

Curriculum Vitae: M. Coleman Miller

Date of Birth: 6 July 1968
Place of Birth: Detroit, MI
Citizenship: USA

The University of Maryland
Department of Astronomy
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Research Interests

Theoretical Astrophysics	Computer Simulations and Modeling
Physics of Dense Matter	Physics in Strong Magnetic Fields
General Relativity	Gravitational Radiation
Plasma Physics	Gravitational Lensing

Education

1984 - 1990 California Institute of Technology, Pasadena, California
Department: Physics, with Computer Science minor
Thesis Topic: Radiation Transfer in Very Strong Magnetic Fields
Degrees: M.S. (1986), Ph.D. (1990) (Advisor: E. S. Phinney)
National Science Foundation Graduate Fellow, 1984-1987

1980 - 1984 Hillsdale College, Hillsdale, Michigan
Major fields: Mathematics and Physics
Degree: B.S., Summa Cum Laude (1984)

Research Experience

2009 - Professor of Astronomy, University of Maryland

2004 - 2009 Associate Professor of Astronomy, University of Maryland

2004 - 2006 Chair, Maryland Astronomy Center for Theory and Computation

1999 - 2004 Assistant Professor of Astronomy, University of Maryland

1997 - 1999 Member of the AXAF Science Center, Chicago beta test site

1994 - 1997 Compton Gamma-Ray Observatory Fellow, University of Chicago

1993 - 1999 Research Scientist, University of Chicago
Constructed the first detailed model of kilohertz QPOs of neutron star low-mass X-ray binaries, investigated gravitational lensing of gamma-ray bursts and galaxies, and performed various studies of accreting black holes and neutron stars.

1993 Visiting Scientist, Nordita, Copenhagen
Examined effects of radiation forces on accretion onto unmagnetized neutron stars in full general relativity

1990 - 1993 Postdoctoral Research Associate, University of Illinois at Urbana-Champaign
Studied electrodynamics and particle acceleration around accretion-powered neutron stars, investigated thermal emission from isolated neutron stars, and examined methods for the determination of the magnetic inclination angles of pulsars

1985 - 1990 Research Assistant, California Institute of Technology
Developed and extended computer programs to calculate atomic data in very strong magnetic fields, used this data to investigate radiation transfer in the atmospheres of neutron stars with strong magnetic fields, and studied particle orbits around rotating and nonrotating black holes

1984 Capacity Planning Analyst, Burroughs Corp., Detroit, Michigan
Designed computer performance reporting and analysis programs

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Teaching and Outreach Experience

- 2005, 2006 Astrophysics instructor for University of Texas at Brownsville summer school on gravitational radiation
- 2004 Dean's Award for Excellence in Teaching, College of Computer, Mathematical, and Physical Sciences, University of Maryland
- 1999 - Assistant professor (1999–2004), associate professor (2004–2009), and full professor (2009–), University of Maryland
Courses include graduate stellar structure and evolution (spring 2000 and spring 2002), graduate high energy astrophysics (fall 2000, spring 2007, and spring 2009), introductory astronomy for non-majors (ASTR 100, spring 2001, fall 2001, spring 2005, and fall 2006), graduate radiative processes (fall 2002), undergraduate theoretical astrophysics (spring 2003), introductory astronomy for majors (fall 2003, continued spring 2004), undergraduate cosmology for majors (fall 2007), high energy astrophysics for majors (spring 2008), and life in the universe (fall 2008 and fall 2009)
- 1999 - Graduate thesis advisor at the University of Maryland for Jamie Cohen, Megan DeCesar, Mike Gill, Kayhan Gültekin, Sidharth Kumar, Vanessa Lauburg, and Eric Winter, and research advisor for Penn State graduate student Emily Alicea-Muñoz. Former student Kayhan Gültekin is now a postdoc at the University of Michigan. Graduate thesis committee member for an additional 30 students. Postdoctoral advisor for Sudip Bhattacharyya (now a professor at the Tata Institute of Fundamental Research Mumbai, India) and Stratos Boutloukos, and co-advisor for postdoctoral researcher Sean O'Neill. Undergraduate thesis advisor for Mia Bovill and Ashley King.
- 1999 - Public speaker
Thirteen talks at the University of Maryland Open House on topics including black holes, neutron stars, and cosmology. An additional ten talks to school groups from kindergarten to AP physics classes, as well as to astronomical societies
- 2000 Scriptwriter, Adler Planetarium, Chicago, Illinois
Head writer for the planetarium show "Black Holes: Into the Dark Abyss", which debuted in the Fall of 2000
- 1995 - 1999 Lecturer, Adler Planetarium
Delivered series of lectures on black holes and neutron stars, and series of lectures on the cosmological distance scale, in the Adler Adult Lecture Series. Also taught general relativity and black hole theory to gifted high school students.
- 1996 - 1998 Consultant, Adler Planetarium
Helped develop scientific content for "Seeing the Invisible Universe", the Fall 1996 planetarium sky show describing recent discoveries in X-ray and gamma-ray astronomy, and consulted on exhibit development and presentations
- 1995 Internet instructor, DuSable High School, Chicago, Illinois
Introduced high school students and teachers to Unix and the World Wide Web

Professional Societies

International Astronomical Union
American Astronomical Society
American Physical Society

Recent Accepted Proposals

- 2007 Principal Investigator on the proposal “Development of a Tree Code for Extreme Mass Ratio Inspirals” to the NASA Astrophysics Theory Program
- 2007 Principal Investigator on the proposal “Probing Extreme Physics Through Analysis of Neutron Star Surface Emission” to the National Science Foundation Stellar Astronomy and Astrophysics program
- 2007 Co-Investigator on the proposal “Intermediate-Mass Black Holes in Globular Clusters: Key Photometric Fingerprints” to the Hubble Theory program
- 2006 Co-Investigator on the proposal “In Search of Black Hole Spin” to the National Science Foundation Stellar Astronomy and Astrophysics program
- 2003 Co-Investigator on the proposal “Ultra-Luminous X-ray Sources in the Barred Spiral Galaxy NGC 1672”, using the XMM-Newton spacecraft
- 2003 Principal Investigator on the proposal “Dynamics of Black Holes in Dense Stellar Regions”, to the NASA Astrophysics Theory Program
- 2001 Principal Investigator on the proposal “Understanding High-Density Matter Through Analysis of X-ray Bursts”, to the National Science Foundation Stellar Astronomy and Astrophysics program

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Recent Professional Activities

- 2009 Member, NSF Stellar Astronomy and Astrophysics panel
Co-Organizer, “Matter and Electromagnetic Fields in Strong Gravity”, College Park, Maryland, 24-28 August 2009
- 2008 Member, Rossi X-ray Timing Explorer panel
Member, NASA Astrophysics Theory and Fundamental Physics panel
Member, NSF Stellar Astronomy and Astrophysics panel
Member of scientific organizing committee for dense matter session at July 2008 COSPAR meeting in Montreal
- 2006 Executive Committee member of the High Energy Astrophysics division of the AAS (to 2009)
Member, LIGO Program Advisory Committee (to 2009)
- 2005 Member, NSF review panel for LIGO
Member of scientific organizing committee, “Sixth LISA International Symposium”, Goddard Space Flight Center
- 2004 Member, Chandra X-ray Observatory review panel
Member of scientific organizing committee, “Making Waves with Intermediate-Mass Black Holes”, Penn State University
- 2003 Reviewer for the United States-Israel Binational Science Foundation
Session chair and member of scientific organizing committee, meeting on astrophysical sources of gravitational radiation
Member, NSF review panel for the Advanced LIGO concept
Member, Chandra X-ray Observatory review panel
Session chair, 10th Marcel Grossman meeting on general relativity
Member of scientific organizing committee, “Globular Clusters and Gravitational Waves”, Penn State University
Member of scientific organizing committee, Second Gravitational Wave Phenomenology Workshop, Penn State University
Member, National Science Foundation proposal review panel, Stellar Astronomy and Astrophysics Program
- 2001 Member, National Science Foundation proposal review panel, Stellar Astronomy and Astrophysics Program
- 2000 Panel chair, RXTE proposal review
Session chair, 2000 Maryland October Astrophysics Conference
Reviewer for the Cooperative Grants Program of the U.S. Civilian Research and Development Foundation
- 1999 External reviewer for the Scholarly Studies Program of the Harvard-Smithsonian CfA
Member, Astro-E proposal review panel
- 1997 Member, Compton Gamma-Ray Observatory proposal review panel
- 1995 Member, National Science Foundation proposal review panel, Stellar Astronomy and Astrophysics Program
- 1992 Member, National Science Foundation proposal review panel, Stellar Astronomy and Astrophysics Program
- 1991 - Referee for *Astronomy and Astrophysics*, *The Astrophysical Journal*, *Monthly Notices of the Royal Astronomical Society*, *Nature*, *Physical Review Letters*, and *Science*

Recent Seminars and Colloquia

1. “Neutron stars, high densities, and nuclear physics”, physics colloquium, Wake Forest University, 4 November 2009
2. “Observations of Black Holes”, invited talk, Shining Light on Black Holes, Ann Arbor, MI, 25 August 2009
3. “Signatures of Kicked Disks and Mass Loss”, invited talk, Matter and Electromagnetic Fields in Strong Gravity, College Park, MD, 27 August 2009
4. “Compact Binaries”, invited talk, Fujihara Seminar, Hayama, Japan, 27 May 2009
5. “Astrophysics With Few-Hz Gravitational Waves”, invited talk, GWADW meeting, Ft. Lauderdale, FL, 11 May 2009
6. “Astrophysical Influences on the Spins of Supermassive Black Holes”, invited talk, Observational Signatures of Black Hole Mergers, Space Telescope Science Institute, 1 April 2009
7. “Intermediate-Mass Black Holes”, Blackboard Lunch talk, Kavli Institute of Theoretical Physics, 23 March 2009
8. “The Spins and Eccentricities of Comparable-mass Black Hole Binaries”, TAPIR seminar, California Institute of Technology, 9 January 2009
9. “Extreme and Intermediate-Mass Ratio Inspirals”, invited talk, winter AAS meeting, Long Beach, CA, 5 January 2009
10. “Properties of Comparable-Mass Black Hole Binaries”, math seminar, Rochester Institute of Technology, 19 September 2008
11. “What Neutron Stars Can Tell Us About Cold High-Density Matter”, invited talk, meeting on the high-density equation of state in astrophysics, Argonne National Lab, 18 August 2008
12. “Astrophysics with the Laser Interferometer Space Antenna”, invited talk, COSPAR Scientific Assembly, Montreal, Canada, 16 July 2008
13. “Models of Kilohertz Quasi-Periodic Brightness Oscillations”, invited talk, COSPAR Scientific Assembly, Montreal, Canada, 13 July 2008
14. “Intermediate-Mass Black Holes”, invited talk, Seventh International LISA Symposium, Barcelona, Spain, 20 June 2008
15. “How to Make a Stellar-Mass Black Hole Merge”, invited colloquium, University of Amsterdam, Amsterdam, Netherlands, 13 June 2008
16. “The Astrophysical Context of Black Hole Mergers”, invited talk, APS April meeting, St. Louis, Missouri, 14 April 2008
17. “Astrophysical Consequences of Black Hole Kicks”, ASD colloquium, Goddard Space Flight Center 4 March 2008
18. “The Plasma Extremes of Neutron Stars”, plasma physics seminar, University of Maryland, 28 November 2007
19. “Gravitational Wave Observations as Probes of Dark Energy”, invited talk, dark energy workshop, University of Maryland, 15 November 2007
20. “Off the Edge: the Innermost Stable Circular Orbit around Neutron Stars”, astronomy colloquium, University of Michigan, Ann Arbor, Michigan, 13 September 2007
21. “Alignment of black holes in microquasars”, Microquasar workshop, Agios Nikolaos, Crete, Greece, 4 June 2007
22. “Getting a kick out of black hole spin alignment”, Lund Observatory seminar, Lund, Sweden, 31 May 2007
23. “Supermassive black hole alignment, merger, and spin kicks”, astrophysics colloquium, Albert Einstein Institute, Potsdam, Germany, 25 May 2007
24. “Implications of the spin distribution of LMXBs”, invited talk, workshop on neutron star populations, Green Bank, WV, 21 May 2007
25. “Intermediate-Mass Black Holes and Gravitational Radiation”, astrophysics colloquium, Institute for Advanced Study, Princeton, NJ, 6 March 2007
26. “Intermediate-Mass Black Holes”, astronomy colloquium, University of Virginia, Charlottesville, VA, 13 November 2006

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27. “Massive Black Holes”, invited review talk, LISA EMRI workshop, Golm, Germany, 18 September 2006
28. “Observations of Massive Black Holes with LISA”, invited talk, LISA analysis workshop, Greenbelt, MD, 25 June 2006
29. “Compact Binaries as Sources of Gravitational Radiation”, invited talk, compact objects conference, Cefalu, Sicily, 20 June 2006
30. “Ultraluminous X-ray Sources”, invited talk, fourth Harvard Conference on astrophysics, Cambridge, MA, 18 May 2006
31. “Astrophysical Applications of Numerical Relativity”, invited talk, AANR meeting, Guanajuato, Mexico, 6 May 2006
32. “Gravitational Waves from Intermediate-Mass Black Holes”, invited talk, APS, Dallas, Texas, 24 April 2006
33. “Constraints on Alternatives to Supermassive Black Holes”, invited talk, MODEST-6a, Lund, Sweden, 15 December 2005
34. “Gravitational Wave Sources from Dense Star Clusters”, invited talk, MODEST-6, Evanston, IL, 31 August 2005
35. “QPO constraints on neutron stars”, invited talk, A Life With Stars, Amsterdam, Holland, 24 August 2005
36. “Astrophysics With LISA”, invited talk, LISA Data: Analysis, Sources, and Science, Aspen, CO, 30 May 2005
37. “Formation Mechanisms for Intermediate-Mass Black Holes”, invited talk, High Energy Phenomena of Compact Objects, Hsinchu, Taiwan, 14 March 2005
38. “Production of QPOs in Accreting Neutron Star Systems”, invited talk, COSPAR Colloquium on Spectra and Timing of Compact X-ray Binaries, Mumbai, India, 17 January 2005
39. “Why Neutron Stars Are Interesting”, physics colloquium, Georgetown University, 30 November 2004
40. “Gravitational Radiation from Inspirals of Intermediate-Mass Black Holes”, astronomy seminar, University of Pennsylvania, 20 October 2004
41. “Probing General Relativity With Mergers of Supermassive and Intermediate-Mass Black Holes”, solicited talk HEAD Meeting, New Orleans, LA, 9 Sep 2004
42. “Sources of Gravitational Radiation”, Hot Points in Astrophysics, Dubna, Russia, 11 Aug 2004
43. “Quasi-Periodic Brightness Oscillations from Accreting Neutron Stars and Black Holes”, Hot Points in Astrophysics, Dubna, Russia, 4 Aug 2004
44. “Intermediate-Mass Black Holes”, invited review talk, Making Waves With Intermediate-Mass Black Holes, Penn State University, 20 May 2004
45. “And All the Rest (Primordial, Intermediate, and Orphan Black Holes)”, invited review talk, APS April Meeting, Denver, CO, 1 May 2004
46. “Intermediate-Mass Black Holes”, astronomy colloquium, Rutgers University, 26 March 2004
47. “Intermediate-Mass Black Holes”, talk presented to the Data Analysis Working Group of the LISA International Science Team, College Park, MD, 8 December 2003
48. “Fundamental Physics in Quasiperiodic Brightness Oscillations”, invited review talk, X-Ray Timing 2003 Meeting, Boston, MA, 5 November 2003
49. “Challenges for Models of Intermediate-Mass Black Holes”, theoretical astrophysics seminar, University of Illinois at Urbana-Champaign, 15 October 2003
50. “Searching for Gravitational Radiation Sources Using Fluctuation Analysis”, astronomy colloquium, University of Illinois at Urbana-Champaign, 14 October 2003
51. “Black Hole Binaries, Gravitational Waves, and Cockroaches”, astronomy colloquium, University of Maryland, 8 October 2003

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52. "Constraints on Superdense Matter from X-ray Binaries", invited review talk, NATO Advanced Research Workshop on Superdense QCD Matter and Compact Stars, Yerevan, Armenia, 30 September 2003
53. "Formation of Ultraluminous X-ray Sources", invited talk, workshop on ULXs, Johns Hopkins University, Baltimore, MD, 12 September 2003
54. "Implications of Intermediate-Mass Black Holes for Gravitational Radiation", invited talk, 10th Marcel Grossman meeting on general relativity, Rio de Janeiro, Brazil, 22 July 2003
55. "Sonic-Point and Spin Resonance Beat Frequency Model For Kilohertz QPOs", contributed talk, Neutron Stars on Fire, Princeton, NJ, 11 May 2003
56. "Formation Scenarios for Intermediate-Mass Black Holes", invited talk, The Astrophysics of Gravitational Wave Sources, College Park, MD, 25 April 2003
57. "Gravitational Waves from Intermediate-Mass Black Holes", High Energy Astrophysics Division Meeting, Mt. Tremblant, Quebec, 26 March 2003
58. "Intermediate-Mass Black Holes and Gravitational Radiation", Penn State Gravity Center colloquium, State College, PA, 3 March 2003
59. "Intermediate-Mass Black Holes and Gravitational Radiation", invited talk, Aspen Winter Conference on Gravitational Waves, 3 February 2003
60. "Intermediate-Mass Black Holes", Astronomy colloquium, Case Western Reserve University, Cleveland, OH, 15 January 2003
61. "Black Holes in Dense Stellar Regions", Astronomy and Solar Physics colloquium, Goddard Space Flight Center, Greenbelt, MD, 7 November 2002
62. "Intermediate-Mass Black Holes and Gravitational Radiation", colloquium, LIGO Science Center, 1 November 2002
63. "Black Hole Dynamics in Stellar Clusters", astronomy seminar, Southwest Research Institute, 12 July 2002
64. "Origin and Implications of Intermediate-Mass Black Holes", astronomy colloquium, University of Massachusetts at Amherst, 16 May 2002
65. "Intermediate-Mass Black Holes", astrophysics seminar, Institute for Advanced Study, Princeton, New Jersey, 1 May 2002
66. "Medium-Size Black Holes", plenary talk, April Meeting of the American Physical Society, Albuquerque, New Mexico, 20 April 2002
67. "The Neutron Star Equation of State From Fast Timing of X-ray Bursts", XEUS Science Workshop, Munich, Germany, 12 March 2002
68. "Intermediate-Mass Black Holes", invited review talk, Black Holes: Theory Confronts Reality, Santa Barbara, California, 25 February 2002
69. "Gravitational Waves and X-rays from Black Holes in Dense Stellar Clusters", invited talk, AAS Winter Meeting, Washington, D.C., 9 January 2002
70. "Origin and Implications of Intermediate-Mass Black Holes", astronomy colloquium, University of Maryland, 31 October 2001
71. "Origin and Implications of Intermediate-Mass Black Holes", high energy seminar, Goddard Space Flight Center, Greenbelt, MD, 9 October 2001
72. "Production of Intermediate-Mass Black Holes in Globular Clusters", invited talk, Two Years of Science With Chandra, Washington, D.C., 7 September 2001
73. "Consequences of Accretion onto Primordial Compact Objects", invited talk, APS meeting, Washington, D.C., 28 April 2001
74. "Neutron Star Masses", invited review talk, Quark Matter 2001 Conference, Stony Brook, New York, 18 January 2001
75. "Strong Gravity and Dense Matter from Observations of Compact Objects", high energy seminar, Goddard Space Flight Center, Greenbelt, MD, 28 November 2000
76. "Strong Gravity and Neutron Star X-ray Binaries", invited talk, HEAD meeting, Honolulu, Hawaii, 9 November 2000

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77. "Small-Scale Structure in Galactic Objects Deduced from X- and Gamma Ray Timing Measurements", invited talk, IAU Symposium #205, Manchester, England, 15 August 2000
78. "Fast Oscillations, General Relativity, and Dense Matter", Astronomy Colloquium, Pennsylvania State University, 26 April 2000
79. "Science With a Large-Area Timing Instrument", invited talk, Rossi 2000 meeting, Goddard Space Flight Center, 24 March 2000
80. "Strong Gravity and Ultradense Matter: Implications of Kilohertz Brightness Oscillations", Astronomy colloquium, University of Virginia, 28 September 1999
81. "Beat-Frequency Models", invited review talk, X-ray astronomy meeting, Bologna, Italy, 6 September 1999

Publications

Articles in Journals

1. “Modeling Extreme Mass Ratio Inspirals within the Effective-One-Body Approach”, N. Yunes, A. Buonanno, S. A. Hughes, M. C. Miller, and Y. Pan 2009, *PRL*, submitted (arXiv:0909.4263).
2. “Relativistic Lines and Reflection from the Inner Accretion Disk Around Neutron Stars”, E. M. Cackett, J. M. Miller, D. R. Ballantyne, D. Barret, S. Bhattacharyya, M. Boutelier, M. C. Miller, T. E. Strohmayer, and R. Wijnands 2009, *ApJ*, submitted (arXiv:0908.1098).
3. “Modeling Flows Around Merging Black Hole Binaries”, J. R. van Meter, J. H. Wise, M. C. Miller, C. S. Reynolds, J. M. Centrella, J. G. Baker, W. D. Boggs, B. J. Kelly, and S. T. McWilliams 2009, *ApJ*, submitted (arXiv:0908.0023).
4. “The Be/X-ray Binary Swift J1626.6-5156 as a Cyclotron Line Source”, M. E. DeCesar, P. T. Boyd, K. Pottschmidt, J. Wilms, S. Suchy, and M. C. Miller 2009, *ApJ*, submitted.
5. “Exploring Intermediate and Massive Black-Hole Binaries with the Einstein Telescope”, J. R. Gair, I. Mandel, M. C. Miller, and M. Volonteri 2009, *GRG*, submitted (arXiv:0907.5450).
6. “The Chandra View of Nearby X-shaped Radio Galaxies”, E. J. Hodges-Kluck, C. S. Reynolds, C. C. Cheung, and M. C. Miller 2009, *ApJ*, submitted.
7. “Systematic Variation in the Apparent Burning Area of Thermonuclear Bursts and its Implication for Neutron Star Radius Measurement”, S. Bhattacharyya, M. C. Miller, and D. K. Galloway 2009, *MNRAS*, accepted.
8. “kHz Quasi-Periodic Oscillations in the Low-Mass X-ray Binary 4U 0614+09”, M. Boutelier, D. Barret, and M. C. Miller 2009, *MNRAS*, **399**, 1901-1906.
9. “A Model for the Waveform Behavior of Accreting Millisecond Pulsars: Nearly Aligned Magnetic Fields and Wandering Emission Regions”, F. K. Lamb, S. Boutloukos, S. Van Wassenhove, R. T. Chamberlain, K.-H. Lo, A. Clare, W. Yu, and M. C. Miller 2009, *ApJ*, **706**, 417-435.
10. “Measuring the Spin of GRS 1915+105 With Relativistic Disk Reflection”, J. L. Blum, J. M. Miller, A. C. Fabian, M. C. Miller, J. Homan, M. van der Klis, E. M. Cackett, and R. C. Reis 2009, *ApJ*, **706**, 60-66.
11. “Origin of Intermittent Accretion-Powered Oscillations in Neutron Stars with Millisecond Spin Periods”, F. K. Lamb, S. Boutloukos, S. Van Wassenhove, R. T. Chamberlain, K.-H. Lo, and M. C. Miller 2009, *ApJ*, **705**, L36-L39.
12. “Reaction of Accretion Disks to Abrupt Mass Loss During Binary Black Hole Merger”, S. M. O’Neill, M. C. Miller, T. Bogdanovic, C. S. Reynolds, and J. Schnittman 2009, *ApJ*, **700**, 859-871.
13. “Mass Segregation in NGC 2298: Limits on the Presence of an Intermediate Mass Black Hole”, M. Pasquato, M. Trenti, G. De Marchi, M. Gill, D. P. Hamilton, M. C. Miller, M. Stiavelli, and R. van der Marel 2009, *ApJ*, **699**, 1511-1517.
14. “Intermediate-Mass Black Holes as LISA Sources”, M. C. Miller 2009, *Class. Quant. Grav.*, **26**, 094031.
15. “On the Time Variability of Geometrically-Thin Black Hole Accretion Disks II: Viscosity-Induced Global Oscillation Modes in Simulated Disks”, S. M. O’Neill, C. S. Reynolds, and M. C. Miller 2009, *ApJ*, **693**, 1100-1112.
16. “Mergers of Stellar-Mass Black Holes in Nuclear Star Clusters”, M. C. Miller and V. M. Lauburg 2009, *ApJ*, **692**, 917-923.
17. “On the Time Variability of Geometrically-Thin Black Hole Accretion Disks”, C. S. Reynolds and M. C. Miller 2009, *ApJ*, **692**, 869-886.
18. “Gravitational Waves from Eccentric Intermediate-Mass Black Hole Binaries”, P. Amaro-Seoane, M. C. Miller, and M. Freitag 2009, *ApJ*, **692**, L50-53.
19. “Intermediate-Mass Black Hole Induced Quenching of Mass Segregation in Star Clusters”, M. Gill, M. Trenti, M. C. Miller, R. van der Marel, D. P. Hamilton, and M. Stiavelli 2008, *ApJ*, **686**, 303-309.

20. “Modeling kicks from the merger of generic black-hole binaries”, J. G. Baker, W. D. Boggs, J. Centrella, B. J. Kelly, S. T. McWilliams, M. C. Miller, and J. R. van Meter 2008, *ApJ Letters*, **682**, L29-L32.
21. “Rates and Characteristics of Intermediate-Mass-Ratio Inspirals Detectable by Advanced LIGO”, I. Mandel, D. A. Brown, J. R. Gair, and M. C. Miller 2008, *ApJ*, **681**, 1431-1447.
22. “Discovery of the Upper kilo-Hz QPO from the X-ray Transient Aql X-1”, D. Barret, M. Boutelier, and M. C. Miller 2008, *MNRAS*, **384**, 1519-1524.
23. “Relativistic Iron Emission Lines in Neutron Star Low-Mass X-ray Binaries as Probes of Neutron Star Radii”, E. M. Cackett, J. M. Miller, S. Bhattacharyya, J. E. Grindlay, J. Homan, M. van der Klis, M. C. Miller, T. E. Strohmayer, and R. Wijnands 2008, *ApJ*, **674**, 415-420.
24. “Modeling Kicks from the Merger of Non-precussing Black-hole Binaries”, J. G. Baker, W. D. Boggs, J. Centrella, B. J. Kelly, S. T. McWilliams, M. C. Miller, and J. R. van Meter 2007, *ApJ*, **668**, 1140-1144.
25. “Neutron stars in Einstein-aether theory”, C. Eling, T. Jacobson, and M. C. Miller 2007, *PRD*, **76**, 042003.
26. “Astrophysics, detection and science applications of intermediate- and extreme mass-ratio inspirals”, P. Amaro-Seoane, J. R. Gair, M. Freitag, M. C. Miller, I. Mandel, C. J. Cutler, and S. Babak 2007, *Class. Quant. Grav.*, **24**, R113-R170.
27. “Alignment of the Spins of Supermassive Black Holes Prior to Merger”, T. Bogdanović, C. S. Reynolds, and M. C. Miller 2007, *ApJ*, **661**, L147-L150.
28. “Supporting Evidence for the Signature of the Innermost Stable Circular Orbit in Rossi X-ray Data from 4U1636-536”, D. Barret, J.-F. Olive, and M. C. Miller 2007, *MNRAS*, **376**, 1139-1144.
29. “Getting a Kick Out of Numerical Relativity”, J. G. Baker, J. Centrella, D. Choi, M. Koppitz, J. R. van Meter, and M. C. Miller 2006, *ApJ*, **653**, L93-L96.
30. “Understanding High-Density Matter Through Analysis of Surface Spectral Lines and Burst Oscillations from Accreting Neutron Stars”, S. Bhattacharyya, M. C. Miller, T. E. Strohmayer, F. K. Lamb, and C. B. Markwardt 2006, *Ad. Space. Res.*, **38**, 2765-2767.
31. “Production of QPOs in Accreting Neutron Star Systems”, M. C. Miller 2006, *Ad. Space Res.*, **38**, 2680-2683.
32. “The MODEST Questions: Challenges and Future Directions in Stellar Cluster Research”, M. B. Davies, P. Amaro-Seoane, C. Bassa, J. Dale, F. De Angelini, M. Freitag, P. Kroupa, D. Mackey, M. C. Miller, and S. Portegies Zwart 2006, *New Astronomy*, **12**, 201-214.
33. “Constraints on the High-Density Nuclear Equation of State from the Phenomenology of Compact Stars and Heavy-Ion Collisions”, T. Klähn, D. Blaschke, S. Typel, E. N. E. van Dalen, A. Faessler, C. Fuchs, T. Gaitanos, H. Grigorian, A. Ho, E. E. Kolomeitsev, M. C. Miller, G. Röpke, J. Trümper, D. N. Voskresensky, F. Weber, and H. H. Wolter 2006, *Phys. Rev. C*, **74**, 035802.
34. “Observing IMBH-IMBH Binary Coalescences via Gravitational Radiation”, J. M. Fregeau, S. L. Larson, M. C. Miller, R. O’Shaughnessy, and F. A. Rasio 2006, *ApJ*, **646**, L135-L138.
35. “The Coherence of Kilohertz Quasi-Periodic Oscillations in the X-rays from Accreting Neutron Stars”, D. Barret, J.-F. Olive, and M. C. Miller 2006, *MNRAS*, **370**, 1140-1146.
36. “The Shapes of Atomic Lines from the Surfaces of Weakly Magnetic Rotating Neutron Stars and Their Implications”, S. Bhattacharyya, M. C. Miller, and F. K. Lamb 2006, *ApJ*, **640**, L1085-L1089.
37. “Constraints on Alternatives to Supermassive Black Holes”, M. C. Miller 2006, *MNRAS*, **367**, L32-L36.
38. “Three-Body Dynamics with Gravitational Wave Emission”, K. Gültekin, M. C. Miller, and D. P. Hamilton 2006, *ApJ*, **640**, 156-166.
39. “Drop in Coherence of the Lower kilo-Hz QPO in Neutron Stars: Is There a Link With the Innermost Stable Circular Orbit?”, D. Barret, J.-F. Olive, and M. C. Miller 2005, *Astronomische Nachrichten*, **326**, 808-811
40. “Binary Encounters With Supermassive Black Holes: Zero-Eccentricity LISA Events”, M. C. Miller, M. Freitag, D. P. Hamilton, and V. M. Lauburg 2005, *ApJ*, **631**, L117-L120.
41. “An Abrupt Drop in the Coherence of the Lower Kilohertz QPO in 4U 1636-536”, D. Barret, J.-F. Olive, and M. C. Miller 2005, *MNRAS*, **361**, 855-860.

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42. “Prompt Mergers of Neutron Stars with Black Holes”, M. C. Miller 2005, *ApJ*, **626**, L41-L44.
43. “Constraints on Compact Star Parameters from Burst Oscillation Light Curves of the Accreting Millisecond Pulsar XTE J1814–338”, S. Bhattacharyya, T. E. Strohmayer, M. C. Miller, and C. B. Markwardt 2005, *ApJ*, **619**, 483-491.
44. “Probing General Relativity With Mergers of Supermassive and Intermediate-Mass Black Holes”, M. C. Miller 2005, *ApJ*, **618**, 426-431.
45. “Growth of Intermediate-Mass Black Holes in Globular Clusters”, K. Gültekin, M. C. Miller, and D. P. Hamilton 2004, *ApJ*, **616**, 221-230.
46. “A Comparison of Intermediate Mass Black Hole Candidate ULXs and Stellar-Mass Black Holes”, J. M. Miller, A. C. Fabian, and M. C. Miller 2004, *ApJ*, **614**, L117-L120.
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