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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

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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

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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

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Detecting the cold water reservoir in a protoplanetary disk

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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

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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

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

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

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

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

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

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M. Szymczak, P. Wolak, A. Bartkiewicz

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Wing-Fai Thi, and the GASPS Team

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Matthew Troutman, Erika Gibb

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Nienke van der Marel, Karin I. Öberg, Lars Kristensen, Ewine F. van Dishoeck

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P.A.M. van Hoof, M.J. Barlow, K.M. Exter, R. Wesson, G.C. Van de Steene, M.A.T. Groenewegen

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Serena Viti, I. Jimenez-Serra, J. Yates, C. Codella, M. Vasta, P. Caselli, B. Lefloch, C. Ceccarelli

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

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

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

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

Eva Wirström, Wolf Geppert, Carina Persson, Steven Charnley

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

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

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

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Laimons Zacs, Aija Laure, Julius Sperauskas

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Kinsuk Acharyya, Eric Herbst

II.02. Revisited nitrogen isotopic ratio in molecular clouds

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Marco Padovani, Malcolm Walmsley, Mario Tafalla, Pierre Hily-Blant

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Andreea Petric, Joe Mazzarella, Lee Armus, Jason Surace, Jin Koda, Aaron Evans, Dave Frayer

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Nuria Piñol Ferrer, Kambiz Fathi, Andreas Lundgren, Glenn van de Ven

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Rene Plume, E. A. Bergin, T. G. Phillips, D. C. Lis, and the HEXOS team

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Mark Rawlings, Andy Adamson, Ben McCall, Tom Kerr

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

II.87. Herschel-SPIRE spectroscopy of nearby Seyfert galaxies

Nicola Sacchi, and the SPIRE Sag2 consortium

II.88. Polycyclic aromatic hydrocarbons and the diffuse interstellar bands. A survey

Farid Salama, Gazinur Galazutdinov, Jacek Krelowski, Ludovic Biennier, Yuri Beletsky, In-Ok Song

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Vianney Taquet, Cecilia Ceccarelli, Claudine Kahane

II.93. A line confusion limited millimeter survey of Orion KL

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II.94. Herschel observations of extra-ordinary sources: Sulfur carbon chains and silicon bearing species in Orion KL

B. Tercero, J. Cernicharo, N. Marcelino, and the HEXOS team

II.95. A multispecies survey of the active galaxy NGC1068

Antonio Usero, Santiago García-Burillo, Asunción Fuente, Susanne Aalto, Roberto Neri, Melanie Krips

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Magda Vasta, Claudio Codella, Andrea Lorenzani, Gina Santangelo, Brunella Nisini, Teresa Giannini, Mario Tafalla, Rene Liseau, Lars Kristensen, Edwine van Dischoeck

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S. F. Wampfler, S. Bruderer, L. E. Kristensen, E. A. Bergin, A. O. Benz, E. F. van Dishoeck, G. J. Herczeg, F. F. S. van der Tak, J. R. Goicoechea, S. D. Doty, F. Herpin

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Dmitri Wiebe, Yaroslav Pavlyuchenkov

II.102. The first Herschel FTS look of the M83 FIR spectrum

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

II.103. APEX telescope observations of hydrides

Friedrich Wyrowski, Karl Menten, Rolf Güsten, Arnaud Belloche, Thomas Klein, Christian Leinz

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Igor Zinchenko, Stan Kurtz, Sheng-Yuan Liu, Devendra Ojha, Yu-Nung Su

II.106. A search for HeH+ and CH in a high redshift QSO

Igor Zinchenko, Victor Dubrovich, Christian Henkel

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Hector Alvaro Galue, Jos Oomens

III.02. Photolysis and Radiolysis of Formic Acid: Relevances to Astrophysical Ices.

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

III.04. Molecular dynamics simulations of D_2O ice photodesorption

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

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Astrid Bergeat, Julien Daranlot, Kevin M. Hickson

III.06. Differential adsorption of complex organic molecules isomers at interstellar ices surfaces

Mathieu Bertin, Marie Lattelais, Hakima Mokrane, Françoise Pauzat, Jerôme 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

III.07. Gas phase chemical kinetics at high temperature of carbonaceous molecules: application to circumstellar envelopes

Ludovic Biennier, Aline Gardez, Ghassen Saidani, Robert Georges, Bertrand Rowe, K.P.J. Reddy

III.08. A new geometry-free astrochemistry code for treating HII/PDR complexes

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

III.09. Studies of sulphur containing model interstellar ices

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

III.10. Analyzing astronomical observations with the NASA Ames PAH database.

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

III.11. Emission model of AIBs: the case of the 11.2 λm band

Alessandra Candian, Peter Sarre

III.12. Observing PAH hydrogenation with scanning tunneling microscopy

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

III.13. Grain surface polarization: ferroelectric mantles?

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

III.14. CASSIS, a software package to analyse high spectral resolution observations

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

III.16. Stochastic models of molecule formation on dust

Steven Charnley, Eva Wirstroem

III.17. Ice, dust and extinction in dense clouds

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

III.19. Nuclear spin dependence of hydrogenic plasmas in the laboratory and the diffuse interstellar medium

Kyle N. Crabtree, Nick Indriolo, Holger Kreckel, Carrie A. Kauffman, Brian A. Tom, Eftalda Becka, Brett A. McGuire, Benjamin J. McCall,

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

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Attila G. Császár, Tibor Furtenbacher

III.22. Simulations of grain surface chemistry under interstellar conditions

Herma Cuppen

III.23. UV induced chemistry of polycyclic aromatic hydrocarbons in NH_3-containing interstellar ice analogues

Cuylle, S.H., Tenenbaum, E.D., Bouwman, J., Linnartz, H.

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

Massimo De Luca, Harshal Gupta, David Neufeld, Maryvonne Gerin, David Teyssier, John Pearson, Darek Lis, and the PRISMAS team

III.25. Electronic absorption spectra of diacetylene cation and comparison with diffuse interstellar bands

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

III.27. VAMDC: A new home for molecular data for astronomy

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

III.30. The chemistry of high mass star forming regions with "Chemical Differentiation": Orion KL, W75N, & W3

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 D_2O 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 CO_2, CO and water ice

Robin Garrod, Tyler Pauly

III.35. Modeling complex molecular chemistry in astrophysically-relevant laboratory ices

Robin Garrod, Karin Oberg

III.36. Sulfur and carbon chemistries driven by turbulent dissipation in the diffuse ISM

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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Varun Gupta, Ramya Nagarajan, John P. Maier, Xiujuan Zhuang, Anh Le, Timothy C. Steimle

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Joseph Guss, Harald Verbraak, Harold Linnartz

III.40. Diffusion mechanism of hydrogen and deuterium atoms and the spin temperature of molecules on the surface of water ice at 8–15 K

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

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III.42. FTIR measurements of ammonia formation by the successive H-atom addition to N-atom in an N_2 matrix at 10K

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

III.57. Competing mechanisms in molecular hydrogen formation on silicates in conditions relevant to the interstellar medium (up to 70K)

Jean Louis Lemaire, Gianfranco Vidali, Saoud Baouche, Mourad Chehrouri, Henda Chaabouni, Hakima Mokrane

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Francois Levrier, Franck Le Petit, Patrick Hennebelle, Pierre Lesaffre, Maryvonne Gerin, Edith Falgarone

III.59. Effects of reagent rotation and vibration on H + OH (v, j)-¿ O + H_2

X. Li, Leiden Observatory, E. F. van Dishoeck, Leiden Observatory, M. C. van Hemert, Leiden Institute of Chemistry, C. Arasa

III.60. State-specific rate coefficients for dissociation of $H_2(v, j)$ + $H_2(v', j')$

Margot Mandy

III.61. An infrared study of glycine in astrophysical ices.

Belén Maté, Yamilet Rodríguez-Lazcano, Óscar Gálvez, Isabel Tanarro, Rafael Escribano

III.62. Residual gas analysis of samples formed from the UV irradiation of astrophysical ice analogs

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