

« **High Energy, Cosmology and Strings** »  
**December 11<sup>th</sup> – 15<sup>th</sup>, 2006**  
**Institut Henri Poincaré – Amphitheater Darboux**

**Coordinator : Cédric Deffayet** (APC, Paris 7, France)

*Monday December 11<sup>th</sup>*

10:45am – 11:00am **Welcome**

11:00am – 11:40am **G. Gibbons** (DAMTP, Cambridge, UK) : The Multiverse as a Reduced Phase Space : The Meta-Universe as a Kolmogorovian Probability Space.

11:40am – 12:20pm **F. Bernardeau** (SPhT, Saclay, France) : Extended hybrid inflationary models.

*Lunch*

2:30pm – 3:10pm **C. Pope** (Texas A&M University, USA): Higher-order corrections in string and M-theory, and generalized holonomy.

3:10pm – 3:50pm **O. Pujolas** (NYU, New York, USA) : Domain Walls as Probes of Gravity Modified at Large Distances.

3:50pm – 4:30pm *Coffee break*

4:30pm – 5:10pm **J. Gray** (APC/IAP, Paris, France) : Anti-branes in heterotic M-theory.

*Tuesday December 12<sup>th</sup>*

11:00am – 11:40am **D. Gorbunov** (Moscow, Russia) : Self accelerating cosmology from Lorentz symmetry violation on the brane.

11:40am – 12:20pm **J. Martin** (IAP, Paris, France) : Particle Physics Models of Quintessence.

*Lunch*

2:30pm – 3:10pm **M. Petropoulos** (École Polytechnique, Palaiseau, France) : Axion-dilaton cosmology, Ricci flows and integrable structures.

3:10pm – 3:50pm **P. Spindel** (UMH, Mons, Belgium) : Geometric configuration and E-10 subalgebras of cosmological inspiration.

- 3:50pm – 4:30pm *Coffee break*
- 4:30pm – 5:10pm **S. Mukohyama** (University of Tokyo, Japan) : Higgs phase of gravity.
- 5:10pm – 5:50pm **P. Vanhove** (SPhT, Saclay, France) : Ultraviolet properties of maximal supergravity theories.
- 6:00pm** **Cocktail at the IHP cafeteria**

**Wednesday December 13<sup>th</sup>**

- 11:00am – 11:40am **S. Das** (University of Kentucky, USA) : Null cosmological singularities and their Gauge Theory Duals.
- 11:40am – 12:20pm **A. Starobinsky** (Landau Institute, Moscow, Russia) : Dark energy in scalar-tensor and f(R) gravity.

*Lunch*

- 2:30pm – 3:10pm **M. Becker** (Texas A&M University and Harvard, USA) : Inflation, moduli stabilization and string theory.
- 3:10pm – 3:50pm **A. Vikman** (Munich) : « Superluminal » scalar fields and cosmology.
- 3:50pm – 4:30pm *Coffee break*
- 4:30pm – 5:10pm **B. Craps** (Brussels) : A Matrix Big Bang.
- 5:10pm – 5:50pm **T. Hertog** (APC, Paris, France) : Holographic cosmology.

**Thursday December 14<sup>th</sup>**

- 11:00am – 11:40am **R. Brandenberger** (McGill University, Montréal, Canada) : String Gas Cosmology and Structure Formation.
- 11:40am – 12:20pm **G. Veneziano** (Collège de France, Paris, France) : Transplanckian string collisions and the information paradox.

*Lunch*

- 2:30pm – 3:10pm **B. Julia** (ENS, Paris, France) : From self-dual gravity to dual gravity with dark energy.

- 3:10pm – 3:50pm **P. Peter** (IAP, Paris, France) : A non-inflationary model with scale invariant cosmological perturbations.
- 3:50pm – 4:30pm *Coffee break*
- 4:30pm – 5:10pm **N. Turok** (DAMTP, Cambridge, UK) : The Big Bang as a brane collision in M-theory.
- 5:10pm – 5:50pm **D. Israel** (IAP, Paris, France) : Brane Annihilation in Curved Space-Time.

**Friday December 15<sup>th</sup>**

- 11:00am – 11:40am **E. Kiritsis** (École Polytechnique, Palaiseau, France) : Graviton cloning, massive gravitons and gauge theory/gravity correspondance.
- 11:40am – 12:20pm **A. Papazoglou** (APC/IAP, Paris, France) : Towards the understanding of gravity on conical branes.

**Lunch**

- 2:30pm – 3:10 pm **C. Bachas** (ENS, Paris, France) : Some Metastable Vacua of M-theory.
- 3:10pm – 3:50pm **K. Maeda** (Waseda University, Japan) : Collision of domain walls and brane world.

**4:30pm** **Special talk of G. Smoot at the Collège de France**  
**11, Place Marcelin Berthelot**  
**75005 Paris**