

CONFERENCE PROGRAM

DAY 1, Monday 23 June

7:30 Registration
 8:45 WELCOME Laurence S. Rothman
 8:55 Institutional Welcome Michael McCarthy

SESSION I: Remote Sensing and Radiative Transfer

Chair: P. F. Bernath

9:05 Tropospheric Emissions: Monitoring of Pollution (TEMPO) . Kelly Chance
 9:45 Retrieving CO₂ from Orbiting Carbon Observatory-2 (OCO-2) Spectra David Crisp
 10:25 Spectroscopic Issues for the Atmospheric Chemistry Experiment (ACE) C. Boone
 10:40 *Coffee Break*

10:55 Remote Sensing of Greenhouse Gases and Their Sources and Sinks A. Butz
 11:35 Validation of H₂O Continuum Absorption Models in the Wave Number Range 180-600 cm⁻¹ with Atmospheric Emitted Spectral Radiance Measured at the Antarctica Dome-C Site G. Liuzzi
 11:50 Determination of Near-IR Water Vapor Self Continuum from Observations E. Mlawer
 12:05 Atmospheric Radiative Transfer Generalised for Use on Earth and Other Planets: ARTS 2.2 A. Perrin
 12:20 TAPAS, a Web-Based Service of Atmospheric Transmission Computation for Astronomy J.-L. Bertaux
 12:35 The Doppler Wind and Temperature Sounder M. McHugh
 12:50 *Lunch Served*

SESSION II: Databases-I

Chair: V. Boudon

14:00 Comparison between HITRAN2012 data and a new experimental line list recently published for water vapor in the spectral region 6450 to 9400 cm⁻¹ L. Regalia

14:15 A Comprehensive Catalogue of Absorption Cross-Sections of Halocarbons and Related Molecules K. Shine
 14:30 New and Improved Infrared Spectroscopy of Halogen-Containing Species for ACE-FTS Retrievals J. J. Harrison
 14:45 New Analysis of the CRDS Spectrum of the Six ¹⁶O/¹⁸O Isotopologues of Ozone up to 7920 cm⁻¹ A. Barbe
 15:00 Measurements and Modeling of ¹⁶O¹²C¹⁷O Spectroscopic Parameters at 2 μm D. Jacquemart
 15:15 Line Positions and Intensities of ¹³C¹²CH₆ in the 12.2 μm region M. A. H. Smith
 15:30 Are Your Spectroscopic Data Being Used? I. E. Gordon
 16:00-18:00 **POSTER SESSION I**

DAY 2, Tuesday 24 June

SESSION III: Line Shapes

Chair: B. J. Drouin

9:00 Spectral Line Shape Model to Replace the Voigt Profile in Spectroscopic Databases D. Lisak
 9:40 Line Parameter Measurements and Stringent Tests of Line Shape Models Based on Cavity-Enhanced Absorption Spectroscopy J. Hodges
 10:20 Narrowing Effects in the H₂¹⁸O Near-IR Spectrum: Experimental Test of the Partially-Correlated Quadratic-Speed-Dependent Hard-Collision Profile M. D. De Vizia
 10:35 *Coffee Break*
 10:50 New Multispectrum Fitting Software Used at DLR for Analysis of Laboratory Fourier-Transform Molecular Spectra J. Loos
 11:05 Comparisons of Measured and Requanzitized Classical Molecular Dynamics Calculated Line Shape of Air-Broadened Isolated Transitions of Molecular Oxygen J. Lamouroux
 11:20 The Use of Ab Initio Wavefunctions in Line Shape Calculations for Water Vapor R. R. Gamache
 11:35 Refinement of the Robert-Bonamy Formalism: Taking Into Account of Contributions From the Line Coupling Q. Ma

11:50 Collisional Line-Shape and Line-Mixing Parameters for CO₂ Absorption near 3340 cm⁻¹: measurements and modelingJ. Buldyreva
 12:05 Ab Initio Computation of Dynamical Properties: Pressure BroadeningL. Wiesenfeld
 12:20 A rapid retrieval methodology based on the spectrally integrated Voigt function for space observation spectral radiance dataS. Abrarov
 12:35 *Lunch Served + Group Photo*

SESSION IV: Laboratory and Field Measurements

Chair: M. A. H. Smith

14:00 The Near Infrared Absorption Spectrum of Water by CRDS Between 1.26-1.70 μm : Complete Empirical Line List and Continuum AbsorptionD. Mondelain
 14:15 Frequency Comb Spectroscopy of CO₂, CH₄, H₂O, and Isotopes Over a 2 km Outdoor Path: Concentration Retrievals Using Different Absorption ModelsG. B. Rieker
 14:30 Frequency Comb-Referenced Spectroscopy in the $\nu_1 + \nu_3$ Region of AcetyleneS. Twagirayezu
 14:45 Spectroscopy for Industrial Applications: High-Temperature ProcessesA. Fateev
 15:00 New Developments for the Terahertz Spectroscopy in LilleL. Margulès
 15:15-17:15 **POSTER SESSION II**

18:00 *Banquet at Knafel Center, Radcliffe Yard*

DAY 3, Wednesday 25 June

SESSION V: Astrophysics and Astronomy

Chair: J. Tennyson

9:00 Combining Theory and Experiment to Compute Highly Accurate Line Lists for Stable MoleculesT. J. Lee

9:40 Accurate First-Principles Spectra Predictions for Planetological and Astrophysical Applications at Various T-ConditionsM. Rey
 10:20 Spectroscopy for Cool Astronomical ObjectsP. F. Bernath
 10:35 *Coffee Break*

10:50 No Photon Left Behind: How Billions of Spectral Lines are Transforming Planetary SciencesG. L. Villanueva

11:30 SOIR and NOMAD: Characterization of Planetary Atmospheres S. Robert

12:10 *Lunch Served*

13:20 Ubiquitous Argonium, ArH⁺, in the Diffuse Interstellar MediumH. S. P. Müller

13:35 HITRAN and HITEMP Modeling of the Infrared Spectra of Circumstellar Gas around Young and Evolved StarsB. Sargent

13:50 Modeling Non-LTE Methane Limb Emissions of Titan's Atmosphere in the IR and Near IR RangeA. A. Kutepov

14:05 *Coffee Break*

SESSION VI: Databases-2

Chair: J. M. Flaud

14:20 Status of the HITRAN and HITEMP databasesL. S. Rothman

14:35 Evaluation of HITRAN 2012 H₂O linelistG. C. Toon

14:50 High Accuracy CO and CO₂ Line Intensities from Ab Initio Calculations and MeasurementsO. L. Polyansky

15:05 New Approach for Spectroscopic Data Reduction Using Ab Initio Calculations and Experimental Lines: Application to Methane .V. Tyuterev

15:20 CH₄, C₂H₄, SF₆ and CF₄ Calculated Spectroscopic Databases for the Virtual Atomic and Molecular Data CentreV. Boudon

15:35 Energy Levels, Band Constants, Potentials, Franck-Condon Factors and Linelists Involving the $X^3\Sigma_g^-, a^1\Delta_g$ and $b^1\Sigma_g^+$ StatesB. J. Drouin

15:50 Simple Molecules as Complex SystemsA. G. Császár