^{208}Pb(^{36}S,Xγ) 2008Wi09

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, John Cameron and Balraj Singh	NDS 112,2715 (2011)	20-Oct-2011

2008Wi09: E=230 MeV ^{36}S beam produced from the Argonne Tandem-Linac Accelerator System (ATLAS), with a intensity of 1.5 pnA on a 0.5 mg/cm^2 target and a intensity of 0.3 pnA on a 44 mg/cm^2 target. A heavy-ion parallel-plate avalanche counter (PPAC) array CHICO for identification of the reaction products; a Ge detector array (Gammasphere) consisting of 101 high-purity (HP) Ge detectors for detecting γ-rays, FWHM=2-10 keV at Eγ=1 MeV. Measured Eγ. Deduced levels.

^{35}P Levels

E(level)[†]	J$^\pi$[‡]	E(level)[†]	J$^\pi$[‡]	E(level)[†]
0	1/2$^+$	4381.8 *10*		4959.3 *9*
2386.9 *7*	3/2$^+$	4493.2 *8*	(7/2$^-$)[#]	5087.6 *11*
3860.6 *7*	5/2$^+$	4766.0 *10*		5487.7 *10*
4102.1 *7*	(7/2$^-$)[#]	4868.7 *8*		5560.1 *12*
				6220.4 *10*

[†] From least-squares fit to Eγ's.
[‡] From Adopted Levels, unless stated otherwise.
[#] Listed in 2008Wi09 from 1987Wa10 shell-model calculation.

γ(^{35}P)

E$_i$(level)	J$_i^\pi$	E$_\gamma$[†]	I$_\gamma$[‡]	E$_f$	J$_f^\pi$	E$_i$(level)	J$_i^\pi$	E$_\gamma$[†]	I$_\gamma$[‡]	E$_f$	J$_f^\pi$
2386.9	3/2$^+$	2386 *1*	100	0	1/2$^+$	4868.7		767 *1*	56 *11*	4102.1	(7/2$^-$)
3860.6	5/2$^+$	1473 *1*	13.0 *17*	2386.9	3/2$^+$			1009 *1*	<11	3860.6	5/2$^+$
		3861 *1*	87	0	1/2$^+$	4959.3		466 *1*	52 *7*	4493.2	(7/2$^-$)
4102.1	(7/2$^-$)	241 *1*	62 *4*	3860.6	5/2$^+$			856 *1*	48 *7*	4102.1	(7/2$^-$)
		1715 *1*	4 *1*	2386.9	3/2$^+$	5087.6		128 *1*	34 *5*	4959.3	
		4102 *1*	34 *5*	0	1/2$^+$			321 *1*	66 *7*	4766.0	
4381.8		1995 *1*	100	2386.9	3/2$^+$	5487.7		993 *1*	63 *13*	4493.2	(7/2$^-$)
4493.2	(7/2$^-$)	391 *1*	85 *7*	4102.1	(7/2$^-$)			1387 *1*	37 *13*	4102.1	(7/2$^-$)
		632 *1*	15.0 *24*	3860.6	5/2$^+$	5560.1		1458 *1*	100	4102.1	(7/2$^-$)
4766.0		273 *1*	20 *3*	4493.2	(7/2$^-$)	6220.4		1132 *1*	<13	5087.6	
		663 *1*	80 *7*	4102.1	(7/2$^-$)			1260 *1*	50 *13*	4959.3	
4868.7		374 *1*	33 *11*	4493.2	(7/2$^-$)			1729 *1*	50 *13*	4493.2	(7/2$^-$)
		487 *1*	11 *11*	4381.8							

[†] From 2008Wi09.
[‡] From 2010WiZZ (e-mail reply from Mathis Wiedeking in April, 2010).

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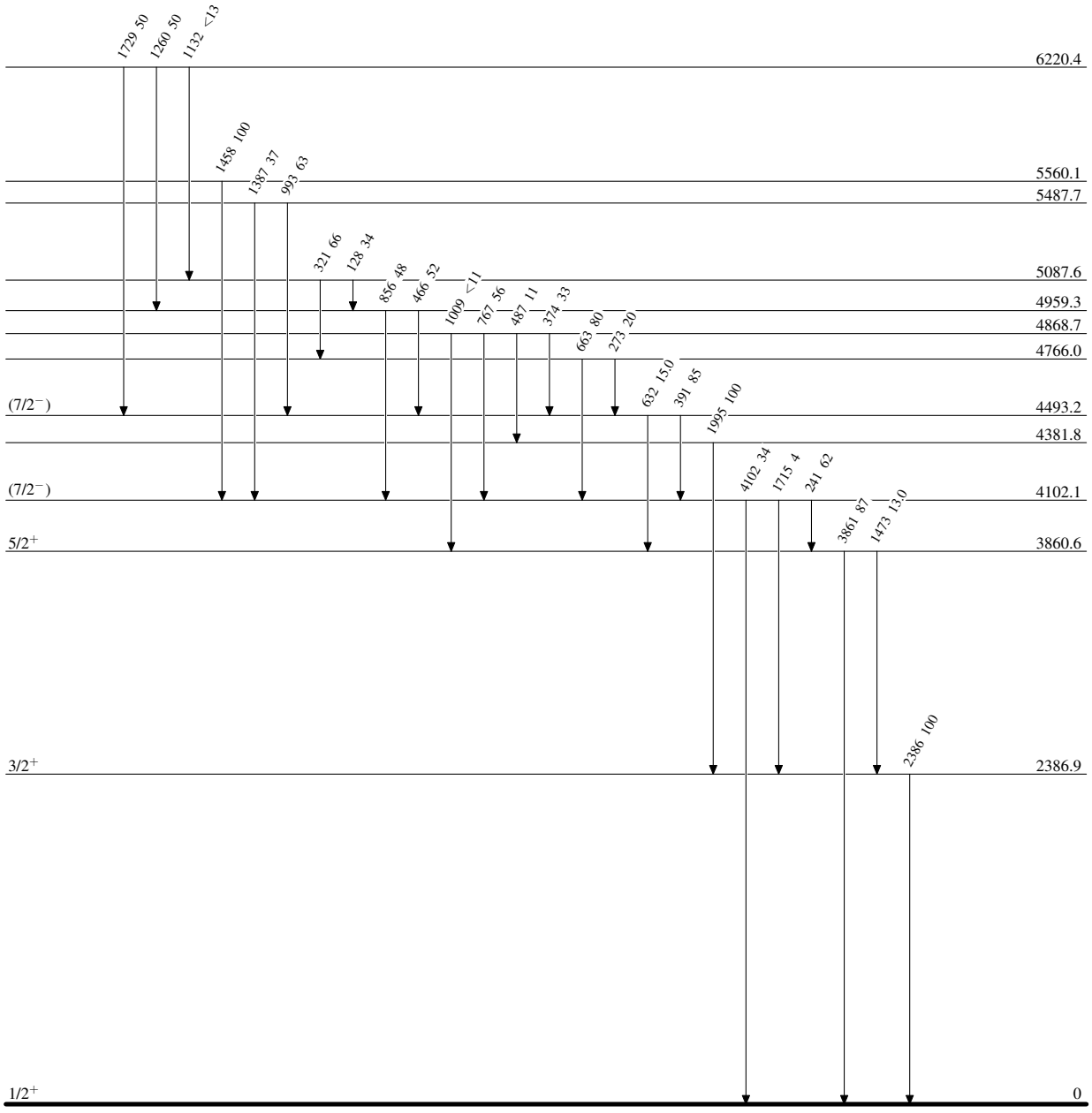
Level Scheme

Intensities: % photon branching from each level



$^{35}_{15}P_{20}$