Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan and A. A. Sonzogni	NDS 115, 135 (2014)	1-Nov-2013

Q(β^-)=8975 *4*; S(n)=4896 *4*; S(p)=11579 *4*; Q(α)=−7287 *4* 2012Wa38
S(2n)=11226 *4*; S(2p)=26332 *5*; Q(β^-n)=1922 *3* (2012Wa38).
α: Additional information 1.

^{88}Br Levels

Cross Reference (XREF) Flags

A ^{88}Br IT decay (5.3 μs)
B ^{88}Se β^- decay (1.53 s)

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	(2$^-$)	16.34 s *8*	AB	%β^-=100; %β^-n=6.58 *18* T$_{1/2}$: from 1993Ru01. Other values: 16.20 s *10* (1987PfZX), 16.7 s *2* (1976Ru01), 16.2 s *4* (1975Kr17), 16.5 s *2* (1974Gr29), 16.5 s *3* (1974NoZR), 16.5 s (1975Al11), 16.4 s *6* (1974Kr21), 16.3 s *8* (1971BrYH), 15.9 s *2* (1966Si09), 15.5 s *3* (1949Su14). %β^-n: from 1993Ru01 compilation. Measured values are 6.0 *16* (1964Ar24), 6.2 *9* (1971De35), 6.4 *7* (1972Sc48), 6.6 *4* (1980Lu04), 6.1 *4* (1980ReZQ), 7.3 *6* (1987PfZX), 6.72 *27* (1993Ru01). 2002Pf04 compilation lists 6.55 *18*. J$^\pi$: log $f^{1u}t$=9.9 to 2276-keV, J^π=0$^+$ level and log $f^{1u}t$=10.3 to 1643-keV, J^π=4$^+$ level in the decay to ^{88}Kr determine J^π=(2$^-$); see general comment in ^{88}Se β^- decay.
159.20 *23*	(1$^-$,2$^-$,3$^-$)		AB	J$^\pi$: E2 − M1+E2 cascade from the 270.1-keV isomeric level to J^π=(2$^-$) ground state suggests tentative J^πs of (1$^-$), (2$^-$), or (3$^-$) for the 159.2-keV level and corresponding J^πs of (3$^-$), (4$^-$), or (5$^-$), respectively, for the 270.1-keV level.
259.2 *3*	(1,2,3$^+$)		B	J$^\pi$: 259γ to (2$^-$), γ's from (1$^+$).
270.1 *5*	(3$^-$,4$^-$,5$^-$)	5.3 μs *4*	A	%IT=100 T$_{1/2}$: weighted average of 5.1 μs *4* (1999Ge01), 4.9 μs *4* (1976SeZN) and 6.3 μs *5* (1970Gr38,1972GrYM). Other 4 μs *1* (2009Fo05). J$^\pi$: see J^π comment for 159.2-keV level. E(level): decay pattern distinguishes this level from one at 272.7 observed in ^{88}Se β^- decay.
272.7 *3*	(1)[#]		B	
408.7 *3*	(1)[#]		B	
566.0 *4*	(1)[#]		B	
1903.72 *25*	(1$^+$)[‡]		B	
3154.1 *6*	(1$^+$)[‡]		B	

[†] From a least-squares fit to Eγ, by evaluators.
[‡] From log *ft*≈4.6-4.8 in ^{88}Se β^- decay (J^π=0$^+$).
[#] From log *ft*≈5.9-6.0 in ^{88}Se β^- decay (J^π=0$^+$).

Adopted Levels, Gammas (continued)

γ(^{88}Br)

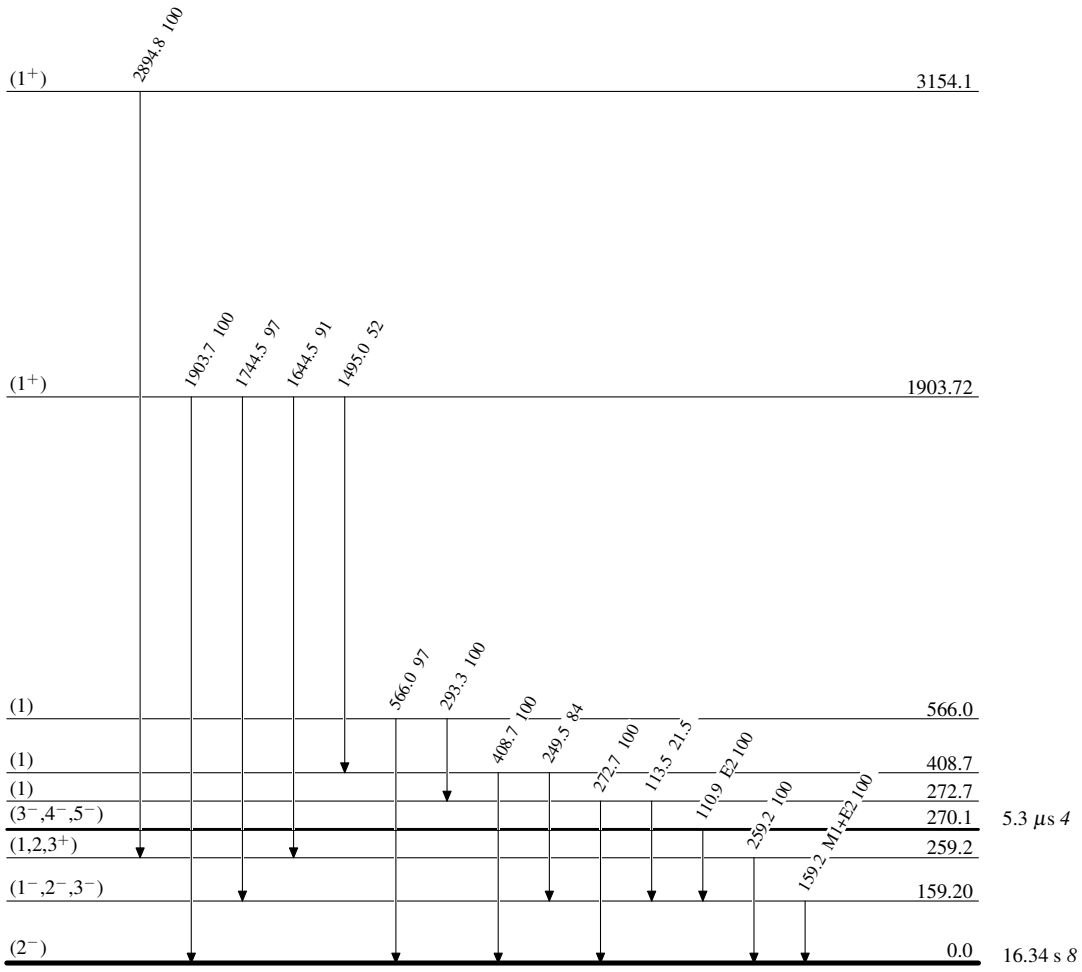
E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. ‡	δ	α	Comments
159.20	(1⁻,2⁻,3⁻)	159.2 *3*	100	0.0	(2⁻)	M1+E2	0.24 *2*	0.0396 *13*	α(K)=0.0350 *11*; α(L)=0.00394 *14*; α(M)=0.000626 *22*; α(N)=5.74×10^{-5} *19* α(K)exp=0.047 *10*. δ: from measured intensity ratio Iγ(110.9)/Iγ(159.1)= 0.65 *4*. δ: Other: 0.44 *15* from α(K)exp.
259.2	(1,2,3⁺)	259.2 *3*	100	0.0	(2⁻)				
270.1	(3⁻,4⁻,5⁻)	110.9 *5*	100	159.20	(1⁻,2⁻,3⁻)	E2		0.599 *14*	α(K)exp=0.48 *10* α(K)=0.516 *12*; α(L)=0.0712 *17*; α(M)=0.0113 *3*; α(N)=0.000951 *22* B(E2)(W.u.)=0.171 *14* E_γ,I_γ: from ^{88}Br IT decay (5.3 μs).
272.7	(1)	113.5 *5*	21.5 *22*	159.20	(1⁻,2⁻,3⁻)				
		272.7 *4*	100 *10*	0.0	(2⁻)				
408.7	(1)	249.5 *5*	84 *9*	159.20	(1⁻,2⁻,3⁻)				
		408.7 *5*	100 *9*	0.0	(2⁻)				
566.0	(1)	293.3 *5*	100 *10*	272.7	(1)				
		566.0 *5*	97 *10*	0.0	(2⁻)				
1903.72	(1⁺)	1495.0 *5*	52 *5*	408.7	(1)				
		1644.5 *4*	91 *9*	259.2	(1,2,3⁺)				
		1744.5 *4*	97 *9*	159.20	(1⁻,2⁻,3⁻)				
		1903.7 *4*	100 *9*	0.0	(2⁻)				
3154.1	(1⁺)	2894.8 *5*	100	259.2	(1,2,3⁺)				

† From ^{88}Se β^- decay, except where noted.
‡ From α(K)exp in ^{88}Br IT decay (5.3 μs) (1999Ge01).

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{88}_{35}Br_{53}$