

NAME: Dr. Richard Fred Mushotzky

DATE OF BIRTH: June 18, 1947

PRESENT POSITION: Astrophysicist
Laboratory for High Energy Astrophysics

RESEARCH AREA: Studies of Active Galactic Nuclei and Clusters of Galaxies: analysis and interpretation of X-ray observations of active galactic nuclei and clusters of galaxies. Participate in the development, planning and implementation of future X-ray observatories. Supervision and guidance of graduate students.

EDUCATION: 1968 - B.S. - M.I.T.
1971 - M.S. - U.C.S.D.
1976 - Ph.D. - U.C.S.D.

PREVIOUS POSITIONS: 1968-1968 - Research in Electron Optics Technology Lab.,
Westinghouse Electric Co., Baltimore, Maryland
1969-1976 - Res. Asst., UCSD
1971-1975 - Teaching Asst., UCSD
1977-1979 - NAS/NRC Res. Assoc., NASA/GSFC,
Greenbelt, MD
5/79-11/79 - Res. Assoc., Univ MD, College Park, MD

PROFESSIONAL SOCIETY MEMBERSHIP: American Astronomical Society

AWARDS: NASA Medal for Exceptional Scientific Achievement, 1983
Lindsay Award, 1985

GSFC PROJECTS: OSO-8 BBXRT
HEAO-1 Astro-D
HEAO-2 ROSAT
XTE
AXAF

GUEST OBSERVER: IUE, EXOSAT, IRAS, ROSAT, Ginga

COMMITTEES:

Interdisciplinary Scientist on AXAF Science
Working Group 1985 -
U.S. Observer on ESA X-Ray Spectroscopy Mission
Science Advisory Group, 1986 - 1988
Space Station Platform Accommodation Group, 1986-1988
Astro-D Science Advisory Group - 1988 -
Science Operations MOWG 1988 -
Mission Scientist, XMM Science Working Group, 1990-

INVITED LECTURES:**Colloquia at Universities:**

X-ray Emission from BL Lac Objects, University of Minnesota, 1979.
X-ray Emission from Active Galaxies, Pennsylvania State, 1979.
Goddard Results on Extragalactic X-ray Sources, Institute of Astronomy, Cambridge, U.K.,
1979.
The X-ray Spectra and Time Variability of Seyfert I Galaxies, University of Maryland, 1980.
X-ray Emission from Active Galaxies, University of Virginia, 1981.
X-ray Emission from Clusters of Galaxies, University of Pittsburgh, 1981.
X-ray Spectra of Active Galaxies, M.I.T., 1981.
X-ray Spectra of Clusters of Galaxies, Space Telescope Science Institute, 1983.
Are There Massive Black Holes in the Centers of Active Galaxies?, Johns Hopkins Applied
Physics Laboratory, 1984.
X-ray Emission from Clusters of Galaxies-New Phenomena, Univ. of Colorado, 1984
X-ray Emission from Active Galaxies, Univ. of Michigan, 1985.
Dark Matter and X-ray Emission from Clusters, Univ. of Pennsylvania, 1985.
Polytropic Models for X-ray Emission from Clusters, Harvard Univ., 1985.
Elliptical Galaxies and Dark Matter, M.I.T., 1985.
X-ray Emission from Clusters of Galaxies, European Space Agency, Darmstadt, West Germany,
1985.
Cooling Flows in Clusters of Galaxies, Univ. of Leicester, England, 1985.
Variability in Active Galactic Nuclei, Stony Brook, 1986.
X-ray Emission from Clusters of Galaxies, University of Virginia, 1986.
ROSAT and Clusters of Galaxies, Max Planck Institute, Garching, West Germany, 1986.
Cooling Flow in Clusters of Galaxies, Space Telescope Science Institute,
Dec. 1987.
Masses of Clusters of Galaxies, NRL, Nov. 1987.
X-ray Spectra of AGN, ISAS, Tokyo, Japan, Feb. 1988.
Recent X-ray Results on Cluster of Galaxies, ISAS, Tokyo, Japan, Feb. 1988.
Dark Matter in Clusters, Yale Univ., March 1988.
Recent X-ray Results on AGN, UCSD, May 1989.
Large Scale Structure of the X-ray Sky, Univ. of Toronto, Canada, Oct. 1989.
Recent X-ray Results on AGN, UCSD, May 1990.
The Detection of Cold Matter in the Central Regions of Clusters of Galaxies, Space Telescope
Science Institute, Sept 1991
BBXRT Results on Active Galaxies, California Institute of Technology, Oct 1991
BBXRT Results on Cluster of Galaxies, University of Virginia, Nov 1991
Recent Results on X-ray Spectra of AGN, University of Maryland, April 1992
The Mass of Clusters, Stanford University, October 1992
Cooling Flow in Clusters, University of California, Berkeley, October 1992

Clusters and Cosmology, Columbia University, February 1993
X-rays and Clusters, University of Tokyo, June 1993
Dark Matter in Clusters, Nagoya University, July 1993
Recent Results on X-ray Emission of Clusters of Galaxies Princeton N.J. Feb 1995

Workshops and Meetings:

X-ray Spectra of Clusters of Galaxies, Erice Symposium on X-ray Astronomy, 1979
X-ray Emission from Active Galaxies, New York Meeting of the American Physical Society, 1979
X-ray Spectroscopy of clusters of Galaxies, Princeton Workshop on Clusters of Galaxies, 1980
Non-dispersive X-ray Spectroscopy, I.A.U. Colloquium on U.V. and X-ray Spectroscopy, Toronto, 1980
X-ray Spectra and Time Variability of Active Galaxies, Aspen Workshop on Active Galaxies, 1980
Time Variability and Spectra of Active Galaxies, Tucson Workshop on Active Galaxies, 1981
X-ray Spectra of Active Galaxies, Herstmonceux Meeting on Active Galaxies, 1981
X-ray Emission from Clusters of Galaxies, Berkeley symposium on Intergalactic Material, 1981
X-ray Spectra of Active Galaxies, Baltimore Meeting of the American Physical Society, 1981
X-ray Spectra of Active Galaxies, Royal Greenwich Observatory Workshop on the Intimate Environment of Seyfert Galaxies, Herstmonceux, England, 1981
X-ray Emission from Clusters of Galaxies, European Workshop on Hot Astrophysical Plasmas, Nice, France, 1982
X-ray Emission from Active Galaxies, Goddard Scientific Colloquium, 1982
X-ray Spectra and Time Variability of Active Galactic Nuclei, Texas Meeting on Relativistic Astrophysics, Austin, 1982
X-ray Spectra and Time Variability of AGN, IAU/COSPAR Conference on High Energy Astrophysics and Cosmology, Rojen, Bulgaria, 1983
Future Prospects for X-ray Spectroscopy of Clusters of Galaxies, Conference on "Non-thermal and Very High Temperature Phenomena in X-ray Astronomy", Rome, Italy, 1983
X-ray Spectra of Active Galaxies, P.A.S.P. Workshop on Active Galaxies, San Diego, Calif., 1983
UV and X-ray Spectra of Seyfert Galaxies: Constraints on Models of the Broad Line Region, Future of Ultraviolet Astronomy IUE Meeting, GSFC, 1984
X-ray Spectra and Time Variability of Active Galaxies, X-Ray and UV Emission from Active Galactic Nuclei, Max Planck Institute, Garching, West Germany, 1984
X-ray Observations of Active Galactic Nuclei, International Symposium on X-ray Astronomy, Bologna, Italy, 1984
X-ray observations of Active Galactic Nuclei, Constraints on Future Missions, ESA X-ray Spectroscopy Workshop, Lyngby, Denmark, 1985
Cooling Flows, Dark Matter and Constraints on Theories of Galaxy Formation, Space Telescope Science Institute Workshop On Galaxies and Clusters, 1985
Dark Matter and Clusters, Institute of Astronomy Workshop on Structure and Evolution of Clusters, Cambridge, England, 1985
Theoretical and Observational Problems in Active Galaxy Research Workshop on X-ray Astronomy, Tokyo, Japan, 1985
Accretion Onto Compact Objects, Tenerife, Spain, 1986
The XMM Observatory and Observation of the Diffuse X-ray Background and Clusters of Galaxies, Rome, Italy, 1988
Cosmic Abundances, Univ. of Minnesota, 1988
Signposts To The Future, Bologna, Italy, 1989
X-ray Observations and Properties of Active Galactic Nuclei, Joint U.S.-U.S.S.R. National Academy of Sciences Workshop on High Energy Astrophysics, Tblisi and Moscow, U.S.S.R., 1989

The Large Scale Surface Brightness Distribution of the X-ray Background, Joint U.S.-U.S.S.R. National Academy of Sciences Workshop on High energy Astrophysics, Tblisi and Moscow, U.S.S.R., 1989

Future Mission Requirements for the Study of Active Galaxies, Workshop on High Energy Astrophysics in the 21st Century, Taos, NM, 1989

First Results from BBXRT, Heidelberg Meeting on Active Galaxies, Heidelberg, Germany, June 1991

High Resolution X-ray Spectroscopy, Cumberland Lodge Meeting on High Energy Astrophysics, Windsor, England, June 1991

X-ray Spectral Images of Clusters, NATO Advanced Study Institute on Clusters of Galaxies, Cambridge, England, July 1991

Large Scale Structure in the X-ray Background, International Workshop on the X-ray Background, September 1991

The Present and Future of X-ray Astronomy, APS Meeting, Chapel Hill, North Carolina, Nov 1991

Recent BBXRT Results on AGN, AAS Meeting, Atlanta, Georgia, Jan 1992

Implications of BBXRT Results for Astro-D, Ginga Memorial Symposium, ISAS, Tokyo, Feb 1992

X-ray Observations of the Nearest Active Galaxies, International Workshop on The Nearest Active Galaxies, Madrid, Spain, May 1992

Cooling Flows in Clusters of Galaxies, The Third Teton Summer School, "The Evolution of Galaxies and Their Environment, Grand Teton National Park, Wyoming, July 1992

The Mass of Clusters, Livermore National Laboratory, October 1992

XMM and Active Galaxies, MPE, Munich, Germany, December 1992

X-ray Spectral Images of Clusters of Galaxies, Texas/PASCOS '92, Berkeley, California, December 1992

ROSAT Observations of Groups, ROSAT Science workshop, College Park, MD, November 1993

X-ray Constraints on Dark Matter in Clusters and Groups, invited talk AAS, Crystal City, VA, Jan 1994

ASCA Observations of Clusters, New Horizons in X-ray Astronomy, Tokyo, Japan, March 1994

X-ray Spectra of Clusters, Moriond Meeting on Clusters, Meribel, France, March 1994

X-ray Spectroscopy, in STS&I Meeting on Emission Lines in Astrophysics, Baltimore, MD, May 1994

X-ray Spectral Constraints on Dark Matter PASJ Meeting on Clusters of Galaxies, College Park MD June 1995

X-ray Spectra of Clusters and Groups Wurzburg Meeting On Roentgenstrahlung From the Universe Wurzburg Germany Sept 1995

The Elemental Abundances in Clusters of Galaxies -Invited talk at the Jan 1996 San Antonio Texas AAS Meeting

The Hot Universe- New Results from Recent X-ray Missions- AAAS Meeting Baltimore Feb 1996

PUBLICATIONS IN REFEREED JOURNALS:

"Radiation Pressure Driven Mass Loss from Quasi-Stellar Objects", R.F. Mushotzky, P.F. Solomon, and P.A. Strittmatter; 1972, Ap. J. 174, 7.

"UCSD OSO-7 Observations of the Hard X-Ray Spectrum and Variability of Cen A", R.F. Mushotzky, W.A. Baity, W.A. Wheaton, and L.E. Peterson; 1976, Ap. J. (Letters) 206, L45.

"A Search for Hard X-rays from Extragalactic Objects", R.F. Mushotzky, W.A. Baity, W.A. Wheaton, and L.E. Peterson; 1977, Ap. J. 212, 22.

"Observational Consequences of Synchrotron Self-Compton Models of Compact Extragalactic X-ray Sources", R.F. Mushotzky; 1977, Nature 265, 225.

"OSO-7 Hard X-Ray Observations of 3U0352+30: X Persei", R.F. Mushotzky, D.H. Roberts, W.A. Baity, and L.E. Peterson; 1977, Ap. J. (Letters) 211, L129.

"High Energy X-Ray Observations of NGC 4151 with a Balloon Borne Telescope", W.S. Paciesas, R.F. Mushotzky, and R.M. Pelling; 1977, M.N.R.A.S. 178, 23.

"Absence of Detectable X-rays from Superclusters", S. Pravdo, R. Mushotzky, R. Becker, E. Boldt, S. Holt, P. Serlemitsos, and J. Swank; 1977, Nature 270, 158.

"The X-Ray Emitting Galaxy Cen-A", R.F. Mushotzky, P.J. Serlemitsos, R.H. Becker, E.A. Boldt, and S.S. Holt; 1978, Ap. J. 220, 790.

"X-Ray Observations of a Flare from NGC 4151", R.F. Mushotzky, S.S. Holt, and P.J. Serlemitsos; 1978, Ap. J. 225, L115.

"OSO-8 X-Ray Spectra of Clusters of Galaxies. I:" R.F. Mushotzky, P.J. Serlemitsos, B.W. Smith, E.A. Boldt, and S.S. Holt; 1978, Ap. J. 225, 21.

"X-ray Observations of BL Lac Objects", R.F. Mushotzky, E.A. Boldt, S.S. Holt, S.H. Pravdo, P.J. Serlemitsos, J.H. Swank, and R.H. Rothschild; 1978, Ap. J. 226, L65.

"N Galaxies: A New Class of X-ray Sources", F. Marshall, R. Mushotzky, E. Boldt, S. Holt, and P. Serlemitsos; 1978, Nature 275, 624.

"New Hard X-Ray Sources Observed with HEAO-1", F. Marshall, E. Boldt, S. Holt, R. Mushotzky, S. Pravdo, R. Rothschild, and P. Serlemitsos; 1979, Ap. J. (Suppl) 40, 657, 1979.

"X-Ray Spectra of Clusters of Galaxies. II." B. Smith, R. Mushotzky, and P. Serlemitsos; 1979, Ap. J. 227, 37.

"Large Scale Structure of X-Ray Clusters of Galaxies", P. Nulsen, R. Mushotzky, E. Boldt, S. Holt, R. Rothschild, and P. Serlemitsos; 1979, M.N.R.A.S. 189, 183.

"Effect of Hard X-Rays on the Emission Lines of Seyfert Galaxies and QSO's", G.A. Shields and R.F. Mushotzky; 1979, Astron. & Astrophys. 79, 56.

"The X-Ray Spectrum of the BL Lac Object PKS0548-322", G.R. Riegler, P.C. Agrawal, and R.F. Mushotzky; 1979, Ap. J. (Letters) 233, L47.

"X-Ray Observations of Bursting Radio Sources", A. Marscher, F. Marshall, R. Mushotzky, W.A. Dent, T.J. Balonek, and M.F. Hartman; 1979, Ap. J. 233, 498.

"A Change in the X-Ray Spectrum of MK421", R.F. Mushotzky, E. Boldt, S.S. Holt, and P.J. Serlemitsos; 1979, Ap. J. (Letters) 232, L17.

"The X-ray Spectrum of 3C273", D.M. Worrall, R.F. Mushotzky, E. Boldt, S. Holt, and P.J. Serlemitsos; 1979, Ap. J. 232, 683.

"X-ray Line Emission from Capella", S.S. Holt, N.E. White, R.H. Becker, E.A. Boldt, R.F. Mushotzky, and P.J. Serlemitsos; 1979, Ap. J. (Letters) 234, L65.

"X-Ray Locations and Sizes of Clusters of Galaxies Observed with the HEAO-1 Scanning Modulation Collimator", J. Schwartz, U. Briel, R. Doxsey, G. Fabbiano, R. Griffiths, M. Johnston, D. Schwartz, J. McKee, and R.F. Mushotzky; 1979, Ap. J. (Letters) 231, L105.

"X-Ray Line Emission from Capella", S.S. Holt, N.E. White, R.H. Becker, E.A. Boldt, R.F. Mushotzky, and P.J. Serlemitsos; 1979, Ap. J. (Letters) 234, L65.

"X-Ray Spectrum of Cassiopeia A Measured with the Einstein SSS", R.H. Becker, S.S. Holt, B.W. Smith, N.E. White, E.A. Boldt, R.F. Mushotzky, and P.J. Serlemitsos; 1979, Ap. J. (Letters) 234, L73.

"The Diffuse X-Ray Background from 3-50 keV", F.E. Marshall, E.A. Boldt, S.S. Holt, R.H. Miller, R.F. Mushotzky, L.A. Rose, R.E. Rothschild, and P.J. Serlemitsos; 1980, Ap. J. 235, 4.

"The X-Ray Spectra of Seyfert I Galaxies", R.F. Mushotzky, F.E. Marshall, E.A. Boldt, S.S. Holt, and P.J. Serlemitsos; 1980, Ap. J. 235, 361.

"HEAO A-2 Observations of the X-Ray Spectra of the Centaurus and Abell 1060 Clusters of Galaxies", R.J. Mitchell and R.F. Mushotzky; 1980, Ap. J. 236, 730.

"X-ray Observations of the Seyfert I Galaxies AKN120 and MCG8-II-II", R.F. Mushotzky, and F.E. Marshall; 1980, Ap. J. (Letters) 239, L5.

"X-ray Spectral Constraints on the Broad-Line Cloud Geometry of NGC 4151", S.S. Holt, R.F. Mushotzky, R.H. Becker, E.A. Boldt, P.J. Serlemitsos, A.E. Szymkowiak, and N.E. White; 1980, Ap. J. (Letters) 241, L13.

"HEAO-1 Identification of X-Ray Emitting Poor Cluster of Galaxies AWM7", D.A. Schwartz, M. Davis, R.E. Doxsey, R.E. Griffiths, J. Huchra, M.D. Johnston, R.F. Mushotzky, J. Swank, and J. Tonry; 1980, Ap. J. (Letters) 238, L53.

"Elemental Abundances in a Type I Supernova Remnant", R.H. Becker, S.S. Holt, B.W. Smith, N.E. White, E.A. Boldt, R.F. Mushotzky, and P.J. Serlemitsos; 1980, Ap. J. (Letters) 235, L5.

"The HEAO A-2 Survey of Abell Clusters and the X-Ray Luminosity Function", J.D. McKee, R.F. Mushotzky, E.A. Boldt, S.S. Holt, F.E. Marshall, S.H. Pravdo, and P.J. Serlemitsos; 1980, Ap. J. 242, 843.

"Cen-A (NGC 5128) from 2 keV - 2.3 MeV: HEAO-1 Observations and Implications", W.A. Baity, R.E. Rothschild, R.E. Lingenfelter, W.A. Stein, P.L. Nolan, D.E. Gruber, F.K. Knight, J.L. Matteson, L.E. Peterson, F.A. Primini, A.M. Levine, W.H.G. Lewin, R.F. Mushotzky, and A.F. Tennant; 1981, Ap. J. 244, 429.

"Variable X-Ray Spectra of BL Lac Objects: HEAO-1 Observations of PKS 0548-322 and 2A1219+305", D.M. Worrall, E.A. Boldt, S.S. Holt, R.F. Mushotzky, and P.J. Serlemitsos; 1981, Ap. J. 243, 53.

"Quasi-Simultaneous Observations of the BL Lac Object MK 501 in X-Ray, UV, Visible, IR and Radio Frequencies", Y. Kondo, D.M. Worrall, R.F. Mushotzky, R.L. Hackney, K.R.H. Hackney, J.B. Oke, H. Yee, P.A. Feldman, and R.L. Brown; 1981, Ap. J. 243, 690.

"Observation of the Core of the Perseus Cluster with the Einstein Solid State Spectrometer: Cooling Gas and Elemental Abundances", R.F. Mushotzky, S.S. Holt, B.W. Smith, E.A. Boldt, and P.J. Serlemitsos; 1981, Ap. J. (Letters) 244, L47.

"HEAO-1 High Energy X-Ray Observations of the Virgo Cluster and A2142", S. Lea, G. Reichert, R.F. Mushotzky, W.A. Baity, D. Gruber, and R. Rothschild; 1981, Ap. J. 246, 369.

"CCD Photometry of 1218+304, 1219+28 and 1727+50: Point Sources, Associated Nebulosity and Broadband Spectra", D. Weistrop, D. Shaffer, R.F. Mushotzky, H.J. Reitsema and B.A. Smith; 1981, Ap. J. 249, 3.

"Rapid X-ray Variability in the Seyfert Galaxy NGC 6814", A.F. Tennant, R.F. Mushotzky, E.A. Boldt and J.H. Swank; 1981, Ap. J. 251, 15.

"UGC 10683B: A Possible X-Ray Emitting Seyfert Galaxy", A.S. Wilson, K. Wood, M.J. Ward, R.E. Griffiths, and R.F. Mushotzky; 1981, A.J. 86, 1289.

"PKS 2155-304: Relativistically Beamed Synchrotron Radiation from a BL Lac Object", C.M. Urry and R.F. Mushotzky; 1982, Ap. J. 253, 38.

"A Complete X-Ray Sample of the High Latitude Sky from HEAO 1 A-2: Log N - Log S and Luminosity Functions", G. Piccinotti, R.F. Mushotzky, E.A. Boldt, S.S. Holt, F.E. Marshall and P.J. Serlemitsos; 1982, Ap. J. 253, 485.

"A Large Scale Height Galactic Component of the Diffuse 2-60 keV Background", D. Iwan, F.E. Marshall, E.A. Boldt, R.F. Mushotzky, R.A. Shafer and R. Stottlemeyer; 1982, Ap. J. 260, 111.

"The X-ray Spectrum and Time Variability of 'Narrow Emission Line' Galaxies", R.F. Mushotzky; 1982, Ap. J. 256, 92.

"Einstein Observatory SSS Observations of M87 and the Virgo Cluster", S.M. Lea, R.F. Mushotzky, and S.S. Holt; 1982, Ap. J. 262, 24.

"Ultraviolet and X-Ray Observations of the BL Lac Object PKS 0548-322", C.M. Urry, R.F. Mushotzky, Y. Kondo, K.R.M. Hackney, and R.L. Hackney; 1982, Ap. J. 261, 12.

"Broad Line Region Clouds and the Absorbing Material in NGC 4151", G. Ferland and R.F. Mushotzky; 1982, Ap. J. 262, 564.

- "Absence of Rapid X-Ray Variability in Active Galaxies", A. Tennant and R.F. Mushotzky; 1983, Ap. J. 264, 92.
- "2-165 keV Observations of Active Galaxies and the Diffuse Background", R.E. Rothschild, R.F. Mushotzky, W.A. Baity, D.E. Gruber, and J.L. Matteson; 1983, Ap. J. 269, 423.
- "Rapid X-Ray Variability from the Seyfert I Galaxy NGC 4051", F.E. Marshall, S.S. Holt, R.F. Mushotzky and R.H. Becker; 1983, Ap. J. (Letters) 269, L31.
- "Observations of NGC 4151 at 2 keV - 2 MeV from HEAO-1", W.A. Baity, R.F. Mushotzky, D.M. Worrall, R.E. Rothschild, A.F. Tennant and F.A. Primini; 1984, Ap. J. 279, 555.
- "Temperature and Elemental Abundances in the Abell Cluster A576 Derived from X-Ray Observations", R. Rothenflug, L. Vigroux, R. Mushotzky and S.S. Holt; 1984, Ap. J. 279, 53.
- "X-Ray Emission from Clusters of Galaxies", R. Mushotzky; 1984, Physica Scripta, Vol. 7, 157.
- "An X-Ray Survey of Variable Radio Bright Quasars", M. Henriksen, R. Mushotzky, and F. Marshall; 1984, Ap. J. 284, 491.
- "The Line Continuum Luminosity Ratio in AGN: or On The Baldwin Effect", R. Mushotzky and G. Ferland; 1984, Ap. J. 278, 558.
- "Cosmic Rays and the Emission Line Regions of Active Galactic Nuclei", G. Ferland and R. Mushotzky; 1984, Ap. J. 286, 42.
- "X-Ray Spectral Signatures of Accreting Black Holes", N.E. White, A.C. Fabian and R. Mushotzky; 1984, A & A 133, L9.
- "Soft X-ray Spectral Observations of Quasars and High Luminosity Seyfert Galaxies", R. Petre, R. Mushotzky, J. Krolik, and S. Holt; 1984, Ap. J. 220, 499.
- "Coordinated Multifrequency Observations of the BL Lacertae Objects Mrk 180 and Mrk 501", S. Mufson, D. Hutter, K. Hackney, R. Hackney, C. Urry, R. Mushotzky, Y. Kondo, W. Wisniewski, H. Aller, M. Aller, and P. Hodge; 1984, Ap. J. 285, 571.
- "Experimental Tests of a Single-Photon Calorimeter for X-ray Spectroscopy", D. McCammon, S.H. Moseley, J.C. Mather, and R.F. Mushotzky; 1984, J. Appl. Phys. 56, 1263.
- "Consequences of Hot Gas in the Broad Line Region of Active Galactic Nuclei", T. Kallman and R. Mushotzky; 1985, Ap. J. 292, 49.
- "The Physical Implications of an Isothermal Model for the Hot ICM in Clusters", M. Henriksen and R. Mushotzky; 1985, Ap. J. 292, 44.
- "An X-ray, Optical and Radio Study of Pks 0745-191: A Massive Cooling Flow", A.C. Fabian, K.A. Arnaud, P.E.J. Nulsen, M.G. Watson, G.C. Stewart, I. McHardy, A. Smith, B. Cooke, M. Elvis, and R.F. Mushotzky; 1985, M.N.R.A.S. 216, 923.
- "Soft X-ray Spectral Observations of Low-Luminosity Active Galaxies", G.A. Reichert, R.F. Mushotzky, R. Petre, and S.S. Holt; 1985, Ap. J. 296, 69.

"Thermal Detectors as Single Photon X-ray Spectrometers", S.H. Moseley, R.L. Kelley, J.C. Mather, R.F. Mushotzky, A.E. Szymkowiak, and D. McCammon; 1985, IEEE Transactions on Nuclear Science, Vol NS-32, No. 1, 134.

"X-ray Absorption in Active Galactic Nuclei: Constraints on the Broad Line Emitting Regions", G. Reichert, R. Mushotzky, and S.S. Holt; 1986, Ap. J. 303, 87.

"The X-ray Spectrum of the Coma Cluster of Galaxies", M.J. Henriksen and R.F. Mushotzky; 1986, Ap. J. 320, 421.

"The Detection of Distant Cooling Flows and the Formation of Dark Matter", A.C. Fabian, K.A. Arnaud, P.E.J. Nulsen, and R.F. Mushotzky; 1986, Ap. J. 305, 9.

"The Limits of X-ray Variability in Active Galactic Nuclei", P. Barr and R.F. Mushotzky; 1986, Nature 320, 421.

"Observable Determination of the Masses of Active Galactic Nuclei", A. Wandel and R.F. Mushotzky; 1986, Ap. J. (Letters) 306, L61.

"X-ray Spectroscopy of Five BL Lacertae Objects", C.M. Urry, R.F. Mushotzky, and S.S. Holt; 1986, Ap. J. 305, 369.

"Are the Virial Masses of Clusters Smaller Than We Think?", L. Cowie, M. Henriksen, and R. Mushotzky; 1987, Ap. J. 317, 593.

"Determination of the Masses of Elliptical Galaxies and Clusters of Galaxies with AXAF", R. Mushotzky; 1987, Astrophysical Letters & Communications 26, 43.

"EXOSAT Observations of the Ophiuchus, PKS 0745-191 and Cygnus-A Clusters of Galaxies", R. Mushotzky; 1987, M.N.R.A.S. 227, 241.

"Observations of Active Galaxies", R.F. Mushotzky; 1987, Nature 325, 666.

"On the Ratio of the Infrared-To-Ultraviolet Continuum to the X-rays in Quasars and Active Galaxies", R. Mushotzky and A. Wandel; 1988, Ap. J. 339, 674.

"A Search for X-Ray Emission Associated with the Great Attractor", K. Jahoda and R.F. Mushotzky; 1989, Ap. J. 346, 638.

"Rapid Variability of the Iron Fluorescence Line from the Seyfert I Galaxy NGC 6814", H. Kunieda, T.J. Turner, H. Awaki, K. Koyama, R. Mushotzky, and Y. Tsusaka; 1990, Nature, 345, 786.

"X-Ray Studies of Superclusters", M. Persic, K. Jahoda, Y. Rephaeli, E. Boldt, F.E. Marshall, R.F. Mushotzky, and G. Rawley; 1990, Ap. J. 364, 1.

"A Ubiquitous Absorption Feature in the X-ray Spectra of BL Lacs", G.M. Madejski, R.F. Mushotzky, K.A. Weaver, K.A. Arnaud, and C. Megan Urry; 1991, Ap.J., 370, 198.

"Cross Correlation of the X-ray Background with Nearby Galaxies", K. Jahoda, O. Lahav, R. Mushotzky and E. Boldt; 1991, Ap.J.(Letters), 378, L37 and 1992, ApJ (Letters), 399, L107.

“The Discovery of Large Amounts of Cold, X-ray Absorbing Matter in Cooling Flows”, D.A. White, A.C. Fabian, R.M. Johnstone, R.F. Mushotzky, and K.A. Arnaud; 1991, *M.N.R.A.S.*, 252, 72.

“Einstein Observatory SSS and MPC Observations of the Complex X-ray Spectra of Seyfert Galaxies”, T.J. Turner, K.A. Weaver, R.F. Mushotzky, S.S. Holt, and G.M. Madejski; 1991, *ApJ.*, 381, 85.

“Hard X-ray Tests of the Unified Hypothesis”, J. Mulchaey, R. Mushotzky, and K. Weaver; 1992, *ApJ*, 390, L69.

“Evidence for Accretion Disk Reprocessing in NGC6814”, T.J. Turner, C. Done, R. Mushotzky, H. Kunieda, and K. Koyama; 1992, *ApJ*, 391 102.

“An Ionized Accretion Disk in Cygnus X-1”, C. Done, J. Mulchaey, R.F. Mushotzky, and K. Arnaud; 1992, *ApJ*, 395, 275

“The X-ray Variability of NGC 6814: Power Spectrum”, C. Done, T.J. Turner, G. Madejski, and R. Mushotzky; 1992, *ApJ*, 400,138.

“BBXRT Observations of NGC 4151: Iron Line Diagnostics”, K.A. Weaver, R.F. Mushotzky, K.A. Arnaud, P.J. Serlemitsos, F.E. Marshall, R. Petre, K.M. Jahoda, E.A. Boldt, S.S. Holt, J.H. Swank, A.E. Szymkowiak, R. Kelley, A.P. Smale, and C. Done, 1992, *ApJ*, 401, L11

“A New X-Ray Spectral Observations of NGC 1068”, F.E. Marshall, H. Netzer, K. Arnaud, E.A. Boldt, S.S. Holt, K.M. Jahoda, R. Kelley, R.F. Mushotzky, R. Petre, P.J. Serlemitsos, A.P. Smale, J. Swank, A.E. Szymkowiak, K.A. Weaver, 1993, *ApJ*, 405, 168

“BBXRT and Ginga Observations of the Seyfert 1 Galaxy MRK 335”, T. J. Turner, K. Nandra, A.A. Zdziarski, K. Jahoda, G.M. Madejski, F. Marshall, R.F. Mushotzky, R. Petre, K.A. Pounds, A.P. Smale, P. Serlemitsos, and K. Weaver, 1993, *ApJ*, 407, 556

“Spatially Resolved X-ray Spectroscopy of the Merging Galaxy Cluster A2256”, Miyaji, T., Mushotzky, R.F., Loewenstein, M., Serlemitsos, P.J., Marshall, F.E., Petre, R., Jahoda, K.M., Boldt, E.A., Holt, S.S., Swank, J., Szymkowiak, A.E., and Kelley, R., 1993, *ApJ*, 419, 66

“A BBXRT Spectrum of the Massive X-ray Binary X Per”, Schlegel, E.M., Serlemitsos, P.J., Jahoda, K., Marshall, F., Petre, R., Boldt, E.A., Mushotzky, R., Swank, J., Szymkowiak, A., Smale, A., and Weaver, K., 1993, *ApJ*, 407, 744

“Resolving the Iron K Line in Cygnus X-2; An Observation with BBXRT”, Smale, A.P., Done, C., Mushotzky, R.F., Weaver, K.A., Serlemitsos, P.J., Marshall, F.E., Petre, R., Jahoda, K.M., Boldt, E.A., Swank, J.H., Szymkowiak, A.E., Kelley, R.L., and Arnaud, K.A., 1993, *ApJ*, 410, 796

“BBXRT Observations of the Magnetic Cataclysmic Variable H0538+608 = BY Cam”, T.R. Kallman , E.M. Schlegel, P.J. Serlemitsos, R. Petre, F. Marshall, K. Jahoda, E.A. Boldt, S.S. Holt, R.F. Mushotzky, J. Swank, A.E. Szymkowiak, R.E. Kelley, A. Smale, K. Arnaud, K. Weaver, and F.B. Paerels, 1993, *ApJ*, 411, 869

“X-Ray Substructure in A1656 and A2256”, D.S. Davis and R.F. Mushotzky, 1993, *AstronJ*, 105, 409

"BBXRT Observations of the Hot Interstellar Media in NGC 1399 and NGC 4472", P.J. Serlemitsos, M. Loewenstein, R.F. Mushotzky, F.E. Marshall, and R. Petre, 1993, ApJ, 413, 518.

"Diffuse X-ray Emission from the NGC 2300 Group of Galaxies: Implications for Dark Matter and Galaxy Evolution in Small Groups", J.S. Mulchaey, D.S. Davis, R.F. Mushotzky, and D. Burstein, 1993, ApJ, 404, L9.

"ROSAT Position Sensitive Proportional Counter Spectra of Six Seyfert 1 Galaxies", T.J. Turner, I.M. George, and R.F. Mushotzky, 1993, ApJ, 412, 72

"BBXRT Spectroscopy of Zeta Pup", M.F. Corcoran, J.H. Swank, P.J. Serlemitsos, E. Boldt, R. Petre, F.E. Marshall, K. Jahoda, R. Mushotzky, A. Szymkowiak, K. Arnaud, K. Weaver, and S.S. Holt, 1993, ApJ, 412, 792

"Soft X-Ray Spectra of Seyfert 2 Galaxies", Mulchaey, J.S., Colbert, E., Wilson, A.S., Mushotzky, R.F., and Weaver, K.A., 1993, ApJ, 414, 144

"A BBXRT Observation of the High Luminosity Quasar H1821+643", Yaqoob, T., Serlemitsos, P.J., Mushotzky, R.F., Weaver, K.A., Marshall, F.E., and Petre, R., 1993, ApJ, 418, 638

"The Broad Band X-Ray Spectrum of the Nucleus of M81", Petre, R., Mushotzky, R.F., Serlemitsos, P.J., Jahoda, K.A., and Marshall, F.E., 1993, ApJ, 418, 644

"Position Sensitive Proportional Counter Soft X-Ray Observations of Seyfert 2 Galaxies", Turner, T.J., Urry, C.M., and Mushotzky, R.F., 1993, ApJ, 418, 653

"The X-Ray Spectrum of Cygnus X-1", Marshall, F.E., Mushotzky, R.F., Petre, R. and Serlemitsos, P.J., 1993, ApJ, 419, 301

"Cygnus X-3 in an "Ultrahigh" X-ray State with no Detected $K\alpha$ Line Emission", Smale, A.P., Mushotzky, R.F., Schlegel, E.M., Weaver, K.A., Serlemitsos, P.J., Marshall, F.E., Petre, R., and Jahoda, K., 1993, ApJ. 418, 894

"Solving the Mystery of the X-Ray Periodicity in Seyfert Galaxy NGC 6814", G.M. Madejski, C. Done, T.J. Turner, R.F. Mushotzky, P. Serlemitsos, F. Fiore, M. Sikora, and M.C. Begelman, 1993, Nature, 365, 626

"The Complex Soft X-Ray Excess in NGC 4151", Weaver, K.A., Mushotzky, R.F., Arnaud, K.A., Serlemitsos, P.J., Marshall, F.E., Petre, R., Jahoda, K.M., Smale, A.P., and Netzer, H., 1994, ApJ, 423, 621

"A Broad Band X-Ray Telescope Observation of the Black Hole Candidate LMC X-1", Schlegel, E.M., Marshall, F.E., Mushotzky, R.F., Smale, A.P., Weaver, K.A., Serlemitsos, P.J., Petre, R., and Jahoda, K.M., 1994, ApJ, 422, 243

"Cooling Flows and the X-ray Luminosity--Temperature Relation for Clusters", Fabian, A.C., Crawford, C.S., Edge, A.C., and Mushotzky, R.F., 1994, MNRAS, 267, 779

"An X-ray Emission of 3C 273 Observed with ASCA", Yaqoob, T., Serlemitsos, P.J., Mushotzky, R.F., Ricker, G., Woo, J., Weaver, K., Kii, T., Mitsuda, K., Kotani, T., Hayashida, K., Murakami, S., and Tashiro, M., 1994, PASJ, 46, L49

"Metal Concentration and X-Ray Cool Spectral Component in the Central Region of the Centaurus Cluster of Galaxies", Fukazawa, Y., Ohashi, T., Fabian, A.C., Canizares, C.R., Ikebe, Y., Makishima, K., Mushotzky, R.F., and Yamashita, K., 1994, PASJ, 46, L55

"ASCA Observation of Three Bright Early-Type Galaxies, NGC4472, NGC4406, and NGC4636", Awaki, H., Mushotzky, R., Tsuru, T., Fabian, A.C., Fukazawa, Y., Loewenstein, M., Makishima, K., Matsumoto, H., Matsushita, K., Mihara, T., Ohashi, T., Ricker, G.R., Serlemitsos, P.J., Tsusaka, Y., and Yamazaki, T., 1994, PASJ, 46, L65

"ASCA Observations of NGC 1068", Ueno, S., Mushotzky, R.F., Koyama, K., Iwasawa, K., Awaki, H., and Hayashi, I., 1994, PASJ, 46, L71

"Discovery of an Obscured Low Luminosity Active Nucleus in the Spiral Galaxy NGC4258", Makishima, K., Serlemitsos, P., Tashiro, M., Fumimoto, R., Ishisaki, Y., Kii, T., Loewenstein, M., Mushotzky, R., Sonobe, T., and Yaqoob, T., 1994, PASJ, 46, L77

"ASCA Detection of Iron Line Emission from the Distant Galaxy Cluster Abell 370", Bautz, M.W., Mushotzky, R., Arnaud, K.A., Crew, G.B., Fabian, A.C., Gendreau, K.C., Yamashita, K., and the ASCA PV Team, 1994, PASJ, 46, L131

"Soft X-ray Spectral Features in the Seyfert 1 Galaxy, NGC4051", Mihara, T., Matsuoka, M., Mushotzky, R.F., Kunieda, H., Otani, C., Miyamoto, S., and Yamauchi, M., 1994, PASJ, 46, L137

"The Fluorescence-Dominated X-Ray Spectrum of the Spiral Galaxy NGC 6552", Fukazawa, Y., Makishima, K., Ebisawa, K., Fabian, A.C., Gendreau, K.C., Ikebe, Y., Iwasawa, K., Kii, T., Mushotzky, R.F., Ohashi, T., Otani, C., Ricker, G.R., Tamura, T., Tanaka, Y., Ueda, Y., and White, N.E., 1994, PASJ, 46, L141

"New X-Ray Spectral Observations of NGC 4151 with ASCA", Weaver, K.A., Yaqoob, T., Holt, S.S., Mushotzky, R.F., Matsuoka, M., and Yamauchi, M., 1994, ApJ (Letters), 436, L27

"Rapid X-ray Spectral Variability in NGC 3227", Ptak, A., Yaqoob, T., Serlemitsos, P.J., Mushotzky, R., and Otani, C., 1994, ApJ (Letters), 436, L31

"Detections of Hard X-ray Emissions from Bright Early-Type Galaxies with ASCA", Matsushita, K., Makishima, K., Awaki, H., Canizares, C.R., Fabian, A.C., Fukazawa, Y., Loewenstein, M., Matsumoto, H., Mihara, T., Mushotzky, R.F., Ohashi, T., Ricker, G.R., Serlemitsos, P.J., Tsuru, T., Tsusaka, Y., and Yamazaki, T., 1994, ApJ (Letters), 436, L41

"Temperature and Iron Abundance Variation of the Gas in the Perseus Cluster", Arnaud, K.A., Mushotzky, R.F., Ezawa, H., Fukuzawa, Y., Ohashi, T., Bautz, M.W., Crewe, G.B., Gendreau, K.C., Yamashita, K., Kamata, Y., and Akimoto, F., 1994, ApJ (Letters), 436, L67

- "Discovery and Implications of Very Low Metal Abundances in NGC 1404 and NGC 4374", Loewenstein, M., Mushotzky, R.F., Tamura, T., Ikebe, Y., Makishima, K., Matsushita, K., Awaki, H., and Serlemitsos, P.J., 1994, ApJ (Letters), 436, L75
- "ASCA Observation of NGC 4636: Dark Matter and Metallicity Gradient", Mushotzky, R.F., Loewenstein, M., Awaki, H., Makishima, K., Matsushita, K., and Matsumoto, H., 1994, ApJ (Letters), 436, L79
- "Diffuse Hot Gas in the NGC 4261 Group of Galaxies", Davis, D.S., Mushotzky, R.F., Mulchaey, J.S., Worrall, D.M., Birkinshaw, M., and Burstein, D., 1995, ApJ, 444, 582
- "Abell 548: An X-Ray and Optical Analysis of Substructure", Davis, D.S., Bird, C.M., Mushotzky, R.F., and Odewahn, S.C., 1995, ApJ, 440, 48.
- "The Origin of the Soft X-ray Excess in the Seyfert 2 Galaxy NGC 2110", Weaver, K.A., Mushotzky, R.F., Serlemitsos, P.J., Wilson, A.S., Elvis, M., and Briel, U., 1995, ApJ, 442, 597
- " A Confirmation of the 2-40 Kev Spectral Complexity in Seyfert Galaxies" Weaver, K., Arnaud, K. and Mushotzky, R. 1995 Ap. J. 447, 121
- "ASCA Observations of the Spectrum of the X-ray Background", Gendreau, K.C., Bautz, M.W., Ricker, G.R., Vanderspek, R.K., Fabian, A.C., Mushotzky, R., Holt, S.S., Serlemitsos, P.J., Kii, T., Ogasaka, Y., Tanaka, Y., Fukazawa, Y., Ishisaki, Y., Kohmura, Y., Makishima, K., and Tashiro, M., Tsusaka, Y., and Kunieda, H., 1995, PASJ, 47, L5
- "Detection of Broad Iron K Lines in Active Galaxies", Mushotzky, R.F., Fabian, A.C., Iwasawa, K., Kunieda, H., Matsuoka, M., Nandra, K., and Tanaka, Y., 1995, MNRAS, 272, L9
- "Calibrating the Broad Band X-Ray Telescope", Weaver, K.A., Arnaud, K.A., Boldt, E.A., Christian, D., Corcoran, M., Holt, S.S., Jahoda, K., Kelley, R., Marshall, F.E., Mushotzky, R.F., Petre, R., Rawley, G., Serlemitsos, P.J., Schlegel, E.M., Smale, A.P., Swank, J.H., Szymkowiak, A.E., and Yamauchi, S., 1995 ApJ Supplement Series, 96, 303
- "The Velocity Dispersion--Temperature Correlation from a Limited Cluster Sample", Bird, C.M., Mushotzky, R.F., and Metzler, C.A., 1995, ApJ 453,40
- " The Iron K Alpha Line Profile in NGC 4151" Yaqoob, T, Edelson, R., Weaver, K. Warwick, R., Mushotzky, R., Serlemitsos, P. and Holt, S.S. 1995 Ap.J. Lett. 453,L81
- "The Hard X-Ray Emission of NGC 3628 and the Contribution of Low-Luminosity Spiral Galaxies to the Cosmic X-ray Background", Yaqoob, T., Serlemitsos, P.J., Ptak, A., Mushotzky, R., Kunieda, H., and Terashima, Y., 1995, ApJ 455,508
- "The Intragroup Medium in Poor groups of Galaxies" Mulchaey, J.S., . Davis, D.S, Mushotzky, R.F. and Burstein, D.1996 Ap.J. 456,80
- "Abell 2163: Temperature, Mass, and Hydrostatic Equilibrium", Markevitch, M., Mushotzky, R., Inoue, H., Yamashita, K., Furuzawa, A., and Tawara, Y., 1996, ApJ, 456,437
- " High Ionization Quasar Absorption Lines A Test of the Existence of Hot Gas in Spiral Rich Groups of Galaxies " Mulchaey, J.S, Mushotzky, R.,F. Burstein, D. and Davis, D.S. 1996 Ap. J. Lett 456,L5

"X-ray Reprocessing by a Molecular Torus in the Seyfert 1.9 Galaxy NGC 2992" Weaver, K. Nousek, J. Yaqoob, T. Mushotzky, R.F. Makino, F. and Otani, C. 1996 Ap. J. 458, 160

"Discovery of an Abundance Gradient in the Central Region of the Virgo Cluster"
Matsumoto, H, Koyama, K., Awaki, H., Mushotzky, R. and Hatsukade, I. 1996
P.A.S.J. in press

OTHER SIGNIFICANT PUBLICATIONS:

"Intensity and Spectral Variations of Cyg X-1 Observed from Balloons", J.L. Matteson, R.F. Mushotzky, W.S. Paciesas, and J.G. Laros; 1976, X-ray Binaries Symposium, NASA SP-389, p. 407.

"Observation of NGC 5548 by OSO-7", R.E. Rothschild, W.A. Baity, R.F. Mushotzky, W.A. Wheaton, and L.E. Peterson; 1978, IAU Symposium.

"The Fluctuating and Isotropic Components of the Cosmic X-Ray Background", E. Boldt, A. Stottlemeyer, R. Shafer, F. Marshall, R. Mushotzky, S. Holt, R. Rothschild, and P. Serlemitsos; 1978, IAU Symposium.

"Ultraviolet and X-Ray Observations of Seyfert Galaxies and Low z QSO's", C.C. Wu, A. Boggess, T.R. Gull, R.F. Mushotzky, E.A. Boldt, S.S. Holt, and P.J. Serlemitsos; 1979, The First Year of IUE Symposium.

"The X-Ray Spectra of Clusters of Galaxies", R. Mushotzky; 1979, Proceedings of the NATO Symposium on X-Ray Astronomy in Erice, Italy, R. Giacconi and G. Setti eds., D. Reidel and Co., p. 171.

"Einstein Observatory Results on Active Galactic Nuclei", R.F. Mushotzky and S.S. Holt; 1984, Adv. Space Res. Vol 2, #9, p. 197.

"X-Ray Spectra and Time Variability of Active Galactic Nuclei", R.F. Mushotzky; 1984, Proceedings of IAU/COSPAR Meeting on High Energy Astrophysics and Cosmology, Rojen, Bulgaria, Adv. Space Research Vol. 3, No. 10-12, p. 157.

"Ultraviolet and X-Ray Observations of Active Galactic Nuclei: Constraints on Models of the Broad Line Region", R. Mushotzky, 1984, Proceedings on the Future of UV Astronomy.

"X-Ray Emission from Active Galactic Nuclei", R. Mushotzky, 1984, in Proceedings of Workshop on X-Ray and UV Emission from AGN, Munich, eds. W. Brinkman and J. Trumper, p. 73.

"X-ray Spectra of Clusters of Galaxies", R.F. Mushotzky, 1985, in Non-Thermal and Very High Temperature Phenomena in X-ray Astronomy, eds. G.C. Perola and M. Salvati, p. 105.

"X-Ray Observations of Clusters of Galaxies", R. Mushotzky, 1988, in Proceedings of the NATO Summer School on Hot Astrophysical Plasmas, Corsica, France, pg. 273, ed. R. Pallavicini, Reidel Publication.

"Einstein Observatory Solid State Detector Observations of Cooling Flows in Clusters of Galaxies", R.F. Mushotzky and A.E. Szymkowiak; 1988, "Cooling Flows in Clusters and Galaxies, 53-62, A.C. Fabian (ed.), Kluwer Academic Publishers.

"X-ray Observational Constraints on Massive Black Holes", R. Mushotzky, 1988, Proceedings of the George Mason Meeting on Supermassive Black Holes, ed. M. Kafatos, Cambridge University Press, p. 143.

"X-ray Spectra of Active Galaxies", R. Mushotzky and A. Wandel; 1988, Active Galactic Nuclei, ed. H. Richard Miller and Paul J. Wiita, Springer-Verlag, p. 239.

"Abundances of the Elements in the Intergalactic Medium", R. Mushotzky, 1988, in Proceedings of the Minnesota Meeting on Cosmic Abundances, ed. J. Waddington, AIP Press.

"Signposts To The Future", R. Mushotzky, 1989, in Proceedings of the 23rd ESLAB Symposium on Two Topics in X-ray Astronomy, eds. J. Hunt and B. Battick, Sept. 13-20, Bologna, Italy, p. 857.

"The Complex X-Ray Spectra of AGN", C.M. Urry, K. Arnaud, R.A. Edelson, J.S. Kruper, and R.F. Mushotzky; 1989, in Proceedings of the 23rd ESLAB Symposium, eds. J. Hunt and B. Battick, Sept. 13-20, Bologna, Italy, p. 789.

"X-ray Observations and Properties of Active Galactic Nuclei", R. Mushotzky; 1989, Proceedings of Joint U.S.-U.S.S.R. National Academy of Sciences Workshop on High Energy Astrophysics, Tblisi and Moscow, USSR, June.

"The Large Scale Surface Brightness Distribution of the X-ray Background", R. Mushotzky; 1989, Proceedings of Joint U.S.-U.S.S.R. National Academy of Sciences Workshop on High Energy Astrophysics, Tblisi and Moscow, USSR, June.

"Future Mission Requirements for the Study of Active Galaxies", R. Mushotzky; 1989, Proceedings of the "Workshop on High Energy Astrophysics in the 21st Century", December 10-14, Taos, NM.

"The Missing Mass In Clusters of Galaxies and Elliptical Galaxies", R. F. Mushotzky; 1991, in "After the First Three Minutes", AIP Conference Proceedings #222, eds. S.S. Holt, C.L. Bennett and V. Trimble, p. 394.

"Comparison of the Soft and Hard X-Ray Log N-Log S Laws", R. Mushotzky; 1992, Proc. of the 28th Yamada Conf. on "Frontiers of X-ray Astronomy, Nagoya, Japan, April 8-12, Universal Academy Press, Inc., Tokyo, Japan, eds. Y. Tanaka and K. Koyama, p. 657.

"X-Ray Variability of NGC6814", C. Done, G.M. Madejski, R.F. Mushotzky, T.J. Turner, K. Koyama, and H. Kunieda; 1992, Proc. of the 28th Yamada Conference on "Frontiers of X-ray Astronomy, Nagoya, Japan, April 8-12, Universal Academy Press, Inc., Tokyo, Japan, eds. Y. Tanaka and K. Koyama, p. 525.

"BBXRT Spectroscopy of the X-ray Binaries Cygnus X-2 and X0614+09", Smale, A.P., Serlemitsos, P.J., Marshall, F.E., Petre, R., Jahoda, K., Boldt, E.A., Holt, S.S., Mushotzky, R., Swank, J., and Szymkowiak, A.; 1992, in "Frontiers of X-ray Astronomy", Universal Academy Press, Inc., Tokyo, Japan, eds. Y. Tanaka and K. Koyama, p. 129.

"BBXRT Observations of AGN", Marshall, F.E., Boldt, E.A., Holt, S.S., Jahoda, K.M., Kelley, R.L., Mushotzky, R.F., Petre, R., Serlemitsos, P.J., Smale, A.P., Swank, J.H., Szymkowiak, A.E., and Weaver, K.; 1992, in "Frontiers of X-ray Astronomy", Universal Academy Press, Inc., Tokyo, Japan, eds. Y. Tanaka and K. Koyama, p. 233.

"BBXRT Observations of BL Lac Objects PKS 2155-304 and H1426+428", Madejski, G. Serlemitsos, P., Marshall, F., Kallman, T., Mushotzky, R. Turner, J., Done, C., Arnaud, K., Boldt, E., Holt, S., Jahoda, K., Kelley, R., Petre, R., Smale, A., Swank, J., Szymkowiak, A., and Weaver, K., 1992, in "Frontiers of X-ray Astronomy", Universal Academy Press, Inc., Tokyo, Japan, eds. Y. Tanaka and K. Koyama, p. 583.

"BBXRT Observations of the DXRB: First Results", K. Jahoda, P.J. Serlemitsos, K.A. Arnaud, E. Boldt, S. Holt, F.E. Marshall, R.F. Mushotzky, R. Petre, W.T. Sanders, A. Smale, J. Swank, A. Szymkowiak, K. Weaver, and S. Yamauchi, 1992, Proceedings of the Int. Colloquium on the XRB, Laredo, Spain, 1991, "The X-Ray Background", eds. X. Barcons and A.C. Fabian (Cambridge University Press), p. 240

"Large Scale Structure in the X-ray Background", R. Mushotzky and K. Jahoda; 1992, Proceedings of the International Workshop on the X-ray Background, Laredo, Spain, ed. X. Barcons and A. Fabian

"X-ray Spectral Images of Clusters", R. Mushotzky; 1992, Proceedings of the NATO Advanced Study Institute on Clusters of Galaxies, Cambridge, ed. A. Fabian

"X-ray Spectrum of BL Lac Object PKS2155-304", G. Madejski, T. Kallman, K. Arnaud, E. Boldt, C. Done, S. Holt, K. Jahoda, R. Kelley, F. Marshall, R. Mushotzky, R. Petre, P. Serlemitsos, A. Smale, J. Swank, A. Szymkowiak, T.J. Turner, and K. Weaver, 1993, BAAS, 24, 1208

"BBXRT Observations of Supernova Remnants", Petre, R., Serlemitsos, P., Marshall, F., Jahoda, K., Szymkowiak, A., Smale, A., Swank, J., Corcoran, M., Ptak, A., Boldt, E., Holt, S., Kelley, R., Mushotzky, R., and Weaver, K., 1993, Adv. Space Res., Vol. 13, No. 12, p. 57-66

"X-Ray Spectra and Time Variability of Active Galactic Nuclei", Mushotzky, R.F., Done, C., Pounds, K.A., 1993, Annu. Rev. Astron. Astrophys, 31, 717.

"ASCA Observations of the Spectrum of the X-ray Background", Gendreau, K.C., Mushotzky, R., Fabian, A.C., Kii, T., Holt, S.S., Serlemitsos, P.J., Tanaka, Y., Ogasaka, Y., Bautz, M.W., Fukazawa, Y., Ishisaki, Y., Kohmura, Y., Makishima, K., Tashiro, M., Tsusaka, Y., Kunieda, H., Ricker, G.R., and Vanderspek, R.K., 1994, Proc. "New Horizons of X-Ray Astronomy - First Results from ASCA", Tokyo, Japan, March

"ASCA Observations of Distant Clusters of Galaxies", Bautz, M.W., Crew, G.B., Gendreau, K.C., Mushotzky, R., Arnaud, K.A., Fabian, A.C., Yamashita, K., and Tawara, Y., 1994, Proc. "New Horizons of X-Ray Astronomy - First Results from ASCA", Tokyo, Japan, March

X-ray Spectra of Clusters and Groups Wurzburg Meeting On Roentgenstrahlung From the Universe Wurzburg Germany Sept 1995