

$^{28}\text{Si}(^{28}\text{Si},\alpha 2n\gamma)$ 2001Le31

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh		NDS 157, 1 (2019)	15-Apr-2019

2001Le31: E=110 MeV beam from the XTU Tandem accelerator. Enriched.

target. Measured $E\gamma$, $I\gamma$, and $\gamma\gamma$ - and γp -coin using EUROBALL array consisting of 26 ‘Clovers’ and 15 ‘Cluster’ composite detectors, and ISIS array for charged particles, and 50 liquid scintillators for neutron detection. Exact shell-model calculations. See also 2002Le21 and 2001Lu14 from the same authors.

The cascade of γ rays was ordered in accordance with their relative intensities and assigned to the g.s. yrast band of ^{50}Fe , analog to that in the mirror nucleus ^{50}Cr ,

 ^{50}Fe Levels

$E(\text{level})^\dagger$	J^π^\ddagger
0 [#]	0 ⁺
765 [#] 1	2 ⁺
1852 [#] 2	4 ⁺
3160 [#] 2	6 ⁺
4787 [#] 2	8 ⁺
6368 [#] 2	10 ⁺
6995 3	11 ⁺

[†] From least-squares fit to $E\gamma$ data, assuming $\Delta E(\gamma)=1$ keV (evaluators).

[‡] From analogy to the mirror nucleus ^{50}Cr for the yrast states up to spin 11⁺ (2001Le31). In Adopted Levels, the assignments are the same except that these are placed under parentheses after the first excited state.

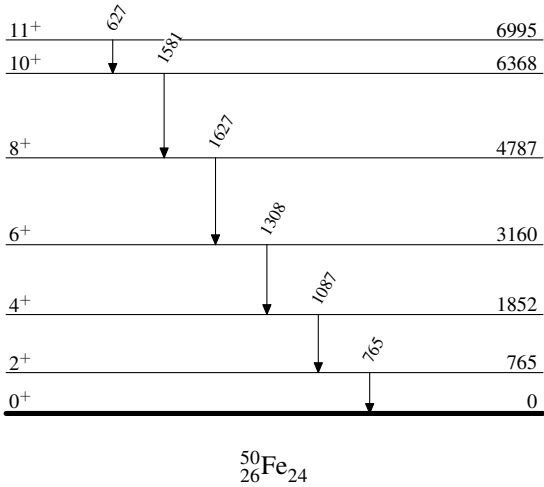
[#] Band(A): Yrast band. Structure similar to that in the mirror nuclide ^{50}Cr .

 $\gamma(^{50}\text{Fe})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
627	6995	11 ⁺	6368	10 ⁺
765	765	2 ⁺	0	0 ⁺
1087	1852	4 ⁺	765	2 ⁺
1308	3160	6 ⁺	1852	4 ⁺
1581	6368	10 ⁺	4787	8 ⁺
1627	4787	8 ⁺	3160	6 ⁺

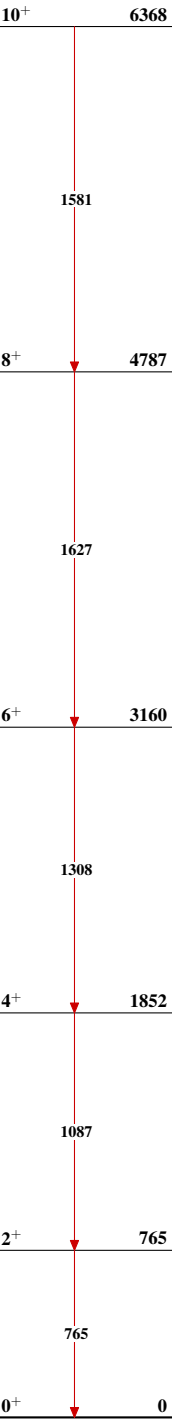
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Level Scheme



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Band(A): Yrast band



$^{50}_{26}\text{Fe}_{24}$