

Corfu Summer Institute on Elementary Particle Physics

(CORFU 2005)

Journal of Physics: Conference Series Volume 53

Corfu, Greece
4-26 September 2005

Editors:

K. Anagnostopoulos
I. Antoniadis
A. Savoy-Navarro
G. Zoupanos

G. Fanourakis
A. Kehagais
J. Wess

ISBN: 978-1-61738-261-1

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571
www.proceedings.com

Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2005) by the Institute of Physics
All rights reserved.

Printed by Curran Associates, Inc. (2010)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

TABLE OF CONTENTS

Organization of the First Week of the 8th Hellenic Summer Study by the European Research and Training Network, Probe for New Physics: Main Objectives and Outcomes	1
<i>Giovanni Busetto, George Fanourakis, Nikos Giokaris, Alberto Ruiz, Aurore Savoy-Navarro</i>	
Electroweak Theory	7
<i>Wolfgang Hollik</i>	
Neutrino Mass and New physics	44
<i>A Yu Smirnov</i>	
Neutrino Physics at Accelerators	83
<i>Enrique Fernández</i>	
Introduction to LHC Physics	107
<i>Giacomo Polesello</i>	
The Experimental Challenges of LHC	117
<i>Daniel Treille</i>	
High-P_T Physics: from the Tevatron to the LHC	163
<i>Tommaso Dorigo</i>	
Top Physics at CDF	195
<i>Gervasio Gómez</i>	
Dynamical Likelihood Method and Top Quark Mass Measurement at CDF	202
<i>Kunitaka Kondo</i>	
Top Pair Production Cross Section Measurements into Multijet Final States	214
<i>Giorgio Cortiana</i>	
Search for $t\bar{t}$ in the τ Dilepton Channels based on 350 pb-1 of CDF Data	227
<i>Stephane Tourneur, Aurore Savoy-Navarro</i>	
Prospects for B Physics at the Tevatron and LHCb	234
<i>Simone Donati</i>	
The B - TAU FCNC Connection in SUSY Unified Theories	248
<i>Antonio Masiero, Paride Paradisi</i>	
B-physics and LVL1 di-muon trigger in the ATLAS experiment at the LHC	255
<i>Theodota Lagouri, Naoko Kanaya, Attila Krasznahorkay</i>	
B^0_s Mixing at CDF	279
<i>Jónatan Piedra</i>	
B^+ and B^0 Direct CP Asymmetries Difference in a Sequential Fourth Generation Scenario	287
<i>Andrea Soddu</i>	
W Properties at CDF	299
<i>Jose E Garcia</i>	
QCD at the Tevatron	304
<i>Mario Martinez</i>	
Inclusive Jet Cross Section using the kT Algorithm at the Tevatron	314
<i>Olga Norriella</i>	
Standard Model Higgs Boson Searches at the CDF Experiment	318
<i>Luca Scodellaro</i>	
Beyond the Standard Model Physics at the Tevatron	329
<i>Mario P Giordani</i>	
Xtra-Dimensional World(s)	359
<i>Antonio Delgado</i>	
The ILC: The Next Step in Particle Physics	371
<i>Ties Behnke</i>	
A Grided World ?	397
<i>Jesús Marco de Lucas</i>	
CDF way to the GRID	413
<i>F Delli Paoli</i>	
Using Neural Nets for Opposite Side Flavour Tagging	431
<i>Milnik Michael</i>	
Massive Neutrinos: Model Building	438
<i>Smaragda Lola</i>	
Lepton Family Symmetry and the Neutrino Mixing Matrix	451
<i>Ernest Ma</i>	

New Developments in the Statistical Approach of Parton Distributions	458
<i>Jacques Soffer</i>	
Spectrum of the Pentaquarks and Selection Rules for their Decays	468
<i>F Buccella</i>	
Neutrino Physics Overview	473
<i>J W F Valle</i>	
Neutrino Physics at Large Colliders	506
<i>F del Águila, Ja Aguilar-Saavedra, R Pittau</i>	
Basics of Inflationary Cosmology	528
<i>George Lazarides</i>	
Corfu 05 Lectures - Part I: Strings on Curved Backgrounds	551
<i>Dinebuci Orlando, P Marios Petropoulos</i>	
Corfu 05 Lectures - Part II: Orientifolds and Model Building	567
<i>Emilian Dudas</i>	
Split Supersymmetry and Magnetic Fluxes	601
<i>Ignatios Antoniadis</i>	
Fluxes, Gaugings and Gaugino Condensates	611
<i>Jean-Pierre Derendinger, Costas Kounnas, P Marios Petropoulos</i>	
Gauge-Higgs Unification on the Brane	621
<i>Gonzalo A Palma</i>	
Brane-to-brane Mediation of Supersymmetry Breaking in Presence of D-type Breaking	635
<i>Thomas Grégoire</i>	
Dark Matter and Dark Energy in Galaxies and Astrophysical Objects	643
<i>Nikolaos Tetradis</i>	
Getting $N=1$ super Yang-Mills from Strings	658
<i>Paolo Merlatti</i>	
Running Neutrino Masses and Mixing in a $SU(4) \times SU(2)^2 \times U(1)_X$ Model	669
<i>Andreas Psallidas</i>	
Unifying Gauge Couplings at the String Scale	684
<i>David Emmanuel-Costa, Ricardo González Felipe</i>	
Unification and Fermion Mass Relations in Low String Scale D-brane Models	695
<i>Dimitris V Gioutsos</i>	
Minimal Low Scale Orientifold Models	705
<i>Nikos Irges</i>	
A D-brane Inspired Trinification Model	722
<i>George K Leontaris, John Rizos</i>	
Anomalies, Chern-Simons Terms and the Standard Model	731
<i>Pascal Anastasopoulos</i>	
Mirage Cosmology on Unstable D3-Brane Universe	746
<i>Anastasios Psinas</i>	
Deformed Gauge Theories	752
<i>Julius Wess</i>	
Noncommutative QFT and Renormalization	764
<i>Harald Grosse, Michael Wohlgenannt</i>	
Quantum Field Theory on Quantum Spacetime	793
<i>Sergio Doplicher</i>	
Noncommutative Symmetries and Gravity	799
<i>Paolo Aschieri</i>	
Noncommutative Cosmologies	820
<i>Maja Buri?, Theodoros Grammatikopoulos, John Madore, George Zoupanos</i>	
The Fuzzy Disc: a Review	830
<i>Fedele Lizzi, Patrizia Vitale, Alessandro Zampini</i>	
Photon Defects in Noncommutative Standard Model Candidates	843
<i>Steven A Abel, Joerg Jaeckel, Valentin V Khoze, Andreas Ringwald</i>	
Global Symmetries of Noncommutative Field Theory	865
<i>C Gonera, P Kosi?ski, P Ma?lanka, S Giller</i>	
Gauge Theory on Fuzzy Spaces	872
<i>Harold Steinacker</i>	
q-Deformed Quaternions and $su(2)$ Instantons	885
<i>Gaetano Fiore</i>	
Deformation of D-branes in Three-dimensional Anti-de Sitter Black Holes	900
<i>P Bieliavsky, S Detournay, M Rooman, Ph Spindel</i>	