

DISCRETE 2012 – Third Symposium on Prospects in the Physics of Discrete Symmetries

Journal of Physics: Conference Series Volume 447

**Lisbon, Portugal
3 - 7 December 2012**

**ISBN: 978-1-62993-072-5
ISSN: 1742-6588**

Printed from e-media with permission by:

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



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

Copyright© by the Institute of Physics
All rights reserved.

Printed by Curran Associates, Inc. (2013)

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

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Mass Hierarchy And String Phenomenology In The LHC Era	1
<i>I. Antoniadis</i>	
Implications Of The Higgs Discovery For SUSY	15
<i>A. Djouadi</i>	
A Theory Of Flavor	23
<i>R. Mohapatra</i>	
Neutrino Mass, Mixing And Discrete Symmetries	33
<i>A. Smirnov</i>	
Time Reversal Violation For Entangled Neutral Mesons	48
<i>J. Bernabeu</i>	
Dark Matter Indirect Searches: Phenomenological And Theoretical Aspects	63
<i>M. Cirelli</i>	
Advances In Leptogenesis	77
<i>A. Pilaftsis</i>	
Testing Discrete Symmetries With Kaons: Status And Perspectives	91
<i>A. Domenico</i>	
Lorentz And CPT Violation	105
<i>R. Potting</i>	
Measurement Of The Properties Of The 125 GeV Higgs Boson With The CMS Detector	119
<i>J. Varela</i>	
The Search For Electric Dipole Moments Of Light Ions In Storage Rings	134
<i>F. Rathmann, A. Saleev, N. Nikolaev</i>	
Top Quark Physics: A Tool For Discoveries	141
<i>M. Gallinaro</i>	
CP Violation At The B Factories	149
<i>J. Walsh</i>	
Overview Of Recent ATLAS Physics Results¹	163
<i>P. Muino</i>	
tt Charge Asymmetry, Family And Friends	177
<i>J. Aguilar-Saavedra, M. Perez-Victoria</i>	
Violation Of CPT Invariance In The Early Universe And Leptogenesis/Baryogenesis	190
<i>N. Mavromatos</i>	
Flavour And CP Violation	204
<i>U. Nierste</i>	
Combining Flavour And CP Symmetries	215
<i>F. Feruglio</i>	
Experimental Status Of Particle And Astroparticle Searches For Supersymmetry	227
<i>V. Mitsou</i>	
Charm Mixing And CP Violation At LHCb	244
<i>A. Ukleja</i>	
CP Violation In Semi-Leptonic B Decays At LHCb	252
<i>T. Bird</i>	
Measurement Of The CP-Violating Phase In B^0_s Mixing	260
<i>J. Leerdam</i>	
Test Of Time Reversal Invariance And COSY	267
<i>D. Eversheim, B. Lorentz, Y. Valdau</i>	
Direct Observation Of Time-Reversal Violation In B Mesons At BABAR	272
<i>P. Villanueva-Perez</i>	
CP Violation At ATLAS	279
<i>A. Barton</i>	
Measurements Of The CKM Angle γ In Tree-Dominated B Decays At LHCb	285
<i>L. Carson</i>	
Recent Results On CP Violation In Charm And τ Decays From BABAR	294
<i>N. Neri</i>	
Search For The CP Violating $K_S \rightarrow 3\pi^0$ Decay With The KLOE Detector	302
<i>M. Silarski</i>	

Recent BaBar Results On CP Violation In B Decays	310
<i>A. Oyanguren</i>	
Top Quark Couplings And Search For New Physics At The LHC	317
<i>A. Onofre</i>	
MEtop - A Top FCNC Event Generator	322
<i>R. Coimbra, A. Onofre, R. Santos, M. Won</i>	
Top Effective Operators At The ILC	330
<i>M. Fiolhais</i>	
Precision Measurements In The Top Quark Sector With The CMS Experiment At The LHC	336
<i>P. Silva</i>	
Running Soft Parameters In SUSY Models With Multiple U(1) Gauge Factors	344
<i>R. Fonseca, M. Malinsky, W. Porod, F. Staub</i>	
Potential Of A Linear Collider For Lepton Avour Violation Studies In The Susy Seesaw	352
<i>A. Figueiredo, A. Abada, J. Romao, A. Teixeira</i>	
Supersymmetric SO(10) With Low Intermediate Scales	360
<i>C. Arbelaez</i>	
Enhanced Lepton Flavour Violation In The Supersymmetric Inverse Seesaw	367
<i>C. Weiland</i>	
Fermion Mixing With Geometrical CP Violation And Its Tests At The LHC	375
<i>I. Varzielas</i>	
Neutrino Mass From Higher Than d=5 Effective Operators With Discrete Symmetries	383
<i>M. Krauss</i>	
Sterile Neutrinos And R_K	390
<i>A. Vicente</i>	
The Adjoint SU(5) Constrained By A Z_4 Flavour Symmetry	397
<i>C. Simoes</i>	
Neutrino Predictions In A Modified Babu-Ma-Valle Model	405
<i>D. Forero</i>	
A Model For Large θ_{13} Constructed Using The Eigenvectors Of The S_4 Rotation Matrices	411
<i>R. Krishnan</i>	
Higgs Boson Searches At ATLAS	419
<i>R. Goncalo</i>	
Very Rare Decays At LHCb	427
<i>S. Oggero</i>	
The LHCb Upgrade	435
<i>S. Eisenhardt</i>	
Searches For Heavy Quarks At The ATLAS Experiment	444
<i>A. Succurro</i>	
Results On The Search For MSSM Neutral And Charged Higgs Bosons (CMS)	452
<i>M. Tosi</i>	
Searches For The SM Higgs Boson Decaying Into Two Photons, ZZ And Two Taus In CMS	460
<i>M. Meneghelli</i>	
2HDM With Z_2 Symmetry In Light Of New LHC Data	468
<i>M. Krawczyk, D. Sokolowska, B. Swiezewska</i>	
Avoiding Death By Vacuum	475
<i>A. Barroso, P. Ferreira, I. Ivanov, R. Santos, J. Silva</i>	
Type I Seesaw Mechanism, Lepton Flavour Violation And Higgs Decays	482
<i>E. Molinaro</i>	
Fermion Mixing In An S_3 Model With Three Higgs Doublets	488
<i>F. Canales, A. Mondragon, M. Mondragon, U. Salazar, L. Velasco-Sevilla</i>	
Generic Constraints On Extra-Fermion(s) From The Higgs Global Fit	496
<i>G. Moreau</i>	
Analysis Of CP Conserving Higgs Bosons Self Couplings In SMxS(3)	504
<i>E. Guevara, O. Felix-Beltran, E. Rodriguez-Jauregui</i>	
Discreteness In Parameters Of The Standard Model	512
<i>S. Sukhoruchkin</i>	
Charged Higgs Boson Production In Single Top Mode At The LHC	520
<i>R. Guedes, S. Moretti, R. Santos</i>	
B - D(*)TV_T Decays In Two-Higgs-Doublet Models	528
<i>A. Celis, M. Jung, X. Li, A. Pich</i>	
Supersymmetric Lepton Flavour Violation And Neutrinos Mass Textures: An Update	536
<i>M. Gomez, M. Cannoni</i>	

RGE Behaviour Of U(2)3 Symmetry In SUSY	544
<i>J. Perez</i>	
Vector-Like Quarks And New Physics In The Flavour Sector	551
<i>F. Botella, M. Nebot, G. Branco</i>	
Lepton Number Violation And Lepton Flavour Violation At LHCb	559
<i>B. Adeva</i>	
Search For Sterile Neutrinos At Radioactive Ion Beam Facilities	567
<i>C. Espinoza, R. Lazauskas, C. Volpe</i>	
Experimental Search For The LSND Anomaly With The ICARUS LAr-TPC Detector In The CNGS Beam	575
<i>E. Segreto</i>	
The SNO+ Experiment: Status And Overview	581
<i>J. Maneira</i>	
Status Of The CUORE Experiment	588
<i>L. Pattavina</i>	
Neutrino Masses, The Baryon Asymmetry And Dark Matter From A Global U(1) Symmetry	595
<i>F. Josse-Michaux</i>	
Search For Low Mass Dark Gauge Bosons At KLOE	601
<i>E. Graziani</i>	
Search For CPT And Lorentz Invariance Violation With Neutral Kaons At KLOE	609
<i>A. Santis</i>	
Testing The Pauli Exclusion Principle For Electrons	617
<i>J. Marton, S. Bartalucci, S. Bertolucci, C. Berucci, M. Bragadireanu, M. Cargnelli, C. Curceanu, S. Matteo, J. Egger, C. Guaraldo, M. Iliescu, T. Ishiwatari, M. Laubenstein, E. Milotti, D. Pietreanu, K. Piscicchia, T. Ponta, A. Vidal, A. Scordo, D. Sirghi, F. Sirghi, L. Sperandio, O. Doce, E. Widmann, J. Zmeskal</i>	
Thermal Field Theory To All Orders In Gradient Expansion	624
<i>P. Millington, A. Pilaftsis</i>	
Author Index	