

## KRISHNA SUBRAMANIAN KUMAR

### Home Address:

31 Mount Pleasant Street  
Amherst, MA 01002  
phone: (413) 549-6530  
email: kkumar@physics.umass.edu

### Office Address:

Department of Physics  
University of Massachusetts,  
Amherst, MA 01003  
phone: (413) 545-1310

### RESEARCH INTERESTS:

Experimental Nuclear and Particle Physics:  
Low energy searches for physics beyond Standard Model,  
QCD structure of the nucleon and other tests of low energy QCD.

### WORK EXPERIENCE:

Sep. '04 - **University of Massachusetts**, Amherst, MA.  
*Professor of Physics.*

Sep. '99 - Aug. '04 **University of Massachusetts**, Amherst, MA.  
*Associate Professor of Physics.*

Sep. '93 - Aug. '99 **Princeton University**, Princeton, NJ.  
*Assistant Professor of Physics.*

Feb. '90 - Aug. '93 **Harvard University**, Cambridge, MA.  
*Research Associate at the L3 experiment at CERN.*

Jan. '85 - Jan. '90 **Syracuse University**, Syracuse, NY.  
*Graduate Research Assistant at the MIT-Bates Linac.*

### EDUCATION:

Sep. '84 - Jan. '90 **Syracuse University**, Syracuse, NY.  
*Ph. D. Physics*, Thesis Advisor: Paul Souder  
Thesis Title: *Parity Violation in Elastic  $\bar{e} - ^{12}\text{C}$  Scattering*

Sep. '79 - Aug. '84 **Indian Institute of Technology**, Bombay, INDIA.  
*M. Sc. Physics*

### AWARDS:

- **2005 Fellow, American Physical Society**, *For his leadership in parity-violating electron scattering experiments, especially those focused on low energy searches for physics beyond the standard model.*
- **1995 Outstanding Junior Investigator Award**, *Precision Electroweak Tests with Polarized Electrons*, awarded by the US Department of Energy, Division of High Energy Physics.
- **1990 Peter T. Demos Award**, Achievement in Graduate Student Research, awarded by the MIT-Bates Linear Accelerator Center Users Group.
- **1990 Doctoral Prize**, awarded by the Graduate School at Syracuse University.

**PROFESSIONAL SERVICE**

- Co-Convener, session on *Symmetries and Conservation Laws* at PANIC11: 2011 Particle and Nuclear Conference, Boston, USA, 2011
- Member, Organizing Committee of PAVI11, 5th International Workshop on *Parity Violation, Hadron Structure and More....*, Rome, Italy, 2011
- Co-Organizer, International Workshop on *Precision Tests of the Standard Model: From Atomic Parity Violation to Parity Violating Electron Scattering* at the European Institute for Nuclear Theory ECT\*, Trento, Italy, 2010
- Lecturer, Joliot-Curie French Nuclear Physics Summer School, Lacanau, France, 2010
- Lecturer, Joint US-Canadian Nuclear Physics Summer School, Vancouver, Canada, 2010
- Co-Organizer, 10 week program on *Low Energy Precision Tests of the Standard Model in the LHC Era* at the Institute for Nuclear Theory, Seattle, USA, 2008
- Member, Executive Committee of the Division of Nuclear Physics, American Physical Society, 2007-8
- Member, Program Committee of the Division of Nuclear Physics, American Physical Society, 2006-7
- Co-convener, session on *Electroweak Physics and Physics Beyond the Standard Model* at CIPANP 2006: Ninth Conference on the Intersections of Particle and Nuclear Physics, San Juan, Puerto Rico
- Chair, National Nuclear Physics Summer School Committee, 2006
- Co-convener, session on *Spin Physics* at DIS2005, XIII International Workshop on Deep Inelastic Scattering
- Lecturer, Hampton University Graduate Summer School in Nuclear Physics, 2005
- Member, Nuclear Science Advisory Committee (NSAC) from 2001 to 2003. NSAC members are appointed by the Secretary of Energy for three year terms. NSAC advises the Department of Energy and the National Science Foundation, whose combined annual budget is about \$ 0.5 Billion, on funding priorities and long range planning for nuclear physics research.
- Co-organizer, session on *Light Quarks and Leptons*, at the 8th International Conference on the Intersections between Nuclear and Particle Physics (CIPANP2003), NY City, May 2003
- Elected member of SLUO (the Users Organization of the Stanford Linear Accelerator Center) from 2001-2004
- Co-convener, session on *Fixed Target Physics* at the International Conference on the Future of Particle Physics, Snowmass, 2001

**PROFESSIONAL COLLABORATION LEADERSHIP**

- Principal Spokesperson: Jefferson Laboratory MOLLER Experiment, 2009-
- Co-Spokesperson: Jefferson Laboratory PREX Experiment, 2007-
- Co-Spokesperson: Jefferson Laboratory HAPPEXII Experiment, 1999-2007
- Principal Spokesperson: Stanford Linear Accelerator Center E158 Experiment: 1997-2005

## DEPARTMENTAL & UNIVERSITY SERVICE

- Director, Physics Graduate Program, 2007-
- Member, NSM College Personnel Committee, 2007-9
- Member, Experimental Particle Search Committee, 2008
- Chair, Physics Department Personnel Committee, 2006-7
- Chair, Graduate Admissions Committee, 2001, 2003-05
- Chair, Experimental Nuclear Faculty Search Committee, 2004
- Member, Comprehensive Exam Committee, Spring 2000
- Member, Graduate Admissions Committee, 2000
- Member, Personnel Subcommittee, 2003-2005
- Member, Chairman's Advisory Committee, 2002-6, 2008-
- Member, Executive Search Committee, 2004
- Member, Personnel Committee 2000-
- Advisor, Society for Physics Students, 2001-2

## Ph.D. THESES

- G. Wilson Miller, *Parity Violation in Elastic Electron Proton Scattering*, Princeton University, 2001.
- D. Relyea, *Parity Violation in Møller Scattering*, Princeton University, 2003.
- L. Kaufman, *Parity Violation in Elastic Electron Proton Scattering at low  $Q^2$* , University of Massachusetts, 2006.
- L. Mercado, *Parity Violation in Elastic Electron Proton Scattering at high  $Q^2$* , University of Massachusetts, 2011 (anticipated)
- J. Wexler, *A Measurement of the Neutron Skin of  $^{208}\text{Pb}$  using Parity Violating Electron Scattering*, University of Massachusetts, 2012 (anticipated)

## PUBLICATIONS

1. "First Observation of the Negative Muonium Ion produced by Electron Capture in a Beam Foil Experiment",  
Y. Kuang *et al.*, *Physical Review* **A36**, RC, 3172, (1987).
2. "Formation of Negative Muonium Ion and Charge Processes for Positive Muons passing through Thin Metal Foils.",  
Y. Kuang *et al.*, *Physical Review* **A39**, No. 12, 6109, (1989).
3. "The Bates Polarized Electron Source.",  
G.D. Cates *et al.*, *Nuclear Instruments and Methods in Physics Research* **A278** No. 2, 293, (1989).
4. \* "Measurement of Parity Violation in the Elastic Scattering of Polarized Electrons from  $^{12}\text{C}$ ",  
P.A. Souder *et al.*, *Physical Review Letters* **65**, No. 6, 694, (1990).
5. "Operation of the LAMPF Stopped Muon Channel for Small Gas Targets.",  
R. Holmes *et al.*, *Nuclear Instruments and Methods in Physics Research* **A303**, 226, (1991).
6. "Mass Limits for Excited Electrons and Muons from  $Z^0$  Decay.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **247B** (1990) 177.
7. "A Determination of Electroweak Parameters from  $Z^0 \rightarrow \mu^+ \mu^- (\gamma)$ .",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **247B** (1990) 473.
8. "A Precision Measurement of the Number of Neutrino Species",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **249B** (1990) 341.
9. "Search for Neutral Higgs Boson in  $Z^0$  Decay.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **248B** (1990) 203.
10. "Determination of  $\alpha_s$  from Jet Multiplicities Measured on the  $Z^0$  Resonance.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **248B** (1990) 462.
11. "A Test of QCD based on 4-Jet Events from  $Z^0$  Decays.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **248B** (1990) 227.
12. "Test of QED in  $e^+e^- \rightarrow \gamma\gamma$  at LEP.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **250B** (1990) 199.
13. \* "Search for Excited Taups from  $Z^0$  Decays.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **250B** (1990) 205.
14. "Search for the Neutral Higgs Bosons of the Minimal Supersymmetric Standard Model from  $Z^0$  Decays.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **251B** (1990) 311.
15. \* "A Search for Heavy Charged and Neutral Leptons from  $Z^0$  Decays",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **251B** (1990) 321.
16. \* "A Determination of Electroweak Parameters from  $Z^0$  Decays into Charged Leptons.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **250B** (1990) 183.

17. "Search for the Charged Higgs Boson in  $Z^0$  Decays.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **252B** (1990) 511.
18. "Search for a Low Mass Neutral Higgs Boson in  $Z^0$  Decays.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **252B** (1990) 518.
19. "A Measurement of  $B^0$ - $\bar{B}^0$  Mixing in  $Z^0$  Decays.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **252B** (1990) 703.
20. "Search for Excited Neutrinos from  $Z^0$  Decays.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **252B** (1990) 525.
21. "A Measurement of the  $Z^0 \rightarrow b\bar{b}$  Forward-Backward Asymmetry.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **252B** (1990) 713.
22. "Determination of  $\alpha_s$  from Energy-Energy Correlations Measured on the  $Z^0$  Resonance.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **257B** (1991) 469.
23. "Search for the Neutral Higgs Boson.", The L3 Collaboration, B. Adeva *et al.*,  
*Physics Letters* **257B** (1991) 450.
24. "Measurement of the Inclusive Production of Neutral Pions and Charged Particles on the  $Z^0$  Resonance.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **259B** (1991) 199.
25. "Search for Leptoquarks in  $Z^0$  Decays.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **261B** (1991) 169.
26. "Measurements of  $Z^0 \rightarrow b\bar{b}$  Decays and the Semileptonic Branching Ratio  $\text{Br}(b \rightarrow \ell + X)$ .",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **261B** (1991) 177.
27. "Measurement of Electroweak Parameters from Hadronic and Leptonic Decays of the  $Z^0$ .",  
The L3 Collab., B. Adeva *et al.*, *Z. Phys.* **C51C** (1991) 179.
28. "Search for Narrow High-Mass Resonances in Radiative Decays of the  $Z^0$ .",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **262B** (1991) 155.
29. "A Test of QCD based on 3-Jet events from  $Z^0$  Decays.",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **263B** (1991) 551.
30. \* "Decay Properties of Tau Leptons Measured at the  $Z^0$  Resonance",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **265B** (1991) 451.
31. "Measurement of the Lifetime of B-Hadrons and a determination of  $|V_{cb}|$ ",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **270B** (1991) 111.
32. "Measurement of the Strong Coupling Constant  $\alpha_s$  for Bottom Quarks at the  $Z^0$  Resonance",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **271B** (1991) 461.
33. \* "Search for Lepton Flavour Violation in  $Z^0$  Decays",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **271B** (1991) 453.
34. "A Direct Determination of the Number of Light Neutrino Families from  $e^+e^- \rightarrow \nu\bar{\nu}\gamma$  at LEP",  
The L3 Collaboration, B. Adeva *et al.*, *Physics Letters* **275B** (1992) 209.

35. "Search for the Neutral Higgs Boson at LEP ",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **283B** (1992) 454.
36. "Studies of Hadronic Event Structure and Comparisons with QCD Models at the  $Z^0$  Resonance",  
The L3 Collab., O. Adriani *et al*, *Z. Phys.* **C55C** (1992) 39.
37. "Determination of  $\alpha_s$  from Hadronic Event Shapes on the  $Z^0$  Resonance ",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **284B** (1992) 471.
38. "Measurement of Inclusive  $\eta$  Production in Hadronic Decays of the  $Z^0$ ",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **286B** (1992) 403.
39. "An Improved Measurement of  $B^0 - \bar{B}^0$  Mixing in  $Z^0$  Decays",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **288B** (1992) 395.
40. "A Test of Quantum Electrodynamics in the Reaction  $e^+e^- \rightarrow \gamma\gamma(\gamma)$ "  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **288B** (1992) 404.
41. "Inclusive  $J/\psi$  production in  $Z^0$  Decays",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **288B** (1992) 412.
42. "Measurement of the  $e^+e^- \rightarrow b\bar{b}$  and  $e^+e^- \rightarrow c\bar{c}$  Forward-Backward Asymmetries at the  $Z^0$  Resonance",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **292B** (1992) 454.
43. "Determination of the number of light neutrino species",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **292B** (1992) 463.
44. "Isolated Hard Photon Emission in Hadronic  $Z^0$  Decays",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **292B** (1992) 472.
45. \* "A Measurement of  $\tau$  Polarization in  $Z^0$  Decays ",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **294B** (1992) 466.
46. "Searches for Non-Minimal Higgs Bosons in  $Z^0$  Decays",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **294B** (1992) 457.
47. "High Mass Photon Pairs in  $\ell^+\ell^-\gamma\gamma$  events at LEP",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **295B** (1992) 337.
48. "Isosinglet Neutral Heavy Leptons in  $Z^0$  Decays",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **295B** (1992) 371.
49. "Search for Anomalous Production of Single-Photon Events in  $e^+e^-$ -Annihilations at the Z Resonance",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **297B** (1992) 469.
50. "Determination of Quark Electroweak Couplings from Direct Photon Production in Hadronic Z Decays",  
The L3 Collaboration, O. Adriani *et al*, *Physics Letters* **301B** (1993) 136.
51. "Results from the L3 Experiment at LEP.",  
The L3 Collaboration, O. Adriani, *et al*, *Physics Reports* **236** (1993) 1.
52. "Search for the Neutral Higgs Boson at LEP.",  
The L3 Collaboration, O. Adriani, *et al*, *Physics Letters* **303B** (1993) 391.

53. "Search for Narrow Vector Resonances in the Z Mass Range.",  
The L3 Collaboration, O. Adriani, *et al*, *Physics Letters* **313B** (1993) 326.
54. "Search for a  $Z'$  at the Z Resonance.",  
The L3 Collaboration, O. Adriani, *et al*, *Physics Letters* **306B** (1993) 187.
55. "Measurement of  $\Gamma_{b\bar{b}}/\Gamma_{\text{had}}$  From Hadronic Decays of the Z.",  
The L3 Collaboration, O. Adriani, *et al*, *Physics Letters* **307B** (1993) 237.
56. \* "Determination of the Effective Electroweak Mixing Angle from Z Decay",  
The L3 Collaboration, O. Adriani, *et al*, *Physics Letters* **309B** (1993) 451.
57. "Inclusive Search for the Charmless Radiative Decay of the B Quark ( $B \rightarrow s\gamma$ )",  
The L3 Collaboration, O. Adriani, *et al*, *Physics Letters* **317B** (1993) 637.
58. "An S Matrix Analysis of the Z Resonance",  
The L3 Collaboration, O. Adriani, *et al*, *Physics Letters* **315B** (1993) 494.
59. \* "Search for Lepton Flavor Violation in Z Decays",  
The L3 Collaboration, O. Adriani, *et al*, *Physics Letters* **316B** (1993) 427.
60. "Measurement of the Average Lifetime of B Hadrons",  
The L3 Collaboration, O. Adriani, *et al*, *Physics Letters* **317B** (1993) 474.
61. " $\chi_c$  Production in Hadronic Z Decays",  
The L3 Collaboration, O. Adriani, *et al*, *Physics Letters* **317B** (1993) 467.
62. "Measurement of  $\eta_c$  Production in Untagged Two Photon Collisions at LEP.",  
The L3 Collaboration, O. Adriani, *et al*, *Physics Letters* **318B** (1993) 575.
63. "A Study of Four Fermion Processes at LEP.",  
The L3 Collaboration, A. Adam, *et al*, *Physics Letters* **321B** (1994) 283.
64. "Measurement of the Cross-Sections and Leptonic Forward-Backward Asymmetries at the Z Pole and Determination of the Electroweak Parameters",  
The L3 Collaboration, M. Acciarri *et al*, *Z. Phys.* **CC62** (1994) 551.
65. "Measurement of the Inclusive Production of Neutral Hadrons From Z Decays",  
The L3 Collaboration, M. Acciarri, *et al*, *Physics Letters* **328B** (1994) 223.
66. "Measurement of the Inclusive  $B \rightarrow \nu_\tau X$  Branching Ratio.",  
The L3 Collaboration, M. Acciarri *et al*, *Physics Letters* **332B** (1994) 201.
67. "Measurement of  $B^0 - \bar{B}^0$  Mixing Parameter and the  $Z \rightarrow B^0 - \bar{B}^0$  Forward-Backward Asymmetry",  
The L3 Collaboration, M. Acciarri, *et al*, *Physics Letters* **335B** (1994) 542.
68. \* "A Measurement of  $\tau$  Polarization at LEP",  
The L3 Collaboration, M. Acciarri, *et al*, *Physics Letters* **341B** (1994) 245.
69. \* "Electroweak Tests with  $\tau$  Leptons at LEP.",  
K.S. Kumar, *Pramana J. Phys.* **41** (1994) Suppl. 45.

70. \* “Precision Low Energy Weak Neutral Current Experiments”,  
K.S. Kumar *et al.*, *Modern Physics Letters* **A10** (1995) 2979.
71. “A Combined Polarized Target/Ionization Chamber for Measuring the Spin Dependence of Nuclear Muon Capture in Laser Polarized Muonic  $^3\text{He}$ ”,  
P. Bogorad *et al.*, *Nuclear Instruments and Methods in Physics Research* **398A** (1997) 211.
72. “Precision Determination of the Neutron Spin Structure Function  $g_1^n$ ”  
The E154 Collaboration, K. Abe *et al.*, *Physical Review Letters* **79**, 26, (1997).
73. “Next-to-Leading Order Analysis of Polarized Deep Inelastic Scattering Data”  
The E154 Collaboration, K. Abe *et al.*, *Physics Letters* **405B** (1997) 180.
74. “Measurement of the Neutron Spin Structure Function  $g_2^n$  and Asymmetry  $A_2^n$ ”,  
The E154 Collaboration, K. Abe *et al.*, *Physics Letters* **404B** (1997) 377.
75. \* “Parity Violation Experiments at TJNAF”,  
K.S. Kumar, *Nucl. Phys.* **A623** (1997) 258c-267c.
76. \* “Measurement of the Neutral Weak Form Factors of the Proton”  
The HAPPEX Collaboration, K.A. Aniol *et al.*, *Physical Review Letters* **82**, 1096, (1999)
77. “Large Momentum Transfer Measurements of the Deuteron Elastic Structure Function  $A(Q^2)$  at Jefferson Laboratory”  
The Jefferson Lab Hall A Collaboration, L.C. Alexa *et al.*, *Physical Review Letters* **82**, 1374, (1999)
78. “Dynamical Relativistic Effects in Quasielastic  $1p$ -Shell Proton Knockout from  $^{16}\text{O}$ ”  
The Jefferson Lab Hall A Collaboration, J. Gao *et al.*, *Physical Review Letters* **84**, 3265 (2000)
79. “Polarization Transfer in the  $^{16}\text{O}(\vec{e}, e'\vec{p})^{15}\text{N}$  Reaction”  
The Jefferson Lab Hall A Collaboration, S. Malov *et al.*, *Physical Review* **C62** (2000) 057302.
80. \* “Strange Quarks and Parity Violation”  
K.S. Kumar and P.A. Souder, *Prog. Nucl. Part. Phys.* **45** (2000) S333-S395.
81. The Reaction Dynamics of the  $^{16}\text{O}(e, e'p)^{15}\text{N}$  Cross-Section at High Missing Energies”,  
The Jefferson Lab Hall A Collaboration, N. Liyanage *et al.*, *Physical Review Letters* **86** (2001) 5670.
82. \* “New Measurement of Parity Violation in Elastic Electron-Proton Scattering and Implications for Strange Form-Factors”  
The HAPPEX Collaboration, K.A. Aniol *et al.*, *Physics Letters* **B509** (2001) 211.
83. \* “The Future of Fixed Target Physics: Snowmass E5 Working Group Summary”  
K.S. Kumar, R. Ray, P.E. Reimer and M. Strovink, Prepared for the APS/DPF/DPB Summer Study on the Future of Particle Physics, *eConf* **C010630** (2001) E5001.
84. \* “Helicity Correlated Systematics for SLAC Experiment E158”  
P.A. Mastromarino *et al.*, *IEEE Trans. Nucl. Sci.* **49** (2002) 1097-1105.
85. \* “SLAC’s Polarized Electron Source Laser System for the E-158 Parity Violation Experiment”  
A. Brachmann *et al.*, *Proc. SPIE Int. Soc. Opt. Eng.* **4632** (2002) 211-222.

86. "The  $Q^2$  Evolution of the Generalized Gerasimov-Drell-Hearn Integral for the Neutron using a  $^3\text{He}$  Target"  
M. Amarian *et al.*, *Physical Review Letters* **89** (2002) 242301.
87. \* "SLAC's Polarized Electron Source Laser System and Minimization of Electron Beam Helicity Correlations for the E158 Parity Violation Experiment"  
T.B. Humensky *et al.*, *Nuclear Instruments and Methods in Physics Research* **A521** (2004) 261-298.
88. "Backward Electroproduction of  $\pi^0$  Mesons on Protons in the Region of Nucleon Resonances at  $Q^2 = 1.0$   $\text{GeV}^2$ "  
G. Laveissiere *et al.*, *Physical Review* **C69** (2004) 045203.
89. " $Q^2$  Evolution of the Neutron Spin Structure Moments using a  $^3\text{He}$  Target"  
M. Amarian *et al.*, *Physical Review Letters* **92** (2004) 022301.
90. \* "Observation of Parity Nonconservation in Møller Scattering"  
The E158 Collaboration, P.L. Anthony *et al.*, *Physical Review Letters* **92** (2004) 181602.
91. \* "Parity-Violating Electron Scattering"  
K.S. Kumar, prepared for the 15th International Spin Physics Symposium (SPIN2002), published in *AIP Conf.Proc.***675** (2003) 142.
92. \* "Status and Plans for Neutral Weak Form Factor Measurements"  
K.S. Kumar, prepared for the Conference on Quarks and Nuclear Physics (QNP2002), published in *Euro.Phys.J.***A18** (2003) 129.
93. "The Dynamics of the Quasielastic  $^{16}\text{O}(e,e'p)$  reaction at  $Q^2 = 0.8$   $\text{GeV}^2$ "  
K.G. Fissum *et al.*, *Physical Review* **C70** (2004) 034606.
94. \* "Parity-Violating Electroweak Asymmetry in Polarized e-p Scattering"  
HAPPEX Collaboration, K.A. Aniol *et al.*, *Physical Review* **C69** (2004) 065501.
95. "Measurements of the Generalized Polarizabilities of the Proton in Virtual Compton Scattering at  $Q^2 = 0.92$   $\text{GeV}^2$  and  $1.76$   $\text{GeV}^2$ "  
JLab Hall A collaboration, G. Laveissiere *et al.*, *Physical Review Letters* **93** (2004) 122001.
96. "Measurement of the Generalized Forward Spin Polarizabilities of the Neutron"  
JLab Hall A collaboration, M. Amarian *et al.*, *Physical Review Letters* **93** (2004) 152301.
97. "Basic Instrumentation for Hall A at Jefferson Lab"  
JLab Hall A collaboration, J. Alcorn *et al.*, *Nuclear Instruments and Methods in Physics Research* **bf A522** (2004) 294.
98. \* "Frontiers of Polarized Electron Scattering Experiments"  
K.S. Kumar, prepared for the International Workshop on Parity Violation and Hadronic Structure (PAVI04), published in *Eur.Phys.J.***A24S2** (2005) 191.
99. \* "Precision Measurement of the Weak Mixing Angle in Møller Scattering"  
The E158 Collaboration, P.L. Anthony *et al.*, *Physical Review Letters* **95** (2005) 081601.
100. \* "Flux Profile Scanners for High Energy Electrons"  
R.S. Hicks *et al.*, *Nuclear Instruments and Methods in Physics Research* **A553** (2005) 470.

101. \* “Parity-Violating Electron Scattering from  $^4\text{He}$  and the Strange Electric Form Factor of the Nucleon”  
HAPPEX Collaboration, K.A. Aniol *et al.*, *Physical Review Letters* **96** (2006) 022003.
102. \* “Constraints on the Nucleon Strange Form Factors at  $Q^2 \sim 0.1 \text{ GeV}^2$ ”  
HAPPEX Collaboration, K.A. Aniol *et al.*, *Physics Letters* **B635** (2006) 275.
103. \* “Strange Events in the Proton”  
K.S. Kumar, published in *Phys. World***18N9** (2005) 29.
104. \* “Spin Physics Summary”  
P. Di Nezza, K.S. Kumar, M. Stratmann, prepared for the 13th International Workshop on Deep Inelastic Scattering (DIS05), published in *AIP Conf. Proc.***792** (2005) 173.
105. \* “Parity Violation in Møller Scattering”  
K.S. Kumar, prepared for the 13th International Workshop on Deep Inelastic Scattering (DIS05), published in *AIP Conf. Proc.***792** (2005) 353.
106. \* “Parity-Violating Electron Scattering: New Results and Future Prospects”  
K.S. Kumar, prepared for CIPANP 2006: 9th Conference on the Intersections of Particle and Nuclear Physics, Puerto Rico, 2006, published in *AIP Conf. Proc.***870** (2006).
107. \* “The E158 Experiment”  
K.S. Kumar, prepared for PAVI06: 3rd International Workshop on *Parity Violation to Hadronic Structure and More*, Milos, Greece, published in *Eur.J.***A32** (2007) 531.
108. \* “Conference Summary”  
K.S. Kumar, prepared for PAVI06: 3rd International Workshop on *Parity Violation to Hadronic Structure and More*, Milos, Greece, published in *Eur.J.***A32** (2007) 531.
109. \* “Precision Measurements of the Nucleon Strange Form Factors at  $Q^2 \sim 0.1 \text{ GeV}^2$ ”  
HAPPEX Collaboration, A. Acha *et al.*, *Physical Review Letters* **98** (2007) 032301.
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