

⁸⁶Rb IT decay (1.017 min) 1969Sc10,1970Pa09,1967Yu01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Alexandru Negret, Balraj Singh		NDS 124, 1 (2015)	30-Nov-2014

Parent: ⁸⁶Rb: E=556.07 18; J^π=6⁻; T_{1/2}=1.017 min 3; %IT decay=100.0

⁸⁶Rb-%IT decay: %β⁻<0.3% (1969Sc10) from absence of 1153γ in ⁸⁶Sr.

Isomer produced by ⁸⁷Rb(n,2n).

1969Sc10: measured Eγ, α, T_{1/2}.

1970Pa09: measured Eγ, Iγ, T_{1/2}.

1967Yu01: The isomeric state was excited following the ⁸⁷Rb(n,2n) reaction. NaI(Tl) detectors were used. Measured T_{1/2}.

1971Ru15: measured Eγ, T_{1/2}.

1953Sc39, 1951Fl17: measured T_{1/2}, Eγ, x rays.

Other: 1998Do17: cross section ratios for isomer and g.s. of ⁸⁶Rb in ⁸⁹Y(n,αγ) reaction at E=6.2-14.7 MeV.

⁸⁶Rb Levels

E(level)	J ^π †	T _{1/2}	Comments
0.0	2 ⁻		
556.07 18	6 ⁻	1.017 min 3	T _{1/2} : from 1967Yu01. Other: 1.020 min 17 (1969Sc10).

† From Adopted Levels.

γ(⁸⁶Rb)

E _γ	I _γ †	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.	α‡	I _(γ+ce) †	Comments
556.07 18	98.21 6	556.07	6 ⁻	0.0	2 ⁻	(E4)	0.0183	100	α(K)exp=0.0158 15; α(exp)=0.0184 15 ce(K)/(γ+ce)=0.01549 22; ce(L)/(γ+ce)=0.00212 3; ce(M)/(γ+ce)=0.000352 5; ce(N+)/(γ+ce)=3.93×10 ⁻⁵ 6 ce(N)/(γ+ce)=3.80×10 ⁻⁵ 6; ce(O)/(γ+ce)=1.329×10 ⁻⁶ 19 I _γ : from I(γ+ce) and α. E _γ : weighted average of 556.03 25 (1969Sc10) and 556.1 25 (1970Pa09). α(K)exp,α(exp): From I(K x ray)/Iγ(556) and Ice/Iγ(556) (1969Sc10).

† 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.

 ^{86}Rb IT decay (1.017 min) 1969Sc10,1970Pa09,1967Yu01Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
%IT=100.0

