

${}^1\text{H}({}^{46}\text{Ar}, \text{X}\gamma)$ 2006Ga31

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen [#]		NDS 126, 1 (2015)	31-Mar-2015

2006Ga31: E=76.4 MeV/nucleon ${}^{46}\text{Ar}$ was produced at the Coupled Cyclotron facility of the NSCL at MSU via projectile fragmentation of a 110 MeV/nucleon ${}^{48}\text{Ca}$ primary beam on a 376 mg/cm² ${}^9\text{Be}$ target located at the mid target position of the A1900 fragment separator. Target of a 191 mg/cm² polypropylene [(C₃H₆)_n] foil. The fragments were separated by A1900 fragment separator B ρ - Δ E-B ρ method and identified using the S800 spectrograph. Prompt γ -rays were detected by SeGA γ -detector array of 32-fold segmented HPGe detectors.

The level scheme is taken from ${}^9\text{Be}({}^{48}\text{Ca}, \text{X}\gamma)$ in **2004So30**.

 ${}^{43}\text{Cl}$ Levels

E(level) [†]	J π [†]	Comments
0	(1/2 ⁺)	
329 4	(3/2 ⁺)	
945 7	(5/2 ⁺)	
1342 7	(5/2 ⁺)	E(level): level not included in Adopted Levels due to revised placement of 1342 γ .
1833 [‡] 9	(7/2 ⁺)	E(level): level not included in Adopted Levels.

[†] From level scheme proposed by **2004So30**.

[‡] A tentative 1509 10 γ from this level reported by **2004So30** is not seen by **2006Ga31**.

 $\gamma({}^{43}\text{Cl})$

E γ	E _i (level)	J π _i	E _f	J π _f	Comments
^x 256 [†] 5					
329 4	329	(3/2 ⁺)	0	(1/2 ⁺)	
616 5	945	(5/2 ⁺)	329	(3/2 ⁺)	
888 6	1833	(7/2 ⁺)	945	(5/2 ⁺)	Note that this γ was not observed in coin with 330 γ or 614 γ in 2012St12 , thus its placement from 1833 level is suspect.
1342 7	1342	(5/2 ⁺)	0	(1/2 ⁺)	

[†] This γ not reported by **2004So30**.

^x γ ray not placed in level scheme.

${}^1\text{H}({}^{46}\text{Ar}, \text{X}\gamma)$ 2006Ga31Level Scheme