

DESY Theory Workshop 2004 “PARTICLE COSMOLOGY”
Dark matter,
dark energy,
early universe,
high-energy cosmic rays
September 28 – October 1st, 2004

INTRODUCTORY LECTURES: Tuesday, 28. Sept. 2004, Auditorium, Building 5

Chair: Arthur Hebecker

09.00 - 10.20	Wilfried Buchmüller	Thermal history of the early universe
10.30 - 11.00	Break	
11.00 - 12.20	Ruth Durrer	Structure formation in the universe and cosmic microwave background radiation
12.30 - 14.00	LUNCH	

Chair: Andreas Ringwald

14.00 - 15.20	Nemanja Kaloper	Origin of primordial perturbations
15.30 - 16.00	Break	
16.00 - 17.20	Veniamin Berezhinsky	High-energy cosmic rays

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PLENARY SESSION I: Wednesday, 29. Sept. 2004, morning, Auditorium, Building 5

Chair: Georg Raffelt

09.00 - 09.10	Albrecht Wagner	Opening
09.10 - 09.35	Christian Spiering	Experimental astroparticle physics at DESY
09.40 - 10.05	Silvia Masi	Cosmic microwave background observations
10.10 - 10.35	Joshua Frieman	Large-scale structure and Sloan digital sky survey
10.40 - 11.00	Coffee Break	

Chair: Claus Kiefer

11.00 - 11.25	Bruno Leibundgut	Supernova Ia Hubble diagram
11.30 - 11.55	Matthias Steinmetz	Small-scale structure and cold dark matter
12.00 - 14.00	LUNCH	

PLENARY SESSION II: Wednesday, 29. Sept. 2004, afternoon, Auditorium, Building 5

Chair: Christof Wetterich

14.00 - 14.25	Peter Schneider	Weak gravitational lensing
14.30 - 14.55	John Webb	Evidence for the variation of constants of nature
15.00 - 15.25	Michael Doran	Early dark energy
15.30 - 16.00	Coffee Break	

Chair: Sidney Bludman

16.00 - 16.25	Dominik Schwarz	Dark energy
16.30 - 16.55	Manoj Kaplinghat	Cosmological neutrino mass limits

**HEINRICH HERTZ LECTURE: Wednesday, 29. Sept. 2004: 17.30 hrs Auditorium
Building 5**

Prof. Dr. Michael S. Turner (Chicago)
CONNECTING QUARKS WITH THE COSMOS

**WELCOME BUFFET: Wednesday, 29. Sept. 2004: 19.00 hrs DESY Cafeteria
Building 9**

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PLENARY SESSION III: Thursday, 30. Sept. 2004, morning, Auditorium, Building 5

Chair: Slava Mukhanov

09.00 - 09.25	David Wands	Inflation
09.30 - 09.55	Lev Kofman	Preheating
10.00 - 10.25	Jürgen Berges	(Pre-)thermalization after inflation
10.30 - 11.00	Coffee Break	

Chair: Michael G. Schmidt

11.00 - 11.25	Mikhail Shaposhnikov	Baryogenesis
11.30 - 11.55	Pasquale Di Bari	Leptogenesis
12.00 - 14.00	LUNCH	

PARALLEL SESSIONS: Thursday, 30. Sept. 2004, afternoon, Sem. Rooms 2, 3, 3a, 4a + 4b

14.00 - 18.30 see separate programme

PLENARY SESSION IV: Friday, October 1st. 2004, morning, Auditorium, Building 5

Chair: Hinrich Meyer

09.00 - 09.25	Günter Sigl	High-energy cosmic rays
09.30 - 09.55	Luis Anchordoqui	High-energy cosmic rays and fundamental physics
10.00 - 10.25	L. Bergström	Indirect dark matter detection
10.30 - 11.00	Coffee Break	

Chair: Fridger Schrempp

11.00 - 11.25	Koichi Hamaguchi	Gravitino in the past and in the future
11.30 - 11.55	Gian Francesco Giudice	Split supersymmetry and dark matter
12.00 - 12.25	Alexander Vilenkin	Closing remarks - vision for future
12.30	LUNCH and adjourn	