

¹⁹⁷Rn α decay (24 ms) [1996En02,2005Uu02,1995Mo14](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia		NDS 143, 1 (2017)	31-Mar-2017

Parent: ¹⁹⁷Rn: E=199 11; J ^{π} =(13/2⁺); T_{1/2}=24 ms +3-2; Q(α)=7411 7; % α decay \leq 100.0

¹⁹⁷Rn-E: From NUBASE2016 ([2017Au03](#)). Others: 194 keV 12 in [2013Sa43](#), deduced from E α values in ¹⁹⁷Rn -> ¹⁹³Po -> ¹⁸⁹Pb -> ¹⁸⁵Hg -> ¹⁸¹Pt α -decay chain; 0+X in ¹⁹⁷Rn Adopted Levels ([2005Hu03](#)).

¹⁹⁷Rn-J ^{π} : From ¹⁹⁷Rn Adopted Levels ([2005Hu03](#)).

¹⁹⁷Rn-T_{1/2}: Weighted average of 25 ms +3-2 (maximum-likelihood method from α decay curve, [2008An05](#)); 19 ms +8-4 ([1996En02](#)), 18 ms +9-5 ([1995Mo14](#)). Others: 30 ms +150-15 ([2005Uu02](#)); 20 ms +68-14 ([1997Pu01](#)).

Other: [2013Sa43](#), [2008An05](#), [1997Pu01](#).

Measured E α ([1996En02,2005Uu02,1995Mo14](#)), half-life ([1996En02,2005Uu02,1995Mo14,2008An05,1997Pu01](#)) of ¹⁹⁷Rn isotope.

¹⁹³Po Levels

E(level)	J ^{π}	T _{1/2}	Comments
100 6	(13/2 ⁺)	245 ms 11	% α \leq 100 E(level),J ^{π} ,T _{1/2} : from Adopted Levels.

α radiations

E α	E(level)	I α [‡]	HF [†]	Comments
7356 7	100	100	1.6	E α : From 1996En02 . Other values: 7370 keV 30 (1995Mo14), 7358 keV 14 (2005Uu02). HF: assumed 100% α decay.

[†] Deduced using r₀=1.568 13, from interpolation of radius=1.585 fm 16 for ¹⁹²Po and 1.551 fm 10 for ¹⁹⁴Po.

[‡] For absolute intensity per 100 decays, multiply by \leq 1.0.