

# Cosmic Microwave Background Radiation and its Polarization

March 19-22, 2003

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**Wednesday, March 19, 2003**

Room 3-210 Electrical Engineering/Computer Science Building

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8:00 - 8:30 a.m. Registration

*Session Chair: Keith Olive, University of Minnesota*

8:30 - 9:10 a.m. George Efstathiou, Cambridge University  
CMB - Review

9:10 - 9:50 a.m. Marc Kamionkowski, California Institute of Technology  
CMB Polarization Fundamentals

9:50 - 10:20 a.m. Coffee Break

10:20 - 11:00 a.m. Ned Wright, University of California, Los Angeles  
The WMAP Data and Results

11:00 - 11:30 a.m. Naoshi Sugiyama, National Astronomical Observatory Japan  
Shine the Dark Ages: Probing Reionization with CMB Temperature and Polarization

11:30 - 11:50 a.m. Lloyd Knox, University of California, Davis  
WMAP and Reionization

11:50 - 12:30 p.m. Martin White, University of California, Berkeley  
Secondary Anisotropy

12:20 - 2:00 p.m. Lunch Break

*Session Chair: Shaul Hanany, University of Minnesota*

2:00 - 2:30 p.m. Uros Seljak, Princeton University  
CMB and Ly-alpha

2:30 - 3:00 p.m. Scott Dodelson, Fermilab  
Running, CMB, and the Lyman Alpha Forest

3:00 - 3:20 p.m. Anthony Readhead, California Institute of Technology  
CBI

3:20 - 3:40 p.m. Marcus Runyan, University of California, Berkeley  
AKBAR

- 3:40 - 4:10 p.m. Coffee Break (Switch to Room 3-230 at the start of Coffee Break)
- 4:10 - 4:40 p.m. John Carlstrom, University of Chicago  
SPT and SZA
- 4:40 - 5:00 p.m. Angela Taylor, Cavendish Astrophysics Group, University of Cambridge  
High-l Observations of the CMB using VSA and AMI
- 5:00 - 5:20 p.m. Dan Schwan, University of California, Berkeley  
APEX
- 5:20 - 5:40 p.m. Arthur Kosowsky, Rutgers University  
ACT
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**Thursday, March 20, 2003**

Room 3-210 Electrical Engineering/Computer Science Building

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***Session Chair: Scott Dodelson, Fermilab***

- 9:00 - 9:20 a.m. Al Kogut, NASA (Goddard)  
Arcade
- 9:20 - 9:40 a.m. Enrique Martinez-Gonzalez, Instituto de Fisica de Cantabria  
Tests of Gaussianity of CMB Data
- 9:40 - 10:00 a.m. Manhoj Kaplinghat, University of California, Davis  
Applications of High-Resolution, High Sensitivity Observations of the CMB
- 10:00 - 10:20 a.m. Christopher Hirata, Princeton University  
Statistics of Weak Lensing of CMB
- 10:20 - 10:40 a.m. Coffee Break
- 10:40 - 11:00 a.m. Matthew Abroe, University of Minnesota  
Correlations Between the WMAP and MAXIMA CMB Maps
- 11:00 - 11:20 a.m. Charles Lineweaver, University of New South Wales  
Testing Combined CMB Data for Systematic Errors
- 11:20 - 12:00 p.m. Alex Lazarian, University of Wisconsin, Madison  
Microwave Polarization from Aligned Dust
- 12:00 - 1:30 p.m. Lunch

***Session Chair: Lloyd Knox, University of California, Davis***

- 1:30 - 2:10 p.m. John Carlstrom, University of Chicago

Status of Polarization Measurements from DASI and Other Experiments

- 2:10 - 2:40 p.m. William Kinney, Columbia University  
The Energy Scale of Inflation: Is the Hunt for the B Signal a Waste of Time?
- 2:40 - 3:10 p.m. Al Kogut, NASA/GSFC  
WMAP Polarization Results
- 3:10 - 3:30 p.m. Coffee Break
- 3:30 - 4:00 p.m. Wayne Hu, University of Chicago  
Secondary Polarization: Reionization and Gravitational Lensing
- 4:00 - 4:20 p.m. Asantha Cooray, California Institute of Technology  
B Modes from Inflationary Gravity Waves: Myth or Reality
- 4:20 - 4:40 p.m. Tedd Bunn, University of Virginia, Richmond  
Separating E from B
- 4:40 - 4:50 p.m. Break

*Session Chair: Liliya Williams, University of Minnesota*

- 4:50 - 5:10 p.m. Anthony Challinor, Cavendish Laboratory  
Fast Quadratic Power Spectrum Estimators and the E-B Decomposition
- 5:10 - 5:30 p.m. Andrew Jaffe, Imperial College  
Predicting Polarization from Temperature
- 5:30 - 5:50 p.m. Jacques Delabrouille, College de France  
Processing PLANCK Polarization Data

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**Friday, March 21, 2003**

Room 3-210 Electrical Engineering/Computer Science Building

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*Session Chair: Andrew Jaffe, Imperial College*

- 9:00 - 9:30 a.m. Angelica de Oliveira-Costa, University of Pennsylvania  
Foregrounds and Surprises in the WMAP Maps
- 9:30 - 10:00 a.m. Terry Jones, University of Minnesota  
Polarization Information at Visible, IR and FIR and Applications to CMB
- 10:00 - 10:30 a.m. Carlo Baccigalupi, SISSA  
CMB and Polarized Foregrounds
- 10:30 - 10:50 a.m. Coffee Break

10:50 - 11:10 a.m. Marco Tucci, Instituto de Fisica de Cantabria  
Simulated Maps for the Polarization of Extragalactic Radio Sources

11:10 - 11:30 a.m. Jungyeon Cho, University of Wisconsin  
MHD Turbulence as a Foreground for CMB Studies

11:30 - 11:50 a.m. Patrick Leahy, University of Manchester, Jodrell Bank Observatory  
Synchrotron Radiation and High Galactic Latitude

11:50 - 12:10 p.m. Shaul Hanany, University of Minnesota  
MM-Wave Polarization of the Atmosphere

12:10 - 1:40 p.m. Lunch

*Session Chair: Angelica de Oliviera-Costa, University of Pennsylvania*

1:40 - 2:10 p.m. Philip Farese, Princeton University  
New CMB Polarization Results from COMPASS

2:10 - 2:40 p.m. Nicolas Ponthieu, CNRS (France)  
New Polarization Results from Archeops

2:40 - 3:00 p.m. Tom Montroy, Case Western Reserve University  
B2K (Boomerang)

3:00 - 3:20 p.m. Brad Johnson, University of Minnesota  
MAXIPOL

3:20 - 3:40 p.m. Coffee Break

3:40 - 4:00 p.m. Denis Barkats, Princeton University  
CAPMAP

4:00 - 4:20 p.m. Sarah Church, Stanford University  
The QUEST Experiment

4:20 - 4:40 p.m. Jamie Bock, California Institute of Technology (JPL)  
The BICEP Experiment

4:40 - 5:00 p.m. Break (Switch to Room 3-230 at the beginning of the Break)

5:00 - 5:20 p.m. Huan Tran, University of California, Berkeley  
Polarbear

5:20 - 6:00 p.m. Andrew Lange, California Institute of Technology  
A CMB Polarization Satellite

6:30 - 10:00 p.m. Conference Dinner

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**Saturday, March 22, 2003**

Room 3-210 Electrical Engineering/Computer Science Building

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***Session Chair: TBD***

- 9:00 - 9:30 a.m. Jean-Michel Lamarre, Observatoire de Paris  
The Planck HFI and Its Polarization Capabilities
- 9:30 - 10:00 a.m. Charles Lawrence, Jet Propulsion Laboratory  
The Planck LFI and Its Polarization Capabilities
- 10:00 - 10:30 a.m. Patrick Leahy, University of Manchester, Jodrell Bank Observatory  
Polarization Systematics in the Planck Mission
- 10:30 - 10:50 a.m. Coffee Break
- 10:50 - 11:20 p.m. Roger Hildebrand, University of Chicago  
Stokes, Hertz, Hale: Past and Future FIR Polarimeters
- 11:20 - 11:40 p.m. Jeff Peterson, Carnegie Mellon  
AMIBA
- 11:40 - 12:00 p.m. Joshua Gundersen, University of Miami  
The Ku-band Polarization Identifier - KUPID
- 12:00 - 2:00 p.m. Lunch

***Session Chair: Charles Lawrence, Jet Propulsion Laboratory***

- 2:00 - 2:30 p.m. Adrian Lee, University of California, Berkeley  
Development of Large Scale Bolometer Arrays for CMB Observations
- 2:30 - 3:00 p.m. Todd Gaier, Jet Propulsion Laboratory  
HEMT Detectors for Future CMB Missions
- 3:00 - 3:30 p.m. Greg Tucker, Brown University  
Bolometric Interferometry
- 3:30 - 4:00 p.m. Jean-Loup Puget, Institut d'Astrophysique Spatiale  
The Far Infrared Background
- 4:00 - 4:45 p.m. Joe Silk, Oxford University  
CMB Temperature and Polarization - Outlook