

PROGRAM OF PARALLEL SESSIONS
DESY Theory Workshop, 28 Sept.–1 Oct. 2004

Session I: Inflation

Room: Sem. 2 — Chair: Barbara Schrempp

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|-------------|---|
| 14:00–14:15 | I.1 Cosmological gravitational instability with compactification
<i>Johannes Martin</i> |
| 14:20–14:35 | I.2 Curvaton scenario with low scale inflation
<i>Marieke Postma</i> |
| 14:40–14:55 | I.3 From heaviness to lightness: quantum fluctuations of a scalar field with time dependent mass during inflation
<i>Filippo Vernizzi</i> |
| 15:00–15:15 | I.4 Electroweak-scale inflation, inflaton-Higgs mixing and the scalar spectral index
<i>Bartjan Van Tent</i> |
| 15:20–15:35 | I.5 Recent developments in second order cosmological perturbation theory
<i>Karim Malik</i> |
| 15:40–15:55 | I.6 Non-Abelian gravitating solitons with negative cosmological constant
<i>George Lavrelashvili</i> |
| 16:00–16:30 | COFFEE BREAK |

Room: Sem. 2 — Chair: Hartmut Wittig

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| 16:30–17:45 | I.7 Hybrid inflation with a U(1) gauge symmetry
<i>Jan Hamann</i> |
| 16:50–17:05 | I.8 Bounds on the reheating temperature from dilaton destabilization
<i>Oleg Lebedev</i> |
| 17:10–17:25 | I.9 Creation of particles in a tunneling universe
<i>Sergei Winitzki</i> |
| 17:30–17:45 | I.10 Scanning the space of observables
<i>Pascal Vaudrevange</i> |
| 17:50 | ADJOURN |

Session II: Dark Energy

Room: Sem. 4a — Chair: Istvan Montvay

- 14:00–14:15 **II.1 Exorcising $w < -1$**
Nemanja Kaloper
- 14:20–14:35 **II.2 Phantom cosmologies**
Mariusz P. Dabrowski
- 14:40–14:55 **II.3 Can dark energy evolve to the Phantom?**
Alexander Vikman
- 15:00–15:15 **II.4 Cosmic acceleration and extra dimensions: Constraints on modifications of the Friedmann equation**
Tuomas Multamäki
- 15:20–15:35 **II.5 Cosmology with time-varying constants**
Florian Bauer
- 15:40–15:55 **II.6 Cosmic neutrino oscillations triggered by dark energy**
Heinrich Päs
- 16:00–16:30 **COFFEE BREAK**

Session II: Dark Energy (continued)

Room: Sem. 4a — Chair: Koichi Hamaguchi

- 16:30–16:45 **II.7 Extended quintessence with an exponential coupling**
Valeria Pettorino
- 16:50–17:05 **II.8 Influence of quintessence on structure formation**
Sepehr Arbabi Bidgoli
- 17:10–17:25 **II.9 Dark energy, non-linear perturbations and structure formation**
Carsten van de Bruck
- 17:30–17:45 **II.10 Local Structures in a cosmological background with cosmological constant**
Nematollah Riazi and M.R. Bordbar
- 17:50–18:05 **II.11 The end of the dark ages in MOND**
Slawomir Stachniewicz
- 18:10–18:25 **II.12 On signature change in cosmology**
Farhad Darabi
- 18:30 **ADJOURN**

Session III: Particle Dark Matter
Room: Sem. 4b — Chair: Ahmed Ali

- 14:00–14:15 **III.1 Gravitational clustering of relic neutrinos and implications for their detection**
Yvonne Wong
- 14:20–14:35 **III.2 Axino CDM confronts the CMSSM**
Laura Covi
- 14:40–14:55 **III.3 Axinos as dark matter in the universe**
Frank Daniel Steffen
- 15:00–15:15 **III.4 Is there a Peccei-Quinn phase transition?**
Alexey Anisimov
- 15:20–15:35 **III.5 Indirect signals from light neutralinos**
Fiorenza Donato
- 15:40–15:55 **III.6 The power spectrum of SUSY-CDM on sub-galactic scales**
Stefan Hofmann
- 16:00–16:30 **COFFEE BREAK**

Session III: Particle Dark Matter (continued)
Room: Sem. 4b — Chair: Arnd Brandenburg

- 16:30–16:45 **III.7 Dark matter and the baryon asymmetry of the universe**
Gabrijela Zaharijas
- 16:50–17:05 **III.8 Gauge couplings at high temperature and the relic gravitino abundance**
Michael Ratz
- 17:10–17:25 **III.9 Towards a renormalizable Standard Model with a composite Higgs scalar**
Jörg Jäckel
- 17:30–17:45 **III.10 Monoenergetic photons from annihilating KK dark matter**
Torsten Bringmann
- 17:50–18:05 **III.11 Gamma rays from annihilating KK dark matter**
Martin Eriksson
- 18:10–18:25 **III.12 500 GeV Neutralinos and Extragalactic Background Radiation**
Dominik Elsässer
- 18:30 **ADJOURN**

Session IVa: Baryo- and Leptogenesis
Room: Sem. 3 — Chair: Wolfgang Kilian

- 14:00–14:15 **IV.1 Dynamical CP violation from early universe**
Balaji Katlai Rangaswamy
- 14:20–14:35 **IV.2 Baryogenesis from the quark-gluon plasma physics**
Dmitri Grigoriev
- 14:40–14:55 **IV.3 Leptogenesis and dark matter from a sneutrino condensate**
Rouzbeh Allahverdi
- 15:00–15:15 **IV.4 Low-scale leptogenesis and soft SUSY breaking**
Lotfi Boubekeur
- 15:20–15:35 **IV.5 SUSY seesaw, leptogenesis and lepton flavor violation at linear colliders**
Frank Deppisch
- 16:00–16:30 **COFFEE BREAK**

Session IVb: String-Cosmology and Braneworlds
Room: Sem. 3 — Chair: Sakura Schäfer-Nameki

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- 16:30–16:45 **IV.6 Patch cosmology and (non)commutative braneworlds**
Gianluca Calcagni
- 16:50–17:05 **IV.7 Brane gas cosmology with fluxes**
Antonio Campos
- 17:10–17:25 **IV.8 Low-energy effective action of a Gauss-Bonnet brane world**
Nicolas Chatillon
- 17:30–17:45 **IV.9 Spontaneous compactifications as self-tuning the cosmological constant**
Hyun Min Lee
- 17:50–18:05 **IV.10 Radiating braneworlds**
Emily Leeper
- 18:10–18:25 **IV.11 A brane model with two asymptotic regions**
Musongela Lubo
- 18:30 **ADJOURN**

Session Va: Supernova Neutrinos

Room: 3a — Chair: Markus Diehl

- 14:00–14:15 **V.1 Cosmic background neutrinos from core-collapse supernovae**
Manoj Kaplinghat
- 14:20–14:35 **V.2 Cosmic star formation history and supernova relic neutrinos**
Shin'ichiro Ando
- 14:40–14:55 **V.3 Neutrino decay and the supernova relic neutrino background**
Daniele Montanino
- 15:00–15:15 **V.4 Supernova neutrino physics with a megaton detector**
Alessandro Mirizzi
- 15:20–15:35 **V.5 Neutrino effects in a supernova mantle with strong magnetic field**
Alexander Gvozdev

Session Vb: Cosmic Rays

Room: 3a — Chair: Markus Diehl

- 15:40–15:55 **V.6 Signatures of supersymmetry from ultra high energy cosmic rays**
Anindya Datta
- 16:00–16:30 **COFFEE BREAK**

Session Vb: Cosmic Rays (continued)

Room: 3a — Chair: Andreas Ringwald

- 16:30–16:45 **V.7 Absorption dips: Detection of the cosmic neutrino background**
Birgit Eberle
- 16:50–17:05 **V.8 Deflections of UHECRs in extra galactic magnetic fields**
Dario Grasso
- 17:10–17:25 **V.9 Gravireggeons in extra dimensions and interactions of cosmic neutrinos with nucleons**
Alexandre Kisselev
- 17:30–17:45 **V.10 Isospin-3/2 and -1/2 resonances in one pion electro- and neutrino production**
Olga Lalakulich
- 17:50–18:05 **V.11 Astrophysical probes of quantum gravity**
Alexander Sakharov
- 18:10–18:25 **V.12 Probing extra dimensions with gravitational waves**
Sergey Solodukhin
- 18:10 **ADJOURN**