^{208}Pb(^{3}He,dγ) 2000Ti04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. Chen # and F. G. Kondev	NDS 126, 373 (2015)	30-Sep-2013

2000Ti04: E=20.5 MeV ^{3}He beam was produced from the Cologne FN tandem accelerator. γ-rays were detected by two unshielded EUROBALL CLUSTER detectors with a total photopeak efficiency of about 7% at 1332 keV. Measured Eγ, Iγ, γγ-coin. Deduced levels,γ-branchings.

^{209}Bi Levels

E(level)†	E(level)†	E(level)†	E(level)†
0.0	3269.6 *2*	4096.6 *2*	5152.2 *3*
896.3 *1*	3449.1 *2*	4236.8 *3*	5190.7 *4*
1608.6 *1*	3590.5 *2*	4415.4‡ *2*	5291.4 *4*
2442.9 *1*	3633.8‡ *2*	4426.7 *3*	5292.5 *3*
2492.8 *1*	3759.0 *5*	4438.9 *2*	5369.7 *4*
2766.6 *1*	3772.5 *2*	4478.2 *3*	5563.3 *6*
2845.1 *1*	3782.6 *2*	4516.5 *3*	5668.3 *3*
2917.6 *1*	3801.4 *2*	4588.1 *3*	5788.7 *4*
2955.9 *1*	3808.2 *2*	4739.6 *2*	6301.0 *4*
3119.5 *1*	3816.7 *3*	4786.3 *3*	6381.9 *6*
3159.3 *1*	3913.2 *2*	4904.2 *3*	6712.1 *4*
3197.4 *2*	4091.4 *4*	5054.0 *4*	6900.4 *7*

† From a least-squares fit to γ-ray energies.
‡ configuration=$\pi(3p_{1/2})^{+1}$.

γ(^{209}Bi)

E_i(level)	E_γ†	I_γ†	E_f	E_i(level)	E_γ†	I_γ†	E_f
3119.5	2223.2		896.3	3816.7	2920.4 *2*	100	896.3
3159.3	242.7 *1*	55 *20*	2917.6	3913.2	1420.4 *2*	100	2492.8
	314.2 *2*	100 *10*	2845.1	4091.4	1648.5 *4*	100	2442.9
	392.5 *2*	40 *10*	2766.6	4096.6	977.1 *2*	100	3119.5
	716.5 *2*	90 *20*	2442.9	4236.8	3340.6 *3*	100	896.3
3197.4	352.3 *1*	70 *20*	2845.1	4415.4	1295.9 *2*	100 *30*	3119.5
	431.2 *2*	50 *15*	2766.6		1922.4 *2*	3 *1*	2492.8
	705.1 *2*	100 *10*	2492.8	4426.7	3530.4 *3*	100	896.3
3269.6	424.5 *1*	100 *10*	2845.1	4438.9	3542.6 *3*		896.3
	826.5 *2*	30 *10*	2442.9		4439.1 *3*		0.0
3449.1	2552.8 *2*	100	896.3	4478.2	3581.9 *3*	100	896.3
3590.5	745.3 *2*	100	2845.1	4516.5	3620.2 *3*	100	896.3
3633.8	436.3 *2*	2 *1*	3197.4	4588.1	3692.1 *3*		896.3
	514.37 *2*	100 *30*	3119.5		4587.8 *6*		0.0
	677.8 *2*	20 *6*	2955.9	4739.6	3843.3 *2*	100	896.3
	788.8 *2*	3 *1*	2845.1	4786.3	3890.0 *2*	100	896.3
	867.2 *2*	20 *6*	2766.6	4904.2	4007.9 *3*	100	896.3
	1140.8 *2*	6 *2*	2492.8	5054.0	4157.7 *4*	100	896.3
	1191.0 *2*	4 *1*	2442.9	5152.2	4255.9 *3*	100	896.3
3759.0	2862.7 *5*	100	896.3	5190.7	4294.4 *4*	100	896.3
3772.5	2876.3 *2*	100	896.3	5291.4	2525.6 *5*	100	2766.6
3782.6	2886.3 *3*	100	896.3	5292.5	2095.1 *3*	100	3197.4
3801.4	2905.1 *2*		896.3	5369.7	2926.9 *4*	100	2442.9
	3801.0 *5*		0.0	5563.3	3070.5 *6*	100	2492.8
3808.2	2199.7 *2*	100	1608.6	5668.3	4772.0 *3*	100	896.3

Continued on next page (footnotes at end of table)

^{208}Pb(^{3}He,dγ) 2000Ti04 (continued)

$\gamma(^{209}Bi)$ (continued)

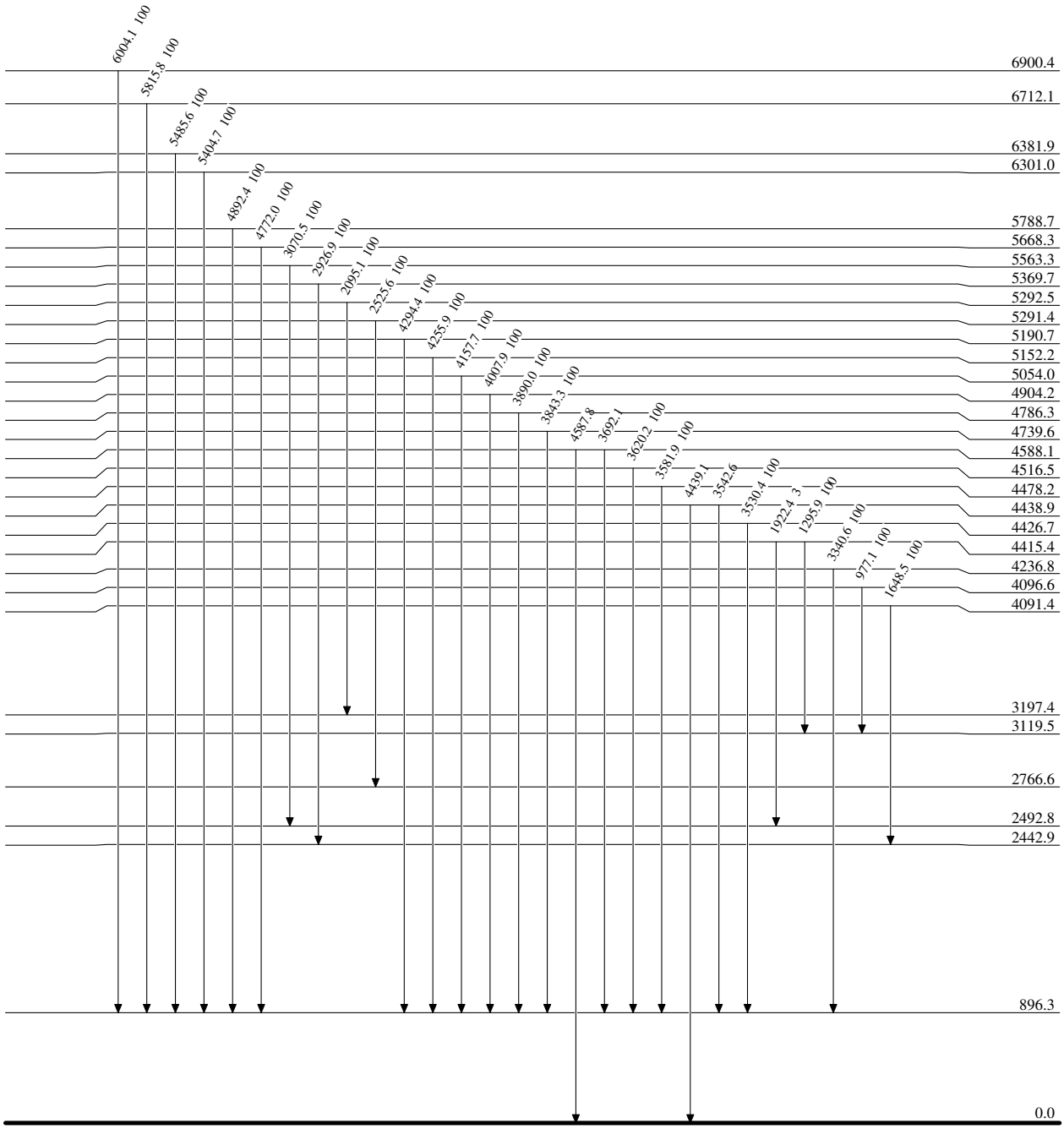
E_i(level)	E_γ †	I_γ †	E_f
5788.7	4892.4 *4*	100	896.3
6301.0	5404.7 *4*	100	896.3
6381.9	5485.6 *6*	100	896.3
6712.1	5815.8 *4*	100	896.3
6900.4	6004.1 *7*	100	896.3

† From 2000Ti04.

^{208}Pb(^{3}He,dγ) **2000Ti04**

Level Scheme

Intensities: Relative photon branching from each level

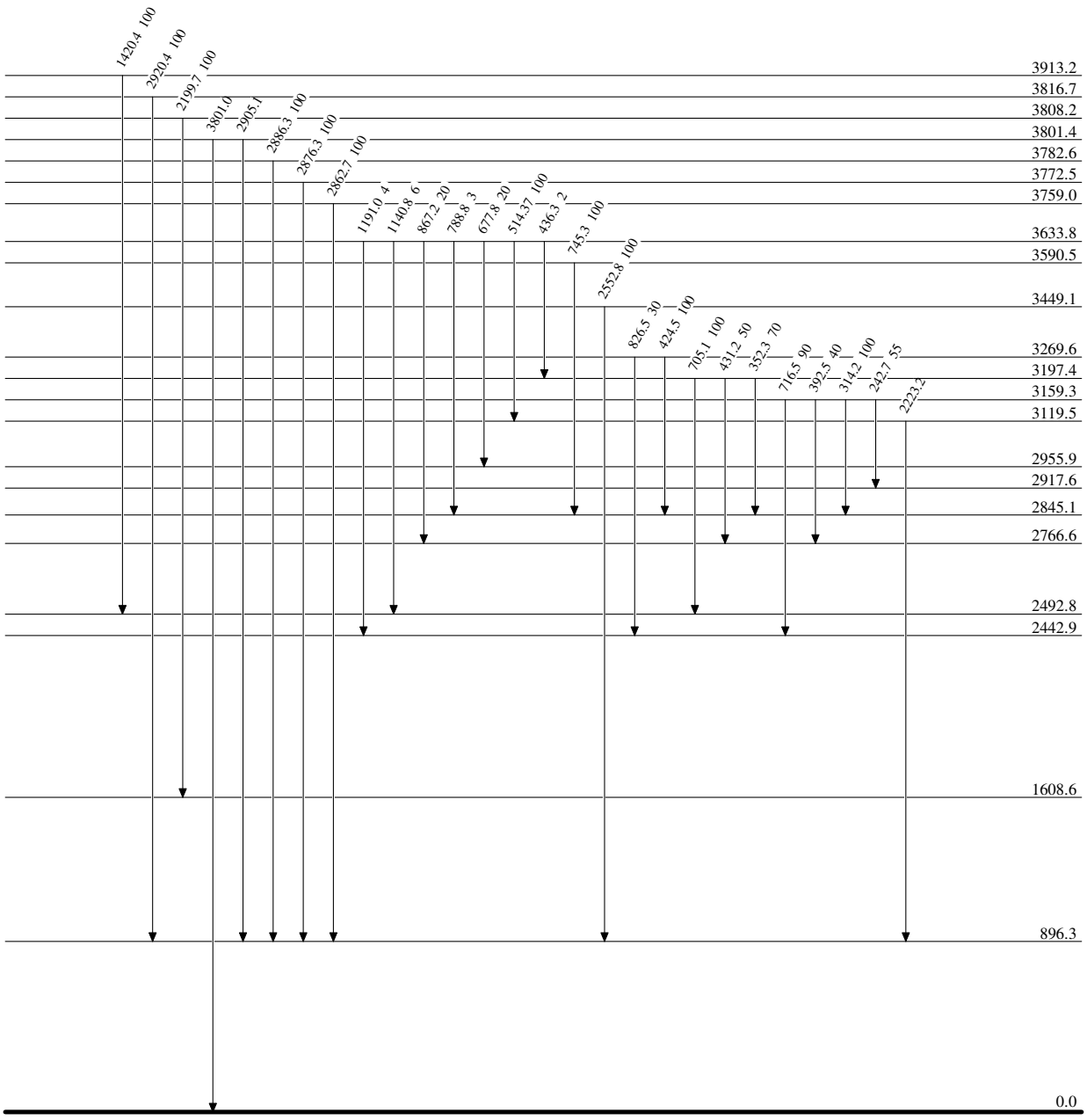


$^{209}_{83}Bi_{126}$

^{208}Pb(^{3}He,dγ) 2000Ti04

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{209}_{83}Bi_{126}$