^{153}Ho α decay (2.01 min) 1974Sc19

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 185, 2 (2022)	23-Aug-2022

Parent: ^{153}Ho: E=0.0; $J^\pi=11/2^-$; $T_{1/2}$=2.01 min *3*; Q(α)=4052 *4*; %α decay=0.051 *25*

^{153}Ho-J^π,$T_{1/2}$: From ^{153}Ho Adopted Levels in the ENSDF database (August 2020 update).

^{153}Ho-$T_{1/2}$: Additional information 1.

^{153}Ho-Q(α): From 2021Wa16.

^{153}Ho-%α decay: Deduced from the Kα_1 X-ray and γ-ray intensities (1974Sc19).

1974Sc19: source produced in ^{147}Sm(^{10}B,4n) reaction with E=53 MeV beam from the Oak Ridge isochronous cyclotron (ORIC). Measured Eα, Iα, I(Kα x-ray), Eγ, Iγ. Deduced α decay branching ratio.

Other measurements: 1971To01, 1978AfZZ, 1988To13.

See also ^{153}Ho α decay (9.3 min).

1964Ma10 have tentatively assigned a 27-min α activity to ^{153}Ho as a precursor of an observed 5-d activity assumed to be ^{145}Eu. This assignment has not been adopted by the evaluators.

^{149}Tb Levels

E(level)	J^π	$T_{1/2}$	Comments
35.75 *8*	$11/2^-$	4.17 min *5*	%ε+%β^+=99.978 *4*; %α=0.022 *4* Energy, J^π, $T_{1/2}$ and decay modes from the Adopted Levels.

α radiations

Eα	E(level)	Iα[‡]	HF[†]	Comments
3909 *5*	35.75	100	0.5 *3*	Eα: weighted average of 3910 *5* (1974Sc19) and 3905 *10* (1978AfZZ). Other: 1988To13.

[†] The nuclear radius parameter $r_0(^{149}Tb)$=1.565 *11* is deduced from interpolation (or unweighted average) of radius parameters of the adjacent even-even nuclides in 2020Si16.

[‡] For absolute intensity per 100 decays, multiply by 0.00051 *25*.