

# **7th International Workshop on the Dark Side of The Universe**

**(DSU 2011)**

**Journal of Physics: Conference Series Volume 384**

**Beijing, China  
26-30 September 2011**

**ISBN: 978-1-62276-345-0  
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© (2011) 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](mailto: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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

|   |     |
|---|-----|
| <b>012001 Gamma-ray Lines from Dark Matter Decay</b> .....  | 1   |
| <i>A Ibarra</i>   |     |
| <b>012002 Fermi Large Area Telescope Results: the Sky at High Energies and the Quest for Dark Matter Signals</b> .....  | 9   |
| <i>A Morselli</i>   |     |
| <b>012003 Some Considerations on Formalism for the Spin-dependent WIMP-nucleus Elastic Scattering</b> .....   | 16  |
| <i>M Cannoni</i>  |     |
| <b>012004 Fermi-LAT Prospects for the Detection of <math>\mu</math>SSM Gravitino Dark Matter</b> .....  | 23  |
| <i>C Muñoz</i>  |     |
| <b>012005 DAMA/LIBRA Results and Perspectives</b> .....   | 32  |
| <i>R Bernabei, P Belli, F Cappella, V Caracciolo, R Cerulli, C J Dai, A D'Angelo, A Di Marco, H L He, A Incicchitti, X H Ma, F Montecchia, X D Sheng, R G Wang, Z P Ye</i>  |     |
| <b>012006 Analyzing Direct Dark Matter Detection Data with Unrejected Background Events by the AMIDAS Website</b> .....   | 40  |
| <i>C-L Shan</i>   |     |
| <b>012007 Recoiling Ion-Channeling in Direct DM Detectors</b> .....   | 49  |
| <i>G B Gelmini</i>  |     |
| <b>012008 An Overview of Dark Matter Experiments at Jefferson Lab</b> .....   | 57  |
| <i>J R Boyce</i>  |     |
| <b>012009 Simultaneous Generation of WIMP Miracle-like Densities of Baryons and Dark Matter</b> .....   | 66  |
| <i>J McDonald</i>   |     |
| <b>012010 The Impact of XENON100 and the LHC on Supersymmetric Dark Matter</b> .....  | 76  |
| <i>K A Olive</i>  |     |
| <b>012011 Probing Reheating Via Direct Detection of the Inflationary Gravitational Wave Background and Its Implications for Dark Matter Candidate</b> .....   | 90  |
| <i>S Kuroyanagi</i>   |     |
| <b>012012 Dark Matter and Higgs Mass in the CMSSM with Yukawa Quasi-Unification</b> .....   | 95  |
| <i>N Karagiannakis, G Lazarides, C Pallis</i>   |     |
| <b>012013 The CRESST II Dark Matter Search</b> .....  | 108 |
| <i>L Stodolsky, G Angloher, M Bauer, I Bavykina, A Bento, C Bucci, C Ciemiak, G Deuter, F V Feilitzsch, D Hauff, P Huff, C Isaila, J Jochum, M Kiefer, M Kimmerle, J C Lanfranchi, S Pfister, F Petricca, W Potzel, F Pröbst, F Reindl, S Roth, K Rottler, C Sailer, K Schäffner, J Schmalzer, S Scholl, W Seidel, M V Sivers, C Strandhagen, R Strauss, A Tanzke, I Usherov, S Wawoczny, M Willers, A Zöller</i> |     |
| <b>012014 Light Higgs and Neutralino Dark Matter in the NMSSM</b> .....   | 116 |
| <i>D E Lopez-Fogliani</i>   |     |
| <b>012015 Signatures of Long-lived Exotic Strongly Interacting Massive Particles on Light Element Abundances Through Reactions Triggered by the Particles</b> .....   | 126 |
| <i>M Kusakabe, M Kawasaki</i>   |     |
| <b>012016 the Status of the <math>E_{\pm}</math> Cosmic-ray Anomaly</b> .....   | 133 |
| <i>K Auchetti, C Balázs</i>   |     |
| <b>012017 Lepton Flavor Violation at a Future LC</b> .....  | 140 |
| <i>M E Gómez</i>  |     |
| <b>012018 Cold Dark Matters in U(1)' Models</b> .....   | 145 |
| <i>Y Omura</i>  |     |
| <b>012019 Flavored Dark Matter and its Laboratory Tests</b> .....   | 150 |
| <i>S Blanchet</i>   |     |
| <b>012020 the Recent Results from KIMS Experiment</b> .....   | 158 |
| <i>S Kim</i>  |     |
| <b>012021 Low Mass Dark Matter: Some Perspectives</b> .....   | 165 |
| <i>S-L Chen</i>   |     |
| <b>012022 Neutrinos and Dark Matter</b> .....   | 173 |
| <i>J W F Valle</i>  |     |
| <b>012023 Predicted Rates for Direct WIMP Searches</b> .....  | 182 |
| <i>J D Vergados</i>   |     |
| <b>012024 Dark Matter Conversion As a Source of Boost Factor</b> .....  | 190 |
| <i>Z-P Liu, Y-L Wu, Y-F Zhou</i>  |     |

|  |     |
|--|-----|
| <b>012025 Higgs Boson Mass in Yukawa Unified SUSY SO(10)</b> .....   | 197 |
| <i>Q Shafi</i>   |     |
| <b>012026 Dark Matter and Radiative Neutrino Masses</b> .....  | 205 |
| <i>Y Cai, X-G He, M Ramsey-Musolf, L-H Tsai</i>  |     |
| <b>012027 Delta-gravity, Dark Energy and the Accelerated Expansion of the Universe</b> .....   | 211 |
| <i>J Alfaro</i>  |     |
| <b>012028 Casimir Energy of the Universe and the Dark Energy Problem</b> .....   | 223 |
| <i>S Ichinose</i>  |     |
| <b>012029 Scalar-tensor Cosmological Models Converging to General Relativity: Potential Dominated<br/>and Matter Dominated Cases</b> ..... | 235 |
| <i>M Saal, L Jarv, P Kuusk</i>   |     |
| <b>012030 Gravitational Waves in Viable Modified Gravity Theories</b> .....  | 243 |
| <i>C Q Geng</i>  |     |
| <b>Author Index</b>  |     |