

⁸⁴Ge β⁻ decay 1991Om01,2009LeZZ

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

Parent: ⁸⁴Ge: E=0.0; J^π=0⁺; T_{1/2}=0.954 s 14; Q(β⁻)=7705 4; %β⁻ decay=100.0

⁸⁴Ge-Q(β⁻): from 2009AuZZ. Other: 7840 420 (syst,2003Au03).

⁸⁴Ge-%β⁻ decay: %β⁻=100, %β⁻n=10.2 9.

1991Om01: mass separated fission fragments, measured β, γ, βγ.

2009LeZZ: U(γ,F), E=50 MeV, fission fragments were mass separated and implanted on a tape system, measured γ, βγ. It states that details of this work are to be discussed in a forthcoming paper.

2009LeZZ is now published as Phys. Rev. C 80, 044308 (2009). The data in the published version are identical to those in preprint.

Additional information 1.

2008WiZZ: ²³⁵U(p,F), fission fragments implanted into a moving tape collector, measured γ, γβ using four Ge clover detectors and two plastic scintillators.

⁸⁴As Levels

Level scheme is based on the one from Figure 2 in 2008WiZZ.

E(level) [†]	J ^π [‡]
0.0	(3 ⁻)
99.9 3	
142.6 4	
242.4 3	
589.5 7	
1198.3 9	

[†] From least-squares fit to E_γ.

[‡] From Adopted Levels.

γ(⁸⁴As)

I_γ normalization: The absolute intensities for the 242γ and 100γ were measured to be 13 3 and 8.7 20 respectively by 1991Om01. If these data is used in conjunction with the I_γ values from 2008WiZZ, one can obtain I_γ normalization=0.14 3 or I_γ normalization=0.110 24, depending on using the 242γ or 100γ. The weighted average of these two values is 0.122 19, which is the value that is adopted.

E _γ	I _γ ^{†@}	E _i (level)	E _f	J _f ^π	Comments
42.7 3	81 3	142.6	99.9		E _γ : weighted average of 42.7 3 (2009LeZZ) and 42.8 5 (2008WiZZ).
99.9 3	79 5	99.9	0.0	(3 ⁻)	E _γ : weighted average of 100.0 3 (2009LeZZ) and 99.6 5 (2008WiZZ) Other: 100.0 (1991Om01).
242.4 3	92 7	242.4	0.0	(3 ⁻)	E _γ : weighted average of 242.4 3 (2009LeZZ) and 242.3 5 (2008WiZZ). Other: 242.4 (1991Om01).
347.1 [‡] 6		589.5	242.4		
*386.0 [#] 5	53 5				
608.8 [‡] 6		1198.3	589.5		

[†] From 2009LeZZ, normalized to 100 for 247.8γ from ⁸⁴Ga β⁻n decay to ⁸³Ge.

[‡] From 2008WiZZ.

Continued on next page (footnotes at end of table)

${}^{84}\text{Ge}$ β^- decay **1991Om01,2009LeZZ** (continued)

$\gamma({}^{84}\text{As})$ (continued)

Observed only by [2009LeZZ](#).

@ For absolute intensity per 100 decays, multiply by 0.122 19.

^x γ ray not placed in level scheme.

$^{84}\text{Ge} \beta^-$ decay 1991Om01,2009LeZZ

Decay Scheme

Intensities: Relative I_γ

Legend

