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## RENE A. ONG

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### Education:

- 1987 Ph.D. Physics      Stanford University  
Ph.D. Thesis: "Measurement of the B Hadron Lifetime."  
Advisor: John A. Jaros
- 1983 M.S. Physics      Stanford University  
Advisor: Martin L. Perl
- 1981 B.S. Physics      University of Michigan  
Undergraduate Thesis: "Design of an Enhanced 1 GeV  
Electron Neutrino Beam."  
Advisor: Lawrence R. Sulak

### Appointments:

- 2001-      Professor      Department of Physics and Astronomy  
University of California, Los Angeles
- 2005      Visiting Scholar      Department of Physics  
University of Michigan
- 1998-2001      Associate Professor      Department of Physics, Enrico Fermi Institute  
University of Chicago
- 1991-1998      W.W. Grainger  
Assistant Professor      Department of Physics, Enrico Fermi Institute  
University of Chicago
- 1988-1991      Robert R. McCormick  
Fellow      Enrico Fermi Institute  
University of Chicago
- 1987-1988      Postdoctoral  
Research Associate      Research Division  
Stanford Linear Accelerator Center
- 1980-1981      Research Assistant      Department of Physics  
University of Michigan

1980	Research Assistant	Physics Department Brookhaven National Laboratory
1979	Research Assistant	Space Physics Research Laboratory University of Michigan

## **Research Interests:**

- High-Energy (Gamma-ray and X-ray) astrophysics
- Cosmic ray and neutrino astrophysics
- Particle physics

## **Awards:**

- Outstanding Teaching Award, Dept. of Physics and Astronomy, UCLA, 2008
- Fellow, American Physical Society, 2003
- Outstanding Teaching Award, Dept. of Physics and Astronomy, UCLA, 2002
- A.P. Sloan Foundation Fellow, 1992
- Robert R. McCormick Fellow, Enrico Fermi Institute, 1988
- Regent's Alumni Scholar, University of Michigan, 1981
- B.S. in Physics with High Honors, 1981
- Phi Beta Kappa, 1980

## **Professional Activities:**

- Reviewer:  
Nature, Science, Physical Review Letters, Physics Letters, Physical Review D,  
Astrophysical Journal, Astronomy and Astrophysics, Astroparticle Physics,  
Nuclear Instruments and Methods.
- Reviewer:  
National Science Foundation: Physics Division, Astronomy Division,  
Office of Polar Programs, International Programs  
  
Department of Energy: Office of Science – High Energy Physics  
  
NASA: Universe Science Mission Directorate  
U.S.-Israel Binational Science Foundation  
Research Corporation  
Guggenheim Foundation
- Member: American Physical Society and American Astronomical Society.

## **Professional Service (since 2000):**

- 2009- Spokesperson, VERITAS Collaboration.
- 2009- Particle Astrophysics Scientific Assessment Group (PASAG), Sub-Panel of the High Energy Physics Advisory Panel (HEPAP), DOE and NSF, Washington, D.C.
- 2009- Astro2010: The Astronomy and Astrophysics Decadal Survey, Panel on Particle Astrophysics and Gravitation (PAG), National Research Council, Washington D.C.
- 2009 Five-Year Program Review: Program “Astroparticle Physics”, Research Field Structure of Matter, Helmholtz Association, Karlsruhe, Germany.
- 2008 Selection Committee, GLAST Fellowship Program, NASA, Washington D.C.
- 2007-09 Deputy Spokesperson, VERITAS Collaboration.
- 2006 International Organizing Committee, “VI Rencontres du Vietnam: Particle Astrophysics,” Hanoi, Vietnam, August 2006.
- 2005-07 Chair, VERITAS Executive Council, VERITAS Collaboration.
- 2005-08 Conseil Scientifique, Laboratoire Leprince Ringuet (LLR), Ecole Polytechnique, Palaiseau, France.
- 2005 Nominating Committee, Division of Astrophysics (DAS) of the American Physical Society (APS), Washington DC.
- 2005 Organizing Committee, “Towards a Future Ground Based Gamma Ray Observatory,” Malibu CA, October 2005.
- 2005 NASA Universe Exploration Strategic Roadmap Committee (SRC-8), NASA, Washington, D.C.
- 2005 International Advisory Committee, “Towards a Network of Atmospheric Cherenkov Detectors VII”, Palaiseau, France, April 2005.
- 2004 Chair, Science Assessment Group for Experiments in Non-Accelerator Physics (SAGENAP), Sub-Panel of the High Energy Physics Advisory Panel (HEPAP), DOE and NSF, Washington, D.C.

- 2004 Organizing Committee, 2004 Meeting of the Division of Particles and Fields (DPF) of the American Physical Society (APS), Riverside CA, August 2004.
- 2003-04 Director's Review, Physics Division, Lawrence Berkeley National Laboratory (LBNL), Berkeley CA.
- 2003 Reviewer, "Connecting Quarks with the Cosmos, Eleven Science Questions for the New Century," Committee on the Physics of the Universe, National Research Council, Washington D.C.
- 2003-07 Gamma Ray Large Area Space Telescope (GLAST) User's Committee, NASA, Washington, D.C.
- 2003-07 Astronomy and Astrophysics Advisory Committee (AAAC) for NSF, NASA, and DOE, Washington, D.C.
- 2003- Experimental Program Advisory Committee (EPAC) for Stanford Linear Accelerator Center (SLAC), Stanford CA.
- 2003 High Energy Physics Facilities Committee, Sub-Panel of the High Energy Physics Advisory Panel (HEPAP), Washington, D.C.
- 2003 Session Organizer, April Meeting of the American Physical Society (APS), Joint DAP/DPF Session, Philadelphia PA, April 2003.
- 2002-04 High Energy Physics Advisory Panel (HEPAP) for DOE and NSF, Washington, D.C.
- 2002-04 Universities Research Association (URA) Visiting Committee for Fermi National Accelerator Laboratory (FNAL), Batavia IL.
- 2002 Neutrino Facilities Assessment Committee (NFAC), National Research Council, Washington, D.C.
- 2002 Scientific Advisory Committee, Int. Symposium: "The Universe Viewed in Gamma Rays," Kashiwa, Japan, September 2002.
- 2002 Program Committee, SPIE International Symposium on Astronomical Telescopes and Instrumentation, Waikoloa, HI, August 2002.
- 2001 Long Range Planning for High Energy Physics, Sub-Panel of the High Energy Physics Advisory Panel (HEPAP), Washington D.C ("Bagger-Barish Panel").
- 2001 Organizing Committee, Snowmass 2001, "The Future of Particle Physics", Snowmass CO, July 2001.

- 2000-02 Scientific Assessment Group for Experiments in Non-Accelerator Physics (SAGENAP) for DOE and NSF, Washington D.C.
- 2000 Committee of Visitors (COV), NSF Physics (PHY) Division, Washington D.C.
- 2000-02 High Energy Neutrino Astrophysics Panel (HENAP) of the Particle and Nuclear Astrophysics and Gravitation Interaction Committee (PANAGIC).
- 2000 Portfolio Allocation Review (PAR), NSF Astronomy (AST) Division, Washington D.C.
- 2000 Astronomy and Astrophysics Survey Committee (Decadal Survey), Panel on High Energy Astrophysics from Space (HEAS), Panel on Particle, Nuclear, and Gravitational Wave Astrophysics (PNGWA), National Research Council, Washington, D.C.

## **Postdoctoral Research Associates:**

(Most recent position given in parentheses)

2005- Amanda Weinstein  
2002-06 Jeffrey Zweerink (Research Scholar, Reasons to Believe)  
2000-02 James Hinton (PPARC Fellow, University of Leeds)  
1997-99 Zoa Conner (Instructor, George Washington University)  
1995-98 Mark Chantell (Teaching Staff, University of Chicago)  
1994-97 Lucy Fortson (Director of Astronomy, Adler Planetarium)  
1992-97 Brian Fick (Assoc. Professor, Michigan Technical University)  
1992-06 Kevin Green (Technical Staff, Castlebridge LLC).  
1991-03 Corbin Covault (Assoc. Professor, Case Western Reserve University)

## **Graduate Students:**

(Most recent position given in parentheses)

Ken Chow UCLA Physics, Ph.D. candidate

Ozlem Celik Ph.D. Physics UCLA 2008  
“Observations of the Crab Nebula and Pulsar with VERITAS,”  
(Postdoctoral Researcher, Goddard Space Flight Center)

Alex Jarvis Ph.D. Physics UCLA 2008  
“Observations of Gamma-Ray Bursts by STACEE,”  
(Analyst, Disney Interactive Media Group)

Jennifer E. Carson Ph.D. Astronomy, UCLA, 2005  
“STACEE Observations of Markarian 421 above 100 GeV and a  
New Method for High-Energy Spectral Analysis.”  
(Visiting Professor, Claremont Colleges)

Scott M. Oser Ph.D. Physics, Univ. of Chicago, 1999  
“High Energy Gamma-Ray Observations of the Crab Nebula and  
Pulsar with the Solar Tower Atmospheric Cherenkov Effect  
Experiment.”  
(Assoc. Professor, University of British Columbia)

Joseph W. Fowler Ph.D. Physics, Univ. of Chicago, 1998  
“Composition and Spectrum of Cosmic Rays at the Knee Measured  
by the CASA-BLANCA Experiment.”  
(Asst. Professor, Princeton University)

# RENE A. ONG

## Refereed Publications:

1. "A Connection Between Star Formation Activity and Cosmic Rays in the Starburst Galaxy M82," V.A. Acciari *et al.*, to be published in *Nature* (2009).
2. "VERITAS Upper Limit on the VHE Emission from the Radio Galaxy NGC 1275," V.A. Acciari *et al.*, submitted to *Astrophys. J.* (2009).
3. "Multiwavelength Observations of the VHE Blazar 1ES 2344+514," V.A. Acciari *et al.*, submitted to *Astrophys. J.* (2009).
4. "Detection of Extended VHE Gamma-Ray Emission from G106.3+2.7 with VERITAS," V.A. Acciari *et al.*, *Astrophys. J.* **703**, L6 (2009).
5. "Simultaneous Multiwavelength Observations of Markarian 421 During Outburst," V.A. Acciari *et al.*, *Astrophys. J.* **703**, 169 (2009).
6. "Radio Imaging of the Tera-electron Volt Emission Region in the Central Engine of a Radio Galaxy," V.A. Acciari *et al.*, *Science* **325**, 444 (2009).
7. "Multiwavelength Observations of LS I +61 303 with VERITAS, Swift, and RXTE," V.A. Acciari *et al.*, *Astrophys. J.* **700**, 1034 (2009).
8. "Observation of Extended Very High Energy Emission from the Supernova Remnant IC 443 with VERITAS," V.A. Acciari *et al.*, *Astrophys. J.* **698**, L133 (2009).
9. "Evidence for Long-Term Gamma-Ray and X-ray Variability from the Unidentified TeV Source HESS J0632+057," V.A. Acciari *et al.*, *Astrophys. J.* **697**, L94 (2009).
10. "Focus on High Energy Particle Astronomy", edited by Rene A. Ong and Corbin E. Covault, *New Journal of Physics* **11**, 055003 (2009).
11. "OSETI with STACEE: A Search for Nanosecond Optical Transients from Nearby Stars," D.S. Hanna *et al.*, *Astrobiology* **9**, 345 (2009).
12. "VERITAS Observations of the BL Lac Object 1ES 1218+304," V.A. Acciari *et al.*, *Astrophys. J.* **695**, 1370 (2009).
13. "Multiwavelength Observations of Markarian 421 in 2005-2006," D. Horan *et al.*, *Astrophys. J.* **695**, 596 (2009).

14. "VERITAS Observations of a Very High Energy Gamma-ray Flare from the Blazar 3C66A," V.A. Acciari *et al.*, *Astrophys. J.* **693**, L104 (2009).
15. "Pulsed Very High Energy Gamma-ray Emission Constraints for PSR B1951+32 from STACEE Observations," J. Zweerink *et al.*, *Astrophys. J.* **693**, 1128 (2009).
16. "The June 2008 Flare of Markarian 421 from Optical to TeV Energies," L. Donnarumma *et al.*, *Astrophys. J.* **691**, L13 (2009).
17. "Discovery of Very High Energy Gamma-ray Radiation from the BL Lac 1ES 0806+524," V. Acciari *et al.*, *Astrophys. J.* **690**, L126 (2009).
18. "Search for Dark Matter Annihilation in Draco with STACEE," D.D. Driscoll *et al.*, *Phys. Rev.* **D78**, 087101 (2008).
19. "VERITAS Discovery of >200 GeV Gamma-ray Emission from the Intermediate-Frequency-Peaked BL Lacertae Object W Comae," V. A. Acciari *et al.*, *Astrophys. J.* **684**, L73 (2008).
20. "VERITAS Observations of the Gamma-Ray Binary LS I+61 303", V.A. Acciari *et al.*, *Astrophys. J.* **679**, 1427 (2008).
21. "Observation of Gamma-Ray Emission from the Galaxy M87 above 250 GeV with VERITAS," V.A. Acciari *et al.*, *Astrophys. J.* **679**, 397 (2008).
22. "A Search for Dark Matter Annihilation with the Whipple 10m Telescope," M. Wood *et al.*, *Astrophys. J.* **678**, 594 (2008).
23. "First Results from VERITAS," D. Hanna *et al.*, *Nucl. Instrum. Meth. Phys. Res.* **A588**, 26 (2008).
24. "Multiwavelength Observations of Markarian 421 in March 2001: an Unprecedented View on the X-ray/TeV Correlated Variability," G. Fossati *et al.*, *Astrophys. J.* **677**, 906 (2008).
25. "Very High Energy Observations of the BL Lac Objects 3C 66A and OJ 287," T. Lindner *et al.*, *Astroparticle Phys.* **28**, 338 (2007).
26. "The Whipple Observatory 10m Gamma-ray Telescope, 1997-2006", J. Kildea *et al.*, *Astroparticle Phys.* **28**, 182 (2007).
27. "The Energy Spectrum of the Blazar Markarian 421 Above 130 GeV," J.E. Carson, J. Kildea, R.A. Ong *et al.*, *Astrophys. J.* **662**, 199 (2007).
28. "Whipple 10m Observations of LSI +61 303: 2004-2006," A. Smith *et al.*, *Astrophys. and Space Science* **309**, 299 (2007).

29. "Observations of the Unidentified TeV Gamma-Ray Source TeV J2032+4130 with the Whipple Observatory 10 m Telescope," A. Konopelko *et al.*, *Astrophys. J.* **658**, 1062 (2007).
30. "Very High Energy Observations of the Gamma-Ray Burst Locations with the Whipple Telescope," D. Horan *et al.*, *Astrophys. J.* **655**, 396 (2007).
31. "TeV Gamma-Ray Observations of the Perseus and Abell 2029 Galaxy Clusters," J.S. Perkins *et al.*, *Astrophys. J.* **644**, 148 (2006).
32. "The First VERITAS Telescope," J. Holder *et al.*, *Astropart. Phys.* **25**, 391 (2006).
33. "A New Search for Primordial Black Hole Evaporations using the Whipple Gamma-Ray Telescope," E.T. Linton *et al.*, *Journal of Cosmology and Astroparticle Physics* **01**, 013 (2006).
34. "A Multi-wavelength View of the TeV Blazar Markarian 421: Correlated Variability, Flaring, and Spectral Evolution," M. Blazejowski *et al.*, *Astrophys. J.* **630**, 130 (2005).
35. "Observations of the BL Lac Object 3C 66A with STACEE", D.A. Bramel *et al.* *Astrophys. J.* **629**, 108 (2005).
36. "A Survey of Unidentified EGRET Sources at Very High Energies", S.J. Fegan *et al.*, *Astrophys. J.* **624**, 638 (2005).
37. "Spectrum of Very High Energy Gamma Rays from the Blazar 1ES 1959+650 During Flaring Activity in 2002," M.K. Daniel *et al.*, *Astrophys. J.* **621**, 181 (2005).
38. "A Search for TeV Gamma-Ray Emission from High-Peaked Flat-Spectrum Radio Quasars using the Whipple Air Cherenkov Telescope," A.D. Falcone *et al.*, *Astrophys. J.* **613**, 710 (2004).
39. "Observation of M87 at 400 GeV with the Whipple 10 Meter Telescope," S. LeBohec *et al.*, *Astrophys. J.* **610**, 156 (2004).
40. "TeV Gamma-Ray Observations of the Galactic Center," K. Kosack *et al.*, *Astrophys. J.* **608**, L97 (2004).
41. "High-Energy Gamma-Ray Observations of W Comae with the Solar Tower Atmospheric Cherenkov Effect Experiment (STACEE)," R.A. Scalzo *et al.*, *Astrophys. J.* **607**, 778 (2004).
42. "Constraints on the Very High Energy Emission from BL Lacertae Objects," D. Horan *et al.*, *Astrophys. J.* **603**, 51 (2004).

43. "Astrophysics around 100 GeV with STACEE," D.A. Williams *et al.*, *New Astr. Rev.* **48**, 359 (2004).
44. "VERITAS: the Very Energetic Radiation Imaging Telescope Array System," F. Krennrich *et al.*, *New Astr. Rev.* **48**, 345 (2004).
45. "Search for High-Energy Gamma Rays from an X-ray Selected Blazar Sample," I. de Calle Perez *et al.*, *Astrophys. J.* **599**, 909 (2003).
46. "Search for TeV Emissions from Pulsars in Binary Systems," T.A. Hall *et al.*, *Astrophys. J.* **583**, 853 (2003).
47. "Detection of TeV Gamma Rays from the BL Lacertae Object 1ES 1959+650 with the Whipple 10 Meter Telescope," J. Holder *et al.*, *Astrophys. J.* **583**, L9 (2003).
48. "The TeV Spectrum of H1426+428," D. Petry *et al.*, *Astrophys. J.* **580**, 102 (2002).
49. "Discovery of Spectral Variability of Markarian 421 at TeV Energies," F. Krennrich *et al.*, *Astrophys. J.* **575**, L9 (2002).
50. "STACEE Observations of Markarian 421 During an Extended Gamma-Ray Outburst," L.M. Boone *et al.*, *Astrophys. J.* **575**, L5 (2002).
51. "Detection of the BL Lacertae Object H1426+428 at TeV Gamma-Ray Energies," D. Horan *et al.*, *Astrophys. J.* **571**, 753 (2002).
52. "The STACEE-32 Ground-Based Gamma-Ray Detector," D.S. Hanna *et al.*, *Nucl. Inst. Meth. Phys. Res.* **A491**, 126 (2002).
53. "VERITAS: the Very Energetic Radiation Imaging Telescope Array System," T.C. Weekes *et al.*, *Astropart. Phys.* **17**, 221 (2002).
54. "Cutoff in the TeV Energy Spectrum of Markarian 421 During Strong Flares in 2001," F. Krennrich *et al.*, *Astrophys. J.* **560**, L45 (2001).
55. "Measurement of the Cosmic Ray Energy Spectrum and Composition from  $10^{17.3}$  to  $10^{18.3}$  eV using a Hybrid Fluorescence Technique," T. Abu-Zayyad *et al.*, *Astrophys. J.* **557**, 686 (2001).
56. "A Measurement of the Average Longitudinal Development Profile of Cosmic Ray Air Showers between  $10^{17}$  and  $10^{18}$  eV," T. Abu-Zayyad *et al.*, *Astropart. Phys.* **16**,1 (2001).

57. "High Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cherenkov Effect Experiment," S. Oser *et al.*, *Astrophys. J.* **547**, 949 (2001).
58. "A Measurement of the Cosmic Ray Spectrum and Composition at the Knee," J.W. Fowler *et al.*, *Astropart. Phys.* **15**, 49 (2001).
59. "Evidence for Changing of the Cosmic Ray Composition between  $10^{17}$  and  $10^{18}$  eV from Multi-Component Measurements," T. Abu-Zayyad *et al.*, *Phys. Rev. Lett.* **84**, 4276 (2000).
60. "The Cosmic Ray Composition between 200 TeV and 10,000 TeV," M.A.K. Glasmacher *et al.*, *Astropart. Phys.* **12**, 1 (1999).
61. "The Cosmic Ray Energy Spectrum between  $10^{14}$  and  $10^{16}$  eV," M.A.K. Glasmacher *et al.*, *Astropart. Phys.* **10**, 291 (1999).
62. "Very High Energy Gamma-Ray Astronomy," Rene A. Ong, *Physics Reports* **305**, 93 (1998).
63. "Prototype Test Results of the Solar Tower Atmospheric Cherenkov Effect Experiment (STACEE)," M. Chantell *et al.*, *Nucl. Inst. Meth. Phys. Res.* **A408**, 468 (1998).
64. "Constraints on Gamma-Ray Emission from the Galactic Plane at 300 TeV," A. Borione *et al.*, *Astrophys. J.* **493**, 175 (1998).
65. "Limits on the Isotropic Diffuse Flux of Ultrahigh Energy Gamma-Radiation," M.C. Chantell *et al.*, *Phys. Rev. Lett.* **79**, 1805 (1997).
66. "A Search for Ultrahigh Energy Gamma-Ray Emission from the Crab Nebula and Pulsar," A. Borione *et al.*, *Astrophys. J.* **481**, 313 (1997).
67. "A High Statistics Search for Ultrahigh Energy Gamma-Ray Emission from Cygnus X-3 and Hercules X-1," A. Borione *et al.*, *Phys. Rev.* **D55**, 1714 (1997).
68. "Detection of Atmospheric Cherenkov Radiation using Solar Heliostat Mirrors," R.A. Ong *et al.*, *Astropart. Phys.* **5**, 353 (1996).
69. "Large Area Atmospheric Cherenkov Detectors for High Energy Gamma-Ray Astronomy," Rene A. Ong, *Nuovo Cimento* **19C**, 971 (1996).
70. "A Search for Ultrahigh Energy Gamma rays from EGRET-Detected Active Galactic Nuclei using CASA-MIA," M. Catanese *et al.*, *Astrophys. J.* **469**, 572 (1996).

71. "A Search for Diffuse Sources of Ultrahigh Energy Gamma Rays,"  
A. Borione *et al.*, Nucl. Phys. **B48**, 483 (1996).
72. "A Large Air Shower Array to Search for Astrophysical Sources Emitting Gamma Rays with Energies  $\geq 10^{14}$  eV," A. Borione *et al.*, Nucl. Instrum. Meth. Phys. Res **A346**, 329(1994).
73. "Observation of the Shadows of the Moon and Sun using 100 TeV Cosmic Rays,"  
A. Borione *et al.*, Phys. Rev. D49, **1171** (1994).
74. "A Northern Sky Survey for Astrophysical Point Sources of 100 TeV Gamma Radiation," T.A. McKay *et al.*, Astrophys. J. **417**, 742 (1993).
75. "Inclusive Charged Hadron and  $K^0$  Production in Two Photon Interactions,"  
D. Cords *et al.*, Phys. Lett. **B302**, 341 (1993).
76. "A Search for Discrete Sources of 100 TeV Gamma Radiation,"  
J. W. Cronin *et al.*, Phys. Rev. **D45**, 4385 (1992).
77. "Search for the Production of the Final States  $\text{Tau}^+\text{Tau}^-e^+e^-$ ,  $\text{Tau}^+\text{Tau}^-\text{Mu}^+\text{Mu}^-$ ,  
and  $\text{Tau}^+\text{Tau}^-\text{Pi}^+\text{Pi}^-$  in  $e^+e^-$  Collisions at  $\sqrt{s} = 29$  GeV," T. Barklow *et al.*,  
Phys. Rev. Lett. **68**, 13 (1992).
78. "A Search for Elastic Nondiagonal Lepton Pair Production in  $e^+e^-$  Annihilations  
at  $\sqrt{s} = 29$  GeV," J.J. Gomez-Cadenas *et al.*, Phys. Rev. Lett. **66**, 1007  
(1991).
79. "Test of QED to 4<sup>th</sup> Order by the Study of Four Lepton Final States in  $e^+e^-$   
Interactions at 29 GeV with the Mark-II Detector," M. Petradza *et al.*, Phys. Rev.  
**D42**, 2171 (1990).
80. "Measurement of the Two Photon Width of the Eta' (958)," F. Butler *et al.*, Phys.  
Rev. **D42**, 1368 (1990).
81. "Two Photon Production of Pion Pairs," J. Boyer *et al.*, Phys. Rev. **D42**, 1350  
(1990).
82. "Search for a Nearly Degenerate Lepton Doublet ( $L^-, L^0$ )," K. Riles *et al.*, Phys.  
Rev. **D42**, 1 (1990).
83. "A Reanalysis of  $B^0$ -Anti- $B^0$  Mixing in  $e^+e^-$  Annihilation at 29 GeV,"  
A. J. Weir *et al.*, Phys. Lett. **B240**, 289 (1990).
84. "Radiative Tau Production and Decay," D.Y. Wu *et al.*,  
Phys. Rev. **D41**, 2339 (1990).

85. "Upper Limits on  $D^+$  and  $B^+$  Decays to Two Leptons Plus  $\Pi^{++}$  or  $K^+$ ," A.J. Weir *et al.*, Phys. Rev. **D41**, 1384, (1990).
86. "Measurement of the  $B^0$  Meson Lifetime," S.R. Wagner *et al.*, Phys Rev. Lett. **64**, 1095 (1990).
87. "Search For B Decay to Higgs Bosons for Higgs Boson Masses Between 50-MeV/ $C^2$  and 210-MeV/ $C^2$ ," A. Snyder *et al.*, Phys. Lett. **B229**, 169 (1989).
88. "First Measurements of Hadronic Decays of the Z Boson," G.S. Abrams *et al.*, Phys. Rev. Lett. **63**, 1558 (1989).
89. "The MARK-II Detector for the SLC," G.S. Abrams *et al.*, Nucl. Instrum. Meth. Phys. Res. **A281**, 55 (1989).
90. "Initial Measurements of Z Boson Parameters in  $e^+ e^-$  Annihilation," G.S. Abrams *et al.*, Phys. Rev. Lett. **63**, 724 (1989).
91. "Searches For Nonminimal Higgs Bosons from a Virtual Z Decaying into a Muon Pair at PEP," S. Komamiya *et al.*, Phys. Rev. **D40**, 721 (1989).
92. "Lambda- $c^+$  Production and Semileptonic Decay in 29-GeV  $e^+ e^-$  Annihilation," S.R. Klein *et al.*, Phys. Rev. Lett. **62**, 2444, (1989).
93. "Limits on New Lepton Pairs ( $L^-, L^0$ ) with Arbitrary Neutrino Mass," D.P. Stoker *et al.*, Phys. Rev. **D39**, 1811 (1989).
94. "Measurement of Single and Double Radiative Low  $Q^2$  Bhabha Scattering at  $E(\text{cm}) = 29 \text{ GeV}$ ," D. Karlen *et al.*, Phys. Rev. **D39**, 1861 (1989).
95. "A Refined Measurement of the B Hadron Lifetime," R.A. Ong *et al.*, Phys. Rev. Lett. **62**, 1236 (1989).
96. "Bose-Einstein Correlations in  $e^+ e^-$  Collisions," I. Juricic *et al.*, Phys. Rev. **D39**, 1 (1989).
97. "Eta and Eta' Production in  $e^+ e^-$  Annihilation at 29 GeV, Evidence for the  $D(S)^{++}$  Decays Into Eta  $\Pi^{++}$  and Eta'  $\Pi^{++}$ ," G. Wormser *et al.*, Phys. Rev. Lett. **61**, 1057 (1988).
98. "Observation of Psi Production in  $e^+ e^-$  Annihilation at 29 GeV," G. Wormser *et al.*, Phys. Rev. **D38**, 1001(1988).
99. "Inclusive Lepton Production in  $e^+ e^-$  Annihilation at 29 GeV," R.A. Ong *et al.*, Phys. Rev. Lett. **60**, 2587 (1988).

100. "Determination of  $\alpha_s$  from Energy-Energy Correlations in  $e^+e^-$  Annihilation at 29 GeV," D.R. Wood *et al.*, Phys. Rev. **D37**, 3091(1988).
101. "Measurement of the Tau Lifetime," D. Amidei *et al.*, Phys. Rev. **D37**, 1750 (1988).
102. "Multi-Hadronic Events at  $E(\text{CM}) = 29$  GeV and Predictions of QCD Models From  $E(\text{CM}) = 29$  GeV to  $E(\text{CM}) = 93$  GeV," A. Petersen *et al.*, Phys. Rev. **D37**, 1 (1988).
103. "Observation of Omega Production in  $e^+ e^-$  Annihilation at 29 GeV," S.R. Klein *et al.*, Phys. Rev.Lett. **59** 2412 (1987).
104. "Upper Limit on the Branching Ratio for the Decay  $\text{Tau}^- \rightarrow \text{Pi}^- \text{Eta Tau-Neutrino}$ ", K.K. Gan *et al.*, Phys. Lett. **B197**, 561 (1987).
105. "Measurement of the  $D^0$  Lifetime from the Upgraded Mark-II Detector at PEP," S.R. Wagner *et al.*, Phys. Rev. **D36**, 2850 (1987).
106. "Observation of the Spin 1 F1 (1285) in the Reaction  $\text{Gamma Gamma}^* \rightarrow \text{Eta}^0 \text{Pi}^+ \text{Pi}^-$ ," G. Gidal *et al.*, Phys. Rev. Lett. **59**, 2012 (1987).
107. "Evidence for a Spin 1 Resonance in the Reaction  $\text{Gamma Gamma}^* \rightarrow \text{K}^0 \text{K}^+ \text{Pi}^-$ ," G. Gidal *et al.*, Phys. Rev. Lett. **59**, 2016 (1987).
108. "Study of Tau Decay Modes With Multiple Neutral Mesons in the Final States," K.K. Gan *et al.*, Phys. Rev. Lett. **59**, 411 (1987).
109. "Limit on the Decay  $D^0 \rightarrow e^+ \mu^-$ ," K. Riles *et al.*, Phys. Rev. **D35**, 2914 (1987).
110. "Search For Heavy Neutrino Production at PEP," C. Wendt *et al.*, Phys. Rev. Lett. **58**, 1810 (1987).
111. "Observation of  $\text{Xi}^-$  Production in  $e^+ e^-$  Annihilation at 29 GeV," S.R. Klein *et al.*, Phys. Rev. Lett. **58**, 644 (1987).
112. "Measurement of the Branching Fractions of the Tau Lepton Using a Tagged Sample of Tau Decays," P.R. Burchat *et al.*, Phys Rev. **D35**, 27 (1987).
113. "Prototype Results of a High Resolution Vertex Drift Chamber for The Mark-II SLC Upgrade Detector," J.P. Alexander *et al.*, Nucl. Instrum. Meth. Phys. Res. **A252**, 350 (1986).
114. "A Study of Noncollinear Two Charged Particle Events Produced in 29 GeV Electron-Positron Annihilation," M.L. Perl *et al.*, Phys. Rev. **D34**, 3321, (1986).

115. "Measurement of the  $D^0$  and  $D^+$  Lifetimes," L. Gladney *et al.*, Phys. Rev. **D34**, 2601, (1986).
116. "A Comparison of the Particle Flow in Three Jet and Radiative Two Jet Events from  $e^+ e^-$  Annihilation at  $E(\text{cm}) = 29 \text{ GeV}$ ," P.D. Sheldon *et al.*, Phys. Rev. Lett. **57**, 1398 (1986).
117. "Study of the Decay  $\text{Tau} \rightarrow \text{Pi}^- \text{Pi}^- \text{Pi}^+$  Tau-Neutrino," W.B. Schmidke *et al.*, Phys. Rev. Lett. **57**, 527 (1986).
118. "Measurement of the Branching Fractions  $\text{Tau} \rightarrow \text{Rho}^- \text{Tau}^- \text{Neutrino}$  and  $\text{Tau} \rightarrow \text{K}^+ \text{Tau}^- \text{Neutrino}$ ," J.M Yelton *et al.*, Phys. Rev. Lett. **56**, 812 (1986).
119. "Charged Meson Pair Production in Gamma-Gamma Interactions," J. Boyer *et al.*, Phys. Rev. Lett. **56**, 207 (1986).
120. "Searches for Unstable Neutral Leptons in Low Multiplicity Events from Electron-Positron Annihilation," M.L. Perl *et al.*, Phys. Rev. **D32**, 2859 (1985).
121. "Inclusive Charged Particle Distributions in Nearly Threefold Symmetric Three Jet Events at  $E(\text{CM}) = 29 \text{ GeV}$ ," A. Petersen *et al.*, Phys. Rev. Lett. **55**, 1954 (1985)..
122. "Upper Limit of  $B^0$  Anti- $B^0$  Mixing in  $e^+ e^-$  Annihilation at 29 GeV," T. Schaad *et al.*, Phys. Lett. **B160**, 188 (1985).
123. "Improved Upper Limit on Tau-Neutrino Mass," C. Matteuzzi *et al.*, Phys. Rev. **D32**, 800 (1985).
124. "Design of an Enhanced 1 GeV Electron Neutrino Beam," R.A. Ong *et al.*, Nucl. Instrum. Meth. Phys. Res. **A236**, 256 (1985).
125. "Charged Multiplicity of Hadronic Events Containing Heavy Quark Jets," P.C. Rowson *et al.*, Phys Rev.Lett. **54**, 2580 (1985)
126. "Measurement of  $K^+$  and  $K^0$  Inclusive Rates in  $e^+ e^-$  Annihilation at 29 GeV," H. Schellman *et al.*, Phys. Rev. **D31**, 3013 (1985).
127. "Measurement of the Branching Fraction for  $\text{Tau} \rightarrow \text{Pi}^+ \text{Pi}^0$  Tau-Neutrino and an Upper Limit on the Tau-Neutrino Mass," P.R. Burchat *et al.*, Phys. Rev. Lett. **54**, 2489 (1985).
128. "Search for Monojet Production in  $e^+ e^-$  Annihilation," G.J. Feldman *et al.*, Phys. Rev. Lett. **54**, 2289 (1985).
129. "Lambda Production in  $e^+ e^-$  Annihilation at 29 GeV," C. de la Vaissiere *et al.*, Phys.Rev.Lett. **54**, 2071 (1985).

130. "A Measurement of the  $D^0$  Lifetime," J.M Yelton *et al.*, Phys. Rev. Lett. **52**, 2019 (1984).
131. "Upper Limit on the Tau-Neutrino Mass," C. Matteuzzi *et al.*, Phys. Rev. Lett. **52**, 1869 (1984).
132. "Search for Supersymmetric Electrons," L. Gladney *et al.*, Phys. Rev. Lett. **51**, 2252 (1983).
133. "Weak Neutral Currents in  $e^+ e^-$  Collisions at  $\sqrt{S} = 29$  GeV," M.E. Levi *et al.*, Phys. Rev. Lett. **51**, 1941 (1983).
134. "Measurement of the Lifetime of Bottom Hadrons," N. Lockyer *et al.*, Phys. Rev. Lett. **51**, 1316 (1983).
135. "Precise Measurement of the Tau Lifetime", J.A. Jaros *et al.*, Phys. Rev. Lett. **51**, 955 (1983).
136. "Comparison of the  $N_2^+$  Photochemistry at Different Phases of the Solar Cycle," M. R. Torr, D. G. Torr, and R. A. Ong, J. Geophysical Res. **85**, 2171 (1980).
137. "Ionization Frequencies for Major Thermospheric Constituents as a Function of Solar Cycle 21," M. R. Torr, D. G. Torr, R. A. Ong, and H. E. Hinteregger, Geophysical Research Lett. **6**, 771 (1979).

## **Invited Talks:**

1. "Viewing the Universe at Very High Energies," Highlight Talk, Southern California American Assoc. of Physics Teachers (AAPT), CalState-Channel Islands, Camarillo CA, May 2, 2009.
2. "Viewing the Universe at Very High Energies," Colloquium, Department of Physics, Kansas State University, Manhattan KS, April 28, 2009.
3. "Viewing the Universe at Very High Energies", Colloquium, LNS/Astrophysics, Massachusetts Inst. of Technology, Cambridge CA, March 2, 2009.
4. "Exploring the Gamma-ray Sky", Public Lecture, Santa Monica Amateur Astronomy Club (SMAAC), Santa Monica CA, November 14, 2008.
5. "Particle Astrophysics with VERITAS", Seminar, Kellogg Radiation Laboratory, California Inst. of Technology, Pasadena CA, February 29, 2008.
6. "VHE Particle Astrophysics: Science, Projects, Roadmap, and SLAC," Invited Talk, SLAC User's Organization (SLUO), Stanford Linear Accelerator Center, Menlo Park CA, February 7, 2008.
7. "The Very High Energy Universe", Colloquium, Department of Physics, University of California, San Diego, La Jolla CA, May 24, 2007.
8. "Cosmic Ray Studies to  $10^{16}$  eV," Invited Talk, The Cronin Fest, University of Chicago, Chicago IL, September 8, 2007.
9. "Very High Energy Gamma-Ray Astronomy: Status and Future," Invited Talk, 6<sup>th</sup> Rencontres du Vietnam: Particle Astrophysics, Hanoi, Vietnam, August 9, 2006.
10. "The Landscape for Particle Astrophysics," Colloquium, Department of Physics, University of California, Riverside, Riverside CA, March 16, 2006.
11. "The Landscape for Particle Astrophysics," Colloquium, Department of Physics, University of Massachusetts, Amherst MA, March 8, 2006.
12. "VHE Astrophysics with VERITAS," Seminar, Department of Physics, University of Toronto, Toronto ON, Canada, March 7, 2006.
13. "Exploring the Extreme Universe," Colloquium, Department of Physics, Whittier College, Whittier CA, December 9, 2005.
14. "Exploring the Extreme Universe," Colloquium, Department of Physics, University of Alberta, Edmonton AB, Canada, December 2, 2005.

15. "Future Landscape for Particle Astrophysics," Seminar, Department of Physics and Astronomy, University of California Los Angeles, Los Angeles CA, October 19, 2005.
16. "Summary: Gamma-Ray Science and Techniques," Rapporteur Talk, 29<sup>th</sup> Int. Cosmic Ray Conference, Pune, India, August 10, 2005.
17. "Future Facilities in Astroparticle Physics and Cosmology," Plenary Talk, XXII Int. Symposium of Lepton-Photon Interactions at High Energies, Uppsala, Sweden, July 4, 2005.
18. "The Extreme Universe," Colloquium, Department of Physics, Columbia University, New York NY, April 18, 2005.
19. "Very High Energy Astrophysics," Colloquium, Department of Physics, University of California, Davis, Davis CA, April 13, 2005.
20. "The Extreme Universe," Colloquium, Department of Physics, University of Michigan, Ann Arbor, MI, March 23, 2005.
21. "Report of the Scientific Assessment Group for Experiments in Non-Accelerator Physics, High Energy Physics Advisory Panel (HEPAP), Washington DC, September 24, 2004.
22. "The Limits of Particle Physics and Astronomy," Colloquium, Department of Physics, Brown University, Providence RI, March 1, 2004.
23. "Observations of Active Galactic Nuclei at Very High Energies," Seminar, Department of Astronomy, University of California San Diego, La Jolla CA, November 4, 2003.
24. "Status of VHE Astronomy," Seminar, Laboratory for High Energy Astrophysics (LHEA), Goddard Space Flight Center, Greenbelt MD, October 24, 2003.
25. "High-Energy Cosmic Rays," Invited Talk Series, XXXI SLAC Summer Institute, Stanford Linear Accelerator Center, Stanford CA, August 1-2, 2003.
26. "The Extreme Universe," Colloquium, Department of Physics, University of California, Irvine, Irvine CA, May 1, 2003.
27. "Exploring the High Energy Universe," Seminar, Department of Statistics, University of California, Los Angeles, Los Angeles, CA, March 11, 2003
28. "Cosmic Ray Frontiers," Opening Talk, Cosmic Ray Astrophysics Symposium, 2003 Meeting of the American Association for the Advancement of Science (AAAS), Denver CO, February 16, 2003.

29. "The Status of VHE Astronomy," Conference Summary Talk, Int. Symposium: The Universe Viewed in Gamma Rays, Kashiwa, Japan, September 28, 2002.
30. "The VERITAS Project," Invited Talk, Int. Symposium: The Universe Viewed in Gamma Rays, Kashiwa, Japan, September 27, 2002.
31. "A Twenty Year Roadmap for Particle Physics," Seminar, Department of Physics and Astronomy, University of California, Los Angeles, Los Angeles CA, December 5, 2001.
32. "The Extreme Universe: Probing the Limits of Particle Physics and Astronomy," Colloquium, Department of Physics, University of Alabama, Tuscaloosa AL, November 14, 2001.
33. "The VHE Sky: 2006-2010", Seminar, Meeting of the Gamma Ray Large Area Telescope (GLAST) Collaboration, Stanford University, Stanford CA, August 2, 2001.
34. "The Violent Universe: Extending the Limits of Particle Physics and Astronomy," Colloquium, Department of Physics, Stanford University, Stanford CA, February 27, 2001.
35. "Astronomy of the Very High Energy Universe," Colloquium, Institute for Theoretical Physics (ITP), University of California, Santa Barbara, Santa Barbara CA, January 26, 2000.
36. "VHE Particle Astrophysics," Colloquium, Department of Physics, Southern Methodist University, Dallas TX, February 7, 2000.
37. "Very High-Energy Gamma-Ray Astronomy," Overview Talk, Session of the High Astrophysics Division at 195<sup>th</sup> Meeting of the American Astronomical Society (AAS), Atlanta GA, January 13, 2000.
38. "Exploring the High Energy Universe," Colloquium, Department of Physics, Iowa State University, Ames IA, December 6, 1999.
39. "Exploring the High Energy Universe," Colloquium, Department of Physics, Boston University, Boston MA, November 15, 1999.
40. "High-Energy Particles from the Universe," Plenary Talk, XIX Int. Symposium of Lepton and Photon Interactions at High Energies, Stanford University, Stanford CA, August 12, 1999.
41. "Detection of 100 GeV Gamma Rays from the Crab Nebula," Seminar, Enrico Fermi Institute, University of Chicago, Chicago IL, May 18, 1999.

42. "Exploring the High Energy Universe," Colloquium, Department of Physics, Ohio State University, Columbus OH, April 13, 1999.
43. "Exploring the High Energy Universe," Colloquium, Department of Physics and Astronomy, University of California Los Angeles, Los Angeles CA, April 8, 1999.
44. "The STACEE Project for High-Energy Gamma-Ray Astrophysics," Seminar, Department of Physics, University of Michigan, Ann Arbor MI, March 15, 1999.
45. "Exploring the High-Energy Universe," Seminar, Department of Physics, University of Wisconsin, Madison WI, March 11, 1999.
46. "Probing the High-Energy Universe," Colloquium, Department of Physics, Case Western Reserve University, Cleveland OH, February 11, 1999.
47. "The STACEE Project," Seminar, Department of Physics, University of New Mexico, Albuquerque NM, October 27, 1998.
48. "Gamma-Ray Astrophysics: Recent Results and Future Prospects," Seminar, LPNHE, Ecole Polytechnique, Palaiseau (Paris), France, June 15, 1998.
49. "The STACEE Project for High Energy Gamma-Ray Astrophysics," Seminar, Department of Physics, Princeton University, Princeton NJ, April 29, 1998.
50. "The STACEE Project for High Energy Gamma-Ray Astrophysics," Seminar, Department of Physics and Astronomy, University of California Los Angeles, Los Angeles CA, March 11, 1998.
51. "The STACEE Project for High Energy Gamma-Ray Astrophysics," Seminar, Department of Physics, Rutgers University, New Brunswick NJ, February 10, 1998.
52. "The Solar Tower Atmospheric Cherenkov Effect Experiment (STACEE)," Seminar, Department of Physics, University of Pennsylvania, Philadelphia PA, February 9, 1998.
53. "Very High Energy Gamma-Ray Astrophysics," Colloquium, Department of Physics, University of Chicago, Chicago IL, October 2, 1997.
54. "UHE Cosmic Rays, Topological Defects, and the Diffuse Gamma-Ray Background," Seminar, Enrico Fermi Institute, University of Chicago, Chicago IL, June 2, 1997.
55. "Astronomy using Solar Heliostat Mirrors," Seminar, USAF Phillips Laboratory, Kirtland AFB, Albuquerque NM, July 2, 1997.

56. "The STACEE Project for Gamma-Ray Astrophysics," Seminar, Center for Particle Astrophysics, University of California, Berkeley, Berkeley CA, May 20, 1997.
57. "TeV and PeV Gamma-Ray Astrophysics," Colloquium, Department of Physics, University of Toronto, Toronto ON, Canada, March 13, 1997.
58. "Development of the Solar Tower Atmospheric Cherenkov Effect Experiment," Invited Talk, 18<sup>th</sup> Texas Symposium of Relativistic Astrophysics and Cosmology," Chicago IL, December 18, 1996.
59. "Gamma-Ray Astronomy using Large Area Solar Heliostat Fields," Seminar, Physics Division, Los Alamos National Laboratory, Los Alamos NM, June 12, 1996.
60. "The Death of Cygnus X-3," Seminar, Bartol Research Institute, Newark DE, April 11, 1996.
61. "The Death of Cygnus X-3," Seminar, Enrico Fermi Institute, University of Chicago, Chicago IL, March 11, 1996.
62. "Large Area Atmospheric Cherenkov Detectors for High Energy Gamma-Ray Astronomy," Plenary Talk, 24<sup>th</sup> Int. Cosmic Ray Conference, Rome, Italy, August 29, 1995.
63. "High Energy Gamma-Ray Astronomy, 20-200 GeV," Seminar, Department of Physics, Leeds University, Leeds U.K., June 6, 1995.
64. "Astronomy at the Highest Energies," Colloquium, Department of Physics, University of Oregon, Eugene OR, May 4, 1995.
65. "Astronomy at the Highest Energies," Colloquium, Department of Physics, Pittsburgh University, Pittsburgh PA, February 20, 1995.
66. "Using a Large Solar Array for Gamma-Ray Astronomy," Seminar, Enrico Fermi Institute, University of Chicago, Chicago IL, November 10, 1994.
67. "Art in the Realm of the Sciences: Flight and Gravity," Invited Talk, Art Institute of Chicago, Chicago IL, October 22, 1994.
68. "Gamma Rays: TeV Energies and Beyond," Invited Talk, Towards a Next-Generation High-Energy Gamma-Ray Telescope, Stanford University, Stanford CA, August 23, 1994.
69. "Cosmic Rays Below  $10^{16}$  eV," Plenary Talk, Snowmass Summer Study: Particle and Nuclear Astrophysics and Cosmology in the Next Millennium, Snowmass CO, July 6, 1994.

70. "Exploratory Work on the Concept of a Large Area Atmospheric Cherenkov Detector," Invited Talk, Int. Workshop Towards a Major Atmospheric Cherenkov Detector III, Tokyo, Japan, May 26, 1994.
71. "PeV Gamma-Ray Astronomy," Seminar, Department of Physics, University of Illinois Chicago, Chicago IL, May 2, 1994.
72. "100 TeV Astronomy with the CASA-MIA Detector," Seminar, Department of Physics, University of Illinois, Urbana IL, May 2, 1994.
73. "High Energy Gamma-Ray Astronomy," Colloquium, Department of Physics, Indiana University, Bloomington IN, December 6, 1993.
74. "Astrophysics at Energies Greater than 100 TeV," Seminar, Department of Physics, University of Michigan, Ann Arbor MI, April 9, 1993.
75. "Particle Astrophysics with Gamma Rays at Energies Greater than 10 TeV," Plenary Talk, IV Rencontres de Blois: Particle Astrophysics, Blois, France, June 17, 1992.
76. "Physics and Astronomy at PeV Energies," Seminar, Research Division, Stanford Linear Accelerator Center, Stanford CA, March 24, 1992.
77. "Physics and Astronomy at Energies of  $10^{14}$  eV," Colloquium, Department of Physics, Rice University, Houston TX, February 19, 1992.
78. "Results from the CASA-MIA Cosmic Ray and Gamma-Ray Astronomy Facility," Invited Talk, Joint International Lepton-Photon Symposium and Europhysics Conference on High Energy Physics, Geneva, Switzerland, July 27, 1991.
79. "The Physics and Astronomy of Gamma Rays at PeV Energies," Colloquium, Department of Physics, University of California, Berkeley, Berkeley CA, April 24, 1991.
80. "Gamma-Ray Physics and Astronomy at PeV Energies," Seminar, Physics Division, Brookhaven National Laboratory, Upton NY, March 28, 1991.
81. "Physics and Astronomy at PeV Energies," Seminar, Department of Physics, Princeton University, Princeton NJ, March 27, 1991.
82. "Gamma-Ray Physics and Astronomy," Colloquium, Department of Physics, University of Colorado, Boulder CO, March 15, 1991.
83. "Physics and Astronomy at PeV Energies," Seminar, Department of Physics, Harvard University, Cambridge MA, February 21, 1991.

84. "PeV Gamma Rays from Astrophysical Point Sources," Seminar, Department of Physics, University of California, Santa Cruz, Santa Cruz CA, February 8, 1991.
85. "Results and Prospects for Ultra High Energy Gamma-Ray Astronomy," Colloquium, Physics Division, Argonne National Laboratory, Argonne IL, March 31, 1989.
86. "Measurement of the B Hadron Lifetime from Mark II at PEP," Invited Talk, Int. Symposium of Production and Decay of Heavy Flavors, Stanford University, Stanford CA, September 3, 1987.
87. "Recent Measurements of the B Hadron Lifetime," Invited Talk, 15<sup>th</sup> SLAC Summer Institute, Stanford Linear Accelerator Center, Stanford CA, August 18, 1987.
88. "The Mark II Vertex Drift Chamber," Seminar, Physics Division, Japanese National Laboratory for High Energy Research (KEK), Tsukuba, Japan, May 1993.