

Invited Lectures A, Tuesday, September 7, 9:00 – 10:30

Chairperson: K.M.T. Yamada

9:00

A1 K. HARADA

MILLIMETER WAVE SPECTROSCOPY OF WEAKLY BOUND MOLECULAR COMPLEXES.

9:45

A2 M. A. SUHM

RAMAN SPECTROSCOPY IN SUPERSONIC JETS: COLD MOLECULES AND CLUSTERS.

Poster Session B, Tuesday, September 7, 11:00 – 12:30

B1 J. N. OLIAEE, F. MIVEHVAR, M. DEGHANY, N. MOAZZEN-AHMADI, A.R.W. MCKELLAR

STRUCTURES OF TWO ISOMERS OF NITROUS OXIDE TETRAMER FROM THEIR INFRARED SPECTRA.

B2 J. N. OLIAEE, M. DEGHANY, F. MIVEHVAR, N. MOAZZEN-AHMADI, A.R.W. MCKELLAR

INFRARED SPECTRA OF $(\text{CO}_2)_2$ -OCS COMPLEX: INFRARED OBSERVATION OF TWO DISTINCT BARREL-SHAPED ISOMERS.

B3 O. PIRALI, P. ROY, J.-B. BRUBACH, M. ROUZIERES, D. BALCON, L.MANCERON AND M. VERVLOET

"AILES": THE IR AND FIR BEAMLINER OF SOLEIL.

B4 A. MOUDENS, R. GEORGES, J. MAKAREWICZ, A.I., PAVLYUCHKO, A.A. VIGASIN, M. GOUBET, T. HUET, M. CIRTOG, P. ASSELIN, P. SOULARD, O. PIRALI, P. ROY

FTIR ABSORPTION SPECTROSCOPY OF $(\text{H}_2\text{O})_m$ - $(\text{CO}_2)_n$ MOLECULAR COMPLEXES.

B5 J. MAKAREWICZ

INTERMOLECULAR POTENTIAL ENERGY SURFACE AND DYNAMICS OF THE WATER-CARBON DIOXIDE COMPLEX.

B6 J. KOUCKÝ, L. KOLESNIKOVÁ, Z. MELTZEROVÁ, J. VARGA, P. KANIA, Š. URBAN, H. BECKERS, H. WILLNER

MICROWAVE ROTATIONAL-HYPERFINE SPECTRA OF THE FCO₂ RADICAL ISOTOPOLOGUES.

B7 P. JANKOWSKI

SPECTROSCOPY OF THE H₂-CO VAN DER WAALS COMPLEX BASED ON THE NEW AB INITIO INTERACTION ENERGY SURFACE.

B8 S. V. IVANOV, O. G. BUZYKIN,

PRECISION CONSIDERATIONS OF CLASSICAL, SEMICLASSICAL, AND QUANTUM METHODS IN COLLISION LINE BROADENING CALCULATIONS: LINEAR MOLECULES PERTURBED BY NOBLE ATOMS.

B9 P. KONGOLO TSHIKALA, J.-C. POPULAIRE, M. LEPÈRE

COLLISIONAL BROADENING COEFFICIENTS OF LINES IN THE ν_3 BAND OF CS₂ DILUTED IN RARE GASES AT LOW TEMPERATURE.

B10 J. KOUBEK, J.-M. HARTMANN, C. BOULET, Š. URBAN

COLLISION BROADENING AND LINE MIXING IN CH₃F IN THE PRESENCE OF STARK EFFECT.

B11 R. R. GAMACHE, J. LAMOUREUX, A. L. LARAIA, Q. MA, R. H. TIPPING

THE EFFECTS OF THE TRAJECTORY MODEL ON CRB CALCULATIONS OF H₂O BROADENED BY N₂, O₂ AND AIR.

B12 M. DHYNE, J.-C. POPULAIRE, M. LEPÈRE, P. JOUBERT

COLLISIONAL SHIFT AND BROADENING COEFFICIENTS OF C₂H₂ DILUTED IN Xe BY DIODE-LASER SPECTROSCOPY.

- B13** B. A. COOMBS, J. D. COOK, J.L. HARDWICK, S. M. HURLEY, P. A. KOVAC, J. K. UTTERBACK
BROADENING AND SHIFT COEFFICIENTS OF THE ACETYLENE $\nu_1 + \nu_3$ BAND PRESSURIZED BY NITROGEN AT 373 K.
- B14** N. SANZHAROV, L. FISSIAUX, M. LEPÈRE
SPEED DEPENDENCE EFFECT ON THE BROADENING COEFFICIENTS OF ACETYLENE : APPLICATION TO HOMONUCLEAR DIATOMIC MOLECULES H_2 , N_2 , O_2 .
- B15** L. FISSIAUX, G. BLANQUET, M. LEPÈRE
DIODE-LASER SPECTROSCOPY: DETERMINATION OF THE N_2 - BROADENING COEFFICIENTS OF LINES IN THE ν_{10} BAND OF C_3H_4 .
- B16** R. R. GAMACHE, J. LAMOUREUX, A. L. LARAIA
THE COLLISION-BROADENED LINE SHAPE OF CO_2 VIA THE COMPLEX ROBERT-BONAMY METHOD: THE COMPLEXITY OF SIMPLICITY.
- B17** V. A. ALEKSEEV, N. SCHWENTNER
SPECTROSCOPY OF $Cl_2 + Xe$ AND $Cl_2 + Kr$ MIXTURES IN THE VAC UV REGION.
- B18** T. URBANCZYK, J. KOPERSKI, M. STROJECKI
INVESTIGATION OF THE $E^3\Sigma^+(6^3S_1)$ RYDBERG ELECTRONIC ENERGY STATE IN $CdRg$ ($Rg=Ar,Kr,Ne$) COMPLEXES USING THE OPTICAL-OPTICAL DOUBLE RESONANCE.
- B19** M. D. DE VIZIA, L. MORETTI, A. CASTRILLO, L. GIANFRANI, F. ROHART
THE LINESHAPE PROBLEM IN THE NEAR-IR SPECTRUM OF THE $H_2^{18}O$ MOLECULE AND POSSIBLE IMPLICATION TO THE SPECTROSCOPIC DETERMINATION OF THE BOLTZMANN CONSTANT.
- B20** N. N. LAVRENTIEVA, T. P. MISHINA, L. N. SINITSA, N.A. LAVRENTIEV, J. TENNYSON

WATER VAPOR LINE SELF-BROADENING CALCULATIONS WITH USE OF ACCURATE VIBRATION-ROTATION WAVE FUNCTIONS .

- B21 S. CIVIŠ, M. FERUS, M. ZUKALOVÁ, L. KAVAN**
SPONTANEOUS OXYGEN ISOTOPE EXCHANGE BETWEEN CARBON DIOXIDE AND SOLID $Ti^{18}O_2$.
- B22 B. OSTOJIC, P. JENSEN, P. SCHWERDTFEGER, B. ASSADOLLAHZADEH, P. R. BUNKER**
THE PREDICTED INFRARED SPECTRUM OF THE HYPERBERYLLIUM MOLECULE $BeOBe$ IN ITS $\tilde{X}^1\Sigma_g^+$ and $\tilde{a}^3\Sigma_u^+$ ELECTRONIC STATES.
- B23 S. N. YURCHENKO, G. SEIFERT, A. MARTINEZ-MESA, S. PATCHKOVSKII, T. HEINE**
APPLICATION OF QLDFT FOR MODELING SPECTRAL PROPERTIES OF MATRIX-ISOLATED MOLECULES AT DIFFERENT FINITE TEMPERATURES.
- B24 J. D. TANDY, J.-G. WANG, P. F. BERNATH**
INVESTIGATING THE EXCITED ELECTRONIC STATES OF $BaOH$ VIA LASER SPECTROSCOPY AND AB INITIO CALCULATION: FURTHER EVIDENCE OF PERTURBATION FROM THE \tilde{A}'^2A STATE.
- B25 J. M. MICHAUD, T. GERSDORF, F. MERKT**
PULSED-FIELD-IONIZATION ZERO-KINETIC-ENERGY (PFIZEKE) PHOTOELECTRON SPECTROSCOPIC STUDY OF THE $\tilde{X}^2\Pi \rightarrow \tilde{X}^+{}^1\Sigma^+$ ($v = 1$) TRANSITION OF NO .
- B26 L. PITICCO, M. SCHÄFER, F. MERKT**
ROTATIONALLY RESOLVED HIGH-RESOLUTION PHOTOELECTRON SPECTRA OF THE LOWEST-LYING ELECTRONIC STATES OF $ArXe^+$.
- B27 L. PITICCO, M. SCHÄFER, F. MERKT**
ROTATIONALLY RESOLVED SPECTROSCOPY AND POTENTIAL ENERGY CURVES OF THE $X\ 0^+$ GROUND STATE AND EXCITED $C1$ AND $D\ 0^+$ STATES OF $ArXe$.

- B28 R. RAGHUNANDAN, F. J. MAZZOTTI, J. P. MAIER**
DETECTION OF THE $^3\Pi - ^3\Pi$ TRANSITION OF C_6H^+ IN THE GAS PHASE BY CAVITY RING DOWN SPECTROSCOPY.
- B29 A. M. ESMAIL, R. RAGHUNANDAN, F. J. MAZZOTTI, M. TULEJ, J. P. MAIER**
LOWEST VIBRONIC ENERGY LEVEL CHARACTERIZATION OF C_4H IN THE CLOSE-LYING $X^2 \Sigma^+$ AND $A^2 \Pi$ STATES BY DOUBLE RESONANCE FOUR-WAVE MIXING.
- B30 V. GUPTA, R. NAGARAJAN, J. P. MAIER**
GAS PHASE SPECTRUM OF A NEW ELECTRONIC BAND SYSTEM OF SiC_2 .
- B31 A. YACHMENEV, W. THIEL, S. N. YURCHENKO, P. JENSEN**
ACCURATE POTENTIAL ENERGY SURFACES OF H_2CO AND H_2CS IN THEIR GROUND ELECTRONIC STATES
- B32 J. KOPUT, J. MAKAREWICZ**
AB INITIO CHARACTERIZATION OF THE $Ca-HCl$ VAN DER WAALS COMPLEX.

Contributed Lectures C, Tuesday, September 7, 14:00-15:30

Chairperson: P.R. Bunker

- 14:00
- C1 N. MOAZZEN-AHMADI, J. NOROOZ OLIAEE, F. MIVEHVAR, M. DEGHANY, A.R.W. McKELLAR**
HIGH RESOLUTION INFRARED SPECTRA OF CARBON DIOXIDE CLUSTERS $(CO_2)_n$ IN THE RANGE $n = 6 - 13$.
- 14:22
- C2 V. A. ALEKSEEV**
VIBRATIONALLY INDUCED TRANSITIONS IN SPECTRA OF ATOM-MOLECULE COLLISION PAIRS.
- 14:44
- C3 P. CACCIANI, J. COSLEOU, M. KHELKHAL**

COLLISIONAL BROADENING STUDY OF CH₄ AROUND 1.47μm USING O-AXIS CAVITY ENHANCED ABSORPTION SPECTROSCOPY.

15:06

C4 S. KASSI, O. LESHCHISHINA, A. CAMPARGUE, I. E. GORDON

VERY HIGH SENSITIVITY CW-CRDS OF THE $a^1\Delta_g - X^3\Sigma_g^-$ (0 - 0) AND (0 - 1) BANDS OF OXYGEN NEAR 1.27 AND 1.58 μm : FIRST OBSERVATION OF ELECTRIC QUADRUPOLE TRANSITIONS AND OF THE HYPERFINE STRUCTURE OF THE ¹⁷O-CONTAINING ISOTOPOLOGUES.

Contributed Lectures D, Tuesday, September 7, 16:00-17:30

Chairperson: L. Coudert

16:00

D1 J. M. MICHAUD, G. GRASSI, F. MERKT

ROTATIONALLY RESOLVED PULSED-FIELD-IONIZATION ZERO-KINETIC-ENERGY PHOTOELECTRON SPECTRUM OF CYCLOPROPENE.

16:22

D2 V. I. SERDYUKOV, L. N. SINITSYA, YU. A. POPLAVSKI

DYNAMIC REGISTRATION OF THE ABSORPTION SPECTRA OF WATER CLUSTERS IN THE 10200 - 11000 cm^{-1} RANGE.

16:44

D3 M. Yu. TRETYAKOV, A.F. KRUPNOV, D.S. MAKAROV

SOME CONSEQUENCES OF SUPERCRITICAL WATER SPECTROSCOPY: WATER DIMER AT EQUILIBRIUM.

17:06

D4 M.A. KOSHELEV, M.Yu. TRETYAKOV, E.A. SEROV, V.V. PARSHIN

MILLIMETERWAVE CONTINUUM ABSORPTION.

Invited and Contributed Lectures E, Wednesday, September 8, 9:00-10:30

Chairperson: L.-H. Xiu

9:00

E1 W. CAMINATI

9:45

- E2** G. YANG, Y. LIU, M. LOSADA, Z. SU, H. TRAN, P. NGUYEN, Y. XU
SPECTROSCOPY OF CHIRAL SOLUTE-WATER INTERACTIONS: FROM THE GAS PHASE TO SOLUTION.

10:00

- E3** C. STOEFFLER, A. AMY-KLEIN, B. DARQUIE, A. SHELKOVNIKOV, O. LOPEZ, C. DAUSSY, C. CHARDONNET, S. ZRIG, J. CRASSOUS, L. GUY, P. SOULARD, P. ASSELIN, T. HUET, P. SCHWERDTFEGER, R. BAST, T. SAUE
PROGRESS TOWARD A FIRST OBSERVATION OF PARITY VIOLATION IN CHIRAL MOLECULES BY HIGH-RESOLUTION LASER SPECTROSCOPY.

10:15

- E4** D. FORTHOMME, C. LINTON, D. W. TOKARYK, A. G. ADAM, A. D. GRANGER, L. E. DOWNIE, W. S. HOPKINS
HIGH RESOLUTION LASER SPECTROSCOPY OF SrOCH₃

Poster Session F, Wednesday, September 8, 11:00 – 12:30

- F1** L. S. ROTHMAN, I. E. GORDON, R. J. BARBER, J. TENNYSON, V. I. PEREVALOV, S. A. TASHKUN, A. GOLDMAN, R. G. GAMACHE, H. DOTHE
HITEMP, THE HIGH-TEMPERATURE MOLECULAR SPECTROSCOPIC DATABASE.

- F2** R. R. GAMACHE, L. S. ROTHMAN, I. E. GORDON
ESTIMATING LINE SHAPE PARAMETERS FOR H₂O TRANSITIONS ON THE HITEMP DATABASE.

- F3** O. ASEEV, M. GRECHKO, T. R. RIZZO, O. V. BOYARKIN
QUANTUM BEAT SPECTROSCOPY OF HIGHLY-EXCITED STATES OF WATER.

- F4** P. CACCIANI, M. KHELKHAL, J. COSLÉOU, L. ABOUAF-MARGUIN, J.H. FILLION, X. MICHAUT, C. PARDANAUD
NUCLEAR SPIN CONVERSION IN WATER: THEORETICAL CALCULATION AND FIRST EXPERIMENTAL ATTEMPT TO MEASURE ORTHO/PARA RATIO.

- F5 K. TANAKA, M. HAYASHI, M. OHTSUKI, K. HARADA, T. TANAKA**
ORTHO-PARA MIXING INTERACTION AND FAST ORTHO-PARA CONVERSION RATE IN THE VINYL RADICAL.
- F6 M.Yu. TRETAKOV, A.F. KRUPNOV, M.A. KOSHELEV, D.S. MAKAROV, E.A. SEROV AND V.V. PARSHIN**
RESONATOR SPECTROMETER FOR PRECISE STUDY OF ATMOSPHERIC LINES AND CONTINUUM.
- F7 Y.G. BORKOV, S.A. TASHKUN, V.I. PEREVALOV, J.P. HOFMANN, G.CH. MELLAU**
HIGH TEMPERATURE EMISSION SPECTRUM OF CO₂ IN THE 2700-3786 cm⁻¹ RANGE.
- F8 H. CROGMAN, B. CHOI, V. BOUDON, D. SADOVSKII**
ANALYSIS OF HIGHLY EXCITED VIBRATIONAL-ROTATIONAL STATES OF CO₂ IN TERMS OF CLASSICAL RELATIVE EQUILIBRIA.
- F9 R. R. GAMACHE, J. LAMOUREUX, A. L. LARAIA, H. TRAN, J.-M. HARTMANN, L. S. ROTHMAN, I. E. GORDON**
THE 2010 VERSION OF THE CO₂ LINE-MIXING DATABASE AND SOFTWARE: UPDATE AND EXTENSION.
- F10 S. ROBERT, R. DRUMMOND, A. MAHIEUX, V. WILQUET, A.C. VANDAELE, J. VANDER AUWERA, YU. BORKOV, V.I. PEREVALOV, S.A. TASHKUN, J.-L. BERTAUX**
NEW ABSORPTION BANDS OF CARBON DIOXIDE ISOTOPOLOGUES IN VENUS SPECTRA.
- F11 R. KEPA, M. OSTROWSKA – KOPEĆ, I. PIOTROWSKA**
NEW OBSERVATIONS AND SPECTROSCOPIC STUDIES OF THE (A ¹Π → X ¹Σ⁺) SYSTEM BANDS IN ¹²C¹⁶O MOLECULE.

- F12 R. KEPA, M. OSTROWSKA – KOPEĆ, R. HAKALLA**
NEW RECORDINGS AND ANALYSES OF THE ($A\ ^1\Pi \rightarrow X\ ^1\Sigma^+$) SYSTEM IN $^{13}\text{C}^{16}\text{O}$ ISOTOPIC MOLECULE.
- F13 I. MORINO, Y. MIYAMOTO, T. TANAKA, M. INOUE, Y. YOSHIDA, T. YOKOTA, O. UCHINO**
OBSERVATIONS OF GREENHOUSE GASES WITH A FOURIER TRANSFORM SPECTROMETER ONBOARD GOSAT AND VALIDATION OF GOSAT DATA.
- F14 A. CAMPARGUE, L. WANG, S. KASSI**
THE ABSORPTION SPECTRUM OF METHANE BETWEEN 1.27 AND 1.71 μm BY HIGH SENSITIVITY CRDS AT 80 K AND 300 K: TEMPERATURE DEPENDENCE AND IMPORTANCE OF THE CH_3D CONTRIBUTION IN THE 1.58 μm TRANSPARENCY WINDOW.
- F15 O. M. LYULIN, S. KASSI, A. CAMPARGUE, K.SUNG, L.R. BROWN**
EMPIRICAL LOWER STATE ENERGIES OF $^{13}\text{CH}_4$ TRANSITIONS AT 1.66 μm FROM 296 AND 81 K SPECTRA.
- F16 A.V. NIKITIN, O.M. LYULIN, S.N. MIKHAILENKO, V.I. PEREVALOV, N.N. FILIPPOV, I.M. GRIGORIEV, I. MORINO, T. YOKOTA, R. KUMAZAWA, T. WATANABE**
GOSAT-2009 METHANE SPECTRAL LINE LIST IN THE 5550-6236 cm^{-1} RANGE.
- F17 M. FERUS, P. KUBELÍK, S. CIVIŠ, K. KAWAGUCHI**
FORMATION AND DECAY OF HNC/HCN IN THE POSITIVE COLUMN DISCHARGE.
- F18 J. SCHOSTAG, I. SOHRABNEDJAD-ESKAN, G.CH. MELLAU**
EFFECTIVE HERMANN-WALLIS FACTORS OF THE ν_1 HOT BANDS OF HNC AND HCN.
- F19 P. KANIA, G. WLODARCZAK, S. BAILLEUX**

THE MILLIMETER-WAVE SPECTROSCOPY OF $H^{15}NC$, $H^{15}N^{13}C$, $D^{15}NC$, $D^{15}N^{13}C$ IN THEIR GROUND VIBRONIC STATES.

- F20 R. BOCQUET, F. HINDLE, G. MOURET, A. CUISSET, C. YANG, S. ELIET**
A THZ PHOTOMIXING SYNTHESIZER BASED ON A FIBER FREQUENCY COMB DEDICATED TO HIGH RESOLUTION SPECTROSCOPY OF ATMOSPHERIC COMPOUNDS
- F21 M. H. BERG, D. BING, A. PETRIGNANI, A. WOLF**
HIGH-SENSITIVITY VIBRATIONAL SPECTROSCOPY OF H^+_3 IN THE VISIBLE SPECTRAL REGION.
- F22 J. VARJU, M. HEJDUK, P. DOHNAL, T. KOTRIK, M. JILEK, R. PLASIL, J. GLOSIK**
APPLICATION OF NIR CW-CRDS FOR STUDY OF PARA- H^+_3 AND ORTHO- H^+_3 KINETICS IN HYDROGEN PLASM.
- F23 M. SCHÄFER, D. SPRECHER, J. LIU, M. RAUNHARDT, F. MERKT**
HIGH-RESOLUTION SPECTROSCOPY OF np RYDBERG STATES OF He_2 : ROTATIONAL AUTOIONISATION DYNAMICS AND ACCURATE DETERMINATION OF THE IONISATION ENERGY OF THE METASTABLE He_2^ .*
- F24 W. SZAJNA, M. ZACHWIEJA, R. HAKALLA, R. KĘPA**
CHARACTERISTICS OF THE $C^1\Sigma^+$, $A^1\Pi$ AND $X^1\Sigma^+$ STATES OF AlH .
- F25 W. SZAJNA, M. ZACHWIEJA, R. HAKALLA, R. KĘPA**
EMISSION SPECTROSCOPY OF THE $A^2\Pi - X^2\Sigma^+$ SYSTEM OF AlH^+ .
- F26 O. LESHCHISHINA, S. KASSI, A. CAMPARGUE, I. E. GORDON, L. S. ROTHMAN**
THE $a^1\Delta_g - X^3\Sigma^-_g$ BAND OF SIX ISOTOPOLOGUES OF OXYGEN NEAR $1.27\ \mu m$.
- F27 S. N. YURCHENKO, B. OSTOJIC, P. JENSEN, P. R. BUNKER**

THE PREDISSOCIATION OF THE $d^1 A^2$ - STATE OF METHYLENE: A COMBINED AB INITIO (MRCI) AND VARIATIONAL (TROVE) STUDY.

- F28 M. ARAKI, M. MIZUMURA, H. YAMABE, K. TSUKIYAMA**
DEVELOPMENT OF A DISCHARGE-EMISSION SPECTROMETER SYSTEM HAVING A HOLLOW-CATHODE DISCHARGE EQUIPMENT.
- F29 D. FORTHOMME, C. LINTON, D. W. TOKARYK, A .G. ADAM, A. D. GRANGER**
HIGH RESOLUTION LASER SPECTROSCOPY OF $Mg^{12}C^{12}CD, Mg^{13}C^{13}CH$ and $Mg^{12}C_4H$.
- F30 N. SANZHAROV, G. BLANQUET, M. LEPÈRE**
ABSOLUTE LINE INTENSITIES IN THE ν_7 BAND OF PROPYNE.
- F31 F. XIE, K. V. MINAEV, V. B. SOVKOV, V. S.IVANOV, D. Li, L. LI**
FINE AND HYPERFINE SPLITTING IN THE $K_2 2^3\Sigma_g^+$ STATE: OBSERVATION AND ANALYSIS.
- F32 N. TASINATO, P. STOPPA, A. PIETROPOLLI CHARMET, S. GIORGIANNI, G. BUFFA, A. GAMBI**
THE VINYL FLUORIDE INFRARED SPECTRUM IN THE ATMOSPHERIC WINDOW REGION AROUND $8.7 \mu m$.
- F33 I. S. UMRIKHIN, B. P. LAVROV, A. S. MIKHAILOV**
NEW SETS OF EXPERIMENTAL WAVENUMBER VALUES FOR TRIPLET-TRIPLET ROVIBRONIC TRANSITIONS OF H_2 AND D_2 .
- F34 S. KASSI, A. BARBE, M.-R. DE BECKER-BARILLY, V.G. TUYTEREV, A. CAMPARGUE**
DETECTION AND ANALYSIS OF THE FIVE MOST EXCITED BANDS OF OZONE IN ITS ELECTRONIC GROUND STATE.

Chairperson: C. Puzzarini

14:00

G1 P. H. VACCARO

NONLINEAR OPTICAL SPECTROSCOPY OF "POTENTIALLY FRUSTRATED" PROTON-TRANSFER DYNAMICS.

14:45

G2 O. VOTAVA, M. MAŠÁT, P. PRACNA, A. CAMPARGUE, S. KASSI

EMPIRICAL LOWER STATE ASSIGNMENTS FROM TEMPERATURE DEPENDENT SPECTRA: ROTATIONAL ASSIGNMENTS OF METHANE TRANSITIONS NEAR 1.38 μm .

15:00

G3 G.CH. MELLAU

COMPLETE EXPERIMENTAL ROVIBRATIONAL EIGENENERGIES OF THE [H,C,N] MOLECULAR SYSTEM UP TO 9000 cm^{-1} ABOVE THE GROUND STATE.

15:15

G4 A. MAKI, A. WEBER, J. W. NIBLER, T. MASIELLO, T. A. BLAKE, R. KIRKPATRICK

HIGH RESOLUTION INFRARED SPECTROSCOPY OF [1.1.1]PROPELLANE: THE REGION OF THE ν_9 (e') BAND

Invited and Contributed Lectures H, Wednesday, September 8, 16:00-17:30

Chairperson: J.-U. Grabow

16:00

H1 J. GAUSS

INTERPLAY OF THEORY AND EXPERIMENT IN ROTATIONAL SPECTROSCOPY

16:45

H2 C. PUZZARINI, G. CAZZOLI, S. STOPKOWICZ, J. GAUSS

INVESTIGATION OF ROTATIONAL SPECTRA OF ISOTOPIC SPECIES OF TRANS-FORMIC ACID: A TEST CASE FOR THE INTERPLAY BETWEEN EXPERIMENT AND THEORY.

17:00

H3 M. BORKOWSKI, R. CIURYLO, P. S. JULIENNE, S. TOJO, K. ENOMOTO, Y. TAKAHASHI
ISOTOPIC EFFECTS IN PHOTOASSOCIATIVE FORMATION OF ULTRACOLD YTTERBIUM MOLECULES IN EXCITED TRIPLET STATE

17:15

H4 A. MOUDENS, R. GEORGES, B. AMYAY, M. HERMAN, A. FAYT, B. PLEZ
RADIATIVE MODEL FOR EMISSION SPECTROSCOPY FROM OPTICALLY THICK LABORATORY ACETYLENE SAMPLES AT HIGH TEMPERATURE.

Invited and Contributed Lectures I, Thursday, September 9, 9:00-10:30

Chairperson: Z. Kisiel

9:00

I1 B. H. PATE
THE DEVELOPMENT OF BROADBAND FOURIER TRANSFORM MICROWAVE SPECTROSCOPY TO OBSERVE MOTIONAL EFFECTS IN ROTATIONAL SPECTROSCOPY

9:45

I2 A. FOLTYNOWICZ, P. MASŁOWSKI, F. ADLER, K. C. COSSEL, T. C. BRILES, J. YE.
APPLICATIONS OF CAVITY-ENHANCED DIRECT FREQUENCY COMB SPECTROSCOPY

10:00

I3 P. MASŁOWSKI, A. FOLTYNOWICZ, F. ADLER, K. C. COSSEL, T. C. BRILES, J. YE
BROADBAND DIRECT FREQUENCY COMB SPECTROSCOPY OF MOLECULES IN THE MID-IR

10:15

I4 L. GIANFRANI, E. FASCI, A. CASTRILLO, G. CASA, A. GAMBETTA, M. MARANGONI, G. GALZERANO, P. LAPORTA
FREQUENCY-COMB ASSISTED SPECTROSCOPIC INVESTIGATION OF $H_2^{18}O$ AND $H_2^{17}O$ MOLECULES BETWEEN 1.38 AND 1.42 μm

Poster Session J, Thursday, September 9, 11:00 – 12:30

- J1 R. A. MOTIYENKO, L. MARGULÈS, E. A. ALEKSEEV**
RECENT DEVELOPMENTS OF SUB-MM WAVE SPECTROMETER IN LILLE.
- J2 M.Yu. TRETYAKOV, A.P. SHKAEV, A.M. KISELYEV, S.B. BODROV, A.V. ANDRIANOV, D.S. MAKAROV**
SUBTERAHERTZ SOURCE WITH SUPER CLEAN SPECTRUM: NEW POSSIBILITY FOR SUB-DOPPLER SPECTROSCOPY.
- J3 A. CYGAN, D. LISAK, P. MASLOWSKI, K. BIELSKA, S. WÓJTEWICZ, J. DOMYSLAWSKA, R. S. TRAWIŃSKI, R. CIURYŁO, J. T. HODGES**
POUND-DREVER-HALL-LOCKED FREQUENCY STABILIZED CAVITY RING-DOWN SPECTROMETER.
- J4 D. LISAK, P. MASLOWSKI, A. CYGAN, K. BIELSKA, S. WÓJTEWICZ, M. PIWIŃSKI, R. S. TRAWIŃSKI, R. CIURYŁO, J. T. HODGES**
HIGH-RESOLUTION FREQUENCY-STABILIZED CAVITY RINGDOWN SPECTROSCOPY OF THE OXYGEN B-BAND TRANSITIONS AT LOW PRESSURES.
- J5 J. S. GUSS, H. VERBRAAK, H. LINNARTZ**
MID INFRARED CW CAVITY RING DOWN SPECTROSCOPY OF MOLECULAR IONS USING AN OPTICAL PARAMETRIC OSCILLATOR.
- J6 M. SILTANEN, M. VAINIO, L. HALONEN**
CONTINUOUS-WAVE MID-INFRARED OPTICAL PARAMETRIC OSCILLATOR WITH EXTENSIVE PUMP TUNING.
- J7 C. STOEFFLER, B. DARQUIÉ, A. SHELKOVNIKOV, C. DAUSSY, O. LOPEZ, C. CHARDONNET, A. AMY-KLEIN,**
ULTRA HIGH RESOLUTION SPECTROSCOPY OF METHYLTRIOXORHENIUM TOWARDS THE OBSERVATION OF PARITY NON CONSERVATION IN CHIRAL MOLECULES.

- J8 J. THOMAS, F. X. SUNAHORI, N. BORHO, Y. XU**
FTMW STUDY OF THE CHIRALITY RECOGNITION BETWEEN TWO DIFFERENT CHIRAL MOLECULES: THE GLYCIDOLPROPYLENE OXIDE COMPLEX.
- J9 F. X. SUNAHORI, E. N. KITOVA, J. S. KLASSEN, Y. XU, G. YANG**
STUDY OF CHIRAL RECOGNITION IN THE PROTONATED SERINE DIMER AND OCTAMER USING INFRARED MULTIPHOTON DISSOCIATION SPECTROSCOPY AND AB INITIO METHODS.
- J10 Z. KISIEL, E. BIAŁKOWSKA-JAWORSKA, L. PSZCZÓŁKOWSKI, J.-C. GUILLEMIN**
ROTATIONAL SPECTRUM OF GLYCINE AMIDE.
- J11 A. KRAŚNICKI, Z. KISIEL, B. J. DROUIN, J. C. PEARSON**
TERAHERTZ SPECTROSCOPY OF ISOTOPIC SPECIES OF ACRYLONITRILE.
- J12 M. SALDYKA**
ISOMERICAL AND STRUCTURAL DETERMINATION OF N-HYDROXYUREA. MATRIX ISOLATION AND THEORETICAL STUDY.
- J13 G. BALLANO, A. I. JIMÉNEZ, C. CATIVIELA, C. CABEZAS, S. MATA, M. VARELA, M. ÁNGELES LOZOYA, J. C. LÓPEZ, J. L. ALONSO**
IDENTIFICATION OF THE C7 AND C5 PEPTIDE CONFORMATIONS IN ALANINE AND PROLINE DERIVATIVES.
- J14 O. PIRALI, D. BALCON, M. VERVLOET, V. BOUDON, J. OOMENS**
INFRARED SPECTROSCOPY OF SMALL DIAMONDOIDS. ANALYSIS OF THE HIGH RESOLUTION SPECTRUM OF ADAMANTANE C₁₀H₁₆.
- J15 J. T. HOUGEN**
APPROXIMATE THEORETICAL MODEL FOR THE FIVE ELECTRONIC STATES ARISING FROM THE 3d⁹ CONFIGURATION IN NICKEL HALIDES AND FOR ROTATIONAL LEVELS OF THE $\Omega = 1/2$ STATES.

- J16 W. JASTRZEBSKI, A. GROCHOLA, P. KOWALCZYK**
HIGHLY EXCITED $^1\Pi_u$ ELECTRONIC STATES IN 7Li_2 .
- J17 A. GROCHOLA, P. KOWALCZYK, W. JASTRZEBSKI**
THE $b^3\Pi (\Omega = 1)$ STATE OF NaCs STUDIED BY POLARISATION LABELLING SPECTROSCOPY.
- J18 H. KNÖCKEL, S. RÜHMANN, E. TIEMANN,**
UV FOURIER TRANSFORM ABSORPTION SPECTROSCOPY OF THE $A^1\Sigma_u^+ - X^1\Sigma_g^+$ SYSTEM OF Mg_2 .
- J19 M. ZACHWIEJA, R. KEPA, R. HAKALLA, W. SZAJNA**
THE EMISSION SPECTRUM OF THE $A^2\Delta - X^2\Pi$ AND SYSTEM OF CD RADICAL.
- J20 D. A. DEWALD, J.-U. GRABOW**
NUCLEAR QUADRUPOLE COUPLING IN HAFNIUM CHALCOGENIDES.
- J21 S. CIVIŠ, I. MATULKOVÁ, J. CIHELKA, P. KUBELIK, V. E. CHERNOV**
TIME-RESOLVED FTIR EMISSION SPECTROSCOPY OF Cu, Ag AND Au IN THE 1300 - 4000 cm^{-1} REGION: TRANSITIONS INVOLVING f AND g STATES AND OSCILLATOR STRENGTHS.
- J22 V. A. ALEKSEEV, N. SCHWENTNER**
ABSORPTION AND LUMINESCENCE EXCITATION SPECTRA OF CIF IN THE VAC UV REGION.
- J23 B. L. BRINICH, J. D. HACKLEY, J. L. HARDWICK, M. K. HUMPHREY, Z. R. JONES, J. LARA, N. R. LINDQUIST, D. P. MEYERS, M. J. MILLER, B. V. SILVER, M. R. WETHERELL**
DIODE LASER SPECTROSCOPY OF THE SECOND OVERTONE BAND OF HYDROGEN IODIDE.

- J24 C. PUZZARINI, J. GAUSS**
BENCHMARKING QUANTUM CHEMISTRY WITH ROTATIONAL SPECTROSCOPY OR BENCHMARKING ROTATIONAL SPECTROSCOPY WITH QUANTUM CHEMISTRY?
- J25 S. N. YURCHENKO, V. G. SOLOMONIK, A. N. SMIRNOV, O. A. VASILIEV, A. YACHMENEV**
A LOW TEMPERATURE ABSORPTION SPECTRUM OF LaF_3 FROM FIRST PRINCIPLES.
- J26 V. G. SOLOMONIK, A. A. MUKHANOV**
INFRARED AND RAMAN SPECTRA OF MnF_3 : AN AB INITIO STUDY.
- J27 O. ÁLVAREZ-BAJO, M. CARVAJAL, F. PÉREZ-BERNAL, R. LEMUS**
GLOBAL RO-VIBRATIONAL ANALYSIS OF HYDROGEN SELENIDE ($\text{H}_2^{80}\text{S}_e$) BASED ON ANHARMONIC OPERATORS.
- J28 J. STANEK**
ROVIBRATIONAL STATES OF THE KRATZER OSCILLATOR IN THE QUANTUM PHASE SPACE REPRESENTATION.
- J29 M. SELG**
NONADIABATIC POTENTIAL FOR THE HYDROGEN MOLECULE IN GROUND ELECTRONIC STATE.
- J30 D.S. MAKAROV, M.Yu. TRETYAKOV, P.W. ROSENKRANZ**
60-GHz OXYGEN BAND: TO THE EXTENSION OF THE MIXING MODEL.
- J31 R. SOKHOYAN, A. ISHKHANYAN, C. LEROY, H.-R. JAUSLIN**
FROM ATOMIC TO MOLECULAR BOSE-EINSTEIN CONDENSATES: A PHYSICALLY REALIZABLE TERM-CROSSING MODEL FOR COLD ATOM ASSOCIATION.

Invited and Contributed Lectures K, Friday, September 10, 9:00-10:30

Chairperson: A.R. McKellar

9:00

K1 L.-H. XU

HIGH-RESOLUTION SPECTROSCOPY OF MOLECULES WITH LARGE AMPLITUDE VIBRATIONS - PROGRESS AND CHALLENGES.

9:45

K2 L. H. COUDERT, A. EL HILALI, L. MARGULÈS, R. MOTIYENKO, S. KLEE

TORSION AND OVERALL ROTATION INTERACTION IN CH₂DOH.

10:00

K3 S.N. YURCHENKO, R.J. BARBER, J. TENNYSON, P. JENSEN, A. YACHMENEV

A VARIATIONALLY COMPUTED HOT (UP TO T=1500 K) LINE LIST FOR NH₃.

10:15

K4 M. TRIKI, C. LEMARCHAND, B. DARQUIE, A. AMY-KLEIN, C. CHARDONNET, C.J. BORDE C. DAUSSY, S. BRIAUDEAU

HIGH RESOLUTION SPECTROSCOPY OF ¹⁴NH₃ AROUND 1000 cm⁻¹ DEDICATED TO THE DETERMINATION OF THE BOLTZMANN CONSTANT

Poster Session L, Friday, September 10, 11:00 – 12:30

L1 T. HIRANO, U. NAGASHIMA, V. DERPMANN, P. JENSEN

LINEAR OR QUASI-LINEAR - THAT IS THE QUESTION.

L2 W. ŁODYGA, M. KRĘGLEWSKI, P. PRACNA, Š. URBAN

LWW (LOOMIS-WOOD FOR WINDOWS) PROGRAM PACKAGE FOR INTERACTIVE ASSIGNING OF VIBRATION-ROTATION SPECTRA.

L3 I. GULACZYK, M. KRĘGLEWSKI, W. ŁODYGA, V.-M. HORNEMAN

THE C-N STRETCHING BAND OF METHYLAMINE.

- L4 F. X. SUNAHORI, N. BORHO, Y. XU**
THE HIGH RESOLUTION SPECTRUM OF JET-COOLED METHYL ACETATE IN THE C=O STRETCH REGION.
- L5 M. TUDORIE, I. KLEINER, J. T. HOUGEN, S. MELANDRI, W. STAHL, L. SUTIKDJA**
NEW MICROWAVE SPECTRUM AND GLOBAL FIT OF METHYL ACETATE GROUND STATE.
- L6 L. MARGULÈS, R. MOTIYENKO, T.R. HUET, J. DEMAISON, I. KLEINER, H. MØLLENDAL, J.-C. GUILLEMIN, M. CARVAJAL**
RECENT ADVANCES IN THE SUBMILLIMETER-WAVE SPECTRUM OF METHYL FORMATE ISOTOPOLOGUES.
- L7 M. TUDORIE, I. KLEINER, M. JAHN, J.-U. GRABOW, M. GOUBET**
ROTATIONAL SPECTRUM AND LARGE AMPLITUDE MOTIONS OF 3,4-DIMETHYLBENZALDEHYDE.
- L8 Z. MELTZEROVÁ, P. KANIA, Š. URBAN, P. PRACNA, J. URBAN, V.-M. HORNEMAN,**
ANHARMONIC RESONANCES AMONG LOW-LYING VIBRATIONAL LEVELS OF METHYL ISOCYANIDE (H₃CNC).
- L9 A. CUISSET, I. SMIRNOVA, R. BOCQUET, F. HINDLE, G. MOURET, D. A. SADOVSKII, O. PIRALI, P. ROY**
FAR INFRARED HIGH RESOLUTION ROVIBRATIONAL SPECTROSCOPY OF DIMETHYLSULFOXYDE.
- L10 C. CABEZAS, S. MATA, J. C. LÓPEZ, J. L. ALONSO**
TWO CONFORMERS OF ACETYL SALICYLIC ACID IN THE GAS PHASE.

- L11 N. KUZE, E. SATO, T. SAKAIZUMI**
ROTATIONAL SPECTRUM, POTENTIAL FUNCTION OF RING PUCKERING, MOLECULAR STRUCTURE, AND QUANTUM CHEMICAL CALCULATION OF CYCLOBUTANONE OXIME AND ITS PYROLYSIS MECHANISM.
- L12 L. PSZCZÓŁKOWSKI, E. BIAŁKOWSKA-JAWORSKA, Z. KISIEL**
DETAILED ANALYSIS OF THE ROTATIONAL SPECTRUM OF 2,2-DICHLOROPROPANE.
- L13 K.S. EXNER, G.CH. MELLAU**
VISUALIZATION OF THE ASYMMETRIC INFINITE SQUARE DOUBLE WELL ENERGY EIGENSTATES.
- L14 L. NOVÁ - STŘÍTESKÁ, P. JENSEN**
CALCULATIONS OF ROVIBRONIC ENERGY LEVELS FOR NO₂.
- L15 S. N. YURCHENKO, R. J. BARBER, J. TENNYSON, P. JENSEN, A. YACHMENEV, W. THIEL**
A NEW 'SPECTROSCOPIC' POTENTIAL ENERGY SURFACE OF NH₃.
- L16 O. PIRALI, M.-A. MARTIN, M. VERVLOET, D. BALCON, S. YU, J. PEARSON, B. DROUIN, K. SUNG, C. P. ENDRES, T. SHIRAISHI, K. KOBAYASHI, F. MATSUSHIMA**
SUBMILLIMETER WAVE AND FAR-INFRARED SPECTROSCOPY OF HIGH-J TRANSITIONS OF THE GROUND AND $v_2=1$ STATES OF NH₃.
- L17 T. UHLÍKOVÁ, Š. URBAN**
THEORETICAL INSIGHT INTO THE FSO₃ RADICAL VIBRONIC LEVEL STRUCTURE.
- L18 L. KOLESNIKOVÁ, J. VARGA, J. KOUCKÝ, Z. MELTZEROVÁ, Š. URBAN, H. BECKERS, H. WILLNER**
A₁-A₂ SPLITTING IN THE ROTATIONAL SPECTRA OF THE FSO₃ RADICAL.

- L19 A. SKALOZUB**
A NEW APPROACH TO THE HECHT HAMILTONIAN.
- L20 O. N. ULENIKOV, E. S. BEKHTEREVA, C. LEROY, A. L. FOMCHENKO, N. I. RASPOPOVA**
ON THE "EXPANDED" LOCAL MODE APPROACH AND ISOTOPIC EFFECT ($\text{CH}_2\text{D}_2/\text{CH}_3\text{D}/\text{CHD}_3$) IN THE METHANE MOLECULE.
- L21 O. N. ULENIKOV, O. V. GROMOVA, E. S. BEKHTEREVA, C. LEROY, I. B. BOLOTOVA, A. V. GORBACH, V.-M. HORNEMAN, S. ALANKO**
HIGH RESOLUTION STUDY OF THE $\nu_1+2\nu_2 - \nu_2$ and $2\nu_2+ \nu_3 - \nu_2$ "HOT" BANDS AND RO-VIBRATIONAL RE-ANALYSIS OF THE $\nu_1 + \nu_2/\nu_2 + \nu_3/3\nu_2$ POLYAD OF THE SO_2 MOLECULE.
- L22 P. KANIA, J. ŠŤOVÍČEK, Š. URBAN, H. OZEKI, S. BAILLEUX**
ROTATIONAL SPECTRUM AND NUCLEAR QUADRUPOLE COUPLING TENSOR OF CH_2Cl_2 .
- L23 J. VARGA, L. NOVÀ-STŘÍTESKÁ, J. KOUBEK, L. KOLESNIKOVÁ, P. KANIA, Š. URBAN,**
PRECISE GROUND STATE MOLECULAR PARAMETERS OF METHYL BROMIDE.
- L24 A. BALDACCI, R. VISINONI, R. WUGT LARSEN**
HIGH RESOLUTION INFRARED SPECTRUM OF $\text{CH}_2\text{D}^{79}\text{Br}$: THE $\nu_6=1,2$, $\nu_5= \nu_6=1$ AND $\nu_6=\nu_9=1$ STATE CONSTANTS.
- L25 A. CEAUSU-VELCESCU, P. PRACNA, A. PREDOI-CROSS**
RECENT DEVELOPMENTS IN THE HIGH-RESOLUTION STUDY OF THE ROVIBRATIONAL SPECTRUM OF DCF_3 IN THE 1000 cm^{-1} REGION.
- L26 N. R. WALKER, S. L. STEPHENS**
DETERMINATION OF NUCLEAR SPIN-ROTATION COUPLING CONSTANTS IN CF_3I BY CHIRPED-PULSE FOURIERTRANSFORM MICROWAVE SPECTROSCOPY.

- L27** P. STOPPA, A. PIETROPOLLI CHARMET, N. TASINATO, A. BALDACCI, A. BALDAN, S. GIORGIANNI, G. CAZZOLI, C. PUZZARINI, R. WUGT LARSEN, S. STOPKOWICZ, J. GAUSS
MICROWAVE AND HIGH-RESOLUTION INFRARED STUDIES OF CHBrF₂: THE GROUND AND $\nu_4 = 1$ STATES.
- L28** C. PUZZARINI, G. CAZZOLI, J. C. LÓPEZ, J. L. ALONSO, A. BALDACCI, A. BALDAN, S. STOPKOWICZ, J. GAUSS
ROTATIONAL, HYPERFINE AND MOLECULAR PARAMETERS OF FLUOROIODOMETHANE: MICROWAVE FOURIER-TRANSFORM SPECTROSCOPY, LAMB-DIP MEASUREMENTS AND QUANTUMCHEMICAL CALCULATIONS.
- L29** M.-A. MARTIN, O. PIRALI, D. BALCON, M. VERVLOET, L.H. COUDERT
HIGH-RESOLUTION FAR-INFRARED EMISSION SPECTROSCOPY OF ROVIBRATIONALLY EXCITED GAS PHASE H₂O MOLECULE AND NH₂ RADICAL.
- L30** N. M. TONGE, N. BHALLA, L. VARRIALE, A. M. ELLIS
NEAR INFRARED SPECTROSCOPY OF LiNH₃.
- L31** M. FUKUSHIMA, T. ISHIWATA
HOT BANDS OF THE SiCN $\tilde{A}^2\Delta - \tilde{X}^2\Pi$ SYSTEM.

Invited and Contributed Lectures M, Saturday, September 11, 9:00-10:30

Chairperson: P. Jensen

9:00

M1 D. J. NESBITT

FROM COMBUSTION RADICALS TO STATE-RESOLVED DYNAMICS AT THE GAS-LIQUID INTERFACE: INSIGHTS FROM HIGH-RESOLUTION LASER SPECTROSCOPY.

9:45

M2 A.R.W. McKELLAR, A. MIZOGUCHI, H. KANAMORI

HIGH RESOLUTION QUANTUM CASCADE LASER STUDIES OF THE ν_3 BAND OF METHYL FLUORIDE IN SOLID PARAHYDROGEN.

10:00

M3 R. J. HINDE

DOPANT-INDUCED INFRARED ABSORPTION FEATURES IN Cl- DOPED SOLID HYDROGEN.

10:15

M4 N.M. TONGE, L. VARRIALE, N. BHALLA, A. M. ELLIS

ELECTRONIC SPECTROSCOPY OF $Li(NH_3)_4$

Invited Lectures N, Saturday, September 11, 11:00-12:30

Chairperson: J.T. Hougen

11:00

N1 B. J. DROUIN

THz SPECTROSCOPY FOR SPACE APPLICATIONS.

11:45

N2 D. McNAUGHTON

HIGH RESOLUTION SPECTROSCOPY OF "INTERSTELLAR SPECIES" - FROM THE MICROWAVE TO THE FAR INFRARED.