

9th Workshop on Hadron physics in China and Opportunities Worldwide

Monday, July 24, 2017 - Saturday, July 29, 2017

Nanjing University, Nanjing, China

Scientific Program

Session 1: Overview/Future 1

Session 2: Overview/Future 2

Session 3: Nucleon Structure 1

Session 4: Nucleon Structure 2

Session 5: Nucleon and Nuclear Physics

Session 6: Hadron Spectroscopy

Session 7: Symmetry and Search for New Physics

Session 8: Instrumentation

Session 9: New facilities and physics program.

Special Meetings: Tuesday evening, JLab12/SOLID and EIC discussions

Friday afternoon, nMRPC detector meeting

Friday-Saturday: forum on the calculation of parton
distribution

Main Program:

Session 1: July 24, 2017, Monday Morning, Chair: Haiyan Gao

9:00 Welcome (TBD)

9:05 Overview of BESIII: Xiaoyan Shen (IHEP)

9:45 Overview/Future Program at JLab: Jian-ping Chen (JLab, USA)

10:25 Coffee break

10:45 Overview/Future Program at RHIC: Berndt Mueller (BNL, USA)

11:25 Nuclear and hadron physics project with Shanghai electron and photon beams:
Yugang Ma (SINAP)

12:05 Discussion

12:20 Lunch break

Session 2: July 24, 2017, Monday Afternoon, Chair: Jian-Ping Chen

14:00 Strong QCD: Atlas for the standard model and, potentially, beyond: Craig
Roberts (Argonne, USA)

14:40 Overview/Future of COMPASS program: Matthias Grosse Perdekamp (UIUC, USA)

- 15:20 EIC in US: Zein-Eddine Meziani (Temple, USA)
- 16:00 Coffee break
- 16:20 Z-factory : Zhaoxi Zhang (ITP)
- 17:00 SPHENIX and forward upgrade: Jin Huang (BNL,USA)
- 17:30 QCD bound states via Dyson-Schwinger equation: Sixue Qin (Chongqing U)
- 18:00 Discussion
- 18:20 Adjourn
- 18:30 Reception

Session 3: July 25, 2017, Tuesday Morning, Chair: Craig Roberts

- 9:00 Recent progress on hadron structure from lattice QCD: H. W. Lin (Michigan State, USA)
- 9:30 Spin Results from JLab: Karl Slifer (New Hampshire, USA)
- 10:00 Spin Results from RHIC-STAR: Jinlong Zhang (LBNL, USA)
- 10:30 Coffee break
- 10:50 The Strange quark-antiquark asymmetry of the nucleon: Bo-Qiang Ma (PKU)
- 11:20 Global polarized Lambda in A-A: Zuo-tang Liang (Shandong)
- 11:50 New angular momentum tensor for nucleon spin structure: Xiangsong Chen (HUST)
- 12:20 Lunch break

Session 4: July 25, 2017, Tuesday Afternoon, Chair: Zein-Eddine Meziani

- 14:00 Meson structure with dilepton production: Jen-Chieh Peng (UIUC, USA)
- 14:30 First transverse spin asymmetries measured in polarized Drell-Yan at COMPASS: Wen-Chen Chang (Institute of Physics, Taiwan)
- 15:00 TMD Experiments from COMPASS SIDIS: Takahiro Iwata (Yamagata, Japan)
- 15:30 TMD Experiments from JLab CLAS12: Bjoern Seitz (Glasgow, UK)
- 16:00 Coffee break
- 16:20 Non-perturbative QCD: the last frontier of standard model physics: Xiangdong Ji (SJTU and UMD, USA)
- 17:00 Measuring the gluon orbital angular momentum at the electron-ion collider: yong Zhao (UMD and LBNL, USA)

17:30 The pauli form factor of quark and nontrivial topological structure of the QCD:
Baiyang Zhang (IMP)

18:00 Discussion

18.20 Adjourn

20:00-22:00 Discussions on Collaboration on JLab 12/SoLID and China EIC

Session 5: July 26, 2017, Wednesday Morning, Chair: Liguang Tang

9:00 Latest on the Proton Radius Puzzle from PRad: Haiyan Gao (Duke, USA and
Duke-Kunshan)

9:30 Highlights and recent development in short range correlation:Axel Schmidt (MIT,
USA)

10:00 Search for Muon to electron conversion at J-PARC: Chen Wu(NJU and J-PARK)

10:30 Coffee break

10:50 Penta-quark 5-body calculation: Emiko Hiyama (RIKEN, Japan)

11:20 Hidden-charm meson-baryon molecules with a short-range attraction from five quark
states: Yasuhiro Yamaguchi (RIKEN, Japan)

11:50 Remarks on the hidden color components: Jia-Lun Ping (NJNU)

12:20 Lunch break

Session 6: July 26, 2017, Wednesday Afternoon, Chair: Zhaoxi Zhang

14:00 GlueX: Beni Zihlmann (JLab, USA)

14:30 Review on tetra-quark states frpm experimental results: Chengping Shen (BUAA)

15:00 Review on multi-quark states from theoretical results: Huaxing Chen (BUAA)

15:30 High strangeness dibaryon search with STAR data: Jinhui Chen(SINAP)

16:00 Coffee break

16:20 Studies on decays of light mesons: Lena Heijkenkjold (Mainz, Germany)

16:50 Hadronic light-by-light scattering and the muon' s (g-2): Igor Danilkin (Mainz,
Germany)

17:20 New physics with high intensity low energy proton beam: Zuowei Liu (NJU)

17:50 The principle of maximum conformality and its application to the high energy
physics process: Sheng-quan Wang (Chongqing U.)

18:20 Adjourn

18:30 Banquet

Session 7: July 27, 2017, Thursday Morning, Chair: Lena Heijkenkjold

9:00 Unified field theory in hyper spacetime:Yueliang Wu (ITP)

9:40 The first results of Dark Matter Particle Explorer: Jin Chang (PMO)

10:10 Dark matter at Jinping underground lab-PandaX: Changbo Fu (SJTU)

10:40 Coffee Break

10:55 Overview on Dark Matter: Yufeng Zhou (ITP)

11:25 Quark and glue components of proton spin: Keh-Fei Liu (Kentucky State, USA)

11:55 PVDIS at JLab: Xiaochao Zheng (Virginia, USA)

12:25 Lunch break

Session 8: July 27, 2017, Thursday Afternoon, Chair: Nu Xu

14:00 MRPC R&D: Yi Wang (Tsinghua)

14:30 MRPC readout R&D : Lei Zhao (USTC)

15:00 GEM R&D at USTC : Wenhao You (USTC)

15:30 MPGD Detectors and Electronics at CIAE : Xinglong Li (CIAE)

16:00 Coffee break

16:20 GEM R&D at Lanzhou: Huiyin Wu (Lanzhou)

16:50 ECal: Jianbin Jiao (Shandong)

17:20 Ecal R&D at THU: Chendi Shen (Tsinghua)

17:50 Adjourn

Session 9: July 28, 2017, Friday Morning, Chair: Fan Wang

9:00 Future particle and nuclear physics facilities in China: Yifang Wang (IHEP)

9:30 Overview/Future Program in J-PARC Shinya Sawada (KEK, Japan)

10:00 CEE project for medium-high energy nuclear physics: Nu Xu (LBNL, USA and CCNU)

10:30 Coffee break

- 10:50 Polarized experiments with medium energy hadron beam: Yi Zhang (Lanzhou)
- 11:20 Nanjing Plan for high intensity proton beam: An Sun (NJU)
- 11:50 Concluding Remarks: Jian-ping Chen (JLab)
- 12:20 End of the regular program of the workshop

July 28, 2017, Friday Afternoon

Session I: mini-workshop Third Meeting on nMRPC detector R&D (14:00-18:10)

- 14:00 Welcome: J.P. Chen (JLab)
- 14:05 "Status of nMRPC R&D at BNL": Mickey Chiu (BNL)
- 14:50 "Front-end electronics and chips": Isar Mostfanezhad (Nalu, Hawaii)
- 15:10 "Readout electronics for nMRPC": Alexandre Camsonne (JLab)
- 15:40 Tea Break
- 16:00 "Status of nMRPC R&D at UIUC": Matthias Perdekamp (UIUC)
- 16:30 "nMRPC R&D at THU": Yi Wang (THU)
- 17:00 "FAST electronics": Lei Zhao (USTC)
- 17:30 Discussion: Future Plan: All
- 18:00 Closing Remarks: Nu Xu (CCNU/LBNL)

July 28 afternoon 14.00-18.00

Session II: After workshop forum on the calculation of parton distribution (14:00-18:00)

- 14:00 Pion parton distribution amplitude based on BS-DS equation: Craig Roberts (ANL)
- 15:00 Parton distribution calculation based on large momentum effective field theory: Xiang-Dong Ji (SJTU and UMD, USA)
- 16:00 Coffee Break
- 16:20 Matching issue in quasi parton distribution approach: Yan-Qing Ma
- 17:20 Discussion
- 18:00 Adjourn

July 29 morning 9.00-12.00

Session II: After workshop forum on the calculation of parton distribution (14:00-18:00)

09:00 Parton distribution with non-perturbative renormalization from lattice QCD: Yong Zhao (UMD and LBNL, USA)

10:00 Lattice QCD calculation of gluon spin in nucleus: Keh-Fei Liu (Kentucky State, USA)

11:00 Plotting pion' s light front wave function: Lei Chang (Nankai University)

Speakers: C.D. Roberts (ANL) , K.F. Liu (Kentucky) , H.W. Lin (Michigan) ,

X.D. Ji (SJTU and UMD), Yong Zhao (UMD and LBNL), Y.Q. Ma (PKU), Lei Chang (Nankai)