

LIST OF PUBLICATIONS

Large Research Facilities

UNIVERSITY LEVEL AND OTHER TEACHING

S. Adam

Mathematics in engineering with MATLAB

University of Applied Science Zürich, Switzerland, WS 2005/06, SS 2006

A. Adelman

Statistics and Probability Theory

University of Applied Science Zurich, Switzerland, WS 2006/07

J. Jourdan, B. Krusche, D. Rohe

Proseminar zur Einführung in die Kern- und Teilchenphysik

University of Basel, Switzerland, WS 2006/07

B. Krusche, D. Rohe

Einführung in die Kern- und Teilchenphysik

University of Basel, Switzerland, WS 2006/07

L. Rivkin

Introduction to Particle Accelerators

EPFL, Lausanne, Switzerland, WS 2006/07

L. Rivkin

Synchrotron Radiation

ICTP School on Synchrotron Radiation and Applications, Trieste, Italy, May 2006

L. Rivkin

X-ray Sources

Spectroscopy/Microscopy, 5th PSI Summer School on Condensed Matter Research, Zuoz, Switzerland, August 19-26, 2006

L. Rivkin

Synchrotron Radiation and Dynamics with Radiation

CERN Accelerator School, Zakopane, Poland, October 2-14, 2006

M. Schneider

Grundlagen der Elektronik

Technikerschule HF, Zürich, Switzerland, WS2005/06, SS2006

U.D. Straumann, U. Langenegger, M. Dittmar, K. Müller, O. Steinkamp, A. Streun

Experimental Methods of Particle Physics

Joint lecture University and ETH Zürich, Switzerland, WS 2006/07

PUBLICATIONS

A. Adelman, K. Kirch

Search for the muon electric dipole moment using a compact storage ring
e-Print Archive: hep-ex/0606034, 3 (2006)

A. Anghel, P. Bruzzone, M. Vogel

Results of Contact Resistance Distribution in ITER-Size Conductor Termination
IEEE Transactions on Applied Superconductivity, **16**, no. 2, 779 (2006)

H.P. Bijl, P. van Luijk, R.P. Coppes, J.M. Schippers, A.W.T. Konings, A.J. van der Kogel
Influence of adjacent low-dose fields on tolerance to high doses of protons in rat cervical spinal cord

Int. J. Radiat. Onc. Biol. Phys. **64**, 1204 (2006)

A.E. Candel, M.M. Dehler, M. Troyer

A massively parallel particle-in-cell code for the simulation of field-emitter based electron sources
Nucl. Instrum. Meth. A **558**, 154 (2006)

M. Dehler, A. Candel, E. Gjonaj

Full scale simulation of a field emitter arrays based electron source for free-electron lasers
J. Vac. Sci. Tech. B **24**, 892 (2006)

W. Joho, M. Muñoz, A. Streun

The SLS Booster Synchrotron
Nucl. Instrum. Meth. A **562**, 1 (2006)

P. Leidenberger, B. Oswald, K. Roth

Efficient Reconstruction of Dispersive Dielectric Profiles using Time Domain Reflectometry (TDR). Hydrology and Earth System Sciences
209-232. SRef-ID: 1607-7938/hess/2006-10-209 (2006)

K. Nünighoff, Ch. Pohl, V. Bollini, A. Bubak, H. Conrad, D. Filges, H. Glückler, F. Goldenbaum, G. Hansen, B. Lensing, R.-D. Neef, N. Paul, K. Pysz, H. Schaal, H. Soltner, H. Stelzer, H. Tietze-Jänsch, W. Ninaus, M. Wohlmuther, P. Ferguson, F. Gallmeier, E. Iverson, S. Koulikov, A. Smirnov

Investigation of the Neutron Performance of a methane hydrate moderator
Nucl. Instrum. Meth. A **562**, 565 (2006)

B. Oswald, J. Doetsch, K. Roth

A new computational technique for procesing transmission line measurements to determine dispersive dielectric properties
Geophysics, {71}(2). doi 10.1190/1.2187764 (2006)

W. Roser

Teilchenbeschleuniger für die Krebstherapie III – Strahlenschutztechnische Überlegungen zur PROSCAN-Anlage des Paul Scherrer Instituts (PSI)
Strahlenschutzpraxis **12**, 35 (2006)

J.M. Schippers, J. Duppich, G. Goitein, M. Jermann, A. Lomax, E. Pedroni, H. Reist, B. Timmermann, J. Verweij

Use of protons in cancer therapy at PSI and related instrumentation
Journal of Physics: Conf. Series 41, 61 (2006)

A. Streun
Lattices for Light Sources
CERN Yellow Report 2006-002, 217 (2006)

A. Streun
Non-linearities in Light Sources
CERN Yellow Report 2006-002, 203 (2006)

F. Stulle, A. Adelman, M. Pedrozzi,
A Bunch Compressor for the CLIC Main Beam
EUROTeV-Report-2006-087, 7 (2006)

F. Stulle, A. Adelman, M. Pedrozzi
Turn Around Loop and Chicane for Bunch Compression and Path Length Tuning in the CLIC Drive Beam
EUROTeV-Report-2006-096, 8 (2006)

F. Stulle, A. Adelman, M. Pedrozzi
Options for the second Bunch Compressor Chicane of the CLIC Main Beam Line
EUROTeV-Report-2006-016, 10 (2006)

C.A. Thomas, G. Rehm, H.L. Owen, N.G. Wyles, S.W. Botchway, V. Schlott, M. Wahl
Bunch Purity Measurement for Diamond
Nucl. Instrum. Meth. in Phys. Res. A **566**, 762 (2006)

M. Wohlmuther, G. Heidenreich
The spallation target of the ultra-cold neutron source UCN at PSI
Nucl. Instrum. Meth. in Phys. Res. A **564**, 51 (2006)

CONFERENCE PROCEEDINGS

D. Abell, A. Adelman, J. Amundson, A. Dragt, C. Mottershead, F. Neri, I. Pogorelov, J. Qiang, R. Ryne, J. Shalf, C. Siegerist, P. Spentzouris, E. Stern, M. Venturini, P. Walstrom
Beam dynamics
SciDAC 2006: Scientific Discovery through Advanced Computing, Denver, Colorado, USA
J. Phys. Conf. Ser. **46**, 210 (2006)

A. Adelman, S.R.A. Adam, H. Fitze, R. Geus, M. Humbel, L. Stingelin
On start to end simulation and modeling issues of the megawatt proton beam facility at PSI
Proc. PAC 2006, Knoxville TN, USA, 3319 (2006)

A. Adelman, S.R.A. Adam, M. Humbel, P.A. Schmelzbach
High Intensity Cyclotron Simulations: Towards Quantitative Predictions
Proc. ICFA-HB2006, KEK, Tsukuba, Japan, 202 (2006)

D. Anicic, T. Korhonen, A. Mezger, D. Vermeulen
Standardization of the PSI Accelerator Control Systems
Proc. PCaPAC 2006, Newport News VA, USA (2006)

Å. Andersson, M. Rohrer, V. Schlott, A. Streun
O.V. Chubar, SOLEIL, Gif-sur-Yvette
Electron Beam Profile Measurements with Visible and X-ray Synchrotron Radiation at the Swiss Light Source
Proc. EPAC 2006, Edinburgh, UK, 1223 (2006)

R.J. Bakker, A. Adelman, A. Anghel, M. Dehler, R. Ganter, S. C. Leemann, K.L. Li, M. Pedrozzi, J.-Y. Raguin, L. Rivkin, V. Schlott, F.Q. Wei, A.F. Wrulich
Ultra High Brightness Accelerator Design
Proc. FEL 2006, Berlin, Germany, 214 (2006)

M. Böge, U. Flechsig, J. Raabe, T. Schilcher
Fast Polarisation Switching at the SLS Microspectroscopy Beamline PoLux
Proc. EPAC 2006, Edinburgh, UK, 3610 (2006)

M. Dehler
Design and Modeling of Field-Emitter Arrays for a High Brilliance Electron Source
Proc. ICAP 2006, Chamonix, France, 114 (2006)

R. Dölling
Ionisation Chambers and Secondary Emission Monitors at the PROSCAN Beam Lines
BIW 2006, Batavia, USA, AIP Conf. Proc. **868**, 271 (2006)

K. Dreyer
Pre-Assembly and Alignment of PROSCAN Beamlines
Proc. 9th IWAA, Stanford, USA (2006)
<http://www.slac.stanford.edu/econf/C06092511/proceedings.htm>

J. Duppich, G. Goitein, M. Jermann, E. Pedroni, M. Schippers, for the PROSCAN team
The super-conducting cyclotron COMET and beam lines of PSI's new proton therapy facility PROSCAN
Proc. PTCOG 45, Houston, USA, 6 (2006)

R. Ganter, R.J. Bakker, M. Dehler, G.J. Gobrecht, C. Gough, E. Kirk, F. Le Pimpec, S. C. Leemann, K. L. Li, M. Paraliiev, M. Pedrozzi, J.-Y. Raguin, L. Rivkin, V. Schlott, H. Sehr, S. Tsujino, A.F. Wrulich
Peak Current Performances from Electron Sources based on Field Emission (Single Tip and Field Emitter Arrays (FEAs))
Proc. FEL 2006, Berlin, Germany, 781 (2006)

M. Gaspar, M. Pedrozzi
500 MHz Solide state amplifier – development at PSI
10th ESLS-RF Meeting, University of Dortmund, Germany (2006)
<http://athene.delta.uni-dortmund.de/esls-rf/program.html>

K.H. Hu, C.H. Kuo, W.K. Lau, M.S. Yeh, S.Y. Hsu, P.J. Chou, M.H. Wang, D. Lee, J. Chen, C.J. Wang, K.T. Hsu, K. Kobayashi, T. Nakamura, M. Dehler
Commissioning of FPGA-based Transverse and Longitudinal Bunch-by-Bunch Feedback System for the TLS
BIW 2006, Battavia, Illinois, USA, AIP Conf. Proc. **868**, 179 (2006)

B. Keil, P.-A. Duperrex, U. Mueller
Commissioning of a New Digital BPM System for the PSI Proton Accelerators
Proc. EPAC 2006, Edinburgh, UK, 1226 (2006)

C. Kuo, J. Chen, C.P. Jung, K.-T. Hsu, S.-Y. Hsu, K.H. Hu, W.-K. Lau, D. Lee, C.-J. Wang, M.-H. Wang, M.-S. Yeh, K. Kobayashi, T. Nakamura, M. Dehler
FPGA-based Longitudinal Bunch-by-bunch Feedback System for TLS
Proc. EPAC 2006, Edinburgh, UK, 3023 (2006)

S.C. Leemann, Å. Andersson, R. Ganter, V. Schlott, A. Streun, A.F. Wrulich
First Measurement Results at the LEG Project's 100 keV DC Gun Test Stand
Proc. EPAC 2006, Edinburgh, UK, 3499 (2006)

A. Lüdeke
SLS Operation Management: Methods and tools
Proc. EPAC 2006, Edinburgh, UK, 2715 (2006)

A. Lüdeke, Å. Andersson, M. Böge, B. Kalantari, B. Keil, M. Pedrozzi, T. Schilcher, A. Streun, V. Schlott
Status of the Swiss Light Source
Proc. EPAC 2006, Edinburgh, UK, 3424 (2006)

M. Negrazus, D. George, V. Vrankovic, M. Werner
Eddy Current Reduction in Fast Ramped Bending Magnets
IEEE Trans. Appl. Supercond., **16**, no. 2, 228 (2006)

B. Oswald, A. Adelman, M. Bopp, R. Geus
Integration of a Large-Scale Eigenmode Solver into the ANSYS Workflow Environment
Proc. ICAP 2006, Chamonix, France, 122 (2006)

E. Pedroni, J. Duppich, G. Goitein, M. Jermann, M. Schippers, *for the PROSCAN team and the Gantry2 team*
The new Gantry2 of PSI, A. Technical choices
Proc. PTCOG 44, Zürich, Switzerland, 17 (2006)

E. Pedroni, J. Duppich, G. Goitein, M. Jermann, M. Schippers, *for the PROSCAN team and the Gantry2 team*
The new Gantry2 of PSI, B. Planned use
Proc. PTCOG 44, Zürich, Switzerland, 16 (2006)

M. Pont, E. Al-Dmour, G. Benedetti, D. Einfeld, A. Falone, M. de Lima Lopes, U. Iriso, M. Muñoz, F. Pérez, W. Joho
Injector design for ALBA
Proc. EPAC 2006, Edinburgh, UK, 3415 (2006)

J.-Y. Raguin, A. Anghel, R.J. Bakker, M. Dehler, R. Ganter, C. Gough, S. Ivkovic, E. Kirk, F. Le Pimpec, S.C. Leemann, K.L. Li, M. Paraliiev, M. Pedrozzi, L. Rivkin, V. Schlott, A.F. Wrulich
Progress in the Design of a Two-Frequency RF Cavity for an Ultra-Low Emittance Pre-Accelerated Beam
Proc. EPAC 2006, Edinburgh, UK, 133 (2006)

M. Rejzek, C. Hilbes, D. Meer, D. Baumann, M. Zehnder
PROSim – A FPGA based Real-time Simulator for the PSI Therapy Facility PROSCAN
Proc. PTCOG 44, Zürich, Switzerland, 11 (2006)

R.D. Ryne, A. Adelman, E.W. Bethel, I.V. Pogorelov, J. Qiang, J.M. Shalf, C. Siegerist, M. Venturini
Recent Progress on the MaryLie/IMPACT Beam Dynamics Code
Proc. ICAP 2006, Chamonix Mont-Blanc, France, 157 (2006)

M. Schippers, J. Duppich, G. Goitein, M. Jermann, E. Pedroni, H. Reist, *for the PROSCAN team*
Commissioning and acceptance tests of the SC cyclotron and the degrader system of PSI's
extended proton therapy facility PROSCAN
Proc. PTCOG 44, Zürich, Switzerland, 29 (2006)

J.M. Schippers, J. Duppich, G. Goitein, M. Jermann, E. Pedroni, H. Reist, *for the PROSCAN*
team
The SC cyclotron and beam lines of PSI's new protontherapy facility PROSCAN
Proc. SSRPM, Annual scientific meeting, Lausanne 2005, Switzerland, R. Moeckli (Ed.), 31,
ISBN 3 908 125 391 (2006)

V. Schlott, D. Abramsohn, P. Beaud, G. Ingold, P. Lerch
THz Diagnostic for the Femtosecond Bunch Slicing Project at the Swiss Light Source
Proc. EPAC 2006, Edinburgh, UK, 1229 (2006)

V. Schlott, M. Dehler, B. Keil, R. Kramert, A. Lunin, G. Marinkovic, P. Pollet, M. Roggli,
T. Schilcher, P. Spuhler, D. Treyer
Intra Bunch Train Feedback for the European X-FEL
Proc. EPAC 2006, Edinburgh, UK, 3017 (2006)

P.A. Schmelzbach, S. Adam, A. Adelman, H.R. Fitze, G. Heidenreich, J.Y. Raguin, U. Rohrer,
P. Sigg
1.8 MW upgrade of the PSI proton facility
Proc. EPAC 2006, Edinburgh, UK, 1879 (2006)

P.A. Schmelzbach, R. Doelling
Experience with high-power operation of the PSI proton accelerator facility
Proc. ICFA-HB2006, KEK, Tsukuba, Japan, 274 (2006)

A. Streun, G. Ingold, A. Al-Adwan, P. Beaud, M. Böge, S. Johnson, A. Keller, T. Schilcher,
V. Schlott, T. Schmidt, L. Schulz, D. Zimoch
Sub-Picosecond X-Ray Source Femto at SLS
Proc. EPAC 2006, Edinburgh, UK, 3427 (2006)

F. Stulle, A. Adelman, M. Pedrozzi
A Bunch Compressor for the CLIC Main Beam
Proc. LINAC 2006, Knoxville, USA, 40 (2006)

F. Stulle, A. Adelman, M. Pedrozzi
Turn Around Loop and Chicane for Bunch Compression and Path Length Tuning in the CLIC
Drive Beam
Proc. LINAC 2006, Knoxville, USA, 43 (2006)

F.Q. Wei (SLS Team)
Experiences of the long term stability at SLS
SRI 2006, Daegu, Korea, AIP Conf. Proc. **879**, 38 (2006)

INVITED TALKS

A. Adelman
H5Part: A Portable High Performance Parallel Data Interface for Electromagnetics Simulations
9th ICAP, Chamonix Mont-Blanc, France, October 2-6, 2006

A. Adelman
Dynamics of High Intensity Beams in Cyclotrons
TRIUMF Cyclotron Division, Vancouver, Canada, May 19, 2006

A. Adelman
High Intensity Cyclotron Simulations: Towards Quantitative Predictions
ICFA-HB2006, KEK, Tsukuba, Japan, May 29 - June 2, 2006

A. Adelman
Scalable Algorithms and Applications in Particle Accelerator Modeling
ISC 2006, Dresden, Germany, June 27-30, 2006

M. Böge
SLS Status Report
ESLS XIV, Gif-sur-Yvette, France, October 19, 2006.

M. Böge
Sub-micron Orbit Stability at the Swiss Light Source
86th Eastern Forum of Science and Technology Shanghai, China, December 7, 2006

M. Böge
CORBA based Beam Dynamics Applications at the SLS
SSRF, Shanghai, China, December 11, 2006

M. Dehler
Resonant strip line design for the European XFEL intra bunch train feedback
Workshop on Longitudinal Beam Stability in Linear Accelerators, Schloss Böttstein, Böttstein, Switzerland, March 8-9, 2006

M. Humbel
Commissioning of a 50/150 MHz Buncher Combination in the 870 keV Injection Line of PSI Injector 2
XXXV ECPM, Nice, France, November 2-4, 2006

W. Joho
The SLS facilities
Brookhaven National Light Source, Brookhaven, USA, August 2, 2006

B. Keil
Digital System Concept for the Intra Bunchtrain Feedback for the European X-FEL
Workshop on Longitudinal Beam Stability in Linear Accelerators, Schloss Böttstein, Böttstein, Switzerland, March 8-9, 2006

B. Keil
An Intra Bunch Train Feedback System for the European X-FEL
FLS 2006, Hamburg, Germany, May 18, 2006

Ch. Kraus
Comparison of h- and p- Refinement in a Finite Element Maxwell Time Domain Solver
9th ICAP, Chamonix Mont-Blanc, France, October 2-6, 2006

V. Schlott
Evolution of Free Electron Lasers – from IR to X-Rays
Fakultätskolloquium, Universität Leipzig, Germany, October 6, 2006

J.M. Schippers

PSI-Experience with the new cyclotron for PSI's proton therapy facility PROSCAN
Seminar, Centre de Protonthérapie d'Orsay, Orsay, France, February 20, 2006

J.M. Schippers

Overview of PSI's proton therapy program and PSI's new facility PROSCAN
Seminar, Erasmus University Medical Center, Daniel den Hoed Kliniek, Rotterdam, The Netherlands, April 18, 2006

J.M. Schippers

The SC 250 MeV cyclotron and beam lines of PSI's new protontherapy facility PROSCAN
Int. Conference on Applications of Accelerators in Research and Industry (ICAARI), Fort Worth, USA, August 20, 2006

J.M. Schippers

Instrumentation development for proton therapy
Seminar, Paul Scherrer Institut, Villigen, Switzerland, August 30, 2006

J.M. Schippers

The SC cyclotron and beam lines of PSI's new protontherapy facility PROSCAN
Europ. Cyclotron Progress Meeting (ECPM) 2006, Nice, France, November 2-4, 2006

P.A. Schmelzbach

1.8 MW Upgrade of the PSI Accelerator Facility
iThembaLABS, Faure, South Africa, March 14, 2006

P.A. Schmelzbach

Operation of the PSI Megawatt Accelerator Facility
iThembaLABS, Faure, South Africa, March 16, 2006

P.A. Schmelzbach

Experience with high-power operation of the PSI proton accelerator facility
ICFA-HB2006, KEK, Tsukuba, Japan, May 29 - June 2, 2006

P.A. Schmelzbach

1.8 MW upgrade of the PSI proton facility
EPAC 2006, Edinburgh, UK, June 26-30, 2006

M. Schneider

Coaxial Switch, High Power Load and Higher Harmonic Absorber for PROSCAN
Fourth CW and High Average Power RF Workshop, Argonne National Laboratory, Argonne, Illinois, USA, May 1-4, 2006

A. Strinning

Decommissioning of the MEGAPIE Target
Int. Workshop on Heavy Liquid Metal Spallation Targets for Transmutation, Aix-en-Provence, France, November 30, 2006

F. Stulle

Options for the second Bunch Compressor Chicane of the CLIC Main Beam Line
CLIC ILPS Meeting, CERN, Geneva, Switzerland, February 7, 2006

F. Stulle

Status of the CLIC Bunch Compressor Work at PSI
CLIC Meeting, CERN, Geneva, Switzerland, October 6, 2006

S. Teichmann

Shielding parameters of concrete and polyethylene for the PSI proton accelerator facilities
8th Workshop on Shielding Aspects of Accelerators, Targets and Irradiation Facilities (SATIF 8),
Pohang Accelerator Laboratory, Republic of Korea, May 22-24, 2006.

D. Treyer

RF Front Ends for Transversal BPM
Workshop on Longitudinal Beam Stability in Linear Accelerators, Schloss Böttstein, Böttstein,
Switzerland, March 8-9, 2006

W. Tron

Modern and Crowbarless HVPS
Fourth CW and High Average Power RF Workshop, Argonne National Laboratory, Argonne,
Illinois, USA, May 1-4, 2006

M.J. van Goethem

Conceptual design of a nozzle for OPTIS2
44th Workshop of the Proton Therapy CoOperative Group, Zürich, Switzerland, June 16-18, 2006

WORKSHOPS

A. Adelman

Co- Organizer
Workshop on High-Performance Computing
ETH Zurich, Switzerland, September 4-5, 2006

V. Schlott

Organizer
Workshop on Longitudinal Beam Stability in Linear Accelerators
Schloss Böttstein, Böttstein, Switzerland, March 8-9, 2006

DISSERTATIONS

S.C. Leemann

*Characterization of Electron Bunches from Field Emitter Array Cathodes for Use in Next-
Generation X-Ray Free Electron Lasers*

Thesis No. 3724, EPFL Lausanne, Switzerland, 2006

Thesis advisors: Prof. Dr. A.F. Wrulich (EPFL/PSI)
Dr. A. Streun (PSI)

D. Sütterlin

*Single-Shot Electron Bunch-Length Measurements with a Spatial Electro-Optical-Auto-Correlation
Interferometer using Coherent Transition Radiation at the 100 MeV SLS Pre-Injector LINAC*

Theses No. 16668, ETH Zürich, Switzerland, 2006

Theses advisors: Prof. H. Jäckel (ETHZ)
Dr. H.C. Sigg (PSI)
Dr. V. Schlott (PSI)

MEMBERSHIPS IN EXTERNAL COMMITTEES

A. Adelman

- CSCS "Horizon Project" Steering Committee
- Expert for Mathematics "Maturitäts Exams"
- Int. Super Computing Conference (ISC), Program Committee
- Member of the Project Group "Swiss National Strategic Plan for High Performance Computing and Networking".

M. Böge

- Review of NSLS II - Lattice and Accelerator Configuration, Committee Member

L. Rivkin

- CERN Accelerator School, Advisory Committee
- DESY, Machine Advisory Committee, Germany
- European Physical Society, Accelerators Group Board, EPAC'06 Organizing Committee
- Joint Universities Accelerator School, Program Committee
- PAC 2007 Program Committee
- SOLEIL, Machine Advisory Committee (Chairman)
- Stanford Synchrotron Radiation Laboratory, Scientific Advisory Committee
- International Linear Collider Machine Advisory Committee

W. Roser

- Swiss Society for Radiation Biology and Medical Physics, Board Member
- Comité Electrotechnique Suisse (CES), Member of TC 62

Th. Schietinger

- European Committee for Future Accelerators (ECFA), Member

V. Schlott

- DIPAC 2007, Scientific Programme Committee
- ALBA Spanish Light Source, Machine Advisory Committee
- DIAMOND Light Source, Technical Advisory Committee
- EuroFEL Advisory Board (Chairman)
- In-Kind Review Committee for the European XFEL (Chairman)
- Working Group on Scientific and Technical Issues for the European XFEL (XFEL-STI)
- CARE Governing Board

P.A. Schmelzbach

- Int. Conferences on Cyclotrons and their Applications: Int. Organizing Committee + Program Committee
- Europ. Cyclotron Progress Meetings, Scientific Committee
- OECD/NEA Int. Workshop on the Utilisation and Reliability of High Power Proton Accelerators, Int. Scientific Advisor

D. Vermeulen

- Int. Conference on Accelerator and Large Experimental Physics Controls Systems, Scientific Advisory Committee

LIST OF PUBLICATIONS

Free Electron Laser Project (PSI-FEL/LEG)

UNIVERSITY LEVEL AND OTHER TEACHING

A.F. Wrulich

Introduction to Particle Accelerator Physics
EPFL, Lausanne, Switzerland, WS 2004/2005

A.F. Wrulich

High Performance Particle Accelerators
EPFL, Lausanne, Switzerland, SS 2005

A.F. Wrulich

Synchrotron Light Sources and Free Electron Lasers
CERN Accelerator School, Zakopane, Poland, October 1-13, 2006

PUBLICATIONS

R. Ganter, R.J. Bakker, C. Gough, M. Paraliiev, M. Pedrozzi, F. Le Pimpec, L. Rivkin, A. Wrulich
Nanosecond field emitted and photo-field emitted current pulses from ZrC tips
Nucl. Instr. and Meth. in Phys. Res. A **565**, 423 (2006)

R. Ganter, R.J. Bakker, R. Betemps, M. Dehler, T. Gerber, J. Gobrecht, C. Gough, M. Johnson, E. Kirk, G. Knopp, F. Le Pimpec, K. Li, M. Paraliiev, M. Pedrozzi, L. Rivkin, H. Sehr, L. Schulz, A. Wrulich
Nanoseconds field emitted current pulses from ZrC needles and field emitter arrays
J. Vac. Sci. Technol. B **24**, (2), 974 (2006)

M. Dehler, A.E. Candel, E. Gjonaj

Full scale simulation of a field-emitter arrays based electron source for free electron lasers
J. Vac. Sci. Technol. B **24**, (2), 892 (2006)

A.E. Candel, M. Dehler, M. Troyer

A massively parallel particle in cell code for the simulation of field emitter based electron source
Nucl. Instr. and Meth. in Phys. Res. A **558**, 154 (2006)

F. Le Pimpec, R. Kirby, F. King, M. Pivi

The Effect of Gas Ion Bombardment on the Secondary Electron Yield of TiN, TiCN and TiZrV Coatings for Suppressing Collective Electron Effects in Storage Rings
Nucl. Instr. and Meth. in Phys. Res. A **564**, 44 (2006)

CONFERENCE PROCEEDINGS

R. J. Bakker, A. Adelman, A. Anghel, M. Dehler, R. Ganter, S. C. Leemann, K.L. Li, M. Pedrozzi, J.-Y. Raguin, L. Rivkin, V. Schlott, F.Q. Wei, A.F. Wrulich
Ultra High Brightness Accelerator Design
Proc. FEL 2006, Berlin, Germany, 214 (2006)

M. Dehler

Design and Modeling of Field Emitter Arrays for High Brilliance Electron Source
Proc. ICAP 2006, Chamonix, France, 114 (2006).

R. Ganter, R. J. Bakker, M. Dehler, G. J. Gobrecht, C. Gough, E. Kirk, F. Le Pimpec,
S. C. Leemann, K. L. Li, M. Paraliiev, M. Pedrozzi, J.-Y. Raguin, L. Rivkin, V. Schlott, H. Sehr,
S. Tsujino, A.F. Wrulich

Peak Current Performances from Electron Sources based on Field Emission (Single Tip and Field Emitter Arrays (FEAs))

Proc. FEL 2006, Berlin, Germany, 781 (2006)

S.C. Leemann, Å. Andersson, R. Ganter, V. Schlott, A. Streun, A. F. Wrulich

First Measurement Results at the LEG Project's 100 keV DC Gun Test Stand
Proc. EPAC 2006, Edinburgh, UK, 3499 (2006)

M. Pedrozzi

0.1 nm Compact FEL project

10th ESLS-RF Meeting, Dortmund, Germany (2006)

<http://athene.delta.uni-dortmund.de/esls-rf/program.html>

J.-Y. Raguin, A. Anghel, R.J. Bakker, M. Dehler, R. Ganter, C. Gough, S. Ivkovic, E. Kirk,
S.C. Leemann, F. Le Pimpec, K. Li, M. Paraliiev, M. Pedrozzi, L. Rivkin, V. Schlott, A..F. Wrulich
Progress in the design of a two-frequency RF cavity for an ultra-low emittance pre-accelerated beam

Proc. EPAC 2006, Edinburgh, UK, 133 (2006)

INVITED TALKS

R. Ganter

High Current electron emission from microscopic tips
FEL 2006, Berlin, Germany, August 31, 2006

DISSERTATIONS

S.C. Leemann

Characterization of Electron Bunches from Field Emitter Array Cathodes for Use in Next-Generation X-Ray Free Electron Lasers

Thesis No. 3724, EPFL Lausanne, Switzerland, 2006

Thesis advisors: Prof. Dr. A.F. Wrulich (EPFL/PSI)
Dr. A. Streun (PSI)

MEMBERSHIPS IN EXTERNAL COMMITTEES

R.J. Bakker

- Evaluation of the European XFEL TDR, Hamburg, Germany
- EPAC 2008, Organizing Committee
- FEL 2006, Program Committee

A. Wrulich

- CCLRC, UK, Accelerator Science and Technology Advisory Board
- CNAO, I, Comitato Tecnico
- DESY, D, Machine Advisory Committee
- DIAMOND, UK, Technical Advisory Committee, Chair
- ELETTRA, I, Machine Advisory Committee, Chair
- ISAC, AUS, Int. Science Advisory Committee
- NSLS-II, US, Project Advisory Committee
- SESAME, Jordan, Technical Advisory Committee, Chair
- ESFRI, EU, Expert Committee for Hard X-Ray Sources
- EPAC06, Organizing Committee
- Co-Editor of 'Journal of Synchrotron Radiation'