

<sup>104</sup>Rh ε decay (42.3 s)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 108,2035 (2007)	30-Mar-2007

Parent: <sup>104</sup>Rh: E=0.0; J<sup>π</sup>=1<sup>+</sup>; T<sub>1/2</sub>=42.3 s 4; Q(ε)=1139 4; %ε+%β<sup>+</sup> decay=0.45 10

Activity from <sup>103</sup>Rh(d,p), <sup>103</sup>Rh(n,γ).

Measured γ(1971Do10,1970Ok03), γγ, γγ(θ) (1972Ok01,1972Si08)Ge(Li), NaI detectors. Others: 1967Fe03, 1959Gi63, 1955Jo25, 1953Jo09.

See also <sup>104</sup>Rh β<sup>-</sup> decay.

Iβ<sup>+</sup><0.0005% (1961La16).

ε/β<sup>-</sup>=0.0045 10 from K x ray/Iβ (1965Fr05).

<sup>104</sup>Ru Levels

E(level)	J <sup>π</sup> †	T <sub>1/2</sub> †
0.0	0 <sup>+</sup>	stable
358.12 15	2 <sup>+</sup>	
987.7 5	0 <sup>+</sup>	

† From Adopted Levels.

ε,β<sup>+</sup> radiations

E(decay)	E(level)	Iβ <sup>+</sup> †	Iε †	Log ft	Comments
(151‡ 4)	987.7		0.0010 4	5.15 18	εK= 0.8370; εL= 0.1312; εM+= 0.0318
(781 4)	358.12		0.016 3	5.42 6	εK= 0.9; εL=0.11000; εM+=0.02600
(1139 4)	0.0	2.711×10 <sup>-5</sup>	0.43 10	4.32 11	av Eβ= 63 4; εK= 0.9; εL=0.10855; εM+=0.02560

† Absolute intensity per 100 decays.

‡ Existence of this branch is questionable.

γ(<sup>104</sup>Ru)

I<sub>γ</sub> normalization: from I(γ+ce)+Iε branching to g.s.=0.45% 10.

E <sub>γ</sub> †	I <sub>γ</sub> †‡	E <sub>i</sub> (level)	J <sub>i</sub> <sup>π</sup>	E <sub>f</sub>	J <sub>f</sub> <sup>π</sup>	Mult.
358.12 15	0.81 6	358.12	2 <sup>+</sup>	0.0	0 <sup>+</sup>	E2
629.6# 4	0.05 2	987.7	0 <sup>+</sup>	358.12	2 <sup>+</sup>	

† From 1972Si08.

‡ For absolute intensity per 100 decays, multiply by 0.020 5.

# Placement of transition in the level scheme is uncertain.

$^{104}\text{Rh}$   $\epsilon$  decay (42.3 s)

## Decay Scheme

Intensities:  $I_\gamma$  per 100 parent decays

- Legend
- $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
  - $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
  - $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
  - - - - -→  $\gamma$  Decay (Uncertain)

