

$^{47}\text{Cr} \beta^+$ decay [1985Bu07](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. W. Burrows	NDS 108, 923 (2007)	20-Feb-2007

Parent: ^{47}Cr : $E=0.0$; $J^\pi=3/2^-$; $T_{1/2}=500$ ms 15; $Q(\beta^+)=7444$ 14; $\% \beta^+$ decay=100.0

$^{47}\text{Cr}-Q(\beta^+)$: From [2003Au03](#).

Measured decay curve of ^{47}V 87.5 γ ; He-jet system, low-energy photon system, Ge(Li). Other: see [1995Bu05](#).

 ^{47}V Levels

All data are from Adopted Levels.

E(level)	J^π	$T_{1/2}$	Comments
0.0	$3/2^-$	32.6 min 3	$\% \varepsilon + \% \beta^+ = 100$
87.525 9	$5/2^-$		

 ε, β^+ radiations

See [1988HaZD](#), [1987HoZP](#), and [1987Mi18](#) for calculations of the GT matrix elements.

E(decay)	E(level)	$I\beta^+{}^\dagger{}^\#$	$I\varepsilon{}^\ddagger{}^\#$	Log f_t	$I(\varepsilon + \beta^+)^\#$	Comments
(7356 14)	87.525	3.9 13	0.0039 13	5.1 2	3.9 13	av $E\beta=2967.3$ 69; $\varepsilon K=0.000893$ 6; $\varepsilon L=9.18 \times 10^{-5}$ 6; $\varepsilon M+=1.524 \times 10^{-5}$ 10
(7444 14)	0.0	96.1 13	0.0924 17	3.70 2	96.2 13	av $E\beta=3010.3$ 69; $\varepsilon K=0.000858$ 6; $\varepsilon L=8.81 \times 10^{-5}$ 6; $\varepsilon M+=1.463 \times 10^{-5}$ 10

† Absolute intensity per 100 decays of parent from $I\gamma(87.5\gamma)/I\gamma(\gamma^\pm)$ and $\alpha(87.5\gamma)$ and assumption that feeding of higher states is negligible ($<0.5\%$). $I\varepsilon \approx 0.1\%$ (evaluator).

‡ From $I\beta$ and theoretical $I\varepsilon/I\beta$ ratios.

$^\#$ Absolute intensity per 100 decays.

 $\gamma(^{47}\text{V})$

$I\gamma(87.5\gamma)/I\gamma(\gamma^\pm)=1.35\%$ 60. Uncertainty includes estimate for the fact that the annihilation site is not restricted to the production site.

E, M, δ, α from Adopted Gammas.

E_γ	$I_\gamma{}^\dagger{}^\ddagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	δ	$\alpha^\#$	Comments
87.5 1	3.7 12	87.525	$5/2^-$	0.0	$3/2^-$	M1+E2	+0.125 21	0.041 4	$\alpha(K)=0.037$ 3; $\alpha(L)=0.0035$ 3; $\alpha(M)=0.00046$ 4; $\alpha(N+..)=2.27 \times 10^{-5}$ 18 $\alpha(N)=2.27 \times 10^{-5}$ 18

† Absolute intensity per 100 decays of parent from $I\gamma(87.5\gamma)/I\gamma(\gamma^\pm)$.

‡ Absolute intensity per 100 decays.

$^\#$ Total theoretical internal conversion coefficients, calculated using the BrIcc code ([2008Ki07](#)) with Frozen orbital approximation based on γ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

$^{47}\text{Cr } \beta^+ \text{ decay } \quad 1985\text{Bu07}$

Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

