^{126}Xe(γ,γ') 2006Vo04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	H. Iimura, J. Katakura, S. Ohya	NDS 180,1 (2022)	1-Oct-2021

4.1 MeV bremsstrahlung; enriched target; measured γ, $\gamma(90°)/\gamma(127°)$; deduced Iγ, Γ_0, J, B(M1), B(E1), B(E2).

^{126}Xe Levels

Integrated elastic scattering cross section $I_{S,0}$ (in eVb) from 2006Vo04.

E(level)[†]	J^π[‡]	$T_{1/2}$[@]	Comments
0	0^+		
388.6[#]	2^+[#]		
879.9[#]	2^+[#]		
2228	$(1,2^+)$	1.0 ps *+6−3*	Γ_0=4.4E−4 *16*. $I_{S,0}$=1.7 *4*.
2359	1	0.0292 ps *+26−23*	Γ_0=8.4E−3 *5*. J^π: (2^+) is reported from $\gamma(\theta)$ in ^{123}Te(α,nγ). $I_{S,0}$=9.4 *7*.
2567	1	0.09 ps *3*	Γ_0=2.1E−3 *4*. $I_{S,0}$=1.6 *5*.
2768	1	0.72 ps *+36−18*	Γ_0=6.3E−4 *21*. $I_{S,0}$=0.9 *3*.
2847	1	0.32 ps *+6−4*	Γ_0=1.42E−3 *21*. $I_{S,0}$=2.0 *3*.
2919	1	4.35 fs *+25−23*	Γ_0=7.8E−2 *4*. $I_{S,0}$=79 *5*.
2951	1	20.9 fs *+23−21*	Γ_0=1.09E−2 *8*. $I_{S,0}$=7.2 *6*.
3132	1	0.37 ps *+9−6*	Γ_0=1.24E−3 *24*. $I_{S,0}$=1.5 *3*.
3160	1	0.40 ps *+10−7*	Γ_0=1.15E−3 *23*. $I_{S,0}$=1.3 *3*.
3196	1	10 fs *3*	Γ_0=6.9E−3 *8*. $I_{S,0}$=1.2 *3*.
3209	1	0.198 ps *+30−23*	Γ_0=2.3E−3 *3*. $I_{S,0}$=2.5 *4*.
3236	1	0.35 ps *+11−7*	Γ_0=1.28E−3 *27*. $I_{S,0}$=1.4 *3*.
3254	1	16.1 fs *+12−10*	Γ_0=2.84E−2 *19*. $I_{S,0}$=30.9 *21*.
3428	1	12.6 fs *9*	Γ_0=2.72E−2 *16*. $I_{S,0}$=20.0 *14*.
3462	1	0.101 ps *+30−23*	Γ_0=3.0E−3 *6*. $I_{S,0}$=1.9 *4*.
3508	1	0.25 ps *+10−6*	Γ_0=1.8E−3 *5*. $I_{S,0}$=1.7 *4*.
3791	1	0.046 ps *6*	Γ_0=1.00E−2 *11*. $I_{S,0}$=8.0 *8*.
3905	1	0.015 ps *4*	Γ_0=1.34E−2 *21*. $I_{S,0}$=4.7 *9*.

[†] From 2006Vo04, unless otherwise noted.
[‡] From $\gamma(90°)/\gamma(127°)$, unless otherwise noted.

Continued on next page (footnotes at end of table)

^{126}Xe(γ,γ') 2006Vo04 (continued)

^{126}Xe Levels (continued)

[#] From the Adopted Levels.
[@] From Γ_0 and branching from 2006Vo04.

$\gamma(^{126}Xe)$

E_i(level)	J_i^π	E_γ	I_γ[†]	E_f	J_f^π	Mult.[‡]	Comments
2228	(1,2$^+$)	2228		0	0$^+$	(Q)	B(E2)↑=5.0×10^{-3} *11* if E2.
2359	1	1970	86 *11*	388.6	2$^+$		
		2359	100	0	0$^+$	[M1]	Mult.: From the adopted gammas. B(M1)↑=0.166 *10*.
2567	1	2178	1.3×10^2 *5*	388.6	2$^+$		
		2567	100	0	0$^+$	D	B(M1)↑=0.032 *6* if M1, B(E1)↑=3.5×10^{-6} *7* if E1.
2768	1	2768		0	0$^+$	D	B(M1)↑=0.008 *3* if M1, B(E1)↑=0.9×10^{-6} *3* if E1.
2847	1	2847		0	0$^+$	D	B(M1)↑=0.016 *2* if M1, B(E1)↑=1.8×10^{-6} *3* if E1.
2919	1	2039	20.8 *24*	879.9	2$^+$		
		2530	13.7 *13*	388.6	2$^+$		
		2919	100	0	0$^+$	D	B(M1)↑=0.82 *4* if M1, B(E1)↑=9.0×10^{-5} *5* if E1.
2951	1	2562	100 *15*	388.6	2$^+$		
		2951	100	0	0$^+$	D	B(M1)↑=0.110 *8* if M1, B(E1)↑=1.22×10^{-5} *9* if E1.
3132	1	3132		0	0$^+$	D	B(M1)↑=0.011 *2* if M1, B(E1)↑=1.16×10^{-6} *22* if E1.
3160	1	3160		0	0$^+$	D	B(M1)↑=0.009 *2* if M1, B(E1)↑=1.04×10^{-6} *21* if E1.
3196	1	2807	5.4×10^2 *14*	388.6	2$^+$		
		3196	100	0	0$^+$	D	B(M1)↑=0.054 *6* if M1, B(E1)↑=6.0×10^{-6} *7* if E1.
3209	1	3209		0	0$^+$	D	B(M1)↑=0.018 *2* if M1, B(E1)↑=2.0×10^{-6} *3* if E1.
3236	1	3236		0	0$^+$	D	B(M1)↑=0.010 *2* if M1, B(E1)↑=1.08×10^{-6} *23* if E1.
3254	1	3254		0	0$^+$	D	B(M1)↑=0.213 *14* if M1, B(E1)↑=2.36×10^{-5} *16* if E1.
3428	1	3039	33 *4*	388.6	2$^+$		
		3428	100	0	0$^+$	D	B(M1)↑=0.175 *10* if M1, B(E1)↑=1.94×10^{-5} *12* if E1.
3462	1	3073	50 *23*	388.6	2$^+$		
		3462	100	0	0$^+$	D	B(M1)↑=0.019 *4* if M1, B(E1)↑=2.1×10^{-6} *4* if E1.
3508	1	3508		0	0$^+$	D	B(M1)↑=0.011 *3* if M1, B(E1)↑=1.2×10^{-6} *3* if E1.
3791	1	3791		0	0$^+$	D	B(M1)↑=0.048 *5* if M1, B(E1)↑=5.3×10^{-6} *6* if E1.
3905	1	3025	1.2×10^2 *4*	879.9	2$^+$		
		3905	100	0	0$^+$	D	B(M1)↑=0.058 *9* if M1, B(E1)↑=6.4×10^{-6} *10* if E1.

[†] Relative branching from each level.
[‡] From γ(90°)/ γ(127°).

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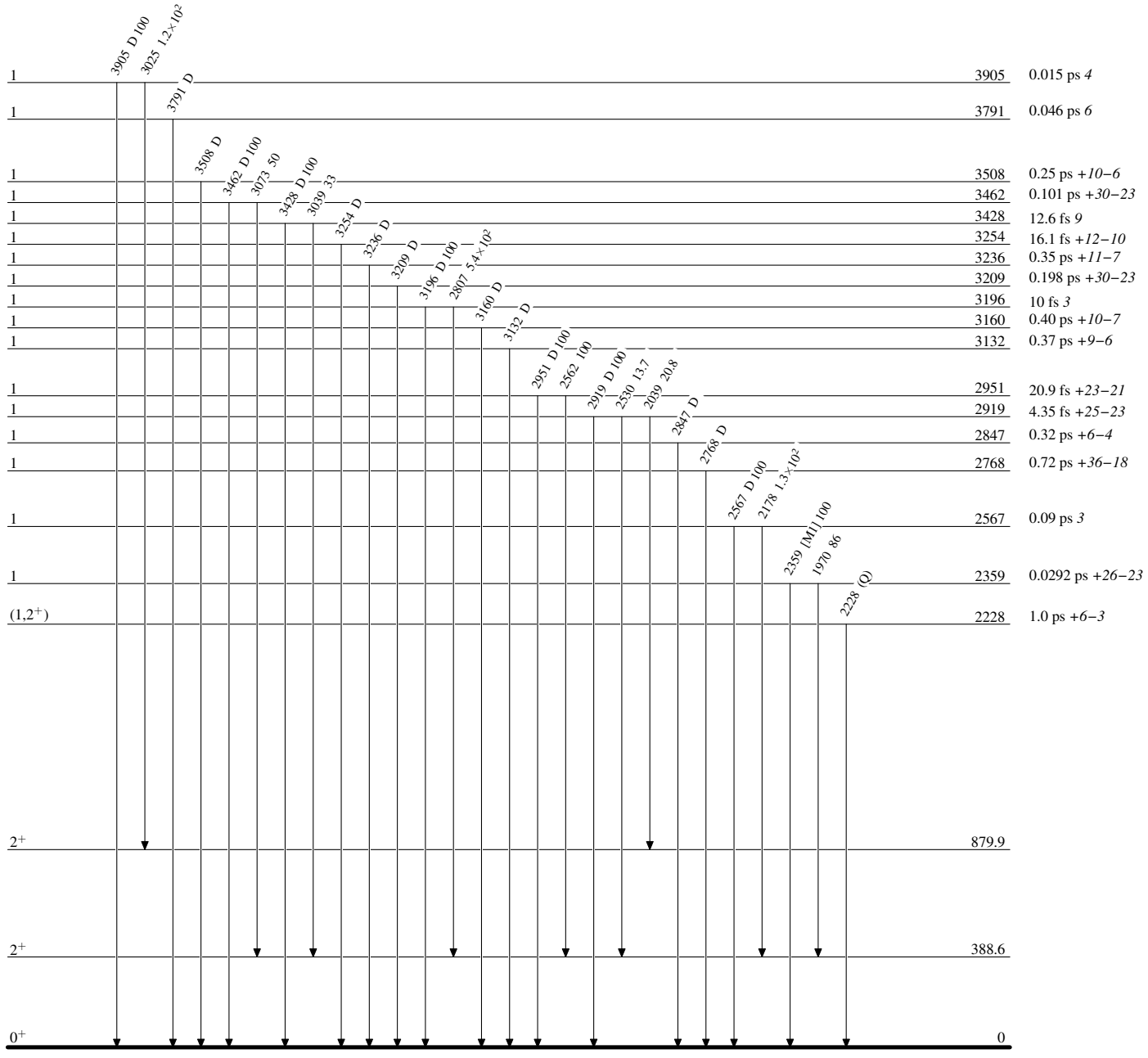
Level Scheme

Intensities: Relative photon branching from each level



$^{126}_{54}Xe_{72}$