^{93}Ru IT decay 1976De37

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 112, 1163 (2011)	15-Dec-2010

Parent: ^{93}Ru: E=734.4 *1*; $J^{\pi}=(1/2)^{-}$; $T_{1/2}$=10.8 s *3*; %IT decay=22.0 *23*

^{93}Ru-%IT decay: See ^{93}Ru ε decay (10.8 s).

Others: 1976DiZP, 1972Do04.

Assignment: from presence of known ^{93}Tc γ rays among decay γ rays; 10.8 s component also detected in $\gamma^{\pm}$ radiation; absence of γ or $\gamma^{\pm}$ in coincidence with 734γ (1976De37).

1976De37:Ge(Li) detectors, coincidence timing FWHM=50 ns; measured Eγ, Iγ, I($\gamma^{\pm}$), $\gamma\gamma$ coin, γ(t).

^{93}Ru Levels

E(level)	J^{π}[†]	$T_{1/2}$[‡]	Comments
0	$(9/2)^{+}$		
734.4 *1*	$(1/2)^{-}$	10.8 s *3*	E(level): from Eγ.

[†] From Adopted Levels.

[‡] From decay of four strongest γ rays following ε decay (1976De37). Other: 45 s *+30−20* (1972Do04); probably does not belong to this level (1976De37).

$\gamma(^{93}Ru)$

Iγ normalization: From Ti(734γ)=100%, assuming mult=M4 so α=0.0287.

Eγ	Iγ[†]	E$_i$(level)	J_i^{π}	E$_f$	J_f^{π}	Mult.	α[‡]	Comments
734.4 *1*	55.6 *26*	734.4	$(1/2)^{-}$	0	$(9/2)^{+}$	[M4]	0.0287	α(K)=0.0246 *4*; α(L)=0.00340 *5*; α(M)=0.000634 *9*; α(N+..)=0.0001066 *15* α(N)=0.0001017 *15*; α(O)=4.95×10^{-6} *7* E$_\gamma$: from 1976De37.

[†] For absolute intensity per 100 decays, multiply by 0.38 *4*.

[‡] 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.

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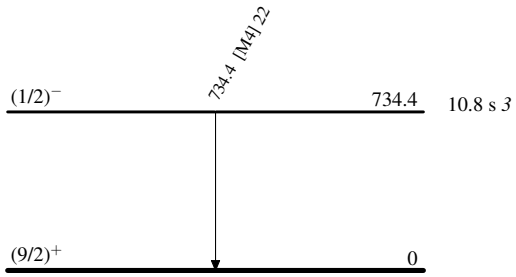
Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
%IT=22.0 *23*



$^{93}_{44}Ru_{49}$