^{76}Br IT decay (1.31 s) 1980Ha23

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Jun Chen and Ameenah R. Farhan	NDS 194,3 (2024)	8-Jan-2024

Parent: ^{76}Br: E=102.59 *3*; $J^{\pi}=(4)^{+}$; $T_{1/2}$=1.31 s *2*; %IT decay=99.7 *3*

^{76}Br-%IT decay: from $\%(\varepsilon+\beta^{+})$=0.3 *3*, deduced from I$\gamma$(559$\gamma$ in ^{76}Se)=0.30 *25* relative to I(γ+ce)=100 for 45.48γ from ^{76}Br IT decay (1980Ha23).

1980Ha23 (also 1978Sc30): ^{75}As(α,3nγ) E=30-55 MeV. Measured γ, ce, $T_{1/2}$.

Others:

1979Kr04: ^{75}As(α,3nγ). Measured γ, $T_{1/2}$.

1981Vo04: U(p,X); Iβ normalization(p,X) E=600 MeV. Yield and $T_{1/2}$ data.

^{76}Br Levels

E(level)[†]	J^{π}[‡]	$T_{1/2}$[‡]
0.0	1^{-}	
45.480 *20*	$(2)^{-}$	
102.59 *3*	$(4)^{+}$	1.31 s *2*

† From Eγ data.
‡ From Adopted Levels.

γ(^{76}Br)

E_{γ}[†]	I_{γ}[†‡]	E_i(level)	J_i^{π}	E_f	J_f^{π}	Mult.	α[#]	$I_{(\gamma+ce)}$[‡]	Comments
45.48 *2*	48.5 *6*	45.480	$(2)^{-}$	0.0	1^{-}	M1	1.057		α(K)=0.933 *14*; α(L)=0.1052 *15*; α(M)=0.01675 *24*; α(N)=0.001547 *22*
57.11 *2*	9.1 *4*	102.59	$(4)^{+}$	45.480	$(2)^{-}$	M2	9.58	99.7 *3*	Mult.: from α(K)exp=1.01 *10* (1980Ha23). ce(K)/(γ+ce)=0.765 *6*; ce(L)/(γ+ce)=0.1193 *22*; ce(M)/(γ+ce)=0.0194 *4* ce(N)/(γ+ce)=0.00173 *4* α(K)=8.10 *12*; α(L)=1.262 *18*; α(M)=0.205 *3*; α(N)=0.0183 *3*
102.6 *10*	<0.1	102.59	$(4)^{+}$	0.0	1^{-}	[E3]	7.3 *4*	<0.8	Mult.: α(K)exp=8.4 *8*, α(expt)=10.0 *10*. ce(K)/(γ+ce)=0.672 *22*; ce(L)/(γ+ce)=0.177 *11*; ce(M)/(γ+ce)=0.0283 *20* ce(N)/(γ+ce)=0.00212 *15* α(K)=5.6 *3*; α(L)=1.46 *9*; α(M)=0.234 *13*; α(N)=0.0175 *10*

† From 1980Ha23.
‡ For absolute intensity per 100 decays, multiply by 0.997 *3*.
# 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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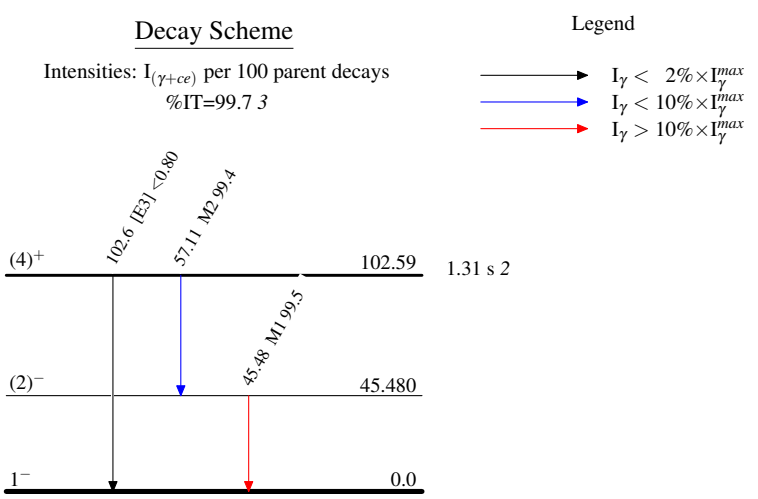
Decay Scheme

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

%IT=99.7 *3*



$^{76}_{35}Br_{41}$