

Appendix: Research Paper Summary
126 publications since 2001 with 31 Journal & 94 Conference Publications

Journal Publications

2004

1. **Ionospheric response to the solar flare of 14 July 2000**, Dymond, K., F., S. A. Budzien, A. C. Nicholas, S. E. Thonnard, R. P. McCoy, R. J. Thomas, J. D. Huba, and G. Joyce, Radio Science, accepted.
2. **The Nature of SN1961V**, Y-H. Chu, R.A. Gruendl, C.J. Stockdale, M.P. Rupen, J.J. Cowan & S.W. Teare, Astronomical Journal, Accepted for publication, May 2004.
3. **SLA-Based Non-Parametric Expectation Maximization**, W. Abd-Almageed, A. El-Osery and Christopher E. Smith, Accepted to Pattern Recognition Letters.

2003

4. **Analysis of the NOFS 1m Telescope using annular Zernike polynomials**. S.R. Restaino, S.W. Teare, M. DiVittorio, C. Gilbreath & D. Mozurkewich, Optical Engineering, 42(9): 2491-2195 (2003).
5. **Astronomical Seeing at the Magdalena Ridge Observatory**. D. Neimeier, S.W. Teare, D. Westpfahl, D. Klinglesmith, G. Loos, N. Euart, L. Truesdell, V. Romero, S.R. Restaino, J. Friedman, Observatory, **123**(1172): 25-31 (2003).
6. **Effects of Charge and Electrostatic Potential on Lightning Propagation**, Coleman, L.M., T.C. Marshall, M. Stolzenburg, T. Hamlin, P.R. Krehbiel, W. Rison, and R.J. Thomas, J. Geophys. Res., 108, 4298 doi: 10.1029/2002JD002718, 2003.
7. **Explaining and Validating Stressed Power Systems Behavior Using Modal Series**, N. Pariz, H. Shanechi, and E. Vaahedi, IEEE Transactions on Power Systems, May 2003.
8. **General Nonlinear Modal Representation of Large Scale Power Systems**, H. Shanechi, N. Pariz, and E. Vaahedi, IEEE Transactions on Power Systems, August 2003.
9. **Middle ultraviolet emission from ionized iron**, Dymond, K. F.; Wolfram, K. D.; Budzien, S. A.; Nicholas, A. C.; McCoy, R. P.; Thomas, R. J., Geophys. Res. Lett. Vol. 30 No. 1 10.1029/ 2002GL015060 January 2003
10. **The Case for Using Blunt-Tipped Lightning Rods as Strike Receptors**, Moore, C.B., G.D. Aulich and W. Rison, J. Appl. Meteorology, 42, 984-993, 2003.
11. **A New Genetic Algorithm with Lamarckian Individual Learning for Generation Scheduling**, H. R. Mashhadi, H. Shanechi, and Caro Lucas, IEEE Transactions on Power Systems, August 2003.
12. **An Outreach Program to Integrate Robotics into Secondary Education**, S. Bruder and K. Wedeward, IEEE Robotics and Automation Magazine, Vol. 10, No. 3, pp 25-29, Sept. 2003.
13. **V-Lab - A Distributed Intelligent Discrete-Event Environment for Autonomous Agents Simulation**, M. Jamshidi, S. Sheikh-Bahaei, J. Kitzinger, P. Sridhar, S. Beatty, S. Xia, Y. Wang, T. Song, U. Dole, J. Liu, E. Tunstel, M. Akbarzadeh, P. Lino, A. El-Osery, M. Fathi, X. Hu and B. P. Zeigler, Intelligent Automation and Soft Computing, Vol. 9, No. 3, 2003, pp.181-214.

2002

14. **Fast steering, high-resolution imaging system**. S.W. Teare, S.R. Restaino & D.M. Payne, Optics Express, **10**(1): 65-69 (2002).
15. **Longterm Periodic Behavior in the Subarcsecond Seeing at Mount Wilson Observatory**. S.W. Teare & L.A. Thompson, Publ. Astron. Soc. Pacific, **114**: 125-127 (2002).
16. **Multi Wavelength Differential Image Motion Monitor**. D. Neimeier, D. Oesch, J. Andrews, J. Baca & S.W. Teare, Optics Express **10**(13): 561-565 (2002).
17. **Rayleigh Laser Guide Star Systems: Application to UnISIS**. L.A. Thompson & S.W. Teare, Publ. Astron. Soc. Pacific, **114**: 1029-1042 (2002).

18. **Rayleigh Laser Guide Star Systems: UNISIS Bow Tie Shutter and CCD39 Wavefront Camera.** L.A. Thompson, S.W. Teare, S. Crawford & R. Leach, Publ. Astron. Soc. Pacific, **114**: 1143-1149 (2002).
19. **Thin Annulus Aperture Active Imager,** S.W. Teare, S.R. Restaino & D.M. Payne, Optics & Photonics News: Optics in 2002, **13**(12): 18 (2002).
20. **Three New Systematic Approaches for Computing Heffron-Phillips Multi-Machine Model Coefficients,** M. Oloomi, H. Shanechi, and H. Ghafoori-Fard, International Journal of Engineering, IRI, Vol. 15, No 1, February 2002
21. **Transmission Planning in Deregulated Environments,** M. O. Buygi, H. Shanechi, and M. Shahidehpour, International Journal of Engineering, IRI, Vol. 15, No. 3, August 2002
22. **The Scientific Basis for Traditional Lightning Protection Systems,** The Committee on Atmospheric And Space Electricity of the American Geophysical Union, <http://CASE.AGU.org/NFPareport.pdf> (Note: This is an official referred publication of the AGU published online. Rison was chair of the working group which prepared the paper, and was the primary author of the paper.)
23. **V-LAB - A Virtual Laboratory for Autonomous Agents - SLA based Controllers,** A. El-Osery, J. Burge, M. Jamshidi, M. Fathi and M.-R. Akbarzadeh-T, IEEE Transaction on Systems, Man and Cybernetics, Vol. 32, No. 6, Dec. 2002, pp. 791-803.

2001

24. **An algorithm for inferring the two-dimensional structure of the nighttime ionosphere from radiative recombination measurements,** Dymond, K. F.; Thomas, R. J., Radio Sci. 36:1241-1254, 2001
25. **Electron densities determined by inversion of ultraviolet limb profiles,** Dymond, K. F.; Budzien, S. A.; Nicholas, A. C.; Thonnard, S. E.; McCoy, R. P.; Thomas, R. J., J. Geophys. Res. 106, 30,315-30,322, 2001
26. **Electron densities determined by the HIRAAS experiment and comparisons with ionosonde measurements,** Dymond, K. F., Budzien, S. A., Thonnard, S. E., McCoy, R. P., Thomas, R. J., Geophys. Res. Lett. Vol. 28, No. 5 , p. 927-931, 2001
27. **Energetic radiation associated with lightning stepped-leaders,** Moore, C.B., K.B. Eack, G.D. Aulich, and W. Rison, Geophys. Research Letters, 28, 2141-2144, 2001.
28. **A Generalized Heffron-Phillips Model for Multi Machine Power Systems with Voltage and Frequency Dependent Loads,** H. Shanechi and M. Oloomi, Journal of Electric Machines and Power Systems, Vol. 29, No 5, May, 2001
29. **Transaction Evaluation and Unit Commitment in a Bilateral Electricity Market Using Genetic Algorithms,** H. Rajabi Mashhadi, H. J. Haubrich, S. Niessen, and H. Shanechi European Transactions for Electrical Power, Vol 11, No 5, Sep./Oct. 2001
30. **VHF source powers radiated by lightning discharges,** Thomas, R.J., P.R. Krehbiel, W. Rison, T. Hamlin, J. Harlin, and D. Shown, Geophys. Research Letters, 28, 143-146, 2001.
31. **A technique for using measured ionospheric density gradients and GPS occultations for inferring the nighttime ionospheric electron density,** Dymond, K. F.; Thomas, R. J., Radio Sci. 36:1141-1148, 2001
32. **Adaptive Trajectory Tracking and Position/Force Controllers for Position-Controlled Manipulators,** Wedeward, K., M. Trabatti, and R. Colbaugh, International Journal of Robotics and Automation, Vol. 16, No. 2, 2001

Conference Publications

2004

1. **Application of Radio Control Cars as Intelligent Unmanned Ground Vehicles with Collaborative and Independent Behavior,** J. Kouns, R. Kruse, S. Wasson, and S. Bruder, (accepted) SPIE Defense and Security Symposium, Orlando, Florida USA, 12-16 April 2004.
2. **A hybrid fuzzy-statistical contour model,** W. Abd-Elmageed, A. El-Osery and C. E. Smith, Accepted to SPIE Defense and Security Symposium, Orlando, Florida, 12-16 April, 2004.
3. **Power control in ad hoc networks: an overview,** A. El-Osery, D. Baird and M. Memon, Accepted to SPIE Defense and Security Symposium, Orlando, Florida, 12-16 April, 2004.
4. **An Unmanned Ground Vehicle for Landmine Remediation,** S. Wasson, J. Guilberto, W. Ogg, K. Wedeward, and S. Bruder, (accepted) SPIE Defense and Security Symposium, Orlando, Florida USA, 12-16 April 2004.

5. **An Autonomous Robot with Reconfigurable Hardware and RTLinux for Fire-Fighting**, J. Guilberto, R. Clark, S. Wasson, S. Bruder, and K. Wedeward, 29th Annual International MAES Symp., Phoenix, Arizona, Oct. 28, 2003.
6. **ATC Calculation Based on Simultaneous Voltage and Angle Stability**, M. Eidiani, H. Shanechi, and E. Vaahedi, accepted for publication in a future issue of Esteghlal, Engineering Journal of Technical University of Esfahan, August 2003 (Farsi)
7. **A Fast and Accurate Method of Calculating ATC with the Consideration of Voltage Stability**, M. Eidiani, H. Shanechi, and E. Vaahedi, Bargh Journal, No. 35, January 2003 (Farsi)
8. **A Fast Method for Calculation of ATC Considering both Transient and Voltage Stabilities**, M. Eidiani, H. Shanechi, and E. Vaahedi, Proceeding of the 18th International Power System Conference, October 2003, Tehran, Iran (Farsi)
9. **Transmission Planning Approaches in Restructured Power Systems**, M. Oloomi Buygi, H. Shanechi, G. Balzer, and M. Shahidehpour, Proceedings of IEEE Bologna PowerTech Conference, June 2003, Bologna, Italy (E)
10. **Analysis of the Equations of Motion of a Cylindrical Robot Using Extended Modal Series Method**, A. Abdollahi, N. Pariz, and H. Shanechi, Proceedings of the 11th Iranian Conference in Electrical Engineering, ICEE 2003, May 2003, Shiraz, Iran (Farsi)
11. **Modal Series Solution of Boundary Layer along a Plate**, J. A. Esfahani, N. Pariz, H. Shanechi, and A. Abdollahi, 4th Conference of Iranian Aerospace Society, February 2003, Tehran, Iran (Farsi)
12. **Non-Parametric Expectation Maximization: A Learning Automata Approach**, W. Abd-Elmageed, A. El-Osery and C. E. Smith, Proc. of the IEEE International Conference on Systems, Man and Cybernetics, Washington D.C., October 2003.
13. **V-Lab - A Virtual Laboratory for Intelligent Agents**, M. Jamshidi, S. Sheikh-Bahaei, J. Kitzinger, P. Sridhar, S. Xia, Y. Wang, J. Liu, T. Song, S. Beatty, U. Dole, E. Dong, P. Swiderski, B. Masefield, E. Tunstel, M. Akbarzadeh, A. El-Osery and M. Fathi, Paper for IEEE SMC Newsletter, May, 2003.
14. **Astronomical Observations with the UNISIS Adaptive Optics System**, L.A. Thompson, S.W. Teare, Y. Xiong, R. Gruendl, S.P.I.E. 5169, 11-16 (2003).
15. **The Magdalena Ridge Optical Interferometer and its Science Drivers** M. J. Creech-Eakman, D. Buscher, M. Chang, C. Haniff, P. Howell, A. Jorgensen, B. Laubscher, G. Loos, V. Romero, M. Sirota, S. Teare, D. Voelz, D. Westpfahl, BAAS 35(5), 1247 (2003).
16. **Dual Use Coatings for Relay Mirror Applications** D. Reicher, S. Teare and R. Ramsey, Proceedings of the 6th Annual Directed Energy Symposium (2003).
17. **Simplified Supercomputing Tool: Usability Design for High-Performance Simulations**, D. Driscoll, J. Kearney, A. Ball, D. Neimeier, S.W. Teare & L.D. Rigdon, Proceedings of the 6th Annual Directed Energy Symposium (2003).
18. **Implications of Optical Coating Quality on Directed Energy Applications**, D. Neimeier, S.W. Teare, D.Reicher & R.Ramsey, Proceedings of the 6th Annual Directed Energy Symposium (2003).
19. **Compact Grism Spectrometer**. S.W. Teare, BAAS, 35(3), (2003).
20. **Liquid Crystal Devices for Adaptive Optics: An Update**. S.R. Restaino, D. Payne, J. Baker, J. Andrews, S.W. Teare, C. Gilbreath, D. Dayton & J. Gonglewski, S.P.I.E. **5003**: 187-192 (2003).
21. **Use and characterization of very large devices for adaptive optics**. S.R. Restaino, S.W. Teare, J. Andrews & C. Gilbreath, (invited paper), S.P.I.E. **4884**: 170-175 (2003).
22. **UNISIS Adaptive optics system at the Mt Wilson 2.5-m Telescope**. L.A. Thompson, S.W. Teare, C.R. Neyman & D.G. Sandler, S.P.I.E. **4839**: 44-54 (2003).
23. **Adaptive optics Performance Considerations for the Magdalena Ridge Observatory**. G.C. Loos, S.W. Teare & R.F. Horton, S.P.I.E. **4838**: 729-735 (2003).
24. **Platform Independent Interface for using Supercomputers in Modeling and Simulation of Directed Energy Weapons**. S.W. Teare, D. Driscoll, M. Nunez, R. Aitbayev, V. Romero, S. Doerr, H. Schreiber, T. Lawson, G. Gusciora, C. Holmberg, L.D. Rigdon & E.A. Duff, Directed Energy Modeling and Simulation Conference, 2003.
25. **Accuracy of the Lightning Mapping Array**, Thomas, R J, Krehbiel, P, Rison, W, Winn, W, Hamlin, T, Harlin, J, presented at the Fall Meeting of the American Geophysical Union in San Francisco, California, December 2003.

26. **Propagation Speeds of Lightning Leaders Throughout an Entire Flash Using 10 μ s Time Resolution 3D Mapping Data**, Behnke, S A, Thomas, R J, Krehbiel, P, Rison, W, presented at the Fall Meeting of the American Geophysical Union in San Francisco, California, December 2003.
27. **Lightning Modes in Thunderstorms**, Krehbiel, P, Rison, W, Thomas, R J, Hamlin, T, Harlin, J, presented at the Fall Meeting of the American Geophysical Union in San Francisco, California, December 2003.
28. **Lightning Initiation Locations as a Remote Sensing Tool of Large Thunderstorm Electric Fields**, Maggio, C R, Coleman, L M, Marshall, T C, Stolzenburg, M, Stanley, M.A, Hamlin, T, Krehbiel, P R, Rison, W, Thomas, R J, presented at the Fall Meeting of the American Geophysical Union in San Francisco, California, December 2003.
29. **Short Duration Discharges Located by NMIMT's Lightning Mapping Array**, Harlin, J D, Hamlin, T, Krehbiel, P, Thomas, R, Rison, W, presented at the Fall Meeting of the American Geophysical Union in San Francisco, California, December 2003.
30. **Lightning Initiation Locations as a Remote Sensing Tool of Thunderstorm Electrical Evolution**, Marshall, T C, Coleman, L, Maggio, C, Stolzenburg, M, Hamlin, T, Krehbiel, P, Rison, W, Thomas, R, presented at the Fall Meeting of the American Geophysical Union in San Francisco, California, December 2003.
31. **Initial Electrification of Thunderstorms: Evidence for a Connection Between Precipitation and Electrical Charging**, Stolzenburg, M, Marshall, T, Krehbiel, P, Rison, W, Thomas, R, Winn, W, Hunyady, S, Aulich, G, Ramig, N, presented at the Fall Meeting of the American Geophysical Union in San Francisco, California, December 2003.
32. **X The LMA Flash Algorithm**, Stolzenburg, M, Marshall, T, Krehbiel, P, Rison, W, Thomas, R, Winn, W, Hunyady, S, Aulich, G, Ramig, N, presented at the 12th International Conference on Atmospheric Electricity, in Versailles, France, June 2003.
33. **The Status of our Search for Inverted-Polarity Electrical Structures in Thunderstorms**, W. David Rust, Donald R. MacGorman, Paul R. Krehbiel, Ron Thomas, Eric Bruning, and Stephanie Stroman presented at the 12th International Conference on Atmospheric Electricity, in Versailles, France, June 2003.
34. **Evolution of Electric Charge and Lightning Type in Developing Thunderstorms**, M. Stolzenburg, T. C. Marshall, L. M. Coleman, P. R. Krehbiel, R. J. Thomas, W. Rison, and T. Hamlin presented at the 12th International Conference on Atmospheric Electricity, in Versailles, France, June 2003.
35. **Thunderstorm Observations with the Lightning Mapping Array**, P. Krehbiel, W. Rison, R. Thomas, T. Hamlin, J. Harlin, and Y. Zhang presented at the 12th International Conference on Atmospheric Electricity, in Versailles, France, June 2003.
36. **The Effects of Charge and Electrostatic Potential on Lightning Propagation**, L. M. Coleman, M. Stolzenburg, T. C. Marshall, P. R. Krehbiel, R. J. Thomas, W. Rison, and T. Hamlin presented at the 12th International Conference on Atmospheric Electricity, in Versailles, France, June 2003.
37. **Electrical Structure and Storm Severity Inferred by 3-D Lightning Mapping Observations During STEPS**, T. Hamlin, P. Krehbiel, Y. Zhang, R. Thomas, W. Rison, and J. Harlin presented at the 12th International Conference on Atmospheric Electricity, in Versailles, France, June 2003.
38. **Lightning Relative to Precipitation and Tornadoes in a Supercell Storm**, D. MacGorman, D. Rust, O. van der Velde, M. Askelson, P. Krehbiel, and R. Thomas presented at the 12th International Conference on Atmospheric Electricity, in Versailles, France, June 2003.
39. **Using Balloon Measurements to Verify and Quantify Radar and LMA Inferences About Thunderstorms**, T. C. Marshall, M. Stolzenburg, L. M. Coleman, P. R. Krehbiel, W. Rison, and R. J. Thomas presented at the 12th International Conference on Atmospheric Electricity, in Versailles, France, June 2003.
40. **Lightning Mapping and Radar Observations of Bolts from the Blue**, W. Rison, P. Krehbiel, R. Thomas, T. Hamlin, and J. Harlin presented at the 12th International Conference on Atmospheric Electricity, in Versailles, France, June 2003.
41. **Using the NMIMT LMA to Determine Which Model of Lightning Initiation Fits Best with Measured Results**, J. Harlin, T. Hamlin, P. Krehbiel, R. Thomas, and W. Rison presented at the 12th International Conference on Atmospheric Electricity, in Versailles, France, June 2003.
42. **Observations of radiations from airplane during STEPS**, Y. Zhang, P. Krehbiel, T. Hamlin, J. Harlin, R. Thomas, and W. Rison, presented at the 12th International Conference on Atmospheric Electricity, in Versailles, France, June 2003.
43. **Overview of the Year-One Field Program Phase of the Thunderstorm Electrification and Lightning Experiment (TELEX) 2003**, Rust, D., D. MacGorman, T. Schuur, J. Straka, W. Rison, T. Hamlin, P. Krehbiel and E. Bruning, Eos Trans. AGU, 84(46), Fall Meet. Suppl., Abstract AE32A-0165, San Francisco, CA, 2003.
44. **Initial Results from a Compact, High Time Resolution, Lightning Mapping System**, Rison, W., W.P. Winn and S.J. Hunyady, Proc. 12th Intern. Conf. Atmospheric Electricity, Versailles, France, pp. 645-648, 2003.
45. **The LMA Flash Algorithm**, Thomas, R., P. Krehbiel, W. Rison, T. Hamlin, J. Harlin, and N. Campbell, Proc. 12th Intern. Conf. Atmospheric Electricity, Versailles, France, pp. 655-656, 2003.

46. **Experimental Validation of Conventional and Non-Conventional Lightning Protection Systems**, Rison, W., Proceedings of the 2003 IEEE Power Engineering Society General Meeting, Toronto, Ontario, Canada, July 13-17, 6 pp., 2003.
47. **Consistent Abstractions of Electric Power Systems**, Wedeward, K., SIAM Conference on Applications of Dynamical Systems, Snowbird, UT, May 2003

2002

48. **Incorporating Robotics into Secondary Education**, Kevin Wedeward and Stephen Bruder, 2002 World Automation Conference (WAC 2002), ISORA-046, Orlando, Florida, USA, June 9-13, 2002.
49. **Characterization of large format LC devices for adaptive and active optics**. S.R. Restaino, T. Martinez, J. Andrews, & S.W. Teare, (invited paper), S.P.I.E. **4825**: 41-45, (2002).
50. **The Use of Astronomical Seeing Measurements**. S.W. Teare, BAAS, 34(4), 1226 (2002).
51. **Synthesizing Large Telescope Apertures: Adaptive Optics and Interferometry**. S.W. Teare, in IAPPP-Western Wing Proceedings of the Symposium on Telescope Science (Eds. S.W. Teare & D.A. Kenyon), IAPPP pg 45-52 (2002).
52. **New Mexico Thunder Storms Observed by the Lightning Mapping Array**, An Overview of One Season, Thomas, R J, Behnke, S, Hamlin, T, Harlin, J, Krehbiel, P, Rison, W, presented at the Fall Meeting of the American Geophysical Union in San Francisco, California, December 2002.
53. **Electrical Structure Inferred by 3-D Lightning Mapping Observations During STEPS**, Hamlin, T, Krehbiel, P R, Zhang, Y, Thomas, R J, presented at the Fall Meeting of the American Geophysical Union in San Francisco, California, December 2002.
54. **Accuracy of the Lightning Mapping Array**, Thomas, R J, Krehbiel, Rison, presented at the International Lightning Detection Conference, October 2002
55. **Positive Cloud-to-Ground Lightning and Inverted Polarity Cloud Flashes Relative to Vertical Profiles of Electric Field and Microphysical Properties of Storms**, MacGorman, D, Rust, van der Velde, Askelson, Krehbiel, Thomas, Rison, Hamlin, Harlin, presented at the International Lightning Detection Conference, October 2002
56. **Fast and Accurate Method for Computing FCTTC (First Contingency Total Transfer Capability)**, M. Eidiyani, H. Shanechi, and E. Vaahedi, Vol. 2, Proceedings of the International Conference on Power System Technology, PowerCon 2002, October 2002, Kuming, China
57. **A Novel Method for Allocation of Transmission Network Revenue Requirement in a Competitive Power Market**, Alireza Sedaghati, H. Shanechi, and M. Shahidehpour, Proceeding of the 10th Iranian Conference on Electrical Engineering, ICEE-2002, May 2002, Tabriz, Iran (Farsi)
58. **Determination of FCTTC Considering Voltage and Transient Stability and Using Energy Method**, M. Eidiyani, H. Shanechi, and E. Vaahedi, Proceeding of the 10th Iranian Conference on Electrical Engineering, ICEE-2002, May 2002, Tabriz, Iran (Farsi)
59. **Energetic Radiation Associated with Cloud-to-Ground Lightning**, Eack, K., G. Aulich, C.B. Moore, W. Rison, W.P. Winn, and S. Hunyady, Eos Trans. AGU, 83(47), Fall Meet. Suppl., Abstract A71B-0108, 2002
60. **Further Studies of the Electrical Alignment of Ice Crystals in Thunderstorms**, Marshall, T.C., M. Stolzenburg, L.M. Coleman, P.R. Krehbiel, R.J. Thomas and W. Rison, Eos Trans. AGU, 83(47), Fall Meet. Suppl., Abstract A71B-0099, 2002
61. **Locations of Electric Charge in Developing Thunderstorms**, Stolzenburg, M., T.C. Marshall, L.M. Coleman, P.R. Krehbiel, R.J. Thomas, W. Rison, and T. Hamlin, Eos Trans. AGU, 83(47), Fall Meet. Suppl., Abstract A71B-0098, 2002
62. **Thunderstorm Charge Regions Inferred From the Vector Electric Field in Combination With Data From a Lightning Mapping Array in STEPS**, Bruning, E.C., D. Rust, D.R. MacGorman, P.R. Krehbiel, R. Thomas, W. Rison, T. Hamlin, and J. Harlin, Eos Trans. AGU, 83(47), Fall Meet. Suppl., Abstract A71B-0095, 2002
63. **The Effects of Potential Wells on Low Altitude Lightning**, Coleman, L.M., T.C. Marshall, M. Stolzenburg, P.R. Krehbiel, R.J. Thomas, W. Rison and T. Hamlin, Eos Trans. AGU, 83(47), Fall Meet. Suppl., Abstract A21E-05, 2002
64. **Additional analyses of possibly inverted-polarity electrical structures in thunderstorms during STEPS**, Rust, W.D., D.R. MacGorman, E.C. Bruning, P.R. Krehbiel, W. Rison, R.J. Thomas, J. Harlin, T. Hamlin and S. Stroman, Eos Trans. AGU, 83(47), Fall Meet. Suppl., Abstract A71B-0096, 2002
65. **Aspects of electric field profiles and total lightning in severe thunderstorms in STEPS**, Rust, W.D., D.R. MacGorman, P.R. Krehbiel, T. Hamlin, J. Harlin, W. Rison, R Thomas and E.C. Bruning, 21st Conference on Severe Local Storms, American Meteorological Society, San Antonio, TX, Aug. 12-16, 2002.

66. **Lightning Relative to Precipitation and Tornadoes in a Supercell Storm during MEaPRS**, MacGorman, D.R., W.D. Rust, O. van der Velde, M. Askelson, P.R. Krehbiel, R. Thomas, W. Rison, T. Hamlin, J. Harlin, 21st Conference on Severe Local Storms, American Meteorological Society, San Antonio, TX, Aug. 12-16, 2002.
67. **Aspects of Electric Field Profiles and Total Lightning in Severe Thunderstorms in STEPS**, Rust, W.D., D.R. MacGorman, P.R. Krehbiel, T. Hamlin, J. Harlin, W. Rison, R. Thomas, and E.C. Bruning, 21st Conference on Severe Local Storms, American Meteorological Society, San Antonio, TX, Aug. 12-16, 2002.
68. **Lightning Relative to Precipitation and Tornadoes in a Supercell Storm During MEaPRS**, MacGorman, D.R., W.D. Rust, O. van der Velde, M. Askelson, P.R. Krehbiel, R.J. Thomas, W. Rison, T. Hamlin and J. Harlin, 21st Conference on Severe Local Storms, American Meteorological Society, San Antonio, TX, Aug. 12-16, 2002.
69. **Blunt-tipped Rods As Preferential Receptors of Lightning Strikes**, W. Rison, G. Aulich, and C.B. Moore, 27th National Weather Association Conference, Fort Worth, October 21-24, 2002.
70. **A Modern Assessment of Benjamin Franklin's Lightning Rods**, Moore, C.B., G.D. Aulich and W. Rison, Turning the Electrical Fire: A Conference on the History and Cultural Meaning of the Lightning Rod, Minneapolis, MN, Nov. 4-6, 2002.
71. **Three-Dimensional Lightning Mapping Observations of Thunderstorms**, W. Rison, P. Krehbiel, and R. Thomas, 27th National Weather Association Conference, Fort Worth, October 21-24, 2002.

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72. **Exploration in Robotics: Outreach to Secondary Education**, K. Wedeward, S. Bruder, and T. Sarkodie-Gyan, American Association for Artificial Intelligence (AAAI) 2001 Spring Symposium Series, Stanford University, CA, March 26-28, 2001.
73. **The Selective Image Reconstruction (SIR) Imaging Technique: Applications to Planetary Science**, A.S. Hale, R.F. Dantowitz, M.J. Kozubel, S.W. Teare & S.G. Gillam, AAS, Division of Planetary Science Meeting, **33**, 5701H (2001).
74. **A Low to Medium Resolution Near-Infrared Spectrometer**, S.W. Teare, IAPPP, Comm. No. 84, 5 (2001).
75. **High Resolution Planetary Imaging**, S.W. Teare, IAPPP, Comm. No. 83, 9 (2001).
76. **A Comparison of Electron Density Profiles Derived from the Low Resolution Airglow and Aurora Spectrograph (LORAAS) Ultraviolet Measurements**, Dymond, K F, Budzien, S A, Thonnard, S E, Nicholas, A C, McCoy, R P, Thomas, R J, presented at the Fall Meeting of the American Geophysical Union in San Francisco, California, December 2001.
77. **Observations of Positive Cloud to Ground Lightning made with the Lightning Mapping Array**, Thomas, R J, Hamlin, T, Harlin, J, Krehbiel, P, Rison, W, Stanley, M, presented at the International Working group on the Physics of Lightning, Nogy, Japan, September, 2001.
78. **Metal Ion Morphology Observed by the ISAAC Instrument**, Dymond, K F, Wolfram, K D, Budzien, S A, Nicholas, A C, McCoy, R P, Thomas, R J, presented at the Spring Meeting of the American Geophysical Union in Boston, Massachusetts, May 2001.
79. **Thermospheric Temperature Derived from ARGOS Observations of N Lyman-Birge-Hopfield Emission**, Budzien, S A, Fortna, C B, Dymond, K F, Thonnard, S E, Nicholas, A C, McCoy, R P, Thomas, R J, presented at the Spring Meeting of the American Geophysical Union in Boston, Massachusetts, May 2001.
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