Bibliography
Richard I. Epstein

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Published Papers

1. "Synchrotron Radiation from Electrons in Helical Orbits," Epstein, R.I. & Feldman, P.A., 1967, *Astrophys. J.*, **150**, L109.

2. "Magnetostriction Effects on Ferrite Material Parameters of Importance in Remanence Devices" Epstein, R., Germann, R., Sohn, J. & Temme, D., 1968, *IEEE Transactions on Microwave Theory and Techniques*, **MTT-14**, 54.

3. "Some Aspects of Cosmic Synchrotron Sources," Epstein, R.I., 1973, Ph.D. Thesis, Stanford University, (unpublished).

4. "Synchrotron Sources. I. Extension of Theory for Small Pitch Angles," Epstein, R.I., 1973, *Astrophys. J.*, **183**, 593.

5. "Synchrotron Sources. II. Pulsars and Compact Extragalactic Objects," Epstein, R.I. & Petrosian, V., 1973, *Astrophys. J.*, **183**, 611.

6. "Can Supernovae Produce Deuterium?" Epstein, R.I., Arnett W.D., & Schramm, D.N., 1974, *Astrophys. J.(Letters)*, **190**, L13.

7. "Effects of Primordial Fluctuations on the Abundances of Light Elements," Epstein, R.I. & Petrosian, V., 1975, *Astrophys. J.*, **197**, 281.

8. "Neutronization and Thermal Disintegration of Dense Stellar Matter," Epstein, R.I. & Arnett, W.D., 1975, *Astrophys. J.*, **201**, 202.

9. "Synthesis of the Light Elements in Supernovae," Epstein, R.I., Arnett, W.D., & Schramm, D.N., 1976, *Astrophys. J. Supp.* **31**, 111.

10. "Magnetohydrodynamic Phenomena in Collapsing Stellar Cores," Meier, D., Epstein, R.I., Schramm, D.N., & Arnett, W.D., 1976, *Astrophys. J.*, **204**, 869.

11. "The Origin of Deuterium," Epstein, R.I., Lattimer, J.M., & Schramm, D.N., 1976, *Nature*, **263**, 198.

12. "Deuterium Production by High-Energy Particles," Epstein, R.I., 1977, *Astrophys. J.*, **212**, 595.

13. "A Model for Super-Light Velocities of Extragalactic Radio Sources," Epstein, R.I., & Geller, M.J., 1977, *Nature*, **265**, 219.

14. "Mechanisms for Supernova Explosions," Epstein, R.I., 1977, in *Supernovae* (D.N. Schramm, ed.; Reidel, Dordrecht), p.183.

15. "Collapsing Stellar Cores and Supernovae," Epstein, R.I., Norgaard, H., & Bond, R., 1979, *Astron. and Astrophys.*, **74**, 353.

16. "Lepton Driven Convection in Supernovae," Epstein, R.I., 1979, *Mon. Not. Roy. Astron. Soc.* **188**, 305.

17. "A Thomas-Fermi Model of Warm Nuclei," Buchler, J.R. & Epstein, R.I., 1980, *Astrophys. J. (Letters)*, **235**, L91.

18. "Acceleration and Propagation of Cosmic Rays," Fransson, C. & Epstein, R.I., 1980, *Astrophys. J.*, **242**, 411.

19. "The Acceleration of Interstellar Grains and the Composition of the Cosmic Rays," Epstein, R.I., 1980, *Mon. Not. Roy. Astron. Soc.*, **193**, 723.

20. "Stellar Collapse and Supernova Explosions," Epstein, R.I. & Pethick, C.J., 1980, *Europhysics News*, Vol. 11, No. 12, p. 7. F

21. "Are Stellar Flares and the Galactic Cosmic Rays Related?" Epstein, R.I., 1981, in *Origin of Cosmic Rays* (G. Setti, G. Spada, A.W. Wolfendale, eds., Reidel, Dordrecht) p. 109.

22. "Gravitational Collapse Supernovae," Epstein, R.I., 1981, *Adv. Space Res.*, **1**, 83.

23. "Lepton Loss and Entropy Generation in Collapsing Stellar Cores," Epstein, R.I. & Pethick, C.J., 1981, *Astrophys. J.*, **243**, 1003.

24. "Eruption of Supernova Shock Waves," Epstein, R.I., 1981, *Astrophys. J. (Letters)*, **244**, L89.

25. "Winds from Dwarf Galaxies and Lα Absorption in the Spectra of Quasars," Fransson, C. & Epstein, R.I., 1982, *Mon. Not. Roy. Astron. Soc.*, **198**, 1127.

26. "Neutron Star Envelopes," Gudmundsson, E.H., Pethick, C.J., & Epstein, R.I., 1982, *Astrophys. J (Letters)* **259**, L19.

27. "Sensitivity of Model Calculations to Uncertain Inputs, with an Application to Neutron Star Envelopes," Epstein, R.I., Gudmundsson, E.H., & Pethick, C.J., 1983, *Mon. Not. Roy. Astron. Soc.*, **204**, 471-483.

28. "Protogalactic Perturbations." Epstein, R.I., 1983, *Mon. Not. Roy. Astron. Soc.*, **205**, 207-229.

29. "Structure of Neutron Star Envelopes," Gudmundsson, E.H., Pethick, C.J., & Epstein, R.I., 1983, *Astrophys. J.*, **272**, 286-300.

30. "On the Formation of Stars from Disk Accretion," Mercer-Smith, J.A., Cameron, A.G.W., & Epstein, R.I., 1984, *Astrophys. J.*, **279**, 363-366.

31. "Galaxies from Poisson Fluctuations," Epstein, R.I., 1984, *Astrophys. J.*, **281**, 545-553.

32. "Firm Bounds on the Neutrino Mass from the Distribution of Dark Matter in Galaxies," Madsen, J. & Epstein, R. I., 1984, *Astrophys. J.*, **282**, 11-18.

33. "Feeding a Gamma Ray Burster," Epstein, R. I., 1984, *Astrophys. J.*, **291**, 822-833.

34. "High-Energy Thermal Synchrotron Emission," Imamura, J. N., Epstein, R. I., & Petrosian, V. 1985, *Astrophys. J.*, **296**, 65-68.

35. "Improved Astronomical Limits to the Neutrino Mass," Madsen, J. & Epstein, R. I., 1985 *Phys. Rev. Letters*, **54**, 2720.

36. "Limits on the Space Density of Gamma-Ray Burst Sources," Epstein, R. I., 1985 *Astrophys. J.*, **297**, 555-563.

37. "Lower Limits on m_ν from the Distribution of Dark Matter in Galaxies." Madsen, J. & Epstein, R. I., 1986, in *Inner Space/Outer Space* (eds. Kolb, E. W. et al., University of Chicago Press, Chicago).

38. "Physical Constraints on Models of Gamma-Ray Bursters," Epstein, R. I., 1986, in *Radiation Hydrodynamics in Stars and Compact Objects*, Proceeding of IAU Colloquium 89, (Spring Verlag: eds. K.-H. Winkler & D. Mihalas) p. 305.

39. "Astrophysics of Time Variability in X-Ray and Gamma-Ray Sources." Epstein, R. I., Lamb, F. K., & Priedhorsky, W. C., 1986, *Los Alamos Science*, **13**, 2.

40. "The X-Ray Emission from Gamma-Ray-Burst Sources: Constraints on Theoretical Models," Imamura, J. N. & Epstein, R. I. , 1987 *Astrophys. J.*, **313**, 711-717.

41. "Neutrino Mass Limits and Dark Halos," Madsen, J. & Epstein, R. I., 1987, in *Dark Matter in the Universe* (IAU: eds. Kormendy, J. & Knapp, G.R.) p. 163.

42. "Neutrino-Induced r-process in Supernovae," Epstein, R. I., Colgate, S. A. & Haxton, W. C., 1988, *Phys. Rev. Lett.*, **61**, 2038-2041.

43. "Gamma-Ray Bursts and Glitching Neutron Stars." Epstein, R. I., 1988, *Physics Reports*, **63**, 155-166.

44. "Vortex Pinning in Neutron Stars," Epstein, R. I. & Baym, G., 1988, *Astrophys. J.*, **328**, 680-690.

45. "Acoustic Properties of Neutron Stars," Epstein, R. I., 1988, *Astrophys. J.*, **333**, 880-894.

46. "Statistical Properties of Gamma Ray Bursts," Epstein, R. I. & Hurley, K., 1988, *Astrophys. Letters and Communications*, **27**, 229-236.

47. "Interpretations of Multiple Absorption Features in a Gamma-Ray Burst Spectrum", Fenimore, E. E., Conner, J. P., Epstein, R. I., Klebesadel, R. W., Laros, J. G., Yoshida, A., Fujii, M., Hayashida, K., Itoh, M., Murakami, T., Nishimura, J., Yamagami, T., Kondo, I., & Kawai, N., 1988 *Astrophys. J. (Letters)*, **335**, L71-L74.

48. "Analyzing Gamma-Ray Burst Spectral Data," Loredo, T. J. & Epstein, R. I., 1989, *Astrophys. J.*, **336**, 896-919.

49. "The Angular Distribution of Gamma-Ray Bursts," Hartmann, D. & Epstein R. I., 1989 *Astrophys. J*, **346**, 960-966.

50. "Superfluid Dissipation Time scales in Neutron Star Crusts," Bildsten, L. & Epstein, R. I., 1989, *Astrophys. J.*, **342**, 951-957.

51. "Inverse-Compton Spectra for Gamma-Ray Bursts: Suppressing the Soft Photons," Ho, C. & Epstein, R. I., 1989, *Astrophys. J.*, **343**, 277-291.

52. "Gamma-Ray Bursts from Galactic Neutron Stars?", Hartmann, D., Epstein, R. I., & Woosley, S. E., 1989, *Nuclear Physics B*, **10B**, 27.

53. "Gamma-Ray Bursts: A Physical Perspective", Epstein, R. I., 1989, in *Cosmic Gamma Rays and Cosmic Neutrinos*, (eds. J. P. Wefel & M. M. Shapiro: Reidel, Dordrecht), p. 381.

54. "Cyclotron Resonant Scattering in the Spectra of Gamma-Ray Bursts", Wang, J. C. L., Lamb, D. Q., Loredo, T. J., Wasserman, I. M., Salpeter, E. E., Fenimore, E. E., Conner, J. P., Epstein, R. I., Klebesadel, R. W., Laros, J. G., Yoshida, A., Fujii, M., Hayashida, K., Itoh, M., Murakami, T., Nishimura, J., Yamagami, T., Kondo, I., & Kawai, N., 1989, *Phys. Rev. Letters*, **63**, 1550-1553.

55. "New Tools for Gamma-Ray Burst Data Analysis," Hartmann, D., Blumenthal, G. R., Epstein R. I., Gonzalez, J. J., Hurley, K., Loredo, T., & Woosley, S. E., 1989 *Proceedings of the Gamma Ray Observatory Science Workshop*, (ed. W. N. Johnson: NRL, Washington) p. 4-427.

56. "Continuum Spectra for Gamma-Ray Bursts: Suppressing the Soft Photons," Ho, C. & Epstein R. I., 1989 *Proceedings of the Gamma Ray Observatory Science Workshop*, (ed. W. N. Johnson: NRL, Washington) p. 4-436.

57. "Galactic Neutron Stars and Gamma-Ray Bursts," Hartmann, D., Epstein R. I., & Woosley, S. E., 1990 *Astrophys. J*, **348**, 625-633.

58. "Escape of Beamed Emission from Gamma-Ray Bursts on Magnetized Neutron Stars," Ho, C., Epstein, R. I., & Fenimore, E. E. 1990, *Astrophys. J. (Letters)*, **348**, L25-L28.

59. "Rapporteur's talk on Gamma-Ray Theory", Epstein, R. I., 1990 *High-Energy Astrophysics in the 21st Century*, ed. P. C. Joss (AIP, New York) p 405.

60. "Cyclotron Lines in γ-Ray Burst Spectra: Absorption in a Radiation-Driven Wind," Miller, G. S., Epstein, R. I., Nolta, J. P., & Fenimore, E. E., 1991, *Phys. Rev. Lett.*, **66**, 1395-1397.

61. "Mechanics and Energetics of Vortex Unpinning", Link, B. & Epstein, R. I. 1991, *Astrophys. J.*, **373**, 592-603.

62. "Soft X-ray Pulses from Neutron Star Glitches", Van Riper, K. A., Epstein, R. I. & Miller, G. S. 1991, *Astrophys. J. (Letters)*, **381**, L47-L50.

63. "An Upper Limit on the Luminosity of Cosmological Gamma-Ray Bursts" Fenimore, E.E., Epstein, R. I., Ho, C., Klebesadel, R. W., & Laros, J. 1991, in *Gamma-Ray Bursts, Proceedings of the Workshop, Oct. 16-18, 1991*, (University of Alabama, Huntsville) 108-112.

64. "Photon-Photon Optical Depth for Gamma-Ray Bursts" Fenimore, E.E., Epstein, R. I. & Ho, C., 1991, in *Gamma-Ray Bursts, Proceedings of the Workshop, Oct. 16-18, 1991*, (University of Alabama, Huntsville) 158-160.

65. "Relativistic Electron-Positron Beams From Oscillating Neutron Stars" Smith, I. & Epstein, R. I., 1992, in *Gamma-Ray Bursts: Observations, Analyses and Theories*, eds. C. Ho, R. Epstein, E. Fenimore (Cambridge U. Press, Cambridge) p. 29.

66. "Neutron Star Glitches and Gamma-Ray Bursts" Epstein, R. I. 1992, in *Gamma-Ray Bursts: Observations, Analyses and Theories*, eds. C. Ho, R. Epstein, E. Fenimore (Cambridge U. Press, Cambridge) p. 1.

67. "Cyclotron Lines in Gamma-Ray Burst Spectra: Absorption In A Radiation-Driven Wind" G. S. Miller, Epstein, R. I., J. Nolta, & E. E. Fenimore 1992, in *Gamma-Ray Bursts: Observations, Analyses and Theories*, eds. C. Ho, R. Epstein, E. Fenimore (Cambridge U. Press, Cambridge) p. 423.

68. "Electric Fields and Particle Acceleration from Neutron Star Oscillations " G. S. Miller & Epstein, R. I. 1992, in *Gamma-Ray Bursts: Observations, Analyses and Theories*, eds. C. Ho, R. I. Epstein, E. E. Fenimore (Cambridge U. Press, Cambridge) p. 24.

69. "Emission Geometry and the Cyclotron Up-Scattering Process: The Observers Personal Field Line" Fenimore, E. E., Epstein, R. I., Freeman, P., & Ho, C. 1992, in *Gamma-Ray Bursts: Observations, Analyses and Theories*, eds. C. Ho, R. I. Epstein, E. E. Fenimore (Cambridge U. Press, Cambridge) p. 305.

70. "Fundamental of the Cyclotron Up-Scattering Process" Ho, C., Epstein, R. I., & Fenimore, E. E. 1992, in *Gamma-Ray Bursts: Observations, Analyses and Theories*, eds. C. Ho, R. I. Epstein, E. E. Fenimore (Cambridge U. Press, Cambridge) p. 297.

71. "Dynamics of Vortices in Neutron Stars", Baym, G., Epstein, R. I., & Link, B., 1992, *Proc. Körber Symposium on Superfluid Helium 3 in Rotation, Espoo, Finland*, ed. M. Salomaa, *Physica B*, **178**, 1-12.

72. "Vortex Drag and the Spin-Up Time Scale for Pulsar Glitches", Epstein, R. I. & Baym, G., 1992, *Astrophys. J.*, **387**, 276-287.

73. "Superfluid Dynamics in the Inner Crust" Epstein, R. I., Link, B. & Baym, G., 1992, in *The Structure and Evolution of Neutron Stars*, eds. D. Pines, R. Tamagaki, & S. Tsuruta (Addison-Wesley, Redwood City) p. 156.

74. "Post-glitch Behavior of the Crab Pulsar: Evidence for External Torque Variations", Link, B., Epstein, R. I. & Baym, G., 1992, *Astrophys. J. (Letters)*, **390**, L21-L22.

75. "Necessity of Evolution in Cosmological γ-Ray Bursts," Fenimore, E. E., Epstein, R. I., Ho, C., Klebesadel, R. W., & Laros, J. 1992, *Nature*, **357**, 140-141.

76. "An Upper Limit on the Luminosity of Cosmological Gamma-Ray Bursts", Fenimore, E. E., Epstein, R. I., Ho, C., Klebesadel, R. W. & Laros, J. 1992, in *Gamma-Ray Bursts*, eds. W. S. Paciesas & G. J. Fishman (AIP, New York) p. 108.

77. "Pulsar Glitches as Probes of Neutron Star Interiors", Link, B., Epstein, R. I. & Van Riper, K.A., 1992 *Nature* **359**, 616-618.

78. "Superfluid Vortex Creep and Rotational Dynamics of Neutron Stars," Link, B., Epstein, R. I. & Baym, G., 1993, *Astrophys. J.*, **403**, 285-302.

79. "Relativistic Electron-Positron Beams in Gamma-Ray Bursters," Smith, I., & Epstein, R. I., 1993, *Astrophys. J.*, **410**, 315-322.

80. "Neutron Superfluid Dynamics," Epstein, R. I., Baym, G., & Link, B., 1993, in *Isolated Pulsars*, eds. K. A. Van Riper, R. I. Epstein & C. Ho (Cambridge U. Press, Cambridge), p. 10.

81. "Constraints on the Nuclear Matter Equation of State from Pulsar Glitches," Link, B., Epstein, R. I. & Van Riper, K. A., 1993, in *Isolated Pulsars*, eds. K. A. Van Riper, R. I. Epstein & C. Ho (Cambridge U. Press, Cambridge), p. 28.

82. "Prevalent Properties of Gamma Ray Burst Variability", Link, B., Epstein, R. I. & Priedhorsky, W. C., 1993 *Astrophys. J. (Letters)*, **408**, L81-L84.

83. "Gamma Ray Bursts in Active Galactic Nuclei", Epstein, R. I., Fenimore, E. E., Leonard, P. & Link, B., 1993 *Texas/PASCOS 92: Relativistic Astrophysics and Particle Cosmology*, eds. A. W. Akerlof & M. A. Srednicki; *Annals of the NY Academy of Science*, **688**, p. 565-572.

84. "Soft Gamma Repeater 1806-20: Weak Evidence for Periodicity Following the Bursts", Ulmer, A., Fenimore, E. E. , Epstein, R. I., Ho, C., Klebesadel, R. W., Laros, J. G., & Delgado, F. 1993 *Astrophys. J.*, **418**, 395-397.

85. "The Intrinsic Luminosity of γ-Ray Bursts and Their Host Galaxies", Fenimore, E. E. , Epstein, R. I., Ho, C., Klebesadel, R. W., Lacey, C. Laros, J. G., Meier, M., Strohmayer, T., Pendelton, G. Fishman, G. Kouveliotou, C. & Meegan, C. 1993 *Nature*, **366**, 40-42.

86. "The Escape of 100 MeV photons from Cosmological Gamma-Ray Bursts", Fenimore, E. E., Epstein, R. I. & Ho, C. 1993 *Astron. & Astrophys. Supp.*, **97**, 59-62.

87. "Frictional Heating and Neutron Star Thermal Evolution", Van Riper, K. A., Link, B. & Epstein, R. I. 1995 *Astrophys. J.*, **448**, 294-304.

88. "Observations of Laser-induced Fluorescent Cooling of a Solid", Epstein, R. I., Buchwald, M. I., Edwards, B. C., Gosnell, T. R. & Mungan, C. E. 1995 *Nature*, **377**, 500-503.

89. "Ekman Pumping in Astrophysical Bodies", Abney, M. & Epstein, R. I. 1996 *J. Fluid Mechanics*, **312**, 327-340.

90. "Thermally-driven Neutron Star Glitches", Link, B. & Epstein, R. I. 1996 *Astrophys. J.*, **457**, 844-854.

91. "Statistics of Gamma Ray Burst Temporal Asymmetry", Link, B. & Epstein, R. I. 1996 *Astrophys. J.*, **466**, 764-767.

92. "Earthquake-like Behavior in Soft Gamma Repeaters", Cheng, B. L, Epstein, R. I., Guyer, R. A. & Young, A. C. 1996 *Nature*, **382**, 518-520.

93. "Observational Constraints on the Internal Structure and Dynamics of the Vela Pulsar", Abney, M., Epstein, R. I. & Olinto, A. V., 1996 *Astrophys. J. (Letters)*, **466** L91-L94.

94. "Development of a Fluorescent Cryocooler", Edwards, B. C., Buchwald, M. I., Epstein, R., I., Gosnell, T. R. & Mungan, C. E. 1996 *Proceedings of the Ninth Annual American Institute of Astronautics & Aeronautics Utah State Conference on Small Satellites*, ed. F. Redd.

95. "The Los Alamos Solid-State Optical Refrigerator (LASSOR) Program" Edwards, B. C., Epstein, R. I., Gosnell, T. R., & Mungan, C. E., Mord, A., Eraker, J., & Buchwald, M. I. 1996 *ICES Conference Proceedings*.

96. "Electrochemical Purification of Heavy Metal Fluoride Glasses for Laser-Induced Fluorescent Cooling Applications", J. C. Fajardo, Sigel, G. H., Jr., Edwards, B. C., Epstein, R., I., Gosnell, T. R. & Mungan, C. E. 1997 *J. of Non-Crystalline Solids*, **213**, 95-100.

97. "The Los Alamos Solid-State Optical Refrigerator" Epstein, R. I., Edwards, B. C., Mungan, C. E., & Buchwald, M. I. 1997 *Cryocoolers 9*, (Plenum Press, New York), ed. R. G. Ross, pp 681-686.

98. "Spectroscopic Determination of the Expected Optical Cooling of Ytterbium-doped Glass" C. E. Mungan, M. I. Buchwald, B. C. Edwards, R. I. Epstein, & T.R. Gosnell 1997 *Mat. Sci. Forum*, **239-241**, 501-504.

99. "Are We Seeing Magnetic Axis Reorientation in the Crab and Vela Pulsars?" Link, B. & Epstein, R. I. 1997 *Astrophys. J. (Letters)*, **478**, L91-L94.

100. "Laser Cooling of a Solid by 16K Starting from Room-Temperature" Mungan, C. E., Buchwald, M. I, Edwards, B. C., Epstein, R. I. & Gosnell, T. R. 1997 *Phys. Rev. Letters*, **78**, 1030-1033.

101. "Thermally-driven Glitches", Link, B. & Epstein, R. I. 1996 *Amsterdam meeting proceedings*.

102. "Internal Laser Cooling of Yb^{3+}-Doped Glass Measured Between 100 and 300 K" Mungan, C. E., Buchwald, M. I, Edwards, B. C., Epstein, R. I. & Gosnell, T. R. 1997 *Appl. Phys. Lett.*, **71**, 1458-1460.

103. "Determination of Spectral Linewidths by Voigt Profiles in Yb^{+3}-doped Fluorozirconate Glasses" Lei, G., Anderson, J. E., Buchwald, M. I, Edwards, B. C. & Epstein, R. I. 1998 *Phys. Rev. B*, **57**, 7673.

104. "Development of the Los Alamos Solid-State Optical Refrigerator" Edwards, B. C., Buchwald, M. I, & Epstein, R. I. 1998 *Review of Scientific Instruments*, **69**, 2050-2055.

105. "Spectroscopic Evaluation of Yb^{3+}-Doped Glasses for Optical Refrigeration" Lei, G., Anderson, J. E., Buchwald, M. I, Edwards, B. C., Epstein, R. I., Murtagh, M. T., & Sigel, G. H., Jr., 1998 *IEEE Journal of Quantum Electronics*, **34** 1839-1845.

106. "Spectroscopic Properties of Yb3+-Doped Glasses Important for Optical Refrigeration" Lei, G., Buchwald, M. I, Edwards, B. C., & Epstein, R. I., 1998 *OSA Trends in Optics and Photonics Series*, vol. **19** *Advanced Solid State Lasers.*

107. "Starquake-induced Magnetic Field and Torque Evolution in Neutron Stars" Link, B., Franco, L. M., & Epstein, R. I., 1998 *Astrophys. J.*, **508**, 838-843.

108. "Starquake-induced Torque Evolution in Neutron Stars", Link, B., Franco, L. M. & Epstein, R. I., 1998, in *Frontiers of Science Ser. 24, Neutron Stars and Pulsars: Thirty Years after the Discovery: Proceedings of the International Conference on Neutron Stars and Pulsars*, ed. N. Shibazaki *et al.* (Tokyo: Universal Academy Press), 149.

109. "Laser-Induced Fluorescent Cooling of Rare-earth-doped Fluoride Glasses" Murtagh, M. T., Sigel, G. H., Fajardo, J. C., Jr., Edwards, B. C., & Epstein, R., I., 1999 *J. of Non-Crystalline Solids*, **253**, 50-57.

110. "Starquakes in Neutron Stars" Franco, L. M., Link, B., & Epstein, R. I., 1999, in *ASP Conf. Ser. 195, Highly Energetic Physical Processes and Mechanisms for Emissions from Astrophysical Plasmas*, ed. P.C.H. Martens & S. Tsuruta (San Francisco: ASP)

111. "Quaking Neutron Stars" Franco, L. M., Link, B., & Epstein, R. I., 1999, in *The Neutron Star-Black Hole Connection*, ed. C. Kouveliotou, J. van Paradijs and J. Ventura (Dordrecht: Kluwer)

112. "Pulsar Constraints on Neutron Star Structure and Equation of State" Link, B., Epstein, R. I., & Lattimer, J. M., 1999 *Phys. Rev. Lett.*, **83**, 3362-3365.

113. "Galactic Ultra-High-Energy Cosmic Rays" Olinto, A. V., Epstein, R. I. & Blasi, P., 1999, *Proceedings of 26th International Cosmic Ray Conference*, Salt Lake City, Utah, **4**, 361.

114. "Compositional investigation of Yb^{3+}-doped heavy metal fluoride glasses for laser-induced fluorescent cooling applications" Murtagh, M. T., Sigel, G. H., Fajardo, J. C., Jr., Edwards, B. C., & Epstein, R., I., 1999 *J. of Non-Crystalline Solids*, **257**, 207-211.

115. "Starquakes in Neutron Stars and the Observable Consequences" Franco, L. M., Link, B., & Epstein, R. I., 1998 *Proceedings of the 19th Texas Symposium on Relativistic Astrophysics and Cosmology*, ed. J. Paul, T. Montmerle, and E. Aubourg (Saclay: CEA)

116. "Demonstration of a Solid-State Optical Cooler: An Approach to Cryogenic Refrigeration" Edwards, B. C., Anderson, J. E., Epstein, R. I., Mills, G. L., Mord, A. J., 1999, *J. Applied Phys.*, **86**, 6489-6493.

117. "Neutron Starquakes" Franco, L. M., Epstein, R. I., & Link, B., 1999, *Proceedings of the Workshop Small Missions for Energetic Astrophysics: Ultraviolet through Gamma-Ray*, Los Alamos, NM, ed. S. P. Brumby (New York: AIP), pp 75-81.

118. "Quaking Neutron Stars" Franco, L. M., Link, B., & Epstein, R. I., 2000, *Astrophys. J.*, **543**, 987-994.

119. "Ultra-High-Energy Cosmic Rays from Young Neutron Star Winds" Blasi, P., Epstein, R. I. & Olinto, A. V., 2000, *Astrophys. J. (Letters)*, **533**, L123-L126.

120. "Starquake-Induced Glitches in Pulsars" Epstein, R. I. & Link, B., 2000, *Proceedings of the 1999 Pacific Rim Conference on Stellar Astrophysics* eds. K. S. Cheng, H. F. Chau, K. L. Chan & K. C. Leung (Dordrecht: Kluwer) pp 95-103.

121. "Probing the Neutron Star Interior with Glitches" Link, B., Epstein, R. I. & Lattimer, J. M., 2000, *Proceedings of the 1999 Pacific Rim Conference on Stellar Astrophysics* eds. K. S. Cheng, H. F. Chau, K. L. Chan & K. C. Leung (Dordrecht: Kluwer) pp 117-123.

122. "Standard and Non-Standard solar Models" Guzik, J. A., Neuforge-Verheecke, C., Young, A. C., Epstein, R. I., Poulin, F. M., & Schissel, J. R., 2001, *Solar Physics*, **200**, 305-321.

123. "Solid-State Optical Cryocooler Development" Edwards, B. C., Anderson, J. E., Epstein, R. I., Hoyt, C. W. & Sheik-Bahae, M., 2001, in *Cryocoolers 11* ed. R. G. Ross (Plenum Press, New York).

124. "Observation of Anti-Stokes Fluorescent Cooling in Thulium-doped Glass" Hoyt, C. W., Sheik-Bahae, M., Epstein,, R. I., Edwards, B. C., & Anderson, J. E., 2000, *Phys. Rev. Lett.*, **85**, 3600-3603.

125. "Precession Interpretation of the Isolated Pulsar PSR B1828-11" Link, B., & Epstein, R. I., 2001, *Astrophys. J.*, **556**, 392-398.

126. "Measurements of Optical Refrigeration in Ytterbium-Doped Crystals" Epstein, R. I., Brown, J. J., Edwards, B.C. & Gibbs, A., 2001, *J. Applied Phys.* **90**, 4815-4819.

127. "Prospects for Laser Cooling of Semiconductors" Sheik-Bahae, M., Hasselbeck, M. P. & Epstein, R. I., 2002, *Proceedings of CLEO/QELS* Long Beach, California.

128. "Optical Cooling in Thulium-doped Glass" Hoyt, C. W., Sheik-Bahae, M., Hasselbeck, M. P. Epstein, R. I., Greenfield, S., Thiede, J., Distel, J. & Valencia, J., 2002, submitted to *J. Optical Soc. Amer.* **B**.

Patents

1. "Fluorescent Refrigeration" Epstein, R. I., Edwards, B. C., Buchwald, M. I. & Gosnell, T. R., 1995, U.S. Patent #5,447,032.

2. "Optical Refrigerator Using Reflectivity Tuned Dielectric Mirrors" Edwards, B. C., Buchwald, M. I. & Epstein, R. I., 2000, U.S. Patent #6,041,610.

3. "Semiconductor-Based Optical Refrigerator" Epstein, R. I. Edwards, B. C., & Sheik-Bahae, M., 2002, U.S. Patent #6,378,321.

Books Edited

1. *Magnetospheric Phenomena in Astrophysics* 1986, Proceedings of the Los Alamos workshop held in Taos, NM 1984 (AIP, New York), editors R. I. Epstein & W. C. Feldman.

2. *Gamma-Ray Bursts: Observations, Analyses and Theories* 1992, Proceedings of the Los Alamos workshop held in Taos, NM, August 1991 (Cambridge Univ. Press, Cambridge), editors C Ho, R. I. Epstein & E. E. Fenimore.

3. *Isolated Pulsars* 1993, Proceedings of the Los Alamos workshop held in Taos, NM, February 1992 (Cambridge Univ. Press, Cambridge), editors K. A. Van Riper, R. I. Epstein & C. Ho.