Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	A. A. Sonzogni, M. Fadil, and B. Pfeiffer	NDS 110,2815 (2009)	30-Sep-2009

Q(β^-)=7705 *5*; S(n)=5243 *4*; S(p)=16180 *4*; Q(α)=−8925 *4* 2012Wa38
Note: Current evaluation has used the following Q record 7705 4 *5243* 4 *16180* 4 −8925 4 2009AuZZ.
Q(β^-n)=3450 *4* (2009AuZZ).
The values in 2003Au03 are: Q(β^-)=7840 *420*, S(n)=5420 *360*, S(p)=16150 *420*, Q(α)=−8830 *340*, Q(β^-n)=3560 *370*; all from systematics.
^{84}Ge evaluated by A.A. Sonzogni, M. Fadil, and B. Pfeiffer .
Precise atomic mass measurement: 2008Ha23 (Penning-trap system). Other mass measurement: 2006Ha62.

^{84}Ge Levels

Cross Reference (XREF) Flags

- A ^{84}Ga β^- decay (0.085 s)
- B ^{84}Ga β^- decay (<0.085 s)
- C ^{84}Ga β^- decay: mixed source
- D ^{85}Ga β^-n decay

E(level)	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0‡	0$^+$	0.954 s *14*	ABCD	%β^-=100; %β^-n=10.2 *9* (2002Pf04) %β^-n from 2002Pf04, others: 10.8 *6* (1993Ru01), 9.5 *20* (1991Kr15), 9 *3* (1991Om01). T$_{1/2}$: from 2002Pf04. Others: 0.947 s *11* (1993Ru01), 0.984 s *23* (1991Kr15), 0.98 s *5* (1991Om01), 1.2 s *3* (1972De43).
624.3‡ *7*	(2$^+$)†		BCD	
1389			BC	
1670.4?‡ *10*	(4$^+$)†		BC	E(level): level treated as tentative (evaluators) since $\gamma\gamma$ coin evidence for 1046-624 cascade is lacking. In reference 8 quoted by 2009LeZZ, one of the possible assignment of 1046γ is in ^{83}Ge nuclide from ^{84}Ga delayed neutron decay, although, this possibility is considered as less likely by 2009LeZZ.

† From systematics of even-even nuclides around N=50, in particular, ^{80}Ge.
‡ Band(A): g.s. cascade.

$\gamma(^{84}Ge)$

E$_i$(level)	J$_i^\pi$	E$_\gamma$†	I$_\gamma$	E$_f$	J$_f^\pi$
624.3	(2$^+$)	624.1 *5*	100	0.0	0$^+$
1389		765.1 *8*	100	624.3	(2$^+$)
1670.4?	(4$^+$)	1046.1 *7*	100	624.3	(2$^+$)

† From ^{84}Ga β^- decay (mixed source).

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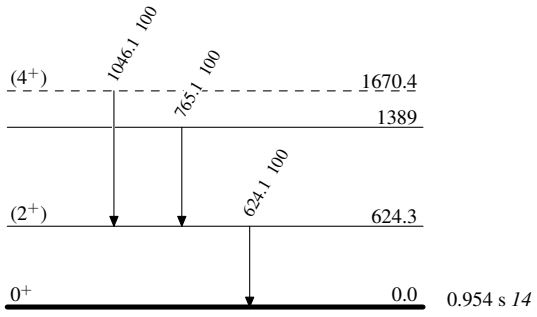
Level Scheme

Intensities: Relative photon branching from each level



$^{84}_{32}Ge_{52}$

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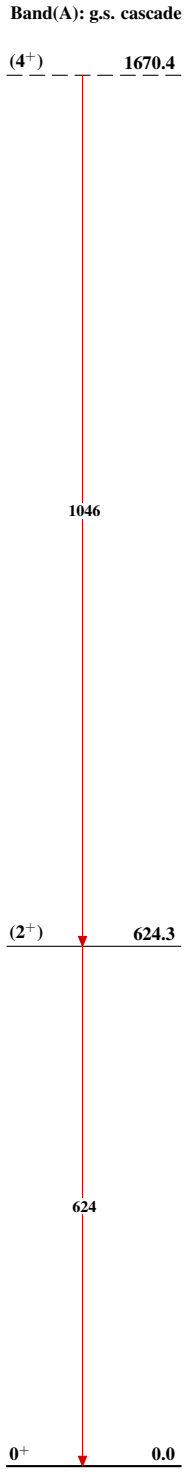

$^{84}_{32}Ge_{52}$