^{81}Ga β^-n decay (1.217 s)　　1993Ru01,1981Ho07,1986Wa17

		History	
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 105, 223 (2005)	22-Jun-2005

Parent: ^{81}Ga: E=0.0; J^π=(5/2$^-$); $T_{1/2}$=1.217 s 5; Q(β^-n)=3.46×10^3 19; %β^-n decay=11.9 7

^{81}Ga-$T_{1/2}$: weighted average of 1.221 s 5 (delayed-n activity, 1991Kr15) and 1.211 s 6 (1993Ru01). Others: 1.23 s 1 (1976Ru01), 1.22 s 1 (1986Wa17), 2.2 s (1975Al11), 1.2 s 2 (quoted in 1976Ru01 from another work).

^{81}Ga-%β^-n decay: %β^-n=11.9 7 from simultaneous measurement of n-emission rate and β^- decay rate. Average of: 10.6% 8 (1986Wa17) (4% statistical and 7% systematic uncertainty); 12.2% 10 (12.0% 9 datum of 1980Lu04 (75% of uncertainty systematic), revised to value recommended in 1984Ma39 (based on overall consistency of data from different laboratories)); 12.9% 8 (1993Ru01). Iγ(216γ from ^{81}Ga β^-)(absolute)/I(delayed neutrons)(absolute)=2.9 2 (1981Ho07).

^{80}Ge Levels

Others: 1977Ru09, 1977Ru10, 1980Lu04, 1991Kr15.
Theory, analysis and compilations: 1989Gu27, 1989BrZI, 1984KoYR, 1984Ha58, 1984Ma39, 1982Ru01, 1980AlZG, 1979RuZQ.
Following neutron groups with energy (percent intensity) reported by 1977Ru09, 1977Ru10: 80 (0.38), 140 (0.55), 240 (0.34), 290 (0.36), 330 (0.80), 380 (0.40), 440 (0.18), 500 (0.10), 560 (0.12).

E(level)[†]	J^{π}[‡]
0.0	0$^+$
659.1	2$^+$
1573.4	(2$^+$)

[†] From 1981Ho07.
[‡] From 'Adopted Levels'.

γ(^{80}Ge)

Iγ normalization: from %Iγ(216γ)=37.4 22 (see A=81,1996Ba89), Iγ(659γ)=14.7 and %β^-n=11.9 7.

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π
659.1	14.7	659.1	2$^+$	0.0	0$^+$
914.3	<0.4	1573.4	(2$^+$)	659.1	2$^+$
1573.4	<0.4	1573.4	(2$^+$)	0.0	0$^+$

[†] From 1981Ho07. Iγ's are relative to 100 for 216γ from ^{81}Ga β^- decay.
[‡] For absolute intensity per 100 decays, multiply by 0.411 24.

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Decay Scheme

Intensities: I$_\gamma$ per 100 parent decays

Legend

I$_\gamma$ < 2%×I$_\gamma^{max}$
I$_\gamma$ < 10%×I$_\gamma^{max}$
I$_\gamma$ > 10%×I$_\gamma^{max}$

(5/2$^-$)   0.0   1.217 s 5

%β^-n=11.9   Q=3.46×10^3 19

$^{81}_{31}$Ga$_{50}$

1573.4 <0.164
914.3 <0.164

(2$^+$)   1573.4

659.1 6.0

2$^+$ 659.1

0$^+$ 0.0

$^{80}_{32}$Ge$_{48}$