

$^{28}\text{Si}(^{36}\text{Ar}, 2\alpha p n \gamma)$ 1999Ru01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde		NDS 121, 1 (2014)	20-Jun-2014

E=143 MeV. Measured $E\gamma$, $I\gamma$, $\gamma\gamma$, particle- γ coin, $\gamma(\theta)$, and $\gamma\gamma(\theta)$ (DCO) using GAMMASPHERE array with 82 Ge detectors, 4π CsI microball and fifteen liquid scintillators for neutrons.

 ^{54}Co Levels

<u>E(level)[†]</u>	<u>J^π[‡]</u>	<u>E(level)[†]</u>	<u>J^π[‡]</u>	<u>E(level)[†]</u>	<u>J^π[‡]</u>	<u>E(level)[†]</u>	<u>J^π[‡]</u>
0.0 [@]	0 ⁺	1445.1 [@] 5	2 ⁺	2651.1 [@] 8	4 ⁺	4730 [#] 4	(11 ⁺)
199 [#] 4	7 ⁺	1820.6 [@] 6	3 ⁺	2910.7 [@] 8	(6 ⁺)	5048? 4	10 ⁺
936.8 [@] 4	1 ⁺	1886.4 16	5 ⁺	3173 [#] 4	(9 ⁺)	7245? [#] 5	(12 ⁺)

[†] From least-squares fit to $E\gamma$'s.

[‡] From Adopted Levels.

[#] Band(A): 7⁺ band.

[@] Band(B): g.s. band.

 $\gamma(^{54}\text{Co})$

A₂'s are for 30° – 83° arrangement.

<u>E_γ</u>	<u>I_γ</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Comments</u>
259.6 3	8 1	2910.7	(6 ⁺)	2651.1	4 ⁺	
375.5 2	35 4	1820.6	3 ⁺	1445.1	2 ⁺	A2=0.78 10.
508.3 3	52 5	1445.1	2 ⁺	936.8	1 ⁺	A2=0.60 8.
764 [†] 2	4 2	2651.1	4 ⁺	1886.4	5 ⁺	
830.5 5	25 3	2651.1	4 ⁺	1820.6	3 ⁺	A2=0.86 12.
936.8 4	76 7	936.8	1 ⁺	0.0	0 ⁺	A2=0.94 9.
1025 [†] 2	2 1	2910.7	(6 ⁺)	1886.4	5 ⁺	
1557 1	53 6	4730	(11 ⁺)	3173	(9 ⁺)	A2>1.
1688 2	11 2	1886.4	5 ⁺	199	7 ⁺	
1875 [†] 3	5 1	5048?	10 ⁺	3173	(9 ⁺)	
2514 [†] 3	9 2	7245?	(12 ⁺)	4730	(11 ⁺)	
2974 1	100 5	3173	(9 ⁺)	199	7 ⁺	A2=1.16 14.

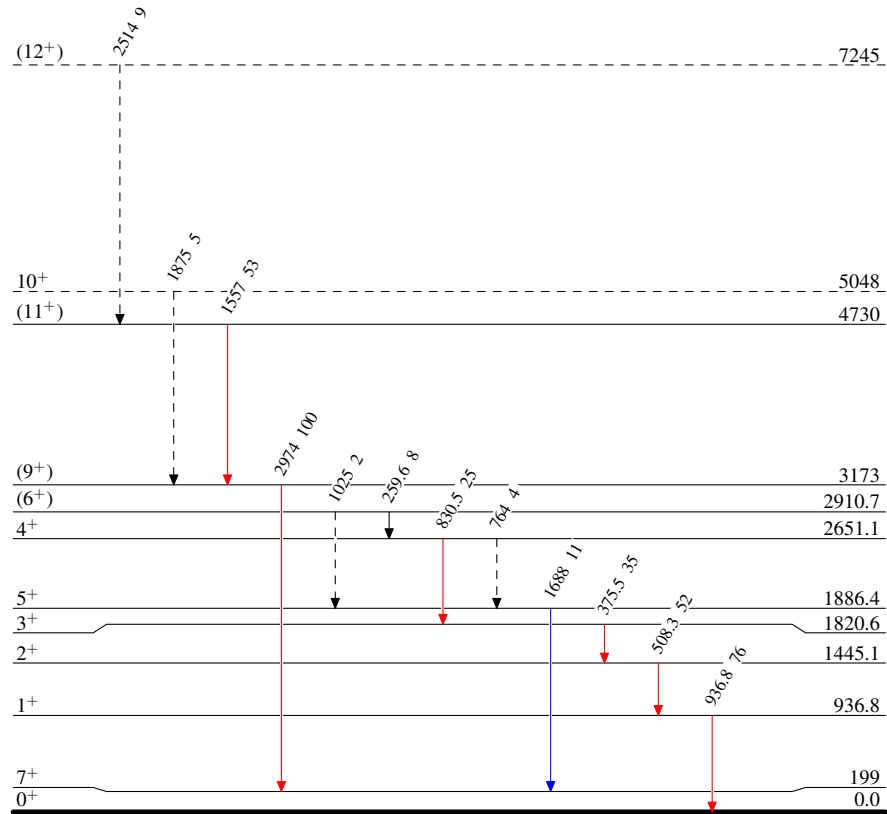
[†] Placement of transition in the level scheme is uncertain.

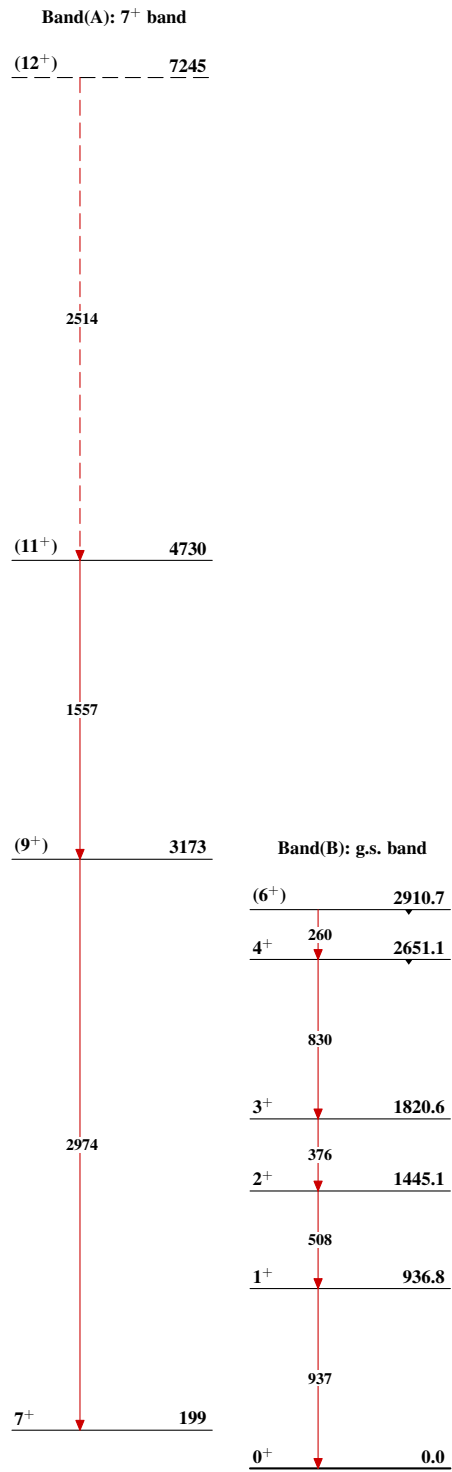
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Legend

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)

 $^{54}_{27}\text{Co}_{27}$

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