

$^{72}\text{Ge}(\alpha, n\text{p}\gamma)$ **1976Ga23**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Ameenah R. Farhan		NDS 107, 1923 (2006)	30-Apr-2006

E=30-55 MeV.

Measured γ , $\gamma\gamma$, $\gamma(t)$, $\gamma(t)$, excitation functions. Main data are reported At 35 MeV.Others: **1975Be58** and **1975Re06** (both from the same laboratory) reaction: $^{71}\text{Ga}(\alpha, n\gamma)$ At E(α)=13.5 MeV. Half-life and g-factor of isomer At 259 keV (incorrectly assigned At 273 keV by **1975Be58** and **1975Re06**) measured by DPAD technique. ^{74}As Levels

E(level) [‡]	J ^π [†]	T _{1/2} [#]	Comments
0.0	2 ⁻		
182.96 15	(3) ⁻		
259.17 16	(4) ⁺	27 ns 2	T _{1/2} : adopted T _{1/2} =26.8 ns 5 (1971Ch10) (see adopted level). g=+0.809 10 (1975Be58 , differential PAD method).
271.54 15	(4) ⁻	<0.5 ns	
315.12 16	(5)	<0.5 ns	
335.38 16	(5 ⁻)	<0.5 ns	
516.3 3	(6)		
547.0 3	(6) ⁻		
595.6 3	(7)		
700.0 4	(7)		

[†] From 'Adopted Levels'.[‡] From least-squares fit to E γ 's.[#] From $\gamma(t)$. $\gamma(^{74}\text{As})$

E γ	I γ	E _i (level)	J ^π _i	E _f	J ^π _f	Comments
55.95 5	70 7	315.12	(5)	259.17	(4) ⁺	A ₂ =-0.15 21.
63.84 5	46 5	335.38	(5 ⁻)	271.54	(4) ⁻	A ₂ =+0.13 13.
76.21 5	85 9	259.17	(4) ⁺	182.96	(3) ⁻	A ₂ =+0.25 10.
79.28 5	37 4	595.6	(7)	516.3	(6)	A ₂ =+0.02 9.
88.58 5	12 4	271.54	(4) ⁻	182.96	(3) ⁻	
153.0 2	9 3	700.0	(7)	547.0	(6) ⁻	
183.0 2	100 10	182.96	(3) ⁻	0.0	2 ⁻	composite G. Other component contributed by impurity.
201.2 2	54 6	516.3	(6)	315.12	(5)	A ₂ =-0.08 14.
211.6 2	33 4	547.0	(6) ⁻	335.38	(5 ⁻)	A ₂ =-0.26 17.
259.2 [†] 2	3 1	259.17	(4) ⁺	0.0	2 ⁻	
271.5 2	28 3	271.54	(4) ⁻	0.0	2 ⁻	A ₂ =+0.67 11.

[†] Placement of transition in the level scheme is uncertain.

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Legend

Level Scheme

Intensities: Relative I_γ

- $I_\gamma < 2\% \times I_\gamma^{\max}$
- $I_\gamma < 10\% \times I_\gamma^{\max}$
- $I_\gamma > 10\% \times I_\gamma^{\max}$
- - - - - γ Decay (Uncertain)

