

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Tilley, Weller, Cheves, Chasteler		NP A595,1 (1995)	31-Oct-1994

$Q(\beta^-)=4820$ 3; $S(n)=3956$ 3; $S(p)=17069$ 19; $Q(\alpha)=-8965$ 3 [2012Wa38](#)

Note: Current evaluation has used the following Q record \$4819.6 293957.1 2817074 20

[1993Au05](#).

 ^{19}O LevelsCross Reference (XREF) Flags

A	$^{19}\text{O} \beta^-$ decay	E	$^{18}\text{O}(n,\gamma), ^{18}\text{O}(n,n)$	I	$^{19}\text{N} \beta^-$ decay
B	$^9\text{Be}(^{18}\text{O}, ^8\text{Be})$	F	$^{18}\text{O}(n,\alpha)$	J	$^{18}\text{F}(\pi^-, \gamma)$
C	$^{13}\text{C}(^7\text{Li}, p)$	G	$^{18}\text{O}(d, p)$		
D	$^{17}\text{O}(t, p)$	H	$^{18}\text{O}(\alpha, ^3\text{He})$		

E(level)	J ^{π}	T _{1/2}	XREF	Comments
0.0	5/2 ⁺	26.88 s 5	A B C D E F G H I J	% β^- =100 T=3/2 T _{1/2} : Weighted average: 27.2 s 3 (1965Bo42), 26.76 s 8 (1967Yu01), 26.5 s 1 (1968Re04), 27.7 s 1 (1970Al21).
96.0 5	3/2 ⁺	1.39 ns 5	C D G H I J	g=-0.48 6
1471.7 4	1/2 ⁺	0.88 ps 12	C D G H	
2371.5 10	9/2 ⁺	>2.4 ps	C D G	
2779.0 9	7/2 ⁺	64 fs 13	C D G H	
3067.4 16	(3/2) ⁺	≥0.7 ps	C D G H	
3153.5 17	5/2 ⁺	≥0.7 ps	C D G H	
3231.6 23	(1/2, 3/2 ⁻)		C D G H	
3944.9 [†] 14	3/2 ⁻		C D G	
4109.3 19	3/2 ⁺	<15 keV	C D G	
4328.1 24	3/2, 5/2	<15 keV	C D G	
4402.5 27	3/2, 5/2, 7/2	<15 keV	C D G	
4582.0 46	3/2 ⁻	52 keV 3	C D E G	%n=100
4702.6 27	5/2 ⁺	<15 keV	C D G H	
4968.3 55	5/2, 7/2		C	
5007.0 45	3/2, 5/2	<15 keV	C D G	
5082.0 54	1/2 ⁻	49 keV 5	C E	%n=100
5148.4 32	≥5/2 ⁺	3.4 keV 10	C D E G	%n=100
5384.0 28	9/2, 11/2, 13/2		C	
5503.5 [†] 31		<15 keV	C D G	
5540	3/2 ⁺	≈490 keV	E	%n=100
5704.6 [†] 43	7/2 ⁻ , 5/2	7.8 keV 14	C D E G H	%n=100
6119.6 [†] 32	3/2 ⁺	≈110 keV	C E	%n=100
6191.6 55			C	
6269.3 26	7/2 ⁻	19.2 keV 24	C D E G H	%n=100
6405.8 [†] 31			C	
6466.2 48	7/2, 9/2, 11/2		C E G	%n=100
6583 [†] 6			C G	
6903 8			C G	
6988 9			C G	
7118 10			C G	
7242 8			C G	
7508 10			C	
8048 20			C	
8132 20			C	

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Adopted Levels, Gammas (continued) ^{19}O Levels (continued)

E(level)	J^π	$T_{1/2}$	XREF	Comments
8247 20			C	
8450 20			C	
8561 20			C	
8591 20			C	
8916 20			C	
8923 20			C	
9022 20			C	
9064 20			C	
9253 20			C	
9324 20			C	
9430			C	
9560			C	
9600	$7/2^-$		C E	%n=100
9900	$7/2^-$		C E	%n=100
9930			C	
9980			C	
10210	$7/2^-$		E	%n=100
10660	$7/2^-$		E	%n=100
11250 50		240 keV	F	% α =?; %n=?
11580 50		330 keV	F	% α =?; %n=?

[†] Corresponds to unresolved states.

 $\gamma(^{19}\text{O})$

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ	Comments
96.0	$3/2^+$	96.0	100	0.0	$5/2^+$	M1		B(M1)(W.u.)=0.088 38
1471.7	$1/2^+$	1375.7	98.0 2	96.0	$3/2^+$	M1		B(M1)(W.u.)=0.0093 15
		1471.7	2.0 2	0.0	$5/2^+$	E2		B(E2)(W.u.)=0.58 12
2371.5	$9/2^+$	2371.5	100	0.0	$5/2^+$	E2+(M3)	0.002 50	B(E2)(W.u.)<1
2779.0	$7/2^+$	2779.0	100	0.0	$5/2^+$	M1+E2	0.8 5	
3067.4	$(3/2)^+$	1595.7	100	1471.7	$1/2^+$			
3153.5	$5/2^+$	3057.5	92 4	96.0	$3/2^+$			
		3153.5	8 4	0.0	$5/2^+$			
3944.9	$3/2^-$	2473.2	28 4	1471.7	$1/2^+$			
		3848.9	39 8	96.0	$3/2^+$			
		3944.9	33 8	0.0	$5/2^+$			

Adopted Levels, Gammas**Level Scheme**

Intensities: Type not specified

Legend

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

