

List of the observed wavelength of the Schumann-Runge absorption bands of $^{16}\text{O}^{18}\text{O}$.

A: Wavelength region of 176.310nm - 180.042nm

Wavenumber	B(16)-X(0) $^{16}\text{O}_2$	B(17)-X(0) $^{16}\text{O}_2$	B(17)-X(0) $^{18}\text{O}_2$
56718.12			
56717.62		R ₃ (11)	R ₃ (7)
56717.17			R ₂ (7)
56715.82		R ₂ (11)	
56715.23			
56714.79	R ₁ (1)		
56714.09	^P R ₁₃ (1)		
56712.86			
56712.71			
56712.26	P ₁ (1)		R ₁ (7)
56711.06			
56710.89			
56710.30			
56709.63			
56708.83			
56707.58		R ₁ (11)	
56706.88			P ₃ (7)
56706.66			P ₂ (7)
56706.45			
56705.87	R ₁ (3)P ₃ (3)		
56705.32			
56704.96			
56704.69	P ₂ (3)		
56702.15			P ₁ (7)
56701.63		P ₃ (11)	
56701.19			
56700.43	P ₁ (3)	P ₂ (11)	
56699.33			
56699.01			
56698.18			
56696.96			
56696.31			
56694.33			
56693.28	R ₃ (5)		
56692.73	R ₂ (5)	P ₁ (11)	
56691.74			
56691.03			
56690.67			
56689.32			
56688.35	R ₁ (5)		

Wavenumber	B(16)-X(0) ¹⁶ O ₂	B(16)-X(0) ¹⁶ O ¹⁸ O	B(17)-X(0) ¹⁶ O ₂	B(17)-X(0) ¹⁸ O ₂
56687.54				R ₃ (9)
56686.77				R ₂ (9)
56686.09				
56685.78				
56684.30	P ₂ (5)			
56684.06				
56683.29				
56681.59				R ₁ (9)
56680.05	P ₁ (5)			
56679.48				
56677.89				
56677.45				
56676.59				
56676.09				
56674.97				
56673.95				P ₃ (9)
56673.61				P ₂ (9)
56673.29				
56672.40				
56671.99				
56671.64				
56670.44				
56669.49		<i>R</i> Q ₂₁		
56668.79				P ₁ (9)
56667.86	R ₃ (7)	R ₂ (1)		
56666.86	R ₂ (7)			
56666.55				
56665.69		R ₃ (2)		
56664.93		R ₂ (2)		
56664.56			R ₃ (13)	
56663.38				
56663.15		R ₁ (0)P ₃ (2)		
56662.27	R ₁ (7)	R ₁ (1)		
56662.04			R ₂ (13)	
56661.40		<i>P</i> R ₁₃ (1)		
56659.74		R ₂ (3)R ₃ (3)		
56659.28		R ₁ (2)P ₁ (1)		
56658.53				
56658.35				
56657.86				
56657.04				
56656.30		<i>P</i> Q ₂₃ (3)		
56655.93	P ₃ (7)			
56655.43	P ₂ (7)			
56654.19		R ₁ (3)P ₂ (3)		
56652.98		R ₃ (4)	R ₁ (13)	
56652.55		R ₂ (4)		

Wavenumber	B(16)-X(0) ¹⁶ O ₂	B(16)-X(0) ¹⁶ O ¹⁸ O	B(17)-X(0) ¹⁶ O ₂	B(17)-X(0) ¹⁸ O ₂
56651.01	P ₁ (7)			
56650.28				
56650.05				R ₃ (11)
56648.87				R ₂ (11)
56648.68		P ₁ (3)		
56647.05		R ₁ (4)		
56645.87		P ₂ (4)	P ₃ (13)	
56643.92			P ₂ (13)	
56643.47		R ₂ (5)R ₃ (5)		R ₁ (11)
56642.24				
56641.67				
56640.26		P ₁ (4)		
56639.71				
56638.58				
56638.01		R ₁ (5)		
56635.67			P ₁ (13)	
56635.26		P ₂ (5)P ₃ (5)		
56633.98	R ₃ (9)			P ₃ (11)
56633.21	R ₂ (9)			
56632.73		R ₂ (6)R ₃ (6)		P ₂ (11)
56632.32				
56631.28				
56629.74		P ₁ (5)		
56628.91				
56627.86	R ₁ (9)			P ₁ (11)
56626.93		R ₁ (6)		
56624.53				
56623.57				
56622.68		P ₂ (6)P ₃ (6)		
56621.55				
56619.85		R(7)		
56619.04	P ₃ (9)			
56618.00	P ₂ (9)			
56617.23		P ₁ (6)		
56616.19				
56613.78		R ₁ (7)		
56613.51	P ₁ (9)			
56612.66				
56611.73				
56608.21		P ₂ (7)P ₃ (7)		
56607.37				
56605.84				
56605.20		R ₃ (8)		

Wavenumber	B(16)-X(0) ¹⁶ O ₂	B(16)-X(0) ¹⁶ O ¹⁸ O	B(16)-X(0) ¹⁸ O ₂	B(17)-X(0) ¹⁶ O ₂	B(17)-X(0) ¹⁸ O ₂
56605.00		R ₂ (8)	R ₂ (1)		R ₃ (13)
56603.76					
56603.65					R ₂ (13)
56602.71		P ₁ (7)			
56602.22			R ₁ (1)	R ₃ (15)	
56599.64					
56599.27			P ₁ (1)		
56598.75		R ₁ (8)		R ₂ (15)	
56597.84			R(3)		
56597.54					R ₁ (13)
56596.20					
56595.94					
56594.77			R ₁ (3)		
56593.97					
56592.00	R ₃ (11)	P ₂ (8)P ₃ (8)	P ₂ (3)		
56590.63	R ₂ (11)				
56590.10					
56589.40			P ₁ (3)	R ₁ (15)	
56588.65		R ₃ (9)			
56588.31		R ₂ (9)			
56586.66					
56586.18		P ₁ (8)			P ₃ (13)
56585.04					P ₂ (13)
56584.68	R ₁ (11)				
56583.16			R(5)		
56581.61		R ₁ (9)			
56581.26				P ₃ (15)	
56580.80					
56580.17			R ₁ (5)		
56579.49					P ₁ (13)
56578.68				P ₂ (15)	
56576.74					
56576.39					
56575.59					
56574.80			P ₃ (5)		
56574.56			P ₂ (5)		
56573.71	P ₃ (11)	P ₂ (9)P ₃ (9)			
56572.96	P ₂ (11)				
56572.13					
56571.77			P ₁ (5)		
56571.12					
56569.75		R(10)		P ₁ (15)	
56567.53	P ₁ (11)	P ₁ (9)			
56566.35					
56565.05					
56562.37		R ₁ (10)			
56561.75			R ₃ (7)		
56561.51			R ₂ (7)		

Wavenumber	B(15)-X(0) ¹⁶ O ₂	B(16)-X(0) ¹⁶ O ₂	B(16)-X(0) ¹⁶ O ¹⁸ O	B(16)-X(0) ¹⁸ O ₂	B(17)-X(0) ¹⁶ O ₂
56558.31				R ₁ (7)	
56557.59					
56555.53					
56555.40					
56553.68			P ₃ (10)		
56553.48			P ₂ (10)		
56552.34	^P Q ₂₁ (1) ^T R ₃₁ (3)				
56550.97					
56550.25			R ₃ (11)	P ₃ (7)	
56549.90				P ₂ (7)	
56549.00			R ₂ (11)		
56547.41	R ₁ (1)				
56547.04			P ₁ (10)	P ₁ (7)	
56546.51					
56544.58	P ₁ (1)				
56544.00					
56543.24					
56542.41	R ₃ (3)				
56542.17	R ₂ (3)				
56541.16		R ₃ (13)	R ₁ (11)		
56539.38	R ₁ (3)	R ₂ (13)			
56536.57	P ₃ (3)				
56536.00	P ₂ (3)				
56533.14	P ₁ (3)	R ₁ (13)		R ₃ (9)	
56532.68				R ₂ (9)	
56531.62			P ₃ (11)		
56531.33			P ₂ (11)		
56530.98					R ₃ (17)
56529.50					
56529.31				R ₁ (9)	
56528.56					
56527.73	^R Q ₂₁ (5)				
56526.18	^R Q ₂₁ (5)				
56525.98	R ₂ (5)				
56524.59	^R Q ₃₂ (5)		P ₁ (11)		
56523.38					
56522.94	R ₁ (5)				
56521.79					
56520.02		P ₃ (13)			
56518.73		P ₂ (13)			
56518.35				P ₃ (9)	
56517.97				P ₂ (9)	
56516.59	P ₃ (5)				
56516.40	P ₂ (5)				
56514.86				P ₁ (9)	
56513.48	P ₁ (5)				
56512.85		P ₁ (13)			
56508.69			P(12)		

Wavenumber	B(15)-X(0) ¹⁶ O ₂	B(15)-X(0) ¹⁶ O ¹⁸ O	B(16)-X(0) ¹⁶ O ₂	B(16)-X(0) ¹⁶ O ¹⁸ O	B(16)-X(0) ¹⁸ O ₂	B(17)-X(0) ¹⁶ O ₂
56507.47	<i>NP</i> ₁₃ (5)					<i>P</i> ₃ (17)
56505.12						<i>P</i> ₂ (17)
56503.40						
56501.99	<i>R</i> ₃ (7)					
56501.73	<i>R</i> ₂ (7)					
56499.98	<i>RQ</i> ₃₂ (7)			<i>P</i> ₁ (12)		
56498.38	<i>R</i> ₁ (7)					
56497.47					<i>R</i> ₃ (11)	
56496.61					<i>R</i> ₂ (11)	
56494.76						<i>P</i> ₁ (17)
56492.91					<i>R</i> ₁ (11)	
56492.48						
56489.83						
56488.73	<i>P</i> ₃ (7)					
56488.59	<i>P</i> ₂ (7)					
56485.58	<i>P</i> ₁ (7)	<i>R</i> ₂ (1)				
56484.31		<i>R</i> ₁ (0)				
56483.28		<i>R</i> ₁ (1) <i>R</i> ₃ (2)				
56482.71		<i>R</i> ₂ (2)				
56482.55				<i>P</i> ₃ (13)		
56481.96			<i>R</i> ₃ (15)			
56481.03				<i>P</i> ₂ (13)		
56480.64		<i>R</i> ₁ (2)				
56479.60			<i>R</i> ₂ (15)		<i>P</i> ₃ (11)	
56478.95					<i>P</i> ₂ (11)	
56478.59		<i>R</i> ₃ (3) <i>R</i> ₂ (3)				
56476.93						
56475.90		<i>R</i> ₁ (3) <i>P</i> ₁ (2)				
56475.64					<i>P</i> ₁ (11)	
56473.31				<i>P</i> ₁ (13)		
56472.61		<i>P</i> ₃ (3)	<i>R</i> ₁ (15)			
56471.84		<i>P</i> ₂ (3) <i>R</i> ₃ (4)				
56471.55		<i>R</i> ₂ (4)				
56469.91	<i>R</i> ₃ (9)	<i>P</i> ₁ (3)				
56469.28	<i>R</i> ₂ (9)	<i>R</i> ₁ (4)				
56468.11						
56465.75	<i>R</i> ₁ (9)					
56463.69		<i>R</i> ₃ (5) <i>P</i> ₂ (4)				
56463.48		<i>R</i> ₂ (5)				
56463.31						
56461.59		<i>P</i> ₁ (4)				
56460.90		<i>R</i> ₁ (5)				
56459.77						
56457.90			<i>P</i> ₃ (15)			
56456.19			<i>P</i> ₂ (15)			
56454.45					<i>R</i> ₃ (13)	
56453.24	<i>P</i> ₃ (9)	<i>R</i> (6)			<i>R</i> ₂ (13)	
56452.85	<i>P</i> ₂ (9)					

Wavenumber	B(15)-X(0) ¹⁶ O ₂	B(15)-X(0) ¹⁶ O ¹⁸ O	B(15)-X(0) ¹⁸ O ₂	B(16)-X(0) ¹⁶ O ₂	B(16)-X(0) ¹⁸ O ₂	B(17)-X(0) ¹⁶ O ₂
56451.47		P ₁ (5)				
56450.46		R ₁ (6)				
56450.10						
56449.58	P ₁ (9)			P ₁ (15)	R ₁ (13)	
56448.53						R ₃ (19)
56446.84						
56444.60						
56442.48						R ₂ (19)
56441.79		P(6)				
56441.26		R ₃ (7)				
56440.98		R ₂ (7)				
56439.46		P ₁ (6)				
56438.35		R ₁ (7)				
56434.80						R ₁ (19)
56433.57					P ₃ (13)	
56432.77					P ₂ (13)	
56429.88	R ₃ (11)					
56428.88	R ₂ (11)				P ₁ (13)	
56428.07		P(7)				
56427.40		R ₃ (8)				
56427.10		R ₂ (8)				
56425.52		P ₁ (7)				
56424.94	R ₁ (11)					
56424.26		R ₁ (8)				
56423.24		P(8)				
56421.33						
56419.88						P ₂ (19)
56418.30						
56415.19						
56413.94				R ₃ (17)		
56412.29		P(8)				
56411.68		R ₃ (9)				
56411.30		R ₂ (9)		R ₂ (17)		
56410.66						P ₁ (19)
56409.66	P ₃ (11)	P ₁ (8)				
56408.87	P ₂ (11)					
56408.41		R ₁ (9)	R ₁ (1)			
56405.43	P ₁ (11)		P ₁ (1)			
56404.09			R(3)		R ₃ (15)	
56403.61				R ₁ (17)		
56402.86					R ₂ (15)	
56401.67			R ₁ (3)			
56398.44			P ₃ (3)		R ₁ (15)	
56397.73			P ₂ (3)			
56395.57			P ₁ (3)			
56395.21		P ₃ (9)				
56394.87		P ₂ (9)				
56394.08		R ₃ (10)				
56393.32		R ₂ (10)				

Wavenumber	B(14)-X(0) ¹⁶ O ₂	B(15)-X(0) ¹⁶ O ₂	B(15)-X(0) ¹⁶ O ¹⁸ O	B(15)-X(0) ¹⁸ O ₂	B(16)-X(0) ¹⁶ O ₂	B(16)-X(0) ¹⁸ O ₂
56392.84						
56392.21			P ₁ (9)			
56391.37						
56390.34			R ₁ (10)	R(5)		
56389.95						
56388.33						
56387.91				R ₁ (5)		
56387.36					P ₃ (17)	
56385.99						
56384.97					P ₂ (17)	
56383.82						
56381.55		R ₃ (13)				
56380.90						
56380.34		R ₂ (13)		P(5)		P ₃ (15)
56379.16						P ₂ (15)
56378.77				P ₁ (5)		
56377.97					P ₁ (17)	
56375.99		R ₁ (13)	P ₃ (10)			
56375.33			P ₂ (10)			P ₁ (15)
56374.61			R ₃ (11)			
56373.70			R ₂ (11)			
56372.65			P ₁ (10)			
56370.66			R ₁ (11)			
56369.62				R ₃ (7)		
56369.41				R ₂ (7)		
56367.27				R ₁ (7)		
56359.12						
56357.97		P ₃ (13)				
56356.98		P ₂ (13)		P(7)		
56354.66			P ₃ (11)	P ₁ (7)		
56354.24			P ₂ (11)			
56353.17		P ₁ (13)	R ₃ (12)			
56352.31			R ₂ (12)			
56351.32			P ₁ (11)			
56349.14			R ₁ (12)			
56346.74						R ₃ (17)
56346.21						
56344.95						R ₂ (17)
56343.93						
56343.38						
56342.34				R ₃ (9)		
56342.07				R ₂ (9)		
56340.36	R ₂ (1)					
56339.75				R ₁ (9)		
56338.91						
56338.57	R ₁ (1)					
56337.46					R ₃ (19)	

Wavenumber	B(14)-X(0) ¹⁶ O ₂	B(15)-X(0) ¹⁶ O ₂	B(15)-X(0) ¹⁶ O ¹⁸ O	B(15)-X(0) ¹⁸ O ₂	B(16)-X(0) ¹⁶ O ₂	B(16)-X(0) ¹⁸ O ₂
56336.95						
56336.43						
56335.42	P ₁ (1)					
56333.97					R ₂ (19)	
56333.08	R ₃ (3)					
56332.85	R ₂ (3)					
56331.54			P ₃ (12)			
56330.99	R ₁ (3)		P ₂ (12)			
56330.00			R ₃ (13)			
56328.96			R ₂ (13)			
56328.04	^R Q ₂₃ (3)		P ₁ (12)			
56326.52	P ₃ (3)					
56326.01	P ₂ (3)			P ₃ (9)		
56325.74			R ₁ (13)	P ₂ (9)		
56325.19		R ₃ (15)				
56324.23	P ₁ (3)					
56323.81				P ₁ (9)		
56323.49		R ₂ (15)				
56322.47						
56321.38						
56319.93						
56319.73						P ₃ (17)
56318.84		R ₁ (15)				
56317.74	R ₃ (5)					
56317.58	R ₂ (5)					
56316.78						
56315.58	R ₁ (5)					
56314.28						P ₁ (17)
56312.71						
56309.22						
56308.25				R ₃ (11)		
56307.78				R ₂ (11)		
56307.02	P(5)		P ₃ (13)			
56305.80			P ₂ (13)			
56305.14	P ₁ (5)		R ₃ (14)	R ₁ (11)		
56303.74			R ₂ (14)			
56302.87			P ₁ (13)			
56300.19			R ₁ (14)			
56298.26		P ₃ (15)				
56297.39					P ₁ (19)	
56296.96		P ₂ (15)				
56294.97	R ₃ (7)					
56294.61	R ₂ (7)					
56292.69		P ₁ (15)				
56292.49	R ₁ (7)					
56288.70				P ₃ (11)		
56288.40				P ₂ (11)		
56286.03				P ₁ (11)		

Wavenumber	B(14)-X(0) ¹⁶ O ₂	B(14)-X(0) ¹⁶ O ¹⁸ O	B(15)-X(0) ¹⁶ O ₂	B(15)-X(0) ¹⁶ O ¹⁸ O	B(15)-X(0) ¹⁸ O ₂	B(16)-X(0) ¹⁶ O ₂	B(16)-X(0) ¹⁸ O ₂
56283.70							
56283.58							
56282.10							
56281.81						R ₃ (19)	
56280.24	P(7)			P ₃ (14)			
56279.00				P ₂ (14)			
56278.24	P ₁ (7)			R ₃ (15)			
56276.56				R ₂ (15)			
56275.88				P ₁ (14)			
56274.62						R ₁ (19)	
56274.20							
56272.92				R ₁ (15)			
56268.03							
56267.36					R ₃ (13)		
56266.54					R ₂ (13)		
56265.71							
56264.52	R ₃ (9)						
56263.95	R ₂ (9)	R(1)			R ₁ (13)		
56262.66		R ₁ (0)					
56262.01		R ₁ (1)					
56261.63	R ₁ (9)						
56261.14		R(2)					
56260.50			R ₃ (17)				
56259.48		R ₁ (2)					
56258.86		P ₁ (1)					
56258.47			R ₂ (17)				
56257.02							
56256.79		R(3)P(2)					
56255.11		R ₁ (3)P ₁ (2)					
56253.41			R ₁ (17)				
56252.23							
56252.04						P ₃ (19)	
56250.90				P ₃ (15)			
56250.63		R(4)P(3)		P ₂ (15)			
56248.94		R ₁ (4)P ₁ (3)		R ₃ (16)			
56247.63				R ₂ (16)			
56246.96				P ₁ (15)			
56246.05	P ₃ (9)						
56245.78	P ₂ (9)						
56244.37					P ₃ (13)		
56243.67	P ₁ (9)				P ₂ (13)		
56242.90				R ₁ (16)			
56242.63		R(5)P(4)					
56241.04		R ₁ (5)P ₁ (4)			P ₁ (13)		
56238.91						R ₁ (21)	
56238.24							
56236.63							
56235.73							

Wavenumber	B(14)-X(0) ¹⁶ O ₂	B(14)-X(0) ¹⁶ O ¹⁸ O	B(14)-X(0) ¹⁸ O ₂	B(15)-X(0) ¹⁶ O ₂	B(15)-X(0) ¹⁶ O ¹⁸ O	B(15)-X(0) ¹⁸ O ₂	B(16)-X(0) ¹⁶ O ₂
56154.50	P ₃ (13)			P ₃ (19)			
56153.77	P ₂ (13)						
56152.54					P ₂ (18)		
56152.27				P ₂ (19)			
56151.23	P ₁ (13)				R ₃ (19)		
56148.93					P ₁ (18)R ₂ (19)		
56147.27			P(5)	P ₁ (19)			
56145.95			P ₁ (5)				
56144.62					R ₁ (19)		
56143.09							R ₁ (23)
56141.21							
56138.04		R ₃ (12)	R(7)				
56137.36		R ₂ (12)					
56136.43		P(11)	R ₁ (7)				
56135.18		R ₁ (12)				P ₃ (17)	
56134.30		P ₁ (11)				P ₂ (17)	
56131.29						P ₁ (17)	
56126.79	R ₃ (15)						
56125.56	R ₂ (15)						
56124.12			P(7)				
56122.80			P ₁ (7)				
56122.52	R ₁ (15)						
56118.73							P ₂ (23)
56117.98					P ₃ (19)		
56115.98		R ₃ (13)					
56115.09		R ₂ (13)					
56114.45		P ₃ (12)			R ₃ (20)		
56114.05		P ₂ (12)					
56112.80		R ₁ (13)					
56112.23					P ₁ (19)		
56112.02		P ₁ (12)	R(9)		R ₂ (20)		
56110.17			R ₁ (9)				
56107.72					R ₁ (20)		
56106.21				R ₃ (21)			
56105.30							
56103.32				R ₂ (21)			
56102.72						R ₃ (19)	
56102.27							
56101.23						R ₂ (19)	
56097.22	P ₃ (15)			R ₁ (21)		R ₁ (19)	
56096.20	P ₂ (15)						

Wavenumber	B(13)-X(0) ¹⁶ O ₂	B(14)-X(0) ¹⁶ O ₂	B(14)-X(0) ¹⁶ O ¹⁸ O	B(14)-X(0) ¹⁸ O ₂	B(15)-X(0) ¹⁶ O ₂	B(15)-X(0) ¹⁸ O ₂
56094.56				P(9)		
56093.41		P ₁ (15)				
56093.04				P ₁ (9)		
56092.05			R ₃ (14)			
56091.11			R ₂ (14)			
56090.52			P ₃ (13)			
56089.97			P ₂ (13)			
56088.74			R ₁ (14)			
56087.83			P ₁ (13)			
56086.92						
56085.67	R ₂ (1)					
56084.41	R ₁ (1)					
56084.25						
56083.15						
56081.05	P ₁ (1)					
56079.67				R ₃ (11)		
56078.99	R ₃ (3)			R ₂ (11)		
56078.67	R ₂ (3)					
56077.42	R ₁ (3)			R ₁ (11)		
56075.88						
56073.87						
56073.42						
56071.85	P ₃ (3)					
56071.31	P ₂ (3)					
56070.13	P ₁ (3)					
56068.90						P ₂ (19)
56068.12						
56067.50					P ₂ (21)	
56066.78						
56066.24			R ₃ (15)			
56065.26		R ₃ (17)	R ₂ (15)			
56064.55	R ₃ (5)		P ₃ (14)			
56064.30	R ₂ (5)		P ₂ (14)			
56063.84		R ₂ (17)				
56062.98	R ₁ (5)		R ₁ (15)			
56061.98			P ₁ (14)			
56060.45		R ₁ (17)				
56058.42				P ₃ (11)		
56058.13				P ₂ (11)		
56056.62				P ₁ (11)		
56054.72						
56052.90	P ₃ (5)					
56052.81	P ₂ (5)					
56051.56	P ₁ (5)					
56046.98						
56042.94	R ₃ (7)					
56042.62	R ₂ (7)					
56041.18	R ₁ (7)					

Wavenumber	B(13)-X(0) ¹⁶ O ₂	B(13)-X(0) ¹⁶ O ¹⁸ O	B(14)-X(0) ¹⁶ O ₂	B(14)-X(0) ¹⁶ O ¹⁸ O	B(14)-X(0) ¹⁸ O ₂	B(15)-X(0) ¹⁶ O ₂	B(15)-X(0) ¹⁸ O ₂
56039.97					R(13)		
56038.73				R ₃ (16)			
56037.90					R ₁ (13)		
56037.43				P ₃ (15)			
56036.49				P ₂ (15)			
56035.08				R ₁ (16)			
56034.18				P ₁ (15)			
56033.70							R ₃ (21)
56032.00			P ₃ (17)				
56030.80			P ₂ (17)				
56027.80			P ₁ (17)				
56027.07	P ₃ (7)						
56026.93	P ₂ (7)						
56025.62	P ₁ (7)						
56016.89							
56016.29						R ₃ (23)	
56015.55					P(13)		
56013.98	R ₃ (9)						
56013.54	R ₂ (9)				P ₁ (13)		
56011.99	R ₁ (9)						
56009.39				R ₃ (17)			
56008.12				R ₂ (17)			
56008.04				P ₃ (16)			
56007.06				P ₂ (16)			
56006.53						R ₁ (23)	
56005.49				R ₁ (17)			
56004.69				P ₁ (16)			
56002.71							
56001.14							
56000.52							
55998.63		R ₂ (1)					
55998.02		R ₁ (0)					P ₃ (21)
55997.51		R ₁ (1)					
55996.29		R(2)					
55995.94			R ₃ (19)				
55995.17		R ₁ (2)					
55994.09	P ₃ (9)						
55993.75	P ₂ (9)						
55992.33	P ₁ (9)	R(3)					
55991.12		R ₁ (3)					
55990.47			R ₁ (19)				
55990.03		P ₁ (2)					
55988.49		^R Q ₂₁ (4)					
55986.60		R ₃ (4)					
55986.50		R ₂ (4)					
55985.32		R ₁ (4)P(3)					
55983.99		P ₁ (3)					
55980.78		^R Q ₂₁ (5)					

Wavenumber	B(13)-X(0) ¹⁶ O ₂	B(13)-X(0) ¹⁶ O ¹⁸ O	B(14)-X(0) ¹⁶ O ₂	B(14)-X(0) ¹⁶ O ¹⁸ O	B(14)-X(0) ¹⁸ O ₂	B(15)-X(0) ¹⁶ O ₂	B(15)-X(0) ¹⁸ O ₂
55979.17		R ₃ (5)					
55979.04		R ₂ (5)					
55977.75	R ₃ (11)	R ₁ (5)					
55977.17	R ₂ (11)	P(4)			R ₂ (18)		
55976.20		P ₁ (4)			P ₂ (17)		
55975.43	R ₁ (11)						
55974.14					R ₁ (18)		
55973.35					P ₁ (17)		
55970.01		R ₃ (6)					
55969.85		R ₂ (6)					
55968.60		R ₁ (6)					
55967.94		P ₃ (5)					
55967.83		P ₂ (5)					
55966.69		P ₁ (5)					
55966.01						P (15)	
55964.03						P ₁ (15)	
55959.11		R ₃ (7)	P ₃ (19)				
55958.98		R ₂ (7)					
55957.67		R ₁ (7)	P ₂ (19)				
55956.69		P (6)					
55955.47		P ₁ (6)					
55954.30			P ₁ (19)				
55953.64	P ₃ (11)						
55953.19	P ₂ (11)						
55951.66	P ₁ (11)						
55948.64							
55946.62		R ₃ (8)					
55946.37		R ₂ (8)					
55945.05		R ₁ (8)			R ₃ (19)		
55943.82		P (7)			P ₃ (18)R ₂ (19)		
55942.55		P ₁ (7)					
55940.89					R ₁ (19)		
55940.24					P ₁ (18)		
55939.31						R ₁ (17)	
55934.09	R ₃ (13)						
55933.32	R ₂ (13)						
55932.36		R ₃ (9)					
55932.03		R ₂ (9)					
55931.46	R ₁ (13)						
55930.68		R ₁ (9)					
55929.17		P (8)					
55927.88		P ₁ (8)					
55918.54			R ₃ (21)				
55916.45		R ₃ (10)	R ₂ (21)				
55916.05		R ₂ (10)					
55914.62		R ₁ (10)					
55912.93		P ₃ (9)					
55912.83		P ₂ (9)	R ₁ (21)				
55911.52		P ₁ (9)					

Wavenumber	B(13)-X(0) ¹⁶ O ₂	B(13)-X(0) ¹⁶ O ¹⁸ O	B(13)-X(0) ¹⁸ O ₂	B(14)-X(0) ¹⁶ O ₂	B(14)-X(0) ¹⁶ O ¹⁸ O	B(14)-X(0) ¹⁸ O ₂	B(15)-X(0) ¹⁶ O ₂
55910.44					R ₃ (20)	P(17)	
55909.02					R ₂ (20)P ₃ (19)		
55907.93					P ₂ (19)	P ₁ (17)	
55907.08							R ₁ (25)
55905.88	P ₃ (13)				R ₁ (20)		
55905.30	P ₂ (13)				P ₁ (19)		
55903.63	P ₁ (13)						
55900.87			R ₁ (1)				
55898.76		R ₃ (11)					
55898.30		R ₂ (11)					
55896.82		R ₁ (11)					
55896.29			R ₂ (3)				
55895.02		P ₃ (10)	R ₁ (3)				
55894.82		P ₂ (10)					
55893.46		P ₁ (10)					
55889.73			P ₃ (3)				
55889.17			P ₂ (3)				
55888.25			P ₁ (3)				
55883.95			R(5)				
55883.00	R ₃ (15)		R ₁ (15)				
55882.09	R ₂ (15)						
55880.03	R ₁ (15)						
55879.43		R ₃ (12)					
55878.86		R ₂ (12)					
55878.32				P ₃ (21)			
55877.33		R ₁ (12)					
55876.54				P ₂ (21)			
55875.33		P ₃ (11)					
55875.06		P ₂ (11)					
55873.69		P ₁ (11)					
55872.94			P(5)	P ₁ (21)			
55872.19			P ₁ (5)		R ₂ (21)		
55871.38					P ₂ (20)		
55868.91					R ₁ (21)		
55868.48					P ₁ (20)		
55865.53			R(7)				
55864.36			R ₁ (7)				
55858.31		R ₃ (13)					
55857.71		R ₂ (13)					
55856.10		R ₁ (13)					
55853.97		P ₃ (12)					
55853.62		P ₂ (12)					
55852.21		P ₁ (12)					
55850.78	P ₃ (15)		P(7)				
55850.00	P ₂ (15)		P ₁ (7)				
55848.19	P ₁ (15)						
55847.21						P ₂ (19)	
55844.97						P ₁ (19)	

Wavenumber	B(12)-X(0) ¹⁶ O ₂	B(13)-X(0) ¹⁶ O ₂	B(13)-X(0) ¹⁶ O ¹⁸ O	B(13)-X(0) ¹⁸ O ₂	B(14)-X(0) ¹⁶ O ₂	B(14)-X(0) ¹⁶ O ¹⁸ O	B(14)-X(0) ¹⁸ O ₂
55840.79				R(9)			
55839.49				R ₁ (9)			
55835.48			R ₃ (14)			R ₃ (22)	
55834.82			R ₂ (14)				
55834.19						P ₃ (21)	
55833.15			R ₁ (14)		R ₃ (23)	P ₂ (21)	
55830.88			P ₃ (13)		R ₂ (23)		
55830.46			P ₂ (13)				
55829.89						P ₁ (21)	
55829.01			P ₁ (13)				
55826.56					R ₁ (23)		
55824.48		R ₃ (17)					
55823.34		R ₂ (17)					
55822.08				P(9)			
55821.10		R ₁ (17)		P ₁ (9)			
55817.55							R ₃ (21)
55816.31							R ₂ (21)
55813.64							R ₁ (21)
55810.94			R ₃ (15)				
55810.19			R ₂ (15)				
55809.77				R(11)			
55808.46			R ₁ (15)	R ₁ (11)			
55806.12			P ₃ (14)				
55805.61			P ₂ (14)				
55804.09			P ₁ (14)				
55798.84							
55794.88						R ₃ (23)	
55794.13							
55794.01						P ₃ (22)	
55793.02						R ₂ (23)	
55792.51						P ₂ (22)	
55789.52						P ₁ (22)R ₁ (23)	
55788.23		P ₃ (17)					
55787.35		P ₂ (17)		P(11)			
55785.79				P ₁ (11)			
55785.33		P ₁ (17)					
55784.66			R ₃ (16)				
55783.90			R ₂ (16)				
55782.71							
55782.07			R ₁ (16)				
55780.64	R ₁ (1)						
55779.59			P ₃ (15)				
55779.00			P ₂ (15)				
55778.67	R(3)						
55777.66	R ₁ (3)						
55777.50			P ₁ (15)				
55775.35							P ₁ (21)
55772.49				R ₃ (13)			

Wavenumber	B(12)-X(0) ¹⁶ O ₂	B(13)-X(0) ¹⁶ O ₂	B(13)-X(0) ¹⁶ O ¹⁸ O	B(13)-X(0) ¹⁸ O ₂	B(14)-X(0) ¹⁶ O ₂	B(14)-X(0) ¹⁶ O ¹⁸ O	B(14)-X(0) ¹⁸ O ₂
55772.14				R ₂ (13)			
55770.70	P ₂ (3)			R ₁ (13)			
55769.93	P ₁ (3)						
55767.98							
55766.32							
55765.13	R(5)						
55764.19	R ₁ (5)						
55758.45		R ₃ (19)					
55757.05		R ₂ (19)					
55756.73			R ₃ (17)				
55755.82			R ₂ (17)				
55754.73		R ₁ (19)					
55753.94			R ₁ (17)				
55752.73	P(5)						
55751.87	P ₁ (5)						
55751.48			P ₃ (16)				
55750.73			P ₂ (16)				
55749.09			P ₁ (16)				
55747.06						P ₁ (23)R ₁ (24)	
55745.64				P(13)			
55744.70	R ₃ (7)						
55744.49	R ₂ (7)			P ₁ (13)			
55743.55	R ₁ (7)						
55741.26							
55740.66							R ₁ (23)
55739.69					R ₃ (25)		
55737.08					R ₂ (25)		
55732.60							
55732.39					R ₁ (25)		
55728.63				R(15)			
55727.79	P(7)						
55726.87	P ₁ (7)		R ₃ (18)	R ₁ (15)			
55726.01			R ₂ (18)				
55724.04			R ₁ (18)				
55721.45			P ₃ (17)				
55720.74			P ₂ (17)				
55719.02			P ₁ (17)				
55718.25		P ₃ (19)					
55717.15	R(9)	P ₂ (19)					
55715.88	R ₁ (9)						
55715.00		P ₁ (19)					
55708.46							
55708.02						P ₃ (24)	
55706.39						P ₂ (24)	
55702.96						P ₁ (24)	
55702.73							P ₃ (23)

Wavenumber	B(12)-X(0) ¹⁶ O ₂	B(12)-X(0) ¹⁶ O ¹⁸ O	B(13)-X(0) ¹⁶ O ₂	B(13)-X(0) ¹⁶ O ¹⁸ O	B(13)-X(0) ¹⁸ O ₂	B(14)-X(0) ¹⁶ O ₂	B(14)-X(0) ¹⁸ O ₂
55701.54							P ₂ (23)
55698.36					P ₃ (15)		
55698.16					P ₂ (15)		
55696.63					P ₁ (15)		
55695.67	P(9)			R ₃ (19)			
55694.65	P ₁ (9)			R ₂ (19)			
55692.43				R ₁ (19)			
55690.13		R ₂ (1)					
55689.80		R ₁ (0)		P ₃ (18)			
55689.44		R ₁ (1)					
55688.99				P ₂ (18)			
55688.59		R ₃ (2)					
55688.04		R ₂ (2)					
55687.24		R ₁ (2)		P ₁ (18)			
55686.14						P ₁ (25)	
55686.04		P ₁ (1)					
55684.54		R ₃ (3)	R ₃ (21)				
55684.24		R ₂ (3)					
55683.47		R ₁ (3)	R ₂ (21)				
55682.56	R(11)	P ₂ (2)					
55682.32							
55681.84		P ₁ (2)					
55681.13	R ₁ (11)		R ₁ (21)				
55679.00		R ₃ (4)					
55678.80		R ₂ (4)			R ₃ (17)		
55678.03		R ₁ (4)			R ₂ (17)		
55677.13		P ₃ (3)					
55676.56		P ₂ (3)			R ₁ (17)		
55675.90		P ₁ (3)					
55673.81		^P Q ₁₂ (3) ^P Q ₂₁ (5)					
55671.89		R ₃ (5)					
55671.74		R ₂ (5)					
55670.96		R ₁ (5)					
55669.30		P ₃ (4)					
55669.03		P ₂ (4)					
55668.31		P ₁ (4)					
55666.31							
55665.62							R ₃ (25)
55664.91							
55663.22		R ₃ (6)					
55663.04		R ₂ (6)					
55662.23		R ₁ (6)					
55661.16				R ₂ (20)			
55659.99		P ₃ (5)					
55659.80		P ₂ (5)					
55659.08		P ₁ (5)		R ₁ (20)			
55656.82	P ₃ (11)						
55656.50	P ₂ (11)			P ₃ (19)			
55655.55	P ₁ (11)			P ₂ (19)			

Wavenumber	B(12)-X(0) ¹⁶ O ₂	B(12)-X(0) ¹⁶ O ¹⁸ O	B(13)-X(0) ¹⁶ O ₂	B(13)-X(0) ¹⁶ O ¹⁸ O	B(13)-X(0) ¹⁸ O ₂	B(14)-X(0) ¹⁶ O ₂	B(14)-X(0) ¹⁸ O ₂
55653.66				P ₁ (19)			
55652.84		R ₃ (7)					
55652.67		R ₂ (7)					
55651.82		R ₁ (7)					
55649.08		P ₃ (6)					
55648.95		P ₂ (6)					
55648.20		P ₁ (6)					
55646.21							
55644.51					P ₃ (17)		
55644.08					P ₂ (17)		
55642.58					P ₁ (17)		
55640.90	R ₃ (13)	R ₃ (8)	P ₃ (21)				
55640.71	R ₂ (13)	R ₂ (8)					
55639.80		R ₁ (8)					
55639.51	R ₁ (13)		P ₂ (21)				
55637.06			P ₁ (21)				
55636.63		P ₃ (7)					
55636.48		P ₂ (7)					
55635.67		P ₁ (7)					
55631.41							
55629.95						R ₁ (27)	
55627.30		R ₃ (9)					
55627.11		R ₂ (9)		R ₃ (21)			
55626.15		R ₁ (9)					
55623.90				R ₁ (21)			
55622.46		P ₃ (8)			R ₃ (19)		
55622.32		P ₂ (8)			R ₂ (19)		
55621.48		P ₁ (8)					
55620.30				P ₂ (20)			
55619.67					R ₁ (19)		
55618.39				P ₁ (20)			
55615.91							P ₁ (25)
55614.73							
55612.12		R ₃ (10)					
55611.81		R ₂ (10)					
55610.84	P(13)	R ₁ (10)					
55609.33	P ₁ (13)						
55608.22							
55606.72		P ₃ (9)					
55606.56		P ₂ (9)					
55605.69		P ₁ (9)					
55603.75				R ₃ (23)			
55601.98				R ₂ (23)			
55599.12				R ₁ (23)			
55595.26		R ₃ (11)					
55594.91		R ₂ (11)					
55593.92		R ₁ (11)					

Wavenumber	B(12)-X(0) ¹⁶ O ₂	B(12)-X(0) ¹⁶ O ¹⁸ O	B(12)-X(0) ¹⁸ O ₂	B(13)-X(0) ¹⁶ O ¹⁸ O	B(13)-X(0) ¹⁸ O ₂	B(14)-X(0) ¹⁶ O ₂
55592.35	R ₃ (15)					
55591.81	R ₂ (15)					
55590.47	R ₁ (15)					
55589.32		P ₃ (10)				
55589.19		P ₂ (10)				
55588.26		P ₁ (10)				
55586.95			R ₂ (1)	R ₁ (22)		
55586.10			R ₁ (1)			
55585.38						P ₂ (27)
55584.66						
55584.41				P ₃ (21)		
55583.44				P ₂ (21)		
55582.71			P ₁ (1)			
55581.94						
55581.70						
55581.41			R ₂ (3)	P ₁ (21)		
55580.68			R ₁ (3)			
55579.67						
55576.75		R ₃ (12)				
55576.34		R ₂ (12)				
55575.30		R ₁ (12)				
55574.67			P ₃ (3)			
55574.10			P ₂ (3)			
55573.38			P ₁ (3)			
55570.05		P(11)	R(5)			
55569.16		P ₁ (11)	R ₁ (5)			
55566.20						
55565.12						
55563.17						
55562.41						
55560.37						
55559.31						
55558.58						
55558.44			P(5)			
55557.73	P(15)		P ₁ (5)			
55556.54		R ₃ (13)				
55556.14	P ₁ (15)	R ₂ (13)				
55555.07		R ₁ (13)				
55552.45			R ₃ (7)			
55552.30			R ₂ (7)			
55551.51			R ₁ (7)			
55550.69						
55549.64		P ₃ (12)				
55549.37		P ₂ (12)				
55548.43		P ₁ (12)		R ₁ (23)		
55545.80				P ₃ (22)		
55544.71				P ₂ (22)		
55542.60				P ₁ (22)		