

Program of sessions

9:00 Tuesday – 12:00 Saturday

Invited Lectures A**Tuesday, 9:00***chairperson: Grabow J.-U.*

A1 **Caselli P.** 9:00
The Importance of High Resolution Molecular Spectroscopy in Astrophysics

A2 **Alonso J-L.** 9:45
Rotational Spectroscopy of Laser-Ablated Biomolecules

Invited Lectures B**Tuesday, 11:00***chairperson: Melandri S.*

B1 **Walker N.R.** 11:00
Exploring Chemical Physics in Transient Plasma by Broadband Rotational Spectroscopy

B2 **Ohshima Y.** 11:45
Creating and Observing Coherently Rotating/Vibrating Molecular Ensembles

Contributed Lectures C**Tuesday, 14:30**

lecture hall AII

chairperson: Lepère M.

C1 **Lees R.M.,** 14:30
 Xu L.H., Reid E.M., Thapaliya B.P., Dawadi M.B., Perry D.S., Twagirayezu S.,
 Billingham B.E.
FTIR Synchrotron Spectroscopy of the Asymmetric C-H Stretching Bands of Methyl Mercaptan (CH₃SH) A Perplexity of Perturbations

C2 **Cuisset A.,** 14:48
 Coeur C., Ahmad W., Tomas F., Pirali O., Brubach J.B.
Infrared Spectroscopy of Methoxyphenols Involved as Atmospheric Secondary Organic Aerosol Precursors

C3 **Serov E.A.,** 15:06
 Odintsova T.O., Semenov V.E., Tretyakov M.Y.
Mono- and Bimolecular Absorption in the Rotational and Fundamental Rotational-Vibrational Bands of H₂O

C4 **Gupta A.,** 15:24
 Agrawal M.
Vibrational Spectroscopic Investigation on Pharmaceutical Compound Levosimendan: A Density Functional Approach

- C5 **Civiš S.** 15:43
25 Years of Infrared Diode Laser Spectroscopy
- C6 **Schmidt T.W.,** 16:02
Krechivska O., Backsay G.B., Nauta K., Kable S.H.
Dicarbon - 214 Years on

Contributed Lectures D**Tuesday, 14:30**

lecture hall AI

chairperson: Jensen P.

- D1 **Kouzov A.,** 14:30
Radi P., Egorova N.
Line Space Theory of Resonant Four-Wave Mixing by Rotationally Anisotropic Photofragments
- D2 **Coudert L.H.** 14:48
Anomalous Centrifugal Distortion in NH₂
- D3 **Wang X.,** 15:06
Carrington T.
Calculated Rotation-Bending Energy Levels of CH₅⁺ and a Comparison With Experiment
- D4 **Kempf S.C.G.,** 15:24
Winterhoff G., Hirano T., Jensen P.
An Empirical Potential Energy Surface for the Electronic Ground State of HCO⁺
- D5 **Wójtewicz S.,** 15:43
Wcisło P., Amodio P., Gianfrani L., Lisak D., Ciuryło R.
Dispersion and Relativistic Corrections to the Spectral Line Shapes
- D6 **Xu L.H.,** 16:02
Belov S.P., Golubiatnikov G.Y., Lapinov A.V., Ilyushin V.V., Alekseev E.A., Mescheryakov A.A., Hougen J.T.
Spin-Rotation Hyperfine Splittings at Moderate to High J Values in Methanol

Poster session E**Tuesday, 16:30**

- E1 **Alkadrou A., Rotger M., Bermejo D., Doménech J.L., Boudon V.**
High-resolution Stimulated Raman Spectroscopy and Analysis of Line Positions and Assignments for the ν_2 and ν_3 Bands of ¹³C₂H₄
- E2 **Alkadrou A., Bourgeois M.T., Rotger M., Boudon V., Auwera V.J.**
Global Frequency and Intensity Analysis of the $\nu_{10}/\nu_7/\nu_4/\nu_{12}$ Band System of ¹²C₂H₄ at 10 μ m using the D_{2h} Top Data System
- E3 **Solodov A.S., Petrova T.M., Ponomarev Y.N., Solodov A.M.**
Rotational Dependences of Line Half-widths of Carbon Oxide Confined in Aerogels with Different Pore Sizes

- E4 **Petrova T.M., Solodov A.M., Solodov A.A., Deichuli V., Starikov V.I.**
Helium Broadening Parameters of Water Vapor in the 10200 to 11200 cm^{-1} Spectral Region
- E5 **Koucký J., Kolesníková L., Kania P., Beckers H., Uhlíková T., Urban Š.**
Determination of Rotational Constant A due to Crossings of the Energy Levels with Different Quantum Numbers K from Microwave Spectra
- E6 **Kania P., Kolík L., Koucký J., Urban Š.**
Submillimeter-wave Spectroscopy of the NS Radical in the 2^{II} Ground Electronic State
- E7 **Tarabukin I., Surin L.A., Panfilov V., Schlemmer S.**
Millimeter-wave Observations of the ND_3H_2 and NH_3D_2 van der Waals Complexes
- E8 **Jusko P., Töpfer M., Schlemmer S., Asvany O.**
Double Resonance Rotational Spectroscopy in Cryogenic Ion Traps
- E9 **Billinghurst B.E., Western C.M.**
Automatic Assignment and Fitting of Spectra with PGOPHER
- E10 **Winterhoff G., Kempf S.C.G., Jensen P., Hirano T.**
An Empirical Potential Energy Surface for the Electronic Ground State of HCO^+
- E11 **Zamotaeva V.A., Bekhtereva E.S., Gromova O.V., Vasilev K.S., Fedotov L.E., Ulenikov O.N., Bauerecker S.**
High-Resolution Study of Sulfur Dioxide: $^{32}\text{S}^{18}\text{O}_2$ and $^{32}\text{S}^{16}\text{O}^{18}\text{O}$ in the Region of 1800 – 2800 cm^{-1}
- E12 **Aslapovskaya Y.S., Tan T.L., Gromova O.V., Bekhtereva E.S., Ulenikov O.N., Bauerecker S.**
High Resolution Spectroscopic Study of Ethylene-1- ^{13}C : Re-analysis of the Ground State and Strongly Interacting the $\nu_2, \nu_3, \nu_4, \nu_7, \nu_8, \nu_{10}$ and ν_{12} Vibrational Bands
- E13 **Raspopova N.I., Fomchenko A.L., Gromova O.V., Bekhtereva E.S., Ulenikov O.N., Bauerecker S.**
High Resolution Study of $^M\text{SiH}_4$ ($M = 28, 29, 30$) in the Dyad and Pentad Regions
- E14 **Barton E.J., Tennyson J., Yurchenko S.N., Civiš S., Ferus M., Bernath P.F., Hargreaves R., Ovsyannikov R.I., Kyuberis A., Zobov N.F., Polyansky O.L.**
Absorption Spectra of Ammonia near 1 Micron
- E15 **Knížek A., Ferus M., Civiš S., Hrnčířová J., Pastorek A., Kubelík P., Ivanek O.**
Transformation of Carbon Dioxide-rich Early Earth's Atmosphere on Catalytic Surfaces Monitored using High Resolution FT Spectroscopy

- E16 **Alps K., Kruzins A., Nikolayeva O., Tamanis M., Ferber R., Pazyuk E.A., Stolyarov A.V.**
Analysis of Laser Induced Fluorescence $3^1\Pi - (A^1\Sigma^+ - b^3\Pi)$ and $5^1\Sigma^+ - (A^1\Sigma^+ - b^3\Pi)$ Fourier Transform Spectra in RbCs and Potential Energy Curves of the $3^1\Pi$ and $5^1\Sigma^+$ States
- E17 **Kozlov S.V., Pazyuk E.A., Stolyarov A.V.**
Deperturbation Analysis of the $(1\sim 2)^1\Pi$ Complex of KRb Molecule
- E18 **Rey M., Nikitin A., Babikov Y., Chizmakova S., Rodina A., Ivanova Y., Starikova E., Tyuterev V.**
TheoReTS – An Information System for Theoretical Spectra Based on Variational Predictions from Molecular Potential Energy and Dipole Moment Surfaces
- E19 **Starikova E., Nikitin A., Rey M., Brown L., Sung K., Smith M.A.H., Mantz A.W., Tyuterev V.**
Assignment and Modelling of the Lower Part of the Tetradecad from the Cold Absorption Spectrum of $^{13}\text{CH}_4$
- E20 **Canè E., Di Lonardo G., Fusina L., Tamassia F.**
Ro-vibrational Analysis of the $\nu_2/\nu_4/2\nu_2$ and $\nu_1/\nu_3/2\nu_4$ band Systems of $^{14}\text{ND}_3$
- E21 **Coudert L.H., Gans B., Loison J.C., de Oliveira N., Ito K.**
The $\hat{C}(^1B_2) \leftarrow \hat{X}(^1A_1)$ Electronic Transition of CF_2
- E22 **Coudert L.H., Motienko R.A., Margulès L.**
In \leftrightarrow out Transitions in Monodeuterated Acetaldehyde
- E23 **Park S.M., Kim H.L., Kwon C.H.**
Stereoisomeric Specific Vacuum Ultraviolet Mass-analyzed Threshold Ionization (VUV-MATI) Spectroscopy of cis- and trans-Crotonaldehyde
- E24 **Ceausu-Velcescu A., Manceron L., Beckers H., Ghesquière P., Predoi-Cross A.**
The First High-resolution Analysis of the $v_6 = 2$ Overtone Levels of $\text{HC } ^{35}\text{Cl}_3$
- E25 **Ceausu-Velcescu A., Nová-Strítěská L.**
Reduced Effective Hamiltonians for Coriolis-interacting $\nu_n + \nu'_t/\nu_t + \nu'_t$ Combination Bands of C_{3v} Symmetric-top Molecules
- E26 **Lee Y.R., Kim H.L., Kwon C.H.**
Development of High-performance Vacuum Ultraviolet Mass-analyzed Threshold Ionization (VUV-MATI) Spectrometer
- E27 **Kang D.W., Kim H.L., Kwon C.H.**
Vacuum Ultraviolet Mass-analyzed Threshold Ionization Spectroscopy of 2-methylpyrazine: Determination of Cation Structure and Vibrational Assignment via Franck-Condon Fit
- E28 **Kang D.W., Park S.M., Kwon C.H., Kim H.L.**
VUV Generation between 10.4 - 11.2 eV: Determination of the Ionization Energy and Structure of HN_3 by Photoionization Mass Spectrometry

- E29 **Lee Y.R., Kim H.L., Kwon C.H.**
Ionization Energies and Cationic Structures of Isobutanal by Conformationally Specific VUV-MATI Spectroscopy
- E30 **Eom S.Y., Kim H.L., Kwon C.H.**
Orientation Change of 3-aminobiphenyl-4-carbonitrile under Various pH Conditions on Silver Surfaces: SERS and DFT Study
- E31 **Gruet S., Pirali O., Steber A.L., Schnell M.**
High-resolution Spectroscopy of the Tetrahydropyran Skeletal Ring Modes in the Millimeter and in the Far-infrared Spectral Regions
- E32 **Zinn S., Medcraft C., Schnell M.**
Interplay of Intermolecular Interactions Studied with Broadband Microwave Spectroscopy
- E33 **Lapierre D., Kokoouline V., Alijah A., Kochanov R., Tyuterev V.**
Wave Functions and Life-times of the Ozone Metastable States beyond the Dissociation Threshold
- E34 **Diniz L.G., Kirnosov N., Alijah A., Adamowicz L., Mohallem J.R.**
Non-adiabatic Effects on the High-resolution Spectroscopic Properties of LiH
- E35 **Vispoel B., Lepère M.**
Collisional Line Shift Coefficients in the ν_3 Band of Methane Diluted in Oxygen from Low to High Temperatures
- E36 **Le Cong T., Doménech J. L., Lepère M., Tran H.**
Spectral Shape of Nitrogen-broadened Methane Lines
- E37 **Leonis S., Browet O., Hespel N., Lepère M.**
High Temperature Absorption Cell
- E38 **Ostrowska-Kopeć M., Piotrowska I., Kępa R., Kolek P., Szajna W., Zachwieja M., Hakalla R.**
Fourier Transform Spectroscopy of the Comet Tail ($A^2\Pi_i - X^2\Sigma^+$) Band System in $^{12}C^{16}O^+$
- E39 **Niu R.W., Hakalla R., Madhu Trivikram T., Heays A.N., de Oliveira N., Salumbides E.J., Ubachs W.**
Spectroscopy and Perturbation Analysis of the $A^1\Pi$ ($\nu = 0$) State of $^{13}C^{16}O$
- E40 **Hakalla R., Niu R.W., Field R.W., Heays A.N., Salumbides E.J., Stark G., Lyons J.R., Eidelsberg M., Lemaire J.L., Federman S.R., de Oliveira N., Ubachs W.**
VUV and VIS Fourier-transform Spectroscopy of $^{13}C^{17}O$ and Deperturbation Analysis of the $A^1\Pi$, $\nu = 0 - 3$ Levels
- E41 **Solodov A.M., Petrova T.M., Solodov A.S., Naumenko O.V.**
FTIR Spectroscopy of Water Vapor in the $9100 - 9800\text{ cm}^{-1}$ Spectral Region
- E42 **Petrova T.M., Solodov A.M., Ponomarev Y.N., Deichuli V., Solodov A.A.**
Line Parameters of the H_2O Molecule in Spectral Region Between 6700 and 7650 cm^{-1}

- E43 **Solodov A.S., Petrova T.M., Ponomarev Y.N., Solodov A.M., Glazkova E.A.**
Line Parameters of CO and CO₂ Confined in SiO₂/Al₂O₃ Xerogel
- E44 **Suchánek J., Dostál M., Janda P., Kubát P., Civiš S., Nevrlý V., Bitala P., Valek V., Zelinger Z.**
Multicomponent Analysis of Acetic Acid with Novel Graphene Cantilevers Employed in Photoacoustic Spectroscopy
- E45 **Dostál M., Suchánek J., Valek V., Nevrlý V., Bitala P., Slivkova S., Kubát P., Janda P., Civiš S., Zelinger Z.**
Quartz Enhanced Photoacoustic Spectroscopy of Acetonitrile
- E46 **Burian T., Zelinger Z., Nevrlý V., Pira P., Suchánek J., Dostál M., Kubát P., Civiš S., Bitala P., Juha L., Wild J.**
Diode Laser Spectroscopy of LiF for Extreme Ultraviolet Laser Induced Ablation
- E47 **Hric B., Suchánek J., Bartlová I., Dostál M., Kubát P., Civiš S., Nevrlý V., Bitala P., Valek V., Zelinger Z.**
Optical, Semiconductor, Electrochemical Gas Sensors Advantages and Disadvantages
- E48 **Nevrlý V., Bitala P., Dostál M., Valek V., Suchánek J., Vašinek M., Ferus M., Civiš S., Zelinger Z.**
Overtone Transitions of X²Π Diatomics for Spectroscopically Based Diagnostics in Laminar Flames
- E49 **Koshelev M.A., Serov E.A., Leonov I.I., Chernova A.I., Parshin V.V., Tretyakov M.Y.**
New Frontiers of Modern Resonator Spectroscopy
- E50 **Koshelev M.A., Delahaye T., Serov E.A., Vilkov I.N., Boulet C., Tretyakov M.Y.**
Line Shape Study of the 118 GHz Oxygen Line in a Wide Pressure Range: Speed-Dependent Broadening and Line Mixing
- E51 **Koshelev M.A., Boyarkin O., Rizzo T., Makarov D., Aseev O., Zobov N.F., Polyansky O.L., Mauguier F., Kochanov R., Tyuterev V.**
Measurements and Assignment of Highly-excited HDO States: Isotopic Effects in Vibrational Progressions
- E52 **Bormotova E., Stolyarov A.V.**
Origin of the Λ-doubling and Spin-orbit Coupling Effects in the B¹Π and D¹Π States of the LiRb Molecule
- E53 **Medvedev E.S., Meshkov V.V., Stolyarov A.V., Ushakov V.G., Gordon I.E.**
Conventional Techniques Fail to Estimate High-overtone Diatomic Transition Probabilities
- E54 **Medvedev A.A., Stolyarov A.V., Zaitsevskii A.V.**
Interatomic Potentials of the Rb-Rg (Rg=He, Ne, Ar) Systems Embedding Spin-orbit Coupling Effect

Invited Lectures F**Wednesday, 9:00***chairperson: Campargue A.*

F1 **Kassi S.** 9:00
Towards Sustainable Absorption Spectroscopy

F2 **Hodges J.T.,** 9:45
 Fleisher A.J., Long D.A., Reed Z.D.
Cavity-Enhanced Laser Spectroscopy for Exacting Measurements of Atmospheric Species is attached

Contributed Lectures G**Wednesday, 11:00**

lecture hall AII

chairperson: Yamada K.

G1 **Campargue A.,** 11:00
 Kassi S., Mondelain D., Romanini D., Vasilchenko S.
Accurate CRDS and OF-CEAS Measurements of the Water Vapor Self-continuum Absorption in Four near Infrared Atmospheric Windows

G2 **McNaughton D.,** 11:18
 Jahn M.K., Grabow J.-U., Travers M.J., Wachsmuth D., Godfrey P.D.
The Microwave Spectra of Planar Aromatic Heterocycles-Inertial Defects Behavior

G3 **Calabrese C.,** 11:36
 Maris A., Marcelino N., Vigorito A., Melandri S.
High Resolution Free Jet Millimeter Wave Absorption Spectroscopy: a Bridge to Astrochemistry

G4 **Kolesníková L.,** 11:54
 Mata S., Alonso E.R., Cabezas C., Alonso J.L.
Laboratory Rotational Spectroscopy Studies of Interstellar Molecules

G5 **Lapinov A.V.** 12:12
 Golubiatnikov G.Y., Sharabakina S.A.
Towards the Increase of Lamb-dip Accuracy

Contributed Lectures H**Wednesday, 14:30**

lecture hall AII

chairperson: Surin L.A.

H1 **Cuisset A.,** 14:30
 Bray C., Hindle F., Mouret G., Bocquet R., Boudon V.
THz Rotational Spectroscopy of Weakly Polar CH₃D and Non-polar CH₄ Molecules using a Widely Tunable Photomixing Synthesizer Based on a Frequency Comb

- H2 **Tokaryk D.**, 14:48
Goudreau E.S., Ross S.C.
A Far-infrared Synchrotron-based Study of the Low-lying Vibrational Levels of Malonaldehyde
- H3 **Caminati W.**, 15:06
Evangelisti L., Spada L., Li W., Lesarri A., López J.C., Blanco S.
Non Bonding Interactions, Internal Dynamic and Pre-Reactivity of the Adducts of Formic Acid with Various Families of Organic Compounds
- H4 **Wijngaarden J.**, 15:24
Mahassneh O.
The Far Infrared Synchrotron Rovibrational Spectrum of Oxetane
- H5 **Mičica M.**, 15:43
Motienko R.A., Vanwollegem M., Postava K., Margulès L., Pištora J., Lampin J.F.
Gain Measurements in Optically-pumped Ammonia Near 1 THz
- H6 **Melandri S.**, 16:02
Calabrese C., Maris A., Vigorito A.
Rotational Spectroscopy of Non-covalently Bound Complexes of Medium Size Organic Molecules

Contributed Lectures I**Wednesday, 14:30**

lecture hall AI

chairperson: Coudert L.H.

- I1 **Bunker P.R.**, 14:30
Ostojic B., Schwerdtfeger P., Jensen P.
An Ab Initio Study of SbH₂ and BiH₂: The Renner Effect, Spin-Orbit Coupling, Local Mode Vibrations and Rovibronic Energy Level Clustering in SbH₂
- I2 **Yamada K.M.T.**, 14:48
Ross S.C., Ito F.
¹³C-substituted C₆₀⁺: Predictions of the Rotational Spectrum
- I3 **Špirko V.**, 15:06
Augustovičová L., Soldán P.
Effective Hyperfine-structure Functions of Ammonia
- I4 **Tyuterev V.**, 15:24
Tashkun S.A., Kochanov R., Starikova E., Mikhailenko S., Barbe A., Kokoouline V., Lapierre D., Alijah A.
Recent Advances in the Theory of the Ozone Molecule: Ab Initio Calculations, Band Intensities and Highly Excited Ro-vibrational States
- I5 **Domingos S.R.**, 15:43
Pérez C., Medcraft C., Pinacho P., Schnell M.
Conformational Flexibility of Acyclic Monoterpenes Revealed by Broadband Rotational Spectroscopy

- I6 **Araki M.**, Takano S., Sakai N., Yamamoto S., Oyama T., Kuze N., Tsukiyama K. 16:02
Detections of Long Carbon Chains CH_3CCCCH , C_6H , $l\text{-C}_6\text{H}_2$ and C_7H in the Low-Mass Star Forming Region L1527

Poster session J

Wednesday, 16:30

- J1 **Gamache R.R., Clenghorn K.N.**
The Use of Pair Identity and Smooth Variation Rules to Check Asymmetric Rotor Molecules on the HITRAN Database
- J2 **Gamache R.R., Renaud C.L.**
Modified Complex Robert-Bonamy (MCRB) Calculations of H_2O Transitions Broadened by H_2 for Applications to Planetary and Exoplanet Atmospheres
- J3 **Gamache R.R., Renaud C.L., Devi V.M., Benner D.C., Sung K., Crawford T.J., Mantz A.W., Smith M.A.H., Villanueva G.L.**
Creation of a Line List of HDO Transitions Broadened by CO_2 in the 1100–4100 cm^{-1} Range
- J4 **Alonso E.R., Mata S., Cabezas C., Peña I., Alonso J.L., Kolesníková L.**
H-bonding Networks in Sugar Alcohols
- J5 **Ilyushin V.V., Armieieva I.A., Dorovskaya O.A., Alekseev E.A., Tudorie M., Margulès L., Motienko R.A., Drouin B.J., Pirali O.**
The Torsional Fundamental Band and Rotational Spectra up to 940 GHz of the Ground, First, and Second Excited Torsional States of Acetone
- J6 **Ilyushin V.V., Armieieva I.A., Dorovskaya O.A., Alekseev E.A., Motienko R.A., Margulès L., Jabri A.**
Submillimeter Wave Spectroscopy of Dimethylsulfide in the Ground, First and Second Excited Torsional States from 150 to 660 GHz
- J7 **Alekseev E.A., Ilyushin V.V., Mescheryakov A.A., Krapivin I.S.**
The Millimeter-Wave Spectrometer with Sub-Doppler Spectral Resolution
- J8 **Vávra K., Kania P., Kisiel Z., Urban Š.**
Perturbations in the rotational spectra of hydrazoic acid
- J9 **Studecký T., Nesvadba R., Kania P., Grabow J.-U., Urban Š.**
1–6 GHz Fourier Transform Microwave Spectrometer
- J10 **Karlovets E.V., Campargue A., Kassi S., Perevalov V.I., Tashkun S.A.**
Cavity Ring Down spectroscopy of ^{18}O Enriched Carbon Dioxide in the 6977–7918 cm^{-1} Region
- J11 **Vasilchenko S., Konefal M., Mondelain D., Kassi S., Čermák P., Tashkun S.A., Campargue A.**
The CO_2 Absorption Spectrum in the 2.3 μm Region by High Sensitivity CRDS: Rovibrational Lines and Continuum
- J12 **Schwanke E., Knöckel H., Ospelkaus S., Pashov A., Tiemann E.**
High Resolution Spectroscopy on Alkali-alkaline Earth Molecules

- J13 **Büchling T., Breier A., Fuchs G.W., Giesen T.F**
High Resolution Terahertz-Spectra of the ν_2 -Bending Mode of Linear C_3 and its ^{13}C -isotopomers
- J14 **Baek D.Y., Lee S.K.**
Vibronic Spectroscopy of Jet-Cooled Chlorofluorobenzyl Radicals Generated in Corona Discharge: Mechanism and Spectroscopy
- J15 **Akindinova E.V., Chernov V.E., Suvorov K.I., Zon B.A.**
Dynamic Polarizabilities of Polar Molecules: Density Functional Theory versus Quantum Defect Green's Function
- J16 **Chernov V.E., Chervinskaya A.S., Elfimov S.V., Dorofeev D.L., Zon B.A.**
Oscillator Strengths for Rydberg States in CaF and NaHe
- J17 **Makhnev V.Y., Kyuberis A., Lodi L., Tennyson J., Zobov N.F., Polyansky O.L.**
Global Ab Initio Potential Energy Surface for the Isomerising HCN-HNC System
- J18 **Kyuberis A., Zobov N.F., Makhnev V.Y., Tennyson J., Lodi L., Yurchenko S.N., Polyansky O.L.**
Overview of Hot and Room T water Line Lists for $H_2^{16}O$, $H_2^{17}O$, $H_2^{18}O$, D_2O , HDO
- J19 **Kyuberis A., Lodi L., Ebert V., Reed Z.D., Hodges J.T., Zobov N.F., Tennyson J., Polyansky O.L.**
Carbon Monoxide: Subwavenumber Accuracy for Energy Levels and Sub Percentage Accuracy for Intensities from Ab Initio Theory and Experiment
- J20 **Bermejo D., Martinez R.Z., Di Lonardo G. Fusina L.**
High resolution stimulated Raman spectroscopy from collisionally populated states after optical pumping. Acetylene isotopologues
- J21 **Lim H.S., Hwang J.Y, Choi E., Lee G.Y., Kang T**
Development and Validation of an Analytical Method for the Determination of Ferrocyanide Ions in Salts
- J22 **Boudon V., Pirali O., Carlos M.**
Pure Rotation Spectrum of CF_4 in the $\nu_3=1$ State Using THz Synchrotron Radiation
- J23 **Morville J., Tokaryk D., Dobrev G., Ross A.J., Crozet P.**
Intracavity Spectroscopy of Metal Monohydrides
- J24 **Bizzocchi L., Tamassia F., Esposti C.D., Dore L., Canè E., Spahn H., Müller H.S.P., Lewen F.**
High-resolution Infrared and Millimetre-wave Spectroscopy of HC_3N : Accurate Ro-vibrational Analysis of Its States Below 1000 cm^{-1}
- J25 **Pashayan-Leroy Y., Sargsyan A., Klinger E., Leroy C., Papoyan A., Sarkisyan D.**
Investigation of Selective Reflection Spectra by an Optical $L \sim \lambda/2$ -thick Cell Filled with Rb Atomic Vapor

- J26 **Coles P.A., Tennyson J., Yurchenko S.N., Al-Refaiie A.F., Azzam A.A.A., Barton E.J., Chubb K., Rivlin T., Gorman M.N., Hill C., Lodi L., McKemmis L.K., Owens A., Polyansky O.L., Sousa-Silva C., Underwood D.S., Yachmenev A., Zak E.**
ExoMol: New Molecular Linelists for Exoplanets and Other Hot Atmospheres
- J27 **Pienkina A., Margulès L., Motienko R.A., Guillemin J.-C.**
The Millimeter-wave Spectrum and Coriolis Interaction in the Ground and Excited Vibrational States of Methoxyisocyanate
- J28 **Zaborowski M., Wcisło P., Thibault F., Wójtewicz S., Cygan A., Kowzan G., Masłowski P., Lisak D., Ciuryło R.**
Ultra Accurate Measurements of the $S(2)$ 2-0 Transition Frequency of D_2 and Ab Initio Calculations of Collisional Effects
- J29 **Puchalski M., Komasa J., Czachorowski P., Pachucki K.**
Exponentially Correlated Basis Set for Calculation of QED Corrections in the Hydrogen Molecule
- J30 **Klimchuk A., Semenov V.E., Churbanov D., Rodin A.**
Near Infrared Heterodyne Spectroradiometer for Column and Vertical Profile measurements of GHGs
- J31 **Charmet A.P., Cornaton Y.**
Infrared Spectra and Cross Section Data of 1,1,1,2-Tetrafluoroethane: Results From a Coupled Experimental and Ab Initio Investigation
- J32 **Charmet A.P., Cornaton Y.**
Benchmarking DFT Analytic Force Fields for Anharmonic Infrared Spectra
- J33 **Charmet A.P., Stoppa P., Tasinato N., Giorgianni S.**
DFT Methods for Calculations of Sextic Centrifugal Distortion Constants: a Benchmark Study
- J34 **Vázquez G.J., Liebermann H.P., Lefebvre-Brion H.**
Electronic structure and spectroscopy of HBr and HBr^+
- J35 **Brackertz S., Asvany O., Schlemmer S.**
Combination Differences of CH_5^+ : From Lines to States without a Model
- J36 **Liu D., Belloche A., Garrod R.T., Lewen F., Menten K.M., Müller H.S.P., Schlemmer S., Vicente R., Walters A., Wehres N., Wikins O.H.**
Spectroscopic Study of n-Propyl Cyanide and Astronomical Detection of its vibrationally excited states
- J37 **Lees R.M., Xu L.H., Reid E.M., Billinghurst B.E.**
Synchrotron Spectroscopy and Torsional Structure of the CSH-Bending and CH₃-Rocking Bands of Methyl Mercaptan
- J38 **Fomchenko A.L., Gromova O.V., Bekhtereva E.S., Sklyarova E.A., Ulenikov O.N., Bauerecker S.**
On the Ro-Vibrational Study of Hot Transitions in C_2D_4 : The $\nu_7 + \nu_{10} - \nu_{10}$ and $\nu_{10} + \nu_{12} - \nu_{10}$ Bands

- J39 **Konov I.A., Chertavskikh Y.V., Gromova O.V., Bekhtereva E.S., Ulenikov O.N., Bauerecker S.**
High Resolution Analysis of the $\nu_4, \nu_6, \nu_7, \nu_8$ and ν_{10} Vibrational Bands of $C_2H_2D_2$ -cis
- J40 **Gromova O.V., Morzhikova Y.B., Onopenko G.A., Bekhtereva E.S., Ulenikov O.N., Bauerecker S.**
High Resolution Study of $^{13}C_2H_4$ in the Region of 1700 - 2150 cm^{-1} : The $\nu_8 + \nu_{10}, \nu_7 + \nu_8, \nu_4 + \nu_8, \nu_6 + \nu_{10}$, and $\nu_3 + \nu_{10}$ Bands
- J41 **Ziatkova A.G., Kashirina N.V., Aslapovskaya Y.S., Gromova O.V., Bekhtereva E.S., Ulenikov O.N., Bauerecker S.**
Sulfur Dioxide Application of Operator Perturbation and Isotopic Substitution Theories to the Dipole Moment Analysis
- J42 **Bekhtereva E.S., Gromova O.V., Ulenikov O.N., Tchana F.K.**
High Resolution Study of the $^{15}NH_2D$ and $^{15}NHD_2$ in the Region 1000-1800 cm^{-1} : the ν_4 Bands
- J43 **Berezkin K.B., Chang X., Gromova O.V., Bekhtereva E.S., Leroy C., Ulenikov O.N., Bauerecker S.**
High Resolution Rovibrational Analysis of the $CH_2=CD_2$ Molecule: $\nu_7 + \nu_{10} - \nu_{10}$ and $\nu_8 + \nu_{10} - \nu_{10}$ Hot Bands
- J44 **Zhdanovich S.A., Kuznetsov S.I., Fangce Z., Gromova O.V., Bekhtereva E.S., Ulenikov O.N., Bauerecker S.**
Ethylene C_2H_3D Isotopologue: High Resolution Study of $\nu_6, \nu_4, \nu_8, \nu_7$, and ν_{10} Fundamentals
- J45 **Belova A.S., Fomchenko A.L., Shamshutdinova V.V., Gromova O.V., Bekhtereva E.S., Ulenikov O.N.**
On the Study of Fundamental Properties of Ethylene: Analytical Form for Ambiguity Parameters and Isotopic Relations for Spectroscopic Constants
- J46 **Zanozina E.M., Civiš S., Ferus M., Kubelík P., Chernov V.E., Tkachenko D.Y., Škut M.**
Newly Observed g-, h- and i-levels of Atomic Sulphur
- J47 **Civiš S., Ferus M., Kubelík P., Chernov V.E., Zanozina E.M., Smejkal D.**
Time-resolved FTIR Study of Rydberg States of Atomic Selenium: Fine Structure of 5g Levels
- J48 **Ferus M., Koukal J., Civiš S., Lenža L., Chatzitheodoridis E., Kubelík P., Zanozina E. M., Váňa P., Kaiserová T., Knížek A.**
Analysis of Meteor Emission Spectra using Comparative Laboratory Experiments and Calibration Free Method
- J49 **Zelenková V., Rakovský J., Votava O.**
High-resolution Overtone Spectroscopy of Methylamin
- J50 **Rakovský J., Horká-Zelenková V., Votava O.**
A Simple Photoacoustic Detector for Highly Corrosive Gases

- J51 **Otsu S., Yamakawa K., Arakawa I.**
Infrared Absorption due to H₂ and H₂O Isolated in a CH₄ Matrix
- J52 **Shimizu G., Yamakawa K., Arakawa I.**
Terahertz-spectroscopic Study of H₂O Ice and Solid CH₄
- J53 **Shimazaki Y., Yamakawa K., Arakawa I.**
FTIR Spectroscopy of CH₄-D₂O Complex Trapped in Ar Matrices
- J54 **Abbasi M., Shayesteh A., Crozet P., Ross A.J.**
Analysis of Near-IR Laser-Induced Fluorescence Spectra of NiD
- J55 **Uhlíková T., Urban Š.**
Ab Initio and Relativistic DFT Calculations of Spin-rotation and NMR Shielding Constants in CH₃Br and CH₃I

The Plíva Prize Session K**Thursday, 9:00**

lecture hall AII

chairperson: Hougen J.T.

- K1 **Usabiaga I.,** 9:00
León I., Arnaiz P.F., Gonzalez J., Cocinero E.J., Fernández J.A.,
REMPI and IDIRS Spectroscopy of Glucose-Derivative Dimers in Gas Phase
- K2 **Roucou A.,** 9:15
Cuisset A., Mouret G., Hindle F., Bocquet R., Sadovskii D., Kleiner I., Goubet M., Bteich S., Meerts W.L.
Internal Rotation Potential and Pure Rotational Spectroscopy of 3-nitrotoluene
- K3 **Kowzan G.,** 9:30
Lee K.F., Borkowski M., Ablewski P., Wójtewicz S., Stec K., Lisak D., Fermann M.E., Trawiński R.S., Masłowski P.
Accurate and Sensitive Molecular Spectroscopy with a Virtually Imaged Phased Array Spectrometer and an Optical Frequency Comb
- K4 **Karhu J.,** 9:45
Vainio M., Metsälä M., Halonen L.
Double Resonance Measurement of Acetylene Symmetric States with Optical Frequency Comb Referenced Cavity Ring-down Spectroscopy
- K5 **Van V.,** 10:00
Stahl W., Nguyen H.V.L.
Coupled Internal Rotations in Five-Membered Rings
- K6 **Uriarte H.I.,** 10:15
Calabrese C., Olivenza-León L., Maris A., Melandri S., Cocinero E.J.
The Conformational Landscape of Rose Ketones in the Gas Phase
- K7 **Herbers S.,** 10:30
Wachsmuth D., Grabow J.-U.
Internal Rotation in Methyl Methacrylate

- K8 Prudenzano D.,** 10:45
 Bizzocchi L., Lattanz V., Laas J., Spezzano S., Giuliano B.M., Caselli P.
Sub-Millimeter Wave Rotational Spectroscopy of HOCO⁺ and DOCO⁺

The Plíva Prize Session L **Thursday, 9:00**
 lecture hall AI

chairperson: Di Lonardo G.

- L1 Fast A.,** 11:20
 Furneaux J.E., Meek S.A.
Towards Precision Infrared Spectroscopy on Small Molecules
- L2 Bteich S.,** 11:35
 Goubet M., Motienko R.A., Margulès L., Huet T.R.
Spectroscopic Study of Methylglyoxal and Its Hydrates: a Gaseous Precursor of Secondary Organic Aerosols
- L3 Roucou A.,** 11:50
 Meerts W.L., Martin-Drumel M.A., Dhont G., Cuisset A.
Evolutionary Algorithm-based Analysis of the ν_5 and ν_2 bands of SOCl₂
- L4 Godin P.J.,** 12:05
 Cabaj A., Le Bris K., Xu L.H., Strong K.
Temperature-dependent Absorption Cross-sections of 3 Fluorinated Molecules: PFTBA, PFPO, and HFPO
- L5 Sugimoto T.,** 12:20
 Yamakawa K., Arakawa I.
Infrared Spectroscopic Investigation of Nuclear Spin Conversion of Methane in a Xenon Matrix
- L6 Schröder B.,** 12:35
 Rybarczyk M., Sebald P.
High-level Theoretical Rovibrational Spectroscopy of Linear Triatomic Molecules
- L7 Witsch D.,** 12:50
 Lutter V., Fuchs G.W., Giesen T.F.
Vibrational Spectroscopy of Small Silicon-Carbides

The 7th Ioannes Marcus Marci Session M **Thursday, 16:00**
chairperson: Bunker P.

- M1 Hougen J.T.** 16:30
The Spirit of the Prague Conferences
- M2 Zare R.,** 17:30
 Perreault W.E., Mukherjee N.
Angular and Internal-State Distributions of Photofragments Determined from Time-of-Flight Mass Spectrometry

Invited Lectures N**Friday, 9:00***chairperson: Xu L.-H.***N1 Zwier T.S.** 9:00*Conformer-specific Spectroscopy and Dynamics: From the Microwave to the Ultraviolet***N2 Hu S.M.** 9:45*Precise Line Parameters from Cavity Ring-Down Spectroscopy***Invited Lectures O****Friday, 11:00***chairperson: Caminati W.***O1 Surin L.A.** 11:00*Millimeter-wave Jet Spectroscopy of van der Waals Complexes and Small Clusters Containing Helium and Hydrogen***O2 Pérez C.** 11:45*Getting Wet in the Gas Phase: Water Aggregates from Broadband Rotational Spectroscopy***Camber Concert Session****Friday, 19:30***chairperson: Urban Š.***Melzoch K.**–*The Rector's greeting* 19:35**Jensen P.**–*The Plíva's awards* 19:40**Martin's Quartet** 19:55*W. A. Mozart: Divertimento D dur, KV 136, Allegro, Andante, Presto**F. Mendelssohn-Bartholdy: Capriccio op. 81/3**A. Dvořák: The sting quartet F dur, op. 96 American, Allegro ma non troppo, Lento, Molto vivace, Vivace ma non troppo***Alonso J.**–*Stirrup-glass* 21:15**Contributed Lectures P****Saturday, 9:00**

lecture hall AII

*chairperson: McNaughton D.***P1 Urbanczyk T.,** 9:00

Koperski J.

Diatomic Molecules in Supersonic Expansion Beam Experiment from Separation of Overlapped Profiles to Determination of Interatomic Potential

- P2 **Yamada K.M.T.**, 9:18
Iwakuni K., Okubo S., Inaba H., Onae A., Hong F.L., Sasada H.
Ortho-para Dependence of Pressure Effects Observed in the C_2H_2 $\nu_1 + \nu_3$ Band by Dual-comb Spectroscopy
- P3 **Bielska K.**, 9:36
Domysawska J., Wójtewicz S., Cygan A., Masłowski P., Trawiński R.S.,
Morzyński P., Bober M., Zawada M., Ciuryło R., Lisak D.
Precise Determination of Line Shapes and Positions of Self-perturbed Oxygen B-band Transitions
- P4 **Ganpathi N.P.**, 9:54
Sen S.
Unifying Hydrogen Bonding with Vibrational Stark Effect
- P5 **Lisak D.**, 10:12
Cygan A., Wójtewicz S., Wcisło P., Zaborowski M., Kowzan G., Masłowski P.,
Ciuryło R.
Cavity-enhanced Absorption and Dispersion Spectroscopy for Molecular Line-shape Investigations

Contributed Lectures Q**Saturday, 9:00**

lecture hall AI

chairperson: Ross A.

- Q1 **Linton C.**, 9:00
Kokkin D.L., Steimle T.C., Kim Y., Mawhorter R.J.
High Resolution Laser Spectroscopy of the $[18.42]0 - X^1\Sigma^+$ and $[15.45]0 - a^3\Delta^1$ Transitions of Tantalum Mononitride, TaN
- Q2 **Steber A.L.**, 9:18
Pérez C., Gruet S., Temelso B., Shields G.C., Rijs A.M., Kisiel Z., Schnell M.
Solvation of Isolated Polycyclic Aromatic Hydrocarbons (PAHs)
- Q3 **Obenchain D.A.**, 9:36
Grubbs G.S., Pickett H.M., Novick S.E.
The Rotational Spectrum of Ortho and Para D_2 -AgCl
- Q4 **Bacalla X.**, 9:54
Salumbides E.J., Linnartz H., Ubachs W., Zhao D.
A Survey of Electronic Transitions of C_6H using Cavity Ring-Down Spectroscopy
- Q5 **Sun Z.D.**, 10:12
Qi S.D., Lees R.M., Xu L.H.
Sub-Doppler Spectroscopy of the C–N Stretching Band of Methylamine

Contributed Lectures R**Saturday, 11:00**

lecture hall AII

chairperson: Lessari A.

- R1 **Gatti D.**, 11:00
Gotti R., Gambetta A., Belmonte M., Galzerano G., Laporta P., Marangoni M.
Comb-assisted Cavity-enhanced Lamb Dip spectroscopy
- R2 **Wachsmuth D.**, 11:18
Lesarri A., Herbers S., Grabow J.-U.
A Broad View at High Resolution the Versatile Conformational Landscape of Cyanocycloheptane Unravelled
- R3 **Hougen J.T.**, 11:36
An Effective-Hamiltonian Approach to Large-amplitude Motions in PF_5 , with Potential Application to CH_5^+