16th International Conference on Strangeness in Quark Matter (SQM2016)

Journal of Physics: Conference Series Volume 779

Berkeley, California, USA 27 June – 1 July 2016

Editors:

Huan Zhong Huang Richard Seto Jochen Thader Nu Xu

ISBN: 978-1-5108-3683-9

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© (2016) by the Institute of Physics All rights reserved. The material featured in this book is subject to IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2017)

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: 845-758-2633

Email: curran@proceedings.com Web: www.proceedings.com

Table of contents

Volume 779

16th International Conference on Strangeness in Quark Matter (SQM2016) 27 June to 1 July 2016, Berkeley, USA

Accepted papers received: 30 November 2016

Published online: 8 February 2017

Preface

011001 OPEN ACCESS

16th International Conference on Strangeness in Quark Matter (SQM2016)

011002 OPEN ACCESS Peer review statement

Papers

012001 OPEN ACCESS

Experimental Overview of Open Heavy Flavor

Kai Schweda....1

012002

OPEN ACCESS

<u>Heavy flavor Production and Interactions in Relativistic Heavy-Ion Collisions in CMS</u>

<u>Experiment</u>

Wei Xie for the CMS collaboration.....7

012003 OPEN ACCESS Latest Results of Open Heavy Flavor and Quarkonia from the PHENIX Experiment at RHIC
Rachid Nouicer (for the PHENIX Collaboration)13
012004 OPEN ACCESS Heavy-Flavor Production at RHIC with STAR
Zhenyu Ye (for the STAR Collaboration)19
012005 OPEN ACCESS Highlights from the LHCb ion physics program Michael Schmelling on behalf of the LHCb collaboration25
012006 OPEN ACCESS Recent development on heavy quark theory in heavy-ion collisions Shanshan Cao31
012007 OPEN ACCESS Strangeness in ALICE at the LHC Francesca Bellini for the ALICE Collaboration37
012008 OPEN ACCESS Strangeness in STAR experiment at RHIC

012009

OPEN ACCESS

Collectivity and thermalization in p+p, p+A, d+Au and ^3He+Au collisions

Shengli Huang.....49

Shusu Shi (for the STAR collaboration).....43

Δ production in p+p collisions at 40 and 158 GeV/c

Herbert Ströbele for the NA61 collaboration.....55

012011

OPEN ACCESS

Collectivity in small systems: Initial correlations or final state flow?

Björn Schenke....60

012012

OPEN ACCESS

Hadron yields, the chemical freeze-out and the QCD phase diagram

A Andronic, P Braun-Munzinger, K Redlich and J Stachel.....64

012013

OPEN ACCESS

Experimental Overview of the Search for Chiral Effects at RHIC

Gang Wang.....70

012014

OPEN ACCESS

From gluon topology to chiral anomaly: Emergent phenomena in quark-gluon plasma

Jinfeng Liao.....76

012015

OPEN ACCESS

Lattice QCD results on cumulant ratios at freeze-out

Frithjof Karsch.....82

012016

OPEN ACCESS

Bulk properties of QCD matter from lattice simulations

Claudia Ratti.....88

Sub-threshold strangeness and charm production in UrQMD

J. Steinheimer and M. Bleicher.....94

012018 OPEN ACCESS

Experimental overview on hadronic resonance production in high-energy nuclear collisions

Yosuke Watanabe.....100

012019 OPEN ACCESS

A new detector at RHIC, sPHENIX goals and status

Rosi Reed for the sPHENIX Collaboration....106

012020 OPEN ACCESS

Experimental summary for heavy flavor production

Rongrong Ma....112

012021 OPEN ACCESS

Summary of recent experimental results on strangeness production

Alexander Kalweit.....118

012022 OPEN ACCESS SQM2016: Theory Summary

Vincenzo Greco....124

Open heavy-flavour measurements in p-Pb and Pb-Pb collisions with ALICE at the LHC

Cristina Terrevoli for the ALICE Collaboration.....130

012024

OPEN ACCESS

Heavy-flavour production in pp collisions and correlations in pp and p-Pb collisions measured with ALICE at the LHC

Fabio Colamaria on behalf of the ALICE Collaboration.....134

012025

OPEN ACCESS

Heavy-flavour multiplicity dependence in p-Pb collisions with ALICE at the LHC

Jan Wagner for the ALICE Collaboration....138

012026

OPEN ACCESS

D⁰ Meson Production in Heavy Ion Collisions in CMS experiment

Jing Wang for the CMS Collaboration....142

012027

OPEN ACCESS

Recent Heavy-Flavor Results Utilizing the FVTX in PHENIX at RHIC

Xuan Li for the PHENIX Collaboration....146

012028

OPEN ACCESS

 $D_{s \; \underline{\text{meson production in Au+Au collisions at}}^{\pm} \sqrt{s_{\mathrm{NN}}} = 200 \; \mathrm{GeV}_{\underline{\text{in STAR}}}$

Long Zhou (for the STAR collaboration).....150

Heavy flavor production in heavy-ion collisions from soft collinear effective theory

Zhong-Bo Kang, Felix Ringer and Ivan Vitev.....154

012030

OPEN ACCESS

Heavy-quark dynamics in heavy-ion collisions

T Song, H Berrehrah, E L Bratkovskaya, D Cabrera, W Cassing, T Tolos and J M Torres-Rincon.....158

012031

OPEN ACCESS

Heavy quark dynamics in QCD matter

S. K. Das, F. Scardina, S. Plumari and V. Greco....162

012032

OPEN ACCESS

<u>Constraining in-medium heavy-quark energy-loss mechanisms via angular correlations</u> between heavy and light mesons

M Rohrmoser, P-B Gossiaux, T Gousset and J Aichelin.....166

012033

OPEN ACCESS

D-meson observables in Pb-Pb and p-Pb collisions at LHC with EPOSHQ model

V Ozvenchuk, J Aichelin, P B Gossiaux, B Guiot, M Nahrgang and K Werner.....170

012034

OPEN ACCESS

T-Matrix Approach to Strongly Coupled QGP

Shuai Y.F. Liu and Ralf Rapp.....174

012035

OPEN ACCESS

Heavy flavor R_{AA} and v_n in event-by-event viscous relativistic hydrodynamics

Caio A. G. Prado, Jacquelyn Noronha-Hostler, Mauro R. Cosentino, Marcelo G. Munhoz, Jorge Noronha and Alexandre A. P. Suaide.....178

012036

OPEN ACCESS

Charmonium production in pp collisions with ALICE at the LHC

Hugo Pereira Da Costa for the ALICE Collaboration.....182

012037

OPEN ACCESS

Charmonium production in Pb-Pb collisions at $\sqrt{s_{\rm NN}} = 2.76_{\rm and 5.02 \ TeV}$ with ALICE

Biswarup Paul on behalf of the ALICE Collaboration.....186

012038

OPEN ACCESS

Charmonium production in pp, pPb and PbPb with CMS

Songkyo Lee on behalf of the CMS collaboration.....190

012039

OPEN ACCESS

Excess of J/w yield at very low transverse momenta in Au+Au collisions at

$$\sqrt{s_{NN}} = 200 \text{ GeV}_{\text{and U+U at}} \sqrt{s_{NN}} = 193 \text{ GeV}_{\text{with STAR}}$$

Wangmei Zha (for the STAR collaboration)....194

012040

OPEN ACCESS

Quarkonium measurements via the di-muon decay channel in p+p and Au+Au collisions with the STAR experiment

Takahito Todoroki (for the STAR collaboration).....198

012041
OPEN ACCESS
Dynamical botto
P-B Gossiaux a

Dynamical bottomonium-suppression in a realistic AA background

P-B Gossiaux and R Katz.....202

012042 OPEN ACCESS $\psi(2S)$ Production at the LHC

Xiaojian Du and Ralf Rapp.....206

012043 OPEN ACCESS

Strangeness production in p–Pb and Pb–Pb collisions with ALICE at LHC

Domenico Colella for the ALICE Collaboration....210

012044

OPEN ACCESS

Studies of final state interactions via femtoscopy in ALICE

Lukasz Kamil Graczykowski (for the ALICE Collaboration).....214

012045

OPEN ACCESS

Multi-strange hadrons and the precision extraction of QGP properties in the RHIC-BES domain

Jussi Auvinen, Krzysztof Redlich and Steffen A. Bass.....218

012046

OPEN ACCESS

Signatures of Flux Tube Fragmentation and Strangeness Correlations in pp Collisions

Cheuk-Yin Wong.....222

012047

OPEN ACCESS

Flavour Oscillations in Dense Baryonic Matter

Peter Filip.....226

012048

OPEN ACCESS

An Application of Functional Renormalization Group Method for Superdense Nuclear Matter

G. G. Barnaföldi, A. Jakovác and P. Pósfay.....230

012049

OPEN ACCESS

Phenomenological Implications of the p_T Spectra of ϕ and Ω produced at LHC and RHIC

Rudolph C. Hwa and Lilin Zhu....234

012050

OPEN ACCESS

Strangeness at finite temperature from Lattice QCD

J. Noronha-Hostler, R. Bellwied, J. Günther, P. Parotto, A. Pasztor, I. Portillo Vazquez and C. Ratti.....238

012051

OPEN ACCESS

Production of π^0 , K^{\pm} and η mesons in Pb-Pb and pp collisions at $\sqrt{SNN} = 2.76 \text{ TeV}$ measured with the ALICE detector at the LHC

Astrid Morreale on behalf of the ALICE collaboration....242

012052

OPEN ACCESS

Measurement of dielectrons in pp, p-Pb and Pb-Pb collisions with ALICE at the LHC

Alberto Calivà on behalf of the ALICE Collaboration....246

012053

OPEN ACCESS

Measurement of bottom contribution to the non-photonic electron production in p+p collisions at STAR

Wei Li for the STAR Collaboration....250

Transverse-momentum spectra of strange particles produced in Pb+Pb collisions at $\sqrt{s_{\text{NN}}}$ = 2.76 TeV in the chemical non-equilibrium model

Wojciech Florkowski.....254

012055

OPEN ACCESS

Anisotropic flow measurements in Pb-Pb collisions at $\sqrt{s_{\text{NN}}}$ = 5.02 TeV with ALICE

You Zhou for the ALICE Collaboration.....258

012056

OPEN ACCESS

Measurement of higher harmonic flow coefficients of identified hadrons in Pb-Pb collisions at $\sqrt{s_{\text{NN}}}$ = 2.76 TeV

Naghmeh Mohammadi for the ALICE Collaboration....262

012057

OPEN ACCESS

Study of the long-range azimuthal correlations in pp and p+Pb collisions with the ATLAS detector at the LHC

Krzysztof W. Wozniak on behalf of the ATLAS Collaboration....266

012058

OPEN ACCESS

Collectivity of (non-)strange hadrons in high-multiplicity pp with CMS

George S. F. Stephans For the CMS collaboration.....270

012059

OPEN ACCESS

Measurement of D^0 elliptic and triangular flow in Au+Au collisions at $\sqrt{s_{\text{NN}}} = 200$ GeV at RHIC

Michael R. Lomnitz and STAR collaboration....272

<u>Viscous Damping of Anisotropic Flow in 7.7 – 200 GeV Au+Au Collisions</u>

Niseem Magdy (For the STAR Collaboration).....276

012061

OPEN ACCESS

<u>Insight from elliptic flow of open charm mesons using quark coalescence model at RHIC</u> and LHC energies

Roli Esha, Md. Nasim and Huan Zhong Huang.....280

012062

OPEN ACCESS

Investigating the correlations of flow harmonics in 2.76A TeV Pb–Pb collisions

Xiangrong Zhu, You Zhou, Haojie Xu and Huichao Song.....284

012063

OPEN ACCESS

The physics mechanisms of light and heavy flavor v₂ and mass ordering in AMPT

Hanlin Li, Zi-Wei Lin and Fuqiang Wang.....288

012064

OPEN ACCESS

The fluctuations of quadrangular flow

Giuliano Giacalone, Li Yan, Jacquelyn Noronha-Hostler and Jean-Yves Ollitrault.....292

012065

OPEN ACCESS

A viscous blast-wave model for heavy-ion collisions

Amaresh Jaiswal and Volker Koch.....296

Directed flow of Λ , $\bar{\Lambda}$, K^{\pm} , K_{Sand}^{0} $\phi_{mesons from Beam Energy Scan Au+Au collisions}$ using the STAR experiment

Subhash Singha (for the STAR collaboration).....300

012067

OPEN ACCESS

Systematic Searches for the Chiral Magnetic Effect and the Chiral Vortical Effect Using Identi ed Particles at RHIC/STAR

Liwen Wen for the STAR Collaboration....304

012068

OPEN ACCESS

Vorticity in the QGP liquid and hyperon polarization at the RHIC BES energies

Iurii Karpenko and Francesco Becattini.....308

012069

OPEN ACCESS

Vorticity and Λ polarization in event-by-event (3+1)D viscous hydrodynamics

Long-Gang Pang, Ren-Hong Fang, Hannah Petersen, Qun Wang and Xin-Nian Wang.....312

012070

OPEN ACCESS

Event-by-event generation of vorticity in heavy-ion collisions

Wei-Tian Deng and Xu-Guang Huang.....316

012071

OPEN ACCESS

Identified particle production in pp collisions at \sqrt{s} = 7 and 13 TeV measured with ALICE

R. Derradi de Souza (for the ALICE Collaboration).....320

012072
OPEN ACCESS
Recent hadronic reso

Recent hadronic resonance measurements at ALICE

A G Knospe (for the ALICE Collaboration)....324

012073

OPEN ACCESS

Higher Moments of Net-Kaon Multiplicity Distributions at STAR

Ji Xu (for the STAR Collaboration).....328

012074

OPEN ACCESS

Behavior of universal critical parameters in the QCD phase diagram

Marcus Bluhm, Marlene Nahrgang, Steffen A. Bass and Thomas Schäfer.....332

012075

OPEN ACCESS

A particlization procedure for the N χ FD model and the evolution of the net-proton kurtosis

C Herold, M Nahrgang, A Limphirat, C Kobdaj and Y Yan.....336

012076

OPEN ACCESS

Fast Dynamical Evolution of Hadron Resonance Gas via Hagedorn States

M Beitel, K Gallmeister and C Greiner.....340

012077

OPEN ACCESS

High baryon densities achievable in the fragmentation regions at RHIC and LHC

Joseph Kapusta and Ming Li....344

012078

OPEN ACCESS

Analysis of hadron yield data within hadron resonance gas model with multi-component eigenvolume corrections

Volodymyr Vovchenko and Horst Stoecker.....348

012079
OPEN ACCESS
On the Use of the Tsallis Distribution at LHC Energies.

J. Cleymans.....352

012080

OPEN ACCESS

Updates to the p+p and A+A chemical freeze-out lines from the new experimental data

V. V. Begun, V. Vovchenko and M. I. Gorenstein.....356

012081

OPEN ACCESS

Near and Far from Equilibrium Power-Law Statistics

T.S. Biró, G.G. Barnaföldi, G. Bíró and K.M. Shen....360

012082

OPEN ACCESS

Prototype sector production for the STAR inner TPC upgrade

Chi Yang (for the STAR Collaboration)....364

012083

OPEN ACCESS

A fixed-target programme at the LHC (AFTER@LHC)

Barbara Trzeciak on behalf of the AFTER@LHC study group¹.....368