^{172}Re ε decay (55 s) 1977Be66,1975St02,1986Sz06

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 75,199 (1995)	31-May-1995

Parent: ^{172}Re: E=0.0+y; J^π=(2); $T_{1/2}$=55 s *5*; Q(ε)=7.29×10^3 *46*; %ε+%$β^+$ decay=100.0

55-s activity obtained as daughter product from ^{172}Os ε decay. Measured Eγ, Iγ, γγ.

1986Sz06: ^{172}Re produced by ^{165}Ho(^{16}O,9n) E=177 MeV. Measured γ, absolute (per 100 decays of the parent) Iγ (relative to Iγ(absolute) of main γ rays from ^{172}Ta decay). The ^{172}Re activity studied by 1986Sz06 is probably mixed but Iγ(254γ)/Iγ(123γ)=2 (1986Sz06) suggests predominantly 55-s activity.

^{172}W Levels

E(level)	J^π[†]
0.0	0^+
123.3 *1*	2^+
377.1 *2*	4^+
727.5? *5*	6^+

[†] From Adopted Levels.

γ(^{172}W)

The decay scheme cannot be normalized due to insufficient information. Comparison of Iγ(per 100 decays) for 123γ and 254γ from 1986Sz06 with Iγ(relative) from 1977Be66 and 1975St02 suggests a normalization factor of 0.17 *4*; but the intensities given by 1986Sz06 may be contributed, in part, by the 15-s activity.

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[@]	Comments
123.3 *1*	135 *5*	123.3	2^+	0.0	0^+	E2	1.78	Iγ(absolute)=27 *7* (1986Sz06).
253.8 *2*	100	377.1	4^+	123.3	2^+	E2	0.143	Iγ(absolute)=13 *5* (1986Sz06).
350.4[&] *4*	<5	727.5?	6^+	377.1	4^+	E2	0.054	E_γ: from 1977Be66.
[x]743.0 *2*	26 *7*							Observed in γγ with 123.4γ (1977Be66).

[†] Weighted average of 1977Be66 and 1975St02.
[‡] From 1977Be66.
[#] From adopted gammas.
[@] 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.
[&] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

^{172}Re ε decay (55 s) 1977Be66,1975St02,1986Sz06