^{115}Te IT decay (7.5 μs) 1972Br38,1972Va38

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 113, 2391 (2012)	1-Sep-2012

Parent: ^{115}Te: E=280.05 *20*; $J^\pi=11/2^-$; $T_{1/2}$=7.5 μs *2*; %IT decay=100.0
Isomer produced by ^{114}Sn(^{3}He,2nγ), ^{112}Sn(α,nγ) cross bombardments.
Measured prompt and delayed photon and ce spectra with pulsed α and ^{3}He beams.

^{115}Te Levels

E(level)	J^π[†]	$T_{1/2}$	Comments
0.0	$(7/2^+)$	5.8 min *2*	J^π: the ^{115}Te g.s. is assigned $7/2^+$ as for ^{113}Te g.s. rather than $1/2^+$ as for ^{117}Te,^{119}Te,^{121}Te g.s. (1974Ch51,1975WiZX).
280.05 *20*	$11/2^-$	7.5 μs *2*	%IT=100 Q=0.8 (1982Io01) $T_{1/2}$: 280γ(t) pulsed beam: 7.5 μs *2* (1972Va38), 6.3 μs *3* (1972Br38); other: 10 μs (1974MiZW). g factor: −0.186 *7* (1972Va38), −0.174 *40* (1974MiZW) γ(θ,H,t). ν h11/2 state; see ^{117}Te,^{119}Te,^{121}Te for band structures up to $J=23/2^-$ (1983VaZW). Q: ratio of absolute values of electric quadrupole moments: Q($7/2^+$,^{121}Te)/Q($11/2^-$,^{115}Te)=1.1 *2*, Q($11/2^-$,^{115}Te)=0.8 estimated (1982Io01).

[†] From Adopted Levels.

γ(^{115}Te)

Iγ normalization: for Ti(280γ,M2)=100, α(M2)=0.188.

E_γ	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[#]	Comments
280.3 *3*	100	280.05	$11/2^-$	0.0	$(7/2^+)$	M2	0.187	α(K)=0.1574 *23*; α(L)=0.0235 *4*; α(M)=0.00478 *7*; α(N+..)=0.001046 *15* α(N)=0.000945 *14*; α(O)=0.0001009 *15* α(K)exp=0.19 *3* α(K)exp: from K x ray/Iγ=0.17 *2* (1972Br38), 0.14 *3* (1972Va38). E_γ: from Eγ,E(ce): 1972Br38. K/L+M=5.5 *2* (s), α(L)exp+α(M)exp=0.028 *6* ce/Iγ (1972Br38). Hf(M2,280γ)=11.7 W.u. consistent with h11/2-to-g7/2 transitions. Analogous transitions: Hf(M2,101γ,^{115}Sn)=8.4 W.u.; Hf(M2,661γ,^{113}Sn)=7.9 W.u.

[†] Deduced from conversion coef and ce-ratio data.
[‡] For absolute intensity per 100 decays, multiply by 0.842 *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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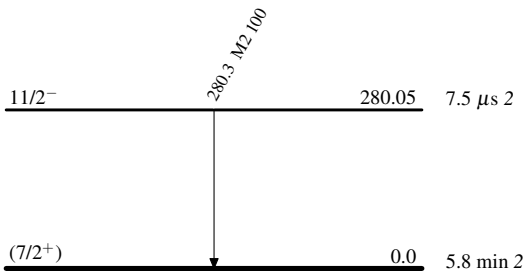
Decay Scheme

Intensities: Relative I_γ

%IT=100.0



$^{115}_{52}Te_{63}$