Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, E. A. Mccutchan	NDS 165, 1 (2020)	1-Mar-2020

Q(β^-)=−11990 *SY*; S(n)=13910 *SY*; S(p)=730 *SY*; Q(α)=−2550 *SY* 2017Wa10
ΔQ(β^-)=500; ΔS(n)=470; ΔS(p)=ΔQ(α)=420 (2017Wa10).
S(2n)=30980 (syst) *500*; S(2p)=4600 (syst) *340*; Q(εp)=8410 (syst) *300* (2017Wa10).
1995He39,1995Mo26,1994He28: ^{90}Rh produced by fragmentation of a ^{106}Cd beam (E=6.36 GeV) on a natural Ni target. Mass separation and identification of ^{90}Rh using the A1200 Fragment Mass Separator of the National Superconducting Cyclotron Laboratory at Michigan State University.
2001Ki13,2002Fa13: ^{90}Rh produced by fragmentation of a ^{112}Sn beam (E=1GeV/A) on a Be target. Halflives and other decay properties measured after isotopic separation by Fragment Separator (FRS) of GSI, Darmstadt and implanting the radionuclides in a stack of position sensitive Si-detectors, used as a microcalorimeter. The microcalorimeter was surrounded by a segmented NaI-detector and a Ge-clover detector allowing β-γ coincidence studies of implanted and identified nuclei.
2019Pa16: ^{90}Rh produced in fragmentation of a ^{124}Xe beam with E=345 MeV/nucleon on a ^{9}Be target at RIKEN. Fragments separated and identified using the BigRIPS and ZeroDegree spectrometers. Nuclei were implanted into one of the DSSDs of the WAS3ABi array consisting of three DSSDs and ten single-sided silicon strip detectors. Measured implant-β, implant-β-p, implant-β(t), and implant-β-p(t). Deduced $T_{1/2}$ and decay branching ratio.

^{90}Rh Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	(0^+)	29 ms *3*	%ε+%β^+=100; %εp=0.7<(2019Pa16) $T_{1/2}$: from implant-β(t) in 2019Pa16. Other: 12 ms *+9−4* from implant-β(t) (2001Ki13, 2002Fa13). %εp: from the number of βp decays relative to the total number decays (2019Pa16). J^π: from log *ft*=3.6 to 0^+ ground state of ^{90}Ru.
0.0+x	(6,7,8)	0.56 s *2*	%ε+%β^+=100; %εp=9.6 *10* (2019Pa16) $T_{1/2}$: weighted average of 0.55 s *3* from implant-β(t) and 0.58 s *4* from implant-β-p(t), both from 2019Pa16. Other: 1.0 s *+3−2* from implant-β(t) (2001Ki13, 2002Fa13). %εp: from the number of βp decays relative to the total number decays (2019Pa16). J^π: no β feeding to yrast 4^+ in ^{90}Ru; population of $(13/2^+)$ and $(9/2^+)$ levels in βp decay to ^{89}Tc; shell model calculations in 2019Pa16 predict $J^\pi=7^+$.