^{45}V β^+ decay 1982Ho11

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	T. W. Burrows	NDS 109, 171 (2008)	30-Oct-2007

Parent: ^{45}V: E=0.0; J^π=7/2$^-$; $T_{1/2}$=547 ms *6*; Q(β^+)=7126 *17*; %β^+ decay=100.0
^{45}V-E,J^π,$T_{1/2}$: From the ^{45}V Adopted Levels.
^{45}V-Q(β^+): From 2003Au03.
Measured γ's; helium-jet transport system. Others: 1992Bu01.

^{45}Ti Levels

E(level)	J^π†
0	7/2$^-$
40.1	5/2$^-$

† From the Adopted Levels.

ε,β^+ radiations

Iβ normalization: see comment on Iγ normalization.

E(decay)	E(level)	Iβ^+†‡	Iε‡	Log *ft*†	I($\varepsilon+\beta^+$)†‡	Comments
(7086 *17*)	40.1	4.3 *15*	0.0042 *14*	5.0 *2*	4.3 *15*	av Eβ=2834.3 *84*; εK=0.000866 *8*; εL=8.79×10^{-5} *8*; εM+=1.514×10^{-5} *13*
(7126 *17*)	0	95.6 *15*	0.091 *2*	3.64 *2*	95.7 *15*	av Eβ=2854.0 *84*; εK=0.000849 *7*; εL=8.62×10^{-5} *8*; εM+=1.484×10^{-5} *13*

† Values are dependent on the theoretical assumptions used by 1982Ho11 to obtain the normalization. The evaluator estimates that these assumptions May lead At most to a factor of two difference In the feeding of the 40-keV state. Such a difference would change the log *ft*'s by≈0.3.
‡ Absolute intensity per 100 decays.

$\gamma(^{45}$Ti)

Iγ normalization: Ti(40.1γ ^{45}Ti)/Ti(56.6γ ^{45}V)=6.2% 9, assuming M1 for both transitions (1980Gr04). Based on theory and data from ^{40}Ca(^{7}Li,2nγ) (1980Gr04), 1982Ho11 estimated that 70% 20 of all ^{45}V nuclei produced should pass through the 56.6-keV state.
Comparison to neighboring nuclei indicated that the branching to excited states was expected to Be small. Within the accuracy of the measurements of 1982Ho11, No other γ's could Be assigned to ^{45}Ti In the decay of ^{45}V.

E$_\gamma$	I$_\gamma$†	E$_i$(level)	J_i^π	E$_f$	J_f^π	Mult.	δ	α‡	I$_{(\gamma+ce)}$†	Comments
40.1	3.5 *CA*	40.1	5/2$^-$	0	7/2$^-$	(M1(+E2))	0.000 *25*	0.223 *10*	4.3 *15*	ce(K)/(γ+ce)=0.165 *5*; ce(L)/(γ+ce)=0.0156 *7*; ce(M)/(γ+ce)=0.00199 *8*; ce(N+)/(γ+ce)=0.000104 *4* ce(N)/(γ+ce)=0.000104 *4* Mult.,δ,α: from the adopted gammas.

Continued on next page (footnotes at end of table)

^{45}V β^+ decay 1982Ho11 (continued)

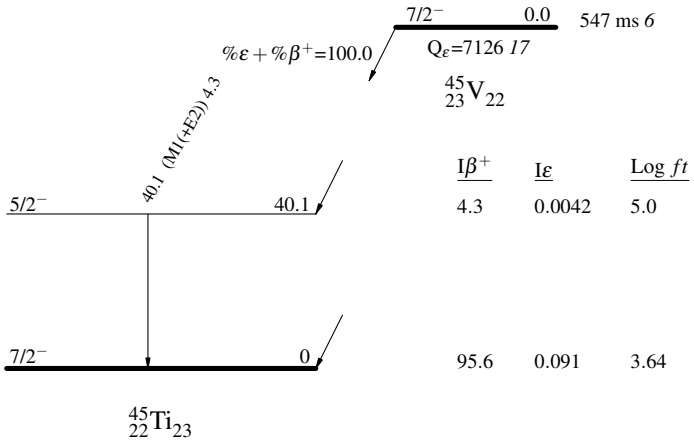
$\gamma(^{45}Ti)$ (continued)

† 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 multipolarities, and mixing ratios, unless otherwise specified.

^{45}V β^+ decay 1982Ho11

Decay Scheme

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



	Iβ+	Iε	Log ft
5/2− 40.1	4.3	0.0042	5.0
7/2− 0	95.6	0.091	3.64