$^{12}C(^{66}Zn,^{8}Be\gamma)$ 2006Le31

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal, E. A. Mccutchan	NDS 136, 1 (2016)	1-Jul-2016

E(^{66}Zn)=180 MeV provided by Munich tandem accelerator. Natural carbon deposited on gadolinium that was evaporated on a tantalum foil backed by a copper layer used as a target. 2α particles and recoiling ^{12}C ions were detected in a Si detector. The γ rays were measured in coincidence with 2α particles using four NaI(Tl) detectors. A Ge detector was used to measure the γ-rays. Measured $T_{1/2}$ using Doppler-shift attenuation method (DSAM) and g factors using Transient Field technique.

^{70}Ge Levels

E(level)[†]	J^{π}[‡]	$T_{1/2}$[#]	Comments
0	0^+		
1039	2^+	1.32 ps *14*	g=+0.43 *12* (2006Le31)
1215	0^+		
1707	2^+	1.94 ps *28*	g=+0.4 *6* (2006Le31)
2153	4^+	0.76 ps *14*	
2156	2^+		
2451	3^+		
2535	2^+		
2562	3^-	0.55 ps *7*	
2806	4^+		
3059	4^+		
3416	5^-		

[†] From a least-squares fit to Eγ's by evaluators.
[‡] From the Adopted Levels.
[#] From Doppler-shift attenuation method (2006Le31).

$\gamma(^{70}Ge)$

E_γ[†]	E_i(level)	J_i^{π}	E_f	J_f^{π}	Comments
176	1215	0^+	1039	2^+	E_γ: deduced by the evaluators from the level scheme given in 2006Le31.
492	1707	2^+	1215	0^+	
668	1707	2^+	1039	2^+	
743	2451	3^+	1707	2^+	
854	3416	5^-	2562	3^-	
906	3059	4^+	2153	4^+	
941	2156	2^+	1215	0^+	
1039	1039	2^+	0	0^+	
1098	2806	4^+	1707	2^+	
1113	2153	4^+	1039	2^+	
1117	2156	2^+	1039	2^+	
1263	3416	5^-	2153	4^+	
1412	2451	3^+	1039	2^+	
1495	2535	2^+	1039	2^+	
1522	2562	3^-	1039	2^+	
1707	1707	2^+	0	0^+	
2019	3059	4^+	1039	2^+	
2156	2156	2^+	0	0^+	

[†] From 2006Le31, except where noted.

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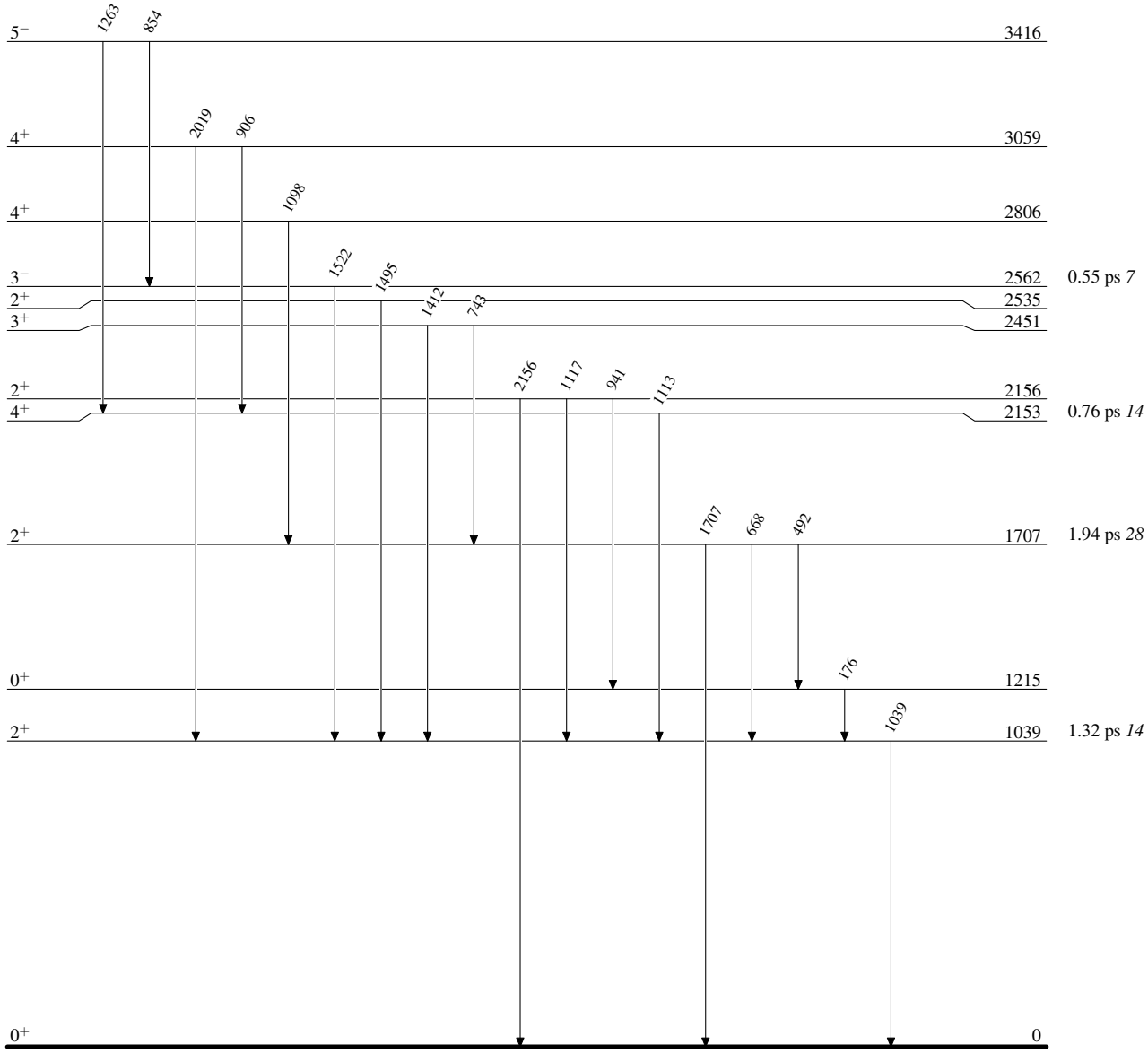
Level Scheme



$^{70}_{32}Ge_{38}$