Adopted Levels

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 113,1871 (2012)	15-Jun-2012

Q(β^-)=−5.46×10^3 *4*; S(n)=8.37×10^3 *4*; S(p)=5.9×10^2 *5*; Q(α)=6376 *5* 2012Wa38

Note: Current evaluation has used the following Q record −5474 35 *8377* 34 *589* 51 *6376* 5 2011AuZZ.

Values are from 2011AuZZ (cf. 5470 *40*, 8380 *30*, 590 *50* and 6376 *5*, respectively, from 2003Au03).

Q(α): both ^{192}Bi (3$^+$) and ^{188}Tl (2$^-$) assumed to be ground states for relevant nuclides.

Identification: mass separation of products from ^{181}Ta(^{20}Ne,xn) (1970Ta14); excitation functions for ^{203}Tl(^{3}He,xn) and ^{159}Tb(^{40}Ar,xn) (1974Le02).

The activity (T$_{1/2}$=74 s *5*, Eα=5892 keV *5*), assigned to ^{192}Bi or ^{196}Bi by 1967Tr06, was reassigned to ^{193}Bi by 1970Ta14; the activity (T$_{1/2}$=38 s *5*, Eα=6050 keV *5*), assigned to ^{191}Bi or ^{195}Bi by 1967Tr06, probably arises from ^{192}Bi.

Theory:

Calculations using Coulomb and proximity potential model: T$_{1/2}$, and HF for α decay from g.s. and (10$^-$) isomer (2011Sa10).

^{192}Bi Levels

Cross Reference (XREF) Flags

A ^{196}At α decay

E(level)	J$^\pi$[†]	T$_{1/2}$	XREF	Comments
0.0	(3$^+$)	34.6 s *9*	A	%ε+%β^+=88 *5*; %α=12 *5* (1991Va04) %α: from $\alpha\gamma$ coin assuming 30% *10* of ^{192}Bi ε decays from a similar source (studied earlier by several of the same authors) proceeded via the low-spin isomer (1991Va04). Other: ≈20% (1974Le02). T$_{1/2}$: from α-X(t) and/or α-γ(t) (1991Va04). Other values: 33 s *2* (1987Va09 from γ(t)), 37 s *3* (1988Hu03 from α(t)). Others: see comment on T$_{1/2}$(0+x level). Probable configuration=((π h$_{9/2}$)(ν f$_{7/2}$ or ν f$_{5/2}$)) (1991Va04).
147 *34*	(10$^-$)	39.6 s *4*		%ε+%β^+=90 *3*; %α=10 *3* (1991Va04) %α: from $\alpha\gamma$ coin assuming 30% *10* of ^{192}Bi ε decays from a similar source (studied earlier by several of the same authors) proceeded via the low-spin isomer (1991Va04). T$_{1/2}$: from decay of 6052α (1988Hu03). Other values: 40.6 s *9* (1991Va04), 44 s *5* (1988Hu03, 6348α(t)), 39 s *2* (1987Va09, γ(t)). Others (presence of more than one ^{192}Bi isomer possible): 1966Si11, 1967Tr06 (see note above), 1972Ga27, 1974Le02, 1997Pu01. Probable configuration=((π h$_{9/2}$)(ν i$_{13/2}$)) (1988Hu03, 1991Va04) coupled to deformed Hg core; J=10 member of multiplet E(level): from mass excesses for ^{192g}Bi (−13546 *33*, 2011AuZZ) and ^{192m}Bi (−13399 *9*, 2008We02). Other: 105+y from Eα data for the 34.6-s, and 39.6-s α decays, with y=[E(7$^+$, ^{188}Tl)-E(2$^-$, ^{188}Tl)].

[†] From 1991Va04 (assignments based on degree of hindrance of α groups to levels with known structure in ^{188}Tl and on systematics of neighboring odd-odd Bi isotopes).