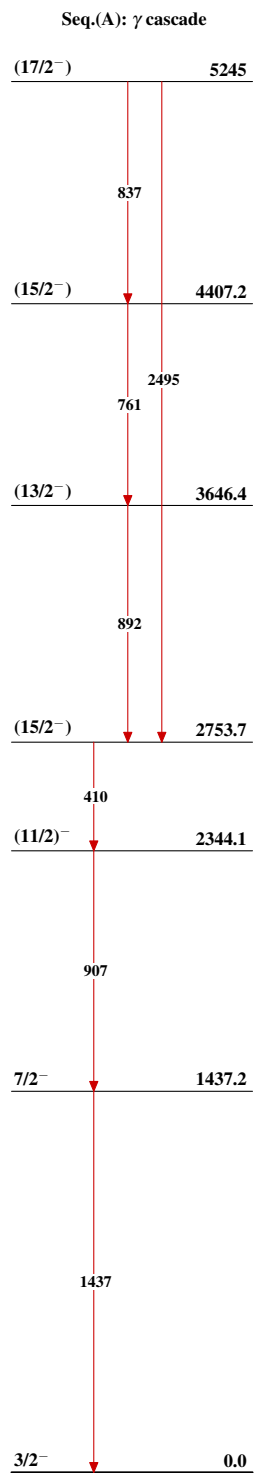
E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
(409.6 5)	2753.7	(15/2) ⁻	2344.1	(11/2) ⁻	E_γ : taken from literature by 2009Ni17.
^x 674.6 6					
760.7 7	4407.2	(15/2) ⁻	3646.4	(13/2) ⁻	
837 3	5245	(17/2) ⁻	4407.2	(15/2) ⁻	
892.0 22	3646.4	(13/2) ⁻	2753.7	(15/2) ⁻	
906.9 6	2344.1	(11/2) ⁻	1437.2	7/2 ⁻	
1437.2 7	1437.2	7/2 ⁻	0.0	3/2 ⁻	
2495 5	5245	(17/2) ⁻	2753.7	(15/2) ⁻	

^x γ ray not placed in level scheme.

$^9\text{Be}(^{46}\text{Ar},4n\gamma)$ 2009Ni17

Legend

Level Scheme-----► γ Decay (Uncertain) $^{51}_{22}\text{Ti}_{29}$

${}^9\text{Be}({}^{46}\text{Ar}, 4n\gamma)$ 2009Ni17 ${}^{51}_{22}\text{Ti}_{29}$