^{201}Hg(n,γ) E=210.3 eV res 1975Lo03

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 196,342 (2024)	1-Sep-2023

1975Lo03: Neutron beam provided by the NRU reactor with E(n) determined by the TOF method with a resolution of 0.32 μsec/m. For Eγ>4.1 MeV, a natural liquid Hg target was used, while for lower-energy Eγ, a thin ^{nat}HgO was used. Detectors: one 39 cm^3 Ge(Li) with a 6 keV energy resolution at 6 MeV and one 55 cm^3 Ge(Li) with 2.5 keV resolution at 1.33 MeV were used. Measured: Eγ and Iγ.

Others: 1960Ca19, 1969Al11, 1975Br02, 2018MuZY.

^{202}Hg Levels

E(level)[†]	Comments
0	
438.9 *6*	
958.0 *7*	
1181.1 *15*	
1296.0 *7*	
1346.1 *8*	
1388.6 *8*	
1457.1 *17*	
1507 *6*	
1523.9 *12*	
1564[‡] *3*	
1576.0[‡] *11*	
1641.5 *15*	
1676.7 *17*	
1722.1 *14*	
1786 *3*	
1792.5 *9*	
1800.5 *19*	
1822.1 *6*	
1851.4 *6*	
1900.9 *9*	
1914.6 *11*	
1958.2 *24*	
1965.2 *10*	
1991.4 *17*	
2070.7 *9*	
2095.7 *8*	
2142.1 *18*	
2160.8 *8*	
2195.6 *21*	
2221.7 *12*	
2248 *3*	
2283.2 *23*	E(level): Other: 2279.4 keV in 1975Br02.
2295.0 *18*	
2310.5 *17*	
2340.3 *20*	
2367.0 *20*	
2417.0 *11*	
2428.1 *8*	
2456.4 *14*	
2472.5 *17*	
2515 *3*	
2550.4 *14*	
2567.7 *8*	

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^{201}Hg(n,γ) E=210.3 eV res 1975Lo03 (continued)

^{202}Hg Levels (continued)

E(level)†	E(level)†	E(level)†	Jπ	$T_{1/2}$
2705 *3*	2950.3 *19*	3222.1 *13*		
2728 *3*	2970.1 *10*	3253.9 *21*		
2751.2 *6*	2997.5 *8*	3295 *4*		
2830 *4*	3017.5 *7*	3310.6 *21*		
2845.1 *16*	3027 *3*	3350.0 *13*		
2857.7 *24*	3058.4 *22*	3415 *3*		
2897 *3*	3079.8 *21*	3485 *3*		
2908.5 *14*	3179 *3*	3605.5 *17*		
2917.9 *22*	3199.7 *14*	7755.4 *4*	1^-	0.39# eV *10*

† From a least-squares fit to Eγ.
‡ From 1975Br02.
# Total radiative $\Gamma(\gamma)$ from 1966Go31.

$\gamma(^{202}Hg)$

E_γ†	I_γ†#	E_i(level)	J_i^π	E_f
4149.8 *16*	<0.50	7755.4	1^-	3605.5
4270.5 *25*	0.98 *50*	7755.4	1^-	3485
4339.9 *29*	<0.30	7755.4	1^-	3415
4405.3 *12*	0.54 *26*	7755.4	1^-	3350.0
4444.7 *20*	0.53 *44*	7755.4	1^-	3310.6
4460.4 *35*	<0.40	7755.4	1^-	3295
4501.4 *20*	0.55 *37*	7755.4	1^-	3253.9
4533.2 *12*	<0.30	7755.4	1^-	3222.1
4555.6 *13*	1.10 *30*	7755.4	1^-	3199.7
4576.5 *26*	<0.30	7755.4	1^-	3179
4675.5 *20*	0.89 *25*	7755.4	1^-	3079.8
4696.9 *21*	<0.25	7755.4	1^-	3058.4
4727.9 *28*	<0.30	7755.4	1^-	3027
4737.8 *5*	1.00 *23*	7755.4	1^-	3017.5
4757.8 *6*	1.10 *24*	7755.4	1^-	2997.5
4785.2 *9*	0.92 *23*	7755.4	1^-	2970.1
4805.0 *18*	1.20 *24*	7755.4	1^-	2950.3
4837.4 *21*	2.40 *33*	7755.4	1^-	2917.9
4846.8 *13*	3.30 *40*	7755.4	1^-	2908.5
4858.5 *29*	<0.40	7755.4	1^-	2897
4897.6 *23*	<0.40	7755.4	1^-	2857.7
4910.2 *15*	2.20 *30*	7755.4	1^-	2845.1
4924.8 *35*	<0.30	7755.4	1^-	2830
5004.1 *4*	1.52 *23*	7755.4	1^-	2751.2
5027.1 *25*	<0.20	7755.4	1^-	2728
5050.4 *25*	<0.30	7755.4	1^-	2705
5187.6 *7*	<0.30	7755.4	1^-	2567.7
5204.9 *13*	1.80 *45*	7755.4	1^-	2550.4
5240.5 *25*	<0.30	7755.4	1^-	2515
5282.8 *16*	0.83 *33*	7755.4	1^-	2472.5
5298.9 *13*	2.70 *30*	7755.4	1^-	2456.4
5327.2 *7*	0.43 *20*	7755.4	1^-	2428.1
5338.3 *10*	0.35 *19*	7755.4	1^-	2417.0
5388.3 *19*	1.30 *23*	7755.4	1^-	2367.0
5415.0 *19*	1.90 *26*	7755.4	1^-	2340.3
5444.8 *16*	0.46 *18*	7755.4	1^-	2310.5

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^{201}Hg(n,γ) E=210.3 eV res 1975Lo03 (continued)

$\gamma(^{202}Hg)$ (continued)

E_γ [†]	I_γ [†#]	E_i(level)	J_i^π	E_f	Comments
5460.3 *17*	0.40 *30*	7755.4	1^-	2295.0	
5472.1 *22*	<0.30	7755.4	1^-	2283.2	E_γ: Other: 5475.0 keV in 1975Br02.
5506.8 *28*	0.35 *17*	7755.4	1^-	2248	
5533.6 *11*	0.72 *17*	7755.4	1^-	2221.7	
5559.7 *20*	0.8 *3*	7755.4	1^-	2195.6	
5594.5 *7*	2.70 *35*	7755.4	1^-	2160.8	
5613.2 *17*	<0.30	7755.4	1^-	2142.1	
5659.6 *7*	0.3 *7*	7755.4	1^-	2095.7	
5684.6 *8*	4.50 *30*	7755.4	1^-	2070.7	
5763.9 *16*	<0.30	7755.4	1^-	1991.4	
5790.1 *9*	<0.30	7755.4	1^-	1965.2	
5797.1 *23*	2.50 *30*	7755.4	1^-	1958.2	
5840.7 *10*	<0.5	7755.4	1^-	1914.6	
5854.4 *8*	1.50 *34*	7755.4	1^-	1900.9	
5903.9 *4*	1.64 *24*	7755.4	1^-	1851.4	
5933.2 *4*	2.30 *23*	7755.4	1^-	1822.1	
5954.8 *18*	<0.30	7755.4	1^-	1800.5	
5962.8 *8*	6.63 *27*	7755.4	1^-	1792.5	
5969.2 *28*	<0.30	7755.4	1^-	1786	
6033.2 *13*	<0.19	7755.4	1^-	1722.1	
6078.6 *16*	2.12 *34*	7755.4	1^-	1676.7	
6113.8 *14*	1.70 *33*	7755.4	1^-	1641.5	
6179.3[‡] *10*	0.26 *10*	7755.4	1^-	1576.0	
≈6191[‡]	0.7 *2*	7755.4	1^-	1564	
6231.4 *11*	0.85 *18*	7755.4	1^-	1523.9	
6248.6 *54*	1.13 *24*	7755.4	1^-	1507	
6298.2 *16*	1.40 *30*	7755.4	1^-	1457.1	
6366.7 *6*	0.78 *25*	7755.4	1^-	1388.6	
6409.2 *7*	2.80 *23*	7755.4	1^-	1346.1	
6459.2 *5*	0.3 *6*	7755.4	1^-	1296.0	
6574.1 *14*	<0.30	7755.4	1^-	1181.1	
6797.2 *5*	<0.30	7755.4	1^-	958.0	
7316.3 *4*	1.50 *13*	7755.4	1^-	438.9	
7755.2 *4*	7.50 *25*	7755.4	1^-	0	

[†] From 1975Lo03, unless otherwise stated.
[‡] From 1975Br02.
[#] Intensity per 100 neutron captures.

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Level Scheme

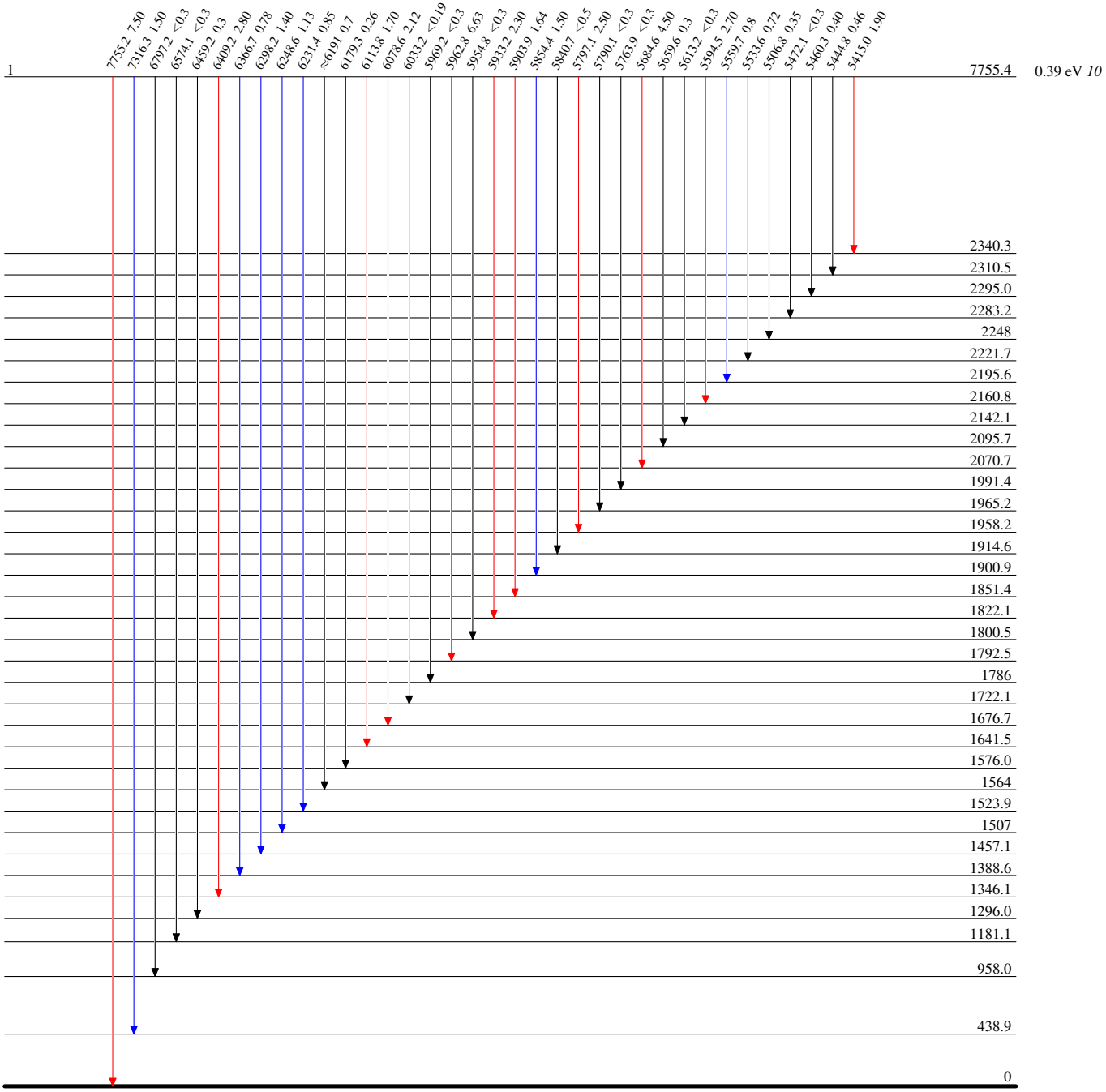
Intensities: I_γ per 100 neutron captures

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{202}_{80}Hg_{122}$

^{201}Hg(n,γ) E=210.3 eV res 1975Lo03

Level Scheme (continued)

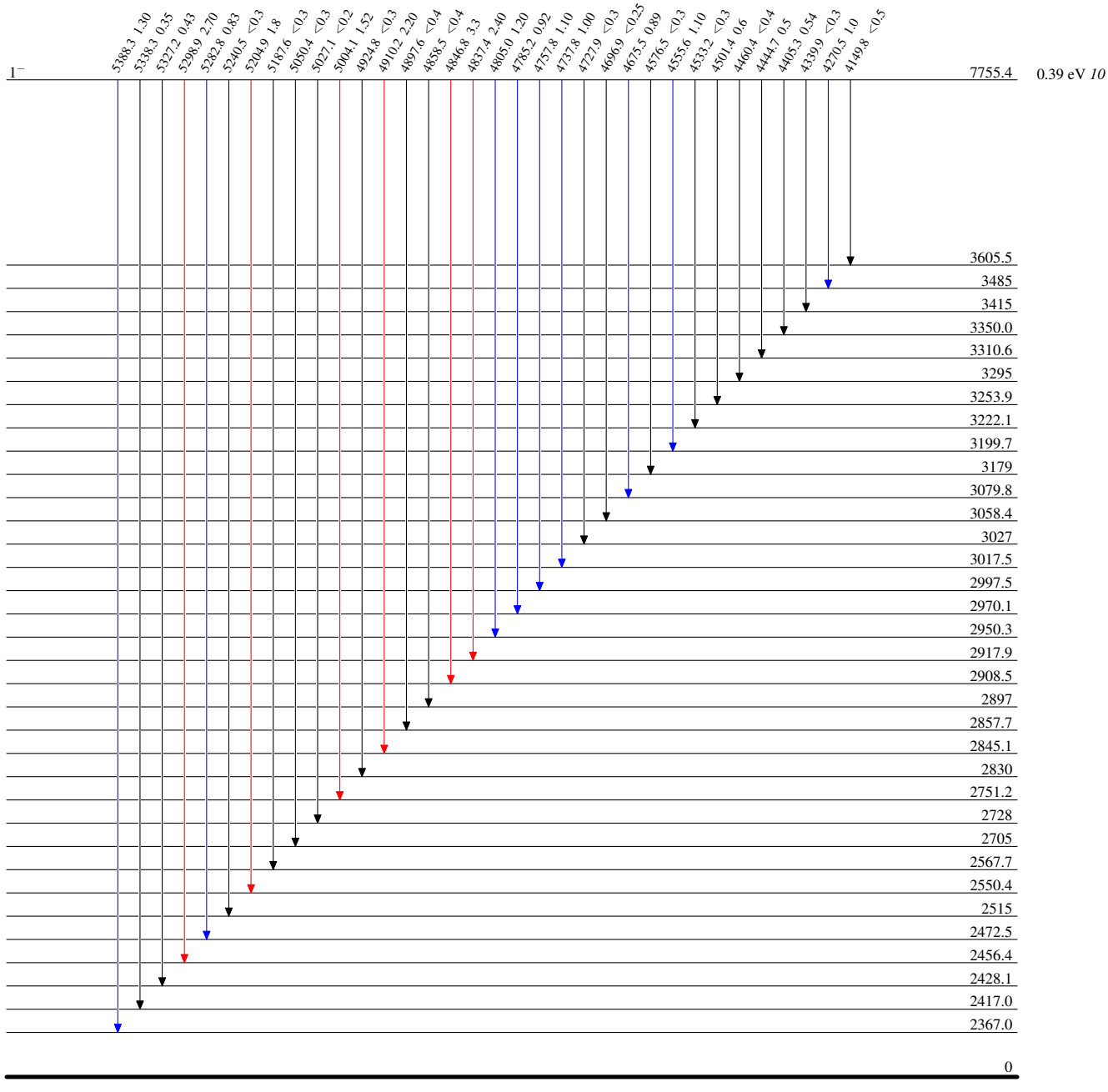
Intensities: I_γ per 100 neutron captures

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{202}_{80}Hg_{122}$