^{115}In(^{34}S,Xγ)   **2006Kr07**

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Ninel Nica, Balraj Singh	NDS 113, 1563 (2012)	28-May-2012

2006Kr07: E=140 MeV. Measured Eγ, Iγ, $\gamma\gamma$, $\gamma\gamma(\theta)$(DCO), $\gamma\gamma$(lin pol) using array of eight Compton-suppressed 'Clover' detectors placed at 80° and 140° relative to the beam direction. Shell-model calculations.

^{34}P Levels

Detailed shell-model configurations are given by 2006Kr07 for each level.

E(level)[†]	J$^{\pi}$	Comments
0	1$^+$	
429.3 *10*	2$^+$	
1608.4 *14*	1$^+$	
2305.2 *14*	4$^+$	J$^{\pi}$: parity is negative in Adopted Levels based on other measurements.
2320.5 *14*	3$^-$	
5188.2 *17*	6$^-$	E(level): this level is not listed in Adopted Levels since 2883γ has been assigned from a 6236 level.

[†] From Eγ data, assuming Δ(Eγ)=1.0 keV for each γ ray.

$\gamma(^{34}$P)

Δ(IPDCO)=polarization asymmetry.

E$_\gamma$	I$_\gamma$	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Mult.	Comments
429.3	>155	429.3	2$^+$	0	1$^+$	M1	DCO=0.59 *5* (ΔJ=2 gate), Δ(IPDCO)=−0.16 *13*.
1179.1	17.7 *11*	1608.4	1$^+$	429.3	2$^+$		
1875.9	100	2305.2	4$^+$	429.3	2$^+$	(E2)	DCO=1.68 *14* (ΔJ=1, dipole gate), Δ(IPDCO)=+0.15 *17*. Mult.: E2 disagrees with unnatural parity assignment In (pol d,α) which would imply M2.
1891.2	38.5 *18*	2320.5	3$^-$	429.3	2$^+$	(E1)	DCO=0.89 *10* (ΔJ=1, dipole gate), Δ(IPDCO)=+0.16 *17*.
2883.0	16.1 *11*	5188.2	6$^-$	2305.2	4$^+$	M2	DCO=0.88 *9* (ΔJ=2 gate), Δ(IPDCO)=−0.22 *11*. E$_\gamma$: placement from 6236 level in Adopted Levels, Gammas according to the level scheme in 2009Be26, 2009Ch43 and 2005Ol02; a strong 1046γ reported in 2009Be26 and 2005Ol02 is not seen in 2006Kr07.

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Level Scheme

Intensities: Relative I$_\gamma$

Legend

→ I$_\gamma <$ 2%×I$_\gamma^{max}$
→ I$_\gamma <$ 10%×I$_\gamma^{max}$
→ I$_\gamma >$ 10%×I$_\gamma^{max}$

6$^-$ 5188.2

2883.0 M2 16.1

1891.2 (E1) 38.5
1875.9 (E2) 100
1179.1 17.7

3$^-$ 2320.5
4$^+$ 2305.2
1$^+$ 1608.4

429.3 M1 >155

2$^+$ 429.3
1$^+$ 0

$^{34}_{15}$P$_{19}$