^{91}Nb IT decay (60.86 d) 1993Hi09,1987La18,1986Wa34

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 114,1293 (2013)	1-Sep-2013

Parent: ^{91}Nb: E=104.60 *5*; $J^\pi=1/2^-$; $T_{1/2}$=60.86 d *22*; %IT decay=96.6 *5*
^{91}Nb-E,J^π,$T_{1/2}$: From Adopted Levels.
^{91}Nb-%IT decay: See comment with ^{91}Nb ε decay (60.86 d).
Others: 1970He03, 1955Ha23, 1954On06, 1951Pr20, 1951Ov01, 1950Ja01.
1993Hi09: measured α(K)exp for IT, Iγ, I(K x ray), I$\gamma\pm$.
1987La18: Ge(Li), HPGe detector, Si(Li). Measured Iγ, I(K x ray). Deduced α(K)exp.
1986Wa34: Ge(Li). Measured Eγ, Iγ, ce.
1970He03: Ge(Li). Measured Eγ, Iγ.
1955Ha23: scin. Measured Iγ, Xγ.
1951Ov01: magnetic spectrometer, NaI. Measured ce, α(exp).

^{91}Nb Levels

E(level)[†]	J^π[‡]	$T_{1/2}$	Comments
0	$9/2^+$	6.8×10^2 y *13*	$T_{1/2}$: from Adopted Levels.
104.62 *5*	$1/2^-$	60.86 d *22*	%ε+%β^+=3.4 *5* (1993Hi09); %IT=96.6 *5* (1993Hi09) $T_{1/2}$: from 1986Wa34. Others: 62 d (1951Pr20), 60 d (1950Ja01).

† From Eγ.
‡ From Adopted Levels.

$\gamma(^{91}Nb)$

Eγ	Iγ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α[‡]	Comments
104.62 *5*	100	104.62	$1/2^-$	0	$9/2^+$	M4	167.3	α(K)=114.7 *17*; α(L)=43.1 *7*; α(M)=8.28 *12*; α(N+..)=1.168 *17* α(N)=1.132 *17*; α(O)=0.0356 *5* α(K)exp=117 *3*; α(K)exp/α(L)exp+α(M)exp+α(N)exp+α(O)exp= 2.1 *1* Eγ: from 1986Wa34. Other measurements: 104.5 keV *1* (1951Ov01), 104.5 keV *1* (1970He03). α(K)exp: weighted average of 115 *5* (1987La18) and 118 *4* (1993Hi09). Other data: α(K)exp=52 *6* (1986Wa34); α(exp) of the order of 50 (1951Ov01). α(K)exp/α(L+...)exp: from 1951Ov01. Others: 2.1 (1951Pr20), 2.0 *1* (1954On06), 2.96 *24* (1986Wa34). Note that authors quote K/L (1951Ov01) or K/(L+M) (1986Wa34), but L peaks presumably include M and higher shell lines also in these studies. Mult.: from α(K)exp.

† For absolute intensity per 100 decays, multiply by 0.00574 *9*.
‡ 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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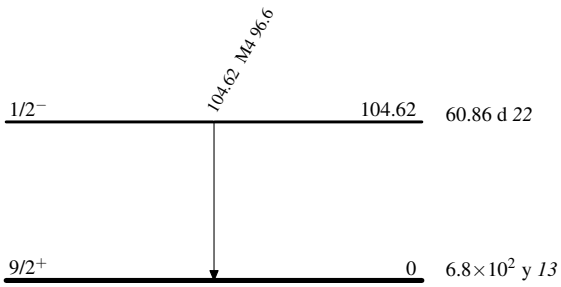
Decay Scheme

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

%IT=96.6 *5*



$^{91}_{41}Nb_{50}$