

Supplementary Material

Positions of the lines in the 30013 ← 00001 band of $^{12}\text{C}^{16}\text{O}_2$ and the derived ground state combination difference (in kHz)

J''	$P(J'')$	J''	$R(J'')$	ΔE
P(2)	186661236665.7(11)	R(0)	186731427340.9(12)	70190675.2(16)
P(4)	186613391890.9(08)	R(2)	186777169015.0(08)	163777124.1(11)
P(6)	186564706645.0(09)	R(4)	186822067530.5(08)	257360885.5(12)
P(8)	186515180707.6(09)	R(6)	186866121133.0(08)	350940425.4(12)
P(10)	186464813427.0(09)	R(8)	186909327632.1(08)	444514205.1(11)
P(12)	186413603719.6(08)	R(10)	186951684413.4(08)	538080693.8(11)
P(14)	186361550077.9(08)	R(12)	186993188431.7(08)	631638353.8(11)
P(16)	186308650579.5(08)	R(14)	187033836229.1(08)	725185649.6(11)
P(18)	186254902891.6(09)	R(16)	187073623938.6(09)	818721047.0(12)
P(20)	186200304282.3(08)	R(18)	187112547294.2(09)	912243011.9(12)
P(22)	186144851634.9(08)	R(20)	187150601642.5(09)	1005750007.6(12)
P(24)	186088541455.0(08)	R(22)	187187781956.8(08)	1099240501.8(11)
P(26)	186031369891.9(08)	R(24)	187224082851.3(09)	1192712959.4(12)
P(28)	185973332748.8(08)	R(26)	187259498593.8(09)	1286165845.0(12)
P(30)	185914425500.9(08)	R(28)	187294023129.1(09)	1379597628.2(12)
P(32)	185854643319.3(09)	R(30)	187327650091.6(09)	1473006772.3(12)
P(34)	185793981085.6(09)	R(32)	187360372830.8(08)	1566391745.2(11)
P(36)	185732433417.8(10)	R(34)	187392184432.1(08)	1659751014.3(13)
P(38)	185669994694.2(12)	R(36)	187423077740.9(08)	1753083046.7(14)
P(40)	185606659083.9(13)	R(38)	187453045391.2(11)	1846386307.3(17)
P(42)	185542420563.5(14)	R(40)	187482079833.3(11)	1939659269.8(18)
P(44)	185477272963.0(13)	R(42)	187510173361.2(13)	2032900398.2(18)
P(46)	185411209992.1(14)	R(44)	187537318154.2(14)	2126108162.1(20)
P(48)	185344225275.8(13)	R(46)	187563506306.7(13)	2219281030.9(18)
P(50)	185276312395.6(15)	R(48)	187588729869.9(19)	2312417474.3(24)
P(52)	185207464934.3(27)	R(50)	187612980897.3(18)	2405515963.0(32)
P(54)	185137676524.8(23)	R(52)	187636251490.8(23)	2498574966.0(33)
P(56)	185066940896.6(21)	R(54)	187658533855.0(22)	2591592958.4(30)
P(58)	184995251945.8(31)	R(56)	187679820349.9(20)	2684568404.1(37)
P(60)	184922603784.0(40)	R(58)	187700103568.9(25)	2777499784.9(47)
P(62)	184848990840.9(60)	R(60)	187719376399.2(43)	2870385558.3(74)

P(64)	184774407896.1(90)	R(62)	187737632115.4(41)	2963224219.3(99)
P(66)	184698850257(14)	R(64)	187754864470.6(52)	3056014214(15)
P(68)	184622313787(18)	R(66)	187771067825.5(61)	3148754039(19)
P(70)	184544795055(18)	R(68)	187786237243(14)	3241442188(23)
P(72)	184466291661(28)	R(70)	187800368730(14)	3334077068(32)