

1 List of all publications from 1998 to 2002

The list is sorted according to the research collaborations. Within each collaboration all articles are listed, of which at least one member of our group is an author and the print date of the publication was during the time, the author was actually a member of our group.

In the first section contributions are listed, which are of general interest for detector technologies and electronics applications.

In the collaboration sections the lists are further grouped into conference contributions, thesis, internal notes and published articles on analysis results.

Invited lectures and conference contributions are only listed if given by members of our group.

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1.1 Detector technologies and trigger electronics

- The CIP2k First Level Trigger System at the H1 experiment at HERA
M. Urban, J. Becker, S. Schmitt and U. Straumann
accepted for publication in IEEE Trans. Nucl. Sci. **50**, No. 4 (2003)
- Studies of aging and HV break down problems during development and operation of MSGC and GEM detectors for the inner tracking system of HERA-B
Y. Bagaturia *et al.* [HERA-B Inner Tracker Collaboration]
Nucl. Instrum. Meth. **A490**, 223 (2002) [arXiv:hep-ex/0204011].

- Purity Monitoring System for the H1 Liquid Argon Calorimeter.
H1 Calorimeter Group (E. Barrelet et al.). DESY-01-188, hep-ex/0111066
Nucl.Instrum.Meth.**A490** (2002) 204-222.
- Compact frontend-electronics and bidirectional 3.3-Gbps optical datalink for fast proportional chamber readout
S. Luders *et al.*
Nucl. Instrum. Meth. **A484**, 515 (2002) [arXiv:hep-ex/0107064].
- First level trigger for H1, using the latest FPGA generation
M. Urban, U. Straumann, A. Rausch and J. Becker
Prepared for 6th Workshop on Electronic for LHC Experiments, Cracow, Poland, 11-15 Sep 2000
- A triple GEM detector with two dimensional readout
M. Ziegler, P. Sievers and U. Straumann
Proceedings of the International Conference on Imaging Techniques in the borderlands of High Energy Physics, Astrophysics, Nuclear Physics, Medicine and Biology (Imaging 2000), 28 June - 1 July 2000, Stockholm
Nucl. Instr. and Meth. **A471** (2001) 260-263.
- Performance And Radiation Tolerance Of The Helix128-2.2 And 3.0 Readout Chips For The Hera-B Microstrip Detectors
C. Bauer *et al.*
Prepared for 5th Workshop on Electronics for the LHC Experiments (LEB 99), Snowmass, Colorado, 20-24 Sep 1999
- The Helix128 Readout Chip Family For Silicon Microstrip Detectors And Microstrip Gaseous Chambers
C. Bauer *et al.*
Given at 4th Workshop on Electronics for LHC Experiments (LEB 98), Rome, Italy, 21-25 Sep 1998
- Development Of A Read-Out Chip Suitable For The Lhcb Experiment
M. Feuerstack-Raible, U. Straumann, E. Sexauer, M. Schmelling, U. Trunk, R. Kluit and J. van den Brand
Given at 4th Workshop on Electronics for LHC Experiments (LEB 98), Rome, Italy, 21-25 Sep 1998

1.2 LHCb collaboration

1.2.1 Invited lectures, talks and contributed papers to conferences

- The Status of LHCb and its Inner Tracker detector
F. Lehner
talk presented on the Experimental Particle Physics Seminar at Kansas State University, March 10, 2003, Manhattan, Kansas, USA
- The LHCb Silicon Inner Tracker
Phillip Sievers
High Energy Physics Seminar, UCLA Los Angeles, 29.01.2003

- The LHCb Inner Tracker technical design
F. Lehner
talk presented on behalf of the LHCb Silicon Tracker Collaboration at the 61st open LHCC session,
November 27, 2002, CERN, Geneva, Switzerland
- The LHCb Silicon Tracker
F. Lehner
talk presented on behalf of the LHCb Silicon Tracker Collaboration on the 11th International
Workshop on Vertex Detectors 'Vertex 2002', November 3-8, 2002, Kailua Kona, Hawaii, USA
submitted to Elsevier Science to be published in NIM
- Development of the Inner Tracker Detector Electronics for LHCb
Achim Vollhardt
8th Workshop on Electronics for LHC Experiments
September 9 - 13, 2002, Colmar, France
LHCb public note LHCb-2002-068
- Performance tests of large pitch silicon strip sensors for the LHCb Inner Tracker
P. Sievers
Poster Session at the 9th European Symposium on Semiconductor Detectors
June 23 - 27, 2002, Schloss Elmau, Germany
LHCb public note 2002-044
submitted to Elsevier Science to be published in NIM A
- The thermal properties of Silicon Detectors used in high energy physics
J. Blocki and F. Lehner
Contributed paper to the ANSYS 2002 Conference, April 22-24, 2002
Pittsburgh, Pennsylvania, USA
- The LHCb experiment
U. Straumann
ECFA meeting, Zurich, 1. Mar. 2002
- The Silicon Inner Tracker for LHCb
O. Steinkamp
8th international conference on instrumentation for colliding beam physics
Feb. 28 - Mar. 6, 2002, Novosibirsk, Russia
LHCb public note 2002-019
Nucl. Instr. and Meth. **A494** (2002) 107
- The LHCb Silicon Inner Tracker
Frank Lehner
10th International Workshop on Vertex Detectors 'Vertex 2001'
September 23-28, 2001, Brunnen, Switzerland,
LHCb public note 2002-011
accepted by Elsevier Science to be published in NIM A
- Status of the LHCb experiment
U. Straumann
9th International Symposium on Heavy Flavor Physics
Sept. 10-13, 2001, Caltech, Pasadena, Ca.
Proc. ed. by A. Ryd and F.C. Porter,
AIP Conf. Proc. **618**, 422 (2002).

- The LHCb Silicon Inner Tracker
P. Sievers
5th International Conference on Large Scale Applications and Radiation Hardness of Semiconductor Detectors
Firenze, July 04-06, 2001.
LHCb public note 2001-108
Nucl. Instrum. Meth. **A 485** (2002) 23-26
- LHCb tracking system
O. Steinkamp
talk given at the International Symposium “LHC physics and detectors”
JINR, DUBna, Russian Federation, June 28-30, 2000.
- Inner Tracking of LHCb
U. Straumann
Talk given at the DESY Seminar, 15. March 2000
- A triple GEM detector for LHCb
M. Ziegler
Workshop on Micro-Pattern Gas Detectors, Orsay, France, June 28-30, 1999.
LHCb public note 99-024
- b Physics at LHC with the dedicated experiment LHCb
U. Straumann
Frühjahrstagung der deutschen physikalischen Gesellschaft, Freiburg, March 1998

1.2.2 Thesis

- A Silicon Inner Tracker for the LHCb Experiment
Phillip Sievers
Zürich, December 2002
- Development of a triple GEM detector for the LHCb experiment
Marcus Ziegler
Zürich, January 2002
- P. Cwetanski, *Studies on detector prototypes for the inner tracking system of LHCb*, Diplomarbeit, Zürich und Heidelberg, März 2000.

1.2.3 Public and internal notes

- Tracking Performance and Robustness Tests
Matthew Needham
LHCb note 2003-020.
- Silicon Tracker simulation performance
Matthew Needham
LHCb note 2003-015.
- F. Lehner and M. Stodulski, “The liquid cooling system of the LHCb Inner Tracker: Design constraints and considerations”, LHCb-2002-066

- *Alignment Tolerances for the Inner Tracker*
F. Lehner, O. Steinkamp
LHCb Note 2002-064
- The LHCb Inner Tracker data readout system
A. Vollhardt
LHCb public note 2002-062
- K. Bösiger et al., “The LHCb Inner Tracker cooling balcony and plate: Design and Material Selection Studies, LHCb-2002-061
- K. Bösiger et al., “Design, Construction and Thermal Measurements on a Detector Box for the LHCb Inner Tracker”, LHCb-2002-059
- *Test Beam Results of Multi-Geometry Prototype Sensors for the LHCb Inner Tracker*
M. Agari, C. Bauer, B. Carron, S. Heule, S. Jimenez-Otero, F. Lehner, A. Ludwig, V. Pugatch, M. Schmelling, P. Sievers, O. Steinkamp, U. Straumann, M.T. Tran, A. Vollhardt, H. Voss
LHCb Note 2002-058
- *Layout and R&D for an All-Silicon TT Station*
O. Steinkamp
LHCb Note 2002-056
- Momentum resolution studies for the inner tracker TDR
Matthew Needham
LHCb note 2002-043.
- Description and evaluation of multi-geometry silicon prototype sensors for the LHCb Inner Tracker
F.Lehner, P.Sievers, O.Steinkamp, U.Straumann, A.Vollhardt, M.Ziegler (Universität Zürich)
LHCb public note 2002-038, July 2002
- Inner and Outer tracker occupancies in the light LHCb detector.
Matthew Needham
LHCb note 2002-032.
- New data model, digitization and reconstruction algorithms for the inner tracker
Matthew Needham
LHCb note 2002-030.
- First measurements on Inner Tracker silicon prototype sensors using the BEETLE v1.1 readout chip
T.Glebe, A.Ludwig, V.Pugatch, M.Schmelling (MPI für Kernphysik, Heidelberg)
F.Lehner, P.Sievers, O.Steinkamp, U.Straumann, A.Vollhardt, M.Ziegler (Universität Zürich)
LHCb public note 2002-018, February 2002
- Test Beam Results on Inner Tracker Silicon Prototype Sensors
C.Bauer, T.Glebe, A.Ludwig, V.Pugatch, F.Sanchez, M.Schmelling (MPI für Kernphysik, Heidelberg)
F.Lehner, P.Sievers, O.Steinkamp, U.Straumann, A.Vollhardt, M.Ziegler (Universität Zürich)
LHCb public note 2001-135, November 2001
- Investigations of the thermal properties of the LHCb Inner Tracker silicon ladders by finite element analysis
Jacek Blocki (Institute for Nuclear Physics, Cracow)

F.Lehner (Universität Zürich)
LHCb public note 2001-128, October 2001

- Characterization of Inner Tracker silicon Prototype Sensors Using a 106 Ru-source and a 1083 nm Laser System
C.Bauer, T.Glebe, V.Pugatch, M.Schmelling, B.Schwingenheuer (MPI für Kernphysik Heidelberg)
P.Sievers (Universität Zürich)
LHCb internal note 2001-121, September 2001
- First results from LHCb inner tracker performance studies using new digitization software
A.Polouektov, O.Steinkamp, U.Straumann
LHCb internal note 2001-118, September 2001
- Revised z positions for tracking stations
O.Steinkamp
LHCb internal note 2001-115, September 2001
- Layout of a cross-shaped inner tracker
O.Steinkamp
LHCb internal note 2001-114, September 2001
- Description and Characterization of Inner Tracker Silicon Prototype Sensors
F.Lehner, P.Sievers, O.Steinkamp, U.Straumann, M.Ziegler (Universität Zürich)
V.Pugatch (MPI für Kernphysik Heidelberg)
LHCb public note 2001-036, April 2001
- First irradiation of Inner Tracker Prototype Sensors
V.Pugatch, F.Sanchez, M.Schmelling (MPI für Kernphysik)
P.Sievers, O.Steinkamp (Universität Zürich)
LHCb internal note 2001-035, March 2001
- M. Ziegler, P. Sievers and U. Straumann, *A triple GEM detector with two dimensional readout*, hep-ex/0007007 and LHCb note LHCb-2000-056, July 2000
- Space Requirements and z Positions for Tracking Stations
O. Steinkamp
LHCb internal note 2000-108, November 2000.
- A triple GEM detector for LHCb
M. Ziegler, U. Straumann
LHCb public note 99-024, 30.6.1999.
- Operation of a large GEM-MSGC detector in a high intensity hadronic test beam using fully pipelined readout electronics
U. Straumann et al.
LHCb public note 98-060, 6.10.1998.
- LHC-B Trigger and Dataacquisition
U. Straumann
LHC-B internal note 97 – 005, February 26, 1997

1.2.4 Technical reports

The latest of the following reports was almost entirely produced in our group.

- LHCb Collaboration: *LHCb Inner Tracker: Technical Design Report* CERN/LHCC 2002-029
- LHCb Collaboration: *LHCb online system technical design report: Data acquisition and experiment control*, CERN/LHCC 2001-040
- LHCb Collaboration: *LHCb Outer Tracking: Technical Design Report*, CERN/LHCC 2001-024, Sept. 14, 2001
- LHCb Collaboration: *LHCb Vertex Locator: Technical Design Report*, CERN/LHCC/2001-011, May 31, 2001.
- LHCb Collaboration: *LHCb Muon System: Technical Design Report*, CERN/LHCC/2001-010, May 28, 2001.
- LHCb Collaboration: *LHCb Magnet: Technical Design Report*, CERN/LHCC/2000-007, Dec. 17, 1999.
- LHCb Collaboration: *LHCb RICH, Technical Design Report*, CERN/LHCC/2000-037, Sep. 7, 2000.
- LHCb Collaboration: *LHCb Calorimeter, Technical Design Report*, CERN/LHCC/2000-036, Sep. 6, 2000.
- LHCb, a Large Hadron Collider Beauty Experiment for Precision Measurements of CP-Violation and Rare Decays
LHCb Collaboration
Technical Proposal, CERN/LHCC – 98/4, February 20, 1998

1.3 Gravitation

1.3.1 Invited talks and contributions to conferences

- A Beam Balance Experiment to Determine the Gravitational Constant
St. Schlamminger, E. Holzschuh, W. Kündig, Conference Digest, to be published in Conference on Precision Electromagnetic Measurements 2002.
- The Zurich Big G Experiment from the Comparators point of View
St. Schlamminger
Seminar given at the METAS (Swiss Federal Office of Metrology and Accreditation), Dec. 4, 2001.
- Neuere Bestimmungen der Gravitationskonstanten
St. Schlamminger
Vortrag im physikalischen Kolloquium Universität Konstanz, 29. Januar 2001
- Determination of the Gravitational Constant
St. Schlamminger, E. Holzschuh, W. Kündig, F. Nolting, J. Schurr
in “Gyros, Clocks and Interferometers: Testing General Relativity in Space”
C. Lämmerzahl, C.W.F. Everitt and F.W. Hehl (Eds.), Springer-Verlag, 2001.

- Determination of the Gravitational Constant Using a Beam Balance
St. Schlamminger, E. Holzschuh, W. Kündig, Conference Digest, Conference on Precision Electromagnetic Measurements 2000, pp. 693-694
- Determination of the Gravitational Constant Using a Beam Balance
St. Schlamminger, E. Holzschuh, W. Kündig, to be published in Conference Proceedings of 9th Marcel Grossmann Meeting, July 2000.

1.3.2 Thesis

- Determination of the Gravitational Constant Using a Beam Balance
St. Schlamminger
Zurich, 2002.

1.3.3 Articles

- Determination of the Gravitational Constant with a Beam Balance
St. Schlamminger, E. Holzschuh, W. Kündig, Phys. Rev. Lett. **89** (2002) Nr. 16, p. 161102
- Hoffnung für die Gravitationskonstante
St. Schlamminger, Physikalische Blätter **56** (2000) Nr. 9 pp. 15-16
- Determination of the Gravitational Constant by Means of a Beam Balance
F. Nolting, J. Schurr, St. Schlamminger and W. Kündig, Europhysics News Juli/August 2000
- Die Gravitationskonstante - eine Herausforderung an die Messtechnik
F. Nolting, J. Schurr, St. Schlamminger and W. Kündig, Physikalische Blätter **55** (1999) Nr. 4, pp. 51-53
- A Value for G from Beam-Balance Experiments
F. Nolting, J. Schurr, St. Schlamminger and W. Kündig, Measurement Science and Technology **10** (1999) Nr. 6, pp. 487-491

1.4 H1 Collaboration

1.4.1 Invited lectures, talks and contributions to conferences (incomplete)

- Measurements of Proton Structure Functions, α_s and Parton Distribution Functions at HERA
Nicole Werner
38th Rencontres de Moriond (QCD and High Energy Hadronic Interactions), Les Arcs, March 22nd-29th, 2003
- A First Level Trigger Subsystem CIP2k for the H1 experiment at HERA
J. Becker, H. Cramer, M. Hildebrandt, K. Müller, S. Schmitt, U. Straumann, M. Urban and N. Werner
Proceedings of the 8th topical seminar on innovative particle and radiation detectors, Siena, Italy, 21 to 24 October 2002.
- The CIP2k First Level Trigger System at the H1 experiment at HERA
M. Urban, J. Becker, S. Schmitt and U. Straumann
Proceedings of the 2002 IEEE NSS/MIC, Norfolk, Virginia, USA, Nov. 10-16, 2002

- Experimental Methods in Deep Inelastic Scattering at the HERA Collider
U. Straumann
lecture given for the Graduiertenkolleg Tübingen – Basel
Basel, 5. Juli 2002
- H1 Experiment at HERA
Katharina Müller
talk given at the ECFA meeting, Zurich, 1. March 2002
- The H1 Experiment at HERA
U. Straumann
talk given at the Schweiz. Phys. Gesellschaft, Lausanne, 28. Febr. 2002
- Measurement of the Inclusive Deep Inelastic ep Scattering Cross Section at Low Q².
R. Wallny
Proc. International Europhysics Conference of HEP 1999, Tampere, Finland
- Quark and Gluon Structure of the Nucleon
6th Conference on Intersections between Particle and Nuclear Physics, Big Sky, May 1997
U. Straumann
Proc. edited by T. W. Donnelly, AIP Proceedings 412, page 125 (1998)
- Structure Function Measurements at HERA
U. Straumann
Les Recontres de Physique de la Vallée d’Aoste, Results and Perspective in Particle Physics, La Thuile, March 1997
Proc. edited by M. Greco, Frascati Physics Series IX, page 409 (1998).

1.4.2 Thesis

- A Measurement of the Gluon Distribution in the Proton and of the Strong Coupling Constant α_s from Inclusive Deep-Inelastic Scattering
R. Wallny
Thesis, Zurich 2001
- Entwurf und Bau einer Frontend-Steuerung für das CIP-Upgrade Projekt für H1 bei HERA
A. Vollhardt
Diplomarbeit, Zürich und Heidelberg, Januar 2001
- The Data Acquisition and Control System for a Fast Trigger at H1
J. Becker
Diplomarbeit, Zürich und Heidelberg, November 2000
- Ein schneller Trigger für H1 bei HERA
M. Urban
Diplomarbeit, Heidelberg und Zürich, Mai 2000

1.4.3 Articles on analysis results

- C. Adloff *et al.* [H1 Collaboration], “Measurement of inclusive jet cross sections in photoproduction at HERA,” arXiv:hep-ex/0302034.

- C. Adloff *et al.* [H1 Collaboration], “Search for excited electrons at HERA,” *Phys. Lett. B* **548**, 35 (2002) [arXiv:hep-ex/0207038].
- C. Adloff *et al.* [H1 Collaboration], “Search for odderon-induced contributions to exclusive π^0 photoproduction at HERA,” *Phys. Lett. B* **544**, 35 (2002) [arXiv:hep-ex/0206073].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of inclusive jet cross-sections in deep-inelastic $e p$ scattering at HERA,” *Phys. Lett. B* **542**, 193 (2002) [arXiv:hep-ex/0206029].
- C. Adloff *et al.* [H1 Collaboration], “Diffractive photoproduction of $\psi(2S)$ mesons at HERA,” *Phys. Lett. B* **541**, 251 (2002) [arXiv:hep-ex/0205107].
- C. Adloff *et al.* [H1 Collaboration], “Search for QCD instanton-induced processes in deep-inelastic scattering at HERA,” *Eur. Phys. J. C* **25**, 495 (2002) [arXiv:hep-ex/0205078].
- C. Adloff *et al.* [H1 Collaboration], “Inelastic lepton production of J/ψ mesons at HERA,” *Eur. Phys. J. C* **25**, 41 (2002) [arXiv:hep-ex/0205065].
- C. Adloff *et al.* [H1 Collaboration], “Inelastic photoproduction of J/ψ mesons at HERA,” *Eur. Phys. J. C* **25**, 25 (2002) [arXiv:hep-ex/0205064].
- C. Adloff *et al.* [H1 Collaboration], “A measurement of the t dependence of the helicity structure of diffractive ρ meson electroproduction at HERA,” *Phys. Lett. B* **539**, 25 (2002) [arXiv:hep-ex/0203022].
- C. Adloff *et al.* [H1 Collaboration], “Energy flow and rapidity gaps between jets in photoproduction at HERA,” *Eur. Phys. J. C* **24**, 517 (2002) [arXiv:hep-ex/0203011].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of dijet cross sections in photoproduction at HERA,” *Eur. Phys. J. C* **25**, 13 (2002) [arXiv:hep-ex/0201006].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of dijet electroproduction at small jet separation,” *Eur. Phys. J. C* **24**, 33 (2002) [arXiv:hep-ex/0111006].
- C. Adloff *et al.* [H1 Collaboration], “Search for excited neutrinos at HERA,” *Phys. Lett. B* **525**, 9 (2002) [arXiv:hep-ex/0110037].
- C. Adloff *et al.* [H1 Collaboration], “ D^{*+} meson production in deep-inelastic diffractive interactions at HERA,” *Phys. Lett. B* **520**, 191 (2001) [arXiv:hep-ex/0108047].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of D^{*+} meson production and $F_2(c)$ in deep inelastic scattering at HERA,” *Phys. Lett. B* **528**, 199 (2002) [arXiv:hep-ex/0108039].
- C. Adloff *et al.* [H1 Collaboration], “On the rise of the proton structure function F_2 towards low x ,” *Phys. Lett. B* **520**, 183 (2001) [arXiv:hep-ex/0108035].
- C. Adloff *et al.* [H1 Collaboration], “A search for leptoquark bosons in $e-p$ collisions at HERA,” *Phys. Lett. B* **523**, 234 (2001) [arXiv:hep-ex/0107038].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of deeply virtual Compton scattering at HERA,” *Phys. Lett. B* **517**, 47 (2001) [arXiv:hep-ex/0107005].
- C. Adloff *et al.* [H1 Collaboration], “Three-jet production in deep-inelastic scattering at HERA,” *Phys. Lett. B* **515**, 17 (2001) [arXiv:hep-ex/0106078].

- C. Adloff *et al.* [H1 Collaboration], “Photoproduction with a leading proton at HERA,” Nucl. Phys. B **619**, 3 (2001) [arXiv:hep-ex/0106070].
- C. Adloff *et al.* [H1 Collaboration], “Searches at HERA for squarks in R-parity violating supersymmetry,” Eur. Phys. J. C **20**, 639 (2001) [arXiv:hep-ex/0102050].
- C. Adloff *et al.* [H1 Collaboration], “Deep-inelastic inclusive e p scattering at low x and a determination of $\alpha(s)$,” Eur. Phys. J. C **21**, 33 (2001) [arXiv:hep-ex/0012053].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of neutral and charged current cross sections in electron proton collisions at high Q^{*2} ,” Eur. Phys. J. C **19**, 269 (2001) [arXiv:hep-ex/0012052].
- C. Adloff *et al.* [H1 Collaboration], “Diffractive jet production in deep-inelastic e+ p collisions at HERA,” Eur. Phys. J. C **20**, 29 (2001) [arXiv:hep-ex/0012051].
- C. Adloff *et al.* [H1 Collaboration], “Measurement and QCD analysis of jet cross sections in deep-inelastic positron proton collisions at s^{*2} of 300-GeV,” Eur. Phys. J. C **19**, 289 (2001) [arXiv:hep-ex/0010054].
- C. Adloff *et al.* [H1 Collaboration], “Dijet production in charged and neutral current e+ p interactions at high Q^{*2} ,” Eur. Phys. J. C **19**, 429 (2001) [arXiv:hep-ex/0010016].
- C. Adloff *et al.* [H1 Collaboration], “A search for excited fermions at HERA,” Eur. Phys. J. C **17**, 567 (2000) [arXiv:hep-ex/0007035].
- C. Adloff *et al.* [H1 Collaboration], “Inclusive photoproduction of neutral pions in the photon hemisphere at HERA,” Eur. Phys. J. C **18**, 293 (2000) [arXiv:hep-ex/0006017].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of elastic electroproduction of Phi mesons at HERA,” Phys. Lett. B **483**, 360 (2000) [arXiv:hep-ex/0005010].
- C. Adloff *et al.* [H1 Collaboration], “Elastic photoproduction of J/psi and Upsilon mesons at HERA,” Phys. Lett. B **483**, 23 (2000) [arXiv:hep-ex/0003020].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of di-jet cross-sections in photoproduction and photon structure,” Phys. Lett. B **483**, 36 (2000) [arXiv:hep-ex/0003011].
- C. Adloff *et al.* [H1 Collaboration], “Search for compositeness, leptoquarks and large extra dimensions in e q contact interactions at HERA,” Phys. Lett. B **479**, 358 (2000) [arXiv:hep-ex/0003002].
- C. Adloff *et al.* [H1 Collaboration], “Investigation of power corrections to event shape variables measured in deep-inelastic scattering,” Eur. Phys. J. C **14**, 255 (2000) [Erratum-ibid. C **18**, 417 (2000)] [arXiv:hep-ex/9912052].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of open beauty production at HERA,” Phys. Lett. B **467**, 156 (1999) [Erratum-ibid. B **518**, 331 (2001)] [arXiv:hep-ex/9909029].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of neutral and charged current cross-sections in positron proton collisions at large momentum transfer,” Eur. Phys. J. C **13**, 609 (2000) [arXiv:hep-ex/9908059].
- C. Adloff *et al.* [H1 Collaboration], “Forward pi0 meson production at HERA,” Phys. Lett. B **462**, 440 (1999) [arXiv:hep-ex/9907030].
- C. Adloff *et al.* [H1 Collaboration], “Measurements of transverse energy flow in deep inelastic-scattering at HERA,” Eur. Phys. J. C **12**, 595 (2000) [arXiv:hep-ex/9907027].

- C. Adloff *et al.* [H1 Collaboration], “A search for leptoquark bosons and lepton flavor violation in $e^+ p$ collisions at HERA,” *Eur. Phys. J. C* **11**, 447 (1999) [Erratum-ibid. *C* **14**, 553 (2000)] [arXiv:hep-ex/9907002].
- C. Adloff *et al.* [H1 Collaboration], “Charmonium production in deep inelastic scattering at HERA,” *Eur. Phys. J. C* **10**, 373 (1999) [arXiv:hep-ex/9903008].
- C. Adloff *et al.* [H1 Collaboration], “Elastic electroproduction of rho mesons at HERA,” *Eur. Phys. J. C* **13**, 371 (2000) [arXiv:hep-ex/9902019].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of internal jet structure in dijet production in deep-inelastic scattering at HERA,” *Nucl. Phys. B* **545**, 3 (1999) [arXiv:hep-ex/9901010].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of dijet cross-sections at low Q^{*2} and the extraction of an effective parton density for the virtual photon,” *Eur. Phys. J. C* **13**, 397 (2000) [arXiv:hep-ex/9812024].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of D^* meson cross sections at HERA and determination of the gluon density in the proton using NLO QCD,” *Nucl. Phys. B* **545**, 21 (1999) [arXiv:hep-ex/9812023].
- C. Adloff *et al.* [H1 Collaboration], “Measurement of leading proton and neutron production in deep inelastic scattering at HERA,” *Eur. Phys. J. C* **6**, 587 (1999) [arXiv:hep-ex/9811013].
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- C. Adloff *et al.* [H1 Collaboration], “Hadron production in diffractive deep-inelastic scattering,” *Phys. Lett. B* **428**, 206 (1998) [arXiv:hep-ex/9803032].

1.5 Roland Bernet with the BaBar Collaboration

Roland Bernet is an author of the following publications of the BaBar - Collaboration between 1998 and 2002, because he was working on that experiment before he joined our institute in 2000:

Regular Publications: 27

Conference Submissions: 64

Reports and Notes: 4

1.6 Frank Lehner with the D0 collaboration

1.6.1 Talks and contributed papers to Conferences and workshops

- *Quality Assurance for the D0 silicon detector*
F. Lehner
talk presented on behalf of the D0 Collaboration on the 1st Workshop on Quality Assurance Issues in Silicon Detectors, May 17-18, 2001, CERN, Geneva, Switzerland
- *The D0 silicon microstrip tracker*
F. Lehner
talk presented on behalf of the D0 Collaboration on the 10th International Workshop on Vertex Detectors 'Vertex 2001', September 23-28, Brunnen, Switzerland
- *CDF/D0 Run2b upgrade silicon projects*
F. Lehner
talk presented on behalf of the D0 and CDF Collaboration on the 10th International Workshop on Vertex Detectors 'Vertex 2001', September 23-28, Brunnen, Switzerland

1.6.2 Internal notes

- A. Bean et al., "Silicon Sensor Quality Assurance for the D0 RunIIb Silicon Detector: Procedures and Equipment", D0-note 4120, March 2003
- J. Gardner et al., "Results from Irradiation Tests on D0 RunIIa Silicon Detectors at the Radiation Damage Facility at Fermilab", D0-note 3962, March 2002
- F. Lehner, "New leakage current, noise and depletion voltage expectations for RunIIb", D0-note 3959, March 2002
- A. Bean et al., "Studies on the Radiation Damage to Silicon Detectors For Use in the D0 RunIIb Experiment, D0-note 3958, March 2002
- F. Lehner, "The construction and performance of the 6-chip silicon ladders for the DZERO silicon main tracker", D0-note 3846, March 2001
- F. Lehner, "The phenomenology of the micro discharge effects on DZERO silicon modules", D0-note 3804, December 2002

1.6.3 Articles on analysis results

- V. M. Abazov *et al.* [D0 Collaboration], “Search for the production of single sleptons through R-Parity Violation in p anti-p collisions at $s^{**}(1/2)=1.8\text{-TeV}$.” Phys. Rev. Lett. **89** (2002) 261801
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- V. M. Abazov *et al.* [D0 Collaboration], “Search for mSUGRA in single-electron events with jets and large missing transverse energy in p anti-p collisions at $s^{**}(1/2) = 1.8\text{-TeV}$.” Phys. Rev. D **66** (2002) 112001
- V. M. Abazov *et al.* [D0 Collaboration], “Improved W boson mass measurement with the D0 detector.” Phys. Rev. D **66** (2002) 012001
- V. M. Abazov *et al.* [D0 Collaboration], “A direct measurement of W boson decay width.” Phys. Rev. D **66** (2002) 032008
- V. M. Abazov *et al.* [D0 Collaboration], “Search for R-parity violating supersymmetry in dimuon and four-jets channel,” Phys. Rev. Lett. **89** (2002) 171801
- V. M. Abazov *et al.* [D0 Collaboration], “Search for leptoquark pairs decaying to $\nu\nu + \text{jets}$ in p anti-p collisions at $s^{**}(1/2) = 1.8\text{-TeV}$,” Phys. Rev. Lett. **88** (2002) 191801
- V. M. Abazov *et al.* [D0 Collaboration], “The inclusive jet cross-section in p anti-p collisions at $s^{**}(1/2) = 1.8\text{-TeV}$ using the k(T) algorithm,” Phys. Lett. B **525** (2002) 211 [arXiv:hep-ex/0109041].
- V. M. Abazov *et al.* [D0 Collaboration], “Subjet multiplicity of gluon and quark jets reconstructed with the k(T) algorithm in p anti-p collisions,” Phys. Rev. D **65** (2002) 052008 [arXiv:hep-ex/0108054].
- V. M. Abazov *et al.* [D0 Collaboration], “A search for the scalar top quark in p anti-p collisions at $s^{**}(1/2) = 1.8\text{-TeV}$,” arXiv:hep-ex/0108018.
- V. M. Abazov *et al.* [D0 Collaboration], “Measurement of the ratio of differential cross sections for W and Z boson production as a function of transverse momentum in p anti-p collisions at $s^{**}(1/2) = 1.8\text{-TeV}$,” Phys. Lett. B **517** (2001) 299 [arXiv:hep-ex/0107012].
- V. M. Abazov *et al.* [D0 Collaboration], “A study of multiple jet production at transverse energy near 20-GeV,” arXiv:hep-ex/0106072.
- V. M. Abazov *et al.* [D0 Collaboration], “Search for single top quark production at D0 using neural networks,” Phys. Lett. B **517** (2001) 282 [arXiv:hep-ex/0106059].
- V. M. Abazov *et al.* [D0 Collaboration], “Search for new physics using QUAERO: A general interface to D0 event data,” Phys. Rev. Lett. **87** (2001) 231801 [arXiv:hep-ex/0106039].
- V. M. Abazov *et al.* [D0 Collaboration], “The ratio of the isolated photon cross sections at $s^{**}(1/2) = 630\text{-GeV}$ and 1800-GeV ,” Phys. Rev. Lett. **87** (2001) 251805 [arXiv:hep-ex/0106026].

- V. M. Abazov *et al.* [D0 Collaboration], “Search for first-generation scalar and vector leptoquarks,” Phys. Rev. D **64** (2001) 092004 [arXiv:hep-ex/0105072].
- V. M. Abazov *et al.* [D0 Collaboration], “Search for heavy particles decaying into electron positron pairs in p anti-p collisions,” Phys. Rev. Lett. **87** (2001) 061802 [Int. J. Mod. Phys. A **16S1B** (2001) 866] [arXiv:hep-ex/0102048].
- V. M. Abazov *et al.* [D0 Collaboration], “Direct search for charged Higgs bosons in decays of top quarks,” arXiv:hep-ex/0102039.
- B. Abbott *et al.* [D0 Collaboration], “A quasi-model-independent search for new high p(T) physics at D0,” Phys. Rev. Lett. **86** (2001) 3712 [arXiv:hep-ex/0011071].
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- B. Abbott *et al.* [D0 Collaboration], “Measurement of the angular distribution of electrons from $W \rightarrow e \nu$ decays observed in p anti-p collisions at $s^{*(1/2)} = 1.8\text{-TeV}$,” Phys. Rev. D **63** (2001) 072001 [arXiv:hep-ex/0009034].
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- B. Abbott *et al.* [D0 Collaboration], “The ratio of jet cross sections at $s^{*(1/2)} = 630\text{-GeV}$ and 1800-GeV ,” Phys. Rev. Lett. **86** (2001) 2523 [arXiv:hep-ex/0008072].
- B. Abbott *et al.* [D0 Collaboration], “Search for large extra dimensions in dielectron and diphoton production,” Phys. Rev. Lett. **86** (2001) 1156 [arXiv:hep-ex/0008065].
- B. Abbott *et al.* [D0 Collaboration], “Search for electroweak production of single top quarks in p anti-p collisions,” Phys. Rev. D **63** (2001) 031101 [arXiv:hep-ex/0008024].
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- B. Abbott *et al.* [D0 Collaboration], “Hard single diffraction in anti-p p collisions at $s^{*(1/2)} = 630\text{-GeV}$ and 1800-GeV ,” Phys. Lett. B **531** (2002) 52 [arXiv:hep-ex/9912061].

1.7 Matthew Needham with the NA48 collaboration

- A precise measurement of the direct CP violating parameter $\text{Re}(\epsilon'/\epsilon)$.
Eur. Phys. J. **C22** (231-254)
The NA48 Collaboration.
- Precise measurement of the decay $K_L \rightarrow \pi^0 \gamma \gamma$.
Phys. Lett. **B536** (229-240)
The NA48 Collaboration.

- A Measurement of the K_S Lifetime.
Phys. Lett. **B537** (28-40)
The NA48 Collaboration.
- Investigation of $K_{L,S} \rightarrow \pi^+\pi^-e^+e^-$ decays.
To be submitted to Eur. Phys. J.
The NA48 Collaboration.

1.8 Olaf Steinkamp and Ulrich Straumann with the HERA-B Collaboration

1.8.1 Invited talk

- O. Steinkamp, “Status and results from HERA-B,” *Prepared for 3rd International Conference on B Physics and CP Violation (BCONF99), Taipei, Taiwan, 3-7 Dec 1999*

1.8.2 Articles

- *Inclusive V^0 Production Cross Sections from 920 GeV Fixed Target Proton-Nucleus Collisions*
HERA-B Collaboration
hep-ex/0212040
- I. Abt *et al.* [HERA-B Collaboration], “J/psi production via chi/c decays in 920-GeV p A interactions,” arXiv:hep-ex/0211033.
- I. Abt *et al.* [HERA-B Collaboration], “Measurement of the b anti-b production cross section in 920-GeV fixed-target proton nucleus collisions,” Eur. Phys. J. C **26**, 345 (2003) [arXiv:hep-ex/0205106].