

FAIRNESS 2013: FAIR NExt generation of ScientisT_S 2013

Journal of Physics: Conference Series Volume 503

**Berlin, Germany
16-21 September 2013**

**ISBN: 978-1-63439-283-9
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

PAPERS

A theory overview on the Compressed Baryonic Matter Experiment at FAIR.....	1
<i>M. Nahrgang</i>	
Investigation of surface homogeneity of mirrors for the CBM-RICH detector and low-mass di-electron feasibility studies	7
<i>E. Lebedeva, C. Hoehne</i>	
Nonequilibrium dynamics and transport near the chiral phase transition of a quark-meson model.....	12
<i>A. Meistrenko, C. Wesp, H. van Hees, C. Greiner</i>	
How spinodal decomposition influences observables at FAIR energies	17
<i>C. Herold, M. Nahrgang, I. Mishustin, M. Bleicher</i>	
Kurtoses and high order cumulants: Insights from resummed perturbation theory.....	22
<i>S. Mogliacci</i>	
In-medium QCD sum rules for D mesons: A projection method for higher order contributions.....	27
<i>T. Buchheim, T. Hilger, B. Kämpfer</i>	
The $\Psi(4040)$ at the future PANDA experiment.....	32
<i>L. Zotti, A. Filippi, S. Marcello, S. Spataro</i>	
A new method for electron momentum reconstruction in the PANDA experiment.....	37
<i>B. Ma</i>	
QCD phase diagram: overview of recent lattice results.....	42
<i>G. Endrodi</i>	
Mesons, PANDA and the scalar glueball	47
<i>D. Parganija</i>	
Microscopic-macroscopic method for studying single-particle level density of superheavy nuclei	52
<i>A. Bezbakh, T. Shneidman, G. Adamian, N. Antonenko</i>	
Production of heavy meson pairs in $p\bar{p}$ collisions within a double handbag approach	57
<i>A. Goritschnig, B. Pire, W. Schweiger</i>	
Antihyperon-hyperon production in antiproton-proton annihilations with PANDA	62
<i>K. Schönning, E. Thomé</i>	
Electron identification in Au+Au collisions at 1.23 GeV/u using multivariate analysis.....	67
<i>S. Harabasz</i>	
Reconstruction of π^0 and η mesons via conversion method in Au+Au at 1.23AGeV with HADES	72
<i>C. Behnke</i>	
Monte-Carlo simulation of lepton pairs production in "$p\bar{p} \rightarrow e^+e^- + X$" events at PANDA experiment	77
<i>A. Skachkova</i>	
Strange and heavy mesons in hadronic matter	82
<i>D. Cabrera, L. Abreu, E. Bratkovskaya, A. Ilner, F. Llanes-Estrada, A. Ramos, L. Tolos, J. Torres-Rincon</i>	
Recent results on dilepton and strangeness production with HADES.....	87
<i>K. Lapidus</i>	
Overview of the CBM detector system.....	92
<i>T. Balog</i>	
D-meson diffusion in hadronic matter	97
<i>J. Torres-Rincon, L. Abreu, D. Cabrera, F. Llanes-Estrada, L. Tolos</i>	
Radiation quality of cosmic ray nuclei studied with Geant4-based simulations.....	102
<i>L. Burigo, I. Pshenichnov, I. Mishustin, M. Bleicher</i>	
Understanding the origin of the elements: experiments at the dripline	107
<i>C. Langer</i>	
Search for mesic nuclei in the photoproduction of $\eta\pi^0$ mesons off light nuclei	112
<i>I. Keshelashvili, A. Käser</i>	
Simulations on the measurement of the D_s meson semileptonic form factor with the PANDA detector	117
<i>L. Cao, J. Ritman</i>	
Evolution of elliptic and triangular flow as a function of beam energy in a hybrid model.....	122
<i>J. Auvinen, H. Petersen</i>	

The relation between cross-section, decay width and imaginary potential of heavy quarkonium in a quark-gluon plasma.....	127
<i>M. Escobedo</i>	
The Compressed Baryonic Matter experiment	132
<i>S. Seddiki</i>	
Track measurement in the high multiplicity environment at the CBM Experiment	137
<i>P. Ghosh</i>	
Resonances $f_0(1370)$, $f_0(1500)$ and $f_0(1710)$ within the extended Linear Sigma Model	142
<i>S. Janowski, F. Giacosa</i>	
Experimental overview of the \bar{P}ANDA experiment.....	147
<i>E. Fioravanti</i>	
Investigation of light and heavy tetraquark candidates using lattice QCD	152
<i>M. Wagner, A. Abdel-Rehim, C. Alexandrou, M. Brida, M. Gravina, G. Koutsou, L. Scorzato, C. Urbach</i>	
First results of proton antiproton annihilation into a pion pair at large scattering angles within the handbag approach	157
<i>A. Goritschnig, S. Kofler, W. Schweiger</i>	
Non-mesonic weak decay of hypernuclei with effective field theory	162
<i>A. Pérez-Obiol, D. Entem, B. Juliá-Díaz, A. Parreño</i>	
Polyakov loop susceptibilities in pure gauge system	167
<i>P. Lo</i>	
Zero temperature properties of mesons and baryons from an extended linear sigma-model.....	172
<i>P. Kovács, G. Wolf</i>	
Triplet based online track finding in the PANDA-STT	177
<i>M. Mertens</i>	
Status and future plan of the spectroscopy of pionic atoms	182
<i>Y. Watanabe, G. Berg, M. Dozono, H. Fujioka, N. Fukuda, T. Furuno, H. Geissel, R. Hayano, N. Inabe, K. Itahashi, S. Itoh, D. Kameda, T. Kubo, H. Matsubara, S. Michimasa, K. Miki, H. Miya, Y. Murakami, M. Nakamura, N. Nakatsuka</i>	
Theoretical nuclear structure and astrophysics at FAIR	187
<i>T. Rodríguez</i>	
Dilepton Production in Transport Calculations and Coarse-Grained Dynamics.....	192
<i>S. Endres, H. van Hees, J. Weil, M. Bleicher</i>	
3+1 dimensional viscous hydrodynamics at high baryon densities	197
<i>I. Karpenko, M. Bleicher, P. Huovinen, H. Petersen</i>	
MPD Detector at NICA	202
<i>L. Yordanova, V. Vasendina</i>	
Author Index	