

5th ICFA Mini-Workshop on Space Charge 2022

Monday, October 24, 2022

Session: Plenary - Holston Room (8:30 AM - 10:30 AM)

-Conveners: Sarah Cousineau

time	[id] title	presenter
8:40 AM	[40] Welcome and Workshop details	RUISARD, Kiersten
9:00 AM	[39] Intensity effects from GARD perspective	NAGAITSEV, Sergei
9:20 AM	[2] Measuring Beam at the Part Per Million Level - Is it halo?	ALEKSANDROV, Alexander
9:50 AM	[3] Overview and status of space charge simulation codes	VAY, Jean-Luc

Session: Facility Perspectives - Holston Room (11:00 AM - 12:30 PM)

-Conveners: Sergei Nagaitsev

time	[id] title	presenter
11:00 AM	[6] Operational experience of a high intensity circular accelerator with minimum beam loss	SAHA, Pranab SAHA, Pranab
11:25 AM	[4] Understanding the High Intensity Behaviour of the ISIS RCS and the Lessons for ISIS II Designs.	WARSOP, Chris WARSOP, Chris
11:50 AM	[30] Space charge limit and mitigation approaches in synchrotrons	OEF TIGER, Adrian

Session: Rings I - Holston Room (2:00 PM - 3:20 PM)

-Conveners: Jeff Eldred

time	[id] title	presenter
2:00 PM	[7] Resonance compensation for high brightness beams in the CERN PSB	ASVESTA, Foteini
2:20 PM	[8] Longitudinal Optimisations for Space Charge Reduction in the CERN PSB	ALBRIGHT, Simon ALBRIGHT, Simon
2:40 PM	[9] Transverse mode coupling instability with space charge at the CERN SPS	BUFFAT, Xavier

Session: Rings II - Holston Room (3:40 PM - 5:20 PM)

-Conveners: Nicholas Evans

time	[id] title	presenter
3:40 PM	[29] Correction of Vertical Half-Integer Resonance at Fermilab Booster	ELDRED, Jeffrey
4:00 PM	[28] Resonance Correction in the FNAL Recycler	GONZALEZ-ORTIZ, Cristhian
4:20 PM	[27] The Waker Experiment: A wake-building feedback system to study beam instabilities in the presence of strong space charge	MOHSEN, Osama
4:40 PM	[31] Space-charge Modeling in the PIP-II Era Fermilab Booster	OSTIGUY, Jean-Francois

Tuesday, October 25, 2022

Session: Theory - Holston Room (8:40 AM - 9:50 AM)

-Conveners: Alexander Valishev

time	[id] title	presenter
8:40 AM	[23] Nested Airbag Model for Study of Transverse Coherent Instabilities	BALCEWICZ, Michael BALCEWICZ, Michael
9:00 AM	[24] Intrabunch motion in the presence of mode coupling	METRAL, Elias BUFFAT, Xavier
9:20 AM	[25] Longitudinal modes of bunched beams with weak space charge	BUROV, Alexey BUROV, Alexy

Session: Simulation Algorithms I - Holston Room (9:50 AM - 10:30 AM)

-Conveners: Jean-Luc Vay

time	[id] title	presenter
9:50 AM	[18] ALPINE: space charge calculations for exascale computing	ADELMANN, Andreas
10:10 AM	[21] Hybrid Simulation: longitudinal particles, transverse envelope.	JUNG, Paul JUNG, Paul

Session: Simulation Algorithms II - Holston Room (11:00 AM - 12:30 PM)

-Conveners: Jean-Luc Vay

time	[id] title	presenter
11:00 AM	[20] Gridless fast multipole method for space charge effect simulation	ZHANG, He
11:20 AM	[22] pyorbit multi-bunch solver	SHISHLO, Andrei
11:40 AM	[19] Space-charge simulation using a quantum Schrodinger method	QIANG, Ji

Session: Low/medium energy - Holston Room (2:00 PM - 3:15 PM)

-Conveners: Sasha Aleksandrov

time	[id] title	presenter
2:00 PM	[38] Application of machine learning algorithms to the reconstruction of the actual beam profiles from the space charge distorted profiles in ionisation profile monitors	SAPINSKI, Mariusz
2:20 PM	[14] Multi-Beam RFQ injector for LANSCE Accelerator Facility	BATYGIN, Yuri
2:40 PM	[15] Exploring Initial Distributions at the Beam Test Facility	RUISARD, Kiersten

Session: Unconventional Systems - Holston Room (3:45 PM - 5:00 PM)

-Conveners: Kiersten Ruisard

time	[id] title	presenter
3:45 PM	[10] Space charge-dominated beams in IOTA	BANERJEE, Nilanjan
4:05 PM	[11] Simulating the mitigation of space charge effects with quasi integrable optics using a Paul Trap	FLOWERDEW, Jake FLOWERDEW, Jake

4:25 PM	[12] Space charge in high intensity cyclotron design	MAYANI MAYANI, Sonali
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Wednesday, October 26, 2022

Session: Electron beams - Holston Room (8:40 AM - 10:30 AM)

-Conveners: Vasilij Morozov

time	[id] title	presenter
8:40 AM	[16] Microbunched electron cooling for the EIC	STUPAKOV, Gennady
9:00 AM	[17] Space charge effects in wiggler with OPAL-FEL	ADELMANN, Andreas
9:20 AM	[32] PyORBIT Simulations Space Charge effects in a McMillan Lens system	CATHEY, Brandon
9:40 AM	[34] Optimization via adjoint methods of flat-to-round transformers for electron cooling	ANTONSEN, Thomas

Session: Beams by design - Holston Room (11:00 AM - 12:50 PM)

-Conveners: Sarah Cousineau

time	[id] title	presenter
11:00 AM	[36] Self-consistent, angular-momentum-dominated hadron beams for space charge mitigation	HOOVER, Austin
11:20 AM	[35] Feasibility of Implementing Pseudo-Circular Mode Optics in the SNS Accumulator Ring	MOROZOV, Vasilij
11:40 AM	[33] Circular Modes for High intensity and High Luminosity Beams	GILANLIOGULLARI, Onur
12:00 PM	[37] Experimental progress on injection painted self-consistent beams	EVANS, Nicholas