

¹¹⁵In IT decay (4.486 h) 1974Ha39

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

Parent: ¹¹⁵In: E=336.244 17; J^π=1/2⁻; T_{1/2}=4.486 h 4; %IT decay=95.0 7

¹¹⁵In-%IT decay: confirmed by I_β=5.0% 7 to ¹¹⁵Sn g.s. with negligible I_β to excited states (see 1974Ha39).

Source: ¹¹⁴Cd(n,γ) ion chem; 99.9% enriched ¹¹⁴Cd.

¹¹⁵In Levels

E(level)	J ^π †	T _{1/2} †	Comments
0.0	9/2 ⁺	4.41×10 ¹⁴ y 25	T _{1/2} : from β decay spectrum with scin solution spiked with indium salt: 1978Pf01, 1979Pf01.
336.244 17	1/2 ⁻	4.486 h 4	T _{1/2} : 4.486 h 4 (1974Ha39) av: 4.485 h 3 scin, 4.485 h 2 scin, 4.487 h 3 semi, 4.491 h 4 4πβ pc. Others: 4.34 h (1975Ku10), 4.5 h 1 (1975Bu24), 4.20 h 7 (1973Fo15), 4.49 h 8 (1972Pa13), 4.8 h (1968Bo28), 4.48 h (1965Sa09), 4.50 h 2 (1947Du03), 4.53 h (1940La07).

† From Adopted Levels, except as noted.

γ(¹¹⁵In)

I_γ normalization: from I_γ(336γ) per 100 isomer decays and α(exp)(M4).

E _γ	I _γ †	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.	α‡	Comments
336.241 25	45.9 1	336.244	1/2 ⁻	0.0	9/2 ⁺	M4	1.073 14	%I _γ =45.9 1 α(K)= 0.866; α(L)= 0.1826; α(M)= 0.0372; α(N+..)=0.00823 α(K)exp=0.844 12 E _γ : from 1974HeYW. Mult.: deduced from α(K)exp, α(exp), K/(L+M) data; upper limit E5 admixture=3.5% 15 from exp vs theory (1974Ha39). From (ce(K))(K x ray)-coin. Other: 0.839 19 from α(exp), ce-ratio data α(exp)=1.071 14 (ce)(K x ray)-coin, 1.076 19 from α(K)exp, ce-ratio data; weighted av: 1.073 14. L1:L2:L3=100:51.7 10:25.6 5 (1975Ma32) s; deviation of relative L2-subshell intensity from M4 theory is attributed by 1975Ma32 to exp analysis; M, N, O intensity data are compared with theory. K/L+M+=3.63 7 (1974Ha39) s. Other: 3.7 8 (1966Gr14). Hf(M4,336γ)=0.116 W.u.; compared with: Hf(M4,392γ, ¹¹³ In)=0.123 W.u., Hf(M4,537γ, ¹¹¹ In)=0.115 W.u.

† 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 multiplicities, and mixing ratios, unless otherwise specified.

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Decay Scheme

Intensities: I_γ per 100 parent decays
%IT=95.07

