

Ecole Internationale Daniel Chalonge



The 18th Paris Cosmology Colloquium 2014

**LATEST NEWS FROM THE UNIVERSE: LAMBDA WARM
DARK MATTER (Λ WDM), CMB, DARK MATTER, DARK
ENERGY, NEUTRINOS AND STERILE NEUTRINOS**

The International School Daniel Chalonge: 23 Years of Activity

OBSERVATOIRE DE PARIS 23, 24, 25 JULY 2014



**All Sessions of the Colloquium take place
in the historic PERRAULT building ("Bâtiment PERRAULT")**

Observatoire de Paris ENTRY: 77, Avenue Denfert Rochereau, 75014 Paris

All Sessions start at the indicated times sharp

Observatoire de Paris, Ecole Daniel Chalonge

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1 HOUR = 45 minutes lecture + 15 minutes discussion

WEDNESDAY 23 JULY MORNING

8.00 - 9.10: **GRANDE GALERIE** (*in Perrault building just aside Salle du Conseil*) **REGISTRATION:** badges, lunch tickets for the Observatoire Restaurant, copies of the full Time Table with Lectures and Lecturers.

« SALLE CASSINI »

9.15 - 9.30 Welcome Address

9.30 - 10.30 **Anthony N. LASENBY** (Chalonge Medal, Cavendish Laboratory, Cambridge, UK)
CMB Observations and its implications: A Status Report

10.30 - 11.30 **Eiichiro KOMATSU** (Max-Planck-Inst. für Astrophysik, Garching, Germany) *Polarisation of the Cosmic Microwave Background: Toward an Observational Proof of Cosmic Inflation.*

11.30 - 12.00 **COFFEE-TEA-MATE BREAK at SALLE DU CONSEIL**, *in Perrault building, downstairs of Salle Cassini.*

12.00 - 13.00 **Alan J. KOGUT** (NASA Godard Space Flight Center, Greenbelt, MD, USA) *Beyond the Power Spectrum: Cosmology with Spectral Distortions and the PIXIE mission*

13.00 - 14.30 **LUNCH** *at the Observatoire Restaurant (Building B, ground floor)*

WEDNESDAY 23 JULY AFTERNOON

« SALLE CASSINI »

14.30 - 15.30 **Héctor J. DE VEGA** (CNRS LPTHE Univ de Paris VI, France) *Fermionic Warm Dark Matter and the Thomas-Fermi galaxy structure theory.*

15.30 - 16.30 **Peter BIERMANN** (Chalonge Medal, MPI-Bonn, Germany & Univ of Alabama, Tuscaloosa, USA) *Cosmological and astrophysical signatures of Warm Dark Matter.*

16.30 - 17.00 **COFFEE-TEA-MATE BREAK at SALLE DU CONSEIL**, in Perrault building, downstairs of Salle Cassini.

17.00 - 18.00 **Paolo SALUCCI** (SISSA-Astrophysics, Trieste, Italy) *Warm Dark Matter: Galaxy structure observations and Cored Density Profiles*

18.00 - 19.00 **Casey WATSON** (Millikin Univ, Dept Physics & Astron., Decatur, Illinois, USA) *X-ray and Phase Space Density Constraints on the Properties of the Dark Matter Particle*

THURSDAY 24 JULY MORNING

« SALLE CASSINI »

9.30 - 10.30 **Gianluigi FOGLI** (INFN Sezione di Bari, Italy)
Neutrino masses, phases and mixings: Theory vs. Experiments. A Status Report

10.30 - 11.30 **Christopher J. CONSELICE** (University of Nottingham, School of Physics and Astronomy, UK)
Observational overview on galaxy formation and evolution

11.30 - 12.00 **COFFEE-TEA-MATE BREAK at SALLE DU CONSEIL** in Perrault building, downstairs of Salle Cassini.

12.00 - 13.00 **Carlo BURIGANA** (INAF-IASF, Bologna, Italy)
Synergies between CMB and SKA radio observations

13.00 - 14.30 **LUNCH at the Observatoire Restaurant**
(Building B, ground floor)

THURSDAY 24 JULY AFTERNOON

« SALLE CASSINI »

14.30 - 15.30 Gerard F. GILMORE (Chalonge Medal,
Institute of Astronomy, Cambridge University, UK)
Cosmology with Gaia

15.30 - 16.30 Asantha COORAY (University of California,
Irvine, USA)
The dusty universe unveiled by Herschel

16.30 - 17.00 **COFFEE-TEA-MATE BREAK at SALLE
DU CONSEIL**, in Perrault building, downstairs of Salle
Cassini.

17.00 - 18.00 Félix MIRABEL (CEA-Saclay, France &
IAFE-Buenos Aires, Argentina)
High energy sources in the epoch of reionization of the Universe

18.00 - 19.00 **PHOTO OF THE GROUP** on the
*meridian of Paris in the middle of the monumental south entry of
the Perrault building & CHAMPAGNE - Delikatessen*
for all participants and accompanying persons

FRIDAY 25 JULY MORNING

« SALLE CASSINI »

9.30 - 10.30 Daniel BOYANOVSKY (Univ. of Pittsburgh, Dept of Physics and Astronomy, USA)

Tensor to scalar ratio and large scale power suppression from fast-roll initial conditions

10.30 - 11.30 Christian WEINHEIMER (Institut für Kernphysik Universität Münster, Münster, Germany)

Absolute scale of the active neutrino mass and the search of sterile neutrinos at the KATRIN experiment

11.30 - 12.00 COFFEE-TEA-MATE BREAK at SALLE DU CONSEIL in Perrault building, downstairs of Salle Cassini.

12.00 - 13.00 Norma G. SANCHEZ (CNRS LERMA Observatoire de Paris, France)

LWDM Cosmology. Galaxies and Supermassive Black holes in agreement with observations. New Results.

13.00 - 14.30 LUNCH BREAK : at the Observatoire Restaurant (Building B, ground floor)

FRIDAY 25 JULY AFTERNOON

« SALLE CASSINI »

OPEN SESSION

14.30 - 15.30 Panel Discussion: *BICEP2: From the South Pole to the origin of the Universe*

15.30 - 16.30 George F. SMOOT III Chalonge Medal, Nobel prize of Physics (BCCP LBL Berkeley & Univ Paris Diderot):
Last News from the Universe

16.30 - 17.00 **COFFEE-TEA-MATE BREAK at SALLE DU CONSEIL**, in Perrault building, downstairs of Salle Cassini.

17.00 - 18.00 Rogier A. WINDHORST (JWST Interdisciplinary Scientist, School of Earth & Space Exploration, Arizona State Univ, Tempe, AZ, USA)
The James Webb Space Telescope and the First Light

18.00 - 18.30 *The Daniel Chalonge Medal: A Surprise Award*

18.30 - 19.30 *Tour of the historic Perrault building starting from Salle Cassini guided by Prof. Suzanne DEBARBAT (SYRTE-Observatoire de Paris)*

**19.30 - 21.30 APERITIF/COCKTAIL at SALLE DU
CONSEIL** *in Perrault building, downstairs of Salle
Cassini, for all participants and accompanying persons*

END OF THE COLLOQUIUM

**All Lecturers and Participants are expected to stay
until the end of the Colloquium**
