

# HUNT for MOLECULES

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## Contents

|                                   |     |
|-----------------------------------|-----|
| Foreword . . . . .                | vii |
| Conference participants . . . . . | x   |
| Conference poster . . . . .       | xiv |

### Part 1. Session I- Molecules in the interstellar medium

|                                                                                      |    |
|--------------------------------------------------------------------------------------|----|
| Discovering interstellar molecules . . . . .                                         | 3  |
| <i>Gerin, M.</i>                                                                     |    |
| Odin's Hunt for Molecules . . . . .                                                  | 15 |
| <i>Hjalmarson A., on behalf of the Odin Team</i>                                     |    |
| The deep search of O <sub>2</sub> in interstellar space . . . . .                    | 27 |
| <i>Pagani, L.</i>                                                                    |    |
| Molecules towards HD 34078 and small scale structure in translucent clouds . . . . . | 35 |
| <i>Boissé, P.</i>                                                                    |    |
| Biological molecules . . . . .                                                       | 43 |
| <i>Despois, D.</i>                                                                   |    |
| Hunt for molecules at the origin of life: the quantum chemistry approach . . . . .   | 57 |
| <i>Ellinger Y., Chiaramello J.M., Berthier G., Lattalais M., Puzat F., Talbi D.</i>  |    |
| Looking for molecular Titanium in space . . . . .                                    | 69 |
| <i>Puzat, F., Ferré, J., Ellinger, Y.</i>                                            |    |

|                                                                                                                |     |
|----------------------------------------------------------------------------------------------------------------|-----|
| Non-equilibrium chemistry in the cold diffuse interstellar medium<br>77                                        |     |
| <i>Falgarone, E., Hily-Blant, P., Pineau des Forêts, G.</i>                                                    |     |
| Interstellar Molecules: direct formation on graphite grains at<br>7-78K . . . . .                              | 85  |
| <i>Bar-Nun, A.</i>                                                                                             |     |
| Finding friends and molecules in unexpected places . . . . .                                                   | 93  |
| <i>Liszt H.</i>                                                                                                |     |
| Molecules as a diagnostic tool in astrophysics . . . . .                                                       | 103 |
| <i>Feautrier, N., Cernicharo, J., Daniel, F., Dubernet, M.L.,<br/>Lique, F., Senent, M.L., Spielfiedel, A.</i> |     |

## **Part 2. Session II- Molecules in planets and comets**

|                                                                                                     |     |
|-----------------------------------------------------------------------------------------------------|-----|
| Hunt for molecules in comets . . . . .                                                              | 115 |
| <i>Bockelée-Morvan, D.</i>                                                                          |     |
| Molecules in planetary atmospheres . . . . .                                                        | 127 |
| <i>Lellouch, E.</i>                                                                                 |     |
| Remote Sensing of a Comet at mm and submm Wavelengths<br>from a Comet-Orbiting Spacecraft . . . . . | 135 |
| <i>Gulkis, S.</i>                                                                                   |     |
| Molecules in comets with Odin and Deep Impact observations                                          | 145 |
| <i>Biver, N. and the Odin Team</i>                                                                  |     |

## **Part 3. Session III- Extra-galactic molecules**

|                                                          |     |
|----------------------------------------------------------|-----|
| High Velocity Clouds: New Hunting Grounds for Molecules? | 157 |
| <i>Boulanger, F., Miville Deschênes, M.A.</i>            |     |
| Extragalactic molecular hydrogen . . . . .               | 165 |
| <i>Lequeux, J., Lebouteiller, V.</i>                     |     |

Hunt for Molecules in Local Universe Galaxies . . . . . 171  
*García-Burillo, S., Fuente, A., Martín-Pintado, J., Usero, A., Graciá-Carpio, J., Planesas, P.*

Hunt for cold H<sub>2</sub> molecules . . . . . 179  
*Combes, F.*

Search for molecules in Cooling Flow Clusters of Galaxies . . . 187  
*Salomé, P., Combes, F.*

**Part 4. Session IV- Primordial molecules**

Molecular echography of the early Universe . . . . . 197  
*Signore, M., Melchiorri, F., Olivo-Melchiorri, B., Puy, D.*

Dust from Reionization . . . . . 207  
*Désert, F.-X., Elfgren, E.*

Dust and Molecules in Early Galaxies: Prediction and Strategy  
 for Observations . . . . . 211  
*Takeuchi, T. T.*

**Part 5. Session V- Progress in instrumentation**

Heterodyne detection in mm & sub-mm waves developed at  
 Paris Observatory . . . . . 225  
*Beaudin, G., Encrenaz, P. and the Microwave Team*

The long submillimetric road: From superconductors to super-  
 conductors via the stars . . . . . 237  
*Salez, M.*

Hunt for Earth ice clouds using millimeter and sub-millimeter  
 observations . . . . . 293  
*Prigent, C., Pardo-Carrion, J. R., Goutoule, J.-M.*

Components, Receivers, and Instrumentation for Ground-Based  
 mm/submm Astronomy . . . . . 305  
*Lazareff, B., Butin, G., Carter, M., Chenu, J.Y., Fontana,  
 A.L., Mahieu, S., Maier, D., Mattiocco, F., Serres, P.,  
 Schuster, K., Krebs, N., Scherer, T., Schicke, M.*

A Glimpse of Technology Advances for the *ALMA* Project. The  
*ALMA* Correlator . . . . . 319  
*Baudry A.*



Robert Lucas

Author index . . . . . 329

## Preface

We are very happy that so many people gathered in Paris, this week of 19 september 2005, for the meeting "Hunt for Molecules", in celebration of the 60th birthday of Pierre Encrenaz. We strongly desired to pay this tribute, since Pierre Encrenaz has been one of the most active persons in France to promote millimeter astronomy. At the end of the 70's, after his PhD, at an epoch where there was no mm instruments in Europe, he developed collaborations with the USA mm radio-astronomers, and developed a group, who regularly observed with mm instruments: these were the 5m gold-covered antenna at McDonald, Texas, the 11m-Kitt Peak NRAO antenna, in Arizona, the Bell-Labs 7m-offset antenna in New Jersey, and even the Aerospace telescope at El-Segundo, near Los Angeles, where foreign astronomers had to observe under escort.

All this millimeter observational activity was fundamental in the training of a millimeter group in France. Soon after, to intensify this preparation, he was the motor of the P.O.M. telescopes, "Petite Operation Millimetrique", using the twin 2.5m telescopes, of the mm solar interferometer in Bordeaux. The first one POM1 was operational in 1980 in Bordeaux, and the second one POM2 a few years later on the Plateau de Bure, operated by the Grenoble radio-astronomy observatory. Many young people made their first millimeter observations there, and began a successful career. Thanks to Pierre and his building of a friendly group, there was an important and competent community in France when the IRAM instruments began to operate

(the 30m in 1985 and the interferometer in 1990). Many people in this room have much recognition towards him. Pierre Encrenaz, who was director of the Radio-millimetric department (DEMIRM) during 12 years, and founded the group at the ENS, then turned to balloon or space missions (Pronaos, Odin, Cassini, Herschel..), and is now Herschel mission scientist.

When we gathered as the organizing committee and had the idea to draw the kite <sup>1</sup> of molecules, flying in the wind of Ouessant island we were struck by the coincidence of the career of Pierre and the history of discovery of molecules in interstellar space. Indeed, although some molecules were discovered as early as in the '40s, the mm molecular domain was in its infancy: it bloomed in 1968-9, when Pierre had his PhD. And then it was a continued series of discoveries, where Pierre had his part, with his collaborators. We are happy to see now in the Proceedings of this meeting that the discovery continues actively, and in particular in the domain of astro-biology or complex organic molecules.

This meeting was the occasion to review the state of this hunt for molecules not only locally in the solar system, the Milky Way, but going toward galaxies at higher and higher redshift, up to the primordial molecules, which are a present topic of interest for Pierre. We thank all speakers for the quality of their contribution.

One of the most appreciated session was the music concert on the Monday's evening, with Pierre Encrenaz at the cello, and Roland Barillet at the piano. A photo from this very cheerful session can be seen below. At this occasion, a very old bonsai was offered to Pierre by his numerous friends.

We thank the many sponsors that helped financially to hold such a meeting: the Paris Observatory, and the LERMA Department in

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<sup>1</sup>In this particular image, we must apologize, since only about half of the ~150 interstellar molecules were drawn, by lack of space.



particular, the Minister of National Education, the CNES (Centre National d'Etudes Spatiales), the Ecole Normale Supérieure (ENS), and the Institut d'Astrophysique de Paris (IAP), where the meeting was held.

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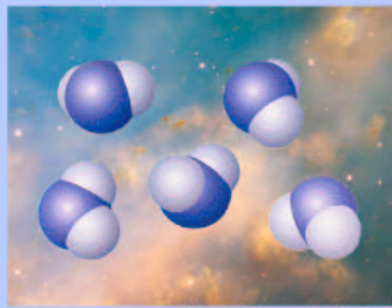
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H<sub>2</sub>O on M27, Dumbell, HST

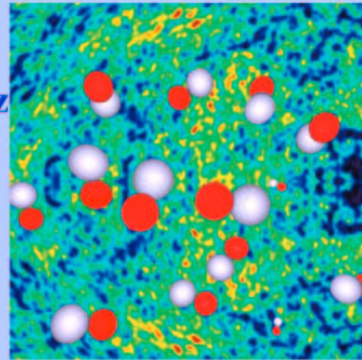
# Hunt for Molecules 19-20 September 2005

Paris, France

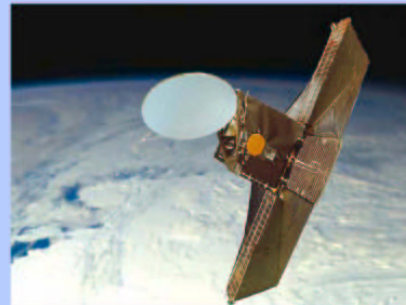
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## In honour of Pierre Encrenaz

Organised by  
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Primordial molecules on WMAP-detail



ODIN