

**Jerry W. Manweiler, Ph.D.**  
Senior Scientist – Fundamental Technologies, LLC  
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**Education:**

- PhD Physics, 1997, University of Kansas - Honors
- MS Computational Physics, 1987, University of Kansas
- BS Computer Science, (eq), ~1986, University of Kansas
- BS Physics, 1985, University of Kansas

**Professional Summary:**

- Senior Scientist and Owner/Manager, Fundamental Technologies, LLC, 1997 – present
- Chief Operating Officer/Chairman of the Board, UmmelGroup International, Inc, 2016 – present
- Referee, NASA Postdoc Proposal (NPP) Fellowship Program, 2017 – present
- Referee, NASA Panel Reviewer, 2020 – present
- Adjunct Associate Professor, University of Kansas, 1997 – present
- Special Graduate Faculty, University of Kansas, Dept. of Physics and Astronomy, 2014 – 2018
- Lecturer, University of Kansas, Department of Physics and Astronomy, 1999-2003/2015-2016
- Lecturer, Ottawa University, 2014
- Post-Doctoral Research, University of Kansas, 1997-1998
- Graduate Research Assistant, University of Kansas, 1986-1987 (MS)/1991-1997(PhD)
- Systems Analyst, The Boeing Company, 1987-1991

**Research Experience:**

- Principal Investigator – FTECS-Energetic Particle Instrument (FT-EPD) – (SBIR DoD/AF)
- Principal Investigator – NASA Heliophysics Data Environment Enhancement – Voyager LECP
- Co-Investigator – NASA Planetary Data Archiving, Restoration, and Tools – Galileo EPD
- Co-Investigator – Planetary Data Systems – Planetary Plasma Interactions Sub Node
- Co-Investigator – NASA Van Allen Probes – RBSPICE Instrument SOC Lead
- Data Scientist – NASA Cassini Mission – MIMI instrument
- Data Scientist – NASA Voyager Interstellar Mission – LECP instrument
- Data Scientist – NASA Ulysses Mission – HiSCALE instrument
- Co-Investigator – Virtual Energetic Particle Observatory
- Co-Investigator – Ulysses Resident Archive Services
- Principal Investigator – NASA IMP 8 – Reestablishment of ground processing capability
- Senior Systems Designer – USAF Surgeon General Medical Records Project, through Zeratec, Inc.
- Project consultant and systems designer for Kansas Criminal Justice Information Systems
- Project manager and senior systems consultant of CORE/GRID systems for Zeratec, Inc.

**Professional Affiliations:**

- American Geophysical Union
- Sigma Pi Sigma National Honor Society
- Sigma Xi National Research Society
- American Associate for the Advancement of Science
- NSF EarthCube Initiative (Technology/Architecture committee and Science committee)

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### Professional Outreach Activities:

- Referee for NASA Postdoctoral Program, 2017-present
- Referee for American Institute of Physics – Physics of Plasmas, 2015-present
- Referee for Planetary Data Systems – Energetic Particle Instrument Data Sets, 2010-present

### Teaching Experience:

#### Department of Physics, University of Kansas, Lawrence, KS

- Adjunct Associate Professor  
*Lecturer: PHSX 114:* F15, F16 – College Physics I (Mechanics)

#### Science Department, Ottawa University, Ottawa, KS

- Adjunct Professor  
*Lecturer: College Physics I:* F14 – College Physics I (Mechanics)  
*Lecturer: University Physics I:* F14 – University Physics I (Mechanics)

#### Department of Physics, University of Kansas, Lawrence, KS

- *Adjunct Assistant Professor*  
*Course coordinator: Phsx 212:* F00-F03  
*Lecturer: Phsx 212:* F99-F03 – University Physics II (EM)  
*Lecturer: Phsx 211:* F01, F02 – University Physics I (Mechanics)
- *Teaching Assistant*  
*Co-Instructor: Phsx 715:* S96 – Graduate Computational Physics and Astronomy  
*Guest Lecturer: Phsx 715,515:* S95 – “Particle-In-Cell Modeling”, “Fitting, Extrapolation, Interpolation”  
*TA: Phsx 516:* S85-S86 – Physical Measurements I Laboratory Instruction  
*TA: Phsx Lab:* S84-S86 – University Physics I, II, III Laboratory Instruction

### Honors:

- NASA Group Achievement Award – Van Allen Probes Project Team
- NASA Group Achievement Award – Cassini MIMI Team
- NASA EPO Achievement Award – RBSP Education and Public Outreach Award
- FBI Recognition – Outstanding work for the implementation of the KCJIS to FBI III interface
- City of Lawrence Recognition – Outstanding Work Chairman of *Lawrence Douglas County Y2K Community Compliant Information Task Force*
- Ph.D. with Honors – University of Kansas
- Vice President Recognition Award – Boeing Computer Services
- Progress, Pride and Productivity Award – Boeing Computer Services

### Publications:

1. Mouikis C G, J W Manweiler, Intercalibration of the Van Allen Probes ECT/HOPE and RBSPICE instruments, in preparation.
2. Yin, Z, X Zhou, C Yue, Q Zong, Z Hu, Y Hao, Z Liu, X Chen, L Li, S Fu, H O Funsten, J W Manweiler, Localized Excitation of Electromagnetic Ion Cyclotron Waves from Anisotropic Protons Filtered by Magnetic Dips, *Nature Communications*, Manuscript# NCOMMS-21-49693, submitted 04-2022
3. Califf, S, H Zhao, M Gkioulidou, J W Manweiler, D G Mitchell, S Tian, Multi-event Study on the Connection between Subauroral Polarization Streams and Deep Energetic Particle Injections in the Inner Magnetosphere, *JGR-A*, DOI:10.1029/2021JA029895
4. Manweiler, J. W., A Breneman, J Niehof, B Larsen, G Romeo, G Stephens, A Halford, C Kletzing, L E Brown, H Spence, G Reeves, R Friedel, S Smith, R Skoug, B Blake, D Baker, S Kanekal, V Hoxie, A Jaynes, J Wygant, J Bonnell, D Crawford, M Gkioulidou, L J Lanzerotti, D G Mitchell, A Gerrard, A Ukhorskiy, T Sotirelis, R J

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- Barnes, R Millan, B Harris, Science of the Van Allen Probes Science Operation Centers, *Space Sci. Rev.*, Manuscript# SPAC-D-21-00060, submitted 10-2021, in manuscript revisions.
5. Gallton, D, J W Manweiler, A Gerrard, J D Patterson, L Lanzerotti, T E Cravens, Ring current plasma scaling lengths: Multi-point Van Allen Probe measurements, *Geophysical Research Letters*, Manuscript# 2021GL096463, submitted 10-2021, resubmitted with revisions, 04-2022.
  6. Gkioulidou M, D G Mitchell, J W Manweiler, L J Lanzerotti, A Gerrard, S Ukhorskiy, K Keika, C G Mouikis, L M Kistler, Radiation Belt Storm Probes Ion Composition Experiment (RBSPICE) revisited: In-flight calibrations, lessons learned and scientific advances, *Space Science Review*, Manuscript# SPAC-D-21-00044, submitted 5/2021.
  7. Soto-Chavez, A.R., L. Lanzerotti, J. W. Manweiler, A. Gerrard, R. Cohen, Z. Xia, L. Chen, and H. Kim, Observational evidence of the drift mirror-plasma instability in Earth's inner magnetosphere, *Phys. Plasmas* 26, 042110 (2019); DOI:10.1063/1.5083629, 2019
  8. Madanian, H., J. L. Burch, T. E. Cravens, T W. Boiles, J. W. Manweiler, R. Goldstein, P. Mokashi, A. I. Eriksson, E. Scime, I. Richter, M. Costa, Suprathermal Electron Pitch Angle Distributions in the Plasma Environment of Comet 1 67P/CG: A Case Study, *GRL*, Manuscript #2018GL078464RR, 2018.
  9. Keika, K., K. Seki, M. Nose, Y. Miyoshi, L. Lanzerotti, D. Mitchell, M. Gkioulidou, J. W. Manweiler, Three-step buildup of the 17 March 2015 storm ring current: Implication for the cause of the unexpected storm intensification, *JGR-A*, 2017, DOI:10.1002/2017JA024462
  10. Summers, D., R. Shi, M. Engebretson, K. Oksavik, J. Manweiler, and D. Mitchell, Energetic proton spectra measured by the Van Allen Probes, *JGR-A*, 122,10,129—10,144. DOI:10.1002/2017JA024484, 2017.
  11. Kim, H., A. Gerrard, L. Lanzerotti, A. Soto-Chavez, R. Cohen, and J. Manweiler, Ring Current He-Ion Control by Bounce Resonant ULF Waves, *JGR-A*, 122, DOI:10.1002/2017JA023958, 2017.
  12. Min K., K. Takahashi, A.Y Ukhorskiy, J.W Manweiler, H.E. Spence, H.J. Singer, S.G. Claudepierre, B.A. Larsen, A. R. Soto-Chavez, and R. J. Cohen, Second harmonic poloidal waves observed by Van Allen Probes in the dusk-midnight sector, *JGR-A*, 122, 3013-3039, DOI:10.1002/2016JA023770, 2017.
  13. Li, J., J. Bortnik, W. Li, Q. Ma, R.Thorne, C. Kletzing, W. Kurth, G. Hospodarsky, J. Wygant, A. Breneman, S. Thaller, H. Funsten, D. Mitchell, J. Manweiler, et al, "Zipper-Like" Periodic Magnetosonic Waves: Van Allen Probes, THEMIS, and Magnetospheric Multiscale Observations, *JGR-A*, 122, 1600-1610, DOI:10.1002/2016JA023536, 2016.
  14. Cohen R., A.J. Gerrard, L.J. Lanzerotti, A.R. Soto-Chavez, H. Kim, and J.W Manweiler, Climatology of high  $\beta$  plasma measurements in Earth's inner magnetosphere, *JGR-A*, 121, 711-726, DOI:10.1002/2016JA022513, 2016.
  15. Shi, R., D. Summers, B. Ni, J. W. Manweiler, D. G. Mitchell, L. J. Lanzerotti, A statistical study of proton pitch angle distributions measured by the Radiation Belt Storm Probes Ion Composition Experiment, *JGR-A*, 121, 5233-5249, DOI:10.1002/2015JA022140, 2016.
  16. Korotova, G.I., D.G. Sibeck, K. Tahakashi, L. Dai, H.E. Spence, C.A. Kletzing, J.R. Wygant, J.W. Manweiler, P.S. Moya, K.-J. Hwang, and R.J. Redmon, Van Allen Probe observations of drift-bounce resonances with Pc 4 pulsations and wave-particle interactions in the pre-midnight inner magnetosphere, *Ann. Geophys.*, 33, 955-964, DOI:10.5194/angeo-33-955-2015, 2015.
  17. O'Brien, T.P, S.G. Claudepierre, M.D. Looper, J.B. Blake, J.F. Fennell, J.H. Clemmons, J.L. Roeder, S.G. Kanekal, J.W. Manweiler, D.G. Mitchell, M. Gkioulidou, L.J. Lanzerotti, H.E. Spence, G.D. Reeves and D.N. Baker, On the use of drift echoes to characterize on-orbit sensor discrepancies, *JGR-A*, 120, 2076–2087. DOI:10.1002/2014JA020859, 2014.
  18. Gerrard, A., L. Lanzerotti, M. Gkioulidou, D. Mitchell, J. Manweiler, J. Bortnik, and K. Keika, Initial measurements of O-ion and He-ion decay rates observed from the Van Allen Probes RBSPICE instrument, *JGR-A*, 119, 8813-8819, DOI:10.1022/2014JA020374, 2014.

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19. Gerrard, A., L. Lanzerotti, M. Gkioulidou, D. Mitchell, J. Manweiler, J. Bortnik, Quiet time observations of He ions in the inner magnetosphere as observed from the RBSPICE instrument aboard the Van Allen Probes mission, *GRL*, DOI 0.1002/2013GL059175, 2014.
20. Mitchell, D.G., L.J. Lanzerotti, C.K. Kim, M. Stokes, G. Ho, S. Cooper, A. Ukhorskiy, J.W. Manweiler, S. Jaskulek, D.K. Haggerty, P. Brandt, M. Sitnov, K. Keika, J.R. Hayes, L.E. Brown, R.S. Gurnee, J.C. Hutcheson, K.S. Nelson, C. M. Hammock, N. Paschalidis, E. Rossano, and S. Kerem, Radiation Belt Storm Probes Ion Composition Experiment (RBSPICE), *Space Sci. Rev.*, DOI:10.1007/s11214-013-9965-x, 2013.
21. Armstrong, T. P., S. Taherion, J. Manweiler, S. M. Krimigis, C. Paranicas, D. Mitchell, and N. Krupp, Energetic Ions Trapped in Saturn's Inner Magnetosphere, *Planet. Space Sci.*, **57**, 1723, DOI:10.1016/J.PSS.2009.03.008, 2009.
22. Manweiler, J. W., The Interplanetary Medium, in Encyclopedia of Space Science and Technology, vol. 1, ed. H. Mark, Wiley-Interscience, 2006.
23. Krimigis, S. M., D. G. Mitchell, D. C. Hamilton, N. Krupp, S. Livi, E. C. Roelof, J. Dandouras, T. P. Armstrong, B. H. Mauk, C. Paranicas, P. C. Brandt, S. J. Bolton, A. F. Cheng, T. Choo, G. Gloeckler, J. Hayes, K. C. Hsieh, W.-H. Ip, S. Jaskulek, E. P. Keath, E. Kirsch, M. Kusterer, A. Lagg, L. J. Lanzerotti, D. LaVallee, J. Manweiler, R. W. McEntire, W. Rasmuss, J. Saur, F. S. Turner, D. J. Williams, and J. Woch, Dynamics of Saturn's Magnetosphere from the Magnetospheric Imaging Instrument During Cassini's Orbital Insertion, *Science*, **307**, 1270, 2005.
24. Mauk, B. H., J. S. Saur, D. G. Mitchell, E. C. Roelof, P. C. Brandt, T. P. Armstrong, D. C. Hamilton, S. M. Krimigis, N. Krupp, S. A. Livi, J. W. Manweiler, and C. P. Paranicas, Energetic Particle Injections in Saturn's Magnetosphere, *GRL*, **32**, L14S05, DOI:10.1029/2005GL022485, 2005.
25. Manweiler, J. W., T. P. Armstrong, and T. E. Cravens, Complex Charge Distributions of Dielectric Dust Grains Due to Plasma Flow, *Journal of Plasma Physics*, **63**, 3, 2000.
26. Manweiler, J. W., Coagulation Rates in the Protoplanetary Nebula: The Effect of Asymmetric Dust Grain Charging, Ph.D. Dissertation, Univ. of Kansas, 1997.
27. Manweiler, J. W., T. P. Armstrong, and T. E. Cravens, Modifications to Collisional Cross Sections Due to Complex Plasma Induced Grain Charge Distributions, p. 79 in *The Physics of Dusty Plasmas*, Eds. P. K. Shukla, D. A. Mendis, and V. W. Chow, *World Scientific*, Singapore, 1996.
28. McDavitt, K. I., J. W. Manweiler, and J. P. Davidson, Search for Heavy Elements in A-type Stars, *Transactions of the Kansas Academy of Science*, **98**, 3-4, December 1995.
29. Manweiler, J. W., T. E. Cravens, and T. P. Armstrong, Electrostatic Interactions of Two Dielectric Dust Particles in the Presence of Plasma, *Adv. Space Research* (COSPAR Proceedings, Washington, D. C., August 1992), **13**, 10175, 1993.

**Presentations and Posters:**

1. Mafi, J., S. Joy, L. Miller, C. Piker, J. Faden, R. Walker, J. W. Manweiler, Enhanced Support for Particle and Plasma Data in the Planetary Data System, Poster: AGU Fall Meeting, 2021
2. Miller, L., J. W. Manweiler, E C S Jr, J F Cooper, P K, New High-Level Galileo Energetic Particle Detector and Magnetic Field Dataset, Poster: AGU Fall Meeting, 2021
3. Hirai, A., F. Tsuchiya, T. Obara, Y. Kasaba, Y. Katoh, H. Misawa, K. Shiokawa, Y. Miyoshi, C.-W. Jun, S. Kurita, M. Connors, A. Hendry, A. Shinbori, Y. Otsuka, T. Tsugawa, M. Nishioka, J. W. Manweiler, The mechanism of frequency increase of IPDP type EMIC waves: event analysis of ground and satellite observations on 19 April 2017, Poster: AGU Fall Meeting, 2021 (Note: added as author after submission)
4. Manweiler, J.W., C. Mouikis, A. Boyd, B. Larsen, R. Skoug, M. Gkioulidou, L. J. Lanzerotti, H. Spence, G. Reeves, Van Allen Probes instrument calibration results of the for ECT-HOPE and RBSPICE energetic particle detectors, Poster: AGU Fall Meeting, 2021

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5. Manweiler, J.W., M. Connors, M. Engebretson, J. Weygand, A. R. Soto-Chavez, M. Cooper, A. Gerrard, D. Mitchell, L. J. Lanzerotti, Direct observation of Magnetospheric-Ionospheric (M-I) coupling by Spacecraft and Ground systems on Feb 2, 2017, Presentation: AGU Fall Meeting, 2018.
6. Manweiler, J.W., M. Connors, M. Engebretson, J. Weygand, February 2, 2017 observation of Large Impulsive Magnetic Event (LIME) by AUTUMNX and Van Allen Probes, Poster: COSPAR Pasadena, 2018.
7. Manweiler, J.W., D. Mitchell, L. Lanzerotti, Van Allen Probes intercalibration between HOPE and RBSPICE protons, Poster: GEM Summer Workshop, 2018.
8. Manweiler, J.W., A. Gerrard, J. D. Patterson, D. Mitchell, L. Lanzerotti, Flow of energy through the inner magnetosphere during the March 17, 2015 solar storm as observed by the Van Allen Probes Radiation Belt Storm Probes Ion Composition Experiment (RBSPICE). Presentation, AGU Fall Meeting, 2017.
9. Madanian, H., J. D. Patterson, J. W. Manweiler, A. R. Soto-Chavez, A. Gerrard, L. Lanzerotti, Time-lag and correlation between ACE and RBSPICE injection event observations during storm times. Presentation, AGU Fall Meeting, 2017.
10. Soto-Chavez, A. R., L. Lanzerotti, R. Cohen, A. Gerrard, J. W. Manweiler, Z. Xia, L. Chen, H. Kim, Generation of ULF waves by the drift-mirror plasma instability. Presentation, AGU Fall Meeting, 2017.
11. Patterson, J. D., H. Madanian, J. W. Manweiler, L. Lanzerotti, Solar energetic particle composition over two solar cycles as observed by the Ulysses/HISCALE and ECE/EPAM Pulse Height Analyzers (PHA). Presentation, AGU Fall Meeting, 2017.
12. Gallton, D., J. W. Manweiler, A. Gerrard, T. Cravens, L. Lanzerotti, J. D. Patterson, Analysis of Van Allen Probes lapping data using Radiation Belt Storm Probes Ion composition Experiment (RBSPICE). Presentation, AGU Fall Meeting, 2017.
13. Gallton, D., J. W. Manweiler, A. Gerrard, T. Cravens, L. Lanzerotti, J. D. Patterson, Analysis of Van Allen Probes lapping data using Radiation Belt Storm Probes Ion Composition Experiment (RBSPICE), Poster: GEM Summer Workshop, 2017.
14. Martens, J, J. W. Manweiler, R. M. Manweiler, A. Gerrard, L. J. Lanzerotti, 18621: Climatology of the Earth's inner magnetosphere as observed by the Radiation Belt Storm Probes Ion Composition Experiment using Principle Component Analysis, Poster: AGU Fall Meeting, 2017.
15. Soto-Chavez, R., L.J. Lanzerotti, R. Cohen, A. Gerrard, J.W. Manweiler, High beta plasma observations in Earth's *inner* magnetosphere: Waves and particle modulations, and drift-mirror instability. Presentation, APS Division of Plasma Physics Annual Meeting, 2016.
16. Manweiler, J. W., J. D. Patterson, A. Gerrard, M. Gkioulidou, D. Mitchell, L. Lanzerotti, RBSPICE Observations of the March 17, 2015 Solar Storm, poster SM41E-2541, AGU Fall Meeting, 2015.
17. Patterson, J. D., J. W. Manweiler, A. Gerrard, L. Lanzerotti, ACE EPAM and Van Allen Probes RBSPICE measurements of interplanetary oxygen injection to the inner magnetosphere, poster SM13A-2484, AGU Fall Meeting, 2015.
18. Gallton, D, J. W. Manweiler, J. D. Patterson, A. Gerrard, M. Gkioulidou, D. Mitchell, L. Lanzerotti, Overview of Radiation Belt Storm Probes Ion Composition Experiment (RBSPICE): Data Access and Science Results, poster SM41E-2517, AGU Fall Meeting, 2015.
19. Hyomin K., L. J. Lanzerotti, A. J. Gerrard, J.W. Manweiler, A. R. Soto-chavez, R. J. Cohen and J. Bortnik, Study of Interactions Between ULF Waves and Ring Current Heavy (He+ and O+) Ions, poster SM41F-2553, AGU Fall Meeting, 2015.
20. Manweiler, J. W., J. D. Patterson, A. Gerrard, M. Gkioulidou, D. Mitchell, L. Lanzerotti, RBSPICE Observations of the March 17, 2015 Solar Storm, GEM Summer Workshop, 2015.
21. Manweiler, J. W., J. D. Patterson, A. Gerrard, M. Gkioulidou, D. Mitchell, L. Lanzerotti, Overview of Radiation Belt Storm Probes Ion Composition Experiment (RBSPICE): Data Access and Science Results, GEM Summer Meeting, 2015.

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22. Manweiler, J. W., L. Brown, J. D. Patterson, M. Gkioulidou, S. Ukhorsky, A. Gerrard, D. Mitchell, L. Lanzerotti, A. Lui, Overview of the RBSPICE Instrument, Triennial Earth Sun Summit (TESS) Conference, 2015.
23. Gerrard, A., L. Lanzerotti, J. Manweiler, J. Bortnik, K. Urban, Modulation of Ring Current He-Ions by Bounce Resonance ULF Waves, AGU Fall Meeting, 2014.
24. Manweiler, J. W., J. D. Patterson, R. Manweiler, A. Gerrard, D. Mitchell, L. Lanzerotti, Climatology of the Earth's inner magnetosphere as observed by the Radiation Belt Storm Probes Ion Composition Experiment (RBSPICE) on the Van Allen Probes spacecraft, poster SM23B-4182, AGU Fall Meeting, 2014.
25. Gerrard, A.J., L.J. Lanzerotti, M. Gkioulidou, D.G. Mitchell, J.W. Manweiler, T.P. Armstrong, Helium ion characteristics during quiet and active solar conditions as measured by the Van Allen Probes RBSPICE Instrument, poster SM22B-05, AGU Fall Meeting, 2013.
26. Manweiler, J.W., T.P. Armstrong, L.E. Brown, D.G. Mitchell, L.J. Lanzerotti, Details of the Radiation Belt Storm Probes Ion Composition Experiment (RBSPICE) Science Operations Center (SOC) and Data Products, abstract no. SM33A-2154, AGU Fall Meeting, 2013.
27. Armstrong, T.P., J.W. Manweiler, A.J. Gerrard, M. Gkioulidou, L.J. Lanzerotti, J.D. Patterson, Using ACE Observations of Interplanetary Particles and Magnetic Fields as Possible Contributors to Variations Observed at Van Allen Probes during Major Events in 2013, abstract no. SM33A-2155, AGU Fall Meeting, 2013.
28. Patterson, J.D., J.W. Manweiler, T.P. Armstrong, L.J. Lanzerotti, A.J. Gerrard, M. Gkioulidou, Comparison of Species-resolved Energy Spectra from ACE EPAM and Van Allen Probes RBSPICE, abstract no. SM33A-2156, AGU Fall Meeting, 2013.
29. Lanzerotti, L. J., D. G. Mitchell, A. Y. Ukhorskiy, K. Keika, P. C. Brandt, and J. W. Manweiler, Earth's Ring Current and Radiation Belt Physics (Invited), abstract no. SM42B-01, AGU Fall Meeting, 2012.
30. Kusterer, M. B., S. P. Christon, D. G. Mitchell, R. D. DiFabio, D. C. Hamilton, S. M. Krimigis, J. W. Manweiler, C. Paranicas, and J. D. Vandergriff, Easier Access to Cassini/MIMI Public Data, abstract no. SM51A-2270, AGU Fall Meeting, 2012.
31. Manweiler, J. W., T. P. Armstrong, L. E. Brown, D. G. Mitchell, and L. J. Lanzerotti, Details of the Radiation Belt Storm Probes Ion Composition Experiment (RBSPICE) Science Operations Center (SOC) and Data Products, abstract no. SM31C-2364, AGU Fall Meeting, 2012.
32. Manweiler, J. W., J. D. Patterson, T. P. Armstrong, Energy Spectra of Helium, Carbon, Nitrogen, Oxygen and Ion from 1990 through 2010 at Daily Averaged Time Resolution: A New Product and Implications Derived therefrom, abstract no. SH31B-2002, AGU Fall Meeting, 2011.
33. Cooper, J. F., N. Lal, R. E. McGuire, A. Szabo, T. W. Narock, T. P. Armstrong, J. W. Manweiler, J. D. Patterson, M. E. Hill, J. D. Vandergriff, R. B. McKibben, C. Lopate, and C. Tranquille, Virtual Energetic Particle Observatory (VEPO), Eos Trans. AGU, 89(53), Fall Meet. Suppl., 2008.
34. Armstrong, T. P., J. W. Manweiler, and J. D. Patterson, Science Studies from Archived Observations, Eos Trans. AGU, 89(53), Fall Meet. Suppl., 2008.
35. Armstrong, T. P., J. Manweiler, D. Hamilton, S. M. Krimigis, N. Krupp, C. Paranicas, and D. Mitchell, Energy Spectra, Angular Distributions, and Compositions of Energetic Ions in Saturn's Inner Magnetosphere, 37th COSPAR Scientific Assembly, Montreal, Canada, July 2008.
36. S. Taherion, T. P. Armstrong, and J. W. Manweiler, New Information About Relativistic Electron Spatial and Angular Distribution at Jupiter's Inner Magnetosphere Through Galileo EPD Computer Modeling, Magnetospheres of the Outer Planets (MOP) Conference, San Antonio, TX, June 2007.
37. Armstrong, T. P., S. Taherion, J. Manweiler, S. Krimigis, and N. Krupp, Observation of Two Components in the Distribution of Trapped Protons at Saturn, Fall AGU Meeting, San Francisco, December 2006.
38. Armstrong, T. P., J. Manweiler, N. Krupp, A. Lagg, S. Krimigis, S. Livi, D. Mitchell, E. Roelof, C. Paranicas, and D. Hamilton, Observation of the Spectrum and Angular Distribution of Trapped Protons in Saturn's Inner

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- Magnetosphere: Implications for Sources, Transport, and Loss, Fall AGU Meeting, December 2005, EOS Trans. AGU, 86(52), Fall Meet. Suppl., 2005.
39. Armstrong, T. P., J. W. Manweiler, N. Krupp, A. Lagg, S. Livi, S. M. Krimigis, D. G. Mitchell, and L. J. Lanzerotti, Comparison of Initial Cassini/LEMMS and Voyager 1 and 2 Low Energy Charged Particle Trapped Radiation Observations, 35th COSPAR Scientific Assembly, Paris, July 18-25, 2004.
  40. Manweiler, J. W. and G. Lansford, Kansas Criminal Justice Information Systems Agency Interoperability, Kansas Homeland Security Conference, January 2004.
  41. Manweiler, J. W., T. P. Armstrong, and T. E. Cravens, Evaluation of Grain Charging in a Flowing Plasma, Eighth Annual Workshop on the Physics of Dusty Plasmas, Boulder, CO, March 1998.
  42. Manweiler, J. W., T. P. Armstrong, and T. E. Cravens, Modifications to Collision Cross Sections and Coagulation Rates due to Grain Charging, Eighth Annual Workshop on the Physics of Dusty Plasmas, Boulder, CO, March 1998.
  43. Manweiler, J. W., T. P. Armstrong, and T. E. Cravens, Coagulation of Dielectric Dust Grains Due to Variable Asymmetric Charging, Physics of Dusty Plasmas, Seventh Workshop, Eds. M. Horanyi, S. Robertson, and B. Walch, AIP Conference Proceedings, 446, 1998.
  44. Manweiler, J. W., T. E. Cravens, and T. P. Armstrong, Modifications to Protoplanetary Nebular Coagulation Rates Due To Grain Charging, Mid-American Regional Astrophysical Conference, March 1997.
  45. Manweiler, J. W., T. P. Armstrong, and T. E. Cravens, Modifications to Collision Cross Sections and Coagulation Rates Due to Grain Charging, Sixth Annual Workshop on the Physics of Dusty Plasmas, San Diego, California, March 1995.
  46. Manweiler, J. W., T. P. Armstrong, and T. E. Cravens, Two Dimensional Particle-In-Cell Modeling of Dusty Plasma in the Presence of Plasma Flow, Fall AGU Meeting, December 1993, 1993 Fall Meeting Supplement to EOS, 524, 1993.
  47. McDavitt, K. I., J. P. Davidson, and J. W. Manweiler, Heavy Elements in A-Type Stars, Society of Physics Students Zone Meeting, Lawrence, Kansas, May 1993.
  48. McDavitt, K. I., J. P. Davidson, and J. W. Manweiler, Search for Heavy Elements in A-Type Stars, Joint Meeting of Kansas and Missouri Academies of Science, Kansas City, Missouri, May 1993.
  49. McDavitt, K. I., J. P. Davidson, and J. W. Manweiler, Search for Gold in A-Type Stars, Mid-American Regional Astrophysical Conference, Kansas City, Missouri, April, 1993.
  50. Cravens, T. E., J. W. Manweiler, B. Young, and T. P. Armstrong, Two-Dimensional Particle-In-Cell Modeling of a Dusty Plasma, Fifth Annual Workshop on the Physics of Dusty Plasmas, Huntsville, Alabama, March 1993.