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Personal

Born: 3/20/1954

United States Citizen

Education

B.S. Physics, Worcester Polytechnic Institute, 1976

Ph.D. Physics, University of Chicago, 1983.

Employment

Full Professor, Dept of Physics & Astronomy, Johns Hopkins University
8/1998 - present

Permanent Staff Physicist, Research Division, SLAC
10/1993 - 8/1998

Assistant Professor, Research Division, SLAC
10/1986 - 9/1993

Staff Physicist, EP Division, CERN
8/1985 - 9/1986

Scientific Associate, EP Division, CERN
8/1983 - 7/1985

Research Assistant, Enrico Fermi Institute, University of Chicago
9/1976 - 7/1983

Teaching Experience

Stanford University

Physics 351/352, Elementary Particle Physics, 6 quarters: 1988/1989, 1989/1990, 1990/1991

Summer/Winter Schools

Physics with Polarized Beams, Two Invited Lectures, 15th SLAC Summer Institute, Stanford, California, July 1987.

Mark II Physics at the SLC, Three Invited Lectures, XXVIIIth Schladming Winter School of Particle Physics, Schladming, Austria, March 1989.

Precision Experiments in Electroweak Interactions, Two Invited Lectures, 17th SLAC Summer Institute, Stanford, California, July 1989.

Physics at the SLC, Two Invited Lectures, NATO Advanced Study Institute: Z^0 Physics, Cargèse, France, August 1990.

Precise Electroweak Measurements: the view from below, Three Invited Lectures, 23rd SLAC Summer Institute, Stanford, California, July 1995.

Johns Hopkins University

172.631/172.632 Physics Seminar (1st year graduate), 1 credit, 10 semesters: 1999/2000 - 2003/2004

171.103 General Physics for the Biological Sciences, 4 credits, 4 semesters: Fall 2000 - Fall 2003

171.732 Elementary Particle Physics, 3 credits, 4 semesters: Spring 1999, Spring 2000, Fall 2004, Spring 2012

171.412 Mathematical Methods for Physicists II (Numerical Methods), 4 credits, 3 semesters: Spring 2003 - Spring 2005

173.111/173.112 General Physics Laboratory I/II, 1 credit, 16 semesters: Fall 2005 - Spring 2012

173.115/173.116 Classical Physics Laboratory I/II (now Classical Mechanics Laboratory/Electricity & Magnetism Laboratory), 1 credit, 16 semesters: Fall 2005 - Spring 2012

172.711/172.712 Intermediate Physics Seminar (2nd year graduate), 1 credit, 4 semesters: Spring 2010 - present

Outreach

Co-Organizer/Mentor, JHU Quarknet Center (High School Teacher Professional Development): 2002-2011.

Co-Organizer, JHU Physics Fair: 2004-2012

Co-Organizer/Mentor, EPPOG/Quarknet Masterclasses (High School Students and Teachers): 2008-2012.

JHU Activities

University Service

Dean's Teaching Fellowship Committee: 2006/2007, 2008/2009, 2009/2010

Committee on the Scheduling of Classes: 2003-2004

Faculty Advisory Board of CER TA Training Institute: 2003-2006

KSAS/WSE Committee on the redesign of General Physics: 2006-2007

KSAS Premed Service Courses Committee: 2006-2007

Goldwater Scholarship Committee: 2004-2006

Faculty Assembly Steering Committee, 2008-2011

Departmental Service

Vice Chair, Academic Affairs: 2002-2008, 2009

Teaching Assignment Committee: 2010-2012

Chair, Faculty Search Committees: 1999-2001, 2004-2005

First Year Graduate Student Advisor: 5 years, 1999/2000-2003/2004

Chair of Computer Committee: 1999-2002

Chair Departmental Promotion Committees: 2006/2007, 2010/2011, 2011/2012

Joint PHA/Chemistry Faculty Search Committee: 2009-2010

Preliminary Exam Author: 5 E&M exams, 1 QM Exam

Graduate Program Committee: 2002-2008, 2012-2013

Undergraduate Program Committee: 2002-2008

Professional Activities

Fellow of the American Physical Society

Physical Review/PRL Referee

Director's Annual Review of the Physics Division of the LBL (1994)

Convener of the DPF Long Term Planning Study (1995)

Chair of cost/schedule review of \$100 million NSF Major Research Equipment initiative: Rare Symmetry Violating Processes, July 2000

Reviewer for NSF Science and Technology Center competition, November 2000

Organizer of National Linear Collider Workshop at JHU, March 2001.

Chair, USCMS Tracker Institutional Board 2006-2008

USCMS Advisory Board

USCMS Institutional Advisory Board

Fermilab LHC Physics Center Advisory Board

USCMS Ad hoc committee to recommend new Research Program Director

CMS Tracker Editorial Board

USCMS M&O Pixel Offline Software Coordinator
NSF EPP Site Visiting Committee at SUNY Stony Brook
Panofsky Prize Committee of the American Physical Society
CMS Publications Committee

Research

Summary

Early Fermilab-based Research (1976-1983)

Design and testing of large cell drift chambers, 1976-1977
Proposal to study neutrino-electron elastic scattering (Fermilab P600), 1977-1978
Study of large transverse momentum hadrons in π^-N and pN collisions, 1978-1980
Study of large mass muon pairs in π^-N collisions (Thesis), 1980-1983

Postdoctoral Research at CERN $S\bar{p}\bar{p}S$ Collider: UA2 Collaboration (1983-1986)

Emulator-based improvements to the data acquisition system
Analysis and interpretation of $W \rightarrow e\nu$ and $Z \rightarrow ee$ final states
Improved identification of low pt electrons: search for excited electrons + scalar W bosons.

Research at SLAC (1986-2001)

Study of mass and width of the Z Boson with Mark II detector
Search for doubly-charged Higgs bosons with Mark II data and published PEP/PETRA data
Construction of Extraction Line Møller Polarimeter
Observation of bound state effects in Møller Polarimeter and solution of large discrepancy with Compton device
Calculation and verification of the radiative corrections to polarized Compton cross section
Reanalysis and improvement of the hadronic vacuum polarization corrections to the fine structure constant
Leader of SLD Electroweak Working Group
Measurement of the Z Left-Right Asymmetry: world's most precise test of the electroweak Standard Model

Research at CERN LHC: CMS Collaboration (1999-present)

Testing and characterization of CMS Pixel Sensors
Development of the world's best model of radiation damaged silicon detectors
Development and deployment of simulation-based Si pixel reconstruction algorithm
Development and deployment of simulation-based Si strip reconstruction algorithm
Development and deployment of Si detector cluster splitting algorithm and improvement of tracking in dense jets
Search for 3rd generation final states from massive exotic states

External Funding

Principal Investigator, *Studies of Elementary Particles*, NSF award PHY-0071001, 5/2000-5/2003, \$2,010,794.

Principal Investigator, *Studies of Elementary Particles*, NSF award PHY-0245040, \$600,000.00 from 8/03-8/04.

Principal Investigator, *Studies of Elementary Particles*, NSF award PHY-0457374, \$1,675,000.00 from 4/05-3/08.

Principle Investigator, HP Technology for Teaching Grant, \$53,133.

Principal Investigator, *Studies of Elementary Particles*, NSF award PHY-0758083, \$1,506,000 from 4/08-3/11.

Principal Investigator, *Studies of Elementary Particles*, Supplement to NSF award PHY-0758083, \$165,000.

Principal Investigator, *Studies of Elementary Particles*, NSF award PHY-1100862, \$1,650,000 from 7/11-6/14.

Conference Talks and Lectures

W and Z⁰ Physics in UA2, Invited Talk, U.K. Physics Forum on Supersymmetry, Abingdon, U.K., May 1984.

UA2 Physics, Invited Plenary Talk, American Physical Society Division of Particles and Fields, Santa Fe, New Mexico, November 1984.

Recent Results From UA2, Invited Talk, New Particles 1985, Madison, Wisconsin, May 1985.

W and Z⁰ Physics in UA2, Invited Talk, American Physical Society Spring Meeting, Washington, D.C., April 1986.

Recent Results from UA2, Invited Talk, Aspen Winter Physics Conference, Aspen, Colorado, January 1987.

Physics with Polarized Beams, Two Invited Lectures, 15th SLAC Summer Institute, Stanford, California, July 1987.

Polarization at SLC, Invited Talk, Workshop on Polarization at LEP, Geneva, Switzerland, November 1987.

Status of the SLC and Physics with the Mark II Detector, Invited Talk, XIth Nordic Meeting on Particle Physics, Spaaind, Norway, January 1988.

Introduction to Polarized Z⁰ Physics, Invited Talk, Eighth International Symposium on High Energy Spin Physics, Minneapolis, Minnesota., September 1988.

Mark II Physics at the SLC, Three Invited Lectures, XXVIIIth Schladming Winter School of Particle Physics, Schladming, Austria, March 1989.

Precision Experiments in Electroweak Interactions, Two Invited Lectures, 17th SLAC Summer Institute, Stanford, California, July 1989.

Prospects for Polarized Z⁰ Physics, Invited Talk, Aspen Winter Physics Conference, Aspen, Colorado, January 1990.

Physics at the SLC, Two Invited Lectures, NATO Advanced Study Institute: Z^0 Physics, Cargèse, France, August 1990.

Polarization Experiments at the Z^0 , Invited Talk, Workshop on Precise Measurements in Electroweak Physics, Santa Barbara, California, February 1991.

Searching for the 17 KeV Neutrino with a Tritium Based Missing Mass Experiment, Contributed Talk, Workshop on the 17 KeV Neutrino Question, Berkeley, California, December 1991.

First Measurement of the Left-Right Z^0 Cross Section Asymmetry in Polarized e^-e^+ Collisions at the SLC, Invited Plenary Talk, Tenth International Symposium on High Energy Spin Physics, Nagoya, Japan, November 1992.

Recent Results from the Polarized SLC, Invited Talk, Thirteenth International Conference on Physics in Collision, Heidelberg, Germany, June 1993.

Tests of the Electroweak Standard Model at High Energies ($\sqrt{s} > 50$ GeV), Invited Talk, Sixteenth International Symposium on Lepton and Photon Interactions, Ithaca, New York, August 1993.

Recent Results From SLD, Invited Talk, Fourth International Conference on Physics Beyond the Standard Model, Lake Tahoe, California, December 1994.

Electroweak Radiative Corrections and Measurements of R_{had} , Invited Talk, Workshop on the Tau-Charm Factory, Argonne, Illinois, June 1995.

Precise Electroweak Measurements: the view from below, Three Invited Lectures, 23rd SLAC Summer Institute, Stanford, California, July 1995.

Experimental Electroweak Results from Electron-Positron Colliders, Invited Plenary Talk, Workshop on New Directions for High Energy Physics (Snowmass 96), Snowmass, Colorado, June 1996.

Final 1994-5 Left-Right Asymmetry Measurement from SLD, Invited Talk, Cracow International Symposium on Radiative Corrections (CRAD 96), Cracow, Poland, August 1996.

Z-Pole Electroweak Results, Invited Plenary Talk, Eighteenth International Physics In Collision (PIC 98), Frascati, Italy, June 1998.

Precision Electroweak Physics at the Z, Invited Plenary Talk, Nineteenth International Symposium on Lepton and Photon Interactions (LP99), Stanford, California, August 1999.

Precise Electroweak Measurements and the Higgs Mass, Invited Talk, Workshop On The Future Of Higgs Physics, Batavia, IL, May 3, 2001.

Precise Electroweak Measurements and the Higgs Mass, Invited Talk, APS/DPF/DPB Summer Study On The Future Of Particle Physics, July 2, 2001.

CMS Pixel Simulations, Invited Talk, VERTEX 2002, Kona HI, November, 2002.

An A_{LR} Retrospective, Invited Talk, Electroweak Precision Data and the Higgs Mass, Zeuthen (Germany), February 2003.

Double junction simulation of CMS pixel test beam data, 4th RD50 - Workshop on Radiation hard semiconductor devices? for very high luminosity colliders, Geneva Switzerland, May 2004.

Type Inversion in Irradiated Silicon Detectors: a half truth?, DPF2004, Riverside CA, August 2004.

Updated double junction simulation of CMS pixel test beam data, 6th RD50 Workshop on Radiation hard semiconductor devices for very high luminosity colliders, Helsinki Finland, June 2005.

Charge collection in irradiated pixel sensors: beam test measurements and simulation, Pixel2005, Bonn, Germany, September 2005.

Charlie and ALR: A Historical Perspective, Invited Talk, CharlieFest (honoring C.Y. Prescott), Stanford CA, January 2006.

Simulation of Heavily Irradiated Silicon Pixel Sensors, Invited talk, International Symposium on the Development of Detectors for Particle, AstroParticle and Synchrotron Radiation Experiments (SNICo6), Stanford CA, April 2006.

A New Technique for the Reconstruction, Validation, and Simulation of Hits in the CMS Pixel Detector, Invited talk, Vertex 2007: 16th International Workshop On Vertex Detectors, Lake Placid NY, September 2007.

Performance of the CMS Pixel Detector at the LHC, Invited Talk, TIPP 2011 (Technology and Instrumentation in Particle Physics 2011), Chicago, June 2011.

40th SSI: 23 Years of Precision Electroweak Physics, Invited Talk, SLAC Summer Institute, Stanford CA, July 2012.

Publications

"Proposal To Study Neutrino - Electron And Anti-Neutrino - Electron Scattering"

J. W. Cronin and M. L. Swartz

FERMILAB-PROPOSAL-0600(1978)

"The Relative Production Of π^+ , K^+ , p And Anti- p At Large Transverse Momentum In 200-GeV And 300-GeV π - p Collisions"

H. J. Frisch *et al.*

Phys. Rev. Lett. **44**, 511 (1980)

"A Comparison Of The Production Of Charged Hadrons At Large Transverse Momentum In π - p And p - p Collisions"

N. D. Giokaris *et al.*

Phys. Rev. Lett. **47**, 1690 (1981)

"The Atomic Weight Dependence Of Muon Pair Production In 225-GeV/c π -Nucleus Interactions"

H. J. Frisch *et al.*

Phys. Rev. D **25**, 2000 (1982)

"The Inclusive Production Of Hadrons At High $P(T)$ In 200-GeV And 300-GeV π - p And π - N Collisions"

H. J. Frisch *et al.*

Phys. Rev. D **27**, 1001 (1983)

"Atomic Mass Dependence Of The Transverse Momentum Distribution Of Massive Muon Pairs From 225-GeV/c π -Nucleus Collisions"

M. L. Swartz *et al.*

Phys. Rev. Lett. **53**, 32 (1984)

"Measurement Of Very Large Transverse Momentum Jet Production At The Cern Anti- p - p Collider"

P. Bagnaia *et al.* [UA2 Collaboration]

Phys. Lett. B **138**, 430 (1984)

“Observation Of Electrons Produced In Association With Hard Jets And Large Missing Transverse Momentum In P Anti-P Collisions At $S^{*(1/2)} = 540\text{-GeV}$ ”

P. Bagnaia *et al.* [Bern-CERN-Copenhagen-Orsay-Pavia-Saclay Collaboration and UA2 Collaboration]
Phys. Lett. B **139**, 105 (1984)

“A Study Of High Transverse Momentum Electrons Produced In Anti-P P Collisions At 540-GeV”

P. Bagnaia *et al.* [UA2 Collaboration and Bern-CERN-Copenhagen- Orsay-Pavia-Saclay Collaboration]
Z. Phys. C **24**, 1 (1984)

“The Atomic Mass Dependence of Massive Muon Pair Production in 225 GeV/c pi-Nucleus Interactions”

M. L. Swartz
FERMILAB-THESIS-1984-28(1984)

“Measurement Of Jet Fragmentation Properties At The Cern Anti-P P Collider”

P. Bagnaia *et al.* [UA2 Collaboration and Bern-CERN-Copenhagen- Orsay-Pavia-Saclay Collaboration]
Phys. Lett. B **144**, 291 (1984)

“Measurement Of Jet Production Properties At The Cern Anti-P P Collider”

P. Bagnaia *et al.* [UA2 Collaboration and Bern-CERN-Copenhagen- Orsay-Pavia-Saclay Collaboration]
Phys. Lett. B **144**, 283 (1984)

“Study Of Electron Pairs Below The Zo Mass Produced In Anti-P P Collisions At $S^{*(1/2)} = 540\text{-GeV}$ ”

P. Bagnaia *et al.* [UA2 Collaboration]
Phys. Lett. B **154**, 338 (1985)

“The Production Of Massive Muon Pairs In Pi- Nucleus Collisions”

H. B. Greenlee *et al.*
Phys. Rev. Lett. **55**, 1555 (1985)

“Measurement Of The $S^{*(1/2)}$ Dependence Of Jet Production At The Cern Anti-P P Collider”

J. A. Appel *et al.* [UA2 Collaboration]
Phys. Lett. B **160**, 349 (1985)

“Experimental Study Of The Emergence Of Two Jet Dominance In Anti-P P Collisions At $S^{*(1/2)} = 630\text{-GeV}$ ”

J. A. Appel *et al.* [UA2 Collaboration]
Phys. Lett. B **165**, 441 (1985)

“Measurement Of W^{+-} And Zo Properties At The Cern Anti-P P Collider”

J. A. Appel *et al.* [UA2 Collaboration]
Z. Phys. C **30**, 1 (1986)

“A Study Of Three Jet Events At The Cern Anti-P P Collider”

J. A. Appel *et al.* [UA2 Collaboration]
Z. Phys. C **30**, 341 (1986)

“DIRECT PHOTON PRODUCTION AT THE CERN anti-p p COLLIDER”

J. A. Appel *et al.* [UA2 Collaboration]
Phys. Lett. B **176**, 239 (1986)

“SEARCH FOR DECAYS OF THE W^{+-} AND Z BOSONS INTO QUARK - ANTI-QUARK PAIRS”

R. Ansari *et al.* [UA2 Collaboration]
Phys. Lett. B **186**, 452 (1987)

"Measurement of the Standard Model Parameters from a Study of W and Z Bosons"R. Ansari *et al.* [UA2 Collaboration]Phys. Lett. B **186**, 440 (1987)**"Measurement of W and Z Production Properties at the CERN anti-p p Collider"**R. Ansari *et al.* [UA2 Collaboration]Phys. Lett. B **194**, 158 (1987)**"JET MEASURES AND HADRONIC EVENT SHAPES AT THE CERN anti-p p COLLIDER"**R. Ansari *et al.* [UA2 Collaboration]Z. Phys. C **36**, 175 (1987)**"Search For Exotic Processes At The Cern P Anti-P Collider"**R. Ansari *et al.* [UA2 Collaboration]Phys. Lett. B **195**, 613 (1987)**"DIRECT PHOTON PRODUCTION IN anti-p p COLLISIONS AT $s^{1/2} = 630\text{-GeV}$ "**R. Ansari *et al.* [UA2 Collaboration]Z. Phys. C **41**, 395 (1988)**"MEASUREMENT OF THE STRONG COUPLING CONSTANT α_s FROM A STUDY OF W BOSONS PRODUCED IN ASSOCIATION WITH JETS"**R. Ansari *et al.* [UA2 Collaboration]Phys. Lett. B **215**, 175 (1988)**"THE MARK-II DETECTOR FOR THE SLC"**G. S. Abrams *et al.*Nucl. Instrum. Meth. A **281**, 55 (1989)**"Limits On Doubly Charged Higgs Bosons And Lepton Flavor Violation"**

M. L. Swartz

Phys. Rev. D **40**, 1521 (1989)**"FIRST MEASUREMENTS OF HADRONIC DECAYS OF THE Z BOSON"**G. S. Abrams *et al.* [MARK-II Collaboration]Phys. Rev. Lett. **63**, 1558 (1989)**"Initial Measurements of Z Boson Resonance Parameters in $e^+ e^-$ Annihilation"**G. S. Abrams *et al.*Phys. Rev. Lett. **63**, 724 (1989)**"Measurements of Z Boson Resonance Parameters in $e^+ e^-$ Annihilation"**G. S. Abrams *et al.*Phys. Rev. Lett. **63**, 2173 (1989)**"SEARCHES FOR NEW QUARKS AND LEPTONS PRODUCED IN Z BOSON DECAY"**G. S. Abrams *et al.*Phys. Rev. Lett. **63**, 2447 (1989)**"SEARCH FOR LONGLIVED MASSIVE NEUTRINOS IN Z DECAYS"**C. K. Jung *et al.*Phys. Rev. Lett. **64**, 1091 (1990)**"DETERMINATION OF α_s FROM A DIFFERENTIAL JET MULTIPLICITY DISTRIBUTION AT SLC AND PEP"**S. Komamiya *et al.*Phys. Rev. Lett. **64**, 987 (1990)

"MEASUREMENT OF THE b anti- b FRACTION IN HADRONIC Z DECAYS"J. F. Kral *et al.*Phys. Rev. Lett. **64**, 1211 (1990)**"MEASUREMENT OF Z DECAYS INTO LEPTON PAIRS"**G. S. Abrams *et al.*Phys. Rev. Lett. **63**, 2780 (1989)**"MEASUREMENTS OF CHARGED PARTICLE INCLUSIVE DISTRIBUTIONS IN HADRONIC DECAYS OF THE Z BOSON"**G. S. Abrams *et al.*Phys. Rev. Lett. **64**, 1334 (1990)**"A SEARCH FOR DOUBLY CHARGED HIGGS SCALARS IN Z DECAY"**M. L. Swartz *et al.*Phys. Rev. Lett. **64**, 2877 (1990)**"A SEARCH FOR DECAYS OF THE Z TO UNSTABLE NEUTRAL LEPTONS WITH MASS BETWEEN 2.5-GeV AND 22-GeV"**P. Burchat *et al.*Phys. Rev. D **41**, 3542 (1990)**"AN IMPROVED METHOD FOR SETTING UPPER LIMITS WITH SMALL NUMBER OF EVENTS"**

M. L. Swartz

Nucl. Instrum. Meth. A **294**, 278 (1990)**"SEARCH FOR NONMINIMAL HIGGS BOSONS FROM Z BOSON DECAY"**S. Komamiya *et al.*Phys. Rev. Lett. **64**, 2881 (1990)**"A SEARCH FOR PAIR PRODUCTION OF HEAVY STABLE CHARGED PARTICLES IN Z DECAYS"**E. Soderstrom *et al.*Phys. Rev. Lett. **64**, 2980 (1990)**"SEARCHES FOR SUPERSYMMETRIC PARTICLES PRODUCED IN Z BOSON DECAY"**T. Barklow *et al.*Phys. Rev. Lett. **64**, 2984 (1990)**"Measurement of the b anti- b fraction in hadronic Z_0 decays with precision vertex detectors"**R. Jacobsen *et al.*Phys. Rev. Lett. **67**, 3347 (1991)**"Measurement of the charged multiplicity of events containing bottom hadrons at $E(\text{cm}) = 91\text{-GeV}$ "**B. A. Schumm *et al.*Phys. Rev. D **46**, 453 (1992)**"First measurement of the left-right cross-section asymmetry in Z boson production by $e^+ e^-$ collisions"**K. Abe *et al.* [SLD Collaboration]Phys. Rev. Lett. **70**, 2515 (1993)**"First measurement of the left-right asymmetry in Z boson production"**R. D. Elia *et al.* [SLD Collaboration]Mod. Phys. Lett. A **8**, 2237 (1993)

“A Measurement of α_s from jet rates at the Z_0 resonance”K. Abe *et al.* [SLD Collaboration]Phys. Rev. Lett. **71**, 2528 (1993)**“Measurement of the charged multiplicity of $Z_0 \rightarrow b$ anti- b events”**K. Abe *et al.* [SLD Collaboration]Phys. Rev. Lett. **72**, 3145 (1994) [arXiv:hep-ex/9405004]**“Measurement of α_s from energy-energy correlations at the Z_0 resonance”**K. Abe *et al.* [SLD Collaboration]Phys. Rev. D **50**, 5580 (1994) [arXiv:hep-ex/9405006]**“Precise measurement of the left-right cross-section asymmetry in Z boson production by $e^+ e^-$ collisions”**K. Abe *et al.* [SLD Collaboration]Phys. Rev. Lett. **73**, 25 (1994) [arXiv:hep-ex/9404001]**“Measurement of $A(b)$ and $A(c)$ from the left-right forward - backward asymmetry of leptons in hadronic events at the Z_0 resonance”**K. Abe *et al.* [SLD Collaboration]Phys. Rev. Lett. **74**, 2895 (1995)**“A Search for jet handedness in hadronic Z_0 decays”**K. Abe *et al.* [SLD Collaboration]Phys. Rev. Lett. **74**, 1512 (1995) [arXiv:hep-ex/9501006]**“Polarized Bhabha Scattering A Precision Measurement Of The Electron Neutral Current Couplings”**K. Abe *et al.* [SLD Collaboration]Phys. Rev. Lett. **74**, 2880 (1995) [arXiv:hep-ex/9410009]**“Measurement of $A(b)$ from the left-right forward - backward asymmetry of b quark production in Z_0 decays using a momentum weighted track charge technique”**K. Abe *et al.* [SLD Collaboration]Phys. Rev. Lett. **74**, 2890 (1995)**“Measurement of $\alpha_s (M(Z)^{**2})$ from hadronic event observables at the Z_0 resonance”**K. Abe *et al.* [SLD Collaboration]Phys. Rev. D **51**, 962 (1995) [arXiv:hep-ex/9501003]**“Observation of target electron momentum effects in single arm Moller polarimetry”**M. Swartz *et al.*Nucl. Instrum. Meth. A **363**, 526 (1995) [arXiv:hep-ex/9412006]**“A Test Of The Flavor Independence Of Strong Interactions”**K. Abe *et al.* [SLD Collaboration]Phys. Rev. D **53**, 2271 (1996) [arXiv:hep-ex/9501005]**“Putting a new spin on particle physics”**

M. Swartz

SLAC Beam Line **25N1**, 19 (1995)**“First study of rapidity gaps in $e^+ e^-$ annihilation”**K. Abe *et al.* [SLD Collaboration]Phys. Rev. Lett. **76**, 4886 (1996) [arXiv:hep-ex/9607008]

“Comparison of a new calculation of energy-energy correlations with $e^+ e^- \rightarrow$ hadrons data at the Z_0 resonance”

K. Abe *et al.* [SLD Collaboration]
Phys. Rev. D **52**, 4240 (1995)

“Measurement of the tau lifetime at SLD”

K. Abe *et al.* [SLD Collaboration]
Phys. Rev. D **52**, 4828 (1995) [arXiv:hep-ex/9506004]

“Measurements of $R(b)$ with impact parameters and displaced vertices”

K. Abe *et al.* [SLD Collaboration]
Phys. Rev. D **53**, 1023 (1996)

“Reevaluation of the Hadronic Contribution to $\alpha(M_Z^2)$ ”

M. L. Swartz
Phys. Rev. D **53**, 5268 (1996) [arXiv:hep-ph/9509248]

“Measurement of the average B hadron lifetime in Z_0 decays using reconstructed vertices”

K. Abe *et al.* [SLD Collaboration]
Phys. Rev. Lett. **75**, 3624 (1995) [arXiv:hep-ex/9511005]

“First Measurement of the T-odd Correlation between the Z_0 Spin and the Three-jet Plane Orientation in Polarized Z_0 Decays to Three Jets”

K. Abe *et al.* [SLD Collaboration]
Phys. Rev. Lett. **75**, 4173 (1995) [arXiv:hep-ex/9510005]

“Measurement of the left-right forward - backward asymmetry for charm quarks with D^{*+} and D^+ mesons”

K. Abe *et al.* [SLD Collaboration]
Phys. Rev. Lett. **75**, 3609 (1995)

“Factorial and cumulant moments in $e^+ e^- \rightarrow$ hadrons at the Z_0 resonance”

K. Abe *et al.* [SLD Collaboration]
Phys. Lett. B **371**, 149 (1996) [arXiv:hep-ex/9601010]

“A study of the orientation and energy partition of three-jet events in hadronic Z_0 decays”

K. Abe *et al.* [SLD Collaboration]
Phys. Rev. D **55**, 2533 (1997) [arXiv:hep-ex/9608016]

“Measurement of the charged multiplicities in b, c and light quark events from Z_0 decays”

K. Abe *et al.* [SLD Collaboration]
Phys. Lett. B **386**, 475 (1996) [arXiv:hep-ex/9608008]

“First measurement of the left-right charge asymmetry in hadronic Z boson decays and a new determination of $\sin^2(\Theta(W)(\text{eff}))$ ”

K. Abe *et al.* [SLD Collaboration]
Phys. Rev. Lett. **78**, 17 (1997) [arXiv:hep-ex/9609019]

“An improved measurement of the left-right Z_0 cross-section asymmetry”

K. Abe *et al.* [SLD Collaboration]
Phys. Rev. Lett. **78**, 2075 (1997) [arXiv:hep-ex/9611011]

“Measurement of the B^+ and B_0 lifetimes using topological vertexing”

K. Abe *et al.* [SLD Collaboration]
arXiv:hep-ex/9702002
SLAC-PUB-7266(1996)

“Measurement of the tau neutrino helicity and Michel parameters in polarized e+ e- collisions”

K. Abe *et al.* [SLD Collaboration]
 Phys. Rev. Lett. **78**, 4691 (1997) [arXiv:hep-ex/9701020]

“Measurement of the B+ and Bo lifetimes from semileptonic decays”

K. Abe *et al.* [SLD Collaboration]
 arXiv:hep-ex/9702001
 SLAC-PUB-7117(1997)

“Measurement of leading particle effects in decays of Zo bosons into light flavors”

K. Abe *et al.* [SLD Collaboration]
 Phys. Rev. Lett. **78**, 3442 (1997) [Erratum-ibid. **79**, 959 (1997)] [arXiv:hep-ex/9702009]

“Measurement of the B+ and Bo lifetimes using topological reconstruction of inclusive and semileptonic decays”

K. Abe *et al.* [SLD Collaboration]
 Phys. Rev. Lett. **79**, 590 (1997)

“Direct measurement of leptonic coupling asymmetries with polarized Z’s”

K. Abe *et al.* [SLD Collaboration]
 Phys. Rev. Lett. **79**, 804 (1997) [arXiv:hep-ex/9704012]

“Measurement of the B hadron energy distribution in Zo decays”

K. Abe *et al.* [SLD Collaboration]
 Phys. Rev. D **56**, 5310 (1997) [arXiv:hep-ex/9707011]

“Measurement of R(b) using a vertex mass tag”

K. Abe *et al.* [SLD Collaboration]
 Phys. Rev. Lett. **80**, 660 (1998) [arXiv:hep-ex/9708015]

“A complete order-alpha3 calculation of the cross section for polarized Compton scattering”**

M. L. Swartz
 Phys. Rev. D **58**, 014010 (1998) [arXiv:hep-ph/9711447]

“A direct measurement of parity violation in the coupling of Zo bosons to b quarks using a mass tag and momentum-weighted track charge”

K. Abe *et al.* [SLD Collaboration]
 Phys. Rev. Lett. **81**, 942 (1998)

“Production of pi+, K+, Ko, K*o, Phi, p and Lambdao in hadronic Zo decays”

K. Abe *et al.* [SLD Collaboration]
 Phys. Rev. D **59**, 052001 (1999) [arXiv:hep-ex/9805029]

“An improved test of the flavor independence of strong interactions”

K. Abe *et al.* [SLD Collaboration]
 Phys. Rev. D **59**, 012002 (1999) [arXiv:hep-ex/9805023]

“Direct measurement of A(b) in Zo decays using charged kaon tagging”

K. Abe *et al.* [SLD Collaboration]
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