

PLANCK 2014: THE MICROWAVE SKY IN TEMPERATURE AND POLARIZATION

PROGRAM

MONDAY DECEMBER 1ST, 2014

09:00 Registration

09:30 Welcome and greetings from the authorities

SESSION: PLANCK MISSION, SCIENCE AND PRODUCTS

CHAIR: J. Tauber

09:50 The Planck mission – *M. Bersanelli*

10:10 LFI frequency maps – *D. Maino*

10:25 HFI frequency maps – *O. Perdereau*

10:40 *Coffee Break*

CHAIR: J.L. Puget

11:10 The Planck temperature and polarization CMB maps – *G. Rocha*

11:30 Understanding the uncertainties in the Planck data – *A. Mennella*

11:50 The Planck low-ell CMB power spectra and likelihood – *P. Natoli*

12:10 *Lunch*

SESSION: PLANCK COSMOLOGY

CHAIR: C. Lawrence

14:00 The Planck high-ell CMB power spectra and likelihood – *F. Elsner*

14:20 Planck cosmological parameters – *S. Gratton*

14:40 Consistency of Planck data – *K. Gorski*

15:00 Constraints on primordial non Gaussianity from Planck – *B. Wandelt*

15:20 Large scale anomalies with Planck – *G. Polenta*

15:40 Planck constraints on CMB isotropy and statistics – *E. Martinez-Gonzalez*

16:00 *Coffee Break*

CHAIR: D. Scott

16:30 Keynote talk: Overview of Planck cosmology - *G. Efstathiou*

17:00 Dark matter annihilation – *S. Galli*

17:20 The lensing potential from Planck – *A. Lewis*

17:40 Lensing B-modes with Planck – *L. Perotto*

18:00 End of Session

TUESDAY DECEMBER 2nd, 2014

SESSION: ASTROPHYSICS AND FOREGROUNDS

CHAIR: R. Davies

09:00 Planck component separation and foregrounds – *I. K. Wehus*

09:20 Planck view of low frequency foregrounds – *M. Vidal*

09:40 Keynote talk: Dust polarization properties - P. Martin

10:05 Magnetic field structure from dust polarization – *F. Boulanger*

10:30 *Coffee Break*

CHAIR: G. De Zotti

11:00 Towards a unified model of polarized emission and extinction from interstellar dust – *B. Hensley*

11:20 Dust emission with Planck – *T. Ghosh*

11:40 Microwave emission from spinning dust and its polarization spectrum – *T. Hoang*

12:00 Magnetic field geometry of interstellar filaments in Planck dust polarization maps – *D. Arzoumanian*

12:20 *Lunch*

SESSION: ASTROPHYSICS AND FOREGROUNDS

CHAIR: G. Helou

14:00 Planck dust at high latitudes – *J. Aumont*

14:20 The Planck temperature and polarization compact source catalogue – *M. Lopez-Caniego*

14:40 High-redshift sources with Planck – *L. Montier*

15:00 Cosmology with the Planck SZ catalogue – *A. Bonaldi*

15:20 Planck SZ catalogue – *D. Sutton*

15:40 Keynote talk: Review of extragalactic emission with Herschel and Planck - D. Elbaz

16:10 *Coffee Break*

CHAIR: R. Davis

16:40 Planck SZ diffuse emission – *B. Comis*

17:00 Keynote talk: Radio astronomy and CMB observations - B. Partridge

17:30 Keynote talk: BOSS - S. Ho

18:00 Poster session

18:30 End of Session

WEDNESDAY DECEMBER 3rd, 2014

SESSION: CMB EXPERIMENTS

CHAIR: J.M. Lamarre

09:00 QUIJOTE – *J. A. Rubino-Martin*

09:20 ACT/ACTPOL – *M. Devlin*

09:40 SPT/SPT-POL – *R. Keisler*

10:00 CORE+ - *P. de Bernardis*

10:20 *Coffee Break*

CHAIR: R. Watson

10:50 BICEP 2, BICEP 3 and Keck - *J. Bock*

11:10 Polarbear – *K. Arnold*

11:30 Litebird – *T. Matsumura*

11:50 Keynote talk: Review of future CMB experiments and proposal – *L. Page*

12:20 *Lunch*

SESSION: INFLATION AND EARLY UNIVERSE

CHAIR: S. Matarrese

14:00 Keynote talk: Review of inflation - *M. Zaldarriaga*

14:30 Planck constraints on inflation – *F. Finelli*

14:50 Planck power spectrum and bispectrum constraints: implications on inflations – *N. Bartolo*

15:10 Planck constraints on isocurvature – *J. Väliviita*

15:30 Stacking of Planck temperature and polarization maps – *Z. Huang*

15:50 The Planck 2014 early universe phonon spectrum – *R. J. Bond*

16:10 *Coffee Break*

CHAIR: M. Giard

16:40 Constraints on primordial magnetic fields – *D. Paoletti*

17:00 Keynote talk: Alternatives to inflation - *J.L. Lehnert*

17:30 Poster session

18:00 End of Session

THURSDAY DECEMBER 4th, 2014

SESSION: OTHER PROBES OF COSMOLOGY

CHAIR: F.R. Bouchet

- 09:00 Nucleosynthesis and Planck constraints – *L. Pagano*
- 09:20 Planck constraints on parity and birefringence – *A. Gruppuso*
- 09:40 Cosmic star formation history and Sunyaev-Zeldovich effect from a global analysis of CIB anisotropies – *P. Serra*
- 10:00 Planck constraints on neutrinos – *M. Lattanzi*
- 10:20 *Coffee Break*

CHAIR: H.K. Eriksen

- 10:50 Dark energy and modified gravity – *V. Pettorino*
- 11:10 Cross correlations with CMB secondaries: constraining cosmological parameters and cluster astrophysics – *N. Battaglia*
- 11:30 C-BASS early results – *S. Muchovej*
- 11:50 Keynote talk: Neutrino physics from cosmology - *J. Lesgourgues***
- 12:20 *Lunch*

14:00 Panel discussion: Lessons learned from Planck and others experiments

Introduction by *R. Mandolesi*

P. de Bernardis, T. Matsumura, B. Partridge, J.L. Puget, J. Tauber (Chair)

SESSION: DATA ANALYSIS, WHAT'S NEXT, COSMOLOGY AND PARTICLE PHYSICS

CHAIR: A. Zacchei

- 15:00 The Planck simulations challenge – *J. Borrill*
- 15:20 Why recombination is so important for the interpretation of Planck data – *J. Chluba*
- 15:40 Keynote talk: The epoch of reionization - *A. Lapi***
- 16:10 *Coffee Break*

CHAIR: P. Naselsky

- 16:40 Keynote talk: LHC importance for cosmology - *S. Bertolucci***
- 17:10 Large-field inflation and string theory – *E. Silverstein*
- 17:30 String theory lessons for the first CMB multipoles? – *A. Sagnotti*
- 17:50 Higgs boson and cosmology – *J. G. Bellido*
- 18:10 End of Session**

20:30 Social Dinner
Sala San Francesco

FRIDAY DECEMBER 5th, 2014

SESSION: DATA ANALYSIS, WHAT'S NEXT, COSMOLOGY AND PARTICLE PHYSICS

CHAIR: C. Burigana

09:00 Dark matter from cosmological probes - *S. White*

09:20 Dark matter from particle physics – *P. Ullio*

09:40 Comparing cosmological constraints from X-ray galaxy clusters with Planck results – *H. Boehringer*

10:00 Beam deconvolution with ArtDeco – *E. Keihänen*

10:20 *Coffee Break*

CHAIR: H.U. Norgaard-Nielsen

10:50 The decomposed Fermi gamma-ray sky and its relation to the Planck microwave sky – *T. Ensslin*

11:10 Synchrotron radiation, magnetic fields and cosmic rays – *G. Di Bernardo*

11:30 Optical observations of Planck galaxy clusters with RTT150 telescope – *R. Burenin*

11:50 Cosmic polarization rotation and pseudoscalar-photon interaction – *WT. Ni*

12:10 Euclid – *L. Valenziano*

12:30 Concluding remarks - *R. Sunyaev*

13:00 *Lunch*