

<sup>192</sup>Os( $\gamma, \gamma'$ ) **1999Fr06**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 113, 1871 (2012)	15-Jun-2012

Other: **1997PiZY**; investigation of low-lying M1 collective excitation (scissors mode) strength.

**1999Fr06**: $\approx 4.1$  MeV brehmsstrahlung endpoint energy; 99% <sup>192</sup>Os target; measured E $\gamma$ , integrated cross section,  $\gamma(\theta)$ .

<sup>192</sup>Os Levels

E(level) <sup>†</sup>	J $\pi$ <sup>‡</sup>	T <sub>1/2</sub> <sup>#</sup>	$\Gamma_{\gamma 0}^2/\Gamma$ (meV) <sup>@</sup>	E(level) <sup>†</sup>	J $\pi$ <sup>‡</sup>	T <sub>1/2</sub> <sup>#</sup>	$\Gamma_{\gamma 0}^2/\Gamma$ (meV) <sup>@</sup>
0.0				3046.4	1	11.3 fs 12	9.6 5
205.8&				3148.9	1	127 fs 14	3.6 4
489.1&				3196.3	1	62 fs 4	7.3 5
2391.2	1	104 fs 9	4.4 4	3207.0	1	109 fs 13	4.2 5
2478.3	1	35 fs 13	1.7 3	3217.1	1	69 fs 5	6.6 5
2694.2	1	31 fs 8	2.3 3	3239.9	1	29 fs 5	5.1 5
2748.3	1	57 fs 14	2.6 3	3257.6	1	123 fs 13	3.7 4
2804.9	1	66 fs 5	6.9 5	3273.3	1	39.7 fs 24	11.5 7
2814.3	1	22 fs 4	3.6 4	3281.0	1	72 fs 7	6.3 6
2820.0	1	123 fs 13	3.7 4	3289.5	1	6.0 fs 7	8.5 6
2864.5	1	84 fs 6	5.4 4	3428.9	1	28 fs 4	8.0 6
2903.5	1	23.2 fs 16	15.7 7	3536.4	1	9.8 fs 25	4.2 6
2915.2	1	10.4 fs 15	4.5 4	3756.8	1	38 fs 4	11.9 12
2941.3	1	91 fs 7	5.0 4	3836.5	1	29 fs 3	15.6 15
2948.0	1	7.8 fs 5	23.2 10	3864.7	1	71 fs 14	6.4 13
2965.6	1	95 fs 8	4.8 4	3890.5			

<sup>†</sup> Authors' values; uncertainty unstated.

<sup>‡</sup> D transition to 0<sup>+</sup> g.s.

<sup>#</sup> Deduced from measured  $\Gamma_{\gamma 0}^2/\Gamma$  and  $\Gamma_{\gamma 1}/\Gamma_{\gamma 0}$ , assuming  $\Gamma = \Gamma_{\gamma 1} + \Gamma_{\gamma 0} + \Gamma_{\gamma 2}$ . thus, T<sub>1/2</sub> for E(level)=2391 and above will be upper limits if branches exist to levels other than the g.s. or 206 or 489 levels.

<sup>@</sup> Calculated by evaluator from integrated cross section data of **1999Fr06** assuming J indicated.

& Rounded value from Adopted Levels.

$\gamma(^{192}\text{Os})$

E <sub>i</sub> (level)	J <sub>i</sub> <sup>†</sup>	E <sub><math>\gamma</math></sub> <sup>†</sup>	I <sub><math>\gamma</math></sub> <sup>‡</sup>	E <sub>f</sub>	Mult. <sup>#</sup>	E <sub>i</sub> (level)	J <sub>i</sub> <sup>†</sup>	E <sub><math>\gamma</math></sub> <sup>†</sup>	I <sub><math>\gamma</math></sub> <sup>‡</sup>	E <sub>f</sub>	Mult. <sup>#</sup>
2391.2	1	2391.2		0.0	D	2948.0	1	2458.9	11.6 25	489.1	
2478.3	1	2272.5	178 43	205.8				2742.2	47.0 23	205.8	
		2478.3	100	0.0	D			2948.0	100	0.0	D
2694.2	1	2488.4	152 28	205.8		2965.6	1	2965.6	100	0.0	D
		2694.2	100	0.0	D	3046.4	1	2557.3	26 7	489.1	
2748.3	1	2542.5	75 18	205.8				2840.6	79 6	205.8	
		2748.3	100	0.0	D			3046.4	100	0.0	D
2804.9	1	2804.9	100	0.0	D	3148.9	1	3148.9	100	0.0	D
2814.3	1	2608.5	143 20	205.8		3196.3	1	3196.3	100	0.0	D
		2814.3	100	0.0	D	3207.0	1	3207.0	100	0.0	
2820.0	1	2820.0	100	0.0	D	3217.1	1	3217.1	100	0.0	D
2864.5	1	2864.5	100	0.0	D	3239.9	1	3034.1	77 11	205.8	
2903.5	1	2414.4	12 3	489.1				3239.9	100	0.0	D
		2903.5	100	0.0	D	3257.6	1	3257.6	100	0.0	D
2915.2	1	2709.4	211 19	205.8		3273.3	1	3273.3	100	0.0	D
		2915.2	100	0.0	D	3281.0	1	3281.0	100	0.0	D
2941.3	1	2941.3	100	0.0	D	3289.5	1	3083.7	198 14	205.8	

Continued on next page (footnotes at end of table)

$^{192}\text{Os}(\gamma, \gamma')$  **1999Fr06 (continued)** $\gamma(^{192}\text{Os})$  (continued)

$E_i(\text{level})$	$J_i^\pi$	$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_f$	Mult. #	$E_i(\text{level})$	$J_i^\pi$	$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_f$	Mult. #
3289.5	1	3289.5	100	0.0	D	3756.8	1	3756.8	100	0.0	D
3428.9	1	3223.1	44 8	205.8		3836.5	1	3836.5	100	0.0	D
		3428.9	100	0.0	D	3864.7	1	3864.7	100	0.0	D
3536.4	1	3330.6	241 39	205.8		3890.5		3890.5	100	0.0	
		3536.4	100	0.0	D						

† Level energy differences; **1999Fr06** report level energies only (uncertainty unstated).

‡ Branching calculated by evaluator from  $E_\gamma$  and authors' reported ratios of integrated cross sections for g.s. and excited state transitions.

# From measured  $\gamma(\theta)$ .

$^{192}\text{Os}(\gamma,\gamma')$  1999Fr06

## Level Scheme

Intensities: Relative photon branching from each level

