Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	B. Singh	NDS 110,2815 (2009)	30-Sep-2009

Q(β^-)=4.66×10^3 *3*; S(n)=6.84×10^3 *3*; S(p)=9.73×10^3 *3*; Q(α)=−7.99×10^3 *3* 2012Wa38
Note: Current evaluation has used the following Q record 4629 15 *6875* 16 *9759* 15 −8064 *22* 2009AuZZ.
Additional information 1.
Values in 2003Au03 are: Q(β^-)=4632 *14*, S(n)=6862 *15*, S(p)=9748 *15*, Q(α)=−8065 *28*.
^{84}Br evaluated by B. Singh.

^{84}Br Levels

Cross Reference (XREF) Flags

A ^{84}Se β^- decay
B ^{208}Pb(^{18}O,Xγ)

E(level)	J$^\pi$	T$_{1/2}$	XREF	Comments
0	2$^-$	31.76 min *8*	A	%β^-=100 μ=1.9 *7* (1992Pr06) J$^\pi$: shape of β spectrum of transition to 0$^+$ is that expected for a first-forbidden unique transition (1970Ha21); possible configuration=$\pi 1f^3_{5/2}\otimes\nu 1g^{-1}_{9/2}$ (1970Ha21). T$_{1/2}$: from weighted average of 31.7 min *2* (1960Sa05), 31.80 min *8* (1957Jo21) and 31.6 min *2* (1956Fi36). Others: 32 min (1951Du03), 33 min (1950Ka02), 30 min (1943Bo02,1943Bo01), 30 min (1940St03), 40 min (1939Do02), 30 min (1939Ha14). μ: from $\gamma(\theta$,H,t) (1992Pr06). See also 2005St24 compilation.
3.2×10^2 *10*	(6)$^-$	6.0 min *2*	B	%β^-=100 %IT: no IT decay from this level has been observed, probably <0.1%. E(level): from difference in Q(β^-) values for the two activities (1970Ha21). Additional information 2. J$^\pi$: log *ft*=5.1 to 5$^-$. *J*$^\pi$=4$^-$ is not likely as E2 transition to 2$^-$ g.s. would be expected to be fast and 5$^-$ is less likely as B(M3)(W.u.) for %IT<0.1 would be smaller than for any other M3 transition in this region. Possible configuration=$\pi 1p^{-1}_{3/2}\otimes\nu 1g^{-1}_{9/2}$ configuration (1970Ha21). T$_{1/2}$: from 1960Sa05.
408.2 *4*	1$^+$	<0.14 μs	A	J$^\pi$: log *ft*=4.0 from 0$^+$. T$_{1/2}$: from $\beta\gamma$(t) (1970Ei02).
849.9† *2*	(7$^-$)		B	
1821.5‡ *3*	(7$^+$)		B	
2015.6‡ *4*	(8$^+$)		B	
2016.0† *4*	(8$^-$)		B	
2290.9† *4*	(9$^-$)		B	
2710.4† *4*	(10$^-$)		B	
2741.6‡ *11*	(9$^+$)		B	

† Band(A): γ sequence based on (7$^-$).
‡ Band(B): γ sequence based on (7$^+$).

Adopted Levels, Gammas (continued)

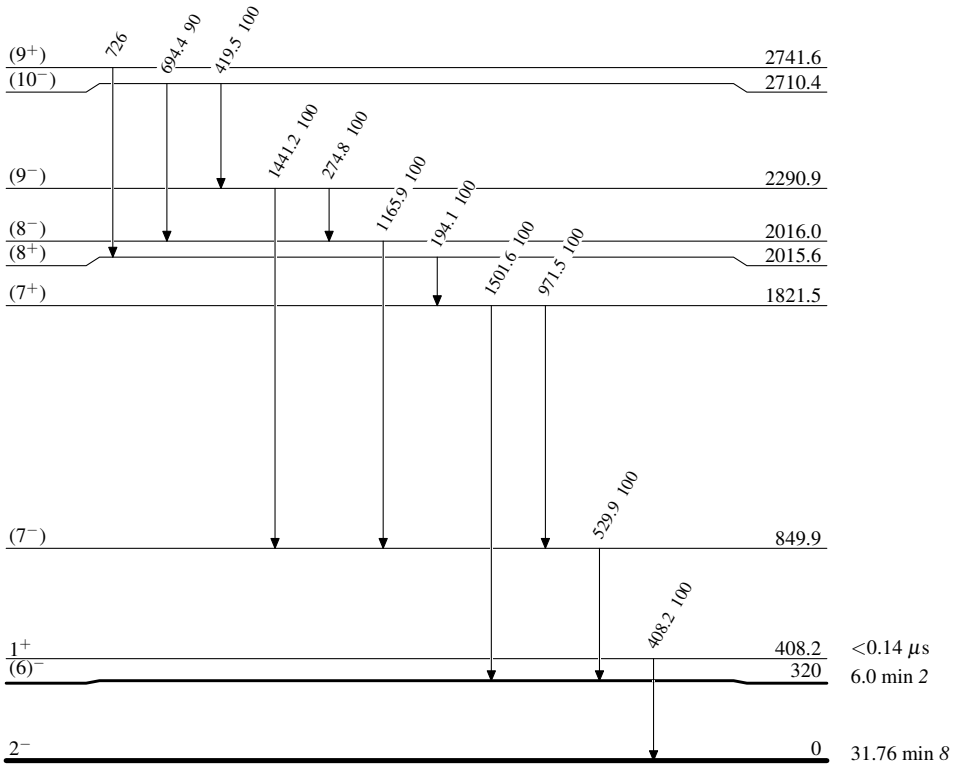
$\gamma(^{84}Br)$

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
408.2	1^+	408.2 *4*	100	0	2^-	2290.9	(9^-)	274.8 *3*	100	2016.0	(8^-)
849.9	(7^-)	529.9 *2*	100	3.2×10^2	$(6)^-$			1441.2 *4*	100	849.9	(7^-)
1821.5	(7^+)	971.5 *3*	100 *25*	849.9	(7^-)	2710.4	(10^-)	419.5 *3*	100 *30*	2290.9	(9^-)
		1501.6 *4*	100 *25*	3.2×10^2	$(6)^-$			694.4 *4*	90 *30*	2016.0	(8^-)
2015.6	(8^+)	194.1 *2*	100	1821.5	(7^+)	2741.6	(9^+)	726 *1*		2015.6	(8^+)
2016.0	(8^-)	1165.9 *3*	100	849.9	(7^-)						

Adopted Levels, Gammas

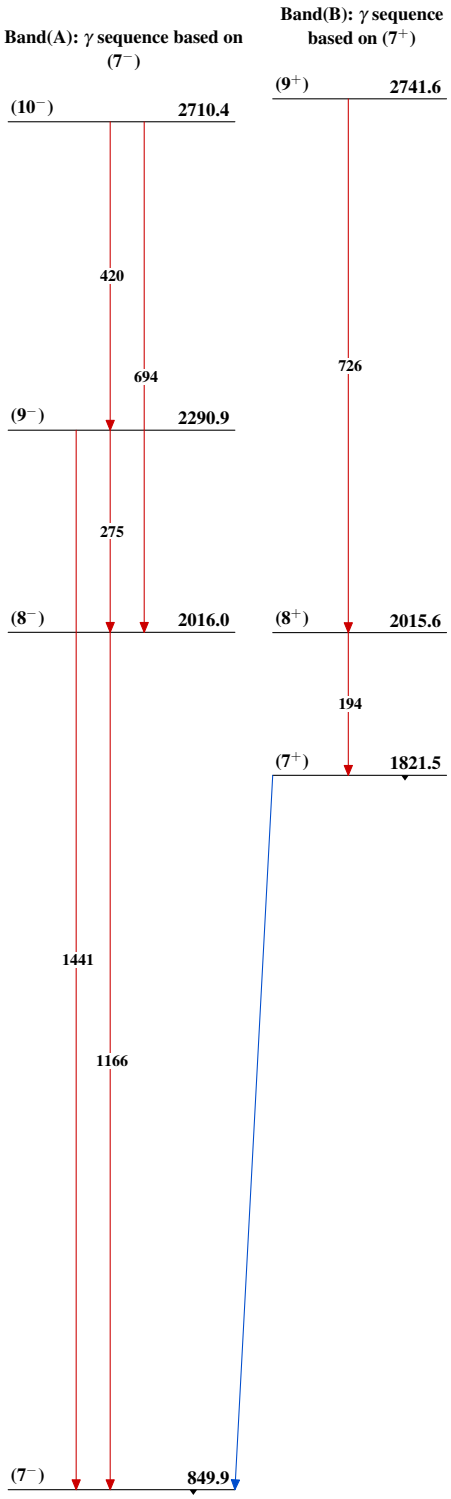
Level Scheme

Intensities: Relative photon branching from each level



$^{84}_{35}Br_{49}$

Adopted Levels, Gammas



$^{84}_{35}Br_{49}$