

Ecole Internationale Daniel Chalonge



Chalonge Meudon Workshop 2013

**WARM DARK MATTER GALAXIES IN AGREEMENT
WITH OBSERVATIONS: FORMATION, EVOLUTION AND
SUPERMASSIVE BLACK HOLES**

**Observatoire de Paris, CIAS Château de Meudon,
Meudon campus 5, 6 and 7 June 2013**



**All Sessions of the Workshop take place in the historic
Castle building (CIAS, Château de Meudon)**

**Observatoire de Meudon ENTRY for pedestrians : 5 Place Jules Janssen,
95195 Meudon**

Entry for cars (and also for pedestrians): 11 Av Marcelin Berthelot

Sessions start at the indicated times sharp

1 HOUR = 45 minutes lecture + 15 minutes discussions

WEDNESDAY 5 JUNE MORNING

8.00 - 9.30: **URANIA HALL** (*in the Château building*)
REGISTRATION, *badges, lunch tickets for the Observatoire Restaurant, copies of the full Time Table with Lectures and Lecturers.*

« SALLE DE CONFERENCES DU CHATEAU »

9.45 - 10:00 **Welcome Address**

10.00 - 11.00 **Peter BIERMANN** (MPI-Bonn, Germany & Univ of Alabama, Tuscaloosa, USA)
Warm Dark Matter and its astrophysical signatures.

11.00 - 11.30 **COFFEE-TEA-MATE BREAK**
at URANIA HALL, in Château building

11.30 - 12.30 **Hector J. DE VEGA** (CNRS LPTHE Univ de Paris VI, France) *Fermionic Warm Dark Matter reproduces galaxy observations because of quantum mechanics*

12.30 - 14.00 **LUNCH** *at the Observatoire Restaurant (Meudon campus around the lac near the Château building)*

WEDNESDAY 5 JUNE AFTERNOON

« SALLE DE CONFERENCES DU CHATEAU »

14.00 - 15.00 Sinziana PADUROIU (Observatoire de Geneve, Switzerland)

Small scale structure from WDM N-body Simulations

15.00 - 16.00 Ayuki KAMADA (IPMU Inst. Physics & Mathematics of the Universe, Univ of Tokyo, Japan)

Dark Matter Halos in Warm Dark Matter Models.

16.00 - 16.30 COFFEE-TEA-MATE BREAK at URANIA HALL, in *Château building and CIAS aside Urania Hall*

16.30 - 17.30 Aurel SCHNEIDER (Dept of Physics & Astronomy, Univ of Sussex, Falmer, Brighton, UK)

Constructing Warm Dark Matter mass functions

17.30 - 18.30 Andrea LAPI (Università Roma2, Rome, Italy)

The Statistics of Warm Dark Matter Halos from the Excursion set approach.

THURSDAY 6 JUNE MORNING

« SALLE DE CONFERENCES DU CHATEAU »

10.00 – 11.00 Ignacio TRUJILLO (Instituto de Astrofísica de Canarias La Laguna, Tenerife , Spain)

Structural evolution of Galaxies since $z \sim 2$, size and mass evolution from Astronomical Observations.

11.00 – 11.30 COFFEE-TEA-MATE BREAK at URANIA HALL *in Château building and CIAS aside Urania Hall*

11.30 - 12.30 Paolo SALUCCI (SISSA-Astrophysics, Trieste, Italy) *Testing Warm Dark Matter with Galaxy observations at high redshifts*

12.30 – 14.00 LUNCH *at the Observatoire Restaurant (Meudon campus around the lac, near the Château building)*

THURSDAY 6 JUNE AFTERNOON

« SALLE DE CONFERENCES DU CHATEAU »

14.00 – 15.00 Jacques DELABROUILLE (APC, Paris, France) *Planck Cosmological Results and their implications*

15.00 – 16.00 Elena FERRI & MARE Experiment (Milano Bicocca, Italy)
Status of MARE for the keV sterile neutrino detection.

16.00 - 16.30 COFFEE-TEA-MATE BREAK at URANIA HALL in Château building and CIAS aside Urania Hall

16.30 - 17.30 Thierry LASSERRE (CEA, IRFU-Saclay, France)
Status report on active and sterile neutrino experiments.

17.30 - 18.30 Alexander MERLE (Physics and Astronomy, University of Southampton Highfield Southampton UK)
Particle physics models for keV Sterile Neutrino Dark Matter

FRIDAY 7 JUNE MORNING

« SALLE DE CONFERENCES DU CHATEAU »

10.00 – 11.00 Brigitte ROCCA-VOLMERANGE (Univ Paris-Sud & IAP, Paris, France)

Observations of the most distant radio galaxies and their implications

11.00 - 11.30 COFFEE-TEA-MATE BREAK at URANIA HALL *in Château building*

PHOTO OF THE GROUP
(in the Main Château facade)

11.30 - 12.30 Alessandro MELCHIORRI (Univ. Roma 1 La Sapienza, Italy)

Planck Results for neutrinos and their implications

12.30 - 14.00 LUNCH BREAK *at the Observatoire Restaurant (Meudon campus around the lac, near the Château building)*

FRIDAY 7 JUNE AFTERNOON

« SALLE DE CONFERENCES DU CHATEAU »

14.00 - 15.00 **Susanne MERTENS** (Inst. for Nuclear & Particle Astrophysics, LBNL Berkeley, CA, USA)
Warm Dark Matter searches with Tritium Beta Decay experiments.

15.00 - 16.00 **Nicholas STEINBRINK** (Institut für Kernphysik Westfälische Wilhems-Universität Münster, Germany) *Neutrino Mass Measurements and Sterile Neutrino Detection at KATRIN*

16.00 -16.30 **COFFEE-TEA-MATE BREAK** at **URANIA HALL** *in Château building and CIAS aside Urania Hall*

16.30 - 17.30 **Norma G. SANCHEZ** (CNRS LERMA Observatoire de Paris, Paris, France) *Quantum Fermionic Warm Dark Matter and Gravitation: Galaxies in Agreement with Observations and Supermassive Black Holes. New Results*

17.30 - 20.00 **APERITIF/COCKTAIL** at **URANIA HALL**
in Château building for all participants and accompanying persons.

All Lecturers and participants are expected to remain until the end of the Workshop

END OF THE WORKSHOP