

FREDERICK K. LAMB

Biographical Information

Address

University of Illinois at Urbana–Champaign, 237B Loomis Laboratory of Physics,
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Fields

Theoretical physics and astrophysics; arms control, national security, and space policy

Date and Place of Birth

June 30, 1945; Manhattan, Kansas, U.S.A.

Education

California Institute of Technology	1963 – 1967
Degree: B.S. in Physics, with Honors	1967
Oxford University	1967 – 1970
Degree: D.Phil. in Theoretical Physics	1970

Employment

Fellow by Examination, Magdalen College, Oxford University	1970 – 1972
Research Associate, University of Illinois	1970 – 1972
Assistant Professor of Physics, University of Illinois	1972 – 1975
Associate Professor of Physics, University of Illinois	1975 – 1978
Professor of Physics, University of Illinois	1978 –
Professor of Astronomy, University of Illinois	1980 –
Brand and Monica Fortner Endowed Chair, University of Illinois	1998 –
Director, Center for Theoretical Astrophysics, University of Illinois	1999 –

Professional Society Memberships

Fellow, American Physical Society
Member, American Astronomical Society
Fellow, Royal Astronomical Society (London)
Member, International Astronomical Union
Member, American Association for the Advancement of Science
Member, Arms Control Association
Member, Tau Beta Pi

Selected Awards and Visiting Positions

Marshall Scholarship	1967 – 1969
National Science Foundation Graduate Fellowship	1969 – 1970
Associate, Center for Advanced Study, University of Illinois	1973 – 1974
Alfred P. Sloan Foundation Research Fellowship	1974 – 1978
Visiting Fellow, Institute of Astronomy, Cambridge	1975 – 1976
Visiting Associate, California Institute of Technology	1977 – 1978
John Simon Guggenheim Foundation Fellowship	1985 – 1986
Visiting Scholar, Center for Space Science and Astrophysics and Department of Physics, Stanford University	1985 – 1986

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Carnegie Foundation Science Fellow, Center for International Security and Arms Control, Stanford University	1985 – 1986
Danish Research Academy Visiting Professor, Copenhagen University	1993
Visiting Scientist, Nordic Institute for Theoretical Physics	1993
Visiting Professor of Physics, Massachusetts Institute of Technology	2002

Recent Awards for Teaching Excellence

Awarded a rating of excellent by the students in Physics 382: Nuclear and Particle Physics	Spring 2000
Awarded a rating of excellent by the students in Physics 180: Nuclear Weapons, Nuclear War, and Arms Control	Spring 2001
Awarded a rating of excellent by the students in Physics 401: Astrophysics	Fall 2002

Selected Physics and Astrophysics Activities

U.S. National Academy of Sciences	
Member, Galactic Working Group, 1980 Astronomy Survey Committee	1979 – 1980
Consultant, High Energy Panel, 1980 Astronomy Survey Committee	1979 – 1980
Member, Panel on High Energy Astronomy from Space, 1990 Astronomy and Astrophysics Survey Committee	1989 – 1990
Member, NRC Task Group on Space Astronomy and Astrophysics, Space Studies Board	1996 – 1997
U.S. National Aeronautics and Space Administration	
Member, X-Ray Astronomy Program Visiting Committee, Goddard Space Flight Center	1979
Member, NASA Satellite Instrumentation Review Panel, X-Ray Timing Explorer	1981
Member, NASA High Energy Astrophysics Management Operations Working Group	1984 – 1986
Member, X-Ray Astronomy Program Working Group	1989 – 1999
Member, X-Ray Timing Explorer Satellite Science Working Group	1994 – 1995
Member, Rossi X-Ray Timing Explorer Satellite Users Group	1996 –
Chairman, Rossi X-Ray Timing Explorer Satellite Users Group	1997 –
American Astronomical Society	
Member, Executive Committee, High Energy Astrophysics Division	1983 – 1985
Chair-Elect, Chair, and Past-Chair, High Energy Astrophysics Division	1987 – 1990
Chairman, Nominating Committee, High Energy Astrophysics Division	1998
American Physical Society	
Member, Steering Committee and Panel on Public Affairs (POPA)	2000 – 2002
Chair, Advisory Committee on National Missile Defense	2000 – 2001
Co-Chair, APS Study of Boost-Phase Missile Defense	2001 –
Organizing Committees	
Co-organizer, Aspen Summer Workshop on Probes of Relativistic Effects Near Neutron Stars and Black Holes	1999
Member, Scientific Organizing Committee, <i>Rossi2000</i> Meeting, March 2000, Goddard Space Flight Center	2000

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Selected National Security Related Activities

University of Illinois Program in Arms Control, Disarmament, and International Security	
Member, Executive Committee	1982 –
Director, Science and Technology Section	1988 – 1992
Los Alamos National Laboratory	
Consultant	1980 – 1988
Member, Earth and Space Sciences Division Advisory Committee	1985 – 1988
Center for International Security and Arms Control, Stanford University	
Study of Anti-Ballistic Missile Weapon Systems	1985
Study of Effects of Anti-Satellite Weapons	1985 – 1986
Institute for Defense Analyses	
Consultant	1985 –
Member, Defense Science Study Group (DSSG)	1985 – 1988
Participant, DSSG Summer Study on Monitoring of Soviet ICBM Tests	1985
Participant, DSSG Summer Study on Development of U.S. Space-Launch Capabilities	1985
Participant, DSSG Summer Study on Survivability of U.S. Strategic and Tactical C3I Assets	1985
Leader, DSSG Summer Study on Missile Volume as a Possible Arms Control Constraint on the Military Potential of Ballistic Missiles	1986
Leader, DSSG Summer Study on Methods for Monitoring Yields of Underground Nuclear Tests	1987
Leader, DSSG Summer Study on Monitoring Yields of Underground Nuclear Tests Using Hydrodynamic Methods	1988
Member, University Scientists Program, Institute for Defense Analyses	1988 –
Congressional Office of Technology Assessment	
Consultant on Seismic Verification of Nuclear Test Limitation Treaties	1987 – 1989
U.S. Arms Control and Disarmament Agency	
Consultant	1989 – 1990
Participant, Technical Review of Proposed TTBT and PNET Verification Protocols	1989
Member, Technical Committee Backstopping the U.S. Delegation to the U.S.–Soviet Negotiations on TTBT and PNET Verification Protocols	1990
U.S. Department of Defense	
Consultant on U.S.–Soviet Treaty Verification	1988 – 1992
Member, Review Panel for the Advanced Simulation Technology Center	1990
Participant, Panel on Space and Aerospace Vehicles, DDR&E/IDA Workshop on Advanced Technologies and Future Joint War Fighting	1999

National Security Related Research Grants and Contracts

Hydrodynamic methods for monitoring underground nuclear tests, with J.D. Sullivan, Air Force grant AF19628-88-K-040 to the University of Illinois at Urbana-Champaign, 11/90–11/93.

Effects of nuclear devices and device canisters on the accuracy of hydrodynamic yield estimates for Threshold Test Ban Treaty (TTBT) and Peaceful Nuclear Explosions Treaty (PNET) verification, DARPA contract with IDA, Document D-1363, 1992.

FREDERICK K. LAMB (CONTINUED)

Selected Physics and Astrophysics Publications

Books Edited

1. F. K. Lamb and D. Pines, Compact Galactic X-ray Sources (UIUC Physics Dept.: Urbana), 285 pp. (1979).
2. F. K. Lamb, High Energy Astrophysics (Benjamin/Cummings: New York), 492 pp. (1985).

Chapters in Books

1. Probing the interiors of neutron stars. In Essays in Theoretical Physics in Honour of Dirk ter Haar, edited by W. E. Parry (Pergamon: Oxford), 75–93 (1984).

Monographs

1. The interaction of atoms with polarized light. F. K. Lamb and D. ter Haar. Physics Repts., 2C, pp. 253–322 (1971).
2. The theory of line formation in the presence of a magnetic field. F. K. Lamb. In Line Formation in the Presence of Magnetic Fields, edited by R. G. Athay, L. L. House, and G. Newkirk (National Center for Atmospheric Research: Boulder), 1–70 (1972).
3. R. I. Epstein, F. K. Lamb, and W. C. Priedhorsky. Astrophysics of Time Variability in X-Ray and Gamma-Ray Sources, Los Alamos National Laboratory, Los Alamos, N.M., 37 pp. (1986).
4. Accretion by magnetic neutron stars. F. K. Lamb. In Timing Neutron Stars, edited by H. Ögelman and E. P. J. van den Heuvel (Dordrecht: Kluwer Academic Publishers), pp. 649–722 (1989).
5. Neutron stars and black holes. F. K. Lamb. In Frontiers in Stellar Evolution, edited by D. L. Lambert (Astronomical Society of the Pacific), pp. 299–388 (1991).
6. Plasma physics of accreting neutron stars. P. Ghosh and F. K. Lamb. In Neutron Stars: Theory and Observation, edited by J. Ventura and D. Pines (Dordrecht: Kluwer Academic Publishers), pp. 363–444 (1991).
7. Unified model of X-ray spectra and QPOs in low-mass neutron star binaries. F. K. Lamb. In Neutron Stars: Theory and Observation, edited by J. Ventura and D. Pines (Dordrecht: Kluwer Academic Publishers), pp. 445–481 (1991).

Journal Articles

1. Line formation in magnetic fields: comments on the role of atomic level polarization. F. K. Lamb. Solar Phys., 12, 186–201 (1970).
2. A model for compact X-ray sources: Accretion by rotating magnetic stars. F. K. Lamb, C. J. Pethick, and D. Pines. Astrophys. J., 184, 271–289 (1973).
3. A steady energy source in Her X-1? Y. Avni, J. N. Bahcall, P. C. Joss, N. A. Bahcall, F. K. Lamb, C. J. Pethick, and D. Pines. Nature Phys. Sci., 246, 36–37 (1973).
4. Soft gamma-ray bursts from accreting compact objects. D. Q. Lamb, F. K. Lamb, and D. Pines. Nature Phys. Sci., 246, 52–54 (1973).
5. Possible role of plasma turbulence in the radiation from accreting gas. S. A. Kaplan, F. K. Lamb, D. Pines, C. J. Pethick, and V. N. Tsytovich. Astron. Zh., 52, 64–70 (1975), (English transl.: Soviet Astron., 19, 38–41, 1975).

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6. Neutron star wobble in binary X-ray sources. D. Q. Lamb, F. K. Lamb, D. Pines, and J. Shaham. *Astrophys. J. (Letters)*, 198, L21–L25 (1975).
7. An opaque shell around Her X-1? R. McCray and F. K. Lamb. *Astrophys. J. (Letters)*, 204, L115–L118 (1976).
8. Observational constraints on pulsar binary motion. D. Q. Lamb and F. K. Lamb. *Astrophys. J.*, 204, 168–186 (1976).
9. Fast rotators and slow rotators: accretion flows in the magnetospheres of Vela X-1, A0535+26, and Her X-1. R. F. Elsner and F. K. Lamb. *Nature*, 262, 356–360 (1976).
10. Dynamical effects of possible solid cores in neutron stars and degenerate dwarfs. G. Baym, D. Q. Lamb, and F. K. Lamb. *Astrophys. J.*, 208, 829–835 (1976).
11. Accretion by magnetic neutron stars. I. Magnetospheric structure and stability. R. F. Elsner and F. K. Lamb. *Astrophys. J.*, 215, 897–913 (1977).
12. A model for bursting X-ray sources: time-dependent accretion by magnetic neutron stars and degenerate dwarfs. F. K. Lamb, A. C. Fabian, J. E. Pringle, and D. Q. Lamb. *Astrophys. J.*, 217, 197–212 (1977).
13. Accretion by rotating magnetic neutron stars. I. Flow of matter inside the magnetosphere and its implications for spinup and spindown of the star. P. Ghosh, F. K. Lamb, and C. J. Pethick. *Astrophys. J.*, 217, 578–596 (1977).
14. Nuclear burning in accreting neutron stars and X-ray bursts. D. Q. Lamb and F. K. Lamb. *Astrophys. J.*, 220, 291–302 (1978).
15. Periodic timing residuals in pulsating binary X-ray sources and orbital precession in Her X-1. Y. Avni, D. Q. Lamb, F. K. Lamb, and M. Milgrom. *Astrophys. J. (Letters)*, 222, L113–L117 (1978).
16. Disk accretion by magnetic neutron stars. P. Ghosh and F. K. Lamb. *Astrophys. J. (Letters)*, 223, L83–L87 (1978).
17. Period variations in pulsating X-ray sources. I. Accretion flow parameters and neutron star structure from timing observations. F. K. Lamb, D. Pines, and J. Shaham. *Astrophys. J.*, 224, 969–987 (1978).
18. Period variations in pulsating X-ray sources. II. Torque variations and stellar response. F. K. Lamb, D. Pines, and J. Shaham. *Astrophys. J.*, 225, 582–590 (1978).
19. New evidence on the nature of the soft X-ray source in AM Her from HEAO-1. I. R. Touhy, F. K. Lamb, G. P. Garmire, and K. O. Mason. *Astrophys. J. (Letters)*, 226, L17–L20 (1978).
20. Accretion by rotating magnetic neutron stars. II. Radial and vertical structure of the transition zone in disk accretion. P. Ghosh and F. K. Lamb. *Astrophys. J.*, 232, 259–276 (1979).
21. Accretion by rotating magnetic neutron stars. III. Accretion torques and period changes in pulsating X-ray sources. P. Ghosh and F. K. Lamb. *Astrophys. J.*, 234, 296–316 (1979).
22. On the origin and persistence of long-period pulsating X-ray sources. R. F. Elsner, P. Ghosh and F. K. Lamb. *Astrophys. J. (Letters)*, 241, L155–L159 (1980).
23. Pointed soft X-ray observations of AM Herculis from HEAO-1. I. R. Tuohy, K. O. Mason, G. P. Garmire, and F. K. Lamb. *Astrophys. J.*, 245, 183–194 (1981).
24. Synchronization of magnetic stars in binary systems. F. K. Lamb, J.- J. Aly, M. C. Cook, and D. Q. Lamb. *Astrophys. J. (Letters)*, 274, L71–L74 (1983).

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25. Accretion by magnetic neutron stars. II. Plasma entry into the magnetosphere via polar cusps, diffusion, and magnetic flux reconnection. R. F. Elsner and F. K. Lamb. *Astrophys. J.*, 278, 326–344 (1984).
26. New evidence on the nature of the neutron star and accretion flow in Vela X-1 from pulse timing observations. P. E. Boynton, J. E. Deeter, F. K. Lamb, G. Zylstra, S. H. Pravdo, N. White, K. Wood, and D. J. Yentis. *Astrophys. J. (Letters)*, 283, L53–L56 (1984).
27. Quasi-periodic oscillations in bright galactic-bulge X-ray sources. F. K. Lamb, N. Shibazaki, M. A. Alpar, and J. Shaham. *Nature*, 317, 681–687 (1985).
28. Astrophysics of time variability in X-ray and gamma-ray sources. R. I. Epstein, F. K. Lamb, and W. C. Priedhorsky. *Los Alamos Science*, No. 13, 2–37 (1986).
29. Vela X-1 pulse timing. I. Determination of the neutron star orbit. P. E. Boynton, J. E. Deeter, F. K. Lamb, and G. Zylstra. *Astrophys. J.*, 307, 545–563 (1986).
30. Apsidal advance in Vela X-1. J. E. Deeter, P. E. Boynton, F. K. Lamb, and G. Zylstra. *Astrophys. J.*, 314, 634–640 (1987).
31. Effect of an electron scattering cloud on X-ray oscillations produced by beaming. J. Brainerd and F. K. Lamb. *Astrophys. J. (Letters)*, 317, L33–L38 (1987).
32. Power spectra of quasi-periodic oscillations in luminous X-ray stars. N. Shibazaki and F. K. Lamb. *Astrophys. J.*, 318, 767–785 (1987).
33. Vela X-1 pulse timing. II. Variations in pulse frequency. J. E. Deeter, P. E. Boynton, F. K. Lamb, and G. Zylstra. *Astrophys. J.*, 336, 376–393 (1989).
34. Neutron star evolution with internal heating. N. Shibazaki and F. K. Lamb. *Astrophys. J.*, 346, 808–822 (1989).
35. Origin of ‘normal-branch’ quasi-periodic oscillations in low-mass X-ray binary systems. B. Fortner, F. K. Lamb, and G. S. Miller. *Nature*, 342, 775–777 (1989).
36. Energy-dependence of normal branch quasi-periodic intensity oscillations in low-mass X-ray binaries. G. S. Miller and F. K. Lamb. *Astrophys. J.*, 388, 541–554 (1992).
37. Effect of radiation forces on disk accretion by weakly magnetic neutron stars. M. C. Miller and F. K. Lamb. *Astrophys. J. (Letters)*, 413, L43–L46 (1993).
38. Electrodynamics of disk-accreting magnetic neutron stars. M. C. Miller, F. K. Lamb, and R. J. Hamilton. *Astrophys. J. Suppl.*, 90, 833–836 (1994).
39. Disk-accreting magnetic neutron stars as high energy particle accelerators. R. J. Hamilton, F. K. Lamb, and M. C. Miller. *Astrophys. J. Suppl.*, 90, 837–840 (1994).
40. Critical radiation fluxes and luminosities of black holes and relativistic stars. F. K. Lamb and M. C. Miller. *Astrophys. J.* 439, 828–845 (1995).
41. X-ray spectra of Z sources. D. Psaltis, F. K. Lamb, & G. S. Miller. *Astrophys. J. (Letters)* 454, L137–L140 (1995).
42. A strongly magnetic neutron star in a nearly face-on binary system. P. Daumerie, V. Kalogera, F. K. Lamb, and D. Psaltis. *Nature*, 382, 141–144 (1996).
43. Structure of the magnetic field near weakly-magnetic neutron stars accreting from disks. D. Psaltis, F. K. Lamb, and G. J. Zylstra. *Astrophys. Letters and Comm.* 34, 377–382 (1996).
44. Motion of matter near luminous slowly rotating relativistic stars. M. C. Miller and F. K. Lamb, *Astrophys. J.*, 470, 1033–1051 (1996).

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45. Discovery of a variable-frequency, 50–60 Hz quasi-periodic oscillation on the normal branch of GX 17+2. R. A. D. Wijnands, M. van der Klis, D. Psaltis, F. K. Lamb, E. Kuulkers, S. Dieters, J. van Paradijs, B. A. Vaughan, and W. H. G. Lewin. *Astrophys. J. (Letters)* 469, L5–L8 (1996).
46. Discovery of 800 Hz QPO in 4U 1608–52. M. Berger, M. van der Klis, J. van Paradijs, W. H. G. Lewin, F. K. Lamb, B. Vaughan, E. Kuulkers, T. Augusteijn, W. Zhang, F. E. Marshall, J. H. Swank, I. Lapidus, J. C. Lochner, and T. E. Strohmayer. *Astrophys. J. (Letters)* 469, L13–L16 (1996).
47. Discovery in 4U 1636–53 of two simultaneous quasi-periodic oscillations near 900 Hz and 1176 Hz. R. A. D. Wijnands, M. van der Klis, J. van Paradijs, W. H. G. Lewin, F. K. Lamb, B. Vaughan, and E. Kuulkers. *Astrophys. J. (Letters)* 479, L141–L144 (1997).
48. Discovery of microsecond time lags in kilohertz QPO. B. A. Vaughan, M. van der Klis, M. Méndez, J. van Paradijs, R. A. D. Wijnands, W. H. G. Lewin, F. K. Lamb, F. K. Lamb, D. Psaltis, E. Kuulkers, and T. Oosterbroek. *Astrophys. J. (Letters)*, 483, L115–118, (1997).
49. Kilohertz quasi-periodic oscillation and atoll source states in 4U 0614+09. M. Méndez, M. van der Klis, J. van Paradijs, W. H. G. Lewin, F. K. Lamb, B. A. Vaughan, E. Kuulkers, and D. Psaltis. *Astrophys. J. (Letters)* 485, L37–L40 (1997).
50. Compton scattering by static and moving media. I. The transfer equation and its moments. D. Psaltis and F. K. Lamb. *Astrophys. J.* 488, 881–894 (1997).
51. Discovery of kilohertz quasi-periodic oscillations in GX 17+2. R. Wijnands, J. Homan, M. van der Klis, M. Méndez, J. van Paradijs, W. H. G. Lewin, F. K. Lamb, D. Psaltis, B. Vaughan, and E. Kuulkers. *Astrophys. J. (Letters)* 490, L157–L160 (1997).
52. Discovery of kilohertz quasi-periodic oscillations in the Z source Cyg X-2. R. Wijnands, J. Homan, M. van der Klis, E. Kuulkers, J. van Paradijs, W. H. G. Lewin, F. K. Lamb, D. Psaltis, and B. Vaughan. *Astrophys. J. (Letters)* 493, L87–L90 (1998).
53. Discovery of a second kilohertz QPO peak in 4U 1608-52. M. Méndez, F. K. Lamb et al. *Astrophys. J. (Letters)* 494, L65–L69 (1998).
54. Discovery of kilohertz quasi-periodic oscillations in 4U 1735–44. R. Wijnands, M. van der Klis, M. Méndez, J. van Paradijs, W. H. G. Lewin, F. K. Lamb, B. Vaughan and E. Kuulkers. *Astrophys. J. (Letters)*, 495, L39–L42 (1998).
55. Bounds on the compactness of neutron stars from brightness oscillations during X-ray bursts. M. C. Miller and F. K. Lamb. *Astrophys. J. (Letters)*, 499, L37–L40 (1998).
56. Discovery of kilohertz quasi-periodic oscillations in the Z source GX 340+0. P. G. Jonker, R. Wijnands, M. van der klis, D. Psaltis, E. Kuulkers, F. K. Lamb. *Astrophys. J. (Letters)*, 499, L191–L194 (1998).
57. The beat-frequency interpretation of kilohertz QPOs in neutron star low-mass X-ray binaries. D. Psaltis, M. Méndez, R. Wijnands, J. Homan, P. G. Jonker, M. van der Klis, F. K. Lamb, E. Kuulkers, J. van Paradijs, and W. H. G. Lewin. *Astrophys. J. (Letters)*, 501, L95–L99 (1998).
58. Discovery of kilohertz quasi-periodic oscillations in the Z source GX 5–1. R. Wijnands, M. Méndez, M. van der Klis, D. Psaltis, E. Kuulkers, F. K. Lamb. *Astrophys. J. (Letters)*, 504, L35–L38 (1998).
59. Lense-Thirring precession and QPOs in X-ray binaries. D. Marković and F. K. Lamb. *Astrophys. J.*, 507, 316–326 (1998).

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60. Sonic-point model of kilohertz QPOs in neutron star low-mass X-ray binaries. M. C. Miller, F. K. Lamb and D. Psaltis. *Astrophys. J.*, 508, 791–830 (1998).
61. Effects of rapid stellar rotation on equation of state constraints derived from quasi-periodic brightness oscillations. M. C. Miller, F. K. Lamb, and G. B. Cook. *Astrophys. J. (Letters)*, 509, 793–801 (1998).
62. Erratum: Discovery of microsecond time lags in kilohertz QPOs. B. A. Vaughan, M. van der Klis, M. Méndez, J. van Paradijs, R. A. D. Wijnands, W. H. G. Lewin, F. K. Lamb, D. Psaltis, E. Kuulkers, and T. Oosterbroek. *Astrophys. J.*, 509, L145–L145 (1998).
63. On the magnetospheric beat-frequency and Lense-Thirring interpretations of the horizontal branch oscillation in the Z sources. D. Psaltis, R. Wijnands, J. Homan, P. G. Jonker, M. van der Klis, M. C. Miller, F. K. Lamb, E. Kuulkers, J. van Paradijs, and W. H. G. Lewin. *Astrophys. J.*, 520, 763–775 (1998).
64. Magnetic fields of neutron stars in low-mass X-ray binaries. D. Psaltis and F. K. Lamb. *Astron. & Astroph. Transactions* (1998).
65. r -mode oscillations in rotating magnetic neutron stars, L. Rezzolla, F. K. Lamb, and S. L. Shapiro, *Astrophysical J. (Letters)*, 531, L139–L142 (2000).
66. No QPO time lags from Sco X-1 as seen with EXOSAT: A comparison with Cyg X-2, S. W. Dieters, B. A. Vaughan, E. Kuulkers, F. K. Lamb, and M. van der Klis, *Astron. Astrophys.*, 353, 203–210 (2000).
67. The power spectral properties of the Z source GX 340+0, P.G. Jonker, M. van der Klis, R. Wijnands, J. Homan, J. van Paradijs, M. Méndez, E. C. Ford, E. Kuulkers, F. K. Lamb, *Astrophysical Journal*, 537, 374–386 (2000).
68. Changing frequency separation of kilohertz quasi-periodic oscillations in the sonic-point beat-frequency model. F. K. Lamb and M. C. Miller. *Astrophys. J.*, 554, 1210–1215 (2001).
69. Properties of r -modes in rotating magnetic neutron stars. I. Kinematic secular effects and magnetic evolution equations, L. Rezzolla, F.K. Lamb, and D. Marković, *Phys Rev. D*, 104013 (2001).
70. Properties of r -modes in rotating magnetic neutron stars. II. Evolution of the r -modes and stellar magnetic field, L. Rezzolla, F. K. Lamb, and D. Marković, *Phys Rev. D*, 104014 (2001).
71. General relativistic precession and QPOs in neutron star X-ray binaries. D. Marković and F. K. Lamb. *MNRAS*, in press.

Invited Papers

1. Line spectra and continuum polarization in magnetic white dwarfs. F. K. Lamb and P. G. Sutherland. In *Line Formation in the Presence of Magnetic Fields*, edited by R. G. Athay, L. L. House, and G. Newkirk (National Center for Atmospheric Research: Boulder), 183–225 (1972).
2. Models for compact X-ray sources. D. Pines, C. J. Pethick, and F. K. Lamb. In *Proc. Sixth Texas Symposium on Relativistic Astrophysics (Ann. New York Academy of Sciences)*, 224, 237–260 (1973).
3. Continuum polarization in magnetic white dwarfs. P. G. Sutherland and F. K. Lamb. In *Physics of Dense Matter, Proc. IAU Symposium No.- 53*, edited by C. J. Hansen (D. Reidel: Dordrecht), 265–285 (1974).

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4. Accretion onto magnetic neutron stars: Comments on the position of the Alfvén surface. F. K. Lamb and C. J. Pethick. In *Astrophysics and Gravitation, Proc. 16th International Solvay Congress*, edited by R. Debever (L'Université de Bruxelles: Bruxelles), 135–141 (1974).
5. Soft gamma-ray bursts from accreting compact objects. D. Q. Lamb, F. K. Lamb, and D. Pines. In *Transient Cosmic Gamma- and X-ray Sources*, edited by I. Strong (LA-5505C: Los Alamos), 192–203 (1974).
6. Theories of binary X-ray sources. F. K. Lamb. In *X-rays in Space, Proc. Calgary Conf.*, edited by D. Venkatesan, University of Calgary, 613–637 (1975).
7. Recent progress in the theory of compact X-ray sources. F. K. Lamb. In *Proc. Seventh Texas Symposium on Relativistic Astrophysics (Ann. New York Academy of Sciences, 262)*, 331–360 (1975).
8. Information about accretion flows from X-ray timing of pulsating sources. F. K. Lamb, D. Pines, and J. Shaham. In *X-ray Binaries*, edited by E. Boldt and Y. Kondo (NASA: SP-389), 141–153 (1976).
9. Bursting X-ray sources: A theoretical framework for accretion models. F. K. Lamb, A. C. Fabian, J. E. Pringle and D. Q. Lamb. In *Highlights of Astronomy*, edited by E. A. Muller (Reidel) 125 (1977).
10. Knowledge of neutron stars from X-ray observations. F. K. Lamb. In *Proc. Eighth Texas Symposium on Relativistic Astrophysics (Ann. New York Academy of Sciences, 302)* 482–513 (1977).
11. Neutron star and degenerate dwarf models of X-ray bursts. D. Q. Lamb and F. K. Lamb. In *Proc. Eighth Texas Symposium on Relativistic Astrophysics (Ann. New York Academy of Sciences, 302)* 261–299 (1977).
12. HEAO-1 observations of AM Herculis between 0.1 and 3 keV. I. R. Tuohy, G. P. Garmire, and K. O. Mason, and F. K. Lamb. In *Advances in Space Exploration, Proc. 21st COSPAR Symposium*, edited by W. A. Baity and L. E. Peterson (Pergamon Press: Oxford), 197–200 (1979).
13. Period changes in neutron star X-ray sources accreting from a disk. F. K. Lamb and P. Ghosh. In *Advances in Space Exploration, Proc. 21st COSPAR Symposium*, edited by W. A. Baity and L. E. Peterson (Pergamon Press: Oxford), 259–262 (1979).
14. Neutron star X-ray sources. F. K. Lamb. In *Compact Galactic X-ray Sources*, edited by F. K. Lamb and D. Pines (UIUC Physics Dept.), 143–165 (1979).
15. The structure of the magnetosphere of accreting neutron stars. F. K. Lamb. In *Magnetospheric Boundary Layers, Proc. Sydney Chapman Conference*, edited by B. Battrock (ESA: SP-148, Addendum), 1-17 (1979).
16. The HEAO-1 neutron star timing experiment. F. K. Lamb. In *Proc. HEAO Science Symposium*, edited by C. Dailey and W. Johnson (NASA: CP 2113), 223–243 (1979).
17. Neutron star properties from observations of pulsars and pulsing X-ray sources. F. K. Lamb. In *Pulsars, Proc. IAU Symposium No. 95*, edited by W. Sieber and R. Wielebinski (D. Reidel: Dordrecht), 303–319 (1981).
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