

## CURRICULUM VITAE

PHILIP A. ISENBERG

### Date and Place of Birth

June 1, 1950, Chicago, Illinois

### Educational Background

Massachusetts Institute of Technology, September 1967 - June 1971. B.S. in Physics, awarded June 1971.

University of Chicago, September 1972 - September 1976. M.A. and Ph.D. in Physics, awarded, June 1977.

### Employment

Current: Research Professor  
Department of Physics and  
Institute for the Study of Earth, Oceans and Space  
University of New Hampshire

Previous: Research Associate Professor (June 1994 - June 1999)  
Department of Physics and  
Institute for the Study of Earth, Oceans and Space  
University of New Hampshire

Research Assistant Professor (November 1991 - June 1994)  
Department of Physics and  
Institute for the Study of Earth, Oceans and Space  
University of New Hampshire

Research Scientist (March 1981 - October 1991)  
Space Science Center  
Institute for the Study of Earth, Oceans and Space  
University of New Hampshire

Research Associate (August 1979 - December 1980)  
Center for Astrophysics and Space Science  
University of California, San Diego  
La Jolla, California, 92093

Research Associate (September 1976 - August 1979)  
Lunar and Planetary Laboratory  
University of Arizona  
Tucson, Arizona 85721

Data Analyst (September 1971 - August 1972)  
Smithsonian Astrophysical Observatory  
Cambridge, Massachusetts 02138

Research Assistant (June - August 1969)  
Center for Space Research  
Massachusetts Institute of Technology  
Cambridge, Massachusetts 02139

### Books Edited

*Solar Wind Nine*, edited by S. R. Habbal, R. Esser, J. V. Hollweg and P. A. Isenberg,  
AIP, Woodbury, NY, 1999.

### Publications

1. Isenberg, P.A., Umbral boundaries, convection, and the depth of sunspots, *Solar Phys.*, 50, 49, 1976.
2. Isenberg, P.A., Adiabatic self-similar blast waves, their radial instabilities, and their application to supernova remnants, *Astrophys. J.*, 217, 597, 1977.
3. Isenberg, P.A., and J.R. Jokipii, Effects of particle drift on cosmic-ray transport. II. Analytical solution to the modulation problem with no latitudinal diffusion, *Astrophys. J.*, 219, 740, 1978.
4. Isenberg, P.A., and E.H. Levy, Polar enhancements of interplanetary  $L\alpha$  through solar wind asymmetries, *Astrophys. J. (Letters)*, 219, L59, 1978.
5. Isenberg, P.A., and J.R. Jokipii, Gradient and curvature drifts in magnetic fields with arbitrary spatial variation, *Proc. 16th Internat. Cosmic Ray Conf. (Kyoto)*, 3, 41, 1979.
6. Isenberg, P.A., and J.R. Jokipii, Gradient and curvature drifts in magnetic fields with arbitrary spatial variation, *Astrophys. J.*, 234, 746, 1979
7. Isenberg, P.A. and J.R. Jokipii, Comment on "The role of particle drifts in solar modulation" by Lee and Fisk, *Astrophys. J.*, 248, 845, 1981.
8. Hollweg, J.V. and P.A. Isenberg, On rotational forces in the solar wind, *J. Geophys. Res.*, 86, 11, 463, 1981.
9. Isenberg, P.A., H.C. Koons and J.F. Fennell, Simultaneous observations of energetic electrons and dawnside chorus in geosynchronous orbit, *J. Geophys. Res.*, 87, 1495, 1982.
10. Isenberg, P.A. and J.V. Hollweg, Finite amplitude Alfvén waves in a multi-ion plasma: Propagation, acceleration, and heating, *J. Geophys. Res.*, 87, 5023, 1982.
11. Isenberg, P.A. and J.V. Hollweg, On the preferential acceleration and heating of solar wind heavy ions, *J. Geophys. Res.*, 88, 3923, 1983.

12. Isenberg, P.A., Acceleration of heavy ions in the solar wind, Solar Wind Five, ed. by M. Neugebauer, *NASA Conference Publ. 2280*, 655, 1983.
13. Isenberg, P.A., The ion-cyclotron dispersion relation in a proton-alpha solar wind, *J. Geophys. Res.*, *89*, 2133, 1984.
14. Isenberg, P.A., Resonant acceleration and heating of solar wind ions: Anisotropy and dispersion, *J. Geophys. Res.*, *89*, 6613, 1984.
15. Isenberg, P.A., P.-P. Chih and L.A. Fisk, The heating of the solar wind by the interstellar neutral gas, *J. Geophys. Res.*, *90*, 12040, 1985.
16. Isenberg, P.A., On a difficulty with accelerating particles at slow-mode shocks, *J. Geophys. Res.*, *91*, 1699, 1986.
17. Isenberg, P.A., Interaction of the solar wind with interstellar neutral hydrogen: Three-fluid model, *J. Geophys. Res.*, *91*, 9965, 1986.
18. Isenberg, P.A., Evolution of interstellar pickup ions in the solar wind, *J. Geophys. Res.*, *92*, 1067, 1987.
19. Isenberg, P.A., Energy diffusion of pickup ions upstream of comets, *J. Geophys. Res.*, *92*, 8795, 1987.
20. Isenberg, P.A., Comment on "On the dispersion of ion cyclotron waves in  $H^+$  -  $He^{++}$  solar wind-like magnetized plasmas" by Cuperman, Ofman, and Dryer, *J. Geophys. Res.*, *94*, 10151, 1989.
21. Burlaga, L.F., L.W. Klein, J.D. Scudder and P.A. Isenberg, Pressure balanced structures between 1 AU and 24 AU and their implications for solar wind electrons and interstellar ions, *J. Geophys. Res.*, *95*, 2229, 1990.
22. Isenberg, P.A., Investigations of a turbulence-driven solar wind model, *J. Geophys. Res.*, *95*, 6437, 1990.
23. Isenberg, P.A., Interstellar pickup protons at pressure-balanced structures, *J. Geophys. Res.*, *96*, 155, 1991.
24. Isenberg, P.A., The solar wind, chapter in *Geomagnetism, v. 4*, ed. by J.A. Jacobs, pp. 1-85, Academic Press, London, 1991.
25. Forbes, T.G., and P.A. Isenberg, A catastrophe mechanism for coronal mass ejections, *Astrophys. J.*, *373*, 294, 1991.
26. Isenberg, P.A., The continuing mystery of the interstellar pickup protons, *Proc. Symp. Physics of Space Plasmas*, ed. by T. Chang, G. B. Crew, and J. R. Jasperse, p. 3-14, Scientific, Cambridge, MA, 1991.
27. Isenberg, P.A., On the interaction of isotropic pickup ions with oblique Alfvén waves, *J. Geophys. Res.*, *98*, 9433, 1993.
28. Isenberg, P.A., T.G. Forbes and P. Démoulin, Catastrophic evolution of a force-free flux rope: A model for eruptive flares, *Astrophys. J.*, *417*, 368, 1993.

29. Tan, L.C., P.A. Isenberg and G.M. Mason, Stochastic acceleration of water-group ions near comet Giacobini-Zinner, *Proc. 23rd Internat. Cosmic Ray Conf.*, (Calgary), 3, 306, 1993.
30. Forbes, T.G., E.R. Priest and P.A. Isenberg, On the maximum energy release in flux-rope models of eruptive flares, *Solar Phys.*, 150, 245, 1994.
31. Burlaga, L.F., N.F. Ness, J.W. Belcher, A. Szabo, P.A. Isenberg and M.A. Lee, Pickup protons and pressure balanced structures: Voyager 2 observations in MIRs near 35 AU, *J. Geophys. Res.*, 99, 21,511, 1994.
32. Isenberg, P.A., and W.C. Feldman, Electron-impact ionization of interstellar hydrogen and helium at interplanetary shocks, *Geophys. Res. Lett.*, 22, 873, 1995.
33. Isenberg, P.A., Interstellar pickup ions: Not just theory anymore, *Rev. Geophys. Supp.*, U.S. Nat. Rep. to IUGG, 623, 1995.
34. Isenberg, P.A., and M.A. Lee, Effects of time-dependent photoionization on interstellar pickup ions, *J. Geophys. Res.*, 100, 17,053, 1995.
35. Isenberg, P.A., and M.A. Lee, A dispersive analysis of bispherical pickup ion distributions, *J. Geophys. Res.*, 101, 11,055, 1996.
36. Möbius, E., D. Rucinski, P.A. Isenberg and M.A. Lee, Determination of interstellar pickup ion distributions in the solar wind with SOHO and Cluster, *Ann. Geophys.*, 14, 492, 1996.
37. Isenberg, P.A., Effects of spatial transport and ambient wave intensity on the generation of MHD waves by interstellar pickup protons, in *Solar Wind Eight*, ed. by D. Winterhalter, J.T. Gosling, S.R. Habbal, W.S. Kurth, and M. Neugebauer, p. 626, AIP, Woodbury, NY, 1996.
38. Feldman, W.C., J.L. Phillips, J.T. Gosling and P.A. Isenberg, Electron impact ionization rates for interstellar H and He atoms near interplanetary shocks: Ulysses observations, in *Solar Wind Eight*, ed. by D. Winterhalter, J.T. Gosling, S.R. Habbal, W.S. Kurth, and M. Neugebauer, p. 622, AIP, Woodbury, NY, 1996.
39. Isenberg, P.A., A hemispherical model of anisotropic interstellar pickup ions, *J. Geophys. Res.*, 102, 4719, 1997.
40. Isenberg, P.A., A weaker solar wind termination shock, *Geophys. Res. Lett.*, 24, 623, 1997.
41. Isenberg, P.A., Solar wind, in *Encyclopedia of Planetary Sciences*, ed. by J.H. Shirley and R.W. Fairbridge, p. 766, Chapman and Hall, New York, 1997.
42. Möbius, E., D. Rucinski, M.A. Lee and P.A. Isenberg, Decreases in the antisunward flux of interstellar pickup He<sup>+</sup> associated with radial interplanetary magnetic field, *J. Geophys. Res.*, 103, 257, 1998.

43. Isenberg, P.A., and M.A. Lee, Transport of anisotropic interstellar pickup ions on bent flux tubes, *J. Geophys. Res.*, 103, 12037, 1998.
44. Lin, J., T.G. Forbes, P.A. Isenberg, and P. Démoulin, The energetics of flux-rope prominence models in axially symmetric systems, in *New Perspectives on Solar Prominences*, ed. by D. Webb, D. Rust, and B. Schmieder, *Astron. Soc. Pac. Conf. Series*, ASP, Provo, Utah, p. 350, 1998.
45. Lin, J., T.G. Forbes, P.A. Isenberg and P. Démoulin, The effect of curvature on flux-rope models of coronal mass ejections, *Astrophys. J.*, 504, 1006, 1998.
46. Isenberg, P.A., Interstellar pickup ions in the solar wind, in *Solar Wind Nine*, ed. by S.R. Habbal, R. Esser, J.V. Hollweg and P.A. Isenberg, AIP, Woodbury, NY, p. 189, 1999.
47. Isenberg, P.A. and M.A. Lee, Solar wind speed dependence of pickup ion fluxes by cross-field diffusion, in *Solar Wind Nine*, ed. by S.R. Habbal, R. Esser, J.V. Hollweg and P.A. Isenberg, AIP, Woodbury, NY, p. 815, 1999.
48. Isenberg, P.A., M.A. Lee, and J.V. Hollweg, A kinetic model of coronal heating and acceleration by ion-cyclotron waves: Preliminary results, *Solar Phys.*, 193, 247, 2000.
49. Szegő, K., K.-H. Glassmeier, R. Bingham, A. Bogdanov, C. Fischer, G. Haerendel, A. Brinca, T. Cravens, E. Dubinin, K. Sauer, L. Fisk, T. Gombosi, N. Schwadron, P. Isenberg, M. Lee, C. Mazelle, E. Möbius, U. Motschmann, V.D. Shapiro, B. Tsurutani, G. Zank, Physics of mass loaded plasmas, *Space Sci. Rev.*, 94, 429, 2000.
50. Isenberg, P.A., Heating of coronal holes and generation of the solar wind by ion-cyclotron resonance, *Space Sci. Rev.*, 95, 119, 2001.
51. Isenberg, P.A., M.A. Lee, and J.V. Hollweg, The kinetic shell model of coronal heating and acceleration by ion cyclotron waves. 1. Outward propagating waves, *J. Geophys. Res.*, 106, 5649, 2001.
52. Lin, J., T.G. Forbes, and P.A. Isenberg, Prominence eruptions and coronal mass ejections triggered by newly emerging flux, *J. Geophys. Res.*, 106, 25053, 2001.
53. Isenberg, P.A., The kinetic shell model of coronal heating and acceleration by ion cyclotron waves. 2. Inward and outward propagating waves, *J. Geophys. Res.*, 106, 29249, 2001.
54. Hollweg, J.V., and P.A. Isenberg, Generation of the fast solar wind: A review with emphasis on the resonant cyclotron interaction, *J. Geophys. Res.*, 107(A7), 1147, doi:10.1029/2001JA000270, 2002.
55. Isenberg, P. A., Ion-cyclotron generation of the fast solar wind: The kinetic shell model, in *Solar Wind Ten*, edited by M. Velli, R. Bruno, and F. Malara, *AIP Conf. Proc.*, 679, 267, 2003.
56. Isenberg, P. A., A kinetic shell description of the ion cyclotron anisotropy instability, in *Solar Wind Ten*, edited by M. Velli, R. Bruno, and F. Malara, *AIP Conf. Proc.*, 679, 493, 2003.

57. Saul, L., E. Möbius, Y. Litvinenko, P. Isenberg, H. Kucharek, M. Lee, H. Grünwaldt, F. Ipavich, B. Klecker, and P. Bochsler, SOHO CTOF observations of interstellar He<sup>+</sup> pickup ion enhancements in solar wind compression regions, in *Solar Wind Ten*, edited by M. Velli, R. Bruno, and F. Malara, *AIP Conf. Proc.*, 679, 778, 2003.
58. Isenberg, P.A., C.W. Smith, and W.H. Matthaeus, Turbulent heating of the distant solar wind by interstellar pickup protons, *Astrophys. J.*, 592, 564, 2003.
59. Isenberg, P.A., The kinetic shell model of coronal heating and acceleration by ion cyclotron waves. 3. The proton halo and dispersive waves, *J. Geophys. Res.*, 109(A3), 3101, doi: 10.1029/2002JA009449, 2004.
60. Smith, C. W., P. A. Isenberg, W. H. Matthaeus, J. D. Richardson, S. Oughton, and G. P. Zank, Heating the outer heliosphere by pickup protons, in *Physics of the Outer Heliosphere*, edited by V. Florinski, N. V. Pogorelov, and G. P. Zank, AIP Press, Melville, NY, 359, 2004.
61. Isenberg, P. A., Turbulence-driven solar wind heating and energization of pickup protons in the outer heliosphere, *Astrophys. J.*, 623, 502, 2005.
62. Smith, C. W., P. A. Isenberg, W. H. Matthaeus, and J. D. Richardson, Turbulent heating of the solar wind by newborn interstellar pickup protons, *Astrophys. J.*, 638, 508, 2006.
63. Isenberg, P. A., C. W. Smith, W. H. Matthaeus, and J. D. Richardson, Turbulent heating of the distant solar wind by interstellar pickup protons with a variable solar wind speed, *Proc. Solar Wind 11/SOHO 16 Conf.*, edited by B. Fleck and T. H. Zurbuchen, p. 347, ESA, Noordwijk, 2006.
64. Isenberg, P. A., and B. J. Vasquez, Preferential perpendicular heating of coronal hole minor ions by the Fermi mechanism, *Proc. SOHO 17 Conf.*, SP-617, edited by H. Lacoste, ESA, Noordwijk, 2006.
65. Saul, L., E. Möbius, P. Isenberg, and P. Bochsler, On pitch-angle scattering rates of interstellar pickup ions as determined by in situ measurement of velocity distributions, *Astrophys. J.*, 655, 672, 2007.
66. Hollweg, J. V., and P. A. Isenberg, Reflection of Alfvén waves in the corona and solar wind: An impulse function approach, *J. Geophys. Res.*, 112, A08102, doi: 10.1029/2007JA012253, 2007.
67. Isenberg, P. A., and B. J. Vasquez, Preferential perpendicular heating of coronal hole minor ions by the Fermi mechanism, *Astrophys. J.*, in press, 2007.
68. Isenberg, P. A., and T. G. Forbes, A three-dimensional line-tied magnetic field model for solar eruptions, *Astrophys. J.*, in press, 2007.

### Invited Talks

1. The effects of particle drift on cosmic-ray modulation, University of California at San Diego, La Jolla, May, 1979.
2. Acceleration and heating of solar wind ions by Alfvén waves, University of New Hampshire, Durham, March, 1982.
3. Acceleration and heating of solar wind ions by Alfvén waves, Center for Astrophysics, Harvard University, Cambridge, March, 1982.
4. Acceleration and heating of ions in the solar wind, Goddard Space Flight Center, Greenbelt, July, 1982.
5. Acceleration and heating of ions in the solar wind, University of Maryland, College Park, July, 1982.
6. The cyclotron resonance interaction in a hydrogen - helium solar wind, Theory Conference in Solar - Terrestrial Physics, Boston College, Boston, August, 1982.
7. Acceleration of heavy ions in the solar wind, Solar Wind Five, Woodstock VT, November, 1982.
8. The continuing mystery of the interstellar pickup protons, IAP Symposium on the Physics of Space Plasmas, MIT, Cambridge, January, 1990.
9. A catastrophe mechanism for eruptive solar flares, EOS Graduate Seminar, University of New Hampshire, Durham, November, 1991.
10. Interstellar pickup protons in the solar wind, AGU Spring Meeting, Baltimore, MD, May, 1993.
11. An introduction to the solar wind, EOS Graduate Seminar, University of New Hampshire, Durham, February, 1994.
12. Modulation of galactic cosmic rays - Part I, EOS Graduate Seminar, University of New Hampshire, Durham, October, 1996.
13. Interstellar pickup ions: Theory and observations, IAGA General Assembly, Uppsala, Sweden, August, 1997.
14. Structure and transport of anisotropic interstellar pickup ion distributions, ISSI Workshop on Mass-Loaded Plasmas, Bern, Switzerland, September, 1998.
15. Interstellar pickup ions in the solar wind, Solar Wind Nine Conference, Nantucket, MA, October, 1998.
16. Structure and transport of interstellar pickup ion distributions, SOHO/CELIAS Workshop, Portsmouth, NH, October, 1998.
17. Science overview and comments, Solar Probe Team Meeting, Applied Physics Laboratory, Laurel, MD, February, 2000.

18. The kinetic shell model of coronal heating and solar wind acceleration, UVCS Science Meeting, Northeast Harbor, ME, September, 2000.
19. The kinetic shell model of ion-cyclotron heating and acceleration in the corona, Center for Astrophysics, Harvard University, Cambridge, MA, January, 2001.
20. The kinetic shell model of ion-cyclotron heating and acceleration in the corona, Space Science Seminar, UNH, Durham, NH, March, 2001.
21. The kinetic shell model of resonant cyclotron heating and acceleration in coronal holes, Conference on Particle Transport and Acceleration in Cosmic Plasmas, IGPP, University of California, Riverside, CA, February, 2002.
22. Ion-cyclotron generation of the fast solar wind: The kinetic shell model, Solar Wind 10, Pisa, Italy, June, 2002.
23. Turbulence driven by interstellar pickup protons, Workshop on Particle Effects in MHD Turbulence, Santa Fe, NM, September, 2004.
24. Turbulent heating of the distant solar wind by interstellar pickup protons, Dartmouth College, November, 2004.
25. What do we need to learn about the physics of the fast solar wind?, UVCS Science Workshop, Giardini Naxos, Sicily, May, 2006.
26. Kinetic mechanisms for generation of the fast solar wind, SHINE Workshop, Zermatt, UT, August, 2006.
27. Kinetic models of the cyclotron resonant wave-particle interaction in heliospheric plasmas, APS-DPP Meeting, Philadelphia, PA, November 2006.
28. Kinetic resonant cyclotron generation of the fast solar wind, Colloquium, Dept. of Astrophysical and Planetary Sciences, University of Colorado, Boulder, CO, April, 2007.

#### Contributed Talks

1. Penetration of interstellar gas into the solar system: Cylindrical asymmetries from latitudinal variations in the solar wind, AGU Fall Meeting, San Francisco, December, 1977.
2. Particle drifts in the interplanetary magnetic field due to a latitude-dependent solar wind, AGU Fall Meeting, San Francisco, December, 1978.
3. Numerical modelling of galactic cosmic-ray modulation including drift effects, AGU Fall Meeting, San Francisco, December, 1979.
4. Simultaneous wave and particle observations of dayside chorus events near geosynchronous orbit, AGU Fall Meeting, San Francisco, December, 1980.

5. Simultaneous observations of dawnside chorus and energetic electrons near geosynchronous orbit, AGU Spring Meeting, Baltimore, May, 1981.
6. Ion flows in the solar wind, AGU Fall Meeting, San Francisco, December, 1981.
7. Heating and acceleration of protons and minor ions in the solar wind, COSPAR, Ottawa, Canada, May, 1982.
8. The cyclotron resonance condition in a proton - alpha solar wind, AGU Fall Meeting, San Francisco, December, 1982.
9. Resonant cyclotron acceleration and heating of anisotropic solar wind ions, AGU Fall Meeting, Baltimore, May, 1983.
10. Resonant cyclotron acceleration and heating of anisotropic solar wind ions, IAGA, Hamburg, Germany, August, 1983.
11. Diffusive particle acceleration by slow shocks at a steady reconnection site, AGU Fall Meeting, San Francisco, December, 1983.
12. Solar wind heating by interstellar hydrogen - modelling the Voyager observations, AGU Spring Meeting, Baltimore, May, 1985.
13. Solar wind heating by interstellar hydrogen - modelling the Voyager observations, IAGA, Prague, Czechoslovakia, August, 1985.
14. Interaction of the solar wind with interstellar neutral hydrogen: Three-fluid model, AGU Fall Meeting, San Francisco, December, 1985.
15. Thermalization of interstellar pick-up protons, COSPAR, Toulouse, France, July, 1986.
16. Energization of pickup ions upstream of a comet, AGU Fall Meeting, San Francisco, December, 1986.
17. Quasilinear evolution of pickup ions: Multiple-time-scale analysis, AGU Fall Meeting, San Francisco, December, 1987.
18. Preferential acceleration of heavy ions in the solar wind - revisited, AGU Spring Meeting, Baltimore, May, 1988.
19. A turbulent - driven three - fluid solar wind model, AGU Spring Meeting, Baltimore, May, 1989.
20. A turbulent - driven three - fluid solar wind model, IAGA, Exeter, England, July, 1989.
21. Fluid instabilities in the solar wind due to the interstellar neutral hydrogen, AGU Fall Meeting, San Francisco, December, 1990.
22. A catastrophe model for eruptive flares and prominences, AAS Solar Physics Meeting, Huntsville, April, 1991.

23. A catastrophe model for eruptive solar flares, AGU Spring Meeting, Baltimore, May, 1991.
24. Requirements for catastrophic behavior in prominence eruptions, AGU Spring Meeting, Montreal, May, 1992.
25. Interaction of pickup ions with oblique Alfvén waves, COSPAR Colloquium on Critical Problems of Comets and Other Non-Magnetized and Weakly Magnetized Bodies, Ann Arbor, August, 1992.
26. Theoretical interpretations of the pickup proton generated spectral enhancements observed on ULYSSES, AGU Spring Meeting, Baltimore, May, 1993.
27. Effects of time-dependent ionization on interstellar pickup helium, AGU Fall Meeting, San Francisco, December, 1993.
28. Time-dependent ionization of interstellar pickup helium by the passage of interplanetary shocks or CME's, AGU Spring Meeting, Baltimore, May, 1994.
29. Effects of time-dependent ionization of interstellar pickup ions at solar wind shocks, Second Pioneer-Voyager Symposium on Energetic Particles and Fields in the Outer Heliosphere, Durham, June, 1994.
30. Effects of wave dispersion on the bispherical distribution of pickup ions, AGU Fall Meeting, San Francisco, December, 1994.
31. Effects of spatial transport and ambient wave intensity on the generation of MHD waves by interstellar pickup protons, Solar Wind 8, Dana Point, California, June, 1995.
32. Effects of spatial transport and ambient wave intensity on the generation of MHD waves by interstellar pickup protons, IUGG General Assembly, Boulder, Colorado, July, 1995.
33. On the initiation of coronal mass ejections by emerging flux, AGU Fall Meeting, San Francisco, December, 1995.
34. Anisotropy and spatial transport of interstellar pickup ions - Two stream analysis, AGU Spring Meeting, Baltimore, May, 1996.
35. A weaker solar wind termination shock, Symposium on Cosmic Rays in the Heliosphere and Galaxy, Durham, October, 1996.
36. A two-stream model of pickup ion density fluctuations, AGU Fall Meeting, San Francisco, December, 1996.
37. Anisotropic pickup ion distributions on bent flux tubes, AGU Spring Meeting, Baltimore, May, 1997.
38. Comparison of pickup He<sup>+</sup> spectra observed during radial IMF with predictions of the bent flux tube model, AGU Fall Meeting, San Francisco, December, 1997.

39. Are interstellar pickup ion distributions really hemispherical?, AGU Spring Meeting, Boston, May, 1998.
40. Solar wind speed dependence of pickup ion fluxes by cross-field diffusion, Solar Wind 9 Conference, Nantucket, MA, October, 1998.
41. Solar wind speed dependence of pickup ion fluxes by cross-field diffusion, AGU Fall Meeting, San Francisco, December, 1998.
42. A kinetic model of coronal heating and acceleration by ion-cyclotron waves, AGU Spring Meeting, Boston, June, 1999.
43. A kinetic model of coronal heating and acceleration by ion-cyclotron waves, Physics of the Solar Corona and Transition Region Workshop, Monterey, CA, August, 1999.
44. A kinetic model of coronal heating and acceleration by ion-cyclotron resonance, AGU Fall Meeting, San Francisco, December, 1999.
45. An observational test of the hemispherical assumption for interstellar pickup ions, AGU Spring Meeting, Washington, DC, May, 2000.
46. The kinetic shell model of coronal heating and solar wind acceleration: Inward- and outward-propagating waves, AGU Fall Meeting, San Francisco, December, 2000.
47. The kinetic shell model of coronal heating and acceleration by ion cyclotron waves: Dispersive waves, AGU Fall Meeting, San Francisco, December, 2001.
48. A kinetic shell description of the ion cyclotron anisotropy instability, Solar Wind 10, Pisa, Italy, June, 2002.
49. Turbulent heating of the solar wind by interstellar pickup protons, AGU Fall Meeting, San Francisco, December, 2002.
50. Kinetic shell evolution of the free-flowing solar wind, EGS-AGU Joint Assembly, Nice, France, April, 2003.
51. A 3D line-tied model of flux rope eruptions, AGU Fall Meeting, San Francisco, December, 2003.
52. Turbulent energization of interstellar pickup ions in the outer heliosphere, COSPAR Scientific Assembly, Paris, France, July, 2004.
53. A 3D line-tied model of an erupting flux rope, RHESSI-SOHO-TRACE Workshop, Sonoma, CA, December, 2004.
54. Current status of the dominant turbulence model for solar wind heating by interstellar pickup ions, AGU Fall Meeting, San Francisco, CA, December, 2004.
55. Turbulent heating of the distant solar wind by interstellar pickup protons with a variable solar wind speed, AGU Spring Meeting, New Orleans, LA, May, 2005.

56. Turbulent heating of the distant solar wind by interstellar pickup protons with a variable solar wind speed, Solar Wind Eleven, Whistler, BC, June, 2005.
57. Preferential perpendicular heating of coronal hole heavy ions by the Fermi mechanism, AGU Fall Meeting, San Francisco, CA, December, 2005.
58. Preferential perpendicular heating of coronal hole heavy ions by the Fermi mechanism, SOHO-17 Conference, Giardini Naxos, Sicily, May, 2006.
59. Preferential perpendicular heating of coronal hole heavy ions by the Fermi mechanism, AAS-SPD Meeting, Durham, NH, June, 2006.
60. Preferential perpendicular heating of coronal hole heavy ions by the Fermi mechanism, SHINE Workshop, Zermatt, UT, August, 2006.
61. A kinetic model of the preferential acceleration and heating of coronal hole minor ions, AGU Fall Meeting, San Francisco, CA, December 2006.
62. A kinetic model of the ponderomotive force of Alfvén waves in the solar wind, AGU Fall Meeting, San Francisco, CA, December 2007.