

Arizona-NASA Atlas of the Infrared Solar Spectrum, Report VI.
G. P. Kuiper, A. B. Thompson, L. A. Bijl, and D. C. Benner
Communications of the Lunar and Planetary Lab. **9**, 53 (1969).

Arizona-NASA Atlas of the Infrared Solar Spectrum, Report X.
D. C. Benner, G. P. Kuiper, L. Randić, and A. B. Thompson
Communications of the Lunar and Planetary Lab. **9**, 155 (1972).

Band Model Analysis of Laboratory Methane Absorption Spectra from 4500-10500 Å.
U. Fink, D. C. Benner, and K. A. Dick
Journal of Quantitative Spectroscopy and Radiative Transfer **18**, 447 (1977).

Image Tube Spectra of Pluto and Triton from 6800-9000 Å.
D. C. Benner, U. Fink, and R. H. Cromwell
Icarus **36**, 82-91 (1978).

The Visual and Near Infrared Spectrum of Methane and its Application to Uranus, Neptune, Triton and Pluto.
D. C. Benner
Dissertation, University of Arizona (1979).

Application of Methane Band-model Parameters to the Visible and Near-Infrared Spectrum of Uranus.
D. C. Benner and U. Fink
Icarus **42**, 343 (1980).

Detection of a CH₄ Atmosphere on Pluto.
U. Fink, B. A. Smith, D. C. Benner, J. R. Johnson, H. J. Reitsema and J. A. Westphal
Icarus **44**, 62 (1980).

Atlas of High Resolution Infrared Spectra of Carbon Dioxide: February 1983 Edition.
D. C. Benner, C. P. Rinsland, D. J. Richardson, T.-H. Soo and M. A. H. Smith
NASA Technical Memorandum 84612 (1983).

Absolute intensity measurements of the (111O)_{II} - OOOO band of ¹²C¹⁶O₂ at 5.2 μm.
Curtis P. Rinsland, D. Chris Benner, Donald J. Richardson, and R. A. Toth
Applied Optics **22**, 3805 (1983).

Atlas of High Resolution Infrared Spectra of Carbon Dioxide: February 1984 Edition.
C. P. Rinsland, D. Chris Benner, V. Malathy Devi, P. S. Ferry, C. H. Sutton, and D. J. Richardson
NASA Technical Memorandum 85764 (1984).

Atlas of High Resolution Infrared Spectra of Carbon Dioxide.

Curtis P. Rinsland, D. Chris Benner, V. Malathy Devi, Penelope S. Ferry, Carolyn H. Sutton
and Donald J. Richardson
Applied Optics **23**, 2051 (1984).

Absolute intensity measurements of CO₂ bands in the 2395-2680-cm⁻¹ region.

V. Malathy Devi, Curtis P. Rinsland, and D. Chris Benner
Applied Optics **23**, 4067 (1984).

Absolute intensities of spectral lines in carbon dioxide bands near 2050 cm⁻¹.

Curtis P. Rinsland and D. Chris Benner
Applied Optics **23**, 4523 (1984).

Identification and intensities of the "forbidden" 3v₃² band of ¹²C¹⁶O₂.

D. Chris Benner and Curtis P. Rinsland
Journal of Molecular Spectroscopy **112**, 18-25 (1985).

Measurements of absolute line intensities in carbon dioxide bands near 5.2 μm.

Curtis P. Rinsland, D. Chris Benner and V. Malathy Devi
Applied Optics **24**, 1644 (1985).

Measurements of ¹²CH₄ v₄ band halfwidths using a tunable diode laser system and a Fourier transform spectrometer.

V. Malathy Devi, Curtis P. Rinsland, Mary Ann H. Smith and D. Chris Benner
Applied Optics **24**, 2788 (1985).

Tunable diode laser measurements of widths of air- and nitrogen-broadened lines in the v₄ band of ¹³CH₄.

V. Malathy Devi, Curtis P. Rinsland, Mary Ann H. Smith and D. Chris Benner
Applied Optics **24**, 3321 (1985).

Tunable diode laser measurements of N₂- and air-broadened half-widths: Lines in the (v₄ + v₅)^o band of ¹²C₂H₂ near 7.4 μm

V. Malathy Devi, D. Chris Benner, C. P. Rinsland, M.A.H. Smith and B. D. Sidney
Journal of Molecular Spectroscopy **114**, 49 (1985).

Tunable diode laser measurements of air- and N₂-broadened halfwidths in the v₂ band of D₂O.

V. Malathy Devi, C. P. Rinsland, D. Chris Benner and M. A. H. Smith
Applied Optics **25**, 336 (1986).

Absolute intensities and self-, N₂-, and air-broadened Lorentz halfwidths for selected lines in the v₃ band of ¹²CH₃D from measurements with a tunable diode laser spectrometer.

V. Malathy Devi, Curtis P. Rinsland, D. Chris Benner, Mary Ann H. Smith and K. B. Thakur
Applied Optics **25**, 1848 (1986).

Tunable diode laser measurements of air-broadened linewidths in the v_6 band of H_2O_2 .
V. Malathy Devi, Curtis P. Rinsland, Mary Ann H. Smith, D. Chris Benner and Bernard Fridovich
Applied Optics **25**, 1844 (1986).

Diode Laser Measurements of Air and Nitrogen Broadening in the v_2 Bands of HDO, H_2^{16}O , and H_2^{18}O .
V. Malathy Devi, D. Chris Benner, C. P. Rinsland, M. A. H. Smith and B. D. Sidney
Journal of Molecular Spectroscopy **117**, 403 (1986).

Absolute line intensity measurements in the v_2 bands of HDO and D_2O using a tunable diode laser spectrometer.

K. B. Thakur, C. P. Rinsland, M. A. H. Smith, D. Chris Benner and V. Malathy Devi
Journal of Molecular Spectroscopy **120**, 239 (1986).

Diode Laser Measurements of Intensities and Halfwidths in the v_6 Band of $^{12}\text{CH}_3\text{D}$.

V. Malathy Devi, D. Chris Benner, Curtis P. Rinsland, Mary Ann H. Smith and K. B. Thakur
Journal of Molecular Spectroscopy **122**, 182 (1987).

Measurements of Air-Broadened and Nitrogen-Broadened Lorentz Width Coefficients and Pressure Shift Coefficients in the v_4 and v_2 Bands of $^{12}\text{CH}_4$

Curtis P. Rinsland, V. Malathy Devi, Mary Ann H. Smith and D. Chris Benner
Applied Optics **27**, 631 (1988).

Air-Broadened Lorentz Halfwidths and Pressure-Induced Line Shifts in the v_4 Band of $^{13}\text{CH}_4$

V. Malathy Devi, Curtis P. Rinsland, Mary Ann H. Smith and D. Chris Benner
Applied Optics, **27**, 2296 (1988).

Measurements of Air-Broadened and Nitrogen-Broadened Halfwidths and Shifts of Ozone Lines Near 9 μm .

M. A. H. Smith, C. P. Rinsland, V. Malathy Devi, D. Chris Benner and K. B. Thakur
Journal of the Optical Society of America **B 5**, 585 (1988).

Absolute Intensities of CO_2 Lines in the 3140 to 3410 cm^{-1} Spectral Region

D. Chris Benner, V. Malathy Devi, Curtis P. Rinsland and Penelope S. Ferry-Leeper
Applied Optics **27**, 1588 (1988).

Measurements of Argon-broadened Lorentz width and pressure induced line shift coefficients in the v_4 band of $^{12}\text{CH}_4$.

C. P. Rinsland, V. Malathy Devi, M. A. H. Smith and D. C. Benner
Applied Optics **28**, 211 (1989).

Measurements of Air-, N₂-, and O₂-Broadened Halfwidths and Pressure-Induced Line Shifts in the v₃ Band of ¹³CH₄

V. Malathy Devi, D. Chris Benner, Mary Ann Smith and Curtis P. Rinsland
Applied Optics **30**, 287 (1991); (E) Applied Optics **30**, 2928 (1991).

Analysis of the High-Resolution Spectrum of Acetylene in the 2.4 μm Region

Romola D'Cunha, Y. A. Sarma, G. Guelachvili, R. Farrenq, Qingli Kou, V. Malathy Devi,
D. Chris Benner and K. Narahari Rao
Journal of Molecular Spectroscopy **148**, 213 (1991).

Measurements of Lorentz Broadening Coefficients and Pressure Induced Line Shift Coefficients in the v₂ Band of D₂¹⁶O

Curtis P. Rinsland, Mary Ann H. Smith, V. Malathy Devi and D. Chris Benner
Journal of Molecular Spectroscopy **150**, 173 (1991).

Measurements of Lorentz Broadening Coefficients and Pressure Induced Line Shift Coefficients in the v₂ Band of HD¹⁶O

C. P. Rinsland, M. A. H. Smith, V. Malathy Devi and D. Chris Benner
Journal of Molecular Spectroscopy **150**, 640 (1991).

Measurements of Pressure Broadening and Pressure Shifting by Nitrogen in the 4.3 μm Band of

¹²C¹⁶O₂
V. Malathy Devi, D. Chris Benner, Curtis P. Rinsland and Mary Ann H. Smith
Journal of Quantitative Spectroscopy and Radiative Transfer **48**, 581 (1992).

Methane and Its Isotopes: Current Status and Prospects for Improvement

L. R. Brown, J. S. Margolis, J. P. Champion, J. C. Hilico, J. M. Jouvard, M. Loete, C. Chackerian, Jr., G. Tarrago and D. Chris Benner
Journal of Quantitative Spectroscopy and Radiative Transfer **48**, 617 (1992).

The HITRAN Molecular Database: Editions of 1991 and 1992

L. S. Rothman, R. R. Gamache, R. H. Tipping, C. P. Rinsland, M. A. H. Smith, D. Chris Benner, V. Malathy Devi, J.-M. Flaud, C. Camy-Peyret, A. Perrin, A. Goldman, S. T. Massie, L. R. Brown and R. A. Toth
Journal of Quantitative Spectroscopy and Radiative Transfer **48**, 469 (1992).

Temperature dependence of broadening and shifts of methane lines in the v₄ band

M. A. H. Smith, C. P. Rinsland, V. Malathy Devi and D. Chris Benner
Spectrochimica Acta **48A**, No. 9, 1257 (1992).

Measurements of Pressure Broadening and Pressure Shifting by Nitrogen in the v₁ and v₃ Bands of H₂¹⁶O

V. Malathy Devi, D. Chris Benner, Mary Ann H. Smith and Curtis P. Rinsland
Journal of Molecular Spectroscopy **155**, 333 (1992).

Measurements of Lorentz-Broadening Coefficients and Pressure-Induced Line Shift Coefficients in the v_1 Band of HD¹⁶O and the v_3 Band of D₂¹⁶O
Curtis P. Rinsland, Mary Ann H. Smith, V. Malathy Devi and D. Chris Benner
Journal of Molecular Spectroscopy **156**, 507 (1993).

Measurements of Air Broadening and Pressure Shifting of Methane Lines in the 2.3 μm Region
V. Malathy Devi, D. Chris Benner, Mary Ann H. Smith and Curtis P. Rinsland
Journal of Molecular Spectroscopy **157**, 95 (1993).

The Fundamental Bands of H³⁵Cl and H³⁷Cl: Line Positions from High-Resolution Laboratory Data
C. P. Rinsland, M. A. H. Smith, A. Goldman, V. Malathy Devi and D. Chris Benner
Journal of Molecular Spectroscopy **159**, 274 (1993).

Air-, N₂-, and O₂-Broadening and Shift Coefficients in the v_3 Spectral Region of ¹²CH₄.
D. Chris Benner, V. Malathy Devi, Mary Ann H. Smith and Curtis P. Rinsland
Journal of Quantitative Spectroscopy and Radiative Transfer **50**, 65 (1993).

Temperature dependence of Lorentz air-broadening and pressure-shift coefficients of ¹²CH₄ lines in the 2.3- μm spectral region
V. Malathy Devi, D. Chris Benner, M. A. H. Smith and C. P. Rinsland
Journal of Quantitative Spectroscopy and Radiative Transfer **51**, 439 (1994).

A Multispectrum Nonlinear Least Squares Fitting Technique
D. Chris Benner, Curtis P. Rinsland, V. Malathy Devi, Mary Ann H. Smith and David Atkins
Journal of Quantitative Spectroscopy and Radiative Transfer **53**, 705 (1995).

Stretch-Bend Levels of Acetylene: Analysis of the Hot Bands in the 3300 cm⁻¹ Region
Y. A. Sarma, Romola D'Cunha, G. Guelachvili, R. Farrenq, V. Malathy Devi, D. Chris Benner and K. Narahari Rao
Journal of Molecular Spectroscopy **173**, 574 (1995).

Solar Center to Limb Infrared Intensity from the Halogen Occultation Experiment
Philip T. Spickler, D. Chris Benner and James M. Russell, III
Solar Physics **165**, 23-39 (1996).

Validation of HALOE CH₄ Measurements from the UARS
J. H. Park, J. M. Russell III, L. L. Gordley, S. R. Drayson, D. Chris Benner, J. McInerney, M. R. Gunson, G. C. Toon, B. Sen, J.-F. Blavier, C. R. Webster, E. C. Zipf, P. Erdman, U. Schmidt and C. Schiller
Journal of Geophysical Research **101**, No. D6, 10183-10203 (1996).

Infrared Spectroscopy of the CO₂ Molecule
V. Malathy Devi, D. Chris Benner, C. P. Rinsland, M. A. H. Smith and D. S. Parmar
Recent Research Developments in Geophysical Research **1**, 119-148 (1996).

Air-Broadening and Shift Coefficients of O₃ Lines in the v₂ Band and their Temperature Dependence
V. Malathy Devi, D. Chris Benner, M. A. H. Smith and C. P. Rinsland
Journal of Molecular Spectroscopy **182**, 221-238 (1997).

Temperature Dependence of Air-Broadening and Shift Coefficients of O₃ Lines in the v₁ Band
M. A. H. Smith, V. Malathy Devi, D. Chris Benner and C. P. Rinsland
Journal of Molecular Spectroscopy **182**, 239-259 (1997).

Air- and N₂-broadening Coefficients and Pressure-Shift Coefficients in the ¹²C¹⁶O₂ Laser Bands
V. Malathy Devi, D. Chris Benner, Mary Ann H. Smith and Curtis P. Rinsland
Journal of Quantitative Spectroscopy and Radiative Transfer **59**, 137-149 (1998).

Pressure Broadening and Pressure Shift Coefficients in the 2v₂⁰ and v₁ Bands of ¹⁶O¹³C¹⁸O
V. Malathy Devi, D. Chris Benner, Mary Ann H. Smith and Curtis P. Rinsland
Journal of Quantitative Spectroscopy and Radiative Transfer **60**, 771-784 (1998).

Spectroscopic Parameters for Ozone and Its Isotopes: Current Status, Prospects for Improvement, and the Identification of ¹⁶O¹⁶O¹⁷O and ¹⁶O¹⁷O¹⁶O Lines in Infrared Ground-based and Stratospheric Solar Absorption Spectra

C. P. Rinsland, J.-M. Flaud, A. Goldman, A. Perrin, C. Camy-Peyret, M. A. H. Smith, V. Malathy Devi, D. C. Benner, A. Barbe, T. M. Stephen and F. J. Murcray
Journal of Quantitative Spectroscopy and Radiative Transfer **60**, 803-814 (1998).

Self-Broadening and Self-Shift Coefficients in the Fundamental Band of ¹²C¹⁶O
V. Malathy Devi, D. Chris Benner, Mary Ann H. Smith and Curtis P. Rinsland
Journal of Quantitative Spectroscopy and Radiative Transfer **60**, 815-824 (1998).

Absolute Rovibrational Intensities of ¹²C¹⁶O₂ Absorption Bands in the 3090 to 3900-cm⁻¹ Spectral Region
V. Malathy Devi, D. Chris Benner, Curtis P. Rinsland and Mary Ann H. Smith
Journal of Quantitative Spectroscopy and Radiative Transfer **60**, 741-770 (1998).

Measurements of air-broadening, pressure shifting and off-diagonal relaxation-matrix coefficients in the v₃ band of ¹²CH₃D
V. Malathy Devi, D. Chris Benner, M. A. H. Smith, C. P. Rinsland, and L. R. Brown
Journal of Molecular Structure **517-518**, 455-475 (2000). Erratum **526**, 401 (2000)

Broadening, shifting, and line asymmetries in the 2<--0 band of CO and CO-N₂: Experimental results and theoretical calculations
Adriana Predoi-Cross, J.P. Bouanich, D. Chris Benner, A. D. May and J. R. Drummond
Journal of Chemical Physics **113**, 158-168 (2000).

Measurements of air broadened width and air-induced shift coefficients and line mixing in the v_6 band of $^{12}\text{CH}_3\text{D}$

V. Malathy Devi, D. Chris Benner, M. A. H. Smith and C. P. Rinsland
Journal of Quantitative Spectroscopy and Radiative Transfer **68**, 1-41 (2001).

Measurements of air broadened width and air-induced shift coefficients and line mixing in the v_5 band of $^{12}\text{CH}_3\text{D}$

V. Malathy Devi, D. Chris Benner, M. A. H. Smith and C. P. Rinsland
Journal of Quantitative Spectroscopy and Radiative Transfer **68**, 135-161 (2001).

The $v_1 + v_3$ bands of the $^{16}\text{O}^{17}\text{O}^{16}\text{O}$ and $^{16}\text{O}^{16}\text{O}^{17}\text{O}$ isotopomers of ozone

A. Perrin, J.-M. Flaud, F. Keller, M. A. H. Smith, C. P. Rinsland, V. Malathy Devi, D. Chris Benner, T. M. Stephen and A. Goldman
Journal of Molecular Spectroscopy **207**, 54-59 (2001).

Absolute intensities of $^{16}\text{O}_3$ lines in the 9-11 μm region

M. A. H. Smith, V. Malathy Devi, D. Chris Benner and C. P. Rinsland
Journal of Geophysical Research **D106**, 9909-9922 (2001).

Multispectrum analysis of self- and N_2 -broadening, shifting and line mixing coefficients in the v_6 band of $^{12}\text{CH}_3\text{D}$

V. Malathy Devi, D. Chris Benner, Linda R. Brown, Mary Ann H. Smith, Curtis P. Rinsland, Robert L. Sams and Steven W. Sharp
Journal of Quantitative Spectroscopy and Radiative Transfer **72**, 139-191 (2002).

Multispectrum analysis of self- and nitrogen-broadening, pressure shifting and line mixing in the v_3 parallel band of $^{12}\text{CH}_3\text{D}$

V. Malathy Devi, D. Chris Benner, Mary Ann H. Smith, Curtis P. Rinsland and Linda R. Brown
Journal of Quantitative Spectroscopy and Radiative Transfer **73**, 603-640 (2002).

Self- and N_2 -broadening, pressure induced shift and line mixing in the v_5 band of $^{12}\text{CH}_3\text{D}$ using a multispectrum fitting technique

V. Malathy Devi, D. Chris Benner, Mary Ann H. Smith, Curtis P. Rinsland and Linda R. Brown
Journal of Quantitative Spectroscopy and Radiative Transfer **74**, 1-41 (2002).

Determination of self- and H_2 -broadening and shift coefficients in the 2-0 band of $^{12}\text{C}^{16}\text{O}$ using a multispectrum fitting procedure

V. Malathy Devi, D. Chris Benner, M. A. H. Smith, C. P. Rinsland and A. W. Mantz
Journal of Quantitative Spectroscopy and Radiative Transfer **75**, 455-471 (2002).

Nitrogen broadening and shift coefficients in the 4.2-4.5- μm bands of CO_2

V. Malathy Devi, D. Chris Benner, M. A. H. Smith and C. P. Rinsland
Journal of Quantitative Spectroscopy and Radiative Transfer **76**, 289-307 (2003).

Absolute intensity measurements of the $^{12}\text{C}^{16}\text{O}_2$ laser bands near 10 μm

V. Malathy Devi, D. Chris Benner, M. A. H. Smith, Linda R. Brown and Michael Dulick
Journal of Quantitative Spectroscopy and Radiative Transfer **76**, 393-410 (2003).

Multispectrum analysis of pressure broadening and pressure shift coefficients in the $^{12}\text{C}^{16}\text{O}_2$ and

$^{13}\text{C}^{16}\text{O}_2$ laser bands
V. Malathy Devi, D. Chris Benner, Mary Ann H. Smith, Linda R. Brown and Michael Dulick
Journal of Quantitative Spectroscopy and Radiative Transfer **76**, 411-434 (2003).

The HITRAN molecular spectroscopic database: edition of 2000 including updates through 2001

L. S. Rothman, A. Barbe, D. Chris Benner, L. R. Brown, C. Camy-Peyret, M. R. Carleer, K. Chance, C. Clerbaux, V. Dana, V. M. Devi, A. Fayt, J.-M. Flaud, R. R. Gamache, A. Goldman, D. Jacquemart, K. W. Jucks, W. J. Lafferty, J.-Y. Mandin, S. T. Massie, V. Nemtchinov, D. A. Newnham, A. Perrin, C. P. Rinsland, J. Schroeder, K. M. Smith, M. A. H. Smith, K. Tang, R. A. Toth, J. Vander Auwera, P. Varanasi and K. Yoshino
Journal of Quantitative Spectroscopy and Radiative Transfer **82**, 5-44 (2003).

Spectroscopic parameters for ozone and its isotopes: Recent measurements, outstanding issues, and prospects for improvements to HITRAN

C. P. Rinsland, J.-M. Flaud, A. Perrin, M. Birk, G. Wagner, A. Goldman, A. Barbe, M.-R. De Backer-Barily, S. N. Mikhailenko, Vl. G. Tyuterev, M. A. H. Smith, V. Malathy Devi, D. Chris Benner, F. Schreier, K. V. Chance, J. Orphal and T. M. Stephen
Journal of Quantitative Spectroscopy and Radiative Transfer **82**, 207-218 (2003).

Methane line parameters in HITRAN

L. R. Brown, D. Chris Benner, J. P. Champion, V. M. Devi, L. Fejard, R. R. Gamache, T. Gabard, J. C. Hilico, B. Lavorel, M. Loete, G. Ch. Mellau, A. Nikitin, A. S. Pine, A. Predoi-Cross, C. P. Rinsland, O. Robert, R. L. Sams, M. A. H. Smith, S. A. Tashkun and Vl. G. Tyuterev
Journal of Quantitative Spectroscopy and Radiative Transfer **82**, 219-238 (2003).

A multispectrum analysis of the v_1 band of $\text{H}^{12}\text{C}^{14}\text{N}$: I. Intensities, self-broadening and self-shift coefficients

V. Malathy Devi, D. Chris Benner, M. A. H. Smith, C. P. Rinsland, Steven W. Sharpe and Robert L. Sams
Journal of Quantitative Spectroscopy and Radiative Transfer **82**, 319-341 (2003).

A multispectrum analysis of the v_1 band of $\text{H}^{12}\text{C}^{14}\text{N}$: II. Air- and N_2 -broadening, shifts and their temperature dependences

C. P. Rinsland, V. Malathy Devi, M. A. H. Smith, D. Chris Benner, Steven W. Sharpe and Robert L. Sams
Journal of Quantitative Spectroscopy and Radiative Transfer **82**, 343-362 (2003).

Analysis of tunable diode laser spectra of ${}^RQ(J,0)$ lines in CH_3F near 1475 cm^{-1} using a multispectrum fitting technique

M. Lepère, R. Gobeille, N. Kolodziejski, V. Malathy Devi, D. Chris Benner, M. A. H. Smith, W. McMichael, B. Aoae, K. Wilkinson and A. W. Mantz

Journal of Molecular Spectroscopy **224**, 7-12 (2004).

Temperature dependence of self- and N_2 -broadening and pressure-induced shifts in the $3-0$ band of CO

A. Predoi-Cross, C. Hnatovsky, K. Strong, J. R. Drummond and D. Chris Benner

Journal of Molecular Structure **695-696**, 269-286 (2004).

A multispectrum analysis of the $2v_2$ spectral region of $\text{H}^{12}\text{C}^{14}\text{N}$: Intensities, broadening and pressure-shift coefficients

V. Malathy Devi, D. Chris Benner, M. A. H. Smith, C. P. Rinsland, Steven W. Sharpe and Robert L. Sams

Journal of Quantitative Spectroscopy and Radiative Transfer **87**, 339-366 (2004).

Line intensities of CH_3D in the Triad region: $6-10 \mu\text{m}$

L. R. Brown, A. Nikitin, D. Chris Benner, V. Malathy Devi, M. A. H. Smith, L. Fejard, J. P. Champion, Vl. G. Tyuterev and R. L. Sams

Journal of Molecular Structure **695-696**, 181-188 (2004).

Self- and H_2 -Broadened Width and Shift Coefficients in the $2\leftarrow 0$ Band of ${}^{12}\text{C}^{16}\text{O}$: Revisited

V. Malathy Devi, A. Predoi-Cross, D. Chris Benner, M. A. H. Smith, C. P. Rinsland and A. W. Mantz

Journal of Molecular Spectroscopy **228**, 580-592 (2004).

Air-broadening parameters in the 3 band of ${}^{14}\text{N}{}^{16}\text{O}_2$ using a multispectrum fitting technique

D. Chris Benner, T. A. Blake, L. R. Brown, V. Malathy Devi, M.A.H. Smith and R. A. Toth

Journal of Molecular Spectroscopy **228**, 593-619 (2004).

The HITRAN 2004 Molecular Spectroscopic Database

L. S. Rothman, D. Jacquemart, A. Barbe, D. Chris Benner, M. Birk, L. R. Brown, M. R. Carleer, C. Chackerian, Jr, K. Chance, V. Dana, V. M. Devi, J.-M. Flaud, R. R. Gamache, A. Goldman, J.-M. Hartmann, K. W. Jucks, A. G. Maki, J.-Y. Mandin, S. T. Massie, J. Orphal, A. Perrin, C. P. Rinsland, M. A. H. Smith, J. Tennyson, R. N. Tolchenov, R. A. Toth, J. Vander Auwera, P. Varanasi, G. Wagner

Journal of Quantitative Spectroscopy and Radiative Transfer **96**, 139-204 (2005).

Line mixing in self- and foreign-broadened water vapor at $6 \mu\text{m}$

L. R. Brown, D. Chris Benner, V. Malathy Devi, M.A.H. Smith and R. A. Toth

Journal of Molecular Structure, **742**, 111-122 (2005).

A multispectrum analysis of the ν_2 band of H¹²C¹⁴N: Part I. Intensities, broadening and shift coefficients

V. Malathy Devi, D. Chris Benner, M. A. H. Smith, C. P. Rinsland, A. Predoi-Cross, S. W. Sharpe, R. L. Sams, C. Boulet and J. P. Bouanich

Journal of Molecular Spectroscopy **231**, 66-84 (2005).

A multispectrum analysis of the ν_2 band of H¹²C¹⁴N: Part II. Theoretical calculations of self-broadening, self-induced shifts and their temperature dependences

J. P. Bouanich, C. Boulet, A. Predoi-Cross, S. W. Sharpe, R. L. Sams, M. A. H. Smith, C. P. Rinsland, D. Chris Benner and V. Malathy Devi.

Journal of Molecular Spectroscopy **231**, 85-95 (2005).

A multispectrum analysis of widths and shifts in the 2010 to 2260 cm⁻¹ region of ¹²C¹⁶O broadened by Helium at temperatures between 80 and 297 K.

A. W. Mantz, V. Malathy Devi, D. Chris Benner, M. A. H. Smith, A. Predoi-Cross and M. Dulick

Journal of Molecular Structure **742**, 99-110 (2005).

Multispectrum analysis of ¹²CH₄ from 4100 to 4635 cm⁻¹: I. Self-broadening coefficients (widths and shifts)

Adriana Predoi-Cross, Linda R. Brown, V. Malathy Devi, M. Brawley-Tremblay and D. Chris Benner

Journal of Molecular Spectroscopy **232**, 231-246 (2005).

Measurements and theoretical calculations of self-broadening and self-shift coefficients in the ν_2 band of CH₃D

Adriana Predoi-Cross, Kyle Hambrook, Marco Brawley-Tremblay, Jean-Pierre Bouanich, V. Malathy Devi, D. Chris Benner and Linda R. Brown

Journal of Molecular Spectroscopy **234**, 53-74 (2005).

Spectroscopic challenges for high accuracy retrievals of atmospheric CO₂ and the Orbiting Carbon Observatory (OCO) experiment

Charles E. Miller, Linda R. Brown, Robert A. Toth, D. Chris Benner, V. Malathy Devi

Comptes Rendu Physique **6**, 876-887 (2005).

Air-broadening of H₂O as a function of temperature: 696-2163 cm⁻¹

R. A. Toth, L. R. Brown, M. A. H. Smith, V. Malathy Devi, D. Chris Benner, and M. Dulick

Journal of Quantitative Spectroscopy and Radiative Transfer **101**, 339-366 (2006).

Multispectrum analysis of ¹²CH₄ from 4100 to 4635 cm⁻¹: II. Air-broadening coefficients (widths and shifts)

Adriana Predoi-Cross, Marco Brawley-Tremblay, Linda R. Brown, V. Malathy Devi and D. Chris Benner

Journal of Molecular Spectroscopy **236**, 201-215 (2006).

Self-broadened widths and shifts of $^{12}\text{C}^{16}\text{O}_2$: 4750–7000 cm $^{-1}$

R.A. Toth, L.R. Brown, C.E. Miller, V. Malathy Devi and D. Chris Benner
Journal of Molecular Spectroscopy **239**, 243-271 (2006).

Line strengths of $^{12}\text{C}^{16}\text{O}_2$: 4550–7000 cm $^{-1}$

R.A. Toth, L.R. Brown, C.E. Miller, V. Malathy Devi and D. Chris Benner
Journal of Molecular Spectroscopy **239**, 221-242 (2006).

Self-broadened widths and shifts of $^{12}\text{C}^{16}\text{O}_2$: 4750-7000 cm $^{-1}$

R.A. Toth, L.R. Brown, C.E. Miller, V. Malathy Devi, D. Chris Benner
Journal of Molecular Spectroscopy **239**, 243-271 (2006).

Rapid and Accurate Calculation of the Voigt Function

Kendra L. Letchworth and D. Chris Benner
Journal of Quantitative Spectroscopy and Radiative Transfer **107**, 173-192 (2007).

Line positions and strengths of $^{16}\text{O}^{12}\text{C}^{18}\text{O}$, $^{18}\text{O}^{12}\text{C}^{18}\text{O}$ and $^{17}\text{O}^{12}\text{C}^{18}\text{O}$ between 2200 and 7000 cm $^{-1}$

R. A. Toth, C. E. Miller, L. R. Brown, V. Malathy Devi and D. Chris Benner
Journal of Molecular Spectroscopy **243**, 43-61 (2007).

Line mixing and speed dependence in CO $_2$ at 6348 cm $^{-1}$: Positions, intensities, and air- and self-broadening derived with constrained multispectrum analysis

V. Malathy Devi, D. Chris Benner, L. R. Brown, C.E. Miller and R.A. Toth
Journal of Molecular Spectroscopy **242**, 90-117 (2007).

Line mixing and speed dependence in CO $_2$ at 6227.9 cm $^{-1}$: Constrained multispectrum analysis of intensities and line shapes in the 30013 \leftarrow 00001 band

V. Malathy Devi, D. Chris Benner, L. R. Brown, C. E. Miller, R. A. Toth
Journal of Molecular Spectroscopy **245**, 52-80 (2007).

Line Mixing Effects in the $_{\text{2}} + _{\text{3}}$ Band of Methane

Adriana Predoi-Cross, Anildev V. Unni, Henry Heung, V. Malathy Devi, D. Chris Benner

and Linda R. Brown

Journal of Molecular Spectroscopy **246**, 65-76 (2007).

Spectroscopic Database of CO $_2$ line parameters: 4300 - 7000 cm $^{-1}$

R. A. Toth, L. R. Brown, C. E. Miller, V. Malathy Devi and D. Chris Benner

Journal of Quantitative Spectroscopy and Radiative Transfer **109**, 906-921 (2008).

Low-temperature measurements of HCN broadened by N $_2$ in the 14- μm spectral region

M.A.H. Smith, C.P. Rinsland, T. A. Blake, R. L. Sams, D.Chris Benner and V. Malathy Devi

Journal of Quantitative Spectroscopy and Radiative Transfer **109**, 922-951 (2008).

Line strengths of $^{16}\text{O}^{13}\text{C}^{16}\text{O}$, $^{16}\text{O}^{13}\text{C}^{18}\text{O}$, $^{16}\text{O}^{13}\text{C}^{17}\text{O}$ and $^{18}\text{O}^{13}\text{C}^{18}\text{O}$ between 2200 and 6820 cm $^{-1}$

Robert A. Toth, Charles E. Miller, Linda R. Brown, V. Malathy Devi and D. Chris Benner
Journal of Molecular Spectroscopy **251**, 64-89 (2008).

Multispectrum analysis of the v_4 band of CH₃CN: Positions, intensities, self- and N₂-broadening and pressure-induced shifts

C. P. Rinsland, V. Malathy Devi, D. Chris Benner, T. A. Blake, R. L. Sams, L. R. Brown, I. Kleiner, A. Dehayem-Kamadjieu, H.S.P. Müller, R. R. Gamache, D. L. Niles, T. Masiello
Journal of Quantitative Spectroscopy and Radiative Transfer **109**, 974-994 (2008).

Constrained Multispectrum Analysis of CO₂-Ar Broadening at 6227 and 6348 cm $^{-1}$

D. Chris Benner, C. E. Miller and V. Malathy Devi
Canadian Journal of Physics, accepted for publication (2009).

Temperature dependences for air-broadened Lorentz half width and pressure-shift coefficients in the 30013←00001 and 30012←00001 bands of CO₂ near 1600 nm

A. Predoi-Cross, A.R.W. McKellar, D. Chris Benner, V. Malathy Devi, R. R. Gamache, C. E. Miller, R. A. Toth and L. R. Brown
Canadian Journal of Physics, accepted for publication (2009).

The HITRAN 2008 Molecular Spectroscopic Database

L. S. Rothman, I. E. Gordon, A. Barbe, D. Chris Benner, P. F. Bernath, M. Birk, L. R. Brown, V. Boudon, J.-P. Champion, K. Chance, L. H. Coudert, V. Dana, S. Fally, J.-M. Flaud, R. R. Gamache, A. Goldman, D. Jacquemart, N. Lacome, J.-Y. Mandin, S. T. Massie, S. Mikhailenko, J. Orphal, V. Perevalov, A. Perrin, C. P. Rinsland, M. Šimečková, M. A. H. Smith, S. Tashkun, J. Tennyson, R. A. Toth, A. C. Vandaele and J. Vander Auwera
in preparation.

Accurate Measurement of Carbon Dioxide Spectra

D. Chris Benner, V. Malathy Devi, Charles E. Miller and Linda R. Brown
in preparation.

Optimized calculation of a quadratic model for speed dependent line shapes

Kendra Lechworth Weaver and D. Chris Benner
in preparation.

Multi-spectrum Analysis of $^{12}\text{CH}_4$ in the v_4 Spectral Region: I. Self-Broadened Width and Shift Coefficients, Temperature Dependence and Line Mixing

V. Malathy Devi, M.A.H. Smith, D. Chris Benner and A. Predoi-Cross
in preparation.

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D. Chris Benner and Rodelle A. Benner
Mercury, vol. 25, no.5, p. 5 (September/October 1996).

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