

THEODORE A. FRITZ
C.V. updated on February 15, 2013

Born: June 25, 1939 in Kingsport, TN [USA]

Education:

B.S. in Physics	Virginia Polytechnic Institute and State University	1961
M.S. in Physics	University of Iowa	1964
Ph.D. in Physics	University of Iowa	1967

Family Status: Married

Wife: Sarah L. (Schmidt) Fritz

Children: Three

Kimberly A. (Giacobbe) Fritz (born 1969)

Deborah L. (Leyden) Fritz (born 1970)

Gregory A. Fritz (born 1972)

Positions Held:

1992 - present	Professor	Department of Astronomy and Center for Space Physics, Boston University
1995 - present	Professor (Affiliated)	Department of Electrical and Computer Engineering, Boston University
1999 - present	Professor (Affiliated)	Department of Mechanical Engineering, Boston University
2007 - present	Professor	Photonics Center, Boston University
1982 -- 1993	Staff Member	Space Science and Technology Division
1991 -- 1993	SST -Division Office	Los Alamos National Laboratory
1987 -- 1991	Deputy Group Leader	Los Alamos, New Mexico
1971 -- 1982	Research Physicist	NOAA/ERL/Space Environment Laboratory Boulder, CO
1978 [summer]	Visiting Scientist	Max Planck Institute for Aeronomy
1973 [Feb.73-Jan.74]		Katlenburg/Lindau, Germany
1970 -- 1971	NRC Post-Doctoral Associate	NASA/Goddard Space Flight Center Greenbelt, Maryland
1968 -- 1969	Post-Doctoral Fellow	National Research Council of Canada Ottawa, Ontario, Canada
1967 -- 1968	Research Associate	Department of Physics and Astronomy
1965 -- 1967	NASA/Graduate Trainee	University of Iowa
1961 -- 1965	Graduate Assistant	Iowa City, Iowa

Relevant Experience:

Experimenter and Satellite Operations Manager	University of Iowa Satellite Injun 3
Co-Investigator	University of Iowa Experiment on NASA/OGO-4 satellite
Co-Investigator	Solid State Detectors Experiment on University of Iowa Satellite Injun 5
Principal Investigator	NOAA-GSFC Low Energy Proton Experiment on NASA/ATS-6
Investigator	GSFC Low Energy Proton Experiment on NASA/S ³ -A (Explorer 45) satellite
Principal Investigator	NOAA/SEL Low Altitude Heavy Ion (LAHI) Experiment on DoD satellite P72-1
Principal Investigator	NOAA/SEL Low Energy Proton Experiment (Expt 17D) on DoD SOLRAD HI
Co-Investigator	Joint NOAA-SEL - MPI/Lindau, Germany Medium Energy Particles

Technical Consultant	Experiment on the NASA/ESRO ISEE A and B Spacecraft The Joint NASA/NOAA TIROS-N Space Environment Monitoring package particle instrumentation
Co-Investigator	The Proton/Electron Detectors (PED) experiment on the NASA Electrodynamic Explorers A B spacecrafts (Program cancelled 1977)
Principal Investigator	Charge Composition Studies Throughout the Magnetosphere/Ionosphere System, NASA funded program, 1975-1977
Investigator	Medium Energy Proton Telescope on the US DoD SCATHA satellite
Co-Investigator	Jovian Orbiter Magnetospheric Particles Instrument (JOMPI, later EPD experiment) on the NASA Jupiter/Orbiter Probe Galileo Mission
Principal Investigator	Studies of the Composition of the Hot Plasmas in the Magnetosphere, NASA funded program, 1977-1979
Principal Investigator	Investigation of a novel time-of-flight solid state detector technique for Improved energetic particle composition measurements, NASA funded program, 1979-1981
Principal Investigator	Charge and Mass Magnetospheric Ion Composition Experiment for the NASA/Origin of Plasma in the Earth's Neighborhood (OPEN) and NASA/ ISTP and GGS Programs being flown on Polar satellite
Co-Principal Investigator	The Source of Long-Period Geomagnetic pulsations with T. W. Speiser, Univ.of Colorado, National Science Foundation funded program, 1982-1985.
Investigator	Heavy Ion Telescope portion of the V3 Energetic Particles Experiment on the Swedish National satellite, VIKING 1984 -- 1985
Investigator and Project Manager	High Mass Sensor B on the Joint NASA/USAF Combined Release and Radiation Effects (CRRES) Satellite
Co-Investigator	Energetic Particle (HEPOS) Experiment on the Japan national satellite, OPEN-J
Co-Investigator	Comprehensive Energetic Particle Pitch Angle Distribution (CEPPAD) Experiment for the NASA/OPEN and NASA/ISTP and GGS Programs being flown on Polar satellite.
Lead US Investigator	Imaging Electron Spectrometer Component of the Research with Adaptive Particle Imaging Detectors (RAPID) experiment on the ESA CLUSTER and CLUSTER II missions (launched in 2000 and is planned to be operational through 2012.
Principal Investigator	Solid State Detector Instrument for the Los Alamos National Laboratory Beams Aboard a Rocket (BEAR) Project
Co-Investigator	Responsible for two energetic electron sensors on the joint NASA/Norwegian PULSAUR II Rocket. Launched February 9, 1994
Principal Investigator	Loss Cone Imager, an experiment to measure energetic electrons in the Earth radiation belt as part of the US Air Force DSX satellite project, 2005-2013
Principal Investigator	University Nanosat Program #5, 2007-2009, a program to fund the development of a very small satellite at Boston University known as BUSAT (BUSAT-1) utilizing student efforts funded by the US Air Force Office of Scientific Research.
Principal Investigator	University Nanosat Program #7, 2011-2013, (BUSAT-2) funded by the US Air Force Office of Scientific Research. Coupled with this satellite program there were two projects accepted by NASA involving the testing of portions of the satellite on a series of microgravity flights from the NASA Johnson Space Center, Houston, TX and a very high altitude balloon flight from Fort Sumner, NM.
Principal Investigator	University Nanosat Program #8, 2013-2015, (BUSAT-3) a cubesat mission funded by the US Air Force Office of Scientific Research known as ANDESITE to establish an ad-hoc computer network in near-Earth space.
Principal Investigator	University Nanosat Program, 2013-2015, (BUSAT-2)funded by the Air Force Research Labs to bring the satellite to flight status.

Professional Activities:

Organizational membership:

American Geophysical Union

European Geophysical Society

IAGA Division III

Sigma Xi

Committee on Space Research (COSPAR) Sub-commission D3, ordinary member (1982-present)

Associate Editor of Surveys in Geophysics (2002-2011)

Participant in the Scientific Definition Team for the NASA International Sun

Earth Explorers (ISEE) 1973-1977. (Successfully launched Oct. 22, 1977)

Participant in the Scientific Definition Team Studies for the NASA Electrodynamics Explorers program, 1975-1977.

Acting ATS-6 Project Scientist for the Environmental Measurements Experiments from 1974 to 1980.

Participant and ATS-6 representative in the IMS program coordinating data collection for periods of the North American apogee of the European Space Agency Satellite, GEOS.

Participant in the Science Working Team for NASA/ISEE program, 1977 to 1988.

Member of the NASA OPEN (Origin of Plasmas in the Earth's Neighborhood) Science Definition Working Group, 1977-1979 and Science Working Group, 1982-1984, ISTP (International Solar Terrestrial Physics) SWG program, 1985 to present; Global Geospace Science SWT, 1991 to Present

Referee of numerous journal articles and funding proposals.

Participant in the Coordinated Data Analysis Workshops (CDAW) at NASA/GSFC:

December, 1978 CDAW1.0 Participant

May, 1979 CDAW2.0 Organizer

October, 1979 CDAW2.1 Co-Chairman

November, 1979 CDAW4.0 Participant

December, 1981 CDAW6.0 Co-Chairman

February, 1982 CDAW6.1 Co-Chairman

October, 1982 CDAW6.3 Participant, Organizing Committee Member

October 1985 CDAW7 Participant

1986-1987 CDAW8 Participant Committee Member

1989--1992 CDAW9 Participant and Organizing Committee Member

Participant and Subgroup Chairman of the NASA CRRES Chemical Release Investigator Working Group, 1985 to 1992.

Participant in course offered by Los Alamos National Laboratory entitled Fundamentals of Leadership Feb. to June, 1986.

US Delegate to multilateral conference on cooperation in Solar-Terrestrial Physics involving INTERCOSMOS, ESA, and NASA held at Balatonfured, Hungary, November 1988.

Co-convenor of special session entitled "Turbulence and Dynamics at the High Altitude Cusp and Dayside Magnetopause Boundary Layer" at Spring meeting of the American Geophysical Union, Washington, DC, May 2002

Editor of a Special Issue of Surveys in Geophysics involving a compilation of 17 papers entitled: "The Magnetospheric Cusps: Structure and Dynamics"

Invited Talks:

1. "Observations from Explorer 45", presented at the Earth's Particles and Fields Summer Advanced Study Institute held at Sheffield, England, August 13--14, 1973.
2. "Particle Measurements with the S3 Satellite", presented at the European Geophysical Society Symposium on Plasma Instabilities and Wave Particle Interactions in the Magnetosphere held at Trieste, Italy, September 23--25, 1974.
3. "Heavy Ions", Presented at the Magnetospheric Particles and Fields-1975 Summer Advanced Study School held at Graz, Austria, August 4-5, 1975.
4. "Ion Composition", presented at the International Symposium on Solar-Terrestrial Physics (ISSTP) held at Boulder, CO, June 7-18, 1976.
5. "Observations of Energetic Heavy Ions Trapped in the Earth's Magnetosphere", presented at the VII MPAAE Lindau Workshop on Ionic Composition held at Lindau, West Germany, August 26-29, 1980.

6. "Magnetospheric Boundary Phenomena and Large Scale Field Line Topologies", presented at the Joint US-Japan Seminar on Wave-Particle Interactions in Space Plasmas held at Kyoto, Japan, March 16-21, 1981.
7. "Geomagnetically Trapped Energetic Heavy Ions and Their Implications for Theory", presented at the 4th General Assembly of the International Association of Geomagnetism and Aeronomy held in Edinburgh, Scotland, August 3--15, 1981.
8. "Particles of Solar Wind Origin", presented at the 1982 Yosemite Conference on the Origins of Plasmas and Electric Fields in the Magnetosphere held in Yosemite, CA, January 25-29, 1982.
9. "Energetic Particle Sounding at the Magnetopause and Implications for Reconnection", presented at the American Geophysical Union Annual Spring Meeting, Philadelphia, PA, May 31-June 4, 1982.
10. "Energetic Particle Observations During the CDAW 6 Substorm Event of March 22, 1979", presented at the 18th General Assembly of the International Union of Geodesy and Geophysics held in Hamburg, Germany, August 15--27, 1983.
11. "The Imaging Electron Spectrometer" presented at the AGU Chapman Conference on "Measurement Techniques in Space Plasmas – What works and what doesn't" held in Santa Fe, NM April 3 -7, 1995.
12. "Big Picture: Significant New Results From ISTP/GGS", Topical Research in Space Physics Advanced Seminar Series, Center for Space Physics, Boston University on May 9, 1996.
13. "A model for the high latitude isotropic boundary" presented at the NATO Advanced Study Institute on Polar Cap Boundary Phenomena held in Longyearbyen, Svalbard [Norway] June 4-13, 1997.
14. "An Energetic Particle Perspective of Magnetospheric Boundaries" presented as a seminar at the Los Alamos National Laboratory, Los Alamos, NM on July 30, 1997.
15. "An Energetic Particle Perspective of Magnetospheric Boundaries" presented as a seminar at the Max Planck Institute for Aeronomy, Katlenburg-Lindau, Germany on August 21, 1997.
16. "The role of the Cusp as a Source for Magnetosphere Particles: A New Paradigm?", Topical Research in Space Physics Advanced Seminar Series, Center for Space Physics, Boston University on January 15, 1998.
17. "The Role of the Cusp as a Source for Magnetospheric Particles: A New Paradigm?" presented at the Physics Department of the University of Alaska, Fairbanks, AK at the Auditorium of the Elvery Bldg. on February 19, 1999.
18. "The Role of the Cusp as a Source for Magnetospheric Particles: A New Paradigm?" seminar presented to the Swedish Institute for Space Physics (IRF), Kiruna, Sweden on March 23, 1999.
19. "The Role of the Cusp as a Source for Magnetospheric Particles: A New Paradigm?" Topical Research in Space Physics Advanced Seminar Series, Center for Space Physics, Boston University on May 6, 1999.
20. "Polar Energetic Particles: Do we have a new paradigm for the Magnetosphere?", Seminar presented to the Skobeltsyn Institute for Nuclear Physics of the Moscow State University in Moscow, Russia on September 15, 1999.
21. "Polar Energetic Particles: Do we have a new paradigm for the Magnetosphere?", Seminar presented to the Space Physics Institute (IKI) of the Russian Academy of Science in Moscow, Russia on September 16, 1999.
22. "The Role of the Cusp as a Source for Magnetospheric Particles: A New Paradigm?", University of New Hampshire, Durham, NH on October 28, 1999.
23. "The Role of the Cusp as a Source for Magnetospheric Particles: A New Paradigm" seminar presented in Building 2 of the NASA/Goddard Space Flight Center, Greenbelt, MD on January 20, 2000.

24. "The Cusp as a Source of Magnetospheric Energetic Particles, Currents and Electric Fields: A New Paradigm", Los Alamos National Laboratory NIS-2 Seminar, February 29, 2000.
25. "Energy Dispersion Events In The Vicinity Of The Cusp", Symposium ST13. The high latitude ionosphere and magnetosphere, EGS meeting, Nice, France, April 28, 2000 [joint with Maria Karra]
26. "Energetic Particles and the Magnetospheric Cusps", University of Bergen, Bergen, Norway, July 11, 2000.
27. "Models and experimental data for the stable trapping region of the earth's magnetosphere", COPSAR Symposium PSRB1 on Radiation Belt Models for Solar Maximum held during the 33rd COSPAR Scientific Assembly, Warsaw, Poland, July 16-23, 2000
28. "Energetic Particles and the Magnetospheric Cusps", Finish Meteorological Institute Seminar, Helsinki, Finland, August 14, 2000.
29. "Energetic Particles and the Magnetospheric Cusps", Max Planck Institute for Aeronomy Seminar, Katlenburg-Lindau, Germany, August 22, 2000.
30. "Energetic Particles and in the Equatorial Magnetosphere-New Insights", Max Planck Institute for Aeronomy Seminar, Katlenburg-Lindau, Germany, August 23, 2000.
31. "Energetic Particles and the Magnetospheric Cusps", University of Leicester, Leicester, United Kingdom, August 31, 2000.
32. "Energetic Particles and the Magnetospheric Cusps", University of Warwick, Coventry, United Kingdom, September 1, 2000.
33. "Energetic Particles and the Magnetospheric Cusps", Istituto di Fisica dello Spazio Interplanetario, Frascati, Italy, September 11, 2000.
34. "Energetic Particles and the Magnetospheric Cusps", National University of Ireland at Maynooth, Maynooth, Ireland, September 18, 2000.
35. "Energetic Particles and the Magnetospheric Cusps", University of Iowa at Iowa City, Iowa, October 13, 2000.
36. "Energetic Particles and the Magnetospheric Cusps", University of Michigan, Ann Arbor, MI, January 12, 2001.
37. "Sabbatical Science: Energetic Particles and the Magnetospheric Cusps", Boston University Center for Space Physics seminar, April 19, 2001
38. "Evidence for a Cusp Source of Upstream Energetic Particles", Section SH01 at the Fall meeting of the American Geophysical Union, San Francisco, December 2002
39. "Energetic Particles in the Polar Cusps and their Impact on the Earth's Magnetosphere" at the Conference on Sun-Earth Connections: Multiscale Coupling in Sun-Earth Processes, Convenors: A. T. Y. Lui and Y. Kamide, held in Kona, Hawaii, February 9-13, 2004
40. "The Magnetospheric Cusps", given at the symposium to honor Prof. Finn Soraas on his retirement in Bergen, Norway on April 22, 2005.

Publications:

1. Fritz, T.A., "The passive magnetic orientation of satellite Injun 3," U.of Iowa Res. Rept. 65-21, 41 pgs., 1965.

2. Fritz, Theodore A., and Donald A. Gurnett, "Diurnal and latitudinal effects observed for 10 keV electrons at low satellite altitudes," J. Geophys. Res., 79, 2485, 1965.
3. Krimigis, S.M., T.P. Armstrong, T.A. Fritz, B.A. Randall, A.L. Burns, P.C. Cullum, and D.M. Clancy, "Injun V SSD experiment document," U. of Iowa Res. Rept. 66-44, 152 pgs., 1966.
4. Fritz, Theodore A., "Spectral, spatial, and temporal variations observed for outer zone electrons from 10 to 1000 keV with satellite Injun3," U. of Iowa Res. Rept. 67-42, 194 pgs., 1967.
5. Fritz, Theodore A., "The high latitude outer zone boundary region for 40keV electrons as observed by satellite Injun 3 during geomagnetically quiet periods," J. Geophys. Res., 73, 7245, 1968.
6. Fritz, T.A. and S.M. Krimigis, "Initial observations of geomagnetically trapped protons and alpha particles with OGO-4," J. Geophys. Res., 74, 5132, 1969.
7. Fritz, Theodore A., "Study of the high-latitude, outer zone boundary region for 40 keV electrons with satellite Injun3," J. Geophys. Res., 75, 5387, 1970.
8. Krimigis, S.M., P. Verzariu, J.A. Van Allen, T.P. Armstrong, T.A. Fritz, and B.A. Randall, "Trapped energetic nuclei $Z > 3$ in the earth's outer radiation zone", J. Geophys. Res., 75, 4210, 1970.
9. Fritz, T.A. and D.J. Williams, "Initial observations of geomagnetically trapped alpha particles at the equator", J. Geophys. Res., 78, 4719, 1973. [Also published as NOAA Tech memo ERL-SEL-20, 1972]
10. Konradi, A., D.J. Williams, and T.A. Fritz, "Energy spectra and pitch angle distributions of storm-time and substorm injected protons," J. Geophys. Res., 78, 4739, 1973.
11. Williams, D.J., T.A. Fritz, and A. Konradi, "Observations of proton spectra ($1.0 < E_p < 300$ keV) and pitch angle distributions at the plasmopause," J. Geophys. Res., 78, 4751, 1973. [Also published as NOAA Tech Memo ERL-SEL-21, 1972]
12. Fritz, T.A., P.H. Smith, D.J. Williams, R.A. Hoffman, and L.J. Cahill, "Initial observations of magnetospheric boundaries by Explorer 45(S3)," In: Correlated Interplanetary and Magnetospheric Observations, D.E. Page, Ed., pp.485-506, Dordrecht-Holland, D.Reidel, 1974.
13. Fritz, T.A., "The pitch angle distribution of > 40 keV electrons," In: Magnetospheric Physics, B.M.McCormac, Ed., pp.105-116, Dordrecht-Holland, D.Reidel, 1974.
14. Fritz, T.A., D.J. Williams, P.H. Smith, R.A. Hoffman, J.N. Barfield, and A. Konradi, "Particle entry into the ring current region of the equatorial magnetosphere," In: Space Research XIV, pp.301-308, Akademie-Verlag, Berlin, 1974.
15. Wilken, B. and T.A. Fritz, "The response of very thin semiconductor detectors to heavy ions, I. Protons and Alpha particles," Nuclear Inst. and Methods, 121, 365, 1974.
16. Williams, D.J., J.N. Barfield, and T.A. Fritz, "Initial Explorer 45 substorm observations and electric field considerations", J. Geophys. Res., 79, 554, 1974. [Also published as NOAA Tech Memo ERL SEL-25, 1973]
17. Berko, F.W., L.J. Cahill, Jr., and T.A. Fritz, "Protons as the prime contributors to the storm time ring current," J. Geophys. Res., 80, 3549, 1975.
18. Fritz, T.A. and J.R. Cessna, "ATS-6 NOAA low energy proton experiment," IEEE Trans. Aerospace and Electronic Systems, AES-11, No.6, 1145, 1975.
19. Fritz, T.A. and D.J. Williams, "Wave and particle observations by Explorer 45 pertaining to wave-particle interactions," J. Geophysics, 41, 551, 1975.

20. Hoffman, R.A., L.J. Cahill, Jr., R.R. Anderson, N.C. Maynard, P.H. Smith, T.A. Fritz, D.J. Williams, A. Konradi, and D.A. Gurnett, "Explorer 45(S3-A) observations of the magnetosphere and magnetopause during the August 4--6, 1972 magnetic storm period," *J. Geophys. Res.*, 80, 4287, 1975.
21. Konradi, A., C.L. Semar, and T.A. Fritz, "Substorm injected protons and electrons and the injection boundary model," *J. Geophys. Res.*, 80, 543, 1975.
22. Fritz, T.A., "Ion composition," In: *Physics of Solar Planetary Environments*, D.J. Williams, ed., pp.716-729, Washington, D.C., American Geophysical Union, 1976.
23. Fritz, T.A. and Berend Wilken, "Substorm generated fluxes of heavy ions at the geostationary orbit," In: *Magnetospheric Particles and Fields*, B.M. McCormac, ed., pp.171-179, Dordrecht-Holland, D.Reidel, 1976.
24. Konradi, A., C.L. Semar, and T.A. Fritz, "Injection boundary dynamics during a geomagnetic storm", *J. Geophys. Res.*, 81, 2701, 1976.
25. Smith, P.H., R.A. Hoffman, and T.A. Fritz, "Ring current proton decay by charge exchange," *J. Geophys. Res.*, 81, 2701, 1976.
26. Su, Shin-Yi, T.A. Fritz, and A. Konradi, "Repeated sharp flux dropouts observed at 6.6 RE during a geomagnetic storm", *J. Geophys. Res.*, 81, 245, 1976.
27. McKinnon, J.A. and T.A. Fritz, "S3 Solid State Proton Experiment, Part II. Mean energy of a finite energy passband," NOAA Tech. Memorandum, ERL-SEL-44, 1976.
28. McKinnon, J.A. and T.A. Fritz, "ATS-6 NOAA Solid State Proton Experiment: Mean energy of a finite energy passband", NOAA Tech. Memorandum, ERL-SEL-45, 1976.
29. Wilken, Berend and T.A. Fritz, "Energy distribution functions of low energy heavy ions in silicon absorbers measured for large relative energy losses", *Nuc. Inst. and Meth.*, 138, 331, 1976.
30. Su, S.-Y., A. Konradi, T.A. Fritz, "On the propagation direction of ring current proton ULF waves observed by ATS-6 at 6.6 RE," *J. Geophys. Res.*, 82, 1859, 1977.
31. Fritz, T.A., C.W. Arthur, J.B. Blake, J.P. Corrigan, P.J. Coleman, Jr., W.D. Cummings, S.E. DeForest, K.N. Erickson, A. Konradi, W. Lennartsson, A.J. Masley, B.H. Mauk, C.E. McIlwain, R.L. McPherron, G.A. Paulikas, K.A. Pfitzer, D.L. Resaoner, P.R. Satterblom, S.-Y. Su, R.J. Walker, E.C. Whipple, Jr., B. Wilken, and J.R. Winckler, "Significant initial results from the Environmental Measurements Experiments on ATS-6," NASA Tech. Paper 1101, 1977.
32. Fritz, T.A. and W.N. Spjeldvik, "Observations of energetic radiation belt helium ions at the geomagnetic equator during quiet conditions", *J. Geophys. Res.*, 83, 2579, 1978.
33. Spjeldvik, W.N. and T.A. Fritz, "Energetic ionized helium in the quiet time radiation belts: Theory and comparison with observations," *J. Geophys. Res.*, 83, 654, 1978.
34. Spjeldvik, W.N. and T.A. Fritz, "Theory for charge state of energetic oxygen ions in the earth's radiation belts," *J. Geophys. Res.*, 83, 1583, 1978.
35. Spjeldvik, W.N. and T.A. Fritz, "Composition of hot plasmas in the inner magnetosphere: Observations and theoretical analysis of protons, helium ions, and oxygen ions", In: *Space Research VIII*, ed. by M.J. Rycroft and A.C. Strickland, pp.317-320, Oxford, Eng., Pergamon Press, 1978.
36. Spjeldvik, W.N. and T.A. Fritz, "Quiet time observations of equatorially trapped megaelectronvolt radiation belt ions with nuclear charge $Z > 4$," *J. Geophys. Res.*, 83, 4401, 1978.

37. Fritz, T.A. and W.N. Spjeldvik, "Simultaneous quiet time observations of energetic radiation belt protons and helium ions: The equatorial α/p ratio near 1 MeV," J. Geophys. Res., 84, 2608, 1979.
38. Wilken B., T.A. Fritz, A. Korth, G. Kremser, "Substorm-associated injections of energetic ions observed by GEOS-1 and ATS-6 in and near synchronous altitude," In: Advances in Magnetospheric Physics with GEOS-1 and ISEE, K. Knott, A. Durney, and K. Ogilvie, ed., pp.327-337, Dordrecht-Holland, D.Reidel, 1979. [Also published Space Science Review, 22, 647, 1978.]
39. Williams, D., J., E. Keppler, T.A. Fritz, B. Wilken, and G. Wibberenz, "The ISEE-1 and 2 medium energy particles experiment," ISEE Trans. on Geoscience Electronics, GE-16, No.3, 1978.
40. Williams, D.J., T.A. Fritz, E. Keppler, B. Wilken, and G. Wibberenz, "Three-dimensional energetic ion observations and the tangential magnetopause electric field," In: Advances in Magnetospheric Physics with GEOS-1 and ISEE, K. Knott, A. Durney, and K. Ogilvie, ed., pp.485-491, Dordrecht-Holland, D.Reidel, 1979. [Also published Space Science Review, 22, 805, 1978].
41. Singer, H.J., C.T. Russell, T.A. Fritz, W. Lennartsson, "The spatial structure of PC 3, 4, and 5 pulsations near the magnetospheric equator," J. Geophys. Res., 6, 889, 1979.
42. Su, S.-Y., A. Konradi, and T.A. Fritz, "On the energy-dependent modulation of the ULF ion flux oscillations observed at small pitch angles," J. Geophys. Res., 84, 6510, 1979.
43. Wilken, B., A. Korth, G. Kremser, T.A. Fritz, "Multiple satellite observations of large scale trapping boundary motion," In: Proceedings of Magnetospheric Boundary Layers Conference, Alpbach, Austria 11-15 June 1979, ESA SP-148, 161, 1979.
44. Williams, D.J., T.A. Fritz, B. Wilken, and E. Keppler, "An energetic particle perspective of the magnetopause," J. Geophys. Res., 84, 6385, 1979.
45. Konradi, A., T.A. Fritz, and S.-Y. Su, "Time-averaged fluxes of heavy ions at the geostationary orbit," J. Geophys. Res., 85, 5149, 1980.
46. Su, S.-Y., R.L. McPherron, A. Konradi, and T.A. Fritz, "Observations of ULF oscillations in the ion fluxes at small pitch angles with ATS-6," J. Geophys. Res., 85, 515, 1980.
47. Fritz, T.A., and W.N. Spjeldvik, "Steady-state observations of geomagnetically trapped energetic heavy ions and their implications for theory," Planet. Space Sci., 29, (No.11), 1169-1193, 1981.
48. Spjeldvik, W.N., and T.A. Fritz, "Discovery of ions with nuclear charge $Z > 9$ stably trapped in the earth's radiation belts", Planet. Space Sci., 29 (No.11) 1227-1234, 1981.
49. Spjeldvik, W.N., and T.A. Fritz, "Energetic heavy ions with nuclear charge 4 in the equatorial radiation belts of the earth: Magnetic storms," J. Geophys. Res. , 86, 2349, 1981.
50. Spjeldvik, W.N., and T.A. Fritz, "Energetic ion and electron observations of the geomagnetic plasma sheet boundary layer: 3-dimensional results from ISEE-1," J. Geophys. Res., 86, 2480, 1981.
51. Spjeldvik, W.N., and T.A. Fritz, "Observation of ions with nuclear charge $Z > 9$ in the inner magnetosphere," J. Geophys. Res. , 86, 7749, 1981.
52. Spjeldvik, W.N. and T.A. Fritz, "Observations of energetic radiation belt helium ions at the geomagnetic equator during quiet conditions," J. Geophys. Res. , 86, 2579, 1981.
53. Su, S.-Y., A. Konradi, T.A. Fritz, "Preserved signatures of ion flux modulations observed with ATS-6", J. Geophys. Res., 86 (No.A13), 1167-1172, 1981.

54. Baker, D.N., T.A. Fritz, B. Wilken, P.R. Higbie, S.M. Kaye, M.G. Kivelson, T.E. Moore, W. Studemann, A.J. Masley, P.H. Smith and A.L. Vampola, "Observation and modeling of energetic particles at synchronous orbit," J. Geophys. Res., 87, (No.A8), 5917, 1982.
55. Baker, D.N., T.A. Fritz, B. Wilken, "The July 19, 1977 Magnetic Storm: Observations and modeling of energetic particles at synchronous orbit, " in The IMS Source Book, (ed. by C. Russell and D. Southwood) pp.259-263, AGU Press, Washington, DC, 1982.
56. Daly, P.W. and T.A. Fritz, "Trapped electron distributions on open magnetic field lines," J. Geophys. Res., 87 (No.A8) 6081, 1982.
57. Fritz, T.A., and S.C. Fahnenstiel, "High temporal resolution energetic particle soundings of the magnetopause on November 8, 1977 using ISEE-2," J. Geophys. Res., 87 (No.A4), 2125, 1982.
58. Fritz, T.A., D.J. Williams, G. Paschmann, C.T. Russell and W.N. Spjeldvik, "The magnetopause as sensed by energetic particles, magnetic field, and plasma measurements on November 20, 1977," J. Geophys. Res. , 87(No.A4), 2133, 1982.
59. Fritz, T.A., and C. Arthur Neeley, "Geostationary satellites ATS-6 and SMS/GOES: Description, position, and data availability during the IMS," in The IMS Source Book (ed. by C. Russell and D. Southwood), pp.53-64, AGU Press, Washington, DC, 1982.
60. Fritz, T.A., and W.N. Spjeldvik, "Pitch angle distributions of geomagnetically trapped MeV helium ions during quiet times," J. Geophys. Res., 87 (No.A7), 5095, 1982.
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