

<b>HB 2008 DRAFT PROGRAM – August 25-29, 2008</b>	
<b>OPENING PLENARY SESSION</b>	
<p><b>Monday 8:30-10:25</b></p> <p>Stuart Henderson, ORNL, Chair HB2008 (10min)</p> <p>John Galambos, ORNL (30+5 min)</p> <p>Hideaki Hotchi, J-PARC (30+5 min)</p> <p>Elena Shaposhnikova , CERN (30+5 min)</p> <p><b>Monday 10:50-12:35</b></p> <p>Oliver Boine-Frankenheim, GSI (30+5 min)</p> <p>Giorgio Apollinari, FNAL (30+5 min)</p> <p>Lionel Prost, FNAL (30+5 min)</p>	<p>Welcome</p> <p>Beam Intensity Challenges at the Spallation Neutron Source</p> <p>Status of J-PARC Commissioning</p> <p>Intensity Upgrade Plans for the CERN/LHC Injector Complex</p> <p>High-Intensity Challenges of the FAIR Project</p> <p>Project X as a way to intensity frontier physics</p> <p>The State of the Art in Hadron Beam Cooling</p>
<b>Working Group A: Beam Dynamics in High-Intensity Circular Machines: theory, codes, simulations and experiments</b>	
<b>Conveners: Rick Baartman (TRIUMF), Giuliano Franchetti (GSI), Elias Metral (CERN)</b>	
<p><b>1. Instabilities and Impedances</b></p> <p><b>Monday 14:00-15:50</b></p> <p>Yong-Ho Chin, J-PARC (30 min)</p>	<p>Impedance and instability issues of the J-PARC rings</p>

<p>Benoit Salvant, EPFL University (20 min)</p> <p>Federico Roncarolo, Cockcroft Institute/ University of Manchester (UMAN) (20 min)</p> <p>Vadim Ptitsyn, BNL (20 min)</p>	<p>Transverse Mode Coupling Instability in the CERN SPS: Comparing HEADTAIL Simulations with Beam Measurements</p> <p>Measurement of the transverse resistive-wall impedance of a LHC graphite collimator at low frequency</p> <p>Crossing transition at RHIC</p>
<p><b>2. Instabilities and Space Charge</b></p> <p><b>Monday 16:10-18:00</b></p> <p>Valeri Lebedev, BNL (30 min)</p> <p>Alexey Burov, FNAL (20 min)</p> <p>Vladimir Kornilov, GSI (20 min)</p> <p>James Amundson, FNAL (20 min)</p>	<p>Effect of space charge on instabilities</p> <p>Coherent Synchro-Betatron Resonance in the Booster</p> <p>Simulation study of transverse coherent instabilities in intense bunches with space charge and image currents</p> <p>Simulation studies of the interplay between space-charge and impedance effects for Project X</p>
<p><b>3. Instabilities and Electron-Cloud</b></p> <p><b>Tuesday 14:00-15:50</b></p> <p>Sarah Cousineau, ORNL (30 min)</p> <p>Miguel Furman, LBNL (20 min)</p>	<p>Instability observations in the SNS Accumulator Ring</p> <p>Electron-Cloud Build-up simulations for FNAL Main Injector</p>

<p>Bob Macek, LANL (20 min)</p> <p>Robert Zwaska, FNAL (20 min)</p>	<p>Recent observations, Experiments and Simulations of Electron Cloud Effects at the Los Alamos Proton Storage Ring</p> <p>Electron cloud studies in FNAL Main Injector</p>
<p><b>4. Space charge, resonance and beam loss =&gt; Theory and simulations (experiment)</b></p> <p><b>Tuesday 16:10-18:00</b></p> <p>Ingo Hofmann, GSI (30 min)</p> <p>Xiaoying Pang, Indiana University (20 min)</p> <p>Giuliano Franchetti, GSI (20 min)</p> <p>Andreas Adelman, PSI (20-30 min)</p>	<p>Space charge and resonances in high intensity beams (linac + ring)</p> <p>Emittance growth scaling laws in resonance crossing</p> <p>Measurements and simulations of beam loss with space charge in the GSI synchrotron SIS-18</p> <p>State of the art of high-intensity simulation codes: new algorithms and methods for rings</p>
<p><b>5. Space charge, resonance and beam loss =&gt; Space charge resonance and beam loss</b></p> <p><b>Wednesday 8:30-10:20</b></p> <p>Alexander Molodzhentsev, J-PARC (30 min)</p> <p>Michel Martini, CERN (20 min)</p>	<p>Simulation of resonances and beam loss for the J-PARC Main Ring</p> <p>Evolution beam parameters during injection, acceleration and storage of the high brightness beams envisaged for the Linac4 injection into the PS Booster</p>

<p>Jeff Holmes, ORNL (20 min)</p> <p>Christopher Warsop, RAL (20 min)</p>	<p>High intensity effects in the SNS Accumulator Ring</p> <p>Space Charge and High-Intensity studies on ISIS</p>
<p><b>6. Space charge and IBS</b></p> <p><b>Wednesday 10:40-12:30</b></p> <p>Alexei Fedotov, BNL (30 min)</p> <p>Elias Metral, CERN (20 min)</p> <p>Eduard Pozdeyev, BNL (20 min)</p> <p>Chao Wu, U. Maryland (20 min)</p>	<p>IBS suppression lattice in RHIC: theory and experimental verification</p> <p>Achievable space-charge tune shift with long lifetime in the CERN PS and SPS</p> <p>Space charge effect in isochronous rings</p> <p>Resonance Analysis of Beams with Intense Space Charge in the University of Maryland Electron Ring (UMER)</p>
<p><b>Thursday 8:30-10:20</b></p> <p>King B. Ng, FNAL (20 min)</p> <p>Jianjun Yang, Tsinghua University (20 min)</p> <p>Dan Abell, Tech-X (20 min)</p>	<p>Landau Damping of Space-Charge Dominated Fermilab Booster Beam</p> <p>Modeling high intensity beam in cyclotron</p> <p>Simulation of Space-Charge Effects in an FFAG Using PTC</p>

<b>Working Group B: Beam Dynamics in High-Intensity Linacs: theory, codes, simulations and experiments</b>	
<b>Conveners: Alexander Aleksandrov (ORNL), Ingo Hofmann (GSI), Jean-Michel Lagniel (GANIL)</b>	
<b>Tuesday 8:30-10:20</b>	
Rob Ryne, LBNL (30 min)	LINAC Beam Dynamics Codes: State of the Art and Perspectives
Lars Groening, GSI (30 min)	Simulation of Experiments on Transverse rms-emittance growth along an Alvarez DTL
Jin Xu, ANL (20 min)	Simulations of High-Intensity Beams Using BG/P Supercomputer at ANL
Andrei Shishlo, ORNL (20 min)	Using Online Single Particle Model for SNS Accelerator Tuning
<b>Tuesday 10:40-12:30</b>	
Yan Zhang, ORNL (30 min)	Recent Beam Studies of the SNS Linac
Masanori Ikegami, J-PARC (30 min)	Measurement and Simulations of the J-PARC Linac
Discussion: Simulation and Operating Linacs (50 min)	
<b>Thursday 8:30-10:20</b>	
Peter Ostroumov, ANL (30 min)	Physics Design of Front Ends for Superconducting Ion Linacs
Rudolf Tiede, Frankfurt (30 min)	Konus Beam Dynamics Designs Using H-Mode Cavities
Dong-O Jeon, ORNL (30 min)	Prediction of a $4\nu=1$ Resonance of a High-Intensity Linac

<p>Gianluigi Clemente, GSI (20 min)</p> <p><b>Thursday 10:40-12:30</b></p> <p>Frank Gerigk, CERN (30 min)</p> <p>Jacob Rodnizki, SOREQ NRC (20 min)</p> <p>Discussion: New Developments in Beam Dynamics in Linacs (60 min)</p>	<p>Investigation of the Beam Dynamics Layout of the FAIR Proton Injector</p> <p>Beam Dynamics in LINAC4 at CERN</p> <p>Lattice Beam Dynamics Study at Low-beta for SARAF/EURISOL Driver 40/60 MeV, 4 mA d/p superconducting linac</p>
<p><b>Working Group C: Accelerator System Design: Injection, Extraction and Collimation</b> <b>Conveners: Deepak Raparia (BNL), Sarah Cousineau (ORNL)</b></p>	
<p><b>1. Injection and Extraction</b></p> <p><b>Wednesday 14:00-16:00</b></p> <p>Mike Plum, ORNL (30 min)</p> <p>Pranab Saha, J-PARC (30 min)</p> <p>Viatcheslav Danilov, ORNL (30 min)</p> <p>David Johnson, FNAL (30 min)</p>	<p>SNS Injection and Extraction Systems Issues and Solutions</p> <p>Experience with J-PARC Injection and Extraction Systems</p> <p>Future Prospects for Laser Stripping Injection in High-Intensity Machines</p> <p>Challenges Associated with 8 GeV Injection in the Fermilab Project-X Proton Driver</p>

<p><b>Wednesday 16:20-18:00</b></p> <p>Isao Sugai, KEK (30 min)</p> <p>Discussion (70 min)</p>	<p>Lifetime Measurement of HBC Foil and Nanocrystalline Diamond Foil by use of the KEK 650 keV High-Intensity DC H- Ion Beam</p>
<p><b>2. Collimation</b></p> <p><b>Thursday 16:10-18:00</b></p> <p>Kazami Yamamoto, J-PARC (30 min)</p> <p>Bruce Brown, FNAL (30 min)</p> <p>Jingyu Tang, CSNS (30 min)</p> <p>Discussion (20 min)</p>	<p>J-PARC Collimation System Experience</p> <p>Performance of the New FNAL Main Injector Collimation System</p> <p>Collimation of H- Beam Transverse Halo by Triplet and Foil Scraping at CSNS</p>
<p><b>Working Group D: Commissioning Strategies, Operations and Performance, Beam Loss Management, Activation, Machine Protection</b>  <b>Conveners: John Galambos (ORNL), Mike Seidel (PSI), Tadashi Koseki (KEK)</b></p>	
<p><b>1. Operations</b></p> <p><b>Monday 14:00-16:00</b></p> <p>Mike Seidel, PSI (30 min)</p> <p>Masanori Ikegami, J-PARC (30 min)</p> <p>John Galambos, ORNL (30 min)</p> <p>David Findlay, ISIS (30 min)</p>	<p>High Power Proton Beam Operation at PSI</p> <p>Transition from Commissioning to Operation in the J-PARC Linac</p> <p>The SNS Power Ramp-up Experience</p> <p>Operational Experience with High Beam Powers at ISIS</p>

<p><b>Monday 16:10-18:10</b></p> <p>Larry Rybarcyk, LANL (30 min)</p> <p>Deepak Raparia, BNL (30 min)</p> <p>Bruce Brown, FNAL (30 min)</p> <p>Thomas Weiler, CERN (30 min)</p>	<p>High Power Operational Experience with the LANSCE Linac</p> <p>High Power Operational Experience of the AGS and Booster</p> <p>Fermilab Main Injector High Power Operation and Future Plans</p> <p>Beam Cleaning and Beam Loss Control at LHC</p>
<p><b>2. Activation Buildup Modeling</b></p> <p><b>Wednesday 8:30-9:30</b></p> <p>Daniela Kiselev, PSI (30 min)</p> <p>Irina Popova, ORNL (30 min)</p>	<p>Activation of Targets and Accelerator Components at PSI – a Comparison of Simulation and Measurement</p> <p>Residual Dose Rate Analyses For SNS Accelerator Facility</p>
<p><b>3. Commissioning</b></p> <p><b>Wednesday 9:30 – 10:30</b></p> <p>Tadashi Koseki, J-PARC (30 min)</p> <p>Sam Childress, FNAL (30 min)</p>	<p>Beam Commissioning of J-PARC Main Ring</p> <p>The Numl Beam at Fermilab: Successes and Challenges</p>

Updated August 22, 2008

<b>Wednesday 10:40 – 12:30</b>  Andrei Shishlo, ORNL (30 min)  Discussion and Summary (80 min)	SNS Beam Commissioning Tools and Experience
<b>Thursday 10:40-12:30</b>  Discussion and Summary (110 min)	
<b>Working Group E: High-Intensity Linacs and Rings: New Facilities and Concepts</b> <b>Conveners: Peter Ostroumov (ANL), Frank Gerigk (CERN)</b>	
<b>1. Recent Trends in proton and ion beam facility design</b>  <b>Tuesday 14:00-15:50</b>  Vadim Ptitsyn, BNL (15+7 min)  Yuhong Zhang, JLab (15+7 min)  Sheng Wang, IHEP (15+7 min)  Peter Spiller, GSI (15+7 min)  Valeri Lebedev, FNAL (15+7 min)	eRHIC conceptual design  ELIC conceptual design  The R&D status for China Spallation Neutron Source Linac  The superconducting SIS 100 synchrotron for high intensity proton and heavy ion beams.  Project X Beam Physics Issues
<b>2. Key concepts for future high-intensity facilities</b>  <b>Tuesday 16:10-18:00</b>  Yannis Papaphillippou, CERN (15+7 min)	Lattice Options for PS2

<p>Frank Gerigk, CERN (15+7 min)</p> <p>Charles Ankenbrandt, FNAL (15+7 min)</p> <p>Bob Webber, FNAL (15+7)</p> <p>Akiro Sato, Osaka University (15+7)</p>	<p>Choice of frequency, gradient, and temperature for a Superconducting Proton Linac</p> <p>Comparison of Proton Driver schemes for Muon Collider and Neutrino Factory</p> <p>Overview and Status of the Fermilab High-Intensity Neutrino Source R&amp;D Program</p> <p>High-Intensity Beams with FFAGs</p>
<p><b>3. Existing facilities, commissioning results &amp; hardware</b></p> <p><b>Wednesday 16:10-18:00</b></p> <p>Hiroki Okuno, RIKEN (15+7 min)</p> <p>Ji- Ho Jang, KAERI (15+7 min)</p> <p>Dan Berkovits, SOREQ (15+7 min)</p> <p>Larry Rybarcyk, LANL (15+7 min)</p> <p>Bob Wagner, FNAL (15+7 min)</p>	<p>Heavy ion accelerators for RIKEN RI beam factory and upgrade plans</p> <p>The Korean Proton Engineering Frontier Project</p> <p>The 40-MeV proton/deuteron SC linac at SARAF</p> <p>Compact Linac for Deuterons</p> <p>High gradient test of SC single-spoke resonators for HINS</p>
<p><b>Working Group F: Beam Diagnostics and Instrumentation for High-Intensity Beams</b>  <b>Conveners: Manfred Wendt (FNAL), Takeshi Toyama (KEK)</b></p>	
<p><b>Tuesday 8:30-10:20</b></p> <p>Saeed Assadi, ORNL (17+10 min)</p>	<p>SNS Optical Projects and Laser Profile Monitor System</p>

Updated August 22, 2008

<p>Manfred Wendt, FNAL (17+10 min)</p> <p>Takeshi Toyama, KEK (17+10 min)</p> <p>Alexander Zhukov, ORNL (17+10 min)</p>	<p>Beam instrumentation for future High-Intensity hadron accelerators at Fermilab</p> <p>Beam Loss Monitoring Using Proportional Counters at J-PARC</p> <p>SNS Beam Loss Monitor System Overview: Detectors, Measurements, Simulations</p>
<p><b>Tuesday 10:40-12:30</b></p> <p>Bill Pellico, FNAL (17+10 min)</p> <p>Timofey Gorlov, ORNL (17+10 min)</p> <p>Jürgen Pozimski, Imperial College (17+10 min)</p> <p>Ivan Podadera-Aliseda, CIEMAT (17+10 min)</p>	<p>Fermilab Booster Diagnostics, Monitors and Software for Operational Control of Residual Radiation</p> <p>Computation of Space-Charge Effect in Allison Scanner and its Application to the Measurement of Emittance</p> <p>Beam Diagnostics at the RAL Front-End Test Stand – First Results and New Ideas</p> <p>HEBT Diagnostics for Commissioning, Control and Characterization of the IFMIF-EVEDA</p>
<p><b>Wednesday 14:00 – 15:50</b></p> <p>Craig Deibele, ORNL (17+10 min)</p> <p>Steve Payne, RAL (17+10 min)</p> <p>Kenichirou Satou, J-PARC (17+10 min)</p>	<p>Status and Implementation of Wideband Feedback System for e-p Instabilities in Long Bunch Proton Machines</p> <p>Beam Diagnostics at ISIS</p> <p>Beam Diagnostic System of the Main Ring Synchrotron of the J-PARC</p>

Sam Childress, FNAL (17+10 min)	Beam Diagnostics Required to Safely Transport and Target a 2 MW 120 GeV Proton Beam
<b>Joint Session Working Groups A+B+E</b>	
<b>Thursday 14:00-15:50</b>  Sheng Wang, IHEP (27 min)  Brahim Mustapha, ANL (27 min)  John Thomason, RAL (27 min)  Discussion (27 min)  <b>Thursday 16:10-18:00</b>  Discussion: Beam Dynamics (110 min)	The Beam Dynamics Design for the China Spallation Neutron Source RCS  Development of Large-Scale Optimization Tools for Beam Tracking Codes  Megawatt Upgrades for the ISIS Facility
<b>Joint Session Working Groups D+F</b>	
<b>Thursday 14:00-15:50</b>  Discussion: Operations and Beam Diagnostics (110 min)	

<b>Poster Session</b>	
<b>Working Group A: Beam Dynamics in High-Intensity Circular Machines</b>	
Alexei Fedotov	Beam Dynamics Limits for Low-Energy RHIC Operation
Christos Papadopoulos, U. Maryland	Effects of Initial Particle Distributions on the Creation and Propagation of Halos in Intense Beams
David Bruhwiler, Tech-X	Simulation of Coherent Electron Cooling for High-Intensity Hadron Colliders
Meiqin Xiao, FNAL	Measurements and Corrections of the Recycler Linear Lattice at Fermilab
Valeri Lebedev, FNAL	Coupling and its Effects on Beam Dynamics
Zhengzheng Liu, Indiana University	Orbit Response Matrix Analysis Applied at SNS Ring
<b>Working Group B: Beam Dynamics in High-Intensity Linear Accelerators</b>	
Yan Zhang, ORNL	Phase Damping in the SNS Linac
Yan Zhang, ORNL	IMPACT Simulation and the SNS Linac Beam
<b>Working Group C: Accelerator System Design</b>	
Yannis Papaphilippou, CERN	Efficiency and Robustness of the PS2 Collimation System
Thomas Spickermann, LANL	Comparison of Carbon Stripper Foils Under Operational

<p>Jian-Guang Wang, ORNL</p> <p><b>Working Group D: Commissioning Strategies, Operations and Performance</b></p> <p>Iratxe Ariz, Fundación Tekniker</p> <p>Ibon Bustinduy, University of Basque Country</p> <p><b>Working Group E: High-Intensity Linacs and Rings, New Facilities and Concepts</b></p> <p><b>Working Group F: Beam Diagnostics and Instrumentation for High-Intensity Beams</b></p> <p>Chris Allen, ORNL</p>	<p>Conditions at the Los Alamos Proton Storage Ring</p> <p>3D Simulation Studies of Beam Dynamic Issues in SNS Ring</p> <p>European Spallation Source</p> <p>A Superconducting Proton Linac for the ESS-Bilbao Accelerator</p> <p>Extracting Information Content within Noisy, Sampled Profile Data from Charged Particle</p>
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