^{9}Be(n,γ) E=thermal

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu and J. L. Godwin, et al.	NP A745 155 (2004)	31-Mar-2004

1969We10: ^{9}Be(n,γ) E=thermal, measured $\sigma(E_\gamma)$. ^{10}Be transition deduced No Doppler broadening.
1980Is02: ^{9}Be(n,γ) E=thermal, measured E_γ, I_γ. ^{10}Be deduced Q, neutron binding energy.
1983Ke11: ^{9}Be(n,γ) E=0.5-11 MeV, measured E_γ, I_γ. ^{10}Be deduced neutron separation energy, level energies.
1985Mu03, 1988Mu05: ^{9}Be(n,γ) E=thermal, analyzed E1 transitions following capture. Deduced spin-spin potential parameters. ^{10}Be levels deduced spectroscopic amplitudes, phases.
1986Co14: ^{9}Be(n,γ) E=thermal, measured E_γ, I_γ. Deduced capture σ relative to ^{14}N(n,γ).
1986Go14: ^{9}Be(n,γ) E=2-25 MeV, measured γ-ray production σ.
1986Ke14: ^{9}Be(n,γ) E=reactor, measured γ-spectra following capture. ^{10}Be levels deduced I_γ.
1994Ki09: ^{9}Be(n,γ) E=622 keV, measured $\sigma(E,E_\gamma)$ At θ=125 degrees. ^{10}Be deduced resonance, Γ_γ.
2002Re13: ^{9}Be(n,γ) E=thermal, compiled, analyzed prompt E_γ, I_γ.
Branching: σ_0=0.00877 *35* (2003MuZZ); others σ=8.8 mb *6* (egaf) σ=8.49 mb *34* (1986Co14), σ=7.6 mb *8* (1981MuZQ, 1987Ly01), σ=9.2 mb *10* (1973Mu14).

^{10}Be Levels

E(level)	J^π	$T_{1/2}$
0.0	0^+	1.51×10^6 y *6*
3368.056 *25*	2^+	125 fs *12*
5958.43 *3*	2^+	<55 fs
5960.76 *12*	1^-	
6180.16 *5*	0^+	0.8 ps *+3−2*
6264.53 *5*	2^-	
6812.10 *3*	$1^-,2^-$	

$\gamma(^{10}$Be)

E_γ	I_γ †‡	E_i(level)	J_i^π	E_f	J_f^π	Comments
219.40 *10*	0.051 *8*	6180.16	0^+	5960.76	1^-	σ(n,γ)= 0.0045 mb *6*; also see σ(n,γ)=0.004 mb *1* (1974JuZW).
304.24# *13*	0.026 *6*	6264.53	2^-	5960.76	1^-	σ(n,γ)= 0.0023 mb *5*.
547.55 *4*	0.124 *14*	6812.10	$1^-,2^-$	6264.53	2^-	σ(n,γ)= 0.0109 mb *10*; also see σ(n,γ)=0.012 mb *2* (1974JuZW).
631.92 *4*	0.205 *48*	6812.10	$1^-,2^-$	6180.16	0^+	σ(n,γ)= 0.018 mb *4*; also see σ(n,γ)=0.018 mb *2* (1974JuZW).
853.630 *12*	23.6 *32*	6812.10	$1^-,2^-$	5958.43	2^+	σ(n,γ)= 2.08 mb *24*; also see σ(n,γ)=2.0 mb *2* (1974JuZW).
2590.014 *19*	21.7 *23*	5958.43	2^+	3368.056	2^+	σ(n,γ)= 0.00191 MB15; also see σ(n,γ)=1.7 mb *2* (1974JuZW).
2811.68 *5*	0.119 *16*	6180.16	0^+	3368.056	2^+	σ(n,γ)= 0.0105 mb *12*; also see σ(n,γ)=0.010 mb *2* (1974JuZW).
2896.02 *4*	0.132 *17*	6264.53	2^-	3368.056	2^+	σ(n,γ)= 0.0116 mb *13*; also see σ(n,γ)=0.011 mb *2* (1974JuZW).
3367.448 *25*	32.4 *33*	3368.056	2^+	0.0	0^+	σ(n,γ)= 0.00285 mb *22*; also see σ(n,γ)=2.5 mb *2* (1974JuZW).
3443.406 *20*	11.1 *11*	6812.10	$1^-,2^-$	3368.056	2^+	σ(n,γ)= 0.98 mb *7*; also see σ(n,γ)=0.86 mb *8* (1974JuZW).
5956.53 *3*	1.66 *18*	5958.43	2^+	0.0	0^+	σ(n,γ)= 0.146 mb *12*; also see σ(n,γ)=0.11 mb *2* (1974JuZW).
5958.85 *12*	0.077 *11*	5960.76	1^-	0.0	0^+	σ(n,γ)= 0.0068 mb *8*.
6809.61 *3*	65.9 *72*	6812.10	$1^-,2^-$	0.0	0^+	σ(n,γ)=5.8 mb *5*; also see σ(n,γ)=4.9 mb *5* (1974JuZW).

† Intensities per 100 neutron captures.
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# Placement of transition in the level scheme is uncertain.

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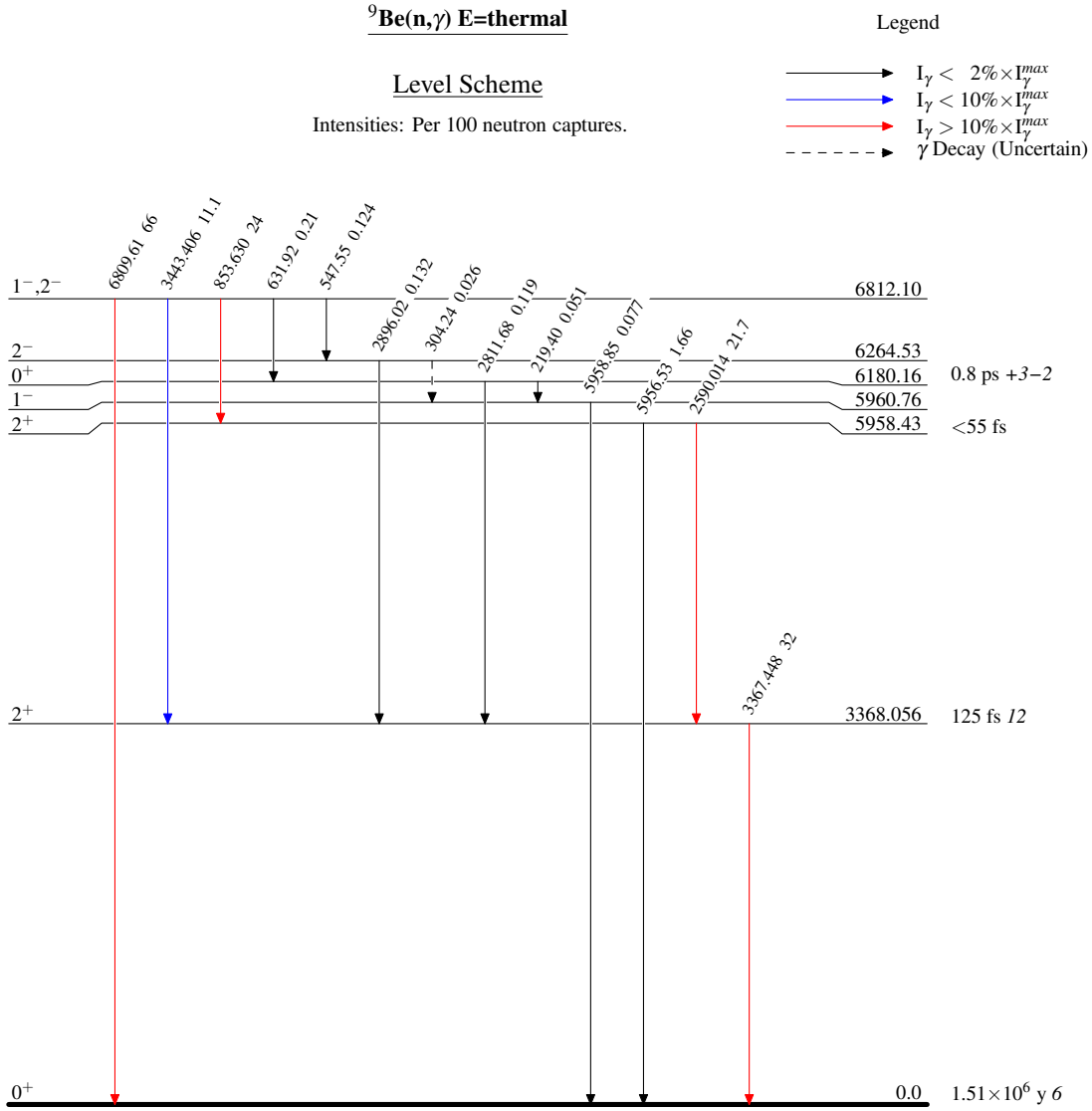
Level Scheme

Intensities: Per 100 neutron captures.



$^{10}_{4}Be_{6}$