

Adopted Levels

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Ictp-2014 Workshop Group		NDS 132, 257 (2016)	15-Jan-2016

$Q(\beta^-)=3200$ 19; $S(n)=3933$ 18; $S(p)=9020$ 5Y; $Q(\alpha)=3380$ 5Y [2012Wa38](#)

Estimated uncertainties ([2012Wa38](#)): 300 for S(p), 200 for Q(α).

$S(2n)=9791$ 18, $S(2p)=16220$ 300 (syst) ([2012Wa38](#)).

^{227}Rn evaluated by B. Singh.

[1986Bo35](#) (also [1989Bo11](#)): the activity was produced by spallation of 600-MeV protons on targets of ^{232}Th . Assignment to ^{227}Rn was based on mass separation using ISOLDE mass separator, and on the genetic relationship with its daughter nucleus ^{227}Fr . Measured β^- and half-life using plastic scintillator detector.

[1997Ku20](#) (also [1989Bo11](#), [1986Bo35](#)): the activity was produced by spallation of 1-GeV protons on targets of ^{232}Th , and subsequently mass separated in the ISOLDE mass separator; measured half-life, $E\gamma$, $I\gamma$, $\gamma\gamma$.

[Additional information 1](#).

Precise mass measurements: [2012Ch19](#), [2009Ne03](#).

 ^{227}Rn Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	(5/2)	20.2 s \pm 4	$\% \beta^- = 100$ $\% \alpha$ is negligible for $Q(\alpha)=3020$ keV (1997Mo25). J^π : suggested by 1997Ku20 ; negative parity is proposed from syst (2012Au07). $T_{1/2}$: from average of several γ decay curves (1997Ku20). Previous measurements from the same experimental group: 22 s \pm 1 (1989Bo11 , from average of γ -ray decay curves), 23 s \pm 1 (1986Bo35 , from integral spectrum).