

VI. INVITED PRESENTATIONS [NATIONAL AND INTERNATIONAL MEETINGS ONLY] – [TOTAL 138]

1. Destruction of a Magnetic Mirror-Trapped Hot Electron Ring by a shear Alfvén Wave; Y. Wang, W. Gekelman, P. Pribyl, D. Papadopoulos' Invited Presentation 55th Annual Meeting of the APS Division of Plasma Physics, Nov. 12, 2013
2. Using Active Experiments to Probe Geo-space, Third International Conference: The Mechanics of the Magnetospheric System and Effects on the Polar Region, Torres del Paine, Patagonia, Chile, October 27- November 1, 2013
3. Controlled Wave Particle Interaction Studies in the Radiation Belts, Invited Presentation to Resonance Workshop September, 19, 2013, Kiev, Ukraine
4. Using Ionospheric Heaters to Explore the Physics of the Radiation Belts, Invited Talk to the 2013 Radiation Belt Workshop, June 30-July 3, 2013, Santorini, Greece
5. Langmuir Solitons and their Role in Artificial Ionization in Ionospheric Heating Experiments, Symposium "The Power of Plasma Theory," Leonid Rudakov 80th May 4, 2013, LaJolla, Ca
6. New Results on Artificial Plasma Layers; Combining the old with the new Invited Presentation, 19th Ionospheric Interactions Workshop April 23, 2013 Arecibo, PR
7. Controlled Wave Particle Interaction Studies in the Radiation Belts, Invited Presentation to Resonance Workshop September, 19, 2012, Kiev, Ukraine
8. Injection of Shear Alfvén Waves in the Inner Radiation Belt Using Arecibo Heater, Invited Talk to the 8th Annual RF Ionospheric Interactions Workshop 15-18 April, 2012, Santa Fe, NM
9. Shear Alfvén Wave Injection in the Magnetosphere by Ionospheric Modifications in the Absence of Electrojet Currents, Invited Presentation Session SM 34A, AGU 2011 Fall Meeting, December 7, 2011, San Francisco.
10. Space as an Open Nonlinear Plasma Laboratory, Invited Presentation Session BM10, 53rd Annual Meeting of the APS, Plasma Physics Division, Salt Lake City, Utah, November 14, 2011.
11. Controlled Wave Particle Interaction Studies in the Radiation Belts, HAARP/ Resonance Workshop, November 8, 2011, UMCP.
12. Controlled Wave Particle Interaction Studies in the Radiation Belt, RBSP IWG APL, May 23, 2011.
13. Injection of shear Alfvén Waves in the Radiation Belts using Arecibo, The Seventeenth Annual RF Ionospheric Interactions Workshop 17-20 April 2011 Santa Fe, New Mexico
14. Fundamental Physics Issues on Radiation Belts and Remediation, Invited Presentation at the 16th Annual RF ionospheric Interactions Workshop, April 20, 2010.
15. Fundamental Physics Issues on Radiation Belts and Remediation, Interim Review December 12, 2010 San Francisco, CA.
16. Space Radiation Environment and Reliability, invited talk, 34th Annual COMACT Conference, Orlando, FL, March 15-20, 2009.
17. Ionospheric ELF/ULF Generation without Needing Electrojects, invited presentation 15th Annual RF Ionospheric Interactions Workshop, Boulder, CO, April 21, 2009.
18. Using Space As a Nonlinear Plasma Laboratory, Presented at the 50th Annual Meeting of the Division of Plasma Physics, Dallas, TX, November 18, 2008.

19. Testing Plasma Physics in the Ionosphere, paper (D35), Presented at the 37th COSPAR Scientific Assembly, Montreal, CA, July 13-19, 2008.
20. The Ionosphere as an Open Plasma Laboratory - Celebration of 50th Anniversary of Sputnik, Russia Academy of Science, October 2007.
21. On the Interaction of Short Pulse Lasers with Semiconductors and Nano-Structures and its Technological Implications, Moscow, Russia, May 24, 2006.
22. ELF Generation and Propagation: Polar vs. Equatorial, February 28, 2006.
23. On the Physics of Ionospheric Heating and its Applications to Underground Exploration and Radiation Belt Control, Taipei, 2005.
24. Ionospheric VLF/ELF Generation, PARS Summer School, August 22, 2005.
25. Plasma Physics in Space the Applications View-Point, COSPAR, 2004.
26. Satellite Threat Due to High Altitude Nuclear Detonations, US Congress, 2004.
27. Effect of the Anomalous Electron Heating on the Ionospheric Potential in the LFM Global MHD Model, AGU Fall Meeting, San Francisco, CA, December 16, 2004.
28. Diagnostics for ELF/VLF Generation, the Tenth Annual RF Generation Ionosphere Interactions Workshop, Santa Fe, NM, April 18-21, 2004.
29. On the Physics of Artificially Stimulated Emissions (ASE), URSI Meeting, Boulder, Colorado, January 7, 2004.
30. Theory of Stimulated VLF Emissions a Review, Presentation to AFRL Workshop on Stimulated Precipitation of Energetic Particles, Stanford, CA, January 28-30, 2003.
31. HAARP A New Revolutionary Facility for Remote Sensing and Space Weather Applications, NATO Advanced Research Workshop Effects of Space Weather on Technology Infrastructure (ESPRIT), Rhodes, Greece March 25-29, 2003.
32. Brief Review of Space Weapons Systems, Presentation to "Future of Space" Meeting, Paris, France, April 1-2, 2003.
33. Plasma Physics in Space the Applications View-Point, Presentation in Symposium Honoring Leonid Rudakov 70th Birthday, May 15, 2003.
34. "The Threat: Nuclear Detonation in Space", The Federation of American Scientists, Panel on Weaponization of Space, Boston, Mass, July 2003.
35. Waves and Instabilities in Space Plasma, Tutorial presented at the Summer School on Basic Processes of Turbulent Plasmas, Halkidiki, Greece, September 22-25, 2003.
36. "Efficiency Scaling for Ionospheric ELF/VLF Generation, Holland, August 2002.
37. "COSPAR – Plasma Physics in Space – The Applications View Point",
38. ELF/VLF Generation in the Ionosphere State of the Art, Presentation to PARS Workshop, November 4, 2001.
39. "ELF Conversion Efficiency", at the Seventh Annual RF Ionospheric Interactions Workshop, Santa Fe, New Mexico, 29 April – 2 May 2001.
40. "The Role and Form of Modeling in Space Weather" (tutorial lecture), NATO Advanced Institute on Space Storms and Space Weather Hazards, Crete, Greece, June 22, 2000.
41. "Physics of Ionospheric VLF/ELF/ULF Generation and their use for Underground Imaging", January 14, 1999.
42. "Collisionless Shocks", Centennial APS Meeting, Atlanta, GA, March 24, 1999.
43. RF Ionospheric Interactions Workshop, Santa Fe, NM, April 14, 1999.
44. "Magnetospheric Modeling for Space Weather", University of Maryland, Meteorology Dept., October 21, 1999.

45. "Lighting", University of Maryland, East West Space Science Center, November 5, 1998.
46. "Low Frequency EM Imaging Using Only Magnetic Field Measurements", DARPA, October 15, 1998.
47. "On the Physics of Ionospheric VLF/ELF/ULF Generation and their Applications", University of Maryland, September 28, 1998.
48. "Modifying the Ionosphere to Image the Underground", Cambridge Symposium/Workshop on the Physics of Space Plasmas, Cascais, Portugal, June 29, 1998.
49. "On the Physics of Low Frequency Underground Imaging", DARPA, June 1998.
50. "From MT to GGT", presentation to Defense Intelligence Agency, April 1998.
51. "Tutorial Review – On the Physics of Ionospheric VLF/ELF/ULF Generation and their Applications", HAARP Santa Fe Meeting, New Mexico, April 19, 1998.
52. "Modeling of Geospace: An ISTP View of Substorms", 1998 Yosemite Workshop, Toward Solar Max 2000: The Present Achievements and Future Opportunities of ISTP and GEM, Yosemite, CA, February 10, 1998.
53. "ISTP Theory Examples", ISTP Meeting, Goddard Space Flight Center, Greenbelt, MD, November 5, 1997.
54. "The Physics of Substorms as Revealed by the ISTP", Symposium on Solar-Terrestrial Coupling Processes, Paros, Greece, June 23-27, 1997.
55. "Current Collection in Space Plasma from Langmuir to TSS-1R", Symposium on Solar-Terrestrial Coupling Processes, Paros, Greece, June 23-27, 1997.
56. "Computer Simulation of an Isolated Substorm: March 9, 1995", International Symposium Chapman Conference on "The Earth's Magnetotail: New Perspectives", Kanazawa, Japan, November 4-8, 1996.
57. "The TSS-1R Results – the Physics of Current Collection in Magnetized Plasmas Revised", American Physical Society Annual Meeting, November 11-15, 1996.
58. "Global MHD Simulations in Support of ISTP", International Symposium Encounter between Global Observations and Models in the ISTP ERA, Huntsville, AL, September 15-20, 1996.
59. "ELF Generation and Remote Sensing with Ionospheric Sources", General Assembly International Union of Radio Science, August 28 – September 5, 1996.
60. "The New "FACE" of Lightning, Red Sprites, Blue Jets and Gamma Rays, AAAS Meeting, Baltimore, Maryland, February 9, 1996.
61. "The New Face of Lightning – Red Sprites/Blue Jets/Gamma Ray Bursts/Radio Bursts", Hellenic Astronomical Society Meeting, Thessaloniki, Greece, June 29, 1995.
62. "The Plasma Physics of the TSS", TSS-R Astronaut Training Sessions, JSFC, Texas, May 10, 1995.
63. "Physics and Applications of Ionospheric VLF/ELF/ULF Generation", High Power RF Ionospheric Modification Workshop, Santa Fe, NM, April 22-26, 1995.
64. "The New "Face" of Lightning Optical Flashes, Gamma and Radio Bursts above the Clouds", 1995 Cambridge Symposium Workshop, Bermuda, February 20-25, 1995.
65. "High Altitude Lightning", Symposium Workshop for Bruno Coppi's 60th Birthday, MIT, Boston, Mass., January 19-20, 1995.
66. "Helicons in Ionospheric Modification Experiments", National Radio Science Meeting, Denver, CO, 1995.

67. "The Importance of the Helicon Mode on the Physics of the Lower Ionosphere", URSI, Boulder, CO, January 3-5, 1995.
68. "Response of a Magnetized Semiconductor Plasma to a Laser Pulse", Symposium on Strong Electromagnetic Field Interaction with Plasmas, College Park, MD, August 30, 1994.
69. "Applications & Research Opportunities Using HAARP", IV Suzdal URSI Symposium, Uppsala, Sweden, August 15-19, 1994.
70. "Transport Processes in Space Plasma – Conventional Thinking and New Trends", Gordon Research Conf. on Solar-Terrestrial Physics, Wolfeboro, NH, June 22, 1994.
71. "Overview of ELF/VLF Theoretical Program", NPRSC 1993 Workshop on Modification and Diagnosis of the Polar Ionosphere, UCLA, April 28-30, 1993.
72. "Remote Spectroscopy of the Atmosphere", Albuquerque, New Mexico, May 10, 1993.
73. "Helicons in Ionospheric Modifications Experiments", AGU Conference, San Francisco, CA, December 6, 1993.
74. "Transport Processes in Space Plasmas", AGU Chapman Conference, Linhue, Hawaii, February 17-21, 1992.
75. "Critical Ionization Velocity in Space", AIAA 30th Aerospace Science Meeting, Reno, Nevada, January 7-10, 1992.
76. "Status of ELF/VLF Generation", National Polar Radio-science Consortium (NPRSC) Workshop, Stanford, CA, April 1-3, 1992.
77. "Theoretical and Modeling Efforts in ISTP", IACG Workshop, Airle, Virginia, June 1-3, 1992.
78. "CIV Primary Instability", World Space Congress, Washington, DC, August 29, 1992.
79. "The Next Logical Step in Ionospheric Heaters", 3rd Suzdal Symposium on Ionospheric Modifications, Suzdal, USSR, September 10-15, 1991.
80. "The Role of Neutrals in Spacecraft Charging", Int. Meeting on Electrodynamics Tether, Varenna, Italy, September 20-25, 1991.
81. "CIV Triggering in Ba Injection Experiments", AGU-MSA Spring Meeting, Baltimore, MD, May 28-31, 1991.
82. "Review of Weakly Magnetized Plasma Processes in the Ionosphere", HAARP Diagnostics Workshop, Phillips Lab., Boston, Mass, May 1991.
83. "Future Directions for Numerical Simulations in Space Plasmas", XXIIIrd General Assembly of the URSI, Prague, Czechoslovakia, August 28 – September 5, 1990.
84. "A Comprehensive Analysis of Ba Injection Critical Velocity Experiments", XXVIII COSPAR Plenary Meeting, Hague, Holland, July 1990.
85. "Electrojet Modulation ELF Communications", Advisory Group for Aerospace Research and Development, Bergen, Norway, June 1990.
86. "Recent Developments in Ionospheric Heating Radio Waves", Topical Conference on Research Trends in Nonlinear and Relativistic Effects in Plasmas, La Jolla Institute, San Diego, February 5-8, 1990.
87. "The Physics of Ionospheric Breakdown", Nonlinear Dynamics Conference, Ukrainian Academy of Sciences, October 1989.
88. "The Physics and Limitations of Low Frequency Wave Emissions by Beam Injection in Space", Workshop on Active Experiments, Northwestern University, September 14-16, 1988.

89. "Review of Ion Beam Propagation in Space", Chapman Conference, Japan, October 1987.
90. "Theoretical Guide to Future Computer Simulation in Space", XXII General Assembly of URSI, Tel Aviv, Israel, September 1987.
91. "RF Acceleration of Electrons in Space", XXXI General Assembly of URSI, Tel Aviv, Israel, September 1987.
92. "Current Understanding and Issues on Electron Beam Injection in Space", COSPAR Meeting, Toulouse, France, July 1-6, 1986.
93. "Theory of Nonlinear RF Plasma Interactions in Electron Acceleration in the Ionosphere", Workshop on RF Interactions with Laboratory on Space Plasma, UCLA, Los Angeles, CA, April 1-2, 1986.
94. "Spontaneous Generation of ULF/ELF/VLF Current Loops in the Ionosphere", USRI General Meeting, Boulder, CO, January 13-15, 1986.
95. "Neutral Gas Plasma Interactions in Space", International School for Plasma Simulations, Kauai, Hawaii, February 3-16, 1985.
96. "Physics of Critical Ionization Velocity", Trieste Plasma Physics College, Triests, Italy, May 27 – June 4, 1985.
97. "On the Shuttle Glow", First Workshop on Spacecraft Glow, Huntsville, Alabama, 1984.
98. "The Microphysics of Collisionless Shocks", AGU Chapman Conference on Collisionless Shocks, Napa Valley, CA, February 1984.
99. "Early Ionization and Coupling of AMPTE Releases to the Solar Wind Plasma", Fall AGU Meeting, San Francisco, CA, December 5-9, 1983.
100. "Neutral Gas Plasma Interactions and Critical Ionization Phenomena in Space", Twenty-fifth Annual Meeting of the Division of Plasma Physics, Los Angeles, CA, November 7-11, 1983.
101. "Review of Ionospheric VLF and ELF Injections", International Symposium on Active Experiments in Space, Alpbach, Austria, May 24-28, 1983.
102. "Electron and Ion Beam Driven Plasma Discharges with Collective Dissipation", Workshop on the Critical Velocity Effect, Munich, Germany, October 11-13, 1982.
103. "Studies of the Earth's Bow Shock and Solar Energetic Electrons", AGU Fall Meeting, San Francisco, CA, December 1981.
104. "Plasma Lasers in Space", First International School of Plasma Astrophysics, Varenna, Italy, August 1981.
105. "Theory of High Mach Number Magnetosonic Shocks", ISEE Working Group Meeting, Meudon, France, July 1981.
106. "Critical Problems of High Mach Number Shocks", Gordon Conference in Space Plasmas, Wolfsboro, NH, June 22-26, 1981.
107. "Beam Experiments from the Space Shuttle", IEEE Conference, Los Angeles, June 1981.
108. "Review of Space Plasma Simulations", IMS Assessment Symposium, Goddard Space Flight Center, May 20-22, 1981.
109. "Strong Turbulence and its Effects on D.C. Resistivity on Auroral Field Lines", AGU Spring Meeting, Baltimore, MD, May 1981.
110. "The Theory of Beam Plasma Discharge", NATO Advanced Research Institute in Active experiments in Space, Geilo, Norway, April 21-25, 1981.
111. 2nd Triannual Greek Physical Society Meeting, Lesvos, Greece, September 18-21, 1980.

112. "Radio Physics of the Sun", IAU Symposium No. 86, College Park, MD, August 1-10, 1979.
113. Discussion Leader, Gordon Conference on Space Plasmas, June 1979.
114. School of Nonlinear Plasma Physics, Kiev, U.S.S.R., September 1979.
115. AGU Chapman Conference on Magnetospheric Substorms, Los Alamos, NM, October 1978.
116. International School on Plasma Physics, "Diagnostics for Fusion Plasmas", Varenna, Italy, September 1978.
117. European Geophys. Soc. Meeting., Strassburg, France, August 1978.
118. Workshop on Planetary and Astrophysical Magnetospheres, Snowmass, CO, August 1978.
119. APS Spring Meeting, Washington, DC, April 1978.
120. Invited Lecturer, International Magnetospheric Study (JMS) Boulder, CO, March 1978.
121. N.C. Christophilos Memorial Conference, Spetses, Greece, July 1977.
122. Invited Lecturer "Workshop on the Physics of Astrophysical Plasmas", Aspen, Co, June 1977.
123. Sixth International Conference on Plasma Physics and Controlled Nuclear fusion Research, Berchtesgaden, Germany, October 1976.
124. Invited Lecturer "International School of Plasma Physics" organized by the Georgian Academy of Science, Tbilissi, U.S.S.R., September 1976.
125. Gordon Conference on Plasma Physics (discussion leader), June 1976.
126. COSPAR Symposium on Active Experiments in Space, Boulder, CO, June 1976.
127. Annual U.R.S.I. Meeting, Boulder, CO, October 1975.
128. Thirteenth International Assembly I.A.G.A., Grenoble, France, September 1975.
129. Gordon Conference on Plasma Physics (discussion leader), June 1975.
130. I.E.E.E. Conference on Plasma Physics, Ann Arbor, May 1975.
131. Conference on Type III Solar Burst, Berkeley, CA, May 1975.
132. N.A.S.A. Workshop on Plasma Simulation, Washington, DC, January 1975.
133. Fifth International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Tokyo, Japan, November 1974.
134. European Geophys. Soc. Meeting, Trieste, Italy, September 1974.
135. Plasma Astrophysics Workshop, Lake Tahoe, July 1974.
136. Substorm Conference, Bryce Mt., June 1974.
137. Asilomar Conference on Solar Wind, April 1974.
138. APS. Plasma Physics Meeting, Philadelphia, PA, November 1973