

Appendix: Additional Contributions

The number of contributions to the Symposium was so high that only the review and invited talks have found place, in the form of articles, in this volume. This Appendix lists all these additional contributions (oral and posters) which are not present as articles. The abstracts of all contributions were published in a booklet produced by the Local Organizing Committee and are available at the SAO/NASA Astrophysics Data System (ADS). More information on these contributions (PowerPoint presentations and/or articles) have been made public in the Internet web site of the conference (http://cab.inta-csic.es/molecular_universe/).

Oral Presentations

Exoplanetary atmosphere observations

G. Tinetti

Exoplanetary atmosphere models

E. Hebrard

Galactic Center clouds and complex molecules

J. Martín-Pintado, M.A. Torres-Requena

The D/H ratio of water ice in star formation

Jeong-Eun Lee, Edwin Bergin

Herschel introduction

G. Pilbratt

Molecules in protostellar shocks: the CHESS view on L1157-B1

Bertrand Lefloch, M. Benedettini, S. Cabrit, E. Caux, C. Ceccarelli, J. Cernicharo, C. Codella, T. Giannini, B. Nisini, B. Parise, M. Salez, M. Vasta, S. Viti, and the CHESS team

Herschel observations of EXtra-Ordinary Sources (HEXOS): Analysis of the HIFI 1.2 THz Wide Spectral Survey toward Orion KL

Nathan R. Crockett, Edwin A. Bergin, Tom Bell, Geoffrey Blake, Jose Cernicharo, Martin Emprechtinger, Harshal Gupta, Dariusz Lis, Steven Lord, John Pearson, Rene Plume, Peter Schilke, Floris van der Tak, Shiya Wang, Shanshan Yu

WISHes coming true: low-mass protostars as chemical fountains

Lars E. Kristensen, Ewine van Dishoeck, Umut Yıldız, Ruud Visser, Greg Herczeg, Jes Jørgensen, Tim van Kempen, Michiel Hogerheijde, and the WISH team

The chemistry of water in the ultracompact HII region (UC HII)**Mon R2**

Asunción Fuente, Paolo Pilleri, José Cernicharo, Olivier Berné, José Ricardo Rizzo, Manuel González-García, Javier R. Goicoechea, Volker Ossenkopf, Maryvonne Gerin, and the WADI KP team

The atmospheres of Titan and Saturn in the infrared from Cassini: the interplay between observation and laboratory studies

Donald E. Jennings, Conor A. Nixon, F. Michael Flasar, Virgil G. Kunde, Athena Coustenis

Herschel observations of comet 103P/Hartley 2: D/H in a Jupiter family comet

D. C. Lis, P. Hartogh, D. Bockelée-Morvan, M. de Val-Borro, N. Biver, M. Küppers, M. Emprechtinger, E.A. Bergin, J. Crovisier, M. Rengel, R. Moreno, G.A. Blake, S. Szutowicz

Detecting the cold water reservoir in a protoplanetary disk

Michiel Hogerheijde, Edwin Bergin, Christian Brinch, Lauren Cleeves, Jeffrey Fogel, Geoffrey Blake, José Cernicharo, Carsten Dominik, Darek Lis, Gary Melnick, David Neufeld, Olja Panić, John Pearson, Lars Kristensen, Umut Yıldız, Ewine van Dishoeck

Time-dependent anion chemistry in the CSE IRC+10216

Michel Guelin, Marce Agundez, Jose Cernicharo, Carl Gottlieb, Mike McCarthy, Patrick Thaddeus

Formation and destruction processes of carbonaceous interstellar dust

Cesar S. Contreras, Claire L. Ricketts, Farid Salama

New chemical models for new era observations: a multiphase Monte Carlo model of gas-grain chemistry

Anton I. Vasyunin, Eric Herbst

Herschel oxygen project observations of molecular oxygen in Orion

Paul F. Goldsmith, René Liseau, Tom Bell, Darek Lis, Jo-Hsin Chen, Ron Snell, Di Li, Michael Kaufman, Edwin Bergin, Gary Melnick, and the HOP Team

Chemical enrichment of the interstellar medium through the mass loss of evolved stars

Leen Decin, on behalf of the HIFISTARS and MESS GTKP consortia

Modelling the gas and the dust of protoplanetary disks in the Herschel-GASPS sample

Wing-Fai Thi, and the GASPS Team

Where is the molecular gas in low metallicity dwarf galaxies?

Suzanne C. Madden, Diane Cormier, Vianney Lebouteiller, SPIRE SAG 2 consortium, and PACS GT Consortium

An interferometric 270–355 GHz spectral line survey of the red supergiant VY CMa

Karl M. Menten, Ken H. Young, Nimesh A. Patel, Carl A. Gottlieb, Patrick Thaddeus, Michael C. McCarthy, Mark A. Gurwell, Arnaud Belloche, Tomasz Kaminski, Lies Verheyen, Leen Decin, Sandra Bünken, Holger S. P. Müller

DISCS: A Disk Imaging Survey of Chemistry with the SMA

Edwin Bergin, Karin Öberg, Chunhua Qi, David J. Wilner, Jeffery K. J. Fogel, Sean M. Andrews, Lauren Cleeves, Catherine Espaillat, Ilaria Pasucci

The far-ultraviolet molecular spectrum of protoplanetary disks: new views from Hubble

Kevin France

Competing mechanisms in the formation of molecular hydrogen on silicates in conditions pertinent to the ISM

J.L. Lemaire, G. Vidali, S. Baouche, M. Chehrouri,

Molecular clouds at the reionization epoch

Amiel Sternberg, Alex Dalgarno, Eric Herbst, Yezhe Pei

The chemistry of exoplanet atmospheres

Catherine Walsh, T. J. Millar

Nobeyama 45 m telescope legacy project: Line survey

Shuro Takano, Yuri Aikawa, Vivien Chen, Naomi Hirano, Masaaki Hiramatsu, Tomoya Hirota, Kazuhisa Kamegai, Kaori Kobayashi, Kotaro Kohno, Yi-Jehng Kuan, Sheng-Yuan Liu, Taku Nakajima, Hideko Nomura, Nagayoshi Ohashi, Masatoshi Ohishi, Hiroyuki Ozeki, Nami Sakai, Takeshi Sakai, Shoichi Shiba, Yu-Nung Su, Mika Sugimura, Shigehisa Takakuwa, Tomofumi Umemoto, Kuo-Song Wang, Masako Yamada, Takahiro Yamaguchi, Satoshi Yamamoto, Qi-Zhou Zhang

Overview of data bases

T. J. Millar

Laboratory investigations of the formation of superhydrogenated PAHs

John Thrower, Emil Friis, Bjarke Jørgensen, Louis Nilsson, Saoud Baouche, Richard Balog, Andrew Cassidy, Liv Hornekær

H₂CCC - A diffuse interstellar band carrier

Ranjini Raghunandan, John P. Maier, Gordon A. H. Walker, David A. Bohlender, Fabio J. Mazzotti, Jan Fulara, Iryna Garkusha, Adam Nagy

Spectroscopy of PAHs with carbon side chains

Gaël Rouillé, Mathias Steglich, Yvain Carpentier, Friedrich Huisken, Thomas Henning

Exploring the Central Molecular Zone of the Galaxy with H₃⁺ and CO

T. R. Geballe, T. Oka, M. Goto, N. Indriolo, B. J. McCall

Herschel/PACS detection of far-IR OH emission towards the Orion Bar PDR

J. R. Goicoechea, C. Joblin, A. Contursi, O. Berné, J. Cernicharo, M. Gerin, J. Le Bourlot, E.A. Bergin, and the HEXOS-GT-KP team

The ubiquitous nature of HF

T. G. Phillips, R. Monje, P. Sonnentrucker

Probing the diffuse interstellar medium with hydroxyl cations and water cations

David Neufeld, David Hollenbach, Michael Kaufman, Mark Wolfire, Javier Goicoechea, Maryvonne Gerin, and the PRISMAS team

Carbon chemistry in transitional clouds from the GOT C+ Survey of CII 158 micron emission in the Galactic Plane

William D. Langer, Thangasamy Velusamy, Jorge Pineda, Karen Willacy, Paul F. Goldsmith

Herschel observation of C₃ in star forming regions

B. Mookerjea, T. Giesen, J. Stutzki, J. Cernicharo, J. Goicoechea, J. Black

Posters: Session 1**I.01. AKARI observations of ice absorption bands towards edge-on YSOs**

Yuri Aikawa, Dai Kamuro, Itsuki Sakon, Yoichi Itoh, Jennifer A. Noble, Klaus M. Pontoppidan, Helen J. Fraser, Hiroshi Terada, Motohide Tamura, Ryo Kandori, Akiko Kawamura, Munetaka Ueno

I.02. Thermal structure of a protoplanetary disk around HD163296: A study of vertical temperature distribution by CO emission lines

Eiji Akiyama, Munekate Momose, Hiroyuki Hayashi, Yoshimi Kitamura

I.03. Deuterium chemistry in protoplanetary disks

Tobias Albertsson, Dmitry Semenov, Thomas Henning

I.04. Complex molecules in protostellar outflows

H. Arce, J. Santiago-Garcia, D. Mardones, J. K. Jorgensen, G. Garay, M. Tafalla, R. Bachiller

I.05. X-rays in protoplanetary disks: their impact on the thermal and chemical structure, a grid of models.

Giambattista Aresu, Inga Kamp, Rowin Meijerink, Peter Woitke, Wing Fai Thi, Marco Spaans

I.06. New probes of the chemistry in the inner regions of planet-forming disks

Jeanette Bast, Avi Mandell, Ewine van Dishoeck, Daniel Harsono, Simon Bruderer

I.07. Tracing Xray and FUV radiation in the embedded phase of star formation

Arnold O. Benz, Simon Bruderer, Susanne F. Wampfler, Carolin Dedes, Ewine F. van Dishoeck

I.08. Herschel/HIFI-HRS observation of CH absorption in IRAS16293-2422

Sandrine Bottinelli, Emmanuel Caux, Valentine Wakelam, Cecilia Ceccarelli, Claudine Kahane, and the CHESS team

I.09. Principles and promise of Fabry-Perot resonators at THz frequencies

Rogier Braakman, Geoffrey A. Blake,

I.10. A VLT-CRIRES 4.7 micron survey of CO emission from young protoplanetary disks

Joanna Brown, Klaus Pontoppidan, Ewine van Dishoeck, Gregory Herczeg

I.11. High-J CO emission in young stellar objects: Disks and Outflow walls! FUV or Shocks?

Simon Bruderer, Ewine F. van Dishoeck, S.D. Doty

I.12. New constraints on the origin of protostellar jets: The SiO abundance in HH212

Sylvie Cabrit, Claudio Codella, Frederic Gueth, Vianney Taquet

I.13. Star forming regions towards stellar wind bubbles: the ring nebulae RCW 52 and RCW 78

Cristina Cappa, Gisela A. Romero, Mónica Rubio, M.C. Martín

I.14. Negative ions induced processes in proto-planetary atmospheres and ISM

F. Carelli, F. Sebastianelli, F. A. Gianturco

I.15. Construction of a high-resolution terahertz cavity ringdown spectrometer

P. Brandon Carroll, Brett A. McGuire, Susanna L. Widicus Weaver

I.16. The role of OH in the chemical evolution of protoplanetary disks

G. Chaparro, I. Kamp

I.17. Water in massive star-forming regions with Herschel Space Observatory

Luis Chavarria, Fabrice Herpin, Sylvain Bontemps, Thierry Jacq, Alain Baudry, Jonathan Braine, Floris van de Tak, Friedrich Wyrowski, Ewine van Dishoeck

I.18. Chemistry in Very Low Luminosity Objects (VeLLOs)

Jo-Hsin Chen, Neal Evans, Jeong-Eun Lee, Michael M. Dunham, Hyo Jeong Kim

I.19. Chemical signposts in transition disks

Ilse Cleeves, Edwin Bergin, Jeffrey Fogel

I.20. The SEVO experiment onboard NASA's O/OREOS Small Satellite

Amanda Cook, Andrew Mattioda, Nathan Bramall, Kathryn Bryson, Julie Chittenden, Pascale Ehrenfreund, Giovanni Minelli, Richard Quinn, Antonio Ricco

I.21. Organic chemistry of Cha-MMS1 and IRAS 15194-5115 probed by microwave spectroscopy

Martin Cordiner, Steven Charnley

I.22. Molecular anions in protostars, prestellar cores and dark clouds

Martin Cordiner, Steven Charnley, Jane Buckle, Catherine Wash, Tom Millar

I.23. Study of deuterated water in the low-mass protostar IRAS16293-2422

Audrey Coutens, Charlotte Vastel, Emmanuel Caux, Cecilia Ceccarelli, and the CHESS team

I.24. HNC in the C-rich envelope of the AGB star IRC+10216

Fabien Daniel, Marcelino Agundez, Elvire de Beck, Jose Cernicharo, Leen Decin, Robin Lombaert

I.25. Detection of iron containing crystalline olivines in the debris disk of β Pictoris

B.L. de Vries, B. Acke, B. Vandenbussche, L. B. F. M. Waters, J. A. D. L. Blommaert, C. Waelkens

I.26. The photodissociation of formaldehyde in comets

Paul D. Feldman

I.27. The relation between deuteration and evolution in massive star formation

Francesco Fontani, Aina Palau, Paola Caselli, Alvaro Sanchez-Monge, Jonathan Tan, Michael J. Butler, Izaskun Jimenez-Serra

I.28. An improved equation of state for protoplanetary simulations

Marina Galvagni, Tristen Hayfield, Lucio Mayer, Prasenjit Saha

- I.29. On the formation of fullerenes in H-rich circumstellar environments**
Anibal Garcia-Hernandez
- I.30. Spitzer spectral line mapping of protostellar outflows: H₂ emission in L1448, BHR71, and NGC2071**
Teresa Giannini, Brunella Nisini, David Neufeld, Yuan Yuan, Simone Antonucci, Antoine Gusdorf
- I.31. New observations of molecular absorptions toward GV Tau N**
Erika Gibb, Matthew Troutman
- I.32. SAFARI: A Far Infrared Imaging FTS-Spectrometer for SPICA**
J.R. Goicoechea, P.R. Roelfsema, W. Jellema, B.M. Swinyard
- I.33. Molecular emission in the IC443 supernova remnant**
Antoine Gusdorf, Rolf Güsten, Yuan Yuan, David Neufeld, and the WADI team
- I.34. PAH Anions in circumstellar and interstellar environments**
Mark Hammonds, Alessandra Candian, Peter Sarre
- I.35. Modelling molecular emission from young embedded disks**
Daniel Harsono, Ruud Visser, Ewine van Dishoeck, Lars Kristensen, Simon Bruderer, Christian Brinch, Michiel Hogerheijde
- I.36. Warm water in Herschel/PACS observations of NGC 1333 IRAS 4B: the outflow, not the disk!**
Gregory J. Herczeg, Agata Karska, Lars E. Kristensen, Ewine F. van Dishoeck, Ruud Visser, Jes Jorgensen, Simon Bruderer, Umut Yildiz, and the WISH Herschel Key Program Team
- I.37. H₂ energetics and gravitational fragmentation in the overlap region in the Antennae. “Early stages of star formation”**
Cinthya Herrera, Francois Boulanger, Nicole Nesvadba
- I.38. Chemical evolution of atmospheres of H₂O dominant comet nuclei**
Subhon Ibadov
- I.39. Modelling the chemistry of a gravitationally unstable protoplanetary disc**
John Ilee, Aaron Boley, Paola Caselli, Richard Durisen, Tom Hartquist, Jonathan Rawlings
- I.40. Chemical segregation in hot cores: SMA imaging of the AFGL2591 star forming region**
Izaskun Jimenez-Serra, Qizhou Zhang, Jesus Martin-Pintado, Serena Viti, Willem-Jan de Wit

I.41. The structure and appearance of irradiated protoplanetary disks: the role of chemistry

Inga Kamp, Giambattista Aresu, German Chaparro, Peter Woitke, Wing-Fai Thi

I.42. Herschel/PACS observations of Class 0/I low-mass young stellar objects.

Agata Karska, Gregory Herczeg, Ewine van Dishoeck, Lars E. Kristensen, and WISH team

I.43. The search for evidence of episodic mass accretion: CO₂ features in low-luminosity, embedded protostars

Hyo Jeong Kim, Neal J. Evans II, Michael M. Dunham, Jeong-Eun Lee

I.44. Epic changes in the IRS 46 mid-infrared spectrum; an inner disk chemistry study

Fred Lahuis, Inga Kamp, Wing Fai Thi, Ewine van Dishoeck, Peter Woitke

I.45. The molecular universe as seen by JWST-MIRI

Fred Lahuis, Ewine van Dishoeck, Gillian Wright, George Rieke, and the MIRI Team

I.46. Class I methanol maser observations at 44 GHz in the direction of some SNRs and SFRs.

G. M. Larionov, I. D. Litovchenko, I. E. Val'tts, A. V. Alakoz

I.47. OH 1720-MHz observations toward northern class I methanol masers with 70-m Ukrainian Telescope.

G. M. Larionov, I. D. Litovchenko, O. S. Bayandina, I. E. Val'tts, A. V. Alakoz, D. V. Mukha, A. S. Nabatov, A. A. Konovalenko, V. V. Zakharenko, E. V. Alekseev, V. S. Nikolaenko, V. F. Kulishenko, S. A. Odincov

I.48. Non-LTE infrared emission from protoplanetary disk surfaces

Alexandra Lockwood, Geoffrey Blake

I.49. PACS molecular spectroscopy of OH/IR stars

R. Lombaert, B. L. de Vries, L. Decin, J. A. D. L. Blommaert, P. Royer, E. De Beck, A. de Koter, L. B. F. M. Waters

I.50. Modeling photodissociation of CO isotopologues in a turbulent solar nebula

James Lyons

I.51. Emission spectra of Geminid Fireballs from 3200 Phaeton: Preferential depletion of volatile phases

Jose Maria Madiedo, Josep Maria Trigo-Rodriguez

I.52. Water profiles of intermediate mass YSOs from HIFI

Carolyn MCoey, Samuel Tisi, Doug Johnstone, Michel Fich, Tim A. van Kempen, Asuncion Fuente, Paola Caselli, Jose Cernicharo, Lars E. Kristensen, Ewine F. van Dishoeck

I.53. Molecules in protoplanetary HAEBE discs as seen with Herschel.

Gwendolyn Meeus

I.54. The Herschel Orion Protostar Survey: Probing protostellar evolution with molecules, ice and dust

Tom Megeath, Manoj Puravankara, Dan Watson, Charles Poteet, Will Fischer, Babar Ali, Roland Vavrek, and the HOPS team

I.55. Centimeter, millimeter, and submillimeter observations of Comet 103P/Hartley 2

Stefanie N. Milam, Steven B. Charnley, Yo-Ling Chuang, Yi-Jehng Kuan, Iain M. Coulson, Anthony J. Remijan

I.56. Multiwavelength observations of volatiles in comets

Stefanie N. Milam, Steven B. Charnley, Yi-Jehng Kuan, Yo-Ling Chuang, Michael A. DiSanti, Boncho P. Bonev, Anthony J. Remijan

I.57. Can PAH clusters survive in PDRs?

Julien Montillaud, Christine Joblin, Dominique Toubanc, Aude Simon, Pascal Parneix

I.58. Sulphur-bearing molecules in the ultracompact HII region G10.6-0.4

Bhaswati Mookerjee, Massimo De Luca, Tom Bell, Audrey Coutens, Maryvonne Gerin, Harshal Gupta, Raquel Monje, Charlotte Vastel

I.59. Chemical evolution of protoplanetary disks: The effects of viscous accretion, turbulent mixing, and disk winds

Hideko Nomura, Dominikus Heinzeller, Catherine Walsh, Tom Millar

I.60. Observations of near-infrared line ratios of molecular hydrogen emission to diagnose dust evolution in protoplanetary disks

Hideko Nomura, Yuhei Takagi, Yoichi Itoh, Koji Sugitani, Makoto Watanabe, Jeff Bary, David Weintraub, Yuri Aikawa, Masahiro Tsujimoto, Yoshitsugu Nakagawa, Tom Millar

I.61. Carbon fractionation in photon-dominated regions

Volker Ossenkopf, Markus Röllig, Asunción Fuente, Robert Simon, Carsten Kramer, Edwin Bergin, the whole WADI key project team, the whole HEXOS key project team

I.62. Molecular complexity in the Cep E protostellar outflow

Susana Pacheco Vazquez, Bertrand Lefloch, Cecilia Ceccarelli

- I.63. Disks, outflows, and hot cores in the mm range at subarcsecond angular resolution**
Aina Palau, Asunción Fuente, Jérémie Boissier, Vincent Piétu, Álvaro Sánchez-Monge, Luis Zapata, Francesco Fontani, Josep Miquel Girart, Roberto Neri, Gemma Busquet, Qizhou Zhang, Paul T. P. Ho, Robert Estalella, Marc Audard, Tomas Alonso-Albi
- I.64. Chemical evolution in protoplanetary disks around T Tauri stars**
Andrey Paska, Andrew Markwick
- I.65. Origin of water around deeply embedded low-mass protostars**
Magnus V. Persson, Jes K. Jørgensen, Ewine F. van Dishoeck
- I.66. Production of small hydrocarbons in photo-dissociation regions**
Paolo Pilleri, Christine Joblin, Maryvonne Gerin, Jerome Pety, Julien Montillaud, Francois Boulanger, Asuncion Fuente
- I.67. Herschel/PACS observations of young sources in Taurus: the far-infrared counterpart of optical jets**
Linda Podio, & the GASPS team
- I.68. Carbon chemistry in oxygen rich planetary nebulae**
Lizette Ramirez
- I.69. Stellar winds in hot water**
Anita M S Richards, Khudhair Assaf, Moshe Elitzur, Sandra Etoka, Malcolm Gray, Graham Harper, Liz Humphreys, Jeremy Lim, Din van Trung, Jeremy Yates
- I.70. Thermal emission of CO and isotopomers from the envelopes of water fountain stars**
J. Ricardo Rizzo, J. F. Gómez, M. Osorio, O. Suárez, L. F. Miranda
- I.71. The search for the magnetic precursor of C-type shocks in young molecular outflows**
Julia Roberts, Izaskun Jiménez-Serra, Jesus Martín-Pintado
- I.72. Radio spectroscopy of circumstellar molecular masers**
Georgij M. Rudnitskij, Pierre Colom, Evguenij E. Lekht, Mikhail I. Pashchenko, Vladimir A. Samodurov, Il'nur A. Surbaev, Alexander M. Tolmachev
- I.73. Deuterium fractionation in massive clumps in early evolutionary stages of high-mass star formation**
Takeshi Sakai, Nami Sakai, Kenji Furuya, Yuri Aikawa, Tomoya Hirota, Satoshi Yamamoto

I.74. Linking high-J CO emission from low- to high-mass protostars with Herschel–HIFI

Irene San José-García, Lars E. Kristensen, Umut A. Yıldız, Ewine F. van Dishoeck, and the WISH team

I.75. Molecular complexity in O-rich circumstellar envelopes around evolved stars: IK TAU and OH 231.8+4.2

C. Sánchez Contreras, L. Velilla Prieto, J. Cernicharo, J. Alcolea, J.R. Pardo, M. Agúndez, V. Bujarrabal, F. Herpin, K.M. Menten, F. Wyroszky

I.76. Hot molecular cores in young stellar objects of different luminosities

Álvaro Sánchez-Monge, Aina Palau, Robert Estalella, Stan Kurtz

I.77. Observing water in low-mass proto-stellar outflows: the case of L1448

Gina Santangelo, Brunella Nisini, Simone Antonucci, Teresa Giannini, Milena Benedettini, Claudio Codella, René Liseau, Andrea Lorenzani, Mario Tafalla, Magda Vasta, Ewine van Dishoeck, Lars Kristensen

I.78. Characterizing CO fourth positive emission in proto-planetary disks

Eric Schindhelm, Kevin France, Eric Burgh, Alex Brown, Greg Herczeg

I.79. Cool molecular environment of stellar mergers V838 Mon and V4332 Sgr. Observations of the circumstellar ammonia 1_0-0_0 lines in carbon-rich AGB stars by the Herschel/HIFI

Miroslaw R. Schmidt, Romuald Tylanda, Tomasz Kamiński, M.R. Schmidt, D. A. Neufeld, R. Szczerba, J. He, N. Siódmiak, and the HIFISTARS consortium

I.80. Effect of metallicity on the chemical properties of ices around embedded young stellar objects

Takashi Shimonishi, Takashi Onaka, Daisuke Kato, Yoshifusa Ita, Itsuki Sakon, Akiko Kawamura, Hidehiro Kaneda

I.81. Spectroscopic analysis of cool galactic R CrB Star candidates

Olesja Smirnova, Laimons Začs, Yakiv V. Pavlenko, Bogdan Kaminsky

I.82. Observational signatures of $^{12}\text{CO}-^{13}\text{CO}$ partitioning in ice and gas towards local young stellar objects and molecular clouds

Rachel L. Smith, Klaus M. Pontoppidan, Edward D. Young, Mark R. Morris

I.83. Cosmic origins spectrograph observations of dense translucent clouds

Theodore P. Snow, E. B. Burgh, J. P. Destree

I.84. Periodic outbursts in the 6.7GHz methanol maser line towards G22.356+0.066

M. Szymczak, P. Wolak, A. Bartkiewicz

- I.85. A molecular survey of outflow gas: velocity-dependent shock chemistry and the peculiar composition of the extremely high-velocity (EHV) gas**
Mario Tafalla, Joaquín Santiago-García, Alvaro Hacar, Rafael Bachiller
- I.86. Molecular chemistry as a probe of pre-stellar core dynamics**
Konstantinos Tassis, Karen Willacy, Harold Yorke, Neal Turner
- I.87. Herschel/HIFI view on massive evolved stars: the HIFISTARS sample of supergiant and yellow hypergiant envelopes**
David Teyssier, Anthony Marston, Javier Alcolea, Valentin Bujarrabal, and the HIFISTARS consortium
- I.88. Modelling CH⁺ in the protoplanetary disk HD100546**
Wing-Fai Thi, F. Ménard, G. Meeus, C. Martin-Zaïdi, P. Woitke, E. Tatulli, M. Benisty, I. Kamp, I. Pascucci, C. Pinte, C. A. Grady, S. Brittain, G.J. White, C. D. Howard, G. Sandell, C. Eiroa
- I.89. Modelling the gas and dust of protoplanetary disks in the Herschel-GASPS sample**
Wing-Fai Thi, and the GASPS Team
- I.90. Low-temperature kinetic studies of OH radical reactions relevant to planetary atmospheres**
Thomas M. Townsend, Maria Antiñolo, Bernabe Ballesteros, Elena Jimenez, Andre Canosa
- I.91. The pathways of C: from AGB stars, to the Interstellar Medium, and finally into the protoplanetary disk**
Josep M. Trigo-Rodriguez, D. Anibal Garcia-Hernandez
- I.92. The extent of aqueous alteration in C-class asteroids, and the survival of presolar isotopic signatures in chondrites**
Josep M. Trigo-Rodriguez
- I.93. Searching for a spectro-astrometric signal from molecules in circumstellar disks**
Matthew Troutman, Erika Gibb
- I.94. Complex organic molecules toward low-mass protostars and outflows**
Nienke van der Marel, Karin I. Öberg, Lars Kristensen, Ewine F. van Dishoeck
- I.95. Herschel spectroscopy of planetary nebulae**
P.A.M. van Hoof, M.J. Barlow, K.M. Exter, R. Wesson, G.C. Van de Steene, M.A.T. Groenewegen
- I.96. L1157-B1: water as a unique tracer of low velocity shocks**
Serena Viti, I. Jimenez-Serra, J. Yates, C. Codella, M. Vasta, P. Caselli, B. Lefloch, C. Ceccarelli

I.97. Herschel HIFI observation of HCl emission in the low mass protostar IRAS16293-2422

Valentine Wakelam, Emmanuel Caux, Sandrine Bottinelli, Cecilia Ceccarelli, Claudine Kahane, and the CHESS team

I.98. An expanding disk around the young massive star AFGL 2591

Kuo-Song Wang, Floris van der Tak, Michiel Hogerheijde

I.99. Spectral line survey toward RCrA IRS7B in the 345 GHz window with ASTE

Yoshimasa Watanabe, Nami Sakai, Johan Lindberg, Jes Jørgensen, Suzanne Bisschop, Satoshi Yamamoto

I.100. The $^{12}\text{C}/^{13}\text{C}$ ratio as a chemistry indicator

Eva Wirström, Wolf Geppert, Carina Persson, Steven Charnley

I.101. Sub-mm spectroscopy and infrared interferometry of molecular layers of evolved stars

Markus Wittkowski, E. M. L. Humphreys, M. D. Gray, D. A. Boboltz, C. de Breuck

I.102. High-J CO survey of low-mass protostars observed with Herschel-HIFI

Umut A. Yıldız, Lars E. Kristensen, Ewine F. van Dishoeck, Jes K. Jørgensen, Ruud Visser, Irene San José-García, and the WISH Team

I.103. Molecular chemistry in protostellar disk winds and observational predictions for Herschel and ALMA

W. Yvart, S. Cabrit, G. Pineau des Forêts, P.J.V. Garcia, J. Ferreira, F. Casse

I.104. Molecules in the atmosphere and circumstellar shell of proto-planetary nebula IRAS22272+5435

Laimons Zacs, Aija Laure, Julius Sperauskas

Posters: Session 2

II.01. The effects of grain size and grain growth on the chemical evolution of cold dense clouds

Kinsuk Acharyya, Eric Herbst

II.02. Revisited nitrogen isotopic ratio in molecular clouds

Gilles Adande, Lucy Ziurys

II.03. Astronomical identification of CN^- , the smallest observed molecular anion

Marcelino Agúndez, José Cernicharo, Michel Guélin, Claudine Kahane, E. Roueff, Jacek Klos, Francisco Javier Aoiz, François Lique, Nuria Marcelino, Javier R. Goicoechea, Manuel González García, Carl A. Gottlieb, Mike C. McCarthy, Patrick Thaddeus

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Ronin Wu, Suzanne Madden, Pasquale Panuzzo, and the Herschel SAG2 Very Nearby Galaxy team

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Diana Andrade, Alicja Domaracka, Enio Frota da Silveira, Herman Rothard, Philippe Boduc

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Carina Arasa, Stefan Andersson, Ewine F. van Dishoeck, Geert-Jan Kroes

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Carina Arasa, Stefan Andersson, Herma Cuppen, Ewine F. van Dishoeck, Geert-Jan Kroes

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Astrid Bergeat, Julien Daranlot, Kevin M. Hickson

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Mathieu Bertin, Marie Lattalais, Hakima Mokrane, Françoise Pauzat, Jérôme Pilmé, Claire Minot, Yves Ellinger, Claire Romanzin, Xavier Michaut, Pascal Jeseck, Jean-Hugues Fillion, Henda Chaabouni, Emanuele Congiu, François Dulieu, Saoud Baouche, Jean-Louis Lemaire

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Thomas G. Bisbas, Tom A. Bell, Serena Viti, Jeremy Yates, Mike Barlow, Barbara Ercolano

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Wendy A. Brown, Daren J. Burke, John L. Edridge

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Jan Cami, Christiaan Boersma, Els Peeters, Charles Bauschlicher Jr., Douglas Hudgins, Louis Allamandola

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Alessandra Candian, Peter Sarre

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Andrew M. Cassidy, Louis Nilsson, Richard Balog, John Thrower, Bjarke Jørgensen, Liv Hornekær

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Andrew M. Cassidy, Richard Balog, David Field, Nykola Jones, Oksana Plekan

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Emmanuel Caux, Sandrine Bottinelli, Charlotte Vastel, Jean-Michel Glorian

III.15. A unified Macro Monte Carlo Simulation of gas phase chemistry and micro Monte Carlo simulation of grain surface chemistry

Qiang Chang, Eric Herbst

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Steven Charnley, Eva Wirstroem

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Jean Chiar, Adwin Boogert, Caltech, Claudia Knez, Xander Tielens

III.18. Low temperature FIR and submm opacity of interstellar silicate dust analogs: experimental variation of the emissivity spectral index with the wavelength and temperature

Anne Coupeaud, Karine Demyk, Claude Mény, Céline Nayral

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Gustavo A. Cruz Díaz, Antonio Jiménez Escobar, Guillermo M. Muñoz Caro

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III.24. Tentative detection of HCl⁺ in diffuse clouds

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Rainer Dietsche, Satrajit Chakrabarty, Corey A. Rice, Fabio J. Mazzotti, John P. Maier

III.26. Formation of complex organics by gas phase and intracluster ion-molecule reactions involving acetylene and hydrogen cyanide

Samy El-Shall, Ahmed Hamed, Abdel-Rahman Soliman, Paul O. Momoh

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Christian Endres, Thomas Giesen, Holger Müller, Peter Schilke, Jürgen Stutzki, Stephan Schlemmer

III.28. Electronic absorption spectra of small carbon chain oxides in 6 K neon matrices.

Sonia M. Erattupuzha Joseph, Jan Fulara, Adam Nagy, Iryna Garkusha, John P. Maier

III.29. Photodesorption of interstellar ice analogues: a wavelength-dependent study

Edith Fayolle, Mathieu Bertin, Claire Romanzin, Xavier Michaut, Karin Öberg, Harold Linnartz, Jean-Hugues Fillion

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Douglas N. Friedel, Susanna Widicus Weaver

III.31. Experimental studies of the formation of molecular hydrogen through superhydrogenation of PAHs

Emil E. Friis, John D. Thrower, Bjarke Jørgensen, Saoud Baouche, Alan Luntz, Liv Hornekær

III.32. Infrared spectroscopy of D₂O in amorphous and crystalline water environments

Óscar Gálvez, Belén Maté, Rafael Escribano, Víctor J. Herrero

III.33. Electronic transitions of protonated PAHs in 6 K neon matrices

Iryna Garkusha, Jan Fulara, Adam Nagy, University of Basel, Sonia M. Erattupuzha Joseph, John P. Maier

III.34. Modeling the formation of interstellar CO₂, CO and water ice

Robin Garrod, Tyler Pauly

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Robin Garrod, Karin Oberg

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Benjamin Godard, Edith Falgarone, Guillaume Pineau des Forêts, Maryvonne Gerin, Massimo De Luca

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Marie Godard, Géraldine Féraud, Marin Chabot, Thomas Pino, Rosario Brunetto, Yvain Carpentier, Jean Duprat, Cécile Engrand, Philippe Bréchignac, Louis d'Hendecourt, Emmanuel Dartois

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Joseph Guss, Harald Verbrack, Harold Linnartz

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Tetsuya Hama, Naoki Watanabe, Yuki Kimura, Akira Kouchi, Takeshi Chigai, Valerio Pirronello

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Hiroshi Hidaka, Motohiro Watanabe, Akira Kouchi, Naoki Watanabe

III.43. Formation routes of interstellar molecules through surface reactions at low temperature

Sergio Ioppolo, Gleb Fedoseev, Thanja Lamberts, Herma M. Cuppen, Claire Romanzin, Ewine F. van Dishoeck, Harold Linnartz

III.44. MATRIICES - Mass Analytical Tool for Reactions in Interstellar ICES

Karoliina Isokoski, Jean-Baptiste Bossa, Harold Linnartz

III.45. Photoprocessing of ice containing H_2S in circumstellar icy grain mantles

Antonio Jiménez-Escobar, Guillermo M. Muñoz Caro

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Cornelia Jäger, Harald Mutschke, Thomas Henning, Friedrich Huisken

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K. Gadallah, H. Mutschke, C. Jäger

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