

$^{58}\text{Ni}(^{36}\text{Ar}, 2\alpha\gamma)$ 2007An21

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Alexandru Negret, Balraj Singh		NDS 124, 1 (2015)	30-Nov-2014

2007An21: E=111 MeV beam delivered by GANIL, CIME cyclotron. Enriched target (99.9%). Charged particles detected using the DIAMANT array of 80 CsI detectors and the neutrons using the Neutron Wall of 45 liquid scintillation detectors. Measured E_γ , I_γ , $\gamma\gamma$ coin using EXOGAM array of 10 Compton-suppressed Clover Ge detectors, six at 90° and four and 135° .

 ^{86}Mo Levels

E(level)	J^π [†]
0 [‡]	0 ⁺
566.6 [‡] 4	2 ⁺
1140.9 [#] 5	(2 ⁺)
1327.5 [‡] 7	4 ⁺
1587.1 [#] 5	(3 ⁺)
1923.4 5	(4 ⁺)
2260.5 [‡] 12	6 ⁺
2372.8 [#] 6	(5 ⁺)

[†] From systematics in neighboring nuclei.

[‡] Band(A): g.s. band.

[#] Band(B): (2⁺) band.

 $\gamma(^{86}\text{Mo})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
446.2 2	7 1	1587.1	(3 ⁺)	1140.9	(2 ⁺)
566.6 [‡] 4	100	566.6	2 ⁺	0	0 ⁺
574.3 1	11 1	1140.9	(2 ⁺)	566.6	2 ⁺
760.9 [‡] 5		1327.5	4 ⁺	566.6	2 ⁺
782.5 [†] 3	≈5	1923.4	(4 ⁺)	1140.9	(2 ⁺)
785.7 [†] 3	≈5	2372.8	(5 ⁺)	1587.1	(3 ⁺)
933		2260.5	6 ⁺	1327.5	4 ⁺

[†] 782.5 γ and 785.7 γ form a doublet.

[‡] From Adopted Gammas.

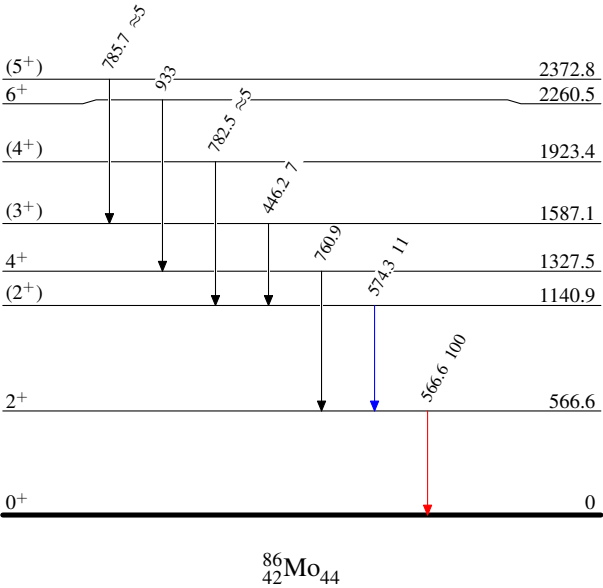
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Level Scheme

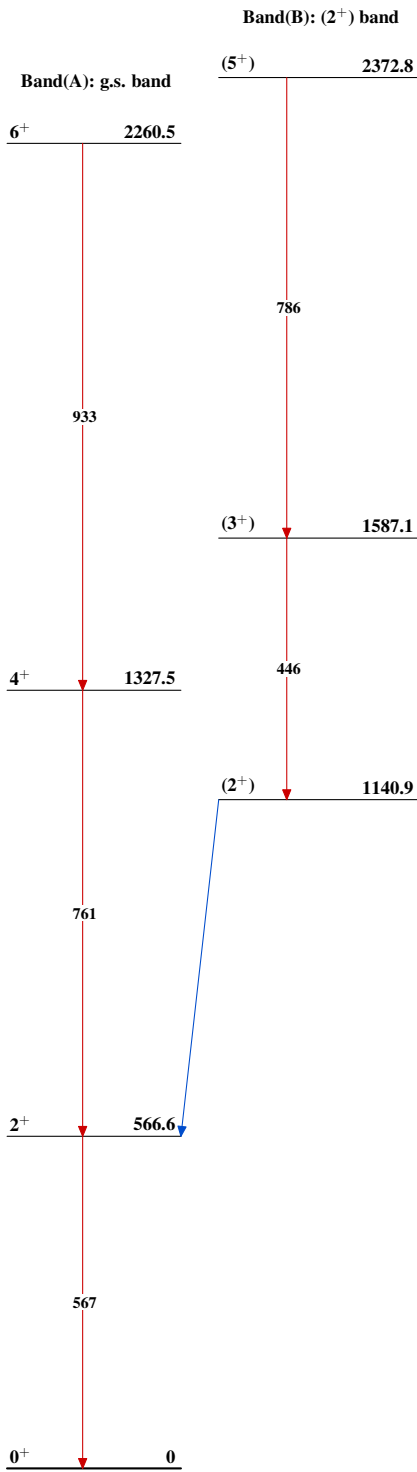
Intensities: Relative I_γ

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{max}$
- $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{max}$
- $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{max}$



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$^{86}_{42}\text{Mo}_{44}$