

<sup>193</sup>Ir( $\alpha,2n\gamma$ ), <sup>196</sup>Pt( $p,2n\gamma$ ) 1974Tj02,1970Go17

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

<sup>193</sup>Ir target  $J^\pi=3/2^+$ .

1974Tj02: <sup>193</sup>Ir( $\alpha,2n\gamma$ ) E=26,29,42 MeV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(t)$ ,  $\gamma(\theta)$  at 30° and 90° with Ge(Li).

1970Go17: <sup>196</sup>Pt( $p,2n\gamma$ ) E=16 MeV; measured E(ce), Ice.

<sup>195</sup>Au Levels

All data are from 1974Tj02, except as noted.

E(level)	$J^\pi^\dagger$	$T_{1/2}$	Comments
0.0	3/2 <sup>+</sup>		
61.41	1/2 <sup>+</sup>		
241.53	3/2 <sup>+</sup>		
261.75	5/2 <sup>+</sup>		
318.49@	11/2 <sup>-</sup>	30.5# s 2	
439.8	3/2 <sup>+</sup> , 5/2 <sup>+</sup>		
525.56	7/2 <sup>-</sup> &		
549.44	7/2 <sup>+</sup>		
706.42@	15/2 <sup>-</sup>		
818.7	9/2 <sup>+</sup>		
878.74	13/2 <sup>-</sup> &		
893.96	9/2 <sup>-</sup> &		
1365.9	(17/2 <sup>-</sup> ) &		
1404.54	(15/2 <sup>-</sup> ) &		
1424.9@	19/2 <sup>-</sup>		
1490.4	(13/2 <sup>+</sup> )		
1813	(21/2 <sup>+</sup> )	8‡ ns 2	$\pi$ h11/2 coupled to 5 <sup>-</sup> core state.

† From Adopted Levels, except as noted.

‡ From  $\gamma\gamma(t)$  measurement 1974Tj02.

# From Adopted Levels.

@ Band(A):  $\pi$  h<sub>11/2</sub> decoupled band. Level spacing of  $\Delta J=2$  sequence built on 11/2<sup>-</sup> is close to corresponding values in the <sup>193</sup>Au, <sup>191</sup>Au and <sup>196</sup>Hg g.s. bands.

& For corresponding  $J^\pi$  states in <sup>193</sup>Au,  $\Delta E(\text{levels}) < 20$  keV.

$\gamma(^{195}\text{Au})$

$\gamma$  placement is based on  $\gamma\gamma$ -,  $\gamma\gamma(t)$ -coin, in-beam, off-beam  $\gamma$  singles,  $\gamma(\theta)$  anisotropy.

All data are from 1974Tj02, except as noted.

$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
61.41		61.41	1/2 <sup>+</sup>	0.0	3/2 <sup>+</sup>	
<sup>x</sup> 167.0	6.2					Precedes 21/2 <sup>+</sup> isomer (1974Tj02).
180.2	5.7	241.53	3/2 <sup>+</sup>	61.41	1/2 <sup>+</sup>	
200.4	6.8	261.75	5/2 <sup>+</sup>	61.41	1/2 <sup>+</sup>	

Continued on next page (footnotes at end of table)

$^{193}\text{Ir}(\alpha, 2n\gamma)$ ,  $^{196}\text{Pt}(p, 2n\gamma)$  **1974Tj02, 1970Go17** (continued) $\gamma(^{195}\text{Au})$  (continued)

$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult.	$\alpha^\@$	Comments
$^{x}207.2\&$	$<21.1\&$							Precedes $21/2^+$ isomer ( <b>1974Tj02</b> ).
207.2 $\&$	$<21.1\&$	525.56	$7/2^-$	318.49	$11/2^-$			
261.9	179	261.75	$5/2^+$	0.0	$3/2^+$			
288.0	4.5	549.44	$7/2^+$	261.75	$5/2^+$			
368.6	5.9	893.96	$9/2^-$	525.56	$7/2^-$			
$^{x}388.1\&$	$<100\&$	706.42	$15/2^-$	318.49	$11/2^-$	E2	0.0494	$\alpha(K)=0.0335$ 5; $\alpha(L)=0.01203$ 17; $\alpha(M)=0.00299$ 5; $\alpha(N+..)=0.000868$ 13 Mult.: stretched Q from $\gamma(\theta)$ .
$^{x}388.1\&$	$<100\&$	1813	$(21/2^+)$	1424.9	$19/2^-$			$I_\gamma$ : seen in delayed spectrum.
439.8	13.2	439.8	$3/2^+, 5/2^+$	0.0	$3/2^+$	M1	0.1187	$\alpha(K)=0.0979$ 14; $\alpha(L)=0.01599$ 23; $\alpha(M)=0.00370$ 6; $\alpha(N+..)=0.001103$ 16 Mult.: $\alpha(K)\text{exp}/\alpha(L)\text{exp}=6.3$ 8 ( <b>1970Go17</b> ).
$^{x}442.1$	9.3							
526.3	17.8	1404.54	$(15/2^-)$	878.74	$13/2^-$			
549.8	17.1	549.44	$7/2^+$	0.0	$3/2^+$	E2	0.0206	$\alpha(K)=0.01536$ 22; $\alpha(L)=0.00397$ 6; $\alpha(M)=0.000965$ 14; $\alpha(N+..)=0.000282$ 4 Mult.: $\alpha(K)\text{exp}/\alpha(L)\text{exp}=3.0$ 8 ( <b>1970Go17</b> ).
556.8	15.8	818.7	$9/2^+$	261.75	$5/2^+$			
560.7	21.8	878.74	$13/2^-$	318.49	$11/2^-$			
576.1	3.1	893.96	$9/2^-$	318.49	$11/2^-$			
659.5	14.2	1365.9	$(17/2^-)$	706.42	$15/2^-$			
671.7	6	1490.4	$(13/2^+)$	818.7	$9/2^+$			
718.5	36.1	1424.9	$19/2^-$	706.42	$15/2^-$	E2	0.01131	$\alpha(K)=0.00882$ 13; $\alpha(L)=0.00190$ 3; $\alpha(M)=0.000453$ 7; $\alpha(N+..)=0.0001333$ 19 Mult.: stretched Q from $\gamma(\theta)$ .
$^{x}1242\#a$								
$^{x}1279\#a$								

$^\dagger$   $\Delta E$  not given by authors.

$^\ddagger$  Relative photon intensity normalized to  $I_\gamma(E_\gamma=261.9)=179$ .

$\#$  From **1970Go17**.

$^\@$  Total theoretical internal conversion coefficients, calculated using the BrIcc code (**2008Ki07**) with Frozen orbital approximation based on  $\gamma$ -ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

$\&$  Multiply placed with undivided intensity.

$^a$  Placement of transition in the level scheme is uncertain.

$^x$   $\gamma$  ray not placed in level scheme.

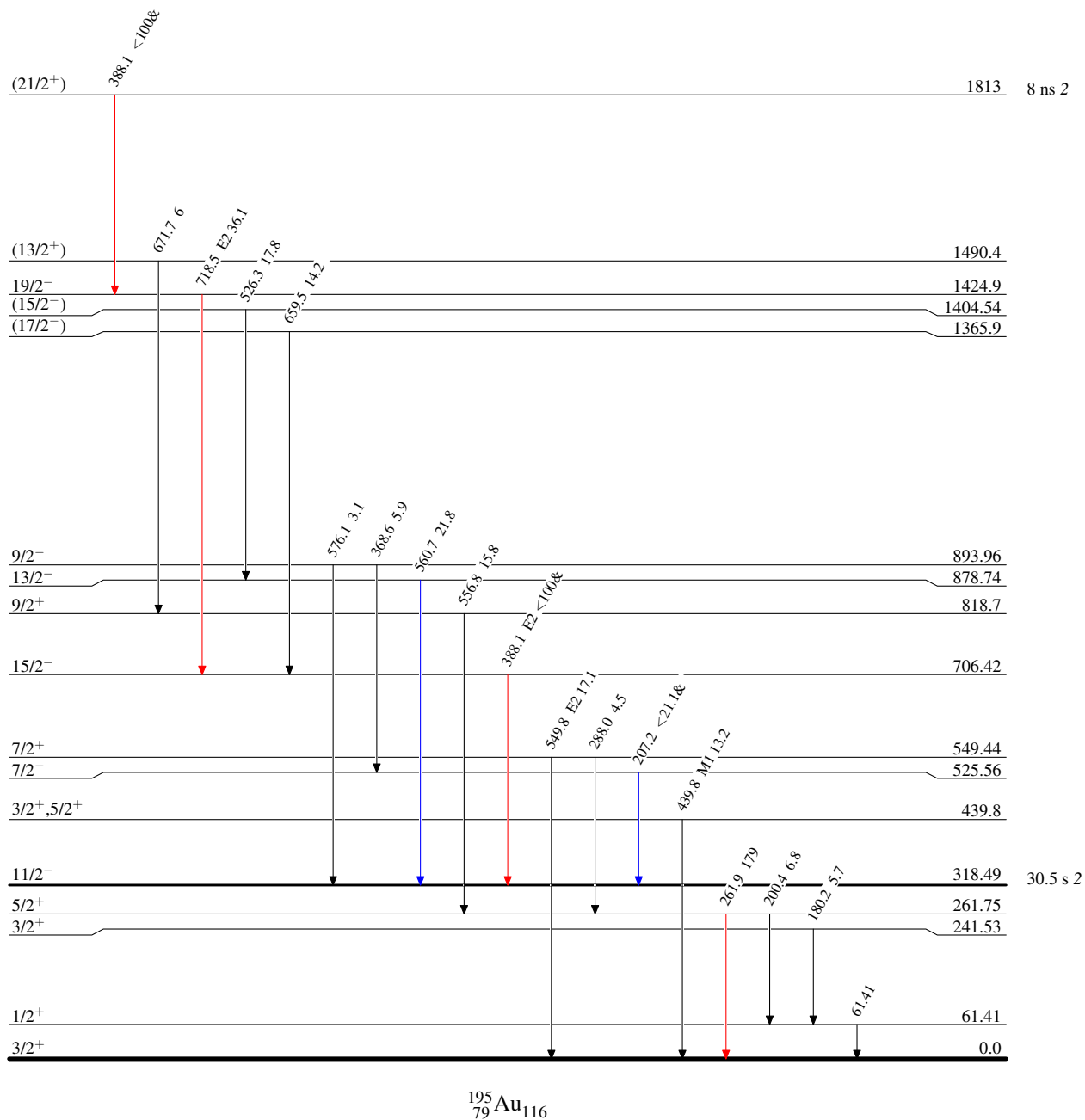
$^{193}\text{Ir}(\alpha,2n\gamma)$ ,  $^{196}\text{Pt}(p,2n\gamma)$  1974Tj02,1970Go17

## Level Scheme

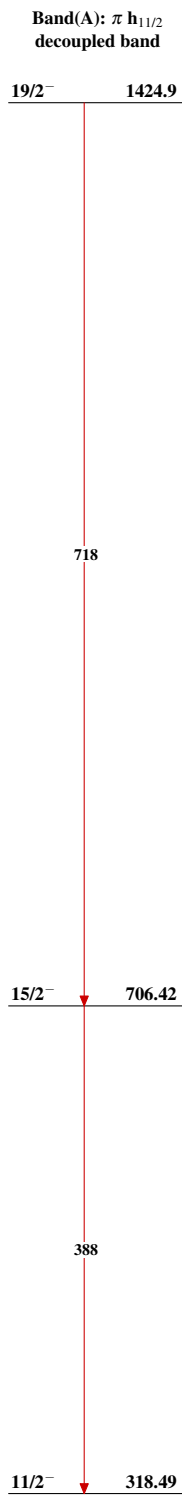
Intensities: Relative  $I_\gamma$   
 & Multiply placed: undivided intensity given

## Legend

- $\longrightarrow$   $I_\gamma < 2\% \times I_\gamma^{\max}$   
 $\longrightarrow$   $I_\gamma < 10\% \times I_\gamma^{\max}$   
 $\longrightarrow$   $I_\gamma > 10\% \times I_\gamma^{\max}$



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$^{195}_{79}\text{Au}_{116}$