

Integrated cross sections of lines of the Herzberg III bands of O₂ at 295 K in units of 10⁻²⁷cm²cm⁻¹.

$A'_1(6) - X(0)$ band							$A'_1(7) - X(0)$ band					
N	$^S R_{31}$	$^R R_{32}$	$^R Q_{31}$	$^Q Q_{32}$	$^Q P_{31}$	$^P Q_{33}$	$^S R_{31}$	$^R R_{32}$	$^R Q_{31}$	$^Q Q_{32}$	$^Q P_{31}$	$^P Q_{33}$
1	25B	5B	31B	8B	13B		34	4B	46	12B	25B	
3	52B	11B	62B	18B	49	18B	62	10B	93	25B	46	34B
5	53B	15B	93	25B	59	28	74	13B	155	35B	77	49
7	68	17B	105	29B	71	34	80	15B	152	40B	87	49
9	56	17B	87B	29B	93	22	68	15	155	28	96	53
11	43	15	124	22	56	26B	65	14B	152	49	68	40
13	34	12B	71	25	37	19B	62	11B	136	31	53	28
15	34B	10B	65	16B	19B	16B	43	9B	90	19	56	40
17	19B	7B	46	12B	27B	12B						

$A'_1(8) - X(0)$ band								$A'_1(9) - X(0)$ band					
N	$^S R_{31}$	$^R R_{32}$	$^R Q_{31}$	$^Q Q_{32}$	$^Q P_{31}$	$^P Q_{33}$	$^O P_{33}$	$^S R_{31}$	$^R Q_{31}$	$^Q Q_{32}$	$^Q P_{31}$	$^P Q_{33}$	$^O P_{33}$
1	49	8B	62	18B	42B			65	71	16B	31B		
3	80	18B	127	38B	77	53	25B	130	93B	35B	62	35B	23B
5	99	25B	158	53B	102	62	34	139	182B	48B	111	49B	32B
7	118	28B	195	60B	130	74	39B	147B	201	54B	124	59	34
9	105	28	180	60B	130	74	39B	118	201	54B	130	53	36B
11	90	25B	176	37	121	71B	35B	118	189	49	105	49	34
13	86B	21B	161	43	102	58B	29B	90	186	41B	62	41B	27B
15	74	16B	111	34B	75B	56	22B	74	117B	31B	40	32B	20B
17	49	11B	118	24B	46B	32B	16B						
19	32B	8B	83	34	38B	21B	10B						
21	20B	5B	56	10E	43	13B	7B						

$A'_1(10) - X(0)$ band						$A'_2(5) - X(0)$ band				
N	$^S R_{31}$	$^R Q_{31}$	$^Q Q_{32}$	$^Q P_{31}$	$^P Q_{33}$	$^S R_{21}$	$^R R_{22}$	$^R Q_{21}$	$^Q Q_{22}$	$^Q P_{21}$
1	42B	58B	24B	33B		19	31	20B		
3	91B	127	52B	71B	18B	37	31	31	19	19B
5	126B	195B	72B	124	25B	28	31B	49	34	22
7	155	202	82B	105	28B	46	28	56B	37	22
9	130B	152B	77	102B	28B	49B	25	71	46B	29B
11	129B	179B	74B	93	25B	53	19	77	28	37B
13	106B	167	65	84B	21B	49	26B	68	28B	22B

$A'_2(6) - X(0)$ band						$A'_2(7) - X(0)$ band					
N	$^S R_{21}$	$^R R_{22}$	$^R Q_{21}$	$^Q Q_{22}$	$^Q P_{21}$	$^S R_{21}$	$^R R_{22}$	$^R Q_{21}$	$^Q Q_{22}$	$^Q P_{21}$	$^P P_{22}$
1	38B	40	40B			56	28	52B			
3	56B	53	49	43	22B	80	59	65	49	34	28B
5	65	59	114	62	28	84	56	111	84	46	16
7	80	62	111	59	37	93	80	142	114	68	56
9	71	40	111	65	40	105	114	167	108	82B	46
11	74	59	118	62	53	121	74B	176	93	74B	56
13	71	50B	102B	43	56	111	37	148	49	68	25
15	62	38B	99	37B	29B	71E	47B	124	34	59	25B
17	59	27B	68	19	34	59	34B	124	38B	56	18B
19	31	18B	65	22B	25B	53	22B	87	25B	22B	12B
21	15B	11B	43	11B	9B	21E	14B	30B	16B	28	7B
23	9B	7B	31	6B	5B						

$A'_2(8) - X(0)$ band							$A'_2(9) - X(0)$ band					
N	$^S R_{21}$	$^R R_{22}$	$^R Q_{21}$	$^Q Q_{22}$	$^Q P_{21}$	$^P P_{22}$	$^S R_{21}$	$^R R_{22}$	$^R Q_{21}$	$^Q Q_{22}$	$^Q P_{21}$	$^P P_{22}$
1	65	77	34				44B	29B	82B			
3	96	87	105	53	59	52B	77	62	176B	97B	104B	33B
5	102	109B	161	110B	124	72B	132B	108	186	139	144B	45B
7	145	115B	228B	125B	96	87	155	124	232	152B	164B	62
9	170	105	228B	161	155	82B	186	77	263	164	164	32
11	161	93	201	102	108	74B	135B	68	266B	136	136	46B
13	122B	53	189	99	111	61B	112B	56	235	118	124	46
15	121	66B	189	65	90	47B	62B	56B	192	87	99	29B
17	62	47B	93B	46B	56	28	61B	40B	161	40	68	21B
19	49	19	99	37	46	22B						
21	27B	19B	38B	21B	31	14B						

$A'_2(10) - X(0)$ band						$A'_2(11) - X(0)$ band				
N	$^S R_{21}$	$^R R_{22}$	$^R Q_{21}$	$^Q Q_{22}$	$^Q P_{21}$	$^S R_{21}$	$^R R_{22}$	$^R Q_{21}$	$^Q Q_{22}$	$^Q P_{21}$
1	59B	31B	86B			38B	43B	65B		
3	127B	90	105	78B	87B	83B	92B	141B	82B	92B
5	176B	90	260B	102	90	115B	128B	195B	124	128B
7	210	104B	272	124B	136B	130	155	195	111	146B
9	198	102	247	102	136B	130B	155	254	133	139
11	180B	77	263	105	123B	124	131B	139	121	131B
13	139	74	260	124B	93	90	80	198	97B	114
15	114	60B	207	65	99	74B	90	145	74B	83B
17	81B	42B	155	56	71					
19	54B	28B	96	33B	37B					
21	34B	18B	71	21B	23B					

B: Lines are blended and values are estimated.

References:

1. *Fourier Transform Spectroscopy and Cross Section Measurements of the Herzberg III Bands of O_2 at 295 K*, K. Yoshino, J. R. Esmond, W. H. Parkinson, A. P. Thorne, R. C. M. Learner, G. Cox, and A. S. -C. Cheung, *J. Chem. Phys.* **112**, 9791-9801 (2000).