(HI,xnγ) 1997Fo06,1999He32

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao	NDS 121, 395 (2014)	1-Mar-2014

1997Fo06: Er(^{32}S,xnγ) E=164 MeV. Prompt γ measured by Compton-suppressed Ge detectors in coin. with α.
1999He32: ^{170}Yb(^{28}Si,3nγ) E=143MeV, ^{171}Yb(^{28}Si,4nγ) E=155 MeV, ^{160}Dy(^{36}Ar,nγ) E=178 MeV. Measured Eγ, γγ, Iγ using the DORIS array of nine TESSA type detectors, the Jurosphere array of ten TESSA type detectors and 13 Eurogam phase I type detectors, and gas-filled recoil separator RITU. Recoil-decay tagging technique used by detecting α particles from the decay of ^{194}Po.

^{195}Po Levels

E(level)‡	Jπ#	$T_{1/2}$@	Comments
0	3/2⁻	4.64 s *9*	
≈230†	(13/2⁺)	1.92 s *2*	E(level): From Adopted Levels.
549.3† *5*	17/2⁺		
656.4 *5*	(15/2⁺)		
937.4† *7*	21/2⁺		
1059.5 *6*	(19/2⁺)		
1431.7† *9*	25/2⁺		
2020.7† *13*	(29/2⁺)		

† Band(A): 13/2⁺ band.
‡ From Eγ, except as noted.
# From odd-mass Po systematics.
@ From Adopted Levels.

γ(^{195}Po)

Eγ	Iγ#	E_i(level)	J^π_i	E_f	J^π_f	Comments
x145‡ *1*	3.7 *8*					
x187‡ *1*	8.8 *13*					
x230@ *1*	50&					
x243.2† *5*	60 *20*					
x319† *1*	100 *13*					
319.1 *5*	100 *4*	549.3	17/2⁺	≈230	(13/2⁺)	I(143°)/I(90°)=1.5 *2*. Eγ: Other: 318.7 5 (1997Fo06).
x323‡ *1*	6.1 *9*					
x362@ *1*	30&					
x387† *1*	61 *14*					
388.1 *5*	55 *4*	937.4	21/2⁺	549.3	17/2⁺	I(143°)/I(90°)=1.5 *4*. Eγ: Other: 388.4 5 (1997Fo06).
x402@ *1*	30&					
404a *1*	5.7 *10*	1059.5	(19/2⁺)	656.4	(15/2⁺)	
x406† *1*	58 *14*					
426.6a *5*	17 *2*	656.4	(15/2⁺)	≈230	(13/2⁺)	
x427@ *1*	50&					
x428† *1*	90 *30*					
x470@ *1*	40&					

Continued on next page (footnotes at end of table)

(HI,xnγ) 1997Fo06,1999He32 (continued)

γ(^{195}Po) (continued)

E_γ	I_γ [#]	E_i(level)	J_i^π	E_f	J_f^π	Comments
494.3 *5*	17 *3*	1431.7	25/2$^+$	937.4	21/2$^+$	I(143°)/I(90°)=1.3 *5*. E_γ: Other: 495.8 5 (1997Fo06).
510.0[a] *5*	13 *3*	1059.5	(19/2$^+$)	549.3	17/2$^+$	
589 *1*	6 *2*	2020.7	(29/2$^+$)	1431.7	25/2$^+$	

† Transition above 3/2$^-$ state.
‡ Transition above 13/2$^+$ state.
# Relative intensity from 1999He32.
@ γ's leading to (3/2$^-$) level. In coin. with α from (3/2$^-$) isomer (4.64 s).
& Relative intensity from fig.3 in 1996Fo06.
a Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

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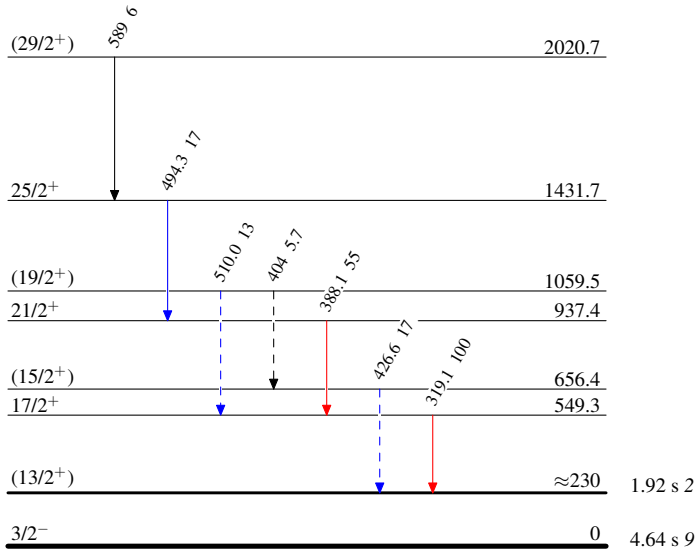
Level Scheme

Intensities: Relative I_γ

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)



$^{195}_{84}Po_{111}$

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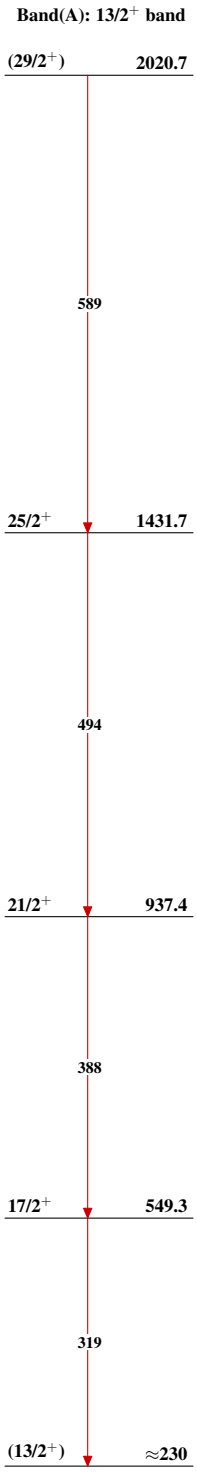

$^{195}_{84}Po_{111}$