

⁴⁶Ar β⁻ decay 1980Hu01,1978Pe04

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. -c. Wu	NDS 91, 1 (2000)	15-Jul-2000

Parent: ⁴⁶Ar: E=0.0; J^π=0⁺; T_{1/2}=8.4 s 6; Q(β⁻)=5698 43; %β⁻ decay=100.0
 Measured γ, γ(t) (1978Pe04,1980Hu01).

⁴⁶K Levels

E(level)	J ^π †	T _{1/2} †
0.0	(2 ⁻)	105 s 10
1944.30 9	1 ⁺	

† From Adopted Levels.

β⁻ radiations

E(decay)	E(level)	Iβ ⁻ †‡	Log ft	Comments
(3.75×10 ³ 4)	1944.30	≈100	4.24 4	av Eβ=1664 21 Iβ ⁻ : assumes no β ⁻ to g.s.; 1980Hu01 reported Iβ=98.6 6 although three unplaced γ's total 1.9 4. Log ft: consistent with 0 ⁺ to 1 ⁺ allowed transition.
(5.70×10 ³ 4)	0.0	≤5	≥8.3 ^{1u}	av Eβ=2623 21 Log ft: consistent with 0 ⁺ to 2 ⁻ 1U transition.

† From 1980Hu01.

‡ Absolute intensity per 100 decays.

γ(⁴⁶K)

I_γ normalization: I_γ(1944γ)≈100% if Iβ(g.s.)=0.

E _γ	I _γ †#	E _i (level)	J _i ^π	E _f	J _f ^π	Comments
^x 288.1‡ 7	0.7 2					Possible assignment as 2222 5 to 1944 cascade G.
^x 584.7‡ 15	0.4 1					
^x 1020.3‡ 12	0.8 3					E _γ : weighted average of values from 1980Hu01, 1978Pe04.
1944.30 9	≈100	1944.30	1 ⁺	0.0 (2 ⁻)		

† Photon intensity relative to I_γ=100 for 1944γ (1980Hu01).

‡ Observed by 1980Hu01.

Absolute intensity per 100 decays.

^x γ ray not placed in level scheme.

${}^{46}\text{Ar}$ β^- decay 1980Hu01,1978Pe04Decay SchemeIntensities: I_γ per 100 parent decays