

**Personal List of Publications, Conference Proceedings, Seminars,  
Colloquia and Workshop Contributions**

**Publications of Experimental Results**

G.W. Wilson, “Inclusive production of  $\pi^0$  mesons from photon-proton interactions in the 60 to 170 GeV energy range”, Ph. D. Thesis, University of Lancaster 1989.

**Author**

WA69 Collab., R.J. Apsimon et al., “Inclusive production of  $\pi^0$  mesons in  $\pi p$ ,  $Kp$  and  $\gamma p$  collisions at energies around 100 GeV”, *Z. Phys.* **C52** (1991) 397.

**Major contribution**

WA83 Collab., S. Banerjee et al., “Observation of direct soft photon production in  $\pi^- p$  interactions at 280 GeV/c ” *Phys. Lett.* **B305** (1993) 182.

**Major contribution**

OPAL Collab., M.Z. Akrawy et al., “Search for Pair Produced Stable Singly-Charged Heavy Particles in  $Z^0$  Decays”, *Phys. Lett.* **B252** (1990) 290.

**Principal Author**

OPAL Collab., M.Z. Akrawy et al., “A Direct Measurement of the  $Z^0$  Invisible Width by Single Photon Counting”, *Z. Phys.* **C50** (1991) 373.

**Major contribution**

OPAL Collab., P.D. Acton et al., “Search for Anomalous Production of High Mass Photon Pairs in  $e^+e^-$  Collisions at LEP”, *Phys. Lett.* **B311** (1993) 391.

**Principal Author**

OPAL Collab., R. Akers et al., “Measurement of Single Photon Production in  $e^+e^-$  Collisions near the  $Z^0$  Resonance”, *Z. Phys.* **C65** (1995) 47.

**Principal Author**

OPAL Collab., G. Alexander et al., “Topological Search for the Production of Neutralinos and Scalar Particles”, *Phys. Lett.* **B377** (1996) 273.

**Major contribution**

OPAL Collab., “Measurements with Photonic Events in  $e^+e^-$  Collisions at Centre-of-mass Energies of 130-140 GeV”, *Phys. Lett.* **B377** (1996) 222.

**Principal Author**

OPAL Collab., G. Alexander et al., “Search for Excited Leptons in  $e^+e^-$  Collisions at  $\sqrt{s} = 130$  and  $136$  GeV ”, *Phys. Lett.* **B386** (1996) 463.

**Substantial Contribution**

OPAL Collab., K. Ackerstaff et al., “ Search for Excited Leptons in  $e^+e^-$  Collisions at  $\sqrt{s} = 161$  GeV ”, *Phys. Lett.* **B391** (1997) 197.

**Substantial Contribution**

OPAL Collab., K. Ackerstaff et al., “ Measurement of the Mass of the W Boson in  $e^+e^-$  Collisions at  $\sqrt{s} = 161$  GeV ”, *Phys. Lett.* **B389** (1996) 416.

**Major Contribution**

OPAL Collab., K. Ackerstaff et al., “ Photonic Events with Large Missing Energy in  $e^+e^-$  Collisions at  $\sqrt{s} = 161$  GeV ”, *Phys. Lett.* **B391** (1997) 210.

**Joint Principal Author**

OPAL Collab., K. Ackerstaff et al., “ Measurement of the Triple Gauge Boson Coupling  $\alpha_{W\phi}$  from  $W^+W^-$  Production in  $e^+e^-$  Collisions at  $\sqrt{s} = 161$  GeV ”, *Phys. Lett.* **B397** (1997) 147.

**Substantial Contribution**

OPAL Collab., K. Ackerstaff et al., “ Multi-Photon Final States in  $e^+e^-$  Collisions at  $\sqrt{s} = 130$ - $172$  GeV ”, *Eur. Phys. J.* **C1** (1998) 21.

**Important Contribution**

OPAL Collab., K. Ackerstaff et al., “ Measurement of the W Boson Mass and  $W^+W^-$  Production and Decay Properties in  $e^+e^-$  Collisions at  $\sqrt{s} = 172$  GeV. ”, *Eur. Phys. J* **C1** (1998) 395.

**Major Contribution**

OPAL Collab., K. Ackerstaff et al., “ Measurement of Triple Gauge Boson Couplings from  $W^+W^-$  Production at  $\sqrt{s} = 172$  GeV. ”, *Eur. Phys. J.* **C2** (1998) 597.

**Substantial Contribution**

OPAL Collab., K. Ackerstaff et al., “Search for Unstable Heavy and Excited Leptons in  $e^+e^-$  Collisions at  $\sqrt{s} = 170\text{-}172$  GeV” *Eur. Phys. J.* **C1** (1998) 45.

**Substantial Contribution**

OPAL Collab., K. Ackerstaff et al., “Search for Anomalous Production of Dilepton Events with Significant Missing Transverse Momentum in  $e^+e^-$  Collisions at  $\sqrt{s} = 161\text{-}172$  GeV” *Eur. Phys. J.* **C4** (1998) 47.

**Joint Principal Author**

OPAL Collab., K. Ackerstaff et al., “ Search for Anomalous Production of Photonic Events with Missing Energy in  $e^+e^-$  Collisions at  $\sqrt{s} = 130\text{-}172$  GeV”, *Eur. Phys. J* **C2** (1998) 607.

**Joint Principal Author**

OPAL Collab., K. Ackerstaff et al., “ Search for Charged Higgs Bosons in  $e^+e^-$  Collisions at  $\sqrt{s} = 130\text{-}172$  GeV ”, *Phys. Lett.* **B426** (1998) 180.

**Substantial Contribution**

OPAL Collab., G. Abbiendi et al., “ Search for Acoplanar Lepton Pair Events in  $e^+e^-$  Annihilation at  $\sqrt{s} = 161, 172$  and  $183$  GeV ”, *Eur. Phys. J.* **C12** (2000) 551.

**Joint Principal Author**

OPAL Collab., G. Abbiendi et al., “ Search for Chargino and Neutralino Production at  $\sqrt{s} = 181\text{-}184$  GeV at LEP ”, *Eur. Phys. J.* **C8** (1999) 255.

**Important Contribution**

OPAL Collab., G. Abbiendi et al., “ Search for Anomalous Photonic Events with Missing Energy in  $e^+e^-$  Collisions at  $\sqrt{s} = 130, 136$  and  $183$  GeV ”, *Eur. Phys. J.* **C8** (1999) 23.

**Joint Principal Author**

OPAL Collab., G. Abbiendi et al., “  $W^+W^-$  production and triple gauge boson couplings at LEP energies up to  $183$  GeV ”, *Eur. Phys. J.* **C8** (1999) 191.

**Major Contribution**

OPAL Collab., G. Abbiendi et al., “ Search for Higgs Bosons in  $e^+e^-$  Collisions at  $183$  GeV ”, *Eur. Phys. J.* **C7** (1999) 407.

**Substantial Contribution**

OPAL Collab., G. Abbiendi et al., “ Search for Anomalous Production of Acoplanar Di-lepton Events in  $e^+e^-$  collisions at  $\sqrt{s} = 183$  and  $189$  GeV ”, *Eur. Phys. J.* **C14** (2000) 51.

**Joint Principal Author**

OPAL Collab., G. Abbiendi et al., “ Search for Chargino and Neutralino Production at  $\sqrt{s} = 189$  GeV at LEP ”, *Eur. Phys. J.* **C14** (2000) 187.

**Important Contribution**

OPAL Collab., G. Abbiendi et al., “ Photonic Events with Missing Energy in  $e^+e^-$  Collisions at  $\sqrt{s} = 189$  GeV ”, *Eur. Phys. J.* **C18** (2000) 253.

**Joint Principal Author**

OPAL Collab., G. Abbiendi et al., “ Searches for Prompt Light Gravitino Signatures in  $e^+e^-$  Collisions at  $\sqrt{s} = 189$  GeV ”, *Phys. Lett.* **B501** (2001) 12.

**Major Contribution**

OPAL Collab., G. Abbiendi et al., “  $W^+W^-$  Production Cross Section and W Branching Fractions in  $e^+e^-$  Collisions at  $189$  GeV ”, *Phys. Lett.* **B493** (2000) 249.

**Joint Principal Author**

OPAL Collab., G. Abbiendi et al., “ Measurement of the Mass of the W Boson in  $e^+e^-$  Collisions using the Fully Leptonic Channel ”, *Eur. Phys. J.* **C26** (2003) 31.

**Major Contribution**

OPAL Collab., G. Abbiendi et al., “ Multi-Photon Production in  $e^+e^-$  Collisions at  $181 - 209$  GeV ”, *Eur. Phys. J.* **C26** (2003) 331.

**Important Contribution**

OPAL Collab., G. Abbiendi et al., “ Search for Anomalous Production of Di-lepton Events with Missing Transverse Momentum in  $e^+e^-$  Collisions at  $\sqrt{s} = 183-209$  GeV ”, CERN-EP/2003-040. Accepted by *Eur. Phys. J.* **C**.

**Joint Principal Author**

OPAL Collab., G. Abbiendi et al., “ Study of Z Pair Production and Anomalous Couplings in  $e^+e^-$  Collisions at  $\sqrt{s}$  between  $190$  GeV and  $209$  GeV ”, *Eur. Phys. J.* **C32** (2003) 303.

### **Important Contribution**

OPAL Collab., G. Abbiendi et al., “ Measurement of Charged Current Triple Gauge Boson Couplings using W Pairs at LEP ”, CERN-EP/2003-042. Accepted by *Eur. Phys. J. C*.

### **Important Contribution**

OPAL Collab., G. Abbiendi et al., “ Search for Chargino and Neutralino Production at  $\sqrt{s} = 192\text{-}209$  GeV at LEP ”, CERN-EP/2003-090. Submitted to *Eur. Phys. J. C*.

### **Important Contribution**

OPAL Collab., G. Abbiendi et al., “ Constraints on Anomalous Quartic Gauge Boson Couplings from  $\nu\bar{\nu}\gamma\gamma$  and  $q\bar{q}\gamma\gamma$  Events at LEP2 ”, CERN-EP/2004-xxx. Submitted to *Phys. Rev. D*.

### **Important Contribution**

## Publications on Detectors and Experimental Methods

C. Beard et al., “Thin, High Gain Wire Chambers for Electromagnetic Presampling in OPAL”, *Nucl. Instr. Meth.* **A286** (1990) 117.

### **Joint Author**

OPAL Collab., K. Ahmet et al., “The OPAL Detector at LEP”, *Nucl. Instr. Meth.* **A305** (1991) 275.

### **Major contribution**

M. Arignon et al., “The Trigger System of the OPAL Experiment at LEP”, *Nucl. Instr. Meth.* **A313** (1992) 103.

### **Major contribution**

J. Allison et al., “The Detector Simulation Program for the OPAL Experiment at LEP”, *Nucl. Instr. Meth.* **A317** (1992) 47.

### **Major contribution**

M. Arignon et al., “The Pretrigger System of the OPAL Experiment at LEP”, *Nucl. Instr. Meth.* **A333** (1993) 330.

### **Major contribution**

E. Accomando et al., “Physics with  $e^+e^-$  Linear Colliders”, Phys. Rep. 299 (1998) 1.

### **Important contribution**

J. Anderson et al., “The DZERO Central Track Trigger” in proceedings of 13th IEEE-NPSS Real Time Conference (RT2003), Montreal, Canada, May 2003 and FERMILAB-PUB-03-157-E.

M. Abolins et al., “The Run IIb Trigger Upgrade for the DZERO Experiment” in proceedings of 13th IEEE-NPSS Real Time Conference (RT2003), Montreal, Canada, May 2003 and DAPNIA-03-134.

DZERO Collaboration, “Run IIb Upgrade Technical Design Report”, September 2002, submitted to Department of Energy Lehman Review.

### **Contributions to track trigger part**

#### Publications on Phenomenology

M. Battaglia et al., “Proposed Post-LEP Benchmarks for Supersymmetry”, *Eur. Phys. J. C* **22** (2001) 535.

B. Allanach et al., “The Snowmass Points and Slopes: Benchmarks for SUSY Searches” Accepted for publication in *Eur. Phys. J. C*.

#### Conference Proceedings

G.W. Wilson, “Single Photon Counting at the  $Z^0$  with the OPAL Detector”, Proceedings (transparencies) of the Aspen Winter Physics Conference January 6th-12th 1991.

G.W. Wilson, “High Mass Photon Pairs at LEP”, Proceedings of the International Europhysics Conference on High Energy Physics, Marseille, France (July 1993).

G.W. Wilson, representing the OPAL Collab., “QCD Studies in  $e^+e^-$  Collisions with a Cone-based Jet Finder”, Proceedings of the International Conference on High Energy Physics (ICHEP94), Glasgow, Scotland (July 1994).

G.W. Wilson, “Searches for New Particles at LEP2 and 4-jet Status”, Proceedings of the XXXIInd Rencontre de Moriond, Electroweak Interactions and Unified Theories, Les Arcs, France, 15th-22nd March 1997, pp23-32.

G.W. Wilson, "Searches at LEP2 for Gravitino LSP Signatures", Proceedings (transparencies) of the SUSY98 Conference, Oxford, July 1998.

G.W. Wilson, "Searches for New Particles at Accelerators", Plenary talk in the UK IoP conference, Salford, April 1999. Available from

<http://www.hep.man.ac.uk/hep/IoP99/home.html>.

G.W. Wilson, "Searches at LEP2 for supersymmetric particles and technicolour signals", talk presented at XXXVth Rencontre de Moriond, QCD and hadronic interactions, Les Arcs, France, March 2000.

G.W. Wilson, "Experimental Tests of Extra-Dimensions at an  $e^+e^-$  Linear Collider", talk presented at the Conference on Higgs and Supersymmetry, LAL, Orsay, France, March 2001.

#### Workshop Contributions

G.W. Wilson, "Low energy ( $80 < \sqrt{s} < 300$  GeV) running possibilities", Talks presented in the Experimentation Working Group of the workshop on Physics with  $e^+e^-$  Linear Colliders, Annecy-Gran Sasso-Hamburg, February-August 1995.

G.W. Wilson, "Kinematic reconstruction of the W mass : some experimental aspects", Talk presented in the W Mass Working Group, May 1995, in the CERN Workshop on Physics at LEP2.

G.W. Wilson, "Single Photon Measurements at LEP1 and LEP2", Talk presented in the Standard Model Processes Working Group, June 1995, in the CERN Workshop on Physics at LEP2.

Contributions to the chapters entitled "Determination of the Mass of the W Boson" and "Standard Model Processes" in the Proceedings of the CERN Workshop on Physics at LEP2, CERN Yellow Report CERN 96-01.

G.W. Wilson, "Measuring the luminosity weighted average centre-of-mass energy with radiative  $Z^0$  events", Talk presented in the ECFA/DESY Workshop on Physics and Detectors for a Linear Collider, MPI Munich, 16th September 1996.

Contributions to the chapters entitled "Particle Physics" and "Detector for the Linear Collider" in the Report on the "Conceptual Design of a 500 GeV  $e^+e^-$  Linear Collider with Integrated X-Ray Laser Facility", DESY-ECFA, 1997.

G.W. Wilson, “Searches at LEP2 related to possible HERA effect”, Oxford Workshop on LEP2 Physics, April 1997. J. Phys. G. 24 (1998) 444.

G.W.Wilson, “Detector Hermeticity Concept”, talk presented at the ECFA DESY Linear Collider workshop, Lund, Sweden, June 1998.

G.W.Wilson, “Testing Lepton Flavour Violating  $Z^0$  Decays with a Linear Collider Z Factory”, talk presented at the ECFA/DESY Linear Collider workshop, Frascati, Italy, November 1998.

G. W. Wilson, “Precision Measurement of the W Mass With a Polarised Threshold Scan at a Linear Collider”, Proceedings of the International Linear Collider Workshop, LCWS99, Sitges, Spain, pp411-416. Paper available from

<http://home.cern.ch/g/graham/www/lcww.ps>

G. W. Wilson et al., “ Some Alternative Tests of Standard Supersymmetry at LEP2 ”, IoP Workshop on Collider Phenomenology, Durham UK, September 1999, J. Phys. G. 26 (2000) 570.

#### **Co-Author**

G. W. Wilson, “Precision Measurement of the Higgs Mass With a Threshold Scan”, talk presented at the ECFA/DESY Linear Collider workshop, Obernai, France, October 1999.

G. W. Wilson, “Direct Signature of Extra-Dimensions”, talk presented at the ECFA/DESY Linear Collider workshop, Padua, Italy, May 2000.

G. W. Wilson, “Completing the Sparticle Spectrum at a Multi-TeV Linear Collider?” talk presented at the CLIC Physics Study Workshop (October 6th 2000) and in Proceedings of the International Linear Collider Workshop, LCWS2000, Fermilab, U.S.A. pp 485-489. October 2000.

G. W. Wilson, “Precision Measurement of the W Mass with a Polarised Threshold Scan at a Linear Collider”, 2nd ECFA-DESY Study, LC-PHSM-2001-009, January 2001.

G. W. Wilson, “Study of the Sensitivity to Extra-Dimensions in the Photon-Graviton Channel with Polarised Beams”, LC-PHSM-2001-010, 2nd ECFA-DESY Study, February 2001.

Contributions to Part III: “Physics at an  $e^+e^-$  Linear Collider” and Part IV: “A Detector for TESLA” of the TESLA Technical Design Report, DESY 2001-011, ECFAA 2001-209, March 2001.



Contributions to “Linear Collider Physics: Resource Book for Snowmass 2001”, May 2001, SLAC-R-570.

S.P. Martin, S. Moretti, J. Qian, G.W. Wilson, “Direct Investigations of Supersymmetry: Subgroup Summary Report” in proceedings of the APS/DPF/DPB Summer Study on the Future of Particle Physics, Snowmass, Colorado, July 2001.

D. K. Ghosh, S. Moretti, G.W. Wilson, “Single Electron Signal from AMSB at a Future Linear Collider” in proceedings of the APS/DPF/DPB Summer Study on the Future of Particle Physics, Snowmass, Colorado, July 2001.

J. Erler et al., “Positron Polarization and Low-Energy Running at a Linear Collider” in proceedings of the APS/DPF/DPB Summer Study on the Future of Particle Physics, Snowmass, Colorado, July 2001.

G. W. Wilson, “Direct Tests of Extra Dimensions at a Linear Collider”, University of Chicago Linear Collider Workshop, January 2002.

G. W. Wilson, “Prospects for High Energy Collider Electroweak Measurements”, Invited plenary talk at the Low Energy Precision Electroweak Measurements (LEPEM) workshop at TRIUMF, Vancouver, Canada, April 2002.

G. W. Wilson, “Experimental Aspects of Linear Collider Electro-weak Physics”, Workshop on Radiative Corrections for Linear Collider Physics, Brookhaven, New York, May 2002.

G. W. Wilson, “A Compact Silicon-Tungsten-Scintillator Electromagnetic Calorimeter”, Talks presented at the ECFA/DESY Linear Collider Workshop, NIKHEF, Amsterdam, The Netherlands, April 2003 and at the American Linear Collider Workshop at Cornell University, Ithaca, NY, July 2003.

G. W. Wilson, “Electromagnetic Calorimetry Research and Development in the Americas”, Talk presented at the ECFA Linear Collider Workshop, Montpellier, France, November 2003.

G. W. Wilson, “Physics Requirements for the Forward Region”, Plenary talk presented at the American Linear Collider Physics Group Workshop at the Stanford Linear Accelerator Center, Menlo Park, CA, January 2004.

#### Invited Seminars and Colloquia

G.W. Wilson, "Search for Anomalous Production of High Mass Photon Pairs in  $e^+e^-$  Collisions", PPE Seminar at CERN, May 1993.

G.W. Wilson, "Recent results from OPAL and review of LEP searches for high mass photon pairs", CDF/D0 Seminar, Fermilab. (November 1993).

G.W. Wilson, "First Results from the OPAL Collaboration at  $\sqrt{s}=130-140$  GeV", Joint CERN Particle Physics Seminar on LEP1.5 Results, 12th December 1995. Scanned transparencies available from <http://preprints.cern.ch/cern/9512.html> as CERN-PRE-95-005.

G.W. Wilson, "Topical Results from Warsaw (ICHEP96)", Joint DESY Seminar, 6th, 7th August 1996. Presented at Hamburg and at Zeuthen, Berlin.

G.W. Wilson, "OPAL Results at LEP2", Seminar presented at Universities of Alberta, Colorado, Oregon, Michigan, SUNY-Stony Brook and Brookhaven and Fermilab National Laboratories, 30th September 1996 to 11th October 1996.

G.W. Wilson, "Recent OPAL Results at LEP2", Seminar presented at the University of Pennsylvania, Johns Hopkins University and the University of Michigan, February 1997.

G.W. Wilson, "W Physics with OPAL", Particle Physics Seminar at Saclay, France, 13th October 1997.

G. W. Wilson, "Missing Energy Searches with OPAL", Seminars at University of Wisconsin, Madison and University of Manchester, March 1998.

G. W. Wilson, "Physics with Electron-Positron Linear Colliders", IoP Future Prospects in High Energy Physics meeting, Birmingham, UK, June 1999. Transparencies available from <http://www.ep.ph.bham.ac.uk/iophepp/fp1999/>

G. W. Wilson, "Investigating the Invisible with  $e^+e^-$  Colliders", Colloquia at the University of Texas, Arlington and the University of Kansas, February 2001.

G. W. Wilson, "Physics Program of a Next Generation Electron-Positron Linear Collider", Seminars at University of Kansas (October 2001) and Kansas State University (May 2002).

### Other

G. Blair et al., "A Leading UK Involvement in the Future Linear Collider", Reports of the Linear Collider Panel to the Particle Physics Committee, UK. March and October 2001.