

Program

All lectures take place in room 201, on the 2nd floor of the Huygens building.

CMB = Cosmic microwave background radiation

GRP = Gravitational and relativistic physics

IMGR = Inhomogeneous Models in General Relativity

LSS = Large scale structure observation

LSF = Large scale flows

SF = Structure formation

Monday September 27

- 09.00 – 10.00 *Registration*
- 10.00 – 10.15 *Welcome by the Lorentz Center and the Scientific Organizers*
- 10.15 – 11.00 *Pierre **Astier** Distances to supernovae: current status and Prospects*
- 11.00 – 11.30 *Coffee Break*
- 11.30 – 12.15 *Hiranya **Peiris** Fingerprints of the early universe*
- 12.15 – 14.15 *Lunch*
- 14.15 – 15.00 *Richard **Lieu** The SZ anomaly, and the large foreground unrelated non-blackbody anisotropy on the 1 degree scale in the WMAP data*
- 15.00 – 15.30 *Vladimir **Sokolov** The star forming rate, core-collapse supernovae rate, and gamma-ray burst rate at large redshifts*
- 15.30 – 16.00 *Coffee Break*
- 16.00 – 17.00 *Poster/Discussion session*
- 17.00 – 19.00 *Wine & cheese party*

Tuesday September 28

- 09.00 – 09.45 *Joao **Magueijo** Varying speed of light and cosmic structure*
- 09.45 – 10.30 *Rick **Watkins** Cosmic Flows on Scales of 100 Mpc/h: A Challenge for the Standard LCDM Cosmology*
- 10.30 – 11.00 *Coffee Break*
- 11.00 – 11.30 *Robert S.**MacKay** Redshift in inhomogeneous space-times*
- 11.30 – 12.00 *Tomislav **Prokopec** Cosmological perturbations and primordial non-Gaussianity*
- 12.00 – 14.00 *Lunch*
- 14.00 – 14.45 *Luciano **Pietronero** The Complex Universe: recent experiments and theoretical challenges*
- 14.15 – 15.30 *Andrea **Gabrielli** Superhomogeneous mass fields and the large scale matter distribution in the Universe*
- 15.30 – 16.00 *Coffee Break*
- 16.00 – 16.30 *Oleg **Verkhodanov** Correlation properties of the CMB low multipoles in WMAP data or hidden coordinate systems*
- 16.30 – 17.00 *Uros **Peric** The impact of the lensing effect in WMAP data*

- 16.00 – 16.30 Oleg **Verkhodanov** *Correlation properties of the CMB low multipoles in WMAP data or hidden coordinate systems*
- 16.30 – 17.00 Hao **Liu** *Possible systematical effects in WMAP data*

Wednesday September 29

- 09.00 – 09.45 Martin **Kunz** CMB
- 09.45 – 10.30 David **Hogg** *Imaging the dark matter*
- 10.30 – 11.00 Coffee Break
- 11.00 – 11.45 Pavel **Naselsky** *Parity asymmetry of the CMB*
- 11.45 – 12.15 Marc **Lachièze-Rey**
- 12.15 – 14.00 Lunch
- 14.00 – 15.30 *Round Table I Large scale structures*
(moderator: Ruth **Durrer**)
- 15.30 – 15.45 Coffee Break
- 15.45 – 16.30 Leandros **Perivolaropoulos** *ΛCDM: Triumphs, Puzzles and Remedies*
- 16.40 Departure by bus to boat
- 17.00 – 21.00 Boat trip and dinner
- 21.00 Departure by bus to Leiden Central Station, Lorentz Center and Hotel Van der Valk.

Thursday September 30

- 09.00 – 09.45 Keith S. **Cover** *Are WMAP's quadrupole and octupole reconstruction artifacts from the calibration of WMAP's time ordered data?*
- 09.45 – 10.30 Antony **Lewis** *Weak lensing of the CMB*
- 10.30 – 11.00 Coffee Break
- 11.00 – 11.30 Alexander **Unzicker** *Anomalous increase of galaxy sizes at small redshifts*
- 11.30 – 12.00 Alexander **Wiegand** *Multiscale approach to inhomogeneous cosmologies*
- 12.00 – 14.00 Lunch
- 14.00 – 15.30 *Round Table II Cosmic microwave background radiation*
(moderator: Michael **Joyce**)
- 15.30 – 16.00 Coffee Break
- 16.00 – 16.45 Michael **Joyce** *Can gravity produce scale invariant clustering?*
- 16.45 – 17.30 Pavel **Kroupa** *Local Group galaxies as critical tests of the contemporary cosmological model and its failure*

Friday October 1

- 09.00 – 09.45 Carl **Gibson** *Formation of Planets by Hydrogravitational Dynamics*
- 09.45 – 10.30 David **Wiltsire** *Dark energy from cosmic structure*
- 10.30 – 11.00 Coffee Break
- 11.00 – 11.45 Tom **Shanks** *Large scale structure - a Lambda-CDM success story?*
- 11.45 – 12.30 Chris **Clarkson** *Dark energy and inhomogeneity*
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