

XXXVII Symposium on Nuclear Physics 2014

**Journal of Physics: Conference Series
Volume 578**

**Cocoyoc, Mexico
6 - 9 January 2014**

Editors:

**Roelof Bijker
Sergio Lerma**

David Lizcano

**ISBN: 978-1-63439-911-1
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. (2015)

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

Volume 578

XXXVII Symposium on Nuclear Physics
6–9 January 2014, Cocoyoc, Mexico

Accepted papers received: 5 December 2014
Published online: 22 January 2015

Preface

011001

[XXXVII Symposium on Nuclear Physics](#) OPEN ACCESS R Bijker, S Lerma and D Lizcano

011002

[Peer review statement](#) OPEN ACCESS

Papers

012001

[Progress in the characterization of the gas jet target at IFUNAM](#) OPEN ACCESS F Favela, E Chávez, O de Lucio, E Andrade and M E Ortíz pg. 1

012002

[Tests of carbon targets for \$^{12}\text{C}+^{12}\text{C}\$ reactions at astrophysical energies](#) OPEN ACCESS L Morales-Gallegos, M Aliotta, A Di Leva, L Gialanella, D Schürmann, M De Cesare, T Davinson, G Imbriani, M Romano and M Romoli pg. 5

012003

[CDCC calculations of elastic scattering for the systems \${}^6\text{Li}+{}^{144}\text{Sm}\$ and \${}^6\text{Li}+{}^{208}\text{Pb}\$. Effect of resonances of \${}^6\text{Li}\$ on elastic scattering angular distributions](#) OPEN ACCESS A Gómez Camacho pg. 11

012004

[Identified particle production in pp, p-Pb, and Pb-Pb collisions measured with ALICE at LHC energies](#) OPEN ACCESS R T Jiménez-Bustamante (on behalf of the ALICE Collaboration) pg. 18

012005

[Study of the PYTHIA \$\Delta\eta\Delta\phi\$ correlation as a function of multiplicity and transverse sphericity in proton-proton collisions at 7 TeV](#) OPEN ACCESS E Pérez Lezama, G Paic, E Cuautle Flores and A Ortiz Velasquez pg. 23

012006

[On the definition of entropy for quantum unstable states](#) OPEN ACCESS O Civitarese and M Gadella pg. 29

012007

[Status and perspectives of double beta decay searches](#) OPEN ACCESS K Zuber pg. 36

012008

[Neutron stars with dark energy](#) OPEN ACCESS P O Hess, I Rodríguez, W Greiner and T Boller pg. 44

012009

[A sensitive search for dark energy through chameleon scalar fields using neutron interferometry](#) OPEN ACCESS W M Snow, M Arif, B Heacock, M Huber, K Li, D Pushin, V Skavysh and A R Young pg. 51

012010

[Dominant Modes in Light Nuclei - *Ab Initio* View of Emergent Symmetries](#) OPEN ACCESS J P Draayer, T Dytrych, K D Launey, A C Dreyfuss and D Langr pg. 58

012011

[Recent advances in exact solutions of pairing models](#) OPEN ACCESS S Pittel pg. 68

012012

[Inter-band B\(E2\) transitions strengths in ¹⁶⁰⁻¹⁷⁰Dy nuclei](#) OPEN ACCESS C E Vargas, V Velázquez and S Lerma pg. 75

012013

[Data-adaptive unfolding of nonergodic spectra: Two-Body Random Ensemble](#) OPEN ACCESS R Fossion, G Torres Vargas, V Velázquez and J C López Vieyra pg. 81

012014

[Quantum interference vs. quantum chaos in the nuclear shell model](#) OPEN ACCESS G Fernández, E M Hernández, M Hautefeuille, E Landa, I O Morales, V Velázquez, R Fossion, C E Vargas and A Frank pg. 88

012015

[Valence and sea quarks in the nucleon](#) OPEN ACCESS R Bijker and E Santopinto pg. 95

012016

[Coulomb gauge approach for charmonium meson and hybrid radiative transitions](#) OPEN ACCESS P Gou, T Yépez-Martínez and A P Szczepaniak pg. 99