^{124}Xe(γ,γ') 2006Vo04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. Katakura, Z. D. Wu	NDS 109, 1655 (2008)	1-Apr-2008

Data set based on the XUNDL data set compiled by M. Mitchell and B. Singh (McMaster), June 8, 2006, except Iγ(90°)/Iγ(127° which is given in XUNDL by reading figure in 2006Vo04.
2006Vo04: enriched target > 99.9 %; measured Eγ, Iγ, γ(θ) at 90°, 127° and 150°, transition strength.

^{124}Xe Levels

E(level)	Jπ†	$\Gamma_{\gamma 0}$ (meV)	Comments
0.0	0^+		
354.03	2^+		E(level): From Adopted Levels.
846.50	2^+		E(level): From Adopted Levels.
2182	1	9.6 *6*	B(M1)↑=0.239 *15*, B(E1)↑=2.64×10^{-5} *17*.
2545	1	7.8 *6*	B(M1)↑=0.123 *9*, B(E1)↑=1.36×10^{-5} *10*.
2867	1	0.79 *19*	B(M1)↑=0.009 *2*, B(E1)↑=0.096×10^{-5} *24*.
2874	1	6.1 *4*	B(M1)↑=0.067 *5*, B(E1)↑=0.74×10^{-5} *5*.
2991	1	52 *3*	B(M1)↑=0.51 *3*, B(E1)↑=5.6×10^{-5} *3*.
3036	1	19.6 *12*	B(M1)↑=0.182 *11*, B(E1)↑=2.01×10^{-5} *12*.
3125	1	17.1 *12*	B(M1)↑=0.145 *10*, B(E1)↑=1.60×10^{-5} *11*.
3147	1	3.7 *5*	B(M1)↑=0.031 *4*, B(E1)↑=0.34×10^{-5} *5*.
3265	1	9.2 *8*	B(M1)↑=0.069 *6*, B(E1)↑=0.76×10^{-5} *7*.
3350	1	44 *3*	B(M1)↑=0.303 *20*, B(E1)↑=3.35×10^{-5} *22*.
3439	1	10.9 *9*	B(M1)↑=0.069 *6*, B(E1)↑=0.77×10^{-5} *6*.
3464	1	7.6 *7*	B(M1)↑=0.048 *4*, B(E1)↑=0.53×10^{-5} *5*.
3512	1	16.5 *13*	B(M1)↑=0.099 *8*, B(E1)↑=1.09×10^{-5} *8*.
3542	1	3.6 *5*	B(M1)↑=0.021 *3*, B(E1)↑=0.23×10^{-5} *3*.
3603	1	4.2 *6*	B(M1)↑=0.023 *3*, B(E1)↑=0.26×10^{-5} *4*.
3667	1	2.5 *5*	B(M1)↑=0.013 *3*, B(E1)↑=0.15×10^{-5} *3*.
3716	1	8.0 *9*	B(M1)↑=0.040 *5*, B(E1)↑=0.45×10^{-5} *5*.
3872	1	5.5 *13*	B(M1)↑=0.025 *6*, B(E1)↑=0.27×10^{-5} *6*.
3905	1	22 *3*	B(M1)↑=0.097 *11*, B(E1)↑=1.08×10^{-5} *13*.

† γγ(θ) consistent with 0-1-0 cascade for levels above 847 keV.

γ(^{124}Xe)

E_i(level)	J_i^π	E_γ	I_γ†	E_f	J_f^π	Mult.	E_i(level)	J_i^π	E_γ	I_γ†	E_f	J_f^π	Mult.
2182	1	1828	24 *4*	354.03	2^+		3147	1	2793	308 *91*	354.03	2^+	
		2182	100	0.0	0^+	D			3147	100	0.0	0^+	(D)
2545	1	2191	137 *19*	354.03	2^+		3265	1	2911	411 *85*	354.03	2^+	
		2545	100	0.0	0^+	D			3265	100	0.0	0^+	D
2867	1	2867		0.0	0^+	D	3350	1	3350		0.0	0^+	D
2874	1	2520	163 *24*	354.03	2^+		3439	1	3085	104 *17*	354.03	2^+	
		2874	100	0.0	0^+	D			3439	100	0.0	0^+	D
2991	1	2144	14.0 *18*	846.50	2^+		3464	1	3110	97 *18*	354.03	2^+	
		2637	23.3 *21*	354.03	2^+				3464	100	0.0	0^+	D
		2991	100	0.0	0^+	D	3512	1	2665	24 *6*	846.50	2^+	
3036	1	2682	17 *3*	354.03	2^+				3158	23 *5*	354.03	2^+	
		3036	100	0.0	0^+	D			3512	100	0.0	0^+	D
3125	1	2278	21 *5*	846.50	2^+		3542	1	3542		0.0	0^+	D
		3125	100	0.0	0^+	D	3603	1	3603		0.0	0^+	D

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^{124}Xe(γ,γ') 2006Vo04 (continued)

$\gamma(^{124}Xe)$ (continued)

E_i(level)	J_i^π	E_γ	E_f	J_f^π	Mult.
3667	1	3667	0.0	0^+	D
3716	1	3716	0.0	0^+	D
3872	1	3872	0.0	0^+	D
3905	1	3905	0.0	0^+	D

† Deduced by the compilers of the XUNDL data set from R(expt) values listed by 2006Vo04.

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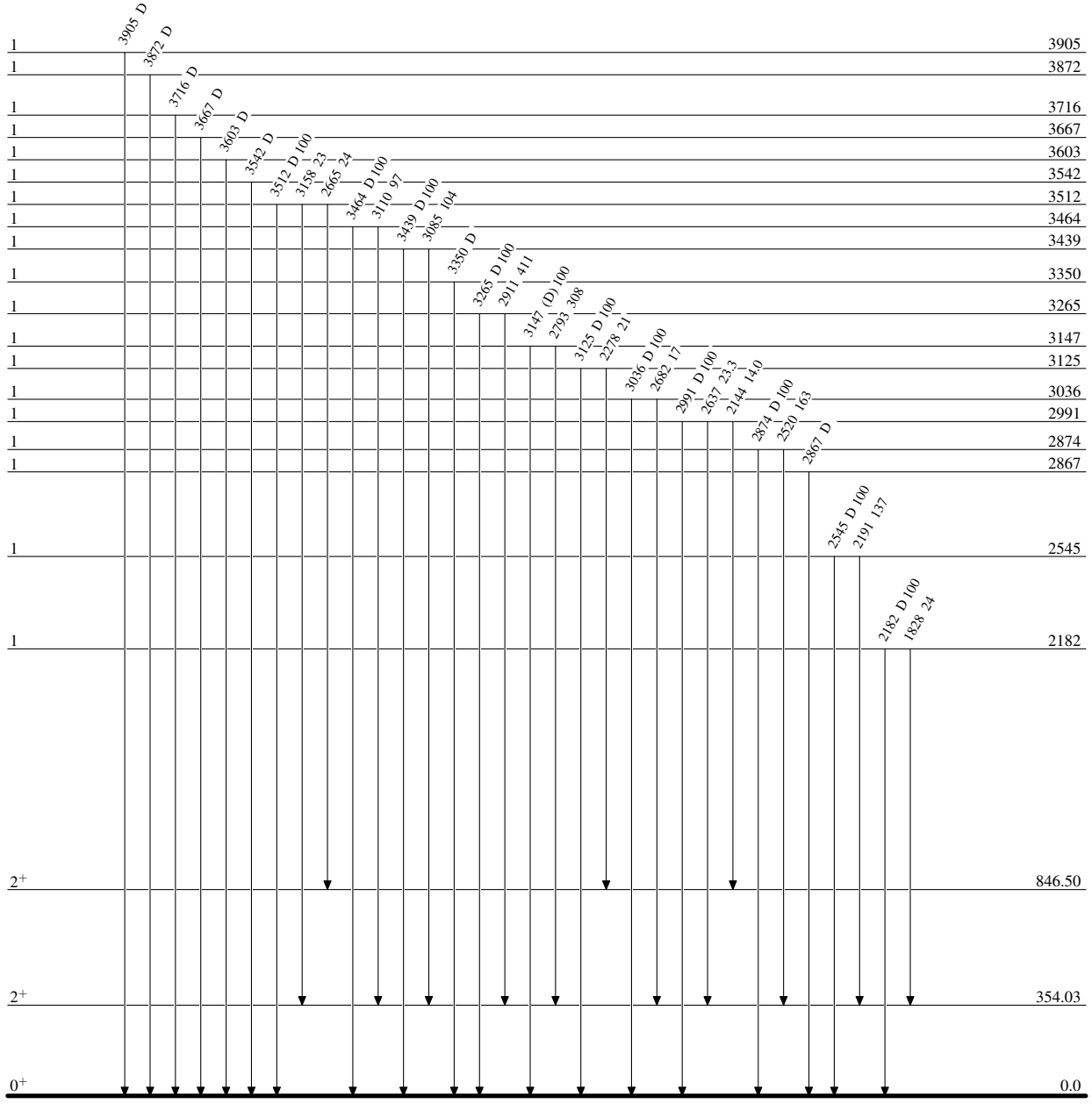
Level Scheme

Intensities: Relative photon branching from each level



$^{124}_{54}Xe_{70}$