

EMMI Workshop
Cold dense nuclear matter:
from short-range nuclear correlations to neutron stars
October 13-16, 2015, Lecture Hall (KBW) GSI Darmstadt

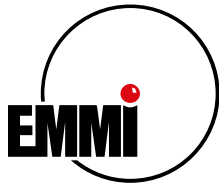
Tuesday

Session: Nuclei at High Energies

- 09:00 - 10:00 Leonid Frankfurt (Tel Aviv):
"High Energy Hard Processes for Studying SRCs in Nuclear Physics"
- 10:00 - 11:00 Larry Weinstein (ODU):
"Introduction: Using Electron Nucleus Scattering to Resolve SRCs"
- 11:00 - 11:30 Coffee Break
- 11:30 - 12:15 Claudio Ciofi degli Atti (Perugia)
„In Medium Short-Range NN Dynamics: Ab initio many-body calculations versus experimental data: where do we stand?"
- 12:15 - 12:45 Eli Piassetzky (Tel Aviv)
"Recent Experimental Progress in SRC Studies"
- 12:45 - 14:00 Lunch

Session: Short Range Structure of Nuclei

- 14:00 - 15:00 Jan Ryckebusch (Ghent)
"Stylized Features of Nuclear Momentum Distributions and the Quest for SRCs through the Mass Table"
- 15:00 - 15:30 Ulrich Mosel (Giessen)
"Fundamentals of SRC in Spectral Functions"
- 15:30 - 16:00 Coffee Break
- 16:00 - 16:30 Hans Feldmeier (GSI)
"Short Range Central and Tensor Correlations in Nuclei"
- 16:30 - 17:00 Nadia Fomin (UTK)
"SRCs in $x > 1$ Inclusive Processes"
- 17:00 - 17:30 Misak Sargsian (FIU)
"New Results in Short Range Correlation Studies"
- 17:30 – Discussions
- 18:00 – 20:00 Welcome Reception



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Wednesday

Session: Non-Nucleonic Degrees in Nuclei

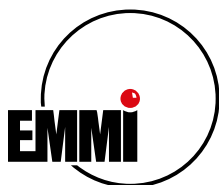
- 09:00 - 10:00 Mark Strikman (PSU)
"Non-nucleonic degrees of freedom – evidence and constraints"
- 10:00 - 10:30 Or Hen (MIT)
"SRC and EMC effects"
- 10:30 - 11:00 Coffee Break
- 11:00 - 11:30 John Arrington (Argonne)
"Experimental Studies of EMC Effects"
- 11:30 - 12:00 Shalev Gilad (MIT)
"Medium Modification in Tagged Processes"
- 12:00 - 12:30 Werner Boeglin (FIU)
"Probing the Deuteron Structure at Short Distances"
- 12:30 - 14:00 Lunch

Session: Tagged Processes and Hadron Propagation

- 14:00 - 14:30 Christian Weiss (Jlab)
"Spectator Tagging and Short-Range Correlations
with an Electron-Ion Collider"
- 14:30 - 15:00 Dipankar Dutta (MsState)
"Hadron Propagation in Nuclear Medium"
- 15:00 - 15:30 Raphael Dupre (Orsay)
"Hadronization Studies"
- 15:30 - 16:00 Coffee Break

Session: SRCs and Hadronic Processes:

- 16:00 - 16:30 Massimiliano Alvioli (Perugia)
"Short Range Correlation Signatures in Nucleon Momentum Distributions"
- 16:30 - 17:00 Alexey Larionov (Frankfurt)
"Hard semiexclusive A(p,pp) process at the beam momenta
of several GeV/c"
- 17:00 - 17:30 Albrecht Gillitzer (Juelich)
"Antiproton - nucleus scattering at PANDA"
- 17:30 - Discussions on SRCs, EMC and Hadronization effects in electro and
hadro production reactions



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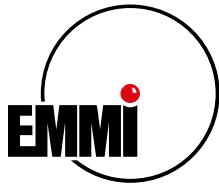
Thursday:

Session: Hadronic Interaction and Nuclear Matter

- 09:00 -10:00 Wolfram Weise (ECT*)
"Chiral Dynamics and Nuclear Matter"
- 10:00 -10:30 Achim Schwenk (TU Darmstadt)
"Nuclear Forces and their Impact on Neutron-rich Matter",
- 10:30 - 11:00 Coffee Break
- 11:00 -11:30 Joachim Stroth (GSI)
"HADES: Latest Physics Highlights"
- 11:30 - 12:00 Stefanos Paschalis (TU Darmstadt)
"Experiments with Radioactive Beams"
- 12:00 - 12:30 Marek Karliner (Tel Aviv)
"Pentaquarks, Doubly Heavy Exotic Mesons and Baryons and
How to Look for Them"
- 12:30 - 14:00 Lunch

Session: Nuclear Matter and neutron stars

- 14:00 - 15:00 Sanjay Reddy (Seattle)
"Dense Matter in Neutron Stars: New insights
from theory and observations"
- 15:00 - 15:30 Armen Sedrakian (Frankfurt)
"Cooling Processes in Neutron Stars"
- 15:30 - 16:00 Coffee break
- 16:00 - 16:30 Arnau Rios (Surrey)
"Density and isospin asymmetry dependence of shortrange correlations"
- 16:30 - 17:00 Bao-An Li (Texas A&M University-Commerce)
"SRC effects on nuclear symmetry energy"
- 17:00 - 17:30 Yukinori Sakuragi (Osaka City University)
"High-density nuclear matter probed by nucleus-nucleus scattering
- its implication to neutron star mass problem -"
- 17:30 - Discussion SRCs and Nuclear Matter/Neutron Stars
- 18:00 – 20:00 Conference Dinner



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Friday

Session: Multi-Nucleon SRCs

- 09:00 - 09:30 Arianna Carbone (Tu-Darmstadt)
"Self-Consistent Green's Function with 3N Forces"
09:30 - 10:00 Donal Day (UVA)
"Correlations in Few-Body Systems"
10:00 - 10:30 Igor Korover (Tel Aviv)
"Correlations in 4He"

10:30 - 11:00 Coffee Break

Session: New Ideas and Directions

- 11:00 - 11:30 Cynthia Keppel (JLab)
"Tagging DIS processes at 12 GeV JLab"
11:30 - 12:00 Shunzo Kumano (KEK)
"Physics of J-PARC"
12:00 - 12:30 Horst Stoecker (Frankfurt)
"Quark-free , initial 'pure glue' Yang-Mills phase in pbar-p/A, p-p/A:
PaNDA@FAiR, NICA, J-PARC and BES at RHIC"
12:30 - 14:00 Lunch
14:00 - 14:30 Wim Cosyn (Ghent)
"Final State Interactions in DIS"
14:30 - 14:50 Erez Cohen(Tel Aviv)
"SRCs from Data Mining"
14:50 - 15:10 Meytal Duer(Tel Aviv)
"SRCs from Data Mining"

15:10 - 15:40 Coffee Break

Session: SRC Studies at GSI

- 15:40 - 16:00 Mark Strikman
16:00 - 17:00 Or Hen/ Eli Piassetzky
17:00 Further presentations & open discussion