

Oslo International School for Master and PhD Students

Relativistic Heavy Ion Collisions

Cosmology and Dark Matter

Cancer Therapy

15-26 May 2017

Oslo, Norway

<https://indico.cern.ch/event/612795/>



Workshop

Nuclear, Particle physics and Cosmology

16-18 May 2017

DFDS Ferry Oslo-Copenhagen-Oslo

<https://indico.cern.ch/event/612792/>

The Main Topics of the School

Relativistic Heavy Collisions and High Energy Particle Physics

Lattice QCD, Phase Diagram: Liquid-Gas Phase Transition,
Chiral Symmetry Restoration

Quark Gluon Plasma to Hadron Gas Phase Transition

Parton Model, Jet Production, Jet Quenching

Signatures of Quark Gluon Plasma:

Anisotropic Flow, Ridge, Strangeness, Heavy Quarkonia,
Femtoscopy, Photons and Dileptons

Thermal Model, Hydrodynamics and Microscopic Models

Interaction of Radiation with Matter and Cancer Therapy

SUSY, Phenomena Beyond Standard Model

Practical sessions with ALICE and ATLAS open data

Cosmology-Astrophysics. Dark Matter. Black Holes.

Nuclear Reactions in Stars.

Critical phenomena – Superconductivity

Organizing Committee

Oleksii Ivanytskyi (Scientific Secretary) (Bogolyubov Institute for Theoretical Physics)

Igor Lokhtin (Moscow State University)

Vytaly Shadura (Bogolyubov Institute for Theoretical Physics)

Alexander Sorin (Joint Institute for Nuclear Research)

Grigory Feofilov (St. Petersburg State University)

Arkadiy Taranenko (National Research Nuclear University MEPhI)

Stanislav Vilchinskii (Kiev Taras Shevchenko National University)

Local Organizing Committee

Ionut Cristian Arsene (University of Oslo)

Larissa Bravina (Chair) (University of Oslo, Norway)

Pavlo Mikheenko (University of Oslo)

Heidi Sandaker (University of Oslo)

Roar Emaus (University of Oslo)

Evgeny Zabrodin (Moscow State University and University of Oslo)

ALICE Experimental Data Analysis (hands-on session)

Igor Altsybeev, Ionut Cristian Arsene, Ilya Selyuzhenkov

Lattice QCD Dmitry Anchishkin

Heavy Quarkonia in Heavy Ion Collisions Ionut Cristian Arsene

Indirect Searches for Dark Matter Torsten Bringmann

**ATLAS Hands-on Session: Searching for exotic particles
in pp collisions at 8 TeV using ATLAS open data and tools**

Magnar Kopangén Bugge

Relativistic Hydrodynamics Laszlo Csernai

Nuclear Reaction Rates in Stars Oleksandr Gorbachenko

Statistical Model and Signatures of Quark Gluon Plasma

Mark Gorenstein

Introduction to Dark Matter Dmytro Iakubovskiy

Strangeness Production in Heavy Ion Collisions Sonia Kabana

Onset of Hydrodynamics in Heavy Ion-Collisions Eero Aleksy Kurkela

Femtoscopy of Heavy Ion Collisions Richard Lednicky

Dilepton and Photon Production in Heavy Ion Collisions Ana Marin

Superconductivity and its applications Pavlo Mikheenko

Multifragmentation, Chiral Symmetry restoration, Cancer Therapy

Igor Mishustin

High Energy Physics in LHC Era Farid Ould-Saada

Supersymmetry Are Raklev

Discovery Statistics Alexander Lincoln Read

Experimental Searches for Dark Matter Heidi Sandaker

Anisotropic Flow In Heavy Ion Collisions Ilya Selyuzhenkov

Introduction to Cosmology of Early Universe Yuriy Shtanov

Hydrodynamics and HBT Correlations Yuriy Sinyukov

Parton Model, Jet Physics and Jet Quenching Alexander Snigirev

Prospects for baryon rich matter research at NICA Alexander Sorin

Anisotropic Flow and Quark Gluon Plasma Arkadiy Taranenko

Interaction of the radiation with the matter Alexey Tishchenko

Jet Quenching and Substructure Modifications

in Heavy-Ion Collisions Konrad Tywoniuk

Cosmology of Early Universe Stanislav Vilchinskii

Physics of Black Holes Alexander Yakimenko

Fluctuations and Correlations Evgeny Zabrodin

Organising Institutes and Sponsors

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