CURRICULUM VITAE: **ROBERT ROSNER**

Institutional Address:

Enrico Fermi Institute, University of Chicago, 5640 S. Ellis Ave., Chicago, IL 60637
Tel.: 1-773-702-0560; email: r-rosner@uchicago.edu; Fax: 1-773-834-3230

Education:

Brandeis University, B.A. (summa), Physics (1969); Harvard University, Ph.D., Physics (1976)

Positions Held:

1977-78	Instructor, Astronomy Department, Harvard University
1978-83	Assistant Professor of Astronomy, Harvard University
1983	Visiting Professor, Dept. of Astronomy, UC Berkeley (Spring)
1983-86	Associate Professor of Astronomy, Harvard University
1986-87	Lecturer in Astronomy, Harvard University
1986-90	Astrophysicist, Smithsonian Astrophysical Observatory
1987-	Professor, Dept. of Astronomy & Astrophysics, Enrico Fermi Institute, and the College, The University of Chicago
1991-97	Chairman, Dept. of Astronomy & Astrophysics, The University of Chicago
1997-02	Director, Ctr. for Astrophysical Thermonuclear Flashes, The University of Chicago
1998-	William E. Wrather Distinguished Service Professor, The University of Chicago
1999-	Senior Fellow, Computations Institute, The University of Chicago
2000-	Professor, Dept. of Physics, The University of Chicago
2002-05	Chief Scientist, Argonne National Laboratory (ANL)
2002-05	Associate Laboratory Director for Physical, Biological, & Computing Sciences, ANL
2004	Rothschild Visiting Professor, Newton Institute for Mathematical Sciences, University of Cambridge, UK (Autumn)
2004	Visiting Fellow, Clare Hall, Cambridge University, UK (Autumn)
2005-	Life Member, Clare Hall, Cambridge University, UK
2005-09	Director, Argonne National Laboratory
2006-09	President, UChicago/Argonne LLC
2007-09	Chairman, DoE National Laboratory Directors' Council
2009-10	Visiting Professor, Stanford University

Professional Societies: American Physical Society (APS), American Astronomical Society (AAS), American Geophysical Union (AGU), American Nuclear Society (ANS), Economic Club of Chicago, International Astronomical Union (IAU), Society for Industrial and Applied Mathematics (SIAM).

Awards and Honors: Woodrow Wilson Fellow (1969); Fellow, American Physical Society (1988); Parker Lecturer (AAS/Solar Physics Division, Spring 1995); Rosseland Lecturer (Univ. of Oslo, 1998); Gordon Bell Prize (Supercomputing 2000); Thompson Lecturer (National Center for Atmospheric Research, 2001); Fellow, American Academy of Arts & Sciences (2001); ISI 'Highly Cited Researcher' (2002); Foreign Member, Norwegian Academy of Science and Letters (2004); Rothschild Visiting Professor (Newton Institute for Mathematical Sciences, Univ. of Cambridge, 2004); ISI 'Highly Cited Researcher'; Honorary Doctorate, Illinois Institute of Technology (2006); Honorary Doctorate, Northern Illinois University (2007).

Synergistic activities: Member, National Academy of Sciences (NAS)/National Research Council (NRC) Subcommittee on Space & Astrophysical Plasmas (1983-4); member, National Center for Atmospheric Research (NCAR)/High Altitude Observatory (HAO) Visiting Committee; *Geophys.*

Ap. Monographs Editorial Board; member, AAS/High Energy Astrophysics Division (HEAD) Executive Committee (1986-88); member, Associated Universities for Research in Astronomy (AURA) Visiting Committee (1986-8); member, Space Science Board/CSSP (1986-90); *Solar Physics* Editorial Board (1987-2002); chair, NAS/NRC Committee on Solar Physics (1987-89); member, NAS Committee on Plasma Science (1989-1991); chair, NAS/Astronomy Survey Committee Solar Physics Panel (1989-1991); member, AAS/Solar Physics Division (SPD) Executive Committee (1989-1992); member, UCAR/NCAR Scientific Programs Evaluation Committee [SPEC] (1990-91); member, APS/Astrophysics Division Executive Committee (1990-1992); member, USRA/ Astrophysics Science Panel (1992-1995); member, NCAR Director's Advisory Council (1993); member, Visiting Committee, Harvard-Smithsonian CfA (1993-1998); chair, Visiting Committee, Harvard-Smithsonian CfA (1995); trustee, *Adler Planetarium* (1990-1998); member-at-large, AURA Board (1994-97); member, NASA Information Systems and Science Operations Working Group (1996-8); member, AURA Board of Directors (1997-9); member, NAS/ BPA/Committee on Astronomy & Astrophysics "McCray" Panel (1994); chair, Nominating Committee, Astrophysics Division, APS (1994-5); member, NAS Committee on Astronomy & Astrophysics (1996-8); member, NAS "Solar Physics from Ground" ("Parker") Committee (1997-8); member, NAS/NRC Committee on Computational Physics (1997-8); Steering Group member of NAS/NRC Fusion Science Assessment Committee [FuSAC] (1999-2000); member, NAS/NRC Committee on Plasma Sciences (1999-2000); member and co-chair, HAO/NCAR Scientific Advisory Committee (1999-2009); member, Evaluation Committee, Astrophysikalisches Institut Potsdam, German Research Council (1999); member, Univ. of Arizona (Tucson) Physics Dept. Visiting Committee (May 2000); member, NSF Atmospheric Sciences (ATM)/UCAR/NCAR (ULAFOS) Section Committee of Visitors (August 2000); member, Princeton Plasma Physics Laboratory Plasma Science and Technology Program Advisory Committee (Sept. 2000); member, NAS Committee on Solar and Space Physics (2000-2); member, Fachbeirat, Astrophysikalisches Institut Potsdam, Potsdam, Germany (2001-2009); member, Scientific & Technical Advisory Committee (STAC), Argonne National Laboratory (2001-2); member, NAS Committee on High Energy Density Physics (2001-2); member, Space Studies Board (2001-2002); member, Fachbeirat, Max Plank Institut für Sonnensystemforschung, Lindau, Germany (2001-2011); member, External Advisory Committee, National Ignition Facility, Lawrence Livermore National Laboratory (2003-2009); member, Steering Committee of National Task Force on High Energy Density Physics (2004); chair, ESSL/National Center for Atmospheric Research (NCAR) Scientific Advisory Committee (2005-2008); member, Economic Club of Chicago (2006-present); chair, Capability Review of Nuclear Physics, Astrophysics and Cosmology, and Particle Physics, Los Alamos National Laboratory (2007); member, NAS/NRC Committee on Evaluation of Quantification of Margins and Uncertainties (QMU) Methodology Applied to the Certification of the Nation's Nuclear Weapons Stockpile (2007-8); member, International Advisory Board of Karlsruhe Institute of Technology (2007-2008); chair, Nuclear Physics, Astrophysics, Cosmology, and Particle Physics (NACP) External Review Committee for Los Alamos National Security (LANS) LLC (2007); member, National Ignition Facility, Physical Sciences, and Weapon & Complex Integration Directorate Review Committees (DRCs) for Lawrence Livermore National Laboratory (2008-); [elected] member of Helmholtz Gemeinschaft Senate (2008-present); member, Steering Committee of Energy Security, Innovation & Sustainability Initiative of the Council on Competitiveness (2008-present); member, APS Physics Policy Committee (2009-2011); member and chair, Strategic Research Advisory Board, Austrian Institute of Technology (2009-2013).

Major University of Chicago Activities: Chairman, Provost's Working Group on High-Performance Computing (1988); chairman, Provost's Committee on University-Argonne National Laboratory Relations (1992-3); chairman, Division of Physical Science Committee on Computational Science at The University of Chicago (1993-4); chairman, Committee on the University Calendar (1997); elected member, College Council (1997-9); member, Computations Institute executive committe (1999-2005); member, Science Council (2003-2009); member, Physical Sciences

Division Visiting Committee (2006-present); member, Biological Sciences Division Faculty Science Committee (2009-present).

General Fields of Research: My research is mostly in the areas of plasma astrophysics and astrophysical fluid dynamics and magnetohydrodynamics (including especially solar and stellar magnetic fields); high energy density physics; boundary mixing instabilities; combustion modeling; applications of stochastic differential equations and optimization problems; and inverse methods. I have continued research interest overlap with the DOE/ASCI Flash Center at Chicago (which I led for its first five years); this Center has been a pioneer in the development of computational astrophysics codes with broad applicability to other disciplines; and I have been closely involved in that Center's research activities in flame modeling and interfacial mixing. I have also been involved with a Wisconsin/Chicago/Princeton NSF-supported Physics Frontier Center focusing on problems lying at the boundary of astrophysics and laboratory plasma physics, mostly in areas related to magnetohydrodynamic instabilities in low Prandtl number fluids (such as liquid metals, or stellar interiors).

In addition I have over the past 7+ years – through my work at Argonne National Laboratory – gotten heavily involved in issues related to science and technology policy and management, especially in areas related to energy, climate, and modeling and simulations, national security, as well as (via my chairmanship of the Department of Energy National Laboratory Directors' Council as well as my work with the Council on Competitiveness) with national policy issues related to STEM workforce development, nuclear and renewable energy technology development, and the role of national laboratories in scientific, technological, and industrial competitiveness, including the relationship between national laboratories, academia, and industry.

PhD Students (graduated): Alex Alexakis (Visiting Professor, Ecole Normal Superior, Paris, France), Joseph Biello (Associate Professor, UC Davis), Jay Bookbinder (Senior Scientist/Harvard-Smithsonian), Alvaro Caceres (Research Scientist, Argonne National Laboratory), Jonathan Dursi (Postdoctoral Fellow, Canadian Institute for Theoretical Astrophysics), Dimitris Giannakis (Postdoc w/ Prof. Andrew Majda/Courant Institute as of 9/2009), Robert Harmon (Associate Professor, Ohio Wesleyan University), Scott Horner (Senior Staff Physicist, Lockheed Martin/Palo Alto), William Jeffrey (President and CEO of HRL Laboratories [the former Hughes Research Labs]), Vinay Kashyap (Astrophysicist, Harvard-Smithsonian), E.-J. Kim (Lecturer, University of Sheffield (UK)), Dawn Lenz (Staff Scientist, RSI, Inc. (Boulder, CO)), Y.-Q. Lou (Professor, Tsinghua University, Beijing), Andrea Mignone ('ricercatore' [permanent staff member], Observatory of Turin, Italy), Giovanni Peres (Professor, Univ. of Palermo), Bruce Popp (Principal, Bien Fait Translations), Jürgen Schmitt (Professor, Univ. of Hamburg), Louis Tao (Professor, Peking Univ.), Joseph Werne (Senior Research Scientist, CoRA/Northwest Research Associates, Boulder, CO), Y.N. Young (Assistant Professor, New Jersey Institute of Technology)

PhD Students (in progress): Elizabeth Hicks (Astronomy & Astrophysics)

Postdoctoral Fellows (past): Stanislaw Boldyrev (Assistant Professor, Univ. of Wisconsin/Madison), Alan Calder (Research Professor, SUNY/Stoney Brook), Fausto Cattaneo (Associate Professor [Astrophysics], UChicago), Edward E. DeLuca (Senior Scientist, Smithsonian Astrophysical Observatory), Y. Du (financial industry), Thierry Emonet (Assistant Professor, Yale University), Shaddia R. Habbal (Professor [Astronomy], University of Hawaii), Timur Linde (financial industry), Christof Litwin (Senior Research Scientist, UChicago [deceased]), Andrea Malagoli (Senior financial analyst, private industry), Leonid Malyshkin (Research Associate, UChicago), Kevin Olson (Staff Scientist, Drexel University), Kanaris Tsinganos (Professor, Univ. of Athens, Greece), Dmitri Uzdensky (Member of Staff, Princeton Plasma Physics Laboratory; Assistant Professor, Univ. of Colorado/Boulder [fall 2009])

1. Refereed Publications Only

1. *Determination of Half–life of Excited States of Te125, I125, and Sb125* Hohenemser, C., & Rosner, R. 1968, Nuclear Phys. A, 109, 364-368.

2. *Hydrostatic and Dynamic Models of Solar Coronal Holes* Rosner, R., & Vaiana, G.S. 1977, ApJ, 216, 141-157.

3. *Dynamics of the Quiescent Solar Corona* Rosner, R., Tucker, W.H., & Vaiana, G.S. 1978, ApJ, 220, 643-665.

4. *Heating of Coronal Plasma by Anomalous Current Dissipation* Rosner, R., Golub, L., Coppi, B., & Vaiana, G.S. 1978, ApJ, 222, 317-332.

5. *Cosmic Flare Transients: Constraints upon Models for Energy Storage and Release Derived from the Event Frequency Distribution* Rosner, R., & Vaiana, G.S. 1978, ApJ, 222, 1104-1108.

6. *Random Capacitance Equation* Rosner, R., & Barakat, R. 1978, J. Phys. D, 11, 1481-1486.

7. *Structured Coronae of Accretion Disks* Galeev, A.A., Rosner, R., & Vaiana, G.S. 1979, ApJ, 229, 318-326.

8. *Detection of Soft X–Rays from Alpha Lyrae and Eta Bootis with an Imaging X–Ray Telescope* Topka, K., Fabricant, D., Harnden, Jr., F.R., Gorenstein, P., & Rosner, R. 1979, ApJ, 229, 661-668.

9. *On the Origins of Solar Magnetic Fields* Layzer, D., Rosner, R., & Doyle, H.T. 1979, ApJ, 229, 1126-1137.

10. *Stellar Luminosity Stability: Luminosity Variations and Light Curve Period Changes in BY Draconis Stars* Hartmann, L., & Rosner, R. 1979, ApJ, 230, 802-814.

11. *Coronae of Rotating Interstellar Clouds* Rosner, R., & Hartquist, T. 1979, ApJ Letters, 231, L83-L86.

12. *Discovery of an X–Ray Star Association in VI Cygni [Cygnus OB2]* Harnden, Jr., F.R., Branduardi, G., Elvis, M., Gorenstein, P., Grindlay, J., Pye, J.P., Rosner, R., Topka, K., & Vaiana, G.S. 1979, ApJ Letters, 234, L51-L54.

13. *Thermal Instabilities in Magnetically Confined Plasmas: Solar Coronal Loops* Habbal, S., & Rosner, R. 1979, ApJ, 234, 1113-1121.

14. *Magnetic Fields and Coronal Heating* Golub, L., Maxson, C.W., Rosner, R., Serio, S., & Vaiana, G.S. 1980, ApJ, 238, 343-348.

15. *EINSTEIN X–Ray Observations of Proxima Centauri and the Surrounding Region* Haisch, B.M., Linsky, J.L., Harnden, Jr., F.R., Rosner, R., Seward, F.D., & Vaiana, G.S. 1980, ApJ Letters, 242, L99-L103.

16. *Solar Magnetic Fields: The Generation of Emerging Flux* Golub, L., Rosner, R., Vaiana, G.S., & Weiss, N.O. 1981, ApJ, 243, 309-316.

17. *Closed Coronal Structures. II. Generalized Hydrostatic Model* Serio, S., Peres, G., Vaiana, G.S., Golub, L., & Rosner, R. 1981, ApJ, 243, 288-300.

18. *Dynamics of Coronal Structures: Magnetic Field-Related Heating and Loop Energy Balance* Galeev, A.A., Rosner, R., Serio, S., & Vaiana, G.S. 1981, ApJ, 243, 301-308.

19. *Results from an Extensive EINSTEIN Stellar Survey* Vaiana, G.S., Cassinelli, J.P., Fabbiano, G., Giacconi, R., Golub, L., Gorenstein, P., Haisch, B.M., Harnden, Jr., F.R., Johnson, H.M., Linsky, J.L., Maxson, C.W., Mewe, R., Rosner, R., Seward, F., Topka, K., & Zwaan, C. 1981, ApJ, 245, 163-182.

20. *The Bounded Quartic Oscillator* Barakat, R., & Rosner, R. 1981, Phys. Letters, 83A, 149-150.

21. *On the Spectrum of Turbulent Magnetic Fields* Knobloch, E., & Rosner, R. 1981, ApJ, 247, 300-311.

22. *Closed Coronal Structures: III. Comparison of Static Models with X–ray, EUV, & Radio Observations* Pallavicini, R., Peres, G., Serio, S., Vaiana, G.S., Golub, L., & Rosner, R. 1981, ApJ, 247, 692-706.

23. *Relations among Stellar X–ray Emission Observed from EINSTEIN, Stellar Rotation and Bolometric Luminosity* Pallavicini, R., Golub, L., Rosner, R., Vaiana, G.S., Ayres, T., & Linsky, J.L. 1981, ApJ, 248, 279-290.

24. *The Stellar Contribution to the Galactic Soft X–ray Background* Rosner, R., Avni, Y., Bookbinder, J., Giacconi, R., Golub, L., Harnden, Jr., F.R., Maxson, C.W., Topka, K., & Vaiana, G.S. 1981, ApJ Letters, 249, L5-L9.

25. *The Cool Half of the HR Diagram in X–rays* Ayres, T.R., Linsky, J.L., Vaiana, G.S., Golub, L., & Rosner, R. 1981, ApJ, 250, 293-299.

26. *X–ray Emission from Of Stars and OB Supergiants* Cassinelli, J.P., Waldron, W.L., Sanders, W.T., Harnden Jr., F.R., Rosner, R., & Vaiana, G.S. 1981, ApJ, 250, 677-686.

27. *Magnetic Fields in Late–type Stars* Knobloch, E., Rosner, R., & Weiss, N.O. 1981, MNRAS (Communications), 197, 45P-49P.

28. *Coronal Closed Structures: IV. Hydrodynamical Stability and Response to Heating Perturbations* Peres, G., Rosner, R., Serio, S., & Vaiana, G.S. 1982, ApJ, 252, 791-799.

29. *EINSTEIN Detection of X–rays from the Alpha Cen System* Golub, L., Harnden, Jr., F.R., Pallavicini, R., Rosner, R., & Vaiana, G.S. 1982, ApJ, 253, 242-247.

30. *A Magnitude–Limited Stellar X–Ray Survey and the F Star X–Ray Luminosity Function* Topka, K., Avni, Y., Golub, L., Gorenstein, P., Harnden, Jr., F.R., Rosner, R., & Vaiana, G.S. 1982, ApJ, 259, 677-692.

31. *On Perturbations of Magnetic Field Configurations* Rosner, R., & Knobloch, E. 1982, ApJ, 262, 349-357.

32. *Magnetic Field–Related Heating Instabilities in the Surface Layers of the Sun and Stars* Ferrari, A., Rosner, R., & Vaiana, G.S. 1982, ApJ, 263, 944-951.

33. *Doubly-diffusive Magnetic Buoyancy Instability in the Solar Interior* Schmitt, J.H.M.M., & Rosner, R. 1983, ApJ, 265, 901-924.

34. *Thermal Conduction and Heating by Non–Thermal Electrons in the X–ray Halo of M87* Tucker, W.H., & Rosner, R. 1983, ApJ, 267, 547-550.

35. *Closed Coronal Structures: V. Gasdynamic Models of Flaring Loops And Comparison With SMM Observations* Pallavicini, R., Peres, G., Serio, S., Vaiana, G.S., Acton, L., Leibacher, J., & Rosner, R. 1983, ApJ, 270, 270-287.

36. *EINSTEIN Observations of X–ray Emission from A Stars* Golub, L., Harnden, Jr., F.R., Maxson, C.W., Rosner, R., Vaiana, G.S., Cash, Jr., W., & Snow, Jr., T.R. 1983, ApJ, 271, 264-270.

37. *Magnetic Field Instabilities in Accretion Disks* Stella, L., & Rosner, R. 1984, ApJ, 277, 312-321.

38. *A Wind–Type Model for the Generation of Astrophysical Jets* Ferrari, A., Habbal, S., Rosner, R., & Tsinganos, K. 1984, ApJ Letters, 277, L35-L39.

39. *On the Topological Stability of Magnetostatic Equilibria* Tsinganos, K., Distler, J., & Rosner, R. 1984, ApJ, 278, 409-419.

40. *The Overshoot Region at the Bottom of the Solar Convection Zone* Schmitt, J.H.M.M., Rosner, R., & Bohn, U.H. 1984, ApJ, 282, 316-329.

41. *The Appearance of Magnetic Flux on the Surfaces of the Early Main–Sequence F Stars* Giampapa, M.S., & Rosner, R. 1984, ApJ Letters, 286, L19-L22.

42. *Temporal Evolution of the Solar Wind and the Formation of a Standing Shock* Habbal, S.R., & Rosner, R. 1984, JGR, 89, 10645-10657.

43. *The X–ray Corona of Procyon* Schmitt, J.H.M.M., Harnden, Jr., F.R., Peres, G., Rosner, R., & Serio, S. 1985, ApJ, 288, 751-755.

44. *An EINSTEIN Observatory Survey of Late–Type Stars With Shallow Convection Zones* Schmitt, J.H.M.M., Golub, L., Harnden, Jr., F.R., & Rosner, R. 1985, ApJ, 290, 307-320.

45. *MHD Thermal Instabilities in Inhomogeneous Atmospheres* Bodo, G., Ferrari, A., Massaglia, S., & Rosner, R. 1985, ApJ, 291, 798-805.

46. *Propagation of Nonlinear Radiatively–damped Longitudenal Waves Along Magnetic Flux Tubes* Herbold, G., Ulmschneider, P., Spruit, H.C., & Rosner, R. 1985, A&A, 145, 157-169.

47. *On Wind-type Flows in Astrophysical Jets: I. The Initial Relativistic Acceleration* Ferrari, A., Trussoni, E., Rosner, R., & Tsinganos, K. 1985, ApJ, 294, 397-418.

48. *EINSTEIN Observatory X–ray Survey of the Pleiades: The Dependence of X–ray Luminosity on Stellar Age* Micela, G., Sciortino, S., Serio, S., Vaiana, G.S., Golub, L., Harnden, Jr., F.R., & Rosner, R. 1985, ApJ, 292, 171-180.

49. *On the Solution Topologies of Polytropic Winds* Bailyn, C., Rosner, R., & Tsinganos, K. 1985, ApJ, 296, 696-709.

50. *Differential Rotation and Magnetic Torques in the Interior of the Sun* Rosner, R., & Weiss, N.O. 1985, Nature, 317, 790-792.

51. *The Equilibrium Structure of Thin Magnetic Flux Tubes. I.* Ferrari, A., Massaglia, S., Kalkofen, W., Rosner, R., & Bodo, G. 1985, ApJ, 298, 181-189.

52. *On Magnetohydrodynamic Thermal Instabilities in Magnetic Flux Tubes* Massaglia, S., Ferrari, A., Bodo, G., Kalkofen, W., & Rosner, R. 1985, ApJ, 299, 769-780.

53. *X–ray Spectra and the Rotation-Activity Connection of RS Canum Venaticorum Binaries* Majer, P., Schmitt, J.H.M.M., Golub, L., Harnden, Jr., F.R., & Rosner, R. 1986, ApJ, 300, 360-373.

54. *On Wind-Type Flows in Astrophysical Jets. II. Propagation Outside the Nucleus, and the Case of M87* Ferrari, A., Trussoni, E., Rosner, R., & Tsinganos, K. 1986, ApJ, 300, 577-590.

55. *On Magnetic Field Stochasticity and Non–thermal Line Broadening in Solar Flares* Antonucci, E., Rosner, R., & Tsinganos, K. 1986, ApJ, 301, 975-980.

56. *The Equilibrium Structure of Thin Magnetic Flux Tubes. II.* Kalkofen, W., Rosner, R., Ferrari, A., & Massaglia, S. 1986, ApJ, 304, 519-525.

57. *Intermittent Stellar Wind Accretion and the Long Term Activity of Pop. I Binary Systems Containing an X–ray Pulsar* Stella, L., White, N.E., & Rosner, R. 1986, ApJ, 308, 669-679.

58. *Neural Network Processing as a Tool for Function Optimization* Jeffrey, W., & Rosner, R. 1986, AIP Conf. Proc., 151, 241-246.

59. *The Damping of the Alfvén Mode in Stochastic Astrophysical Fluids* Lou, Y.Q., & Rosner, R. 1986, ApJ, 309, 874-882.

60. *On Strategies for Inverting Remote Sensing Data* Jeffrey, W., & Rosner, R. 1986, ApJ, 310, 463-472.

61. *Optimization Algorithms: Simulated Annealing and Neural Network Processing* Jeffrey, W., & Rosner, R. 1986, ApJ, 310, 473-481.

62. *Current-Driven MHD Thermal Instabilities in Sheared Fields* Bodo, G., Ferrari, A., Massaglia, S., & Rosner, R. 1987, ApJ, 313, 432-439.

63. *A Model for Collimated Outflows in Molecular Clouds and the Case of HH 7-11* Silvestro, G., Ferrari, A., Rosner, R., Trussoni, E., & Tsinganos, K. 1987, Nature, 325, 228-230.

64. *Variability Analysis in Low Count Rate Sources* Collura, A., Maggio, A., Sciortino, S., Serio, S., Vaiana, G.S., & Rosner, R. 1987, ApJ, 315, 340-348.

65. *A Computational Code for Two–dimensional Unsteady Magnetohydrodynamics by the Method of Characteristics* Lou, Y.Q., Rosner, R., & Ulmschneider, P. 1987, ApJ, 315, 349-370.

66. *On the Generation of MHD Waves in a Stratified and Magnetized Fluid. I. Vertical Propagation* Musielak, Z.E., & Rosner, R. 1987, ApJ, 315, 371-384.

67. *EINSTEIN Observatory Survey of X–ray Emission from Solar-type Stars: The Late F and G Stars* Maggio, A., Sciortino, S., Vaiana, G.S., Majer, P., Bookbinder, J., Golub, L., Harnden, Jr., F.R., & Rosner, R. 1987, ApJ, 315, 687-699.

68. *On the Thermal Instability of Galactic and Cluster Halos* Malagoli, A., Rosner, R., & Bodo, G. 1987, ApJ, 319, 632-636.

69. *Explosive Chromospheric Instability in Hydromagnetic Loop Flare Models: The Problem and Its Cure* Peres, G., Serio, S., & Rosner, R. 1987, Il Nuovo Cim., 99B, 15-28.

70. *Non–local Thermal Conduction in Hydrodynamic Loop Flare Models* Peres, G., Rosner, R., & Serio, S. 1987, Il Nuovo Cim., 99B, 29-44.

71. *Simulations of the Ca XIX Spectral Emission from a Flaring Solar Coronal Loop. I. Thermal Case* Antonucci, E., Dodero, M.A., Peres, G., Serio, S., & Rosner, R. 1987, ApJ, 322, 522-543.

72. *The Stellar Composition of X–ray Surveys from the EINSTEIN Observatory* Favata, F., Rosner, R., Sciortino, S., & Vaiana, G.S. 1988, ApJ, 324, 1010-1015.

73. *On Wind–Type Flows in Astrophysical Jets. III. Temporal Evolution of Perturbations and the Formation of Shocks* Trussoni, E., Ferrari, A., Rosner, R., & Tsinganos, K. 1988, ApJ, 325, 417-441.

74. *The Stellar X-ray Database of EINSTEIN Image Observations* Micela, G., Maggio, A., Sciortino, S., Vaiana, G.S., Harnden, Jr., F.R., Rosner, R., & Schmitt, J.H.M.M. 1988, Mem. Soc. Astron. Ital., 59, 465-470.

75. *The EINSTEIN Observatory Survey of Stars in the Hyades Cluster Region* Micela, G., Sciortino, S., Vaiana, G.S., Schmitt, J.H.M.M., Stern, R.A., Harnden, Jr., F.R., & Rosner, R. 1988, ApJ, 325, 798-819.

76. *Hydrodynamic Modeling of an X–ray Flare on Proxima Centauri Observed by the EINSTEIN Telescope* Reale, F., Peres, G., Serio, S., Rosner, R., & Schmitt, J.H.M.M. 1988, ApJ, 328, 256-264.

77. *On the Generation of MHD Waves in a Stratified and Magnetized Fluid. II. MHD Energy Fluxes for Late-Type Stars* Musielak, Z.E., & Rosner, R. 1988, ApJ, 329, 376-383.

78. *The Equilibrium Structure of a Thin Magnetic Flux Tube: III. The Effects of Molecular CO Absorption* Massaglia, S., Bodo, G., Kalkofen, W., & Rosner, R. 1988, ApJ, 333, 925-935.

79. *Generation of Flux Tube Waves in Stellar Convection Zones. I. Longitudinal Tube Waves Driven by External Turbulence* Musielak, Z.E., Rosner, R., & Ulmschneider, P. 1989, ApJ, 337, 470-484.

80. *Variability of X–ray Emission from OB Stars* Collura, A., Serio, S., Vaiana, G.S., Harnden, Jr., F.R., & Rosner, R. 1989, ApJ, 338, 296-307.

81. *Nearby and bright star samples from the EINSTEIN Observatory stellar X-ray catalog* Sciortino, S., Favata, F., Micela, G., Vaiana, G.S., Harnden, Jr., F.R., Rosner, R., & Schmitt, J.H.M.M. 1989, Mem. Soc. Astron. Ital., 60(1-2), 125-130.

82. *Nonlinear Parker Instability of Isolated Magnetic Flux in a Plasma* Shibata, K., Tajima, T., Matsumoto, R., Horiuchi, T., Hanawa, T., Rosner, R., & Uchida, Y. 1989, ApJ, 338, 471-492.

83. *On Magnetic Fields, Heating and Thermal Conduction in Halos, and the Suppression of Cooling Flows* Rosner, R., & Tucker, W.H. 1989, ApJ, 338, 761-769.

84. *On the Stability of Magnetized Rotating Jets: The Axisymmetric Case* Bodo, G., Rosner, R., Ferrari, A., & Knobloch, E. 1989, ApJ, 341, 631-649.

85. *Finite Amplitude Stability of a Plane Shear Layer* Bodo, G., Rosner, R., & Ferrari, A. 1989, Geophys. Astrophys. Fluid Dyn., 43, 333-347.

86. *On the Generation of MHD Waves by Forced Turbulence* Rosner, R., & Musielak, Z.E. 1989, A&A Letters, 219, L27-L29.

87. *On the Relationship Between the Topology of Magnetic Field Lines and Flux Surfaces* Rosner, R., Low, B.C., Tsinganos, K., & Berger, M.A. 1989, Geophys. Astrophys. Fluid Dyn., 48, 251-271.

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2. Invited Reviews and Comments

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