

<sup>70</sup>Ge(pol  $\gamma, \gamma'$ ) 1995Ju01

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

E <sub>$\gamma$</sub> =9-14 MeV. The scattered  $\gamma$ s were detected by a Ge spectrometer consisting of 4 Ge detectors located at different scattering angles. Measured E $\gamma$ ,  $\gamma(\theta)$ ,  $\gamma(\text{linear pol})$ ; deduced  $\Gamma$ .

<sup>70</sup>Ge Levels

E(level) <sup>†</sup>	J <sup>π</sup> <sup>‡</sup>	$\Gamma$ (MeV) <sup>#</sup>	$\Gamma_{\gamma 0}^2/\Gamma$ (MeV)	Comments
0	0 <sup>+</sup>			
4356.6 7	1 <sup>(-)</sup>	67 11	67 11	B(E1) $\uparrow$ =0.0023 4 Ls: Integrated photon scattering cross section = 40.5 eVb 68.
4447.3 8	1 <sup>-</sup>	111 20	61 11	B(E1) $\uparrow$ =0.0036 7 Ls: Integrated photon scattering cross section = 35.6 eVb 65.
4520.7 9	1 <sup>-</sup>		<67	B(E1) $\uparrow$ <0.0005 Ls: Integrated photon scattering cross section = 37.8 eVb 52.
4790.4 19	1 <sup>(-)</sup>	28 16	28 16	Ls: Integrated photon scattering cross section = 13.9 eVb 82. J <sup>π</sup> : from 4790.4 $\gamma$ E1 to 0 <sup>+</sup> .
4886.4 13	1	40 10	40 10	Ls: Integrated photon scattering cross section = 19.2 eVb 46.
5129.4 7	1 <sup>-</sup>	136 38	89 25	B(E1) $\uparrow$ =0.0029 8 Ls: Integrated photon scattering cross section = 38.8 eVb 11.
5263.2 8	1 <sup>(-)</sup>	112 21	112 21	B(E1) $\uparrow$ =0.0022 4 Ls: Integrated photon scattering cross section = 46.6 eVb 88.
5465.1 10	1 <sup>-</sup>	133 22	133 22	B(E1) $\uparrow$ =0.0023 4 Ls: Integrated photon scattering cross section = 51.2 eVb 85.
5512.3 10	1 <sup>(-)</sup>	113 18	113 18	B(E1) $\uparrow$ =0.0019 3 Ls: Integrated photon scattering cross section = 43.0 eVb 67.
5876.6 7	1 <sup>(-)</sup>	96 30	96 30	B(E1) $\uparrow$ =0.0014 4 Ls: Integrated photon scattering cross section = 32.0 eVb 99.
5989.4 7	1 <sup>(+)</sup>	149 31	149 31	Ls: Integrated photon scattering cross section = 48.0 eVb 98.
6296.7 14	1	277 87	147 46	Ls: Integrated photon scattering cross section = 42.8 eVb 14.
6362.5 8	1	133 28	133 28	Ls: Integrated photon scattering cross section = 37.9 eVb 80.
6587.4 12	1 <sup>(+)</sup>	333 62	136 25	Ls: Integrated photon scattering cross section = 36.1 eVb 67.
6636.3 15	1	168 25	168 25	Ls: Integrated photon scattering cross section = 44.1 eVb 66.
6702.2 13	1 <sup>(-)</sup>	289 49	289 49	B(E1) $\uparrow$ =0.0027 5 Ls: Integrated photon scattering cross section = 74.1 eVb 13.
7305.9 8	1 <sup>(+)</sup>	249 60	249 60	Ls: Integrated photon scattering cross section = 53.8 eVb 13.
7425.6 16	1 <sup>(-)</sup>	316 60	316 60	B(E1) $\uparrow$ =0.0022 4 Ls: Integrated photon scattering cross section = 66.0

Continued on next page (footnotes at end of table)

${}^{70}\text{Ge}(\text{pol } \gamma, \gamma')$  1995Ju01 (continued) ${}^{70}\text{Ge}$  Levels (continued)

<u>E(level)<sup>†</sup></u>	<u><math>J^\pi</math><sup>‡</sup></u>	<u><math>\Gamma</math> (MeV)<sup>#</sup></u>	<u><math>\Gamma_{\gamma_0}^2/\Gamma</math> (MeV)</u>	<u>Comments</u>
7753.0 10	1 <sup>(-)</sup>	430 92	307 66	eVb 13. B(E1) $\uparrow$ =0.0026 6 Ls: Integrated photon scattering cross section = 59.0 eVb 13.
8283.2 15	1 <sup>(+)</sup>	307 86	307 86	Ls: Integrated photon scattering cross section = 51.5 eVb 15.
8877.9 14	1	332 78	332 78	Ls: Integrated photon scattering cross section = 48.5 eVb 12.

<sup>†</sup> From measured ground state gamma-ray transitions in 1995Ju01.

<sup>‡</sup> From measured gamma-ray transition multiplicities.

<sup>#</sup>  $\Gamma=\Gamma_0$  when g.s. transition is assumed to be 100%.

 $\gamma({}^{70}\text{Ge})$ 

<u><math>E_\gamma</math><sup>†</sup></u>	<u><math>E_i(\text{level})</math></u>	<u><math>J_i^\pi</math></u>	<u><math>E_f</math></u>	<u><math>J_f^\pi</math></u>	<u>Mult.<sup>‡</sup></u>	<u><math>E_\gamma</math><sup>†</sup></u>	<u><math>E_i(\text{level})</math></u>	<u><math>J_i^\pi</math></u>	<u><math>E_f</math></u>	<u><math>J_f^\pi</math></u>	<u>Mult.<sup>‡</sup></u>
4356.6 7	4356.6	1 <sup>(-)</sup>	0	0 <sup>+</sup>	(E1)	6296.7 14	6296.7	1	0	0 <sup>+</sup>	D
4447.3 8	4447.3	1 <sup>-</sup>	0	0 <sup>+</sup>	E1	6362.5 8	6362.5	1	0	0 <sup>+</sup>	D
4520.7 8	4520.7	1 <sup>-</sup>	0	0 <sup>+</sup>	E1	6587.4 8	6587.4	1 <sup>(+)</sup>	0	0 <sup>+</sup>	(M1)
4790.4 19	4790.4	1 <sup>(-)</sup>	0	0 <sup>+</sup>	(E1)	6636.3 15	6636.3	1	0	0 <sup>+</sup>	D
4886.4 13	4886.4	1	0	0 <sup>+</sup>	D	6702.2 13	6702.2	1 <sup>(-)</sup>	0	0 <sup>+</sup>	(E1)
5129.4 7	5129.4	1 <sup>-</sup>	0	0 <sup>+</sup>	E1	7305.9 8	7305.9	1 <sup>(+)</sup>	0	0 <sup>+</sup>	(M1)
5263.2 8	5263.2	1 <sup>(-)</sup>	0	0 <sup>+</sup>	(E1)	7425.6 8	7425.6	1 <sup>(-)</sup>	0	0 <sup>+</sup>	(E1)
5465.1 8	5465.1	1 <sup>-</sup>	0	0 <sup>+</sup>	E1	7753.0 10	7753.0	1 <sup>(-)</sup>	0	0 <sup>+</sup>	(E1)
5512.3 10	5512.3	1 <sup>(-)</sup>	0	0 <sup>+</sup>	(E1)	8283.2 15	8283.2	1 <sup>(+)</sup>	0	0 <sup>+</sup>	(M1)
5876.6 7	5876.6	1 <sup>(-)</sup>	0	0 <sup>+</sup>	(E1)	8877.9 14	8877.9	1	0	0 <sup>+</sup>	D
5989.4 7	5989.4	1 <sup>(+)</sup>	0	0 <sup>+</sup>	(M1)						

<sup>†</sup> From 1995Ju01.

<sup>‡</sup> From  $\gamma(\theta)$  and  $\gamma(\text{linear pol})$  in 1995Ju01. Evaluators derive multiplicities from the authors given  $J^\pi$  values. Authors state that for definite  $J^\pi$  assignments, the analyzing power differed by at least three standard deviations from the value for the opposite parity. If the difference was at least two standard deviations or the value itself very close ( $<\sigma/2$ ) to one or the other parity, the assignment was given as tentative. Specific values for  $\gamma(\theta)$  or  $\gamma(\text{linear pol})$  were not provided.

$^{70}\text{Ge}(\text{pol } \gamma, \gamma')$  1995Ju01

## Level Scheme

