^{28}P $\varepsilon\alpha$ decay 1996Og01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia, Anagha Chakraborty	NDS 186, 2 (2022)	31-Mar-2022

Parent: ^{28}P: E=0; $J^{\pi}=3^{+}$; $T_{1/2}$=270.3 ms *5*; Q($\varepsilon\alpha$)=4361.8 *11*; %$\varepsilon\alpha$ decay=0.00086 *25*
^{28}P-J^{π},$T_{1/2}$: From Adopted Levels of ^{28}P (2013Ba53).
^{28}P-Q($\varepsilon\alpha$): Deduced by evaluators using data Q(ε)(^{28}P) and Q(α)(^{28}Si) from AME2020 (2021Wa16).
^{28}P-%$\varepsilon\alpha$ decay: From Adopted Levels of ^{28}P (2013Ba53).
Source produced by ^{24}Mg(^{3}He,2n) E=40 MeV and ^{27}Al(p,3n) E(p)=45 MeV reactions. Helium-jet recoil collection. E-ΔE Si detector telescope.
Other reference: 1979Ho27.

^{24}Mg Levels

E(level)	J^{π}	$T_{1/2}$
0	0^{+}	stable

Delayed Alphas (^{24}Mg)

Particle normalization: Normalized to Σ Iα = 100. Relative intensities of 1996Og01 are listed in comments section.

E(α)	E(^{24}Mg)	I(α)†	E(^{28}Si)	Comments
1310 *1*	0	8.9 *11*	11515	I(α): (rel) = 25 *3*.
1432 *1*	0	28.1 *21*	11657	I(α): (rel) = 79 *6*.
1667 *1*	0	<1.1	11931	I(α): (rel) < 3.
1787 *1*	0	5.3 *14*	120717	I(α): (rel) = 15 *4*.
1974 *1*	0	5.0 *18*	12290	I(α): (rel) = 14 *5*.
2106 *1*	0	35.6	12440	I(α): (rel) = 100.
2197 *1*	0	8.2 *21*	12550	I(α): (rel) = 23 *6*.
2347 *1*	0	2.1 *7*	12725	I(α): (rel) = 6 *2*.
2496 *1*	0	4.6 *11*	12899	I(α): (rel) = 13 *3*.
2663 *1*	0	1.1 *4*	13093	I(α): (rel) = 3 *1*.

† For absolute intensity per 100 decays, multiply by 8.6×10^{-6} *25*.

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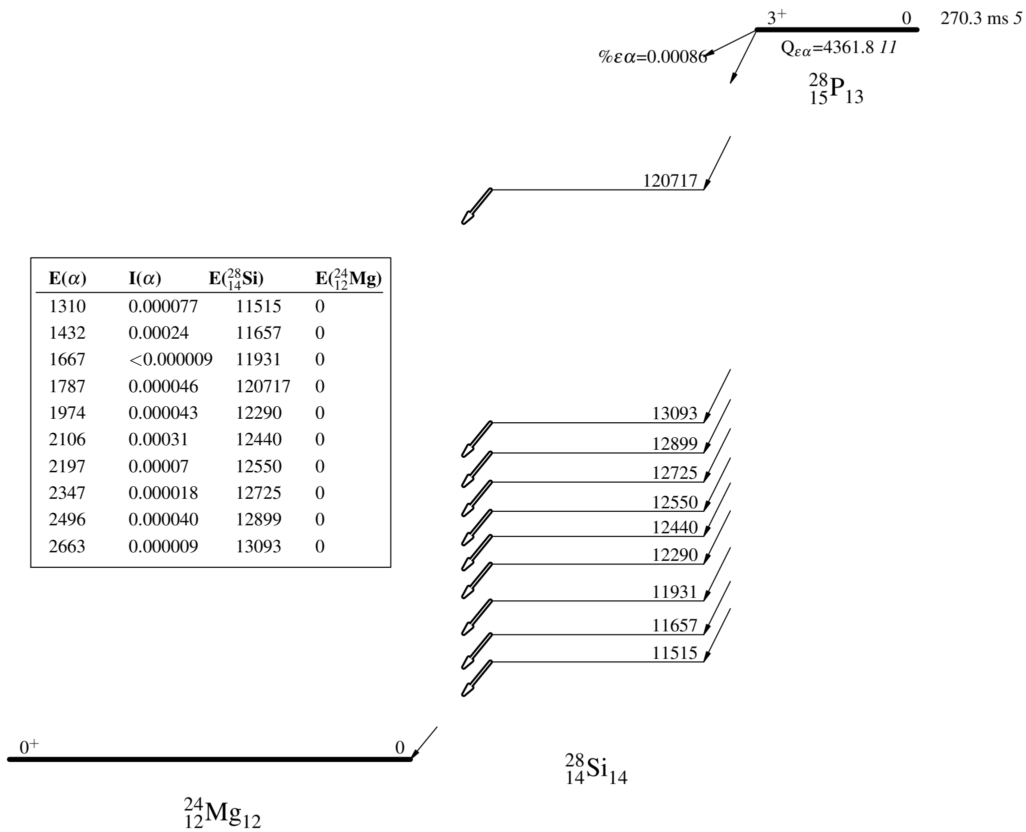
Decay Scheme

I(α) Intensities: Relative I(α)



E(α)	I(α)	E($^{28}_{14}$Si)	E($^{24}_{12}$Mg)
1310	0.000077	11515	0
1432	0.00024	11657	0
1667	<0.000009	11931	0
1787	0.000046	120717	0
1974	0.000043	12290	0
2106	0.00031	12440	0
2197	0.00007	12550	0
2347	0.000018	12725	0
2496	0.000040	12899	0
2663	0.000009	13093	0