

⁷⁴Ge(p,γ) 1974Wa08,1979Sz06,1997Ra16

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Alexandru Negret, Balraj Singh		NDS 114, 841 (2013)	30-Jun-2013

1974Wa08: E=2.531 MeV. Measured G. Enriched target.

1979Sz06, 1978WiZM: E(p)=2.2-2.8 MeV, average resonance spectroscopy yielding γ-ray strength functions.

1997Ra16: E(p)=1.8-3.9 MeV; measured σ(θ), primary Eγ and Iγ.

Others:

1978Kl05: E(p)=3.25-5.29 MeV; measured σ(θ), observed primary transitions.

1957Ch37: resonances in the range 1.0-2.7 MeV.

2012Sa41: E(p)=2.1-3.7 MeV; measured σ(θ) using 4 HPGe detectors at 8 angles. Cross sections compared with Hauser Feshbach calculations.

⁷⁵As Levels

E(level) [†]	J ^π [‡]	T _{1/2}	E(level) [†]	E(level) [†]
0.0	3/2 ⁻		1065.4 15	1605 2
199.3 15	1/2 ⁻		1077.0 15	1662 [#]
264.9 15	3/2 ⁻		1128.6 15	1808 2
278.7 15	5/2 ⁻		1204.5 15	1874 2
304.1 15	9/2 ⁺	18.8 ^{&} ms 4	1264 [@] 3	2061 ^a 3
400.4 15	5/2 ⁺		1301 [#]	2098 ^b 3
468.6 15	1/2 ⁻		1309 [#]	2180 3
572.6 15	5/2 ⁻		1351.3 15	2470?
585 [#]	1/2 ⁻		1371 [@] 3	2572 3
619.1 15	1/2 ⁻ , 3/2 ⁻		1422.0 15	2663 4
822	7/2 ⁻		1431.7 15	2683 4
864.8 15			1504 2	2938 4
886 [@] 3			1581 [#]	9399 ^c 5
1044.0 15			1592 [#]	

[†] From 1974Wa08, unless otherwise stated.

[‡] From Adopted Levels.

[#] From 1997Ra16 only.

[@] From 1979Sz06 only.

[&] From pulsed-beam, γ(t) (1961Sc09) in ⁷⁴Ge(p,γ) at 2.6 MeV.

^a 2069 3 (1979Sz06).

^b 2102 doublet (1979Sz06).

^c Proton-capture state.

γ(⁷⁵As)

E _i (level)	J _i ^π	E _γ [‡]	I _γ [†]	E _f	J _f ^π	Mult. [@]
304.1	9/2 ⁺	304	100	0.0	3/2 ⁻	E3
400.4	5/2 ⁺	400	18	0.0	3/2 ⁻	
468.6	1/2 ⁻	469	100	0.0	3/2 ⁻	
572.6	5/2 ⁻	573	100	0.0	3/2 ⁻	
619.1	1/2 ⁻ , 3/2 ⁻	619	100	0.0	3/2 ⁻	
822	7/2 ⁻	822	100	0.0	3/2 ⁻	
864.8		865	100	0.0	3/2 ⁻	
1044.0		644	45	400.4	5/2 ⁺	
		740	45	304.1	9/2 ⁺	

Continued on next page (footnotes at end of table)

$^{74}\text{Ge}(p,\gamma)$ **1974Wa08,1979Sz06,1997Ra16** (continued) $\gamma(^{75}\text{As})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\ddagger	I_γ^\dagger	E_f	J_f^π	$E_i(\text{level})$	E_γ^\ddagger	I_γ^\dagger	E_f	J_f^π
1044.0		1044	10	0.0	3/2 ⁻	2683	1078 ^{&}		1605	
1065.4		786	51	278.7	5/2 ⁻		1818	20	864.8	
		800	49	264.9	3/2 ⁻		2214	10	468.6	1/2 ⁻
1077.0		458	18	619.1	1/2 ⁻ , 3/2 ⁻		2418	22	264.9	3/2 ⁻
		608	33	468.6	1/2 ⁻		2484	28	199.3	1/2 ⁻
		1077	49	0.0	3/2 ⁻		2683	20	0.0	3/2 ⁻
1128.6		1129	100	0.0	3/2 ⁻	2938	1516	14	1422.0	
1204.5		1205	100	0.0	3/2 ⁻		1733	18	1204.5	
1351.3		951	14	400.4	5/2 ⁺		2634	15	304.1	9/2 ⁺
		1351	86	0.0	3/2 ⁻	9399	6461	6.7	2938	
1422.0		1143	77	278.7	5/2 ⁻		6713	5.2	2683	
		1422	23	0.0	3/2 ⁻		6733	4.9	2663	
1431.7		1432	100	0.0	3/2 ⁻		6824 ^{#&}	<1.0	2572	
1504		1305	100	199.3	1/2 ⁻		7221	2.4	2180	
1605		1605	100	0.0	3/2 ⁻		7299	6.2	2098	
1808		1408	20	400.4	5/2 ⁺		7335 ^{#&}	<1.0	2061	
		1504	14	304.1	9/2 ⁺		7524	6.0	1874	
		1543	18	264.9	3/2 ⁻		7591	4.1	1808	
1874		669	29	1204.5			7793	4.2	1605	
		1009 ^{&}		864.8			7891	3.7	1504	
		1474	12	400.4	5/2 ⁺		7966	2.1	1431.7	
		1609 ^{&}		264.9	3/2 ⁻		7976	1.9	1422.0	
		1675	15	199.3	1/2 ⁻		8046	3.7	1351.3	
2061		932	25	1128.6			8193	5.5	1204.5	
		996	40	1065.4			8268	2.1	1128.6	
		1757	35	304.1	9/2 ⁺		8331 ^{#&}	<1.0	1077.0	
2098		1033 ^{&}		1065.4			8343 ^{#&}	<1.0	1065.4	
		1233	19	864.8			8353 ^{#&}	<1.0	1044.0	
		1698	12	400.4	5/2 ⁺		8536	3.9	864.8	
		1794	15	304.1	9/2 ⁺		8779	4.7	619.1	1/2 ⁻ , 3/2 ⁻
		2098	27	0.0	3/2 ⁻		8828	4.2	572.6	5/2 ⁻
2180		575 ^{&}		1605			8930	4.5	468.6	1/2 ⁻
		1915	88	264.9	3/2 ⁻		8997	2.4	400.4	5/2 ⁺
		1981	12	199.3	1/2 ⁻		9093	1.6	304.1	9/2 ⁺
2572		1953	26	619.1	1/2 ⁻ , 3/2 ⁻		9120	2.6	278.7	5/2 ⁻
		2103	43	468.6	1/2 ⁻		9133	5.2	264.9	3/2 ⁻
		2307	31	264.9	3/2 ⁻		9200	6.2	199.3	1/2 ⁻
2663		565 ^{&}		2098			9398	4.7	0.0	3/2 ⁻
		2263	23	400.4	5/2 ⁺					

[†] Photon branching at 90°. Uncertainties not available.

[‡] From 1974Wa08, uncertainties not available.

Existence of transition is questionable.

@ From Adopted Gammas.

& Placement of transition in the level scheme is uncertain.

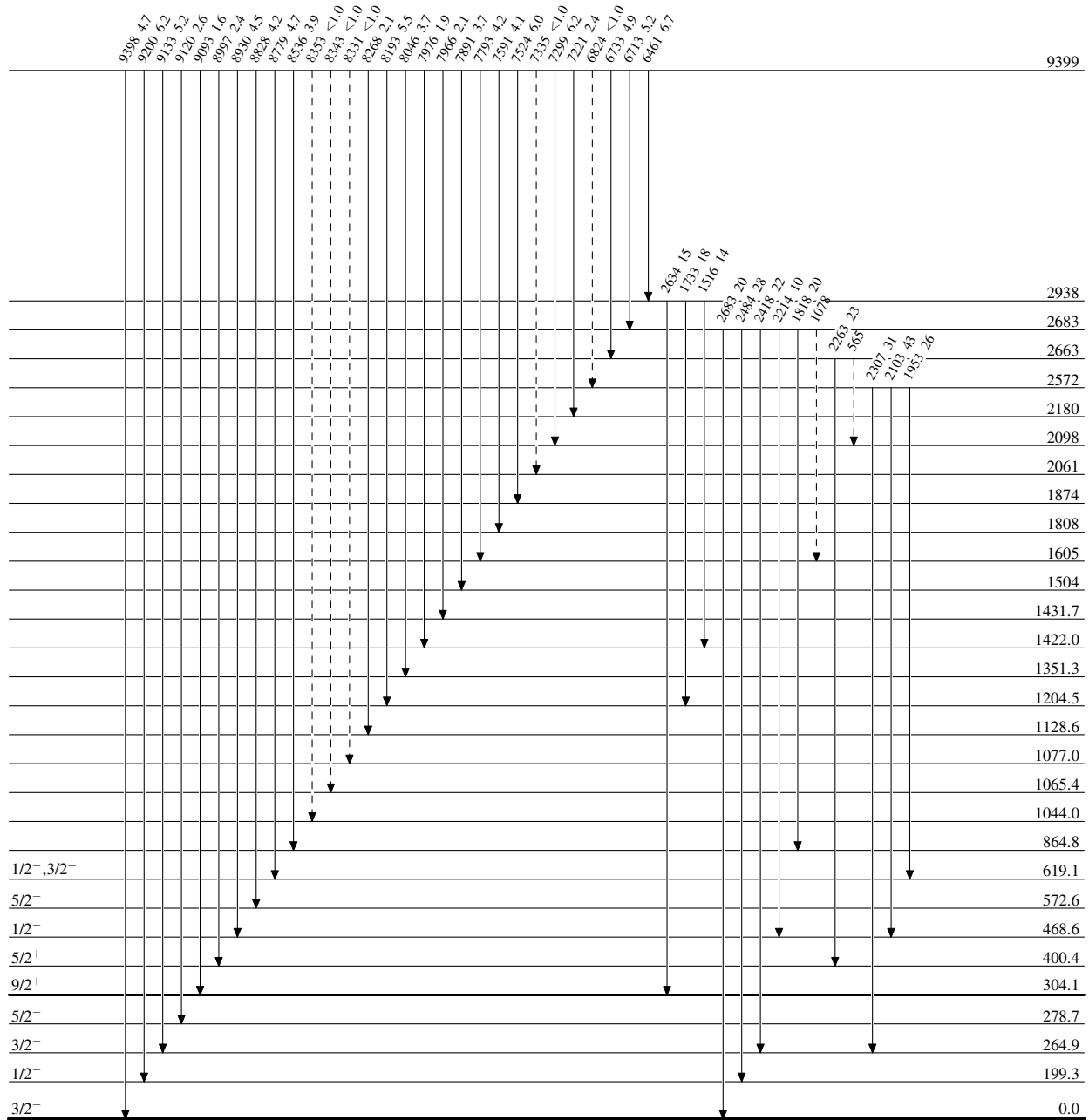
$^{74}\text{Ge}(p,\gamma)$ 1974Wa08,1979Sz06,1997Ra16

Legend

Level Scheme

Intensities: % photon branching from each level

-----▶ γ Decay (Uncertain)



18.8 ms 4

$^{75}_{33}\text{As}_{42}$

$^{74}\text{Ge}(p,\gamma)$ 1974Wa08,1979Sz06,1997Ra16

Legend

Level Scheme (continued)

Intensities: % photon branching from each level

-----► γ Decay (Uncertain)

