

Program of COOL'2019 international Workshop
23-27 September 2019
Budker INP, Novosibirsk

Monday, 23 September 2019

10:30 – 11:20 Registration (BINP main entrance)

10:40 – 11:20 Welcome Coffee (4th floor)

11:20 Welcome speech from BINP Director, academician Pavel V. Logachev

11:30 – 13:00 Session 01, Chairman – Vasily Parkhomchuk

11:30 Paper ID: MOX01 **COSY experience of electron cooling**, Vladimir Reva (BINP SB RAS, Novosibirsk) **(invited talk)**

12:10 Paper ID: MOX02 **Cooling Aspects for the Deceleration of Highly Charged Ions in the ESR**, Markus Steck (GSI, Darmstadt) **(invited talk)**

13:00 – 14:00 Lunch

14:00 – 15:20 Session 02, Chairman – Nikolay Dikansky

14:00 Paper ID: MOY01 **First Operation for Stochastic Cooling of P-Bars in the CERN AD Using Optical Delay Notch Filter and Plans 2021 Operation**, Fritz Caspers (CERN, Geneva) **(invited talk)**

14:40 Paper ID: MOY02 **Prototype of turbine driven HV-module for a relativistic electron cooler**, Kurt Aulenbacher (HIM, Mainz) **(invited talk)**

15:20 – 15:50 Coffee break

15:50 – 18:00 Session 03, Chairman – Yang Xiaodong

15:50 Paper ID: MOZ01 **The Electron Cooling System for the HIAF Project in China**, Lijun Mao (IMP/CAS, Lanzhou) **(invited talk)**

16:30 Paper ID: MOA01 **Dielectronic recombination of Na-like Kr²⁵⁺ at the cooler storage ring CSRm**, Zhongkui Huang (IMP/CAS, Lanzhou)

17:10 Paper ID: MOA02 **Design of a Compact Electron Gun for the High-Voltage Electron Cooling Systems of the NICA Collider**, Andrey Denisov (BINP SB RAS, Novosibirsk)

18:00 – 20:00 Welcome Party (BINP Canteen)

Tuesday, 24 September 2019

9:00 – 11:00 Session 04, Chairman – Markus Steck

9:00 Paper ID: TUX01 **Status of the Electron Cooler for Nica Booster and Results of Its Commissioning**, Maxim Bryzgunov (BINP SB RAS, Novosibirsk) **(invited talk)**

9:40 Paper ID: TUA01 **Electron Cooling in the Low-Energy Electrostatic Ion Storage Ring CSR at Electron Energies down to 10 eV**, Andreas Wolf (MPI-K, Heidelberg)

10:20 Paper ID: TUA02 **First HESR Stochastic cooling tanks in operation at COSY with PANDA cluster target**, Rolf Stassen (FZJ, Jülich)

11:00 – 11:30 Coffee Break

11:30 – 13:00 Session 05, Chairman – Takeshi Katayama

11:30 Paper ID: TUY01 **RF Accelerator for Electron Cooling of Ultrarelativistic Hadrons**, Nikolay Vinokurov (BINP SB RAS, Novosibirsk; NSU, Novosibirsk) **(invited talk)**

12:10 Paper ID: TUY02 **Progress on Muon Ionization Cooling Demonstration with MICE**, Daniel Kaplan (Illinois Institute of Technology, Chicago, Illinois) **(invited talk)**

12:50 – 13:00 **Group photo (BINP main entrance)**

13:00 – 14:00 **Lunch**

14:00 – 16:30 Session 06, Chairman – Christina Dimopoulou

14:00 Paper ID: TUZ01 **Coherent Electron Cooling: Status and Prospects**, Vladimir N. Litvinenko (BNL, Upton, Long Island, New York) **(invited talk)**

14:40 Paper ID: TUB01 **Measurement from MICE of Coulomb Multiple Scattering and Energy Loss**, Daniel Kaplan (Illinois Institute of Technology, Chicago, Illinois)

15:20 – 15:50 **Coffee break**

15:20 – 15:50 **International Advisory Committee Meeting (BINP Round Table)**

15:50 Paper ID: TUB02 **Plasma-Cascade Instability**, Vladimir N. Litvinenko (BNL, Upton, Long Island, New York)

16:30 – 18:00 Poster Session, Chairman – Maksim Bryzgunov

Electron Cooling

TUPS01: **Simulation of Electron Cooling and IBS at EICC**, Xiaodong Yang (IMP/CAS, Lanzhou)

TUPS02: **Two-Energy Storage-Ring Electron Cooler**, Fanglei Lin (JLab, Newport News, Virginia)

TUPS03: **Vacuum Systems for the Coolers of the NICA Project**, Alexander Bubley (BINP SB RAS, Novosibirsk)

TUPS04: **Preliminary studies of BIF and status of the beam-current upgrade of the electron-cooler test-bench at HIM**, Thomas Beiser (HIM, Mainz)

TUPS05: **High Voltage Power Supply System for Electron Cooler for CSRe**, Dmitry Skorobogatov (BINP SB RAS, Novosibirsk)

TUPS06: **Simulating Electron Cooling**, Bianca Veglia (Cockcroft Institute, Warrington, Cheshire)

TUPS07: **WinSAM and WinMAG - New Program Packages for Simulation of Electron-Optical Systems**, Andrey Ivanov (BINP SB RAS, Novosibirsk)

TUPS08: **Beam Position Monitor System for High Voltage Electron Cooler for NICA Collider**, Evgeny Bekhtenev (BINP SB RAS, Novosibirsk; NSU, Novosibirsk)

TUPS09: **Analyze of Influence of Electron Cooler on Stored Ion Beam**, Youjin Yuan (IMP/CAS, Lanzhou)

TUPS10: **Power supplies for correctors of the 2.5 MeV Electron Cooling System for NICA Collider**, Oleg Belikov (BINP SB RAS, Novosibirsk)

TUPS11: **Specifications for a new Electron Cooler for the Antiproton Decelerator (AD)**, Lars Varming Joergensen (CERN, Meyrin)

TUPS12: **Commissioning the ELENA Electron Cooler**, Lars Varming Joergensen (CERN, Meyrin)

TUPS13: **The Cascade Transformer for the High-Voltage Electron Cooling System for the NICA Collider**, Andrey Denisov (BINP SB RAS, Novosibirsk)

TUPS14: **Electron Cooling Application for Hadron Therapy**, Vladimir Vostrikov (BINP SB RAS, Novosibirsk; NSU, Novosibirsk)

TUPS15: **The magnetic system of electron cooler of collider NICA**, Vitalij Panasyuk (BINP SB RAS, Novosibirsk)

Facility status updates and beam cooling reviews

TUPS16: Laser cooling of relativistic lithium-like 16O⁵⁺ ion beams at the CSRe, Hanbing Wang (IMP/CAS, Lanzhou)

Stochastic cooling

TUPS17: Parameter Optimization of Ring Slot Coupler Pickup and Kicker for the NICA Stochastic Cooling System, Konstantin Osipov (JINR/VBLHEP, Dubna, Moscow region)

TUPS18: Phase Step Method for Friction Force Measurement in Stochastic Cooling, Ivan Gorelyshev (JINR/VBLHEP, Dubna, Moscow region; Saint Petersburg State University, Saint Petersburg)

TUPS19: Stochastic Cooling Simulation of Rare Isotope Beams on the Spectrometer Ring of the High Energy and High Intensity Accelerator Facility, Xuejing Hu (IMP/CAS, Lanzhou)

New concepts and theoretical advancements in beam cooling

TUPS20: Laser Cooling at Ultrarelativistic Energies and the Gamma Factory Based on the LHC, Alexey Petrenko (CERN, Meyrin)

Wednesday, 25 September 2019

9:00 – 11:00 Session 07, Chairman – Jurgen Dietrich

9:00 Paper ID: WEX01 **Cooling commissioning results of first RF-based electron cooler LEReC**, Alexei V. Fedotov (BNL, Upton, Long Island, New York) ([remote talk](#))

9:40 Paper ID: WEX02 **Magnetized Dynamic Friction Force for Times Short Compared to Plasma Period**, Ilya V. Pogorelov (Radiasoft LLC, Boulder, Colorado) (**invited talk**)

10:20 Paper ID: WEX03 **ELENA Commissioning**, Davide Gamba (CERN, Meyrin) (**invited talk**)

11:00 – 11:30 Coffee Break

11:30 – 13:00 Session 08, Chairman – Kurt Aulenbacher

11:30 Paper ID: WEY01 **DERICA - Prospective Facility for Radioactive Ion Studies in Storage Rings and Electron Collider**, Leonid Grigorenko (JINR, Dubna) (**invited talk**)

12:10 Paper ID: WEA01 **Transverse/Longitudinal Emittance Exchange in MICE**, Daniel Kaplan (Illinois Institute of Technology, Chicago, Illinois)

13:00 – 14:00 Lunch

14:00 – 17:30 Excursion to the BINP facilities (VEPP-4, VEPP-2000, Free Electron Laser, AMS)

18:00 – 22:00 Conference Dinner

Thursday, 26 September 2019

09:00 – 11:00 Session 09, Chairman – Andreas Wolf

9:00 Paper ID: THX01 **The status of the electron cooling system for the NICA collider**, Vasily Parkhomchuk (BINP SB RAS, Novosibirsk) (**invited talk**)

9:40 Paper ID: THX02 **Electron Cooling in The NICA Project: Status and Problems**, Igor Meshkov (JINR, Dubna, Moscow Region) (**invited talk**)

10:20 Paper ID: THA01 **Longitudinal Particle Dynamics and Cooling in NICA Collider**, Natalya Mityanina (BINP SB RAS, Novosibirsk)

11:00 – 11:30 Coffee Break

11:30 – 13:00 Session 10, Chairman – Dieter Prasuhn

11:30 Paper ID: THB01 Design of an 80keV Electron Target at the Spectrometry Ring, Jie Li (IMP/CAS, Lanzhou)

12:10 Paper ID: THB02 Simulation of Electron-Optical Systems of Electron Coolers, Andrey Ivanov (BINP SB RAS, Novosibirsk)

13:00 – 14:00 Lunch

14:00 – 15:20 Session 11, Chairman – Alexander Skrinsky

14:00 Paper ID: THY01 **Laser cooling of relativistic lithium-like O5+ ion beams at the heavy ion storage ring CSRe**, Weiqiang Wen (IMP/CAS, Lanzhou) **(invited talk)**

14:40 Paper ID: THY02 **Progress of stochastic cooling on SRing of HIAF**, Fritz Caspers (CERN, Geneva) **(invited talk)**

15:20 – 15:50 Coffee Break

16:00 City Excursion and Ballet "Romeo and Juliet"

Friday, 27 September 2019

9:00 – 10:00 Möhl medal Awards and Winner Lecture

10:00 – 11:00 Session 12, Chairman – Fritz Caspers

10:00 Paper ID: FRX01 **Recent Developments and Experimental Results From Electron Cooling of a 2.4 GeV/c Proton Beam at COSY**, Philipp Niedermayer (FZJ, Jülich) **(invited talk)**

10:30 Paper ID: FRX02 **Control of stochastic cooling systems**, Nikolay Shurkhno (FZJ, Jülich) **(invited talk)**

11:00 – 11:30 Coffee Break

11:30 – 13:00 Conclusion remarks, Conference closing, Chairman – Vasily Parkhomchuk

13:00 – 14:00 Lunch