^{27}P β^+p decay   1996Og01,1985Ay02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia and A. M. Hurst	NDS 134,1 (2016)	1-Feb-2016

Parent: ^{27}P: E=0.0; J^π=1/2$^+$; T$_{1/2}$=260 ms 80; Q(β^+p)=4170 40; %β^+p decay≈0.070

1996Og01: ^{27}P was produced from ^{nat}Si(p,X), E=45 MeV, ΔE-E Si detectors; Measured β^+ delayed Ep, Ip.

1985Ay02: ^{27}P was produced from ^{28}Si(p,2n), E=28-50 MeV; Measured β^+ delayed Ep, Ip, T$_{1/2}$.

^{26}Al Levels

E(level)	J^π	T$_{1/2}$†
0.0	5$^+$	7.17×10^5 y 24
228.305 13	0$^+$	6.3465 s 7

† From Adopted Levels.

Delayed Protons (^{26}Al)

E(p)	E(^{26}Al)	I(p)†‡	E(^{27}Si)
466 3	228.305	4.2 9	8176
612 2	228.305	45.5 14	8328
731 2	228.305	46.9	8451
1324 4	228.305	3.3 9	9067

† From 1996Og01, normalized to ΣI$_p$=100.

‡ For absolute intensity per 100 decays, multiply by ≈0.0007.

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Decay Scheme

I(p) Intensities: I(p) per 100 parent decays

E(p)	I(p)	E($^{27}_{14}$Si)	E($^{26}_{13}$Al)
466	≈0.0029	8176	228.305
612	≈0.032	8328	228.305
731	0.0328	8451	228.305
1324	≈0.0023	9067	228.305

$1/2^+$ 0.0   260 ms *80*

Q_{β^+p}=4170 *40*

%β^+p≈0.07

$^{27}_{15}$P$_{12}$

9067

8451

8328

8176

$^{27}_{14}$Si$_{13}$

0^+ 228.305

$^{26}_{13}$Al$_{13}$