First workshop on "Perceiving the Emergence of Hadron Mass through AMBER@CERN" (EHM2020/1)

Monday 30 March 2020 - Thursday 2 April 2020



Book of Abstracts

Contents

Introduction to the workshop	1
Measurable Expressions of EHM	1
On the hadron mass decomposition	1
Meson Structure: Drell-Yan session	1
Drell-Yan measurement at AMBER - Studying the hadrons structure	1
Pion parton distribution functions in a symmetry-preserving approach	1
Pion and Kaon Valence-Quark Parton Distributions from Lattice QCD	1
Structure of Mesons and its impact on Baryons one	1
Pion structure in Nambu–Jona-Lasinio: phenomenology	2
Parton distribution functions and beyond	2
Pion and Kaon parton distributions from their light-front wave functions	2
The structure of pion from first-principles calculation in lattice QCD	2
3D imaging of pion and kaon on the light front	2
Calculation of pion/kaon-nucleus induced Drell-Yan process from a basis light-front approach	2
Charmonium measurements with AMBER –a tool for accessing the meson PDFs	3
Constraining pion PDFs with Jpsi production	3
Quark mass function from a OGE-type interaction in Minkowski space	3
Prompt photon production and diffractive scattering at AMBER	3
Hadron Spectroscopy at AMBER	3
Spectroscopy via Lattice QCD	3
An Experimental Observable to Trace the Mass from pQCD to Strong QCD	4
Insight into EHM from Nucleon Resonance Electroexcitation and the Meson Structure Studies	1
1es	4

Continuum functional methods to study strong-QCD in new generation facilities	4			
Meson Spectroscopy	4			
Parton distribution of nucleon	4			
talk	4			
Introduction to round table discussion	4			
Round table discussion	5			
Future plans	5			
Hybrid mesons in the framework of DSEs	5			
Meson spectroscopy from a basis light-front approach	5			
talk	5			
Power corrections to the Drell-Yan and Charmonium qT-spectra at moderate transverse				
momenta from Reggeized Partons	5			
Two issues concerning the pion structure function	5			

Afternoon session / 6

Introduction to the workshop

Afternoon session / 7

Measurable Expressions of EHM

Afternoon session / 8

On the hadron mass decomposition

Corresponding Author: cedric.lorce@polytechnique.edu

Afternoon session / 9

Meson Structure: Drell-Yan session

Afternoon session / 10

Drell-Yan measurement at AMBER - Studying the hadrons structure

Corresponding Author: marcia@lip.pt

Afternoon session / 11

Pion parton distribution functions in a symmetry-preserving approach

Corresponding Author: mhding@nankai.edu.cn

Afternoon session / 12

Pion and Kaon Valence-Quark Parton Distributions from Lattice QCD

Corresponding Author: hwlin@pa.msu.edu

Afternoon session / 13

Structure of Mesons and its impact on Baryons one

Corresponding Author: cedric.mezrag@cea.fr

Afternoon session / 14

Pion structure in Nambu-Jona-Lasinio: phenomenology

Corresponding Author: aurorecourtoy@gmail.com

Afternoon session / 15

Parton distribution functions and beyond

Corresponding Author: khepani@gmail.com

Afternoon session / 16

Pion and Kaon parton distributions from their light-front wave functions

Corresponding Author: jose.rodriguez@dfaie.uhu.es

Afternoon session / 17

The structure of pion from first-principles calculation in lattice QCD

Corresponding Author: dgr@jlab.org

Afternoon session / 18

3D imaging of pion and kaon on the light front

Corresponding Author: shichao0820@gmail.com

Afternoon session / 19

Calculation of pion/kaon-nucleus induced Drell-Yan process from a basis light-front approach

Corresponding Author: xbzhao@impcas.ac.cn

Afternoon session / 20

Charmonium measurements with AMBER –a tool for accessing the meson PDFs

Corresponding Author: stephane.platchkov@cern.ch

Afternoon session / 21

Constraining pion PDFs with Jpsi production

Corresponding Author: wen-chen.chang@cern.ch

Afternoon session / 22

Quark mass function from a OGE-type interaction in Minkowski space

 $\textbf{Corresponding Author:}\ elmar.biernat@tecnico.ulisboa.pt$

Afternoon session / 23

Prompt photon production and diffractive scattering at AMBER

 $\textbf{Corresponding Author:} \ a lexey.guskov@cern.ch$

Afternoon session / 24

Hadron Spectroscopy at AMBER

Corresponding Author: bgrube@ph.tum.de

Afternoon session / 25

Spectroscopy via Lattice QCD

Corresponding Author: rbriceno@jlab.org

Afternoon session / 26

An Experimental Observable to Trace the Mass from pQCD to Strong QCD

Corresponding Author: gothe@sc.edu

Afternoon session / 27

Insight into EHM from Nucleon Resonance Electroexcitation and the Meson Structure Studies

Corresponding Author: mokeev@jlab.org

Afternoon session / 28

Continuum functional methods to study strong-QCD in new generation facilities

Corresponding Author: jsegovia@upo.es

Afternoon session / 29

Meson Spectroscopy

Corresponding Author: vmathieu@ucm.es

Afternoon session / 30

Parton distribution of nucleon

Corresponding Author: gao@thphys.uni-heidelberg.de

Afternoon session / 31

talk

Corresponding Author: binosi@ectstar.eu

Afternoon session / 32

Introduction to round table discussion

Corresponding Author: catarina.quintans@cern.ch

Afternoon session / 33

Round table discussion

Afternoon session / 34

Future plans

Corresponding Author: denisov@to.infn.it

Afternoon session / 35

Hybrid mesons in the framework of DSEs

Corresponding Author: xusshep@gmail.com

Afternoon session / 36

Meson spectroscopy from a basis light-front approach

Corresponding Author: xbzhao@impcas.ac.cn

Afternoon session / 37

talk

Corresponding Author: phycui@nju.edu.cn

Afternoon session / 38

Power corrections to the Drell-Yan and Charmonium qT-spectra at moderate transverse momenta from Reggeized Partons

Corresponding Author: saleev@samsu.ru

Afternoon session / 39

Two issues concerning the pion structure function

 $\textbf{Corresponding Author:} \ lei.chiong@gmail.com$