

Roger W. Rusack

Curriculum Vitae:

Birthdate: September 20th. 1952.

Education: Ph.D. in Physics, London University 1979.
B.Sc. in Physics, Liverpool University, 1974.

Positions Held Professor of Physics, The University of Minnesota, 2001 - present
Associate Professor of Physics, University of Minnesota, 1993- 2001.
Associate Professor of Physics, The Rockefeller University, 1991 - 1993
Assistant Professor of Physics, The Rockefeller University, 1985 - 1991
Senior Research Associate, The Rockefeller University, 1981 - 1985
Research Associate, The Rockefeller University, 1980 - 1981
Research Associate, Columbia University, 1978 - 1980
Research Associate, Rutgers University, 1977 - 1978

Recent Publications:

1. *A Phototube Incorporating an Avalanche Photodiode.* P. Cushman and R. Rusack, Nucl. Intr. and Meth. A333 (1993) 381-390.
2. *Effect of a Preshower Detector on Calorimetry Performance.* M. Hulbert, et al. Nucl. Intr. and Meth. A, 335 (1993) 427-438.
3. *Direct Photon Production in $\bar{p}p$ and pp Interactions at $\sqrt{s} = 24.3$ GeV.* G. Sozzi, et al. Physics Letters B, 317 (1993) 243.
4. *Determination of α_s and the gluon distribution using direct photon production in $\bar{p}p$ and pp collisions.* G. Balocchi, et al. Physics Letters B, 317 (1993) 250.
5. *A Multichannel Avalanche Photodiode Phototube for Calorimetry.* P. Cushman, R.W. Rusack and V.M. Singh. Nuclear Physics B44 (1995) pp.35-39.

6. *Comparison of Direct Gamma Production in $\bar{p}p$ and pp Reactions and Determination of Lambda and the Gluon Structure Function*, P. Obserson *et al.* (CLMR Collaboration), Phys. At. Nucl. 54, 1624 (1995).
7. *Results from Tests on Matrices of Lead Tungstate Crystals Using High-Energy Beams*, J.P. Peigneux *et al.*, Nucl. Instr. Methods A378, 410 (1996).
8. *Test Beam Results for an Endcap Electromagnetic Calorimeter for the SSC*, G. Abrams *et al.*, Nucl. Instr. Methods A390, 41 (1997).
9. *Studies of Lead Tungstate Crystal Matrices in High-Energy Beams for the CMS Electromagnetic Calorimeter at the LHC*, G. Alexeev, *et al.*, Nucl. Instrum. Meth. A385, 425 (1997)
10. *Neutron Irradiation Studies of APD's using Californium 252*, S. Reucroft *et al.*, Nucl. Inst. Meth. A387, 214 (1997)
11. *Direct Photon Cross-sections in pp and $\bar{p}p$ collisions at $\sqrt{s} = 24.3$ GeV*. G. Balocchi *et al.* Phys.Lett.B436:222-230 (1998)
12. *Advances in Photodetectors*, R. Rusack, Nucl. Instr. Meth. A408:181-190,1998
13. *Beam Tests of Lead Tungstate Crystal Matrices and a Silicon Strip Preshower Detector for the CMS electromagnetic Calorimeter*. E. Auffray *et al.*, Nucl. Instr. Meth. A412, 223 (1998).
14. *Radiation Damage effect on Avalanche Photodiodes*. S. Baccaro *et al.*, Nucl. Instr. Meth. A426:206,(1999).
15. *A new determination of Alpha-s using direct photon production cross-sections in pp and $\bar{p}p$ collisions at $\sqrt{s} = 24.3$ GeV*. M. Werlen *et al.* Phys.Lett.B 452 (1999) 201.
16. *Properties of the most Recent Avalanche Photodiodes for the CMS Electromagnetic Calorimeter*. K. Dieters *et al.* Nucl. Instr. Meth. A442:193, (2000).
17. *Observation of Tau-Neutrino Interactions*. K. Kodama *et al.*, Phys. Lett. B 504 (2001) 218.
18. *CMS ECAL Quality Assurance Facility*. K. Dieters *et al.*, Published in "Cracow 2000, Electronics for LHC experiments" 221-225.
19. *Properties of the Avalanche Photodiodes for the CMS Electromagnetic Calorimeter*. K. Dieters *et al.*, Nucl. Instr.. Meth. A453:223-226 (2000).

20. *Properties of the Most Recent Avalanche Photodiodes for the CMS Electromagnetic Calorimeter.* K. Dieters et al. Nucl. Instr. Meth. A442:193-197 (2000).
21. *E835 at FNAL: Charmonium Spectroscopy in Anti-Proton Proton Annihilations.* C. Patrignani et al Nucl.Phys.A692:308-314 (2001).
22. *A Large Liquid Scintillator Detector for a Long Baseline Neutrino Oscillation Experiment.* P. Border et al. Nucl.Instrum.Meth.A463:194-204 (2001).
23. *Investigation of the Avalanche Photodiodes for the CMS Electromagnetic Calorimeter Operated at High Gain.* K. Dieters et al. Nucl Instr. Meth. A461:574-576 (2001)
24. *A Large Liquid Scintillator Detector for a Long Baseline Neutrino Oscillation Experiment.* P. Border et al. Nucl Instr and Meth. A463:194-204 (2001).
25. *E835 at FNAL: Charmonium Spectroscopy in Anti-P P Annihilations.* C. Patrignani et al. Nucl.Phys.A692:308-314, 2001
26. *A New Upper Limit For The Tau - Neutrino Magnetic Moment.* R. Schweinhorst et al. Phys. Lett. B513:23-29 (2001).
27. *New Measurements of the Resonance Parameters of the $c_{c0}(1^3P_0)$ State of Charmonium.* S. Bagnasco et al. Phys. Lett. B533, pp. 237-242, (2002).
28. *Avalanche Photodiodes for the CMS Electromagnetic Calorimeter.* Q. Ingram et al. Proceedings of the International Europhysics Conference on High-Energy Physics (HEP 2001), Budapest, Hungary, 12-18 Jul 2001.
29. *Avalanche Photodiodes for the CMS Lead Tungstate Calorimeter.* By J. Grahl et al. Mar 2002. 10th International Conference on Calorimetry in High Energy Physics (CALOR 2002), Pasadena, California, 25-30 Mar 2002.
30. *Measurements of the Magnetic Form-Factor of the Proton for Timelike Momentum Transfers.* M. Andreotti, et al. Phys.Lett.B559:20-25 (2003).
31. *Measurement of the Resonance Parameters of the charmonium Ground State $h_c(1^1S_0)$.* M. Ambrogiani et al. Phys.Lett.B566:45-50,2003.
32. *Experiment E835 at Fermilab.* G. Garzoglio, G. Garzoglio et al. Nucl. Instr. and Meth A519:558-609 (2004)
33. *Charmonium States at the Fermilab Antiproton Accumulator. New Results from E835.* M.M. Obertino et al. 2003.
Presented at the 16th International Conference on Particles and Nuclei

- (PANIC 02), Osaka, Japan, 30 Sep - 4 Oct 2002. Nucl.Phys.A721:809-812,2003.
34. *Interference Study of the $\chi_{c0}(1^3P_0)$ in the Reaction Proton Anti-Proton $\pi^0 \pi^0$.* M. Andreotti *et al.* Phys.Rev.Lett.91:091801 (2003).
 35. *Identification of neutrino interactions using the DONUT spectrometer.* K. Kodema *et al.* Nucl Instr and Meth A516:21-33 (2004).
 36. *Measurement of the Two Photon Decay of the $\chi_{c0}(1^3P_0)$ State of Charmonium.* M. Andreotti *et al.* Phys Letts. B 584 16 – 21, (2004).