Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 187,355 (2023)	20-Sep-2022

Q(β^-)=−7696 *14*; S(n)=8178 *12*; S(p)=2408 *26*; Q(α)=6860.7 *23* 2021Wa16

^{201}Rn Levels

Cross Reference (XREF) Flags

A ^{205}Ra α decay (210 ms)
B ^{205}Ra α decay (170 ms)
C ^{122}Sn(^{82}Kr,3nγ)

E(level)†	J$^\pi$	$T_{1/2}$	XREF	Comments
0.0	(3/2$^-$)	7.0 s *4*	A C	%α=?; %ε+%β^+=? Using 2019Mo01 predictions of $T_{1/2}(\beta^+ + \varepsilon)$=18.05 s and $T_{1/2}(\alpha)$=4.68 s, one gets %α=55 and %ε+%β^+=41 using $T_{1/2}$(exp)=7.0 s. J$^\pi$: Favored α-decay to ^{197}Po g.s. [J^π=(3/2$^-$), 2021Ko07]; systematics of levels in neighboring nuclei. $T_{1/2}$: Weighted average of 7.0 s *4* (1971Ho01) and 7.1 s *8* (1996Ta18). Other: 6.7 s *+51−20* (1987He10). Eα1=6725 keV *2*, correlated with Eα2(^{197}Po)=6281 keV *2* (1996Ta18). The quoted uncertainty is statistical only. Others: 6727 keV *7* (1995Le04), 6723.7 keV *25* (1993Wa04), 6730 keV *20* (1987He10) and 6721 keV *8* (1971Ho01). configuration: $\nu\, p^{-1}_{3/2}$.
245 *12*	13/2$^+$	3.8 s *1*	B C	%α=?; %ε+%β^+=? E(level): From 2021Ko07, based on the least-square adjustment of the atomic masses and the 2017Al34 data. J$^\pi$: Favored α-decay to ^{197}Po isomeric state (J^π=13/2$^+$, 2021Ko07); systematics of levels in neighboring nuclei. $T_{1/2}$: Weighted average of 3.8 s *1* (1996Ta18) and 3.8 s *4* (1971Ho01). Others: 3.0 s *15* (1967Va17) and 2.7 s *+14−7* (1987He10). Eα1=6773 keV *2*, correlated with Eα2(^{197}Po)=6380 keV *2* (1996Ta18). The quoted uncertainty is statistical only. Others: 6787 keV *30* (2010He25), 6778 keV *7* (1995Le04), 6772.1 keV *25* (1993Wa04), 6770 keV *20* (1987He10), 6770 keV *8* (1971Ho01) and 6768 keV *5* (1967Va17). configuration: $\nu\, i^{-1}_{13/2}$.
718.30 *20*	(17/2$^+$)		C	J$^\pi$: 473.3γ to 13/2$^+$; systematics of similar structures in neighboring nuclei. configuration: $\nu\,(i^{-1}_{13/2})\otimes 2^+$.
1266.2 *3*	(21/2$^+$)		C	J$^\pi$: 548.1γ to (17/2$^+$); systematics of similar structures in neighboring nuclei. configuration: $\nu\,(i^{-1}_{13/2})\otimes 4^+$.
1364.9? *4*	(21/2$^+$)		C	J$^\pi$: 646.2g to (17/2$^+$); systematics of similar structures in neighboring nuclei.
1819.3? *4*	(25/2$^+$)		C	J$^\pi$: 553.5γ to (21/2$^+$); systematics of similar structures in neighboring nuclei.

† From a least-squares fit to Eγ, unless otherwise stated.

Adopted Levels, Gammas (continued)

$\gamma(^{201}Rn)$

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
718.30	$(17/2^+)$	473.3 *2*	100	245	$13/2^+$
1266.2	$(21/2^+)$	548.1 *2*	100	718.30	$(17/2^+)$
1364.9?	$(21/2^+)$	646.2‡ *3*	100	718.30	$(17/2^+)$
1819.3?	$(25/2^+)$	454.0‡ *3*	100 *17*	1364.9?	$(21/2^+)$
		553.5‡ *3*	83 *14*	1266.2	$(21/2^+)$

† From $^{122}Sn(^{82}Kr,3n\gamma)$ (2008An05).
‡ Placement of transition in the level scheme is uncertain.

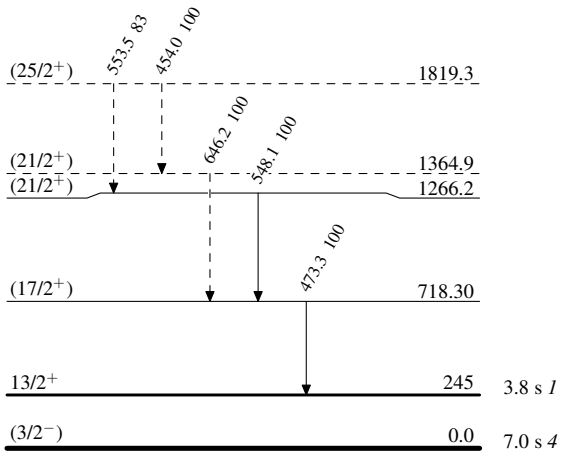
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{201}_{86}Rn_{115}$