

41st ICFA Advanced Beam Dynamics Workshop on Energy Recovery Linacs



Report of Contributions

Contribution ID: 1

Type: **not specified**

ERL07 Working Group 1 Summary: Electron Guns and Injector Designs

Friday 25 May 2007 11:00 (30 minutes)

Author: Dr BURRIL, Andrew (BNL)

Co-author: Dr POELKER, Matt (JLab)

Presenter: Dr BURRIL, Andrew (BNL)

Session Classification: WG REPORTS

Contribution ID: 2

Type: **not specified**

ERL07 Working Group 2 Summary: Optics and Beam Transport

Friday 25 May 2007 11:30 (30 minutes)

Author: Dr HAJIMA, Ryoichi (Japan Atomic Energy Agency (JAEA))

Co-author: Dr OWEN, Hywel (CCLRC/DL/ASTeC)

Presenter: Dr HAJIMA, Ryoichi (Japan Atomic Energy Agency (JAEA))

Session Classification: WG REPORTS

Contribution ID: 3

Type: **not specified**

ERL07 Working Group 3 Summary: Superconducting RF and RF Control for Energy-Recovery Linacs

Friday 25 May 2007 12:00 (30 minutes)

Authors: Dr SIMROCK, Stefan (Deutsches Elektronen-Synchrotron (DESY)); Dr SMITH, Todd (Stanford University)

Co-author: Dr RIMMER, Robert (Jefferson Lab)

Presenter: Dr SMITH, Todd (Stanford University)

Session Classification: WG REPORTS

Contribution ID: 10

Type: **not specified**

Development of an Electron Gun for the ERL Light Source in Japan

Tuesday 22 May 2007 11:00 (30 minutes)

Author: Dr NISHIMORI, Nobuyuki (Japan Atomic Energy Agency (JAEA))

Co-authors: IIJIMA, Hokuto (Japan Atomic Energy Agency (JAEA)); Dr HAJIMA, Ryoichi (Japan Atomic Energy Agency (JAEA)); NAGAI, Ryoji (Japan Atomic Energy Agency (JAEA)); NISHITANI, Tomohiro (RIKEN)

Presenter: Dr NISHIMORI, Nobuyuki (Japan Atomic Energy Agency (JAEA))

Session Classification: DC Guns

Contribution ID: 11

Type: **not specified**

QE Measurements of a Nb-Pb SRF Photoinjector

*Wednesday 23 May 2007 14:00 (20 minutes)***Author:** Dr SMEDLEY, John (Brookhaven National Laboratory (BNL))

Co-authors: MUHS, A (Deutsches Elektronen-Synchrotron (DESY)); SOLTAN, A (The Andrzej Soltan Institute for Nuclear Studies Centre Swierk); KLINKE, Daniel (Deutsches Elektronen-Synchrotron (DESY)); KOSTIN, Denis (Deutsches Elektronen-Synchrotron (DESY)); SEKUTOWICZ, Jacek (Deutsches Elektronen-Synchrotron (DESY)); IVERSEN, Jens (Deutsches Elektronen-Synchrotron (DESY)); WARREN, John (Brookhaven National Laboratory (BNL)); STRZYZEWSKI, Pawel (The Andrzej Soltan Institute for Nuclear Studies Centre Swierk); KNEISEL, Peter (Thomas Jefferson National Accelerator Facility (JLAB)); RAO, Triveni (Brookhaven National Laboratory (BNL)); MÖLLER, Wolf-Dietrich (Deutsches Elektronen-Synchrotron (DESY))

Presenter: Dr SMEDLEY, John (Brookhaven National Laboratory (BNL))**Session Classification:** Joint WG1, WG3: SRF Guns

Contribution ID: 12

Type: **not specified**

Status of the ERLP Photoinjector Drive Laser

Thursday 24 May 2007 11:00 (30 minutes)

Author: Dr JONES, Lee (ASTeC, STFC Daresbury Laboratory)

Presenter: Dr JONES, Lee (ASTeC, STFC Daresbury Laboratory)

Session Classification: Fifth Session of WG 1 - Injectors

Contribution ID: 13

Type: **not specified**

Drive Lasers for Photoinjectors

Monday 21 May 2007 15:45 (30 minutes)

Author: Mr WILL, Ingo (Max Born Institute)

Presenter: Mr WILL, Ingo (Max Born Institute)

Session Classification: Opening Plenary

Contribution ID: 14

Type: **not specified**

Optics Issues for the 4GLS High-Current ERL

Tuesday 22 May 2007 09:00 (30 minutes)

Author: Dr OWEN, Hywel (ASTeC, STFC Daresbury Laboratory)

Co-authors: Dr MURATORI, Bruno (ASTeC, STFC Daresbury Laboratory); Dr WILLIAMS, Peter (ASTeC, STFC Daresbury Laboratory)

Presenter: Dr OWEN, Hywel (ASTeC, STFC Daresbury Laboratory)

Session Classification: Optics Issues for Ongoing ERL Projects (WG2)

Contribution ID: 15

Type: **not specified**

Investigation of Bunch-Gap Effects for Curing Ion Trapping in Energy Recovery Linacs

Tuesday 22 May 2007 14:30 (30 minutes)

Author: Dr SAKANAKA, Shogo (High Energy Accelerator Research Organisation (KEK))

Presenter: Dr SAKANAKA, Shogo (High Energy Accelerator Research Organisation (KEK))

Session Classification: Joint WG2, WG4: Beam Loss and Stability Issues

Contribution ID: 16

Type: **not specified**

Study of Resistive-Wall Beam Breakup

Tuesday 22 May 2007 15:00 (30 minutes)

Author: Prof. NAKAMURA, Norio (Institute for Solid State Physics, University of Tokyo)

Presenter: Prof. NAKAMURA, Norio (Institute for Solid State Physics, University of Tokyo)

Session Classification: Joint WG2, WG4: Beam Loss and Stability Issues

Contribution ID: 17

Type: **not specified**

Beam Instrumentation for the KEK ERL Test Facility

Tuesday 22 May 2007 16:30 (30 minutes)

Author: Dr TOBIYAMA, Makoto (High Energy Accelerator Research Organisation (KEK))

Co-authors: HAGA, Kaiichi (High Energy Accelerator Research Organisation (KEK)); FURUKAWA, Kazuro (High Energy Accelerator Research Organisation (KEK)); SATOH, M (High Energy Accelerator Research Organisation (KEK)); TADANO, M (High Energy Accelerator Research Organisation (KEK)); Prof. NAKAMURA, Norio (Institute for Solid State Physics, University of Tokyo); HIRAMATSU, Shigenori (High Energy Accelerator Research Organisation (KEK)); NAITO, Takashi (High Energy Accelerator Research Organisation (KEK)); OBINA, Takashi (High Energy Accelerator Research Organisation (KEK)); KASUGA, Toshio (High Energy Accelerator Research Organisation (KEK)); MITSUHASHI, Toshiyuki (High Energy Accelerator Research Organisation (KEK))

Presenter: Dr TOBIYAMA, Makoto (High Energy Accelerator Research Organisation (KEK))

Session Classification: Joint WG2, WG4: Beam Loss and Stability Issues

Contribution ID: **18**

Type: **not specified**

Dual-Axis Energy Recovery Linac

Thursday 24 May 2007 11:30 (30 minutes)

Author: Dr WANG, Chun-xi (Argonne National Laboratory (ANL))

Co-authors: Dr LEWELLEN, John (Argonne National Laboratory (ANL)); NOONAN, John (Argonne National Laboratory (ANL))

Presenter: Dr WANG, Chun-xi (Argonne National Laboratory (ANL))

Session Classification: Joint WG2, WG3: Optics with Superconducting RF

Contribution ID: **19**

Type: **not specified**

4GLS Cavity Considerations for BBU

Thursday 24 May 2007 12:30 (30 minutes)

Author: Ms WOOLDRIDGE, Emma (ASTeC, STFC Daresbury Laboratory)

Co-author: Dr MURATORI, Bruno (ASTeC, STFC Daresbury Laboratory)

Presenter: Ms WOOLDRIDGE, Emma (ASTeC, STFC Daresbury Laboratory)

Session Classification: Joint WG2, WG3: Optics with Superconducting RF

Contribution ID: 20

Type: **not specified**

The Status of the Daresbury Energy Recovery Linac Prototype (ERLP)

Monday 21 May 2007 16:15 (20 minutes)

Author: Ms SMITH, Susan (ASTeC, STFC Daresbury Laboratory)

Presenter: Ms SMITH, Susan (ASTeC, STFC Daresbury Laboratory)

Session Classification: Opening Plenary

Contribution ID: 21

Type: **not specified**

Injection System of 4GLS Light Source

Tuesday 22 May 2007 11:30 (20 minutes)

Author: Dr MILITSYN, Boris (ASTeC, STFC Daresbury Laboratory)

Presenter: Dr MILITSYN, Boris (ASTeC, STFC Daresbury Laboratory)

Session Classification: DC Guns

Contribution ID: 22

Type: **not specified**

Development of a High-Brightness VHF Electron Source at LBNL

Tuesday 22 May 2007 14:00 (20 minutes)

Author: Dr LIDIA, Steve (Lawrence Berkeley National Laboratory (LBNL))

Co-authors: Dr SANNIBALE, F (Lawrence Berkeley National Laboratory (LBNL)); Dr STAPLES, J (Lawrence Berkeley National Laboratory (LBNL)); Dr WELLS, R (Lawrence Berkeley National Laboratory (LBNL)); Dr VIROSTEK, S (Lawrence Berkeley National Laboratory (LBNL))

Presenter: Dr LIDIA, Steve (Lawrence Berkeley National Laboratory (LBNL))

Session Classification: NCRF Guns

Contribution ID: 23

Type: **not specified**

Beam Parameter Simulation of the Rossendorf SRF Gun and Comparison with Other SRF Photoinjectors

Wednesday 23 May 2007 09:00 (20 minutes)

Author: Dr STAUFENBIEL, Friedrich (FZD)

Co-authors: Dr ARNOLD, A (FZD); Dr JANSSEN, D (FZD); Dr LIPKA, D (Deutsches Elektronen-Synchrotron (DESY)); Mr TEICHERT, Jochen (FZD); Dr MICHEL, P (FZD); Dr XIANG, R (FZD); Dr KAMPS, Torsten (Berliner Elektronenspeicherring-Gesellschaft für Synchrotronstrahlung m.b.H. (BESSY)); Dr LEHNERT, U (FZD)

Presenter: Dr STAUFENBIEL, Friedrich (FZD)

Session Classification: Joint WG1, WG2: Computational Aspects

Contribution ID: 24

Type: **not specified**

Half Cell Length Optimization of Photocathode RF Gun

Wednesday 23 May 2007 09:20 (20 minutes)

Author: Dr HAN, Jang-Hui (Deutsches Elektronen-Synchrotron (DESY))

Co-author: Dr FLOTTMANN, Klaus (Deutsches Elektronen-Synchrotron (DESY))

Presenter: Dr HAN, Jang-Hui (Deutsches Elektronen-Synchrotron (DESY))

Session Classification: Joint WG1, WG2: Computational Aspects

Contribution ID: 25

Type: **not specified**

Status of the Superconducting RF Photo-Injector Development

Wednesday 23 May 2007 14:20 (20 minutes)

Author: Mr TEICHERT, Jochen

Co-authors: Dr ARNOLD, A (FZD); Dr MATHEISEN, A (Deutsches Elektronen-Synchrotron (DESY)); Dr HORST, B v d (Deutsches Elektronen-Synchrotron (DESY)); Dr SCHNEIDER, Ch (FZD); Dr JANSSEN, D (FZD); Dr LIPKA, D (Deutsches Elektronen-Synchrotron (DESY)); Dr STAUFENBIEL, Friedrich (FZD); Dr KLEMZ, G (Max Born Institute); Dr BUETTIG, H (FZD); Mr WILL, Ingo (Max Born Institute); Dr STEPHAN, J (IKS); Dr MOELLER, K (FZD); Dr MOELLER, K (FZD); Dr JUSTUS, M (FZD); Dr MICHEL, P (FZD); Dr MURCEK, P (FZD); Dr VOM STEIN, P (ACCEL Instruments); Dr SCHURIG, R (FZD); Dr XIANG, R (FZD); Dr KAMPS, Torsten (Berliner Elektronenspeicherring-Gesellschaft für Synchrotronstrahlung m.b.H. (BESSY)); Dr LEHNERT, U (FZD); Dr VOLKOV, V (Budker Institute of Nuclear Physics); Dr LEHMANN, W -D (SGE)

Presenter: Mr TEICHERT, Jochen

Session Classification: Joint WG1, WG3: SRF Guns

Contribution ID: 26

Type: **not specified**

Initial 3D VORPAL Simulations for RF Electron Gun Modeling

Thursday 24 May 2007 11:30 (20 minutes)

Author: Dr DIMITROV, Dimitre (Tech-X Corporation)

Co-authors: Dr KAYRAN, D (Brookhaven National Laboratory (BNL)); Dr BRUHWILER, D L (Tech-X Corporation); Dr SMITHE, D (Tech-X Corporation); Prof. BEN-ZVI, Ilan (Brookhaven National Laboratory (BNL)); Dr CARY, J R (Tech-X Corporation); Dr MESSMER, P (Tech-X Corporation)

Presenter: Dr DIMITROV, Dimitre (Tech-X Corporation)

Session Classification: Fifth Session of WG 1 - Injectors

Contribution ID: 27

Type: **not specified**

Experience with Fiber-Based Drive Lasers at CEBAF-Jefferson Lab and High Current Lifetime Studies

Thursday 24 May 2007 11:50 (20 minutes)

Author: Dr POELKER, Matt (JLab)

Presenter: Dr POELKER, Matt (JLab)

Session Classification: Fifth Session of WG 1 - Injectors

Contribution ID: 28

Type: **not specified**

Lattice and Optics Designs of the Test ERL in Japan

Tuesday 22 May 2007 09:30 (20 minutes)

Author: Dr HARADA, K (High Energy Accelerator Research Organisation (KEK))

Co-authors: Dr TAKAKI, H (Institute for Solid State Physics, University of Tokyo); Dr SATOH, K (High Energy Accelerator Research Organisation (KEK)); Dr TOBIYAMA, Makoto (High Energy Accelerator Research Organisation (KEK)); Dr SHIMADA, Miho (UVSOR, Institute for Molecular Science); Prof. NAKAMURA, Norio (Institute for Solid State Physics, University of Tokyo); Dr HAJIMA, Ryoichi (Japan Atomic Energy Agency (JAEA)); Dr SAKANAKA, Shogo (High Energy Accelerator Research Organisation (KEK)); Dr KASUGA, T (High Energy Accelerator Research Organisation (KEK)); Dr MIYAJIMA, T (High Energy Accelerator Research Organisation (KEK)); Dr OZAKI, T (High Energy Accelerator Research Organisation (KEK)); Dr KOBAYASHI, Y (High Energy Accelerator Research Organisation (KEK))

Presenter: Dr SAKANAKA, Shogo (High Energy Accelerator Research Organisation (KEK))

Session Classification: Optics Issues for Ongoing ERL Projects (WG2)

Contribution ID: 29

Type: **not specified**

Beam Loss Issues for an ERL Upgrade to APS

Tuesday 22 May 2007 17:00 (20 minutes)

Author: Mr YAO, Chihyuan (Argonne National Laboratory (ANL))

Co-authors: Dr XIAO, Aimin (Argonne National Laboratory (ANL)); Dr EMERY, Louis (Argonne National Laboratory (ANL)); Dr BORLAND, Michael (Argonne National Laboratory (ANL))

Presenter: Dr BORLAND, Michael (Argonne National Laboratory (ANL))

Session Classification: Joint WG2, WG4: Beam Loss and Stability Issues

Contribution ID: 30

Type: **not specified**

Bunch Compression and the Emittance Growth due to CSR

Wednesday 23 May 2007 14:00 (20 minutes)

Author: Dr SHIMADA, Miho (UVSOR, Institute for Molecular Science)

Co-authors: Dr HARADA, K (High Energy Accelerator Research Organisation (KEK)); Dr HAJIMA, Ryoichi (Japan Atomic Energy Agency (JAEA))

Presenter: Dr SHIMADA, Miho (UVSOR, Institute for Molecular Science)

Session Classification: Optics Developments

Contribution ID: **31**

Type: **not specified**

ERL Related HOM Measurements at ELBE

Thursday 24 May 2007 13:00 (20 minutes)

Author: Dr BURT, Graeme (The Cockcroft Institute)

Co-authors: Mr SPENCER, Ben (The Cockcroft Institute); Mr BEARD, Carl (ASTeC, STFC Daresbury Laboratory); Dr SCHNEIDER, Ch (FZD); Ms WOOLDRIDGE, Emma (ASTeC, STFC Daresbury Laboratory); Dr STAATS, G (FZD); Dr BUETTIG, H (FZD); Mr TEICHERT, Jochen; Mr ORRETT, Joe (ASTeC, STFC Daresbury Laboratory); Dr MICHEL, P (FZD); Mr MCINTOSH, Peter (ASTeC, STFC Daresbury Laboratory); Dr SCHURIG, R (FZD); Dr LEHNERT, U (FZD)

Presenter: Dr BURT, Graeme (The Cockcroft Institute)

Session Classification: Joint WG2, WG3: Optics with Superconducting RF

Contribution ID: 32

Type: **not specified**

Analysis of HOM-BBU with Newly Designed Cavities for a Multi-GeV ERL Light Source

Thursday 24 May 2007 13:20 (20 minutes)

Author: Dr HAJIMA, Ryoichi (Japan Atomic Energy Agency (JAEA))

Presenter: Dr HAJIMA, Ryoichi (Japan Atomic Energy Agency (JAEA))

Session Classification: Joint WG2, WG3: Optics with Superconducting RF

Contribution ID: 33

Type: **not specified**

Review of Cryomodules and SRF Challenges for Light Source Energy Recovery Linacs

Tuesday 22 May 2007 09:00 (20 minutes)

Author: Dr NASSIRI, Alireza (Argonne National Laboratory (ANL))

Presenter: Dr NASSIRI, Alireza (Argonne National Laboratory (ANL))

Session Classification: Cryomodules

Contribution ID: 34

Type: **not specified**

Development of a 1.3GHz 9-Cell Superconducting Cavity for the Energy Recovery Linac

Tuesday 22 May 2007 14:00 (20 minutes)

Author: Dr SAKAI, Hiroshi (Institute for Solid State Physics, University of Tokyo)

Co-authors: Dr SHINOE, K (Institute for Solid State Physics, University of Tokyo); Dr UMEMORI, K (High Energy Accelerator Research Organisation (KEK)); Dr SAWAMURA, M (Japan Atomic Energy Agency (JAEA)); Dr SAKANAKA, Shogo (High Energy Accelerator Research Organisation (KEK)); Dr SUWADA, T (High Energy Accelerator Research Organisation (KEK)); Dr TAKAHASHI, T (High Energy Accelerator Research Organisation (KEK)); Dr FURUYA, Takaaki (High Energy Accelerator Research Organisation (KEK))

Presenter: Dr FURUYA, Takaaki (High Energy Accelerator Research Organisation (KEK))

Session Classification: Cavities

Contribution ID: 35

Type: **not specified**

Experiences with TESLA Cavities in CW-Operation at ELBE

Tuesday 22 May 2007 14:20 (20 minutes)

Author: Dr MICHEL, Peter (FZD)

Co-authors: Dr SCHNEIDER, Ch (FZD); Dr STAATS, G (FZD); Dr BUETTIG, H (FZD); Mr TEICHERT, Jochen (FZD); Dr JUSTUS, M (FZD); Dr LEHNERT, U (FZD)

Presenter: Dr MICHEL, Peter (FZD)

Session Classification: Cavities

Contribution ID: 36

Type: **not specified**

Implications of Incomplete Energy Recovery in SRF-Based Energy Recovery Linacs

Wednesday 23 May 2007 09:00 (20 minutes)

Author: Mr POWERS, Tom (Thomas Jefferson National Accelerator Facility (JLAB))

Co-author: Dr TENNANT, Chris (Thomas Jefferson National Accelerator Facility (JLAB))

Presenter: Mr POWERS, Tom (Thomas Jefferson National Accelerator Facility (JLAB))

Session Classification: Tuners Microphonics and RF Control

Contribution ID: 37

Type: **not specified**

Concept of Vector-Sum Control for CW-Operation

Wednesday 23 May 2007 09:20 (20 minutes)

Author: Mr SCHMIDT, Christian (Deutsches Elektronen-Synchrotron (DESY))

Co-author: Dr SIMROCK, Stefan (DESY)

Presenter: Mr SCHMIDT, Christian (Deutsches Elektronen-Synchrotron (DESY))

Session Classification: Tuners Microphonics and RF Control

Contribution ID: 38

Type: **not specified**

Measurement and Compensation of Microphonics in CW-Operated TESLA-Type Cavities

Wednesday 23 May 2007 09:40 (20 minutes)

Author: Dr KUGELER, Oliver (Berliner Elektronenspeicherring-Gesellschaft für Synchrotronstrahlung m.b.H. (BESSY))

Co-authors: Dr NEUMANN, Axel (Berliner Elektronenspeicherring-Gesellschaft für Synchrotronstrahlung m.b.H. (BESSY)); Dr KNOBLOCH, Jens (Berliner Elektronenspeicherring-Gesellschaft für Synchrotronstrahlung m.b.H. (BESSY)); Dr ANDERS, Wolfgang (Berliner Elektronenspeicherring-Gesellschaft für Synchrotronstrahlung m.b.H. (BESSY))

Presenter: Dr KUGELER, Oliver (Berliner Elektronenspeicherring-Gesellschaft für Synchrotronstrahlung m.b.H. (BESSY))

Session Classification: Tuners Microphonics and RF Control

Contribution ID: 39

Type: **not specified**

Microphonics Measurements at ELBA

Wednesday 23 May 2007 10:00 (20 minutes)

Author: Dr STAATS, Gerald (FZD)

Co-authors: Dr BUECHNER, A (FZD); Dr GABRIEL, F (FZD); Dr BUETTIG, H (FZD); Dr MICHEL, Peter (FZD)

Presenter: Dr STAATS, Gerald (FZD)

Session Classification: Tuners Microphonics and RF Control