^{168}**Er(d,pγ)**   **1969BoZP**

| | | History | |
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 109, 2033 (2008)	15-Jun-2008

E(d)=8 MeV (pulsed beam); measured Eγ, Iγ (semi), E(ce), Ice (mag spect), prompt and delayed pγ coin and p-ce coin.

^{169}Er Levels

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$[#]
0.0	1/2$^-$	
63.9 *7*	3/2$^-$	
74.1 *7*	5/2$^-$	
91.5 *8*	(5/2)$^-$	285 ns *20*
175.5 *11*	(7/2)$^-$	
241.0 *11*	7/2$^+$	200 ns *10*
283.5 *15*	(9/2$^-$)	

[†] From least-squares fit to Eγ, assigning 1 keV uncertainty to data for which authors do not state uncertainty.
[‡] From Adopted Levels.
[#] From pγ(t), p-ce(t).

γ(^{169}Er)

E$_{\gamma}$	I$_{\gamma}$[‡]	E$_i$(level)	J$^{\pi}_i$	E$_f$	J$^{\pi}_f$	Mult.[†]	δ[†]	α[&]	Comments
(10.0[#] *1*)		74.1	5/2$^-$	63.9	3/2$^-$				
(17.46[#] *12*)	@	91.5	(5/2)$^-$	74.1	5/2$^-$				
(27.6[#] *2*)	@	91.5	(5/2)$^-$	63.9	3/2$^-$				
64	20.5	63.9	3/2$^-$	0.0	1/2$^-$	M1+E2	0.67	12.48	α(K)exp=7.85, α(L)exp + α(M)exp=5.7.
65.5	35	241.0	7/2$^+$	175.5	(7/2)$^-$	E1		0.983	Mult.: from α(exp)≈0.94 (value required by intensity balance of 65.5γ-84γ cascade), compared with α(E1 theory)=0.983.
74	15	74.1	5/2$^-$	0.0	1/2$^-$	(E2)		9.55	α(K)exp=5.4, α(L)exp + α(M)exp=2.3.
84	12	175.5	(7/2)$^-$	91.5	(5/2)$^-$	M1		4.70	α(L)exp + α(M)exp=0.71.
108		283.5	(9/2$^-$)	175.5	(7/2)$^-$				
[x]130									
[x]147.5									
149.5	100	241.0	7/2$^+$	91.5	(5/2)$^-$	E1		0.1118	K/L=5.9 *15*. Mult.: from restriction to E1 or M1 by K/L, and elimination of M1 by low Iγ(Er K x ray) (M1 for 149.5γ would require Iγ(Er K x ray)>800, compared with Iγ(exp)=326).
[x]157.5									
[x]165									

[†] From α(L)exp + α(M)exp, except where noted. The photon and ce intensity scales were normalized through (α(L) + α(M))=0.0174 (E1 theory) for 149.5γ.
[‡] Arbitrary units, relative to Iγ=100 for 149.5γ. On this scale, Iγ(Er K x ray)=326.
[#] From Adopted Gammas.
[@] Iγ(17.3γ)/Iγ(27.6γ)>0.18.
[&] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
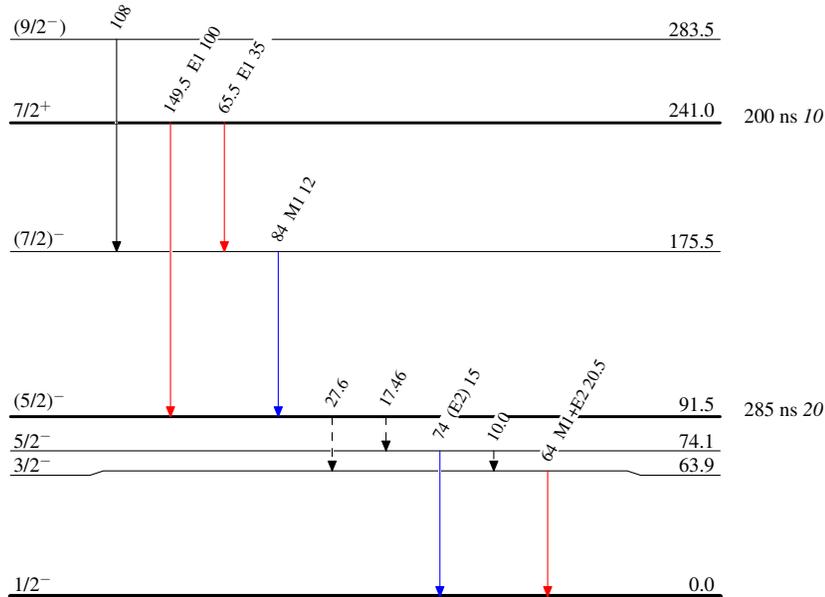[x] γ ray not placed in level scheme.

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Legend

<u>Level Scheme</u>

Intensities: Relative I$_\gamma$

→	I$_\gamma$ < 2%×I$_\gamma^{max}$
→	I$_\gamma$ < 10%×I$_\gamma^{max}$
→	I$_\gamma$ > 10%×I$_\gamma^{max}$
⇢	γ Decay (Uncertain)

$^{169}_{68}$Er$_{101}$