Туре	Author	Citation	Literature Cutoff Date		
Full Evaluation	Balraj Singh, Jun Chen and Ameenah R. Farhan	NDS 194,3 (2024)	8-Jan-2024		

Parent: ⁷⁶Ga: E=0.0; $J^{\pi}=2^{(-)}$; $T_{1/2}=30.5 \text{ s } 4$; $Q(\beta^{-})=6916.3 \ 20$; $\%\beta^{-}$ decay=100

⁷⁶Ga-J^{π},T_{1/2}: From ⁷⁶Ga Adopted Levels.

⁷⁶Ga-Q(β^{-}): From 2021Wa16.

1971Ca39: measured E γ , I γ . The level scheme is from RITZ-combination. No $\gamma\gamma$ coincidences were reported. Others:

2016Do05 (also 2014Sp05): ⁷⁶Ga activity produced in ⁹Be(⁷⁶Ge³²⁺,X),E=130 MeV/nucleon, and separated by A1900 fragment separator at NSCL-MSU. Secondary beam consisting of 73% ⁷⁶Ga³¹⁺ and 27% ⁷⁴Zn³⁰⁺ was passed through the NSCL gas stopping station where primarily the ⁷⁶Ga³¹⁺ beam was extracted and stopped in the gas cell. A scan of the activity as a function of mass of the extracted ions showed the molecular ion [⁷⁶Ga(H₂O)]⁺ as the main activity delivered to the counting station. The ⁷⁶Ga ions with an energy of ≈40 keV and intensity of ≈500 particles/s were implanted into an aluminum target foil. Measured total absorption gamma-ray (TAGS) spectrum using segmented NaI(TI)(SuN) detector, and electrons from ⁷⁶Ga β^- decay by a silicon surface barrier detector located inside the bore hole of the SuN detector. Also detected were $\beta\gamma$ -coincidences. First results from this experiment were published by 2014Sp05, where β -Oslo method was used to deduce γ -strength function. Comparison of extracted Gamow-Teller strengths with shell-model calculations using jj4b and JUN45 interactions. Relevance to studies of neutrinoless double β -decay of ⁷⁶Ge.

2016To01: measured E γ and I γ with a focus on the intensity of the 2040.7-keV γ ray emitted in the decay of ⁷⁶Ga, isotope produced in ⁷⁶Ge(n,p),E=6.2-21 MeV reaction. These results are relevant to the measurement of ⁷⁶Ge 0 $\nu\beta\beta$ decay by GERDA Collaboration. Also discussed experimental results of ⁷⁶Ge(n,n' γ) reaction by the Kentucky group.

2014Do08: in connection with the importance of 2040.7 γ (from 3952 level) for double beta decay experiments of ⁷⁶Ge, β decay of ⁷⁶Ga was investigated by producing the source in ⁷⁶Ge(p,n) reaction. Preliminary branching ratio of 2040.7 γ is reported as 0.46% in comparison to 0.33% in 1971Ca39.

2014Sp05: measured total-absorption spectrum using SUN detector at NSCL-MSU in order to deduce gamma-strength functions. 1972MaWL: measured $E\gamma$, $I\gamma$.

 $T_{1/2}$ and source production: 1985Ta01, 1981Ru07, 1974Gr29, 1970OsZZ, 1966Se04, 1961Ta08.

 $\beta\gamma$ -coin: 1977Al17.

 β^- strength functions: 1975All11. β^- systematics (1983Be56).

⁷⁶Ge Levels

E(level) [‡]	J^{π}
0.0	0+
562.93 <i>3</i>	2^{+}
1108.45 4	2+
1410.08 5	4+
1539.46 6	3+
1911.09 12	0^{+}
2019.87 10	4+
2284.22 24	$(3)^{-}$
2591.10 16	$(1^+, 2^+)$
2654.51 21	
2692.40 8	3-
2747.76 8	$(2)^{+}$
2768.76 14	2+
2841.57 <i>13</i>	2+
2919.79 7	1^{+}
3141.51 7	1+
3182.21 6	(2^{+})
3231.8? 4	4+
3312.33 12	3-
3322.85 7	(2^{+})

76 Ga β^- decay (30.5 s) 1971Ca39 (continued)

⁷⁶Ge Levels (continued)

E(level) [‡]	$J^{\pi \dagger}$	Comments
3334.7? <i>3</i>		
3409.19 19	(1.2.3)	
3477.65? 17	$(2^+,3)$	
3632.75 10	(2^+)	
3887.05 19	(3-)	
3951.89 7	1-	
4122.3? 4	$(1,2^{+})$	
4192.9? 2	$(2^+,3)$	
4239.4? 2	(1,2,3)	
4326.5? 2	(1,2,3)	
4363.5? 2	4+	
4476.5? 2		
4600		E(level): this level corresponds to 4611 10 level in Adopted Levels, which 2016Do05 included in their
		analysis.
4719.9 2	$(2^+, 3, 4^+)$	
4784.1? <i>3</i>	(1,2,3)	
4812.5? 2	$(2^+,3)$	
4814.8? <i>3</i>	(1,2,3)	
4950		E(level): this level corresponds to 4936.07 20 level in Adopted Levels, which 2016Do05 included in their analysis.
5122.48 14	(1,2,3)	
5350		E(level): new level introduced by 2016Do05 in the analysis of their TAGS data.
5522.6 2	(1,2,3)	
5663.37 15	(2^{+})	
5749.9? <i>4</i>	(1,2,3)	
5883.0? 3	(1,2,3)	
6021.1? <i>3</i>	(1,2,3)	
6065.2? 4	(1,2,3)	

[†] From the Adopted Levels.

[‡] From least-squares fit to $E\gamma$ data.

β^- radiations

2016Do05 compared their experimental TAGS spectrum with that simulated from β feedings given in the ⁷⁶Ga β^- decay level scheme from γ -ray data in 1971Ca39.

All log *ft* values are considered as tentative since the level scheme is not considered as well established. These log *ft* values cannot be used for definitive J^{π} assignments for ⁷⁶Ge levels.

E(decay)	E(level)	$I\beta^{-\dagger\ddagger}$	Log ft	Comments
(851.1 [#] 23)	6065.2?	0.39 7	4.8	av E β =297.98 85 I β^- : 0.1 <i>I</i> (from TAGS, 2016Do05).
(895.2 [#] 23)	6021.1?	0.44 7	4.8	av $E\beta$ =316.24 85 I β ⁻ : 0.065 65 (from TAGS, 2016Do05).
(1033.3 [#] 23)	5883.0?	0.36 5	5.1	av $E\beta=374.42\ 87$ I β^- : 0.2 2 (from TAGS, 2016Do05).
(1166.4 [#] 23)	5749.9?	0.30 5	5.4	av Eβ=431.71 89 Iβ ⁻ : 0.19 8 (from TAGS, 2016Do05).
(1252.9 23)	5663.37	0.87 9	5.1	av E β =469.49 88 I β^- : 0.7 3 (from TAGS, 2016Do05).
(1393.7 23)	5522.6	0.72 9	5.3	av Eβ=531.74 90

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76 Ga β^- decay (30.5 s) 1971Ca39 (continued)

β^{-} radiations (continued)

E(decay)	E(level)	Ιβ ^{-†‡}	Log ft	Comments
				$I\beta^-: 0.7 \ 2 \ (\text{from TAGS}, \ 2016\text{Do05}).$
(1566.3 25)	5350	1.6 3	5.2	av $E\beta$ =609.18 91 $I\beta^{-1}$ from TAGS (2016De05)
(1793.8 23)	5122.48	1.0 1	5.6	$av E\beta = 712.77 \ 92$
(1966.3 25)	4950	1.1 3	5.7	$I\beta^-: 0.7 I$ (from TAGS, 2016Do05). av $E\beta$ =792.23 93 $I\beta^-:$ from TAGS (2016Do05)
(2101.5 [#] 23)	4814.8?	0.88 10	6.0	av $E\beta$ =854.98 95 $I\beta^{-1}$: 0.6 1 (from TAGS, 2016Do05)
(2103.8 [#] 23)	4812.5?	0.47 4	6.2	av $E\beta$ =856.05 94 $I\beta^{-}$: <0.0001 (from TAGS, 2016Do05).
(2132.2 [#] 23)	4784.1?	0.69 9	6.1	av E β =869.27 95
(2196.4 23)	4719.9	0.90 9	6.0	$I\beta^-: 0.54 \ 9 \ (from TAGS, 2016Do05).$ av $E\beta=899.23 \ 94$
(2316.3 25)	4600	3.4 6	5.5	$I\beta : 0.517$ (from TAGS, 2016D005). av $E\beta$ =955.36 94 $I\beta^{-1}$ from TAGS (2016D005).
(2439.8 [#] 23)	4476.5?	1.12 12	6.1	av $E\beta$ =1013.40 95 I β ⁻ : 2.3.3 (from TAGS, 2016Do05).
(2552.8 [#] 23)	4363.5?	1.40 14	6.1	av $E\beta$ =1066.69 95 I β^- : 0.2 2 (from TAGS, 2016Do05).
(2589.8 [#] 23)	4326.5?	1.33 10	6.2	av $E\beta$ =1084.17 95 I β ⁻ : 2.4 4 (from TAGS, 2016Do05).
(2676.9 [#] 23)	4239.4?	0.88 10	6.4	av $E\beta$ =1125.39 96 $I\beta^{-1}: 0.045.45$ (from TAGS 2016Do05)
(2723.4 [#] <i>23</i>)	4192.9?	1.96 15	6.1	av $E\beta$ =1147.43 96 $I\beta^{-1}$: 1.2.2 (from TAGS, 2016De05).
(2794.0 [#] 23)	4122.3?	0.74 7	6.6	av E β =1180.93 97
(2964.4 23)	3951.89	8.2 6	5.6	$I\beta^-$: 1.4 2 (from TAGS, 2016Do05). av $E\beta$ =1262.00 96
(3029.3 23)	3887.05	1.39 14	6.4	$I\beta^{-1}$: 12 <i>I</i> (from TAGS, 2016De05). av $E\beta$ =1292.91 96 $I\beta^{-1}$: 3 <i>I</i> (from TAGS, 2016De05).
(3283.6 23)	3632.75	0.39 17	7.1	av $E\beta$ =1414.44 96 I β ⁻ : 2.8 4 (from TAGS, 2016Do05).
(3438.7 [#] 23)	3477.65?	4.4 12	6.2	av $E\beta$ =1488.78 97 $I\beta^{-1}$: 1.6.2 (from TAGS, 2016Do05)
(3507.1 [#] 23)	3409.19	0.41 8	7.2	av $E\beta$ =1521.63 97 $I\beta^{-1}$: 0.24 4 (from TAGS, 2016Do05)
(3581.6 [#] 23)	3334.7?	0.35 5	7.3	av $E\beta$ =1557.41 98 $I\beta^{-1}: 0.2.2$ (from TAGS 2016De05).
(3593.5 23)	3322.85	3.2 2	6.4	av $E\beta$ =1563.10 97 I β ⁻ : 2.9 3 (from TAGS, 2016Do05).
(3604.0 [#] 23)	3312.33	< 0.15	>7.7	av $E\beta$ =1568.16 97 I β^- : 1.8 2 (from TAGS, 2016Do05).
(3684.5 ^{#} 23)	3231.8?	0.14 3	9.4 ¹ <i>u</i>	av E β =1611.37 98
(3734.1 23)	3182.21	5.5 4	6.2	$I\beta^-: 0.7\ 2$ (from TAGS, 2016Do05). av $E\beta$ =1630.73 97 E(decay): 3580 150 from (2074 γ) β -coin (1977Al17). $I\beta^-: 7\ 4\ 9$ (from TAGS, 2016Do05).
(3774.8 [#] 23)	3141.51	<2.1	>6.7	av E β =1650.32 97 $R^{-1} \circ L$ (from TAGS, 2016De05)
(3996.5 23)	2919.79	9.1 6	6.1	$\mu = 2 \beta T$ (non 1AGS, 2010D005). av E β =1757.15 97

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 $^{76}_{32}\text{Ge}_{44}$ -4

$^{76}\mathrm{Ga}\,\beta^-$ decay (30.5 s) 1971Ca39 (continued)

β^- radiations (continued)

E(decay)	E(level)	$I\beta^{-\dagger\ddagger}$	Log ft	Comments
(4074.7 23)	2841.57	0.43 9	7.5	$I\beta^{-}$: 9.8 9 (from TAGS, 2016Do05). av $E\beta$ =1794.88 97
(4147.5 23)	2768.76	0.67 9	7.3	$I\beta$: 3.9 4 (from 1AGS, 2016Do05). av $E\beta$ =1830.02 97
(4168.5 23)	2747.76	6.1 4	6.4	$I\beta$: <0.0001 (from IAGS, 2016D005). av E β =1840.16 97
(4223.9 23)	2692.40	0.40 16	7.6	$\mu = 5.4.9$ (from TAGS, 2016D005). av E β =1866.91.97 I β^- : 0.6.4 (from TAGS, 2016D005).
(4261.8 [#] 23)	2654.51	< 0.2	>7.9	av $E\beta = 1885.21 \ 98$
(4325.2 23)	2591.10	1.09 12	7.2	av E β =1915.85 97 I β^{-1} : 1.1.3 (from TAGS, 2016Do05).
(4896.4 23)	2019.87	0.49 9	7.8	av $E\beta = 2192.28 \ 97$
(5005.2 [#] 23)	1911.09	<0.18	$>10.1^{1u}$	av $E\beta$ =2245.49 97 $I\beta^{-1}$: 0.21 4 (from TAGS, 2016Do05).
(5376.8 23)	1539.46	3.8 4	7.1	av $E\beta = 2425.21 98$
(5506.2 23)	1410.08	0.34 22	10.1^{1u}	$\mu = 0.5 T \text{ (from TAGS, 2016D005).}$ av $E\beta = 2487.70 \ 97 \ I\beta^{-1} = 0.34 \ 4 \text{ (from TAGS, 2016D005).}$
(5807.9 23)	1108.45	14.5 16	6.7	av E β =2634.40 98
(6353.4 23)	562.93	12.7 15	6.9	$I\beta^-: 11.7 \ 9 \ (from TAGS, 2016Do05).$ av $E\beta=2899.36 \ 98 \ I\beta^-: 7.3 \ 2 \ (from TAGS, 2016Do05).$
(6916.3 [#] 25)	0.0	<10	>9.2 ¹ <i>u</i>	av E β =3172.06 98 I β ⁻ : from TAGS data, 2016Do05 provide no information about experimental or theoretical β feeding to the ground state, which is possible from an expected first-forbidden unique transition. Evaluators deduce I β <10% for centroid value of log $f^{1u}t$ =9.75 (2023Tu02) for such transitions. Note that for minimum log $f^{1u}t$ =8.5, I β =40%. Such large feeding to g.s. is probably unlikely.

[†] Values from TAGS data in 2016Do05 are given in comments, authors list intensity values below 0.0001% as zero in their Table I.

[‡] Absolute intensity per 100 decays.
[#] Existence of this branch is questionable.

$\gamma(^{76}\text{Ge})$

I γ normalization: Summed γ -transition intensity=89 5, allowing for <10% feeding to the g.s., and 6.1% 7 feeding to 4600, 4950 and 5350 levels proposed by 2016Do05 from their TAGS data.

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	E_{γ}	Ι _γ ^b	E _i (level)	\mathbf{J}_i^π	E_f	\mathbf{J}_f^{π}	Mult. [†]	δ^{\dagger}	α^{c}	Comments	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	335.9 ^e 5	8.0 20	3477.65?	$(2^+,3)$	3141.51	1+				%Iy=4.7 <i>12</i>	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	431.0 5	4.6 [#] 5	1539.46	3+	1108.45	2+	M1+E2	+1.86 +17-11	0.0029 9	$\%$ I γ =2.69 33	
	545.51 <i>3</i>	39.4 20	1108.45	2+	562.93	2+	E2+M1	+2.4 2	0.00175	$\%$ I γ =23.1 18	
	562.93 <i>3</i>	100	562.93	2+	0.0	0^{+}	E2		0.00164	$\%$ I γ =58.5 33	
843,8 ⁶ 21.731.774476,5?3632,75 (2^*) (2^*) (2^*) 847,15555,331410,084*562,932*E20.00053 $(4)_{2}=1.17$ 11 911,40 ⁽⁶⁾ 101.5210210,974*1108,452*[E2]0.00044 $(4)_{2}=0.89$ $(4)_{2}=0.82$ 976,50'57.021539,463*562,932*M1+E2+2.61200.00037 $(4)_{2}=4.10$ 261014,2 ⁶ 20.548326,57(1,2,3)3312,333* $(4)_{2}=0.263,28$ $(4)_{2}=0.263,28$ *1043,640.454 $(4)_{2}=0.263,28$ $(4)_{2}=0.263,28$ $(4)_{2}=0.263,28$ 1051,720.7110 $(1+2^+)$ 1539,463* $(4)_{2}=0.263,28$ 1108,41824.051108,452*0.0002 $(4)_{2}=0.464,77$ 1128,160.77,114814,87(1,2,3)362,75 (2^+) $(4)_{2}=0.464,77$ 128,021.32.321.72747,76 $(2)^+$ 1539,463* $(4)_{2}=0.266,77$ 128,04-0.9710 $(4)_{2}=0.262,40$ 3* $(4)_{2}=0.266,77$ $(4)_{2}=0.266,77$ 128,040.4511481,452* $(4)_{2}=0.266,77$ 128,040.262,77 $(4)_{2}=0.266,76$ $(4)_{2}=0.266,77,77$ 128,040.4511269,2403*[E2]0.00023<	661.4 ^e 2	1.12 10	3409.19	(1,2,3)	2747.76	$(2)^{+}$				%Iy=0.66 7	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	843.8 ^e 2	1.73 17	4476.5?		3632.75	(2^{+})				%Iγ=1.01 <i>12</i>	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	847.15 5	5.3 <i>3</i>	1410.08	4+	562.93	2+	E2		0.00053	%Iγ=3.10 25	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	885.83 ^e 10	2.00 15	4363.5?	4+	3477.65?	$(2^+,3)$				%Iy=1.17 11	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	911.40 [@] 10	1.52 10	2019.87	4+	1108.45	2+	[E2]		0.00044	%Iy=0.89 8	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	927.05 ^e 10	1.40 8	4239.4?	(1,2,3)	3312.33	3-				%Iγ=0.82 7	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	976.50 5	7.0 2	1539.46	3+	562.93	2+	M1+E2	+2.61 20	0.00037	%Iy=4.10 26	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1014.2 ^e 2	0.54 8	4326.5?	(1,2,3)	3312.33	3-				%Iγ=0.32 5	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	^x 1043.6 4	0.45 4								%Iy=0.263 28	
1108.4124.0 51108.45 2^+ 0.0 0^- E20.00028 $\%_{1}y=0.42$ $IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII$	1051.7 2	0.71 10	2591.10	$(1^+, 2^+)$	1539.46	3+				$\%$ I γ =0.42 6	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1108.41 8	24.0 5	1108.45	2+	0.0	0+	E2		0.00028	$\%1\gamma = 14.0 \ 8$	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1175.7 5	0.71 18	2284.22	(3)-	1108.45	2+				$\%1\gamma = 0.42$ 11	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1182.1° 3	0.77 11	4814.8?	(1,2,3)	3632.75	(2^{+})				$\%1\gamma = 0.45$ /	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1208.02 <i>13</i>	2.32 17	2/4/./6	(2)	1539.46	31				$\%1\gamma = 1.36 \ 13$	
1259.5 $0.43.11$ $393.1.89$ 1 2092.40 3 $[12]$ 0.00023 $91y-0.057$ 1273.05^{e} 1.82 11 $4192.9?$ $(2^{+},3)$ 2919.79 1^{+} $\%1y=1.07$ 1282.9^{de} $<0.43^{d}$ 2692.40 3^{-} 1410.08 4^{+} $\%1y=0.25$ 1282.9^{de} <0.427 4719.9 $(2^{+},3,4^{+})$ 3409.19 $(1,2,3)$ $\%1y=0.25$ 1310.6^{e} 0.427 4719.9 $(2^{+},3,4^{+})$ 3409.19 $(1,2,3)$ $\%1y=0.25$ 1348.13 1.13 8 1911.09 0^{+} 562.93 2^{+} $[E2]$ 0.00022 1348.13 1.13 8 1911.09 0^{+} 562.93 2^{+} $[E2]$ 0.00022 1348.13 1.3 8 1911.09 0^{+} 562.93 2^{+} $[E3]$ 0.00023 1442.9^{e} 0.50 $0.4784.1?$ $(1,2,3)$ 3322.85 (2^{+}) $\%1y=0.25$ 1461.2^{e} 0.50 10 $4784.1?$ $(1,2,3)$ 3322.85 (2^{+}) 1482.5 0.50 10 $4784.1?$ $(1,2,3)$ 3322.85 (2^{+}) 1489.6 0.35 10 5122.48 $(1,2,3)$ 3632.75 (2^{+}) $\%1y=0.21$ 1489.6 0.35 10 $4814.8?$ $(1,2,3)$ 3312.33 3^{-} $\%1y=0.38$ 1583.9 5 0.30 10 2692.40 3^{-} 1108.45 2^{+} $\%1y=0.38$ <td< td=""><td>1249.1 2</td><td>0.9710</td><td>2051.20</td><td>1-</td><td>2602 40</td><td>2-</td><td>[[]]</td><td></td><td>0.00022</td><td>$\%1\gamma = 0.577$</td><td></td></td<>	1249.1 2	0.9710	2051.20	1-	2602 40	2-	[[]]		0.00022	$\%1\gamma = 0.577$	
1273.05 10 1.82 11 4192.91 $(2^{-}, 3)$ 2919.79 1 $317-107$ 1282.9^{d} 4 $<0.43^{d}$ 2692.40 3^{-} 1410.08 4^{+} $\%1\gamma<0.25$ 1282.9^{d} 4 $<0.43^{d}$ 5522.6 $(1,2,3)$ $4239.4?$ $(1,2,3)$ $\%1\gamma=0.25$ 1310.6^{e} 0.42 7 719.9 $(2^{+},3,4^{+})$ 3409.19 $(1,2,3)$ $\%1\gamma=0.25$ 1348.13 1.13 1911.09 0^{+} 562.93 2^{+} $[E2]$ 0.00022 $\%1\gamma=0.26$ 1358.9 6 0.28 9 2768.76 2^{+} 1410.08 4^{+} $\%1\gamma=0.23$ 1443.9^{e} 5 0.39 10 $4363.5?$ 4^{+} 2919.79 1^{+} $[M3]$ 1443.9^{e} 5 0.39 10 $4363.5?$ 4^{+} 2919.79 1^{+} $[M3]$ 1443.9^{e} 5 0.39 10 $4363.5?$ 4^{+} 2919.79 1^{+} $[M3]$ 1443.9^{e} 5 0.39 10 $4784.1?$ $(1,2,3)$ 3322.85 (2^{+}) $\%1\gamma=0.23$ 1445.2^{e} 3 0.50 10 $4784.1?$ $(1,2,3)$ 3632.75 (2^{+}) $\%1\gamma=0.21$ 1489.6 4 0.35 10 5122.48 $(1,2,3)$ 3322.35 (2^{+}) $\%1\gamma=0.43$ 1489.6 0.65 3 2654.51 1108.45 2^{+} $\%1\gamma=0.38$ 1583.95 0.30 10 <t< td=""><td>1239.9 J $1273 05^{\circ} 10$</td><td>1.82.11</td><td>3931.09 4102.02</td><td>$(2^+ 3)$</td><td>2092.40</td><td>5 1+</td><td></td><td></td><td>0.00023</td><td>701y = 0.207</td><td></td></t<>	1239.9 J $1273 05^{\circ} 10$	1.82.11	3931.09 4102.02	$(2^+ 3)$	2092.40	5 1+			0.00023	701y = 0.207	
1282.9^{4} $< 0.43^{5}$ 2692.40 5 1410.08 4^{4} $\%1\gamma < 0.25$ 1282.9^{de} $< 0.43^{d}$ 5522.6 $(1,2,3)$ $4239.4?$ $(1,2,3)$ $\%1\gamma < 0.25$ 1310.6^{e} 3 0.42 7 4719.9 $(2^{+},3,4^{+})$ 3409.19 $(1,2,3)$ $\%1\gamma < 0.25$ 1348.13 1.3 1.13 8 1911.09 0^{+} 562.93 2^{+} $[E2]$ 0.00022 $\%1\gamma = 0.66$ 1358.9 6 0.28 2768.76 2^{+} 1410.08 4^{+} $\%1\gamma = 0.16$ 1443.9^{e} 5 0.39 10 $4363.5?$ 4^{+} 2919.79 1^{+} $[M3]$ 1461.2^{e} 3 0.50 10 $4784.1?$ $(1,2,3)$ 3322.85 (2^{+}) $\%1\gamma = 0.23$ 1482.5 3 0.75 11 2591.10 $(1^{+},2^{+})$ 1108.45 2^{+} $\%1\gamma = 0.44$ 1489.6 4 0.35 10 5122.48 $(1,2,3)$ 3312.33 3^{-} $\%1\gamma = 0.43$ 1502.3^{e} 5 0.74 10 $4814.8?$ $(1,2,3)$ 3312.33 3^{-} $\%1\gamma = 0.43$ 1546.0 4 0.65 13 2654.51 1108.45 2^{+} $\%1\gamma = 0.43$ 1583.9 5 0.30 10 2692.40 3^{-} 108.45 2^{+} 1612.7 3 668 3632.75 (2^{+}) 2019.87 4^{+} $\%1\gamma = 0.40$ 1634.0^{e} 1.73	1275.05 10	1.02 11	4192.91	(2,5)	1410.00	1				/01y = 1.07 9	
$1282.9^{\text{uc}} 4$ $<0.43^{\text{u}}$ 5522.6 $(1,2,3)$ $4239.4?$ $(1,2,3)$ $\% \gamma<0.25$ $1310.6^{e} 3$ 0.427 4719.9 $(2^+,3,4^+)$ 3409.19 $(1,2,3)$ $\% \gamma=0.25 4$ $1348.13 I3$ $1.13 8$ 1911.09 0^+ 562.93 2^+ $[E2]$ 0.00022 $\% \gamma=0.66 6$ $1358.9 6$ $0.28 9$ 2768.76 2^+ 1410.08 4^+ $\% \gamma=0.23 6$ $1443.9^{e} 5$ $0.39 I0$ $4363.5?$ 4^+ 2919.79 1^+ $[M3]$ $0.00043 I2$ $\% \gamma=0.29 6$ $1442.5 3$ $0.50 I0$ $4784.1?$ $(1,2,3)$ 3322.85 (2^+) $1482.5 3$ $0.75 II$ 2591.10 $(1^+,2^+)$ 1108.45 2^+ $1489.6 4$ $0.35 I0$ 5122.48 $(1,2,3)$ 3632.75 (2^+) $1502.3^{e} 5$ $0.74 I0$ $4814.8?$ $(1,2,3)$ 3632.75 (2^+) $1583.9 5$ $0.30 I0$ 2692.40 $3^ 1108.45$ 2^+ $\% \gamma=0.18 6$ $1612.7 3$ $0.68 9$ 3632.75 (2^+) 2019.87 4^+ $\% \gamma=0.40 6$ $1634.0^{e} 2$ $1.73 8$ $4326.5?$ $(1,2,3)$ 2692.40 3^-	1282.9 ^d 4	< 0.43	2692.40	3	1410.08	4'				%1γ<0.25	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1282.9 ^{ac} 4	< 0.43	5522.6	(1,2,3)	4239.4?	(1,2,3)				$\sqrt[6]{1} < 0.25$	
1348.13 131.13 81911.090° 502.93 2°[E2] 0.00022 %1 γ =0.06 61358.9 60.28 92768.762+1410.084+%1 γ =0.16 61443.9°50.39 104363.5?4+2919.791+[M3]1461.2°30.50 104784.1?(1,2,3)3322.85(2+)%1 γ =0.23 61482.5 30.75 112591.10(1+,2+)1108.452+%1 γ =0.24 61489.6 40.35 105122.48(1,2,3)3632.75(2+)%1 γ =0.21 61502.3°50.74 104814.8?(1,2,3)3312.333^-%1 γ =0.43 61546.0 40.65 132654.511108.452+%1 γ =0.38 81583.9 50.30 102692.403^-1108.452+%1 γ =0.40 61612.7 30.68 93632.75(2+)2019.874+%1 γ =0.40 61634.0°21.73 84326.5?(1,2,3)2692.403^-	1310.6 3	0.42 7	4719.9	$(2^+,3,4^+)$	3409.19	(1,2,3)	[[20]		0.00022	$\%_{1\gamma=0.25}$ 4	
1538.96 0.289 2768.76 2^{+} 1410.08 4^{+} $9179-0.166$ 1443.9^{e} 0.3910 $4363.5?$ 4^{+} 2919.79 1^{+} $[M3]$ 0.0004312 $\% I\gamma = 0.236$ 1461.2^{e} 0.5010 $4784.1?$ $(1,2,3)$ 3322.85 (2^{+}) $\% I\gamma = 0.296$ 1482.53 0.7511 2591.10 $(1^{+},2^{+})$ 1108.45 2^{+} $\% I\gamma = 0.447$ 1489.64 0.3510 5122.48 $(1,2,3)$ 3632.75 (2^{+}) $\% I\gamma = 0.216$ 1502.3^{e} 0.7410 $4814.8?$ $(1,2,3)$ 3312.33 3^{-} $\% I\gamma = 0.436$ 1546.04 0.6513 2654.51 1108.45 2^{+} $\% I\gamma = 0.388$ 1583.95 0.3010 2692.40 3^{-} 1108.45 2^{+} $\% I\gamma = 0.186$ 1612.73 0.689 3632.75 (2^{+}) 2019.87 4^{+} $\% I\gamma = 0.406$ 1634.0^{e} 1.738 $4326.5?$ $(1,2,3)$ 2692.40 3^{-} $\% I\gamma = 1.018$	1348.13 13	1.13 8	1911.09	0^{+}	362.93	2' 4+	[E2]		0.00022	$\%1\gamma = 0.000$	
$1443.9^{\circ} 5$ $0.59 10$ $4363.5?$ 4° 2919.79 1° $[M3]$ $0.0043 12$ $\%1y=0.25 0$ $1461.2^{\circ} 3$ $0.50 10$ $4784.1?$ $(1,2,3)$ 3322.85 (2^{+}) $\%1y=0.29 6$ $1482.5 3$ $0.75 11$ 2591.10 $(1^{+},2^{+})$ 1108.45 2^{+} $\%1y=0.44 7$ $1489.6 4$ $0.35 10$ 5122.48 $(1,2,3)$ 3632.75 (2^{+}) $\%1y=0.44 7$ $1502.3^{\circ} 5$ $0.74 10$ $4814.8?$ $(1,2,3)$ $3312.33 3^{-}$ $\%1y=0.43 6$ $1546.0 4$ $0.65 13$ 2654.51 $1108.45 2^{+}$ $\%1y=0.18 6$ $1583.9 5$ $0.30 10$ 2692.40 3^{-} $1108.45 2^{+}$ $\%1y=0.40 6$ $1612.7 3$ $0.68 9$ 3632.75 (2^{+}) $2019.87 4^{+}$ $\%1y=0.40 6$ $1634.0^{\circ} 2$ $1.73 8$ $4326.5?$ $(1,2,3)$ $2692.40 3^{-}$ $\%1y=1.01 8$	1338.9 0	0.28 9	2/08./0	2 · 4+	1410.08	4	[M2]		0 00042 12	$\%1\gamma = 0.100$	
1401.2^{-5} 0.50^{-10} 4784.11 $(1,2,3)$ 5322.83^{-} (2^{-}) $901y=0.29^{-0}$ 1482.5^{-3} 0.75^{-11} 2591.10 $(1^+,2^+)$ 1108.45^{-} 2^+ $\%1y=0.44^{-7}$ 1489.6^{-4} 0.35^{-10} 5122.48 $(1,2,3)$ 3632.75^{-} (2^+) $\%1y=0.21^{-6}$ 1502.3^{e} 0.74^{-10} $4814.8?$ $(1,2,3)$ 3312.33^{-7} $\%1y=0.43^{-6}$ 1546.0^{-4} 0.65^{-13} 2654.51^{-1} 1108.45^{-2}^{+} $\%1y=0.38^{-8}$ 1583.9^{-5} 0.30^{-10} 2692.40^{-3^-} 1108.45^{-2}^{+} $\%1y=0.40^{-6}$ 1612.7^{-3} 0.68^{-9} 3632.75^{-} (2^+) 2019.87^{-4}^{+} $\%1y=0.40^{-6}$ 1634.0^{e} 1.73^{-8} $4326.5?$ $(1,2,3)^{-2}$ 2692.40^{-3^-} $\%1y=1.01^{-8}$	1445.9° J	0.59 10	4303.37	(1, 2, 3)	2919.79	(2^+)	[1015]		0.00045 12	$\%1\gamma = 0.250$	
1432.55 0.7511 2591.10 $(1, 2)$ 1108.45 2 $717-0.447$ 1489.64 0.3510 5122.48 $(1,2,3)$ 3632.75 (2^+) $\%1\gamma=0.216$ 1502.3^{e} 0.7410 $4814.8?$ $(1,2,3)$ 3312.33 $3^ \%1\gamma=0.436$ 1546.04 0.6513 2654.51 1108.452^+ $\%1\gamma=0.388$ 1583.95 0.3010 $2692.403^ 1108.452^+$ $\%1\gamma=0.186$ 1612.73 0.689 $3632.75(2^+)$ 2019.874^+ $\%1\gamma=0.406$ $1634.0^{e}2$ 1.738 $4326.5?$ $(1,2,3)$ 2692.403^-	1401.2 5	0.30 10	4704.17	(1,2,3) (1+2+)	1108 45	$\binom{2}{2^+}$				$701\gamma = 0.290$	
143.04° 0.5310° 5122.48° $(1,2,3)^{\circ}$ 5032.73° $(2^{\circ})^{\circ}$ $701y=0.210^{\circ}$ 1502.3° 0.7410° 4814.82° $(1,2,3)^{\circ}$ 3312.33° $\%1y=0.436^{\circ}$ 1546.04° 0.6513° 2654.51° 1108.45° 2^{+} $\%1y=0.388^{\circ}$ 1583.95° 0.3010° 2692.40° 3^{-} 1108.45° 2^{+} $\%1y=0.186^{\circ}$ 1612.73° 0.689° 3632.75° $(2^{+})^{\circ}$ 2019.87° 4^{+} $\%1y=0.406^{\circ}$ 1634.0° 1.738° 4326.52° $(1,2,3)^{\circ}$ 2692.40° 3^{-} $\%1y=1.018^{\circ}$	1482.5 5	0.75 11	5122.48	(1,2) (1,2,3)	3632 75	(2^+)				$\sqrt{1} = 0.44$	
$1502.5 \ o$ $0.14\ lo$ 4014.01 $(1,2,5)$ $5012.55\ o$ 5 $1546.0\ 4$ $0.65\ l3$ 2654.51 $1108.45\ 2^+$ $\%l\gamma=0.38\ 8$ $1583.9\ 5$ $0.30\ l0$ $2692.40\ 3^ 1108.45\ 2^+$ $\%l\gamma=0.18\ 6$ $1612.7\ 3$ $0.68\ 9$ $3632.75\ (2^+)$ $2019.87\ 4^+$ $\%l\gamma=0.40\ 6$ $1634.0^{e}\ 2$ $1.73\ 8$ $4326.5?\ (1,2,3)$ $2692.40\ 3^ \%l\gamma=1.01\ 8$	$1502.3^{e}5$	$0.33\ 10$ $0.74\ 10$	4814 82	(1,2,3) (1,2,3)	3312 33	3-				$\sqrt{1} = 0.210$	
1583.9 50.30 102692.40 3^- 1108.45 2^+ %I γ =0.18 61612.7 30.68 93632.75 (2^+) 2019.87 4^+ %I γ =0.40 61634.0 ^e 21.73 84326.5?(1,2,3)2692.40 3^- %I γ =1.01 8	1546.0 4	0.65 13	2654.51	(1,2,3)	1108.45	2+				%Iv=0.38.8	
1612.7 3 0.68 9 3632.75 (2^+) 2019.87 4 ⁺ $\%$ I γ =0.40 6 1634.0^e 2 1.73 8 $4326.5?$ $(1,2,3)$ 2692.40 3 ⁻ $\%$ I γ =1.01 8	1583.9.5	0.30 10	2692.40	3-	1108.45	$\frac{1}{2^{+}}$				$\%$ [$\gamma = 0.18.6$	
$1634.0^{e} 2$ 1.73 8 4326.5? (1,2,3) 2692.40 3 ⁻ %Iy=1.01 8	1612.7 3	0.68 9	3632.75	(2^+)	2019.87					$\%$ I γ =0.40 6	
	1634.0 ^e 2	1.73 8	4326.5?	(1,2,3)	2692.40	3-				$\%I\gamma = 1.01 8$	

 $^{76}_{32}\text{Ge}_{44}$ -5

⁷⁶Ga $β^-$ decay (30.5 s) 1971Ca39 (continued)

$\gamma(^{76}\text{Ge})$ (continued)

Eγ	I_{γ}^{b}	E _i (level)	\mathbf{J}_i^π	E_f	\mathbf{J}_{f}^{π}	Mult. [†]	α ^C	Comments
1639.30 10	8.40 20	2747.76	$(2)^{+}$	1108.45	2+			%Iγ=4.91 30
1642.80 15	1.41 10	3182.21	(2+)	1539.46	3+			%Iy=0.83 8
1660.30 14	1.17 8	2768.76	2+	1108.45	2^{+}			%Iy=0.68 <i>6</i>
1721.9 7	0.22 7	3632.75	(2^{+})	1911.09	0^{+}			%Iy=0.13 4
1732.70 25	1.10 10	2841.57	2+	1108.45	2+			%Iy=0.64 7
1811.10 12	1.27 7	2919.79	1+	1108.45	2+			%Iy=0.74 6
1878.3 2	0.55 6	4719.9	$(2^+,3,4^+)$	2841.57	2+			$\%1\gamma = 0.324$
1892.7° 2	0.61 4	4812.5?	$(2^+,3)$	2919.79	1+			$\%1\gamma = 0.357/31$
1902.2 2	0.64 5	3312.33	3	1410.08	4'			$\%1\gamma = 0.374$
1912.7 1	0.89 5	3322.85	(2^{+})	1410.08	4			$\%1\gamma = 0.524$
1924.6° 3	0.30 4	3334.7?	(1,2,2)	1410.08	4' (2+)			$\% 1\gamma = 0.1/6 20$
1940.30 14	1.04 /	5122.48	(1,2,3)	3182.21	(2^{+})			$\%1\gamma = 0.010$ E $\times 104040.15(2016T_{0}01)$
1020 4 5	0.22.6	5100 49	(1, 2, 3)	21/1 51	1+			E_{γ} : 1940.49 <i>IJ</i> (20101001).
1960.4 J 2040 70 25	0.550	2051.80	(1,2,3)	1011.00	1 0 ⁺	FE 11	0.00071	$\%1$ $\gamma = 0.194$
2040.70 23	0.30 8	3931.09	1	1911.09	0		0.00071	$\frac{1}{2} = 0.29 \text{ J}$ E $\cdot 2039 \text{ A}(2016 \text{T}_{2} 01)$
								L_{γ} . 2039.40 (20101001). Measured branching ratio from 2016To01: $I_{\gamma}(2040) \cdot I_{\gamma}(2843) \cdot I_{\gamma}(3380) - 71$
								12:35.6 60:57.3 98.
2073.75 7	6.43 16	3182.21	(2^{+})	1108.45	2^{+}			%Iy=3.76 23
								E_{γ} : 2073.65 <i>15</i> (2016To01).
2091.9 4	0.27 6	2654.51		562.93	2+			%Iy=0.16 4
2129.46 8	3.34 10	2692.40	3-	562.93	2+			$\%$ I γ =1.95 13
2185.20 17	0.75 6	2747.76	$(2)^{+}$	562.93	2+			%Iy=0.44 4
2203.86 16	2.08 15	3312.33	3-	1108.45	2+			$\%1\gamma = 1.22$ 11
2214.36 8	3.39 10	3322.85	(2^+)	1108.45	2+			$\%1\gamma = 1.98$ 13
2278.80 17	0.67 5	2841.57	2	562.93	2+			$\%1\gamma = 0.394$
2347.40 25	0.66 /	3887.05	$(3)_{1+}$	1539.46	3'			$\%1\gamma = 0.39.5$
2356.88 I2	3.74 10	2919.79	$(2^+, 2)$	362.93	2.			$\%1\gamma=2.19$ 10
2309.8 0	0.42 14	34//.03/	$(2^+,3)$	1108.45	$(2)^{-}$			$\%1\gamma=0.25$ 8
2433.0 3	0.30 /	4/19.9	(2, 3, 4)	1/10.08	(5)			$\%1\gamma = 0.55 J$
2470.0040 248114	0.337	5663.37	(3^{+})	3182 21	(2^+)			$\sqrt{1} = 0.194$
x2489.6.4	0.30 6	5005.57	(2)	5162.21	(2)			% Jy=0.18 4
2524.0.2	1 21 8	3632.75	(2^{+})	1108 45	2^{+}			%Iy=0.71.6
2578 55 9	3 40 10	3141 51	1+	562.93	$\frac{1}{2}$ +			$\%I_{\nu=1} 99.13$
2591.0 4	0.41 7	2591.10	$(1^+, 2^+)$	0.0	$\tilde{0}^{+}$			%Iy=0.24 4
2619.20 10	3.41 10	3182.21	(2^+)	562.93	2^{+}			$\%I_{\gamma} = 2.00 \ 1.3$
2668 8 ^{‡e} 1	0.24.5	3231.82	<u>4</u> +	562.03	2+			$\%$ J ν -0 140 30
2680.9.3	0.275 0.495	5522.6	(123)	2841 57	$\frac{2}{2}$ +			$\% I_{\nu=0} 287 34$
2600.55	0.12%	2602.40	2-	0.0	- 0+	[[2]	0.00050	
$2091.0^{\circ} 4$	0.25 0	2092.40	(1 2 3)	0.0	(2^+)	[E3]	0.00030	01y = 0.144
2/00.5° 4	0.30 3	3883.0?	(1,2,3)	3182.21	(2^{+})			%1Y=0.1/0 51

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⁷⁶Ga β⁻ decay (30.5 s) 1971Ca39 (continued)

$\gamma(^{76}\text{Ge})$ (continued)

E_{γ}	I_{γ}^{b}	E _i (level)	\mathbf{J}_i^{π}	E_f	\mathbf{J}_{f}^{π}	Mult. [†]	α ^{<i>c</i>}	Comments
2759.95 14	1.67 8	3322.85	(2^{+})	562.93	2^{+}			%Iv=0.98 7
2779.1 4	1.21 12	3887.05	(3-)	1108.45	2+			%Iy=0.71 8
2782.70 ^e 40	1.53 12	4192.9?	$(2^+,3)$	1410.08	4+			%Iy=0.90 9
2843.50 9	2.42 10	3951.89	1-	1108.45	2+	[E1]	0.00118	$\%$ I γ =1.42 10
								E _γ : 2843.10 (2016To01).
2868.1 2	0.53 7	5522.6	(1,2,3)	2654.51				%Iy=0.31 5
2882.9 ^e 9	0.21 7	6065.2?	(1,2,3)	3182.21	(2^{+})			%Iy=0.12 4
2914.6 ^e 2	1.12 9	3477.65?	$(2^+,3)$	562.93	2^{+}			%Iy=0.66 7
2919.85 10	13.8 5	2919.79	1^{+}	0.0	0^{+}			%Iy=8.1 5
2970.90 15	0.60 7	5663.37	(2^{+})	2692.40	3-			%Iy=0.35 5
2981.2 ^e 4	0.31 6	5749.9?	(1,2,3)	2768.76	2^{+}			%Iy=0.18 4
x3034.6 2	0.79 8							%Iy=0.46 6
3069.90 13	1.40 8	3632.75	(2^{+})	562.93	2^{+}			%Iy=0.82 7
3130.7 ^e 6	0.32 6	4239.4?	(1,2,3)	1108.45	2+			%Iy=0.19 4
3141.40 10	6.42 32	3141.51	1+	0.0	0^{+}	[M1]		%Iy=3.76 28
3145.3 ^e 4	0.45 9	6065.2?	(1,2,3)	2919.79	1^{+}			%Iy=0.26 6
3190.6 ^e 3	0.32 4	5883.0?	(1,2,3)	2692.40	3-			%Iy=0.187 26
^x 3275.9 2	0.88 8							%Iy=0.52 6
x3283.6 5	0.26 6							%Iy=0.15 4
3325.2 12	0.17 9	3887.05	(3 ⁻)	562.93	2+			%Iy=0.10 5
3328.7° 8	0.30 9	6021.1?	(1,2,3)	2692.40	3-			$\%1\gamma = 0.186$
3334.6 ^e 5	0.29 6	3334.7?		0.0	0^{+}			$\%1\gamma = 0.174$
3366.5 ^e 3	0.22 3	6021.1?	(1,2,3)	2654.51	- 1			$\%1\gamma = 0.129$ 19
3388.75 12	4.29 25	3951.89	1-	562.93	2+	[E1]	0.00145	$\% l\gamma = 2.51 2l$ E : 2388 42 (2016Te01)
3102 18 3	0.20.3	4812 52	$(2^+ 3)$	1/10.08	⁄1 ⁺			E_{γ} . 5500.45 (20101001). % I_{2} -0.117.70
3465.5^{e} 4	0.20.3 0.21.4	5749.92	(2, 3) (1, 2, 3)	2284 22	$(3)^{-}$			%Iy=0.117 19 %Iy=0.123 25
x3496.7.6	$0.21 \neq$ 0.16 5	5749.91	(1,2,3)	2204.22	(\mathbf{J})			%1y=0.125 25 %1y=0.094 30
$35595^{e}4$	0.10 5	4122.32	$(1 2^+)$	562.93	2^{+}			%Iy=0.52 5
3675.60 ^e 45	0.68 7	4784.1?	(1,2,3)	1108.45	$\frac{2}{2^{+}}$			%Iy=0.40 5
3736.90 ^e 45	0.24 6	6021.1?	(1,2,3)	2284.22	$(3)^{-}$			%Iy=0.14 4
3752.10.50	0.25.5	5663.37	(2^+)	1911.09	0^{+}			%[y=0.146.3]
x3842.3.4	0.14.3	0000107	(-)	1711107	0			$\% I_{\gamma} = 0.082.18$
3913.3 ^e 5	0.19 4	4476.5?		562.93	2^{+}			%Iy=0.111 24
x3925.2 2	0.51 5							%Iy=0.298 <i>34</i>
3951.70 14	6.43 50	3951.89	1-	0.0	0^{+}	[E1]	0.00168	%Iy=3.8 4
								E _γ : 3951.40 (2016To01).
x3994.3 10	0.34 5							%Iy=0.199 <i>31</i>
4121.8 ^e 5	0.38 5	4122.3?	$(1,2^+)$	0.0	0^{+}			%Iy=0.222 32
4253.3 5	0.34 5	5663.37	(2^{+})	1410.08	4+			%Iy=0.199 <i>31</i>

7

$^{76}_{32}{ m Ge}_{44}$ -7

From ENSDF

$\gamma(^{76}\text{Ge})$ (continued)

[†] From Adopted Gammas.

[‡] Placement suggested by the evaluators.

[#] 1971Ca39 give 14.0 *10*. In view of $I\gamma(431\gamma)/I\gamma(976\gamma)=0.65$ 7 adopted from ²³⁸U(⁷⁶Ge, ⁷⁶Ge'\gamma) (2013To05), the evaluators have adjusted the intensity of this γ ray from 1539 level. In 1971Ca39, either the intensity of 431 γ is overestimated or it has another possible placement in the decay scheme. In the spectrum shown by 1971Ca39, the 431 γ -ray lies in the region of strong γ rays from contaminants, whereas the 976 γ in the spectrum is relatively clear of the contaminants.

[@] 913.2 4 in Adopted dataset taken from ²³⁸U(⁷⁶Ge, ⁷⁶Ge' γ) and (n,n' γ). Value of 911.40 10 in β^- decay seems discrepant.

[&] Part of it could be sum line also as suggested by E3 reduced transition probabilities in (p,p') and (α, α') (evaluators).

^{*a*} Preliminary value measured in 2014Do08 is ≈ 0.7 .

^b For absolute intensity per 100 decays, multiply by 0.585 33.

^c 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.

^d Multiply placed with undivided intensity.

^e Placement of transition in the level scheme is uncertain.

 $x \gamma$ ray not placed in level scheme.

From ENSDF

Decay Scheme



Decay Scheme (continued)



Decay Scheme (continued)

