

Session Program

9-13 Oct 2023



HB2023

WGB - Beam Dynamics in Linacs

CERN, 500/1-001 - Main Auditorium

Tuesday 10 October

08:55

WGB - Beam Dynamics in Linacs

Session | **Location:** CERN, 503/1-001 - Council Chamber | **Conveners:** Nicholas Evans, Hongwei Zhao, Frédéric BOULY

08:55-09:15 **"Multi-Beam Operation of LANSCE Accelerator Facility"**

Speaker
Yuri Batygin

09:15-09:25 **Discussion**

09:25-09:45

"30 kW Beam Commissioning of the High-Intensity Proton Accelerator IPHI: Experiments, Simulations and Space Charge"

Speakers
Nicolas Chauvin, Nicolas Chauvin

09:45-09:55 **Discussion**

09:55-10:10

"Effect of three-dimensional quadrupole magnet model on beam dynamics in the FODO line at the Spallation Neutron Source Beam Test Facility"

Speaker
Trent Edward Thompson

10:10-10:20 **Discussion**

10:20-10:35

"The impact of high-dimensional phase space correlations on the beam dynamics in a linear accelerator"

Speaker
Austin Hoover

10:35-10:45 **Discussion**

10:45

11:05

WGB - Beam Dynamics in Linacs

Session | **Location:** CERN, 503/1-001 - Council Chamber | **Conveners:** Frédéric BOULY, Hongwei Zhao, Nicholas Evans

11:05-11:25 **"High availability oriented beam dynamics for CiADS proton linac"**

Speaker
Shuhui Liu

11:25-11:35 **Discussion**

11:35-11:55

"SNS Linac Beam Dynamics: What We Understand, and What We Don't"

Speaker
Andrei P. Shishlo

11:55-12:05 **Discussion**

12:05-12:20 **"Beam physics simulation studies of 70 MeV ISIS injector linac"**

Speaker
Sasan Ahmadiannamin

12:20-12:30 **Discussion**

12:30-12:45

"Evaluating PyORBIT as Unified Simulation Tool for Beam-Dynamics Modeling of the ESS Linac"

Speakers
Juan Esteban Muller, Juan Esteban Muller, Juan Federico Esteban Muller

12:45-12:55 **Discussion**

12:55

Wednesday 11 October

14:20

WGB - Beam Dynamics in Linacs

Session | **Location:** CERN, 500/1-001 - Main Auditorium | **Conveners:**
Frédéric BOULY, Hongwei Zhao, Nicholas Evans

14:20–14:40 **"Synchronous Phases and Transit Time Factors"**

Speaker

Jean-Michel Lagniel

14:40–14:50 **Discussion**

14:50–15:10

"Particle resonances' domination over parametric instabilities and their mitigation"

Speaker

Dong-O Jeon

15:10–15:20 **Discussion**

15:20–15:35 **"The tracking code RF-Track and its application"**

Speakers

Andrea Latina, Andrea Latina

15:35–15:45 **Discussion**

15:45–16:00

"Benchmarking of PATH and RF-Track simulation codes using the Linac4 front-end"

Speakers

Giulia Bellodi, Giulia Bellodi

16:00–16:10 **Discussion**

16:10–16:25

"Differential Algebra for Accelerator Optimization with Truncated Green's Function"

Speaker

Chong Shik Park

16:25–16:35 **Discussion**

16:35

16:55

WGB - Beam Dynamics in Linacs

Session | **Location:** CERN, 500/1-001 - Main Auditorium | **Conveners:**
Hongwei Zhao, Nicholas Evans, Frédéric BOULY

16:55–17:15

"Development of non-destructive beam envelope measurements using BPMs for low beta heavy ion beams in SRF cavities"

Speaker
Takahiro Nishi

17:15-17:25 **Discussion**

17:25-17:45 **"Linac4 Source and Low Energy Experience and Challenges"**

Speakers
Edgar Sargsyan, Edgar Sargsyan

17:45-17:55 **Discussion**

17:55-18:10 **"Beam Loss Studies in the China Spallation Neutron Source Linac"**

Speaker
Ming-Yang Huang

18:10-18:20 **Discussion**

18:20-18:35 **"Beam loss simulations for the proposed TATTOOS beamline at HIPA"**

Speaker
Marco Hartmann

18:35-19:00 **Discussion**

19:00

Thursday 12 October

11:05

WGB - Beam Dynamics in Linacs

Session | **Location:** CERN, 500/1-001 - Main Auditorium | **Conveners:**
Nicholas Evans, Hongwei Zhao, Frédéric BOULY

11:05-11:20

"Measurement of transverse beam emittance for a high-intensity proton injector"

Speaker

DongHwan Kim

11:20-11:30

Discussion

11:30-11:45

"Comparison of longitudinal emittance of various RFQs"

Speaker

Michele Comunian

11:45-11:55

Discussion

11:55-12:10

"Matched Transport of Intense and Coupled Coasting Beams Through Quadrupole Channels"

Speakers

Dr Chen Xiao, Chen Xiao

12:10-12:20

Discussion

12:20-12:35

"Alternating Phase Focusing Under Influence of Space Charge Defocusing"

Speaker

Simon Lauber

12:35-13:00

Discussion

13:00