École Internationale Daniel Chalonge

12th Paris Cosmology Colloquium 2008

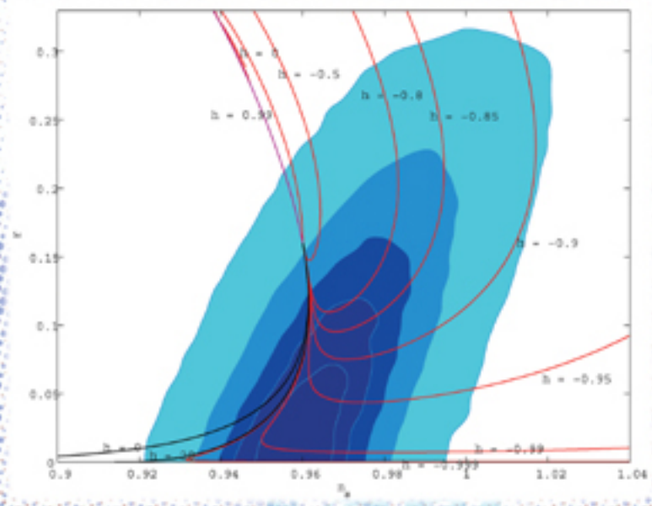
Ecole Internationale Daniel Chalonge

CMB, DM, DE, DARK AGES, LSS IN THE STANDARD MODEL OF THE UNIVERSE

George Smoot, Nobel Prize of Physics and Daniel Chalonge Medal

OBSERVATOIRE DE PARIS, PARIS CAMPUS

Thursday 17, Friday 18, Saturday 19 July 2008



PROGRAMME and LECTURERS INCLUDE

- **Amy BARGER** (MPI-Bonn) (Univ of Wisconsin, Madison, USA) *The Star Formation and Accretion Histories of the Universe*
- **Daniel BOYANOVSKY** (Univ. of Pittsburgh, USA) *Constraints on Dark Matter Particles from Theory, Galaxy Observations and N-body Simulations*
- **Asantha COORAY** (University of California, Irvine, USA) *Cosmology with the 21 cm Background"*
- **Ruth DALY** (Penn State University, Reading, USA) *The Accelerating Universe and the Properties of Dark Energy*
- **Claudio DESTRI** (INFN Univ. Milano-Bicocca Dpt. di Fisica, Italy) *New Monte Carlo Markov Chain Analysis of WMAP 3-year data with the Effective Field Theory of Inflation*
- **Hector J. DE VEGA** (CNRS LPTHE Univ de Paris VI, France) *The Effective Theory of Inflation, Dark Matter and Dark Energy in the Standard Model of the Universe*
- **Carlos S. FRENK** (Institute for Computational Cosmology, Durham, UK) *The Structure of Cold Dark Matter Halos*
- **Massimo GIOVANNINI** (INFN Univ. Milano-Bicocca Dpt. di Fisica, Italy) *CMB Signatures of Cosmological Magnetic Fields*
- **Martin KESSLER** (ESA/RSSD ESTEC, Noordwijk, The Netherlands) *ESA's Cosmic Vision Plan*
- **Lawrence M. KRAUSS** (CWRU, Cleveland Ohio, USA) *What is Dark Energy?: The Cosmological Constant, Life and the Future of the Universe*
- **Anthony N. LASENBY** (Cavendish Laboratory, Cambridge, UK) *CMB Observations. Anisotropies and Polarization in the Standard Model of the Universe*
- **Reno MANDOLESI** (IASF Bologna, Italy): *Measurements of the CMB by the PLANCK satellite and their Implications*
- **Sabino MATARRESE** (INFN Univ Padova, Italy): *Primordial Non-Gaussianity and the CMB*
- **Michael NOLTA** (CITA Toronto Univ/WMAP, Canada) *Results from the WMAP experiment*
- **Bernard SADOULET** (LBL, Univ. of California, Berkeley, USA) *Dark Matter, the Future Underground Science and DUSEL*
- **Ariel G. SANCHEZ** (Univ & Observatorio de Cordoba, Argentina) *What is the Best Way to Measure Baryonic Acoustic Oscillations?*
- **Norma G. SANCHEZ** (CNRS LERMA Observatoire de Paris, France) *Understanding of Inflation, Dark Matter and Dark Energy in the Standard Model of the Universe*
- **Paul R. SHAPIRO**, Univ of Texas, Dept of Astronomy, Austin, USA *Cosmic Reionization and the End of the Dark Ages*
- **George F. SMOOT** (LBL, Univ. of California, Berkeley, USA) *CMB Observations and the Standard Model of the Universe*
- **Rashid SUNYAEV** Max-Plank Institute für Astrophysics, Garching, Germany *The Richness of the Physics of Cosmological Recombination and Its Observational Consequences.*

... And Other Lecturers

PURPOSE AND TOPICS

The Conference is within the astrofundamental physics spirit of the Chalonge School, this time focalized on recent observational and theoretical progress on the CMB, dark matter, dark energy, dark ages, and the theory of the early universe with predictive power.

In summary, the aim of the meeting is to put together real cosmological data and hard theory predictive approach connected to them in the framework of the Standard Model of the Universe.

Topics: Observational and theoretical progress in deciphering the nature of dark matter, dark energy, dark ages and the 21 cm line. Large and small scale structure formation. Inflation after WMAP (in connection with the CMB and LSS data),slow roll and fast roll inflation, quadrupole suppression and initial conditions; quantum effects. CMB polarization, primordial magnetic fields effects. Neutrinos in cosmology. All Lectures are followed by a discussion.

The Meeting is open to all scientists interested in the subject. Information and on line registration at **http://chalonge.obspm.fr**

An exhibition will retrace the 16 years of activity of the Chalonge School and George Smoot participation to the School along these 16 years.

A tour of Perrault building guided by **Suzanne DEBARBAT** (SYRTE-Observatoire de Paris) will take place around an exhibition of the historical patrimony of Observatoire de Paris.

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