Coulomb excitation 1977Sc36

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 184, 29 (2022)	24-Jun-2022

1977Sc36: ^{27}Al(^{31}P,^{31}P′γ) E=44.46 MeV ^{31}P beam from tandem Van de Graaff accelerator of Brookhaven National Laboratory. Measured γ-ray yields, de-excitation Doppler-shift γ lineshapes with a Ge(Li) detector. Deduced B(E2), $T_{1/2}$. See also 1973ScWZ thesis.

Others: 1967Af03, 1961An09, 1960Le07.

^{31}P Levels

B(E2)↑ values are extracted from measured γ-ray yields (1977Sc36).

E(level)	J^π[†]	$T_{1/2}$[‡]	Comments
0	$1/2^+$		
1270	$3/2^+$	0.520 ps *42*	B(E2)↑=0.0060 *10* (1977Sc36) other: B(E2)↑=0.011 (1961An09). Additional information 1.
2230	$5/2^+$	0.256 ps *55*	B(E2)↑=0.0149 *22* $T_{1/2}$: 0.200 ps *+36−27* from B(E2) and adopted transition properties. Additional information 2.

[†] From Adopted Levels.

[‡] From DSAM using line-shape analysis (1977Sc36).

$\gamma(^{31}P)$

E_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	Comments
1270	1270	$3/2^+$	0	$1/2^+$	M1+E2	0.32 *3*	Mult.: from Adopted Gammas. δ: deduced by 1977Sc36 from measured B(E2)↑=0.0060 *10* and lifetime.
2230	2230	$5/2^+$	0	$1/2^+$	[E2]		

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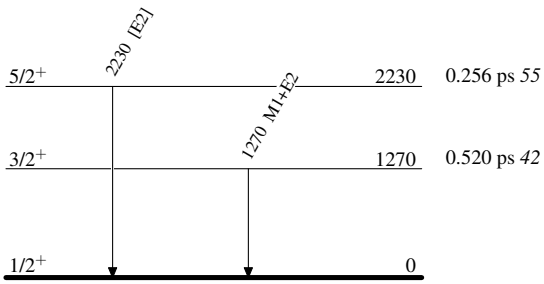
Level Scheme



$^{31}_{15}P_{16}$