^{1}H(^{46}Ar,2pγ): E=76.4 MeV/A 2006Ga31

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. W. Burrows	NDS 109, 171 (2008)	30-Oct-2007

^{46}Ar beam produced by fragmentation of a primary beam of ^{48}Ca At 110 MeV/nucleon impinging upon a ^{9}Be target; polypropylene [$(C_3H_6)_n$]. The fragments were separated by A1900 fragment separator Bρ-ΔE-Bρ method At NSCL, Michigan facility. Particle identification using the S800 spectrograph. Prompt γ's detected by SeGa γ-detector array of 32-fold segmented HPGe detectors.

^{45}Cl Levels

E(level)	J$^{\pi}$[†]
0	(1/2$^+$)
127 *6*	(3/2$^+$)
929 *9*	

[†] Shell-model calculations predict J$^{\pi}$(g.s.)=1/2$^+$ and a first excited state At 3/2$^+$. Present experimental result is In agreement with this predicted energy splitting and completes the systematics of E(1/2$^+$)−3(3/2$^+$) In the chain of Cl isotopes for 20≤N≤28. Parentheses added by the evaluator.

γ(^{45}Cl)

E$_\gamma$	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Comments
127 *6*	127	(3/2$^+$)	0	(1/2$^+$)	dominant transition.
[x]773					weak; existence is less clear.
929 *9*	929		0	(1/2$^+$)	

[x] γ ray not placed in level scheme.

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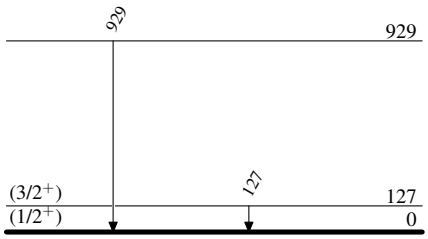
Level Scheme



$^{45}_{17}Cl_{28}$