

Curriculum Vitae: M. Coleman Miller

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

The University of Maryland
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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 - 2020 Professor of Astronomy, University of Maryland
Radboud Excellence Professor, Radboud University, Nijmegen, Netherlands

2017 - 2019 Chair, Maryland Astronomy Center for Theory and Computation

2015 - 2019 Astronomy Director, Joint Space-Science Institute

2013 - 2014 Director, Joint Space-Science Institute

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

Curriculum Vitae of M. Coleman Miller, Page 2

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

Teaching and Outreach Experience

2019 Instructor, masterclass on neutron stars, Nordita, Stockholm, Sweden

2017 Distinguished Faculty Teaching Prize in the Department of Astronomy, University of Maryland

2017 Instructor, Kavli summer school on gravitational wave astronomy at the Niels Bohr Institute, Copenhagen, Denmark

2016 Instructor, winter school on gravitational wave astronomy at UFABC, São Paulo, Brazil

2015 Instructor, summer school on gravitational wave astronomy at the Indian Institute of Science, Bengaluru, India

2014 Instructor, “Look & Listen” winter school (gave lectures on gravitational waves), Playa del Carmen, Mexico

2012 Consultant for the Maryland Dance Ensemble performance “Gravity”

2005, 2006 Astrophysics instructor for University of Texas at Brownsville summer school on gravitational radiation

2004 Instructor, summer school on “Hot Points in Astrophysics and Cosmology”, Dubna, Russia

2004 Dean’s Award for Excellence in Teaching, College of Computer, Mathematical, and Physical Sciences, University of Maryland

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

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, spring 2009, and spring 2017), introductory astronomy for non-majors (spring 2001, fall 2001, spring 2005, fall 2006, and fall 2011), graduate radiative processes (fall 2002, fall 2013, fall 2014, fall 2015, and fall 2016), undergraduate theoretical astrophysics (spring 2003), introductory astronomy for majors (fall 2003, continued spring 2004; fall 2017, continued spring 2018; fall 2018, continued spring 2019; fall 2020, continues spring 2021), undergraduate cosmology for majors (fall 2007), high energy astrophysics for undergraduate majors (spring 2008), life in the universe (fall 2008 and fall 2009), problem solving in astrophysics (spring 2010), honors class on black holes (spring 2010, spring 2011, and spring 2012), honors class on life in the universe (spring 2014, spring 2015, and spring 2016), graduate course on practical astrostatistics (spring 2018), undergraduate course on practical astrostatistics (spring 2019)

1999 - Graduate thesis advisor or co-advisor at the University of Maryland for Jamie Cohen, Megan DeCesar, Alex Dittmann, Mike Gill, Kayhan Gültekin (now an assistant professor at the University of Michigan), Vanessa Lauburg, Dheeraj Pasham, Corbin Taylor, Yvette Thackeray, and John Vanlandingham. Graduate thesis committee member for an additional 77 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 researchers Bruno Giacomazzo (now a professor at the University of Trento) and Sean O’Neill. Undergraduate thesis advisor or co-advisor for Ryan Abrahams, Shreya Anand, Ernesto Benitez, Mia Bovill, Dylan Britt, Laura Dunlap, Ben Flagg, Jacob Golomb, Bryan Holler, Ben Johanson, Ashley King, Kalman Knizhnik, Scott Lawrence, Jennifer Liang, Brian Prager, Shawn Rosofsky, and Joseph Weller.

Curriculum Vitae of M. Coleman Miller, Page 3

- 1999 - Public speaker
22 talks at the University of Maryland Open House on topics including black holes, neutron stars, cosmology, and life in the universe. More than 40 additional talks to school groups from kindergarten to AP physics classes, as well as to astronomical societies
- 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

Accepted Proposals

- 2017 Co-Investigator on the proposal “The Central Role of Compact Star Clusters in the Early Universe”, NASA Astrophysics Theory Program
- 2016 Co-Investigator on the proposal “Unifying Spectral and Timing Studies of Relativistic Reflection in Active Galactic Nuclei”, NASA Astrophysical Data Analysis Program
- 2016 Principal Investigator on the proposal “Gravitational Waves and Neutron Star Oscillations”, Fundação de Amparo à Pesquisa do Estado de São Paulo
- 2013 Co-Investigator on the proposal “The Multiscale Physics of Massive Black Hole Formation, Growth and Feedback”, Theoretical and Computational Astrophysics Network
- 2012 Simons sabbatical fellowship, for the study of electromagnetic counterparts to supermassive black hole binary mergers
- 2010 Principal Investigator on the proposal “Exploration of Extreme Mass Ratio Inspirals with a Tree Code” to the NASA Astrophysics Theory Program
- 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

Professional Activities

- 2018–2022 Councilor, Division of Astrophysics, American Physical Society
- 2018-2021 Member, Executive Committee, Division of Astrophysics, American Physical Society
- 2018 Reviewer, Narodowe Centrum Nauki (Polish National Science Centre)
- 2017 Member, Einstein/Hubble/Sagan Prize Committees, American Astronomical Society
Reviewer, Established Program to Stimulate Competitive Research (EPSCoR)
Reviewer for New York University Abu Dhabi
Member, Pierce and Warner Prize Committees, American Astronomical Society
- 2016 Part of committee to review the Institute for Mathematics, Astrophysics and Particle
Physics at Radboud University (Nijmegen, the Netherlands)
Member, Pierce and Warner Prize Committees, American Astronomical Society
Chair, advisory board for the West Virginia Center for Gravitational Waves and Cos-
mology (to 2018)
- 2015 Reviewer, United States-Israel Binational Foundation
Member, Bethe Prize Committee, American Physical Society
Reviewer, NASA Postdoctoral Program
- 2014 Member, Bethe Prize Committee, American Physical Society
Reviewer, Established Program to Stimulate Competitive Research (EPSCoR)
Organizer, session for 2014 COSPAR meeting
- 2013 Organizer, relativistic astrophysics session for the 10th Amaldi Conference on Gravitational
Waves
Science advisor for the KITP workshop A Universe of Black Holes
- 2012 Reviewer for NASA Postdoctoral Program
Reviewer for the Netherlands Organisation for Scientific Research
Reviewer for NSF Centers for Research Excellence in Science and Technology Program
Member of Executive Committee, Division of Astrophysics, American Physical Society
(to 2014)
- 2011 Reviewer for Swiss National Science Foundation
Reviewer for Deutsche Forschungsgemeinschaft program
Member, NSF Centers of Research Excellence in Science and Technology review panel
Member, NSF Astronomy and Astrophysics Postdoctoral Fellowship panel
Scientific organizing committee, conference on single and double massive black holes in
galaxies, Ann Arbor, MI, 22-25 August 2011
- 2010 Member, INCITE review panel
Chair, LIGO Program Advisory Committee (to 2014)
Chair, Chandra proposal review, June 2010
- 2009 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 of scientific organizing committee for dense matter session at July 2008
COSPAR meeting in Montreal
- 2006 Exec. Comm. member of the High Energy Astrophysics division of the AAS (to 2009)
Member, LIGO Program Advisory Committee (to 2009)
External reviewer for the PPARC program

Curriculum Vitae of M. Coleman Miller, Page 5

- 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
- 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 Devel-
opment 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
- 1992– Member of multiple theory proposal review panels for National Science Foundation (in-
cluding the Stellar Astronomy and Astrophysics Program and the Gravitational Physics
program) and NASA (including the Astrophysics Theory Program)
- 1992– Reviewer of more than 200 articles submitted to ApJ, MNRAS, Phys. Rev. Letters,
Phys. Rev. D., Nature, Science, Astronomy & Astrophysics, and several other journals
- 1992– Reviewer of books and book proposals for various publishers including Princeton Uni-
versity Press and Oxford University Press

Presentations

1. “NICER, Gravitational Waves, and Neutron Stars”, nuclear theory seminar, Arizona State University, 23 September 2020
2. “Learning About Dense Matter from Neutron Stars”, nuclear theory seminar, University of Minnesota Twin Cities, 22 September 2020
3. “Learning About Dense Matter Using NICER”, invited talk, Compact Stars and Quantum Chromodynamics meeting, 17 August 2020
4. “What Can We Learn From Gravitational-Wave Observations?”, invited talk, European Astronomical Society meeting, 3 July 2020
5. “The Insides of Neutron Stars”, astrophysics seminar, Center for Computational Astrophysics, Flatiron Institute, 16 April 2020
6. “A NICER Measurement of a Neutron Star”, astronomy colloquium, Radboud University, 10 March 2020
7. “Extremal Principles in Physics”, astronomy theory seminar, Radboud University, 19 February 2020
8. “A NICER View of a Neutron Star”, astronomy colloquium, University of Maryland, 29 January 2020
9. “Neutron Star Mass and Radius from X-ray Observations: the Next Five Years”, invited talk, Dense Matter & Neutron Star Mergers, Institute for Nuclear Theory, University of Washington, 16 December 2019
10. “A NICER View of a Neutron Star”, strong gravity seminar, Perimeter Institute, 12 December 2019
11. “Multiscale Applications of Gravitational-Wave Physics”, astronomy seminar, University of Michigan, 26 November 2019
12. “Exploring the Interiors of Neutron Stars”, physics colloquium, University of Guelph, 12 November 2019
13. “Unveiling the Interiors of Neutron Stars”, nuclear physics seminar, Ohio University, 29 October 2019
14. “What We Do and Do Not Know About Neutron Star Cores”, strong gravity seminar, Perimeter Institute, 25 September 2019
15. “Gravity in Astrophysics”, invited talk, Precision Gravity: from the LHC to LISA, Munich Institute for Astrophysics and Particle Physics, Garching, Germany, 5 September 2019
16. “Astrophysical Context of BH-BH Coalescences”, invited talk, Precision Gravity: from the LHC to LISA, Munich Institute for Astrophysics and Particle Physics, Garching, Germany, 27 August 2019
17. “Spilling the Guts of Neutron Stars”, invited talk, Nordita, Stockholm, Sweden, 16 August 2019
18. “What your competitor’s BBH model can’t do”, invited talk, The New Era of Gravitational-Wave Physics and Astrophysics, Kavli Institute of Theoretical Physics, 10 July 2019
19. “Constraining the High-Density Equation of State with Astronomical Observations”, invited talk, Merging Visions, Kavli Institute of Theoretical Physics, 26 June 2019
20. “Understanding the Interiors of Neutron Stars”, KIPAC astronomy colloquium, Stanford University, 23 May 2019
21. “Peering Inside Neutron Stars”, astronomy colloquium, University of Maryland, 1 May 2019
22. “What can Gravitational Waves Tell Us About the Assembly of Supermassive Black Holes?”, invited talk, American Astronomical Society meeting, Seattle, Washington, 7 January 2019
23. “LISA in the Extreme”, physics colloquium, Montana State University, 2 November 2018
24. “Frontiers in Black Hole Astrophysics”, invited review, Unsolved Problems in Astrophysics and Cosmology, Budapest, Hungary, 2 July 2018
25. “Extreme and Intermediate-mass Black Hole Inspirals”, invited talk, 21st Capra meeting, Golm, Germany, 28 June 2018
26. “What can NS Mergers Tell Us About Dense Matter?”, invited talk, Compact Stars and QCD, New York, NY, 13 June 2018
27. “Arguments For and Against Intermediate-Mass Black Holes”, invited talk, APS April Meeting, Columbus, Ohio, 17 April 2018

Curriculum Vitae of M. Coleman Miller, Page 7

28. “Could Dark Matter Consist of Primordial Black Holes?”, physics seminar, University of São Paulo, São Paulo, Brazil, 21 March 2018
29. “Neutron Stars Going Bump in the Night”, cosmology seminar, Johns Hopkins University, 16 November 2017
30. “When Neutron Stars Collide”, astrophysics theory seminar, University of Florida, 25 October 2017
31. “Why Should We Care About Double Neutron Star Mergers?”, invited talk, Joint Space-Science Institute symposium on neutron star gravitational wave detection, University of Maryland, 16 October 2017
32. “Brainstorming: Key Questions and Challenges”, invited review talk, And then there was Light: Electromagnetic Signatures of Stellar Mass Binary Black Hole Mergers, Leiden, Netherlands, 4 September 2017
33. “Putting a Spin on Stellar-Mass Black Holes”, astronomy seminar, Penn State, 1 September 2017
34. “Basics of Magnetic Accretion”, invited talk, High Energy Astrophysics Division meeting, Sun Valley, Idaho, 24 August 2017
35. “Systematics in Mass and Radius Measurements Using NICER data”, invited talk, eXtreme Matter meets eXtreme Gravity, Bozeman, Montana, 18 August 2017
36. “Neutron Star Measurements Using X-rays and Gravitational Waves”, colloquium, Instituto Nacional de Pesquisas Espaciais, São José dos Campos, Brazil, 9 August 2017
37. “Astrophysical Implications of LIGO’s Gravitational Wave Detections”, invited talk, The Physics of Extreme-Gravity Stars, Nordita, Stockholm, Sweden, 21 June 2017
38. “NICER overview and Status”, invited talk, Nuclear Astrophysics in the Gravitational Wave Era, Trento, Italy, 13 June 2017
39. “Neutron Star Measurements Using X-rays and Gravitational Waves”, invited talk, Nuclear Astrophysics in the Gravitational Wave Era, Trento, Italy, 13 June 2017
40. “Black Holes and Revelations: Gravitational Wave Detections”, physics colloquium, University of Iceland, Reykjavik, Iceland, 29 May 2017
41. “The Wave of the Future”, astronomy colloquium, University of São Paulo, 22 March 2017
42. “How to Tell When You’ve Busted CDM”, physics colloquium, MIT, 18 October 2016
43. “CDM vs. Perceived Structure”, astronomy seminar, Johns Hopkins University, 10 October 2016
44. “Future X-ray and Gravitational Wave Measurements of Neutron Star Masses and Radii”, invited talk, workshop on laboratory and astronomical observations of dense matter, Institute for Nuclear Theory, University of Washington, Seattle, 18 July 2016
45. “An Upper Bound on Neutron Star Masses from Models of Short Gamma-Ray Bursts”, contributed talk, 21st International Conference on General Relativity and Gravitation, Columbia University, 11 July 2016
46. “Implications of the Gravitational Wave Event GW151226”, invited talk, Dense Stellar Environments as a Probe of Astrophysics and General Relativity, Benasque, Spain, 15 June 2016
47. “Dynamical Formation of Double Black Hole Binaries”, invited talk, Dense Stellar Environments as a Probe of Astrophysics and General Relativity, Benasque, Spain, 9 June 2016
48. “Systematic Errors in Neutron Star Radius Measurements”, invited talk, Neutron Stars in the Multi-Messenger Era, Ohio University, 25 May 2016
49. “The Wave of the Future”, physics colloquium, University of Maryland, Baltimore County, 27 April 2016
50. “A New Method for Finding Point Sources in High-energy Neutrino Data”, ITC lunchtime seminar, Harvard, 21 April 2016
51. “GW, short γ -ray bursts, and constraints on NS matter”, ITC colloquium, Harvard, 21 April 2016
52. “The Prospects and Challenges of Measuring NS Masses and Radii Using Waveform Modeling”, invited talk, Accretion onto Magnetized Neutron Stars, Nordita, Stockholm, Sweden, 23 March 2016
53. “The Era of Gravitational-Wave Astronomy”, astronomy seminar, University of Michigan, 18 March 2016
54. “Short GRBs and the Maximum Mass of Neutron Stars”, astronomy colloquium, University of Michigan, 17 March 2016

Curriculum Vitae of M. Coleman Miller, Page 8

55. “The Implications of GW150914”, physics seminar, Hillsdale College, 14 March 2016
56. “Neutron Star Upper Mass Limits from GRBs and GWs”, physics colloquium, Texas Tech University, 25 February 2016
57. “Standard Channels for Binary Formation”, invited talk, Rapid-Fire Workshop on Compact Binary Mergers, Columbia University, 20 February 2016
58. “The Discovery of Gravitational Waves: GW at GW”, physics seminar, George Washington University, 16 February 2016
59. “Learning about Neutron Star Matter from X-rays and Gravitational Waves”, invited talk, The Many Faces of Neutron Stars, Garching, Germany, 14 September 2015
60. “Systematics and Statistics for NICER Determination of Neutron Star Masses and radii”, invited talk, Extreme Gravity Workshop, Bozeman, Montana, 20 August 2015
61. “The Challenges of Determining Neutron Star Masses and Radii”, invited talk, The Neutron Star Radius and All That Jazz, Montreal, Canada, 2 July 2015
62. “Constraints on the Dense Matter EOS from Burst Oscillations”, invited talk, Forty Years of X-ray Bursts, Madrid, Spain, 18 June 2015
63. “Neutron Star Upper Mass limits from GRBs and GWs”, contributed talk, What Comes Next for LIGO?, Silver Spring, MD, 7 May 2015
64. “Measurements, Causes, and Effects of Black Hole Spin”, invited talk, Compact Objects as Astrophysical and Gravitational Probes, Leiden, Netherlands, 5 February 2015
65. “Gravitational Wave Detection of Massive Stellar BH Binaries”, invited talk, Aspen meeting on black holes in dense star clusters, Aspen, CO, 22 January 2015
66. “Determining Neutron Star Masses and Radii using NICER Energy-Resolved Waveform Data”, contributed talk, AAS meeting, Seattle, 6 January 2015
67. “Black Hole Astrophysics”, invited talk, GR@99, Bad Honnef, Germany, 18 September 2014
68. “Challenges in Measuring Neutron Star Radii”, colloquium, Tuorla Observatory, University of Turku, Finland, 12 August 2014
69. “Alignment of Supermassive Black Hole Binary Orbits and Spins”, invited talk, COSPAR meeting, Moscow, Russia, 6 August 2014
70. “Challenges in Measuring Neutron Star Radii”, invited talk, workshop on Binary Neutron Star Coalescence as a Fundamental Physics Laboratory, Seattle, Washington, 15 July 2014
71. “Supermassive Black Hole Binaries: The Case for Aligned Spins”, invited talk, workshop on Unsolved Problems in Astrophysics and Cosmology, Budapest, Hungary, 5 July 2014
72. “Physics with Gravitational Wave Detections”, invited talk, Aspen workshop on ultracompact binaries, Aspen, Colorado, 13 June 2014
73. “Gravitational Waves and the Joint Space-Science Institute”, presentation to congressional staffers, University of Maryland, 17 April 2014
74. “Lemming Black Holes”, astronomy colloquium, McGill University, 15 April 2014
75. “Theoretical Ideas for the Formation and Feeding of IMBHs”, invited talk, ULXs and their Implications for our View of the Universe, Leiden, the Netherlands, 2 April 2014
76. “Lemming Black Holes”, astronomy colloquium, Radboud University, Nijmegen, the Netherlands, 1 April 2014
77. “Mass-Radius Constraints for NS from Pulse Profile Modeling”, invited talk, Joint Space-Science Institute minisymposium, Goddard Space Flight Center, 27 March 2014
78. “Ways to Measure Neutron Star Radii”, invited presentation, workshop on the structure and signals of neutron stars, Florence, Italy, 19 March 2014
79. “Neutron Stars and Very Dense Matter”, seminar, Case Western Reserve University, 5 March 2014
80. “Lemming Black Holes”, colloquium, Case Western Reserve University, 5 March 2014
81. “Measuring the Radii of Neutron Star X-ray Bursters with NICER”, invited talk, American Astronomical Society meeting, Washington, DC, 8 January 2014

Curriculum Vitae of M. Coleman Miller, Page 9

82. “Formation of Black Hole Seeds by Core Collapse”, invited talk, Astro-GR@Atlanta, Atlanta, Georgia, 18 November 2013
83. “Current Challenges in the Astrophysics of Neutron Stars and Black Holes”, Rowan University physics colloquium, 27 September 2013
84. “Neutron Stars and Their Planets”, Goddard Space Flight Center Astrophysics Colloquium, 27 August 2013
85. “The Universe of Black Holes that will be Revealed with Gravitational Waves”, Blackboard Lunch talk, Kavli Institute of Theoretical Physics, 19 August 2013
86. “Alignment of the Spins of Supermassive Black Hole Binaries”, invited talk, A Universe of Black Holes, Kavli Institute of Theoretical Physics, 16 August 2013
87. “Systematics in Measurements of Neutron Star Radii”, invited talk, Netherlands Institute for Space Research, Utrecht, Netherlands, 20 June 2013
88. “Intermediate-Mass Black Holes”, invited talk, Netherlands Institute for Space Research, Utrecht, Netherlands, 19 June 2013
89. “Gravitational Wave Radiation and Sources”, invited talk, Netherlands Institute for Space Research, Utrecht, Netherlands, 18 June 2013
90. “Challenges in the Measurement of Neutron Star Radii”, invited talk, Max Born Symposium, Wrocław, Poland, 15 June 2013
91. “How Well Can We Measure Neutron Star Radii?”, invited talk, University of Wrocław, Poland, 13 June 2013
92. “Electromagnetic Counterparts to High-Frequency Gravitational Wave Sources”, invited talk, Science from the First Gravitational Wave Detections, 23 May 2013, South Padre Island, Texas
93. “How Can We Measure Neutron Star Radii?”, invited seminar, Canadian Institute for Theoretical Astrophysics, 29 April 2013, Toronto, Canada
94. “The Dynamics of Galactic Nuclei”, invited review talk, Black Hole Fingerprints, 20 March 2013, Snowbird, Utah
95. “Neutron Stars and Physical Extremes”, astronomy colloquium, Universidad de Chile, 14 March 2013
96. “Hearing the Universe with Gravitational Waves”, astronomy colloquium, Pontificia Universidad Católica de Chile, 12 March 2013
97. “The Difficulties and Rewards of Neutron Star Radii”, astronomy seminar, Pontificia Universidad Católica de Chile, 11 March 2013
98. “The Near Future of Gravitational Wave Detection”, astronomy colloquium, Universidade Federal do ABC, São Paulo, Brazil, 7 March 2013
99. “Neutron Stars and the Unknowns of Dense Matter”, astronomy colloquium, Universidad Nacional de La Plata, Argentina, 5 March 2013
100. “The Universe As Heard With Gravitational Waves”, astronomy colloquium, Instituto de Astronomía y Física del Espacio, University of Buenos Aires, Argentina, 4 March 2013
101. “Planets Around Neutron Stars”, invited talk, AAS Meeting, Long Beach, CA, 10 January 2013
102. “Fermi Synergies with Advanced LIGO”, invited talk, Fermi Symposium, Monterey, CA, 30 October 2012
103. “How Accretion Disks Wiggle”, CAS seminar, Johns Hopkins University, 9 October 2012
104. “Dynamics and Intermediate-Mass Black Holes”, invited talk at the Chirps, Mergers, and Explosions workshop at the Kavli Institute for Theoretical Physics, Santa Barbara, CA, 12 September 2012
105. “Using Thermonuclear Burst Spectra to Constrain NS Masses and Radii”, invited talk, IAU General Assembly, Beijing, China, 20 August 2012
106. “Neutron Stars and the Extremes of Matter”, colloquium, Yonsei University, Seoul, South Korea, 16 August 2012
107. “The Promise of Gravitational Waves”, colloquium, Seoul National University, 14 August 2012

Curriculum Vitae of M. Coleman Miller, Page 10

108. “So What Happens When We Detect GWs from CBCs?”, invited talk, Rattle and Shine conference, Kavli Institute for Theoretical Physics, 3 August 2012
109. “The Implications of Neutron Star Observations for Dense Matter”, plenary talk, CompStar meeting, Tahiti, 7 June 2012
110. “Gravitational Wave Sources from a few Hz to a few kHz”, invited talk, Gravitational Wave Advanced Detector Workshop, Waikoloa Beach, HI, 14 May 2012
111. “The Implications of kHz QPOs”, invited talk, 16 Years of Discovery with RXTE, Goddard Space Flight Center, 30 March 2012
112. “Planets in the Extreme Environments of Neutron Stars”, invited talk, Planets around Stellar Remnants, Arecibo Observatory, Puerto Rico, 26 January 2012
113. “Lemming Black Holes”, University of California at Santa Cruz astronomy colloquium, 23 November 2011
114. “The Connection of LIGO to Astrophysics”, invited talk, Gravitational Wave Open Data Workshop, Livingston, LA, 27 October 2011
115. “Lemming Black Holes”, Howard University physics colloquium, 12 October 2011
116. “Galactic Centers: it’s a Binary’s Life”, invited talk, Astro-GR conference, Palma de Mallorca, Spain, 9 September 2011
117. “Using Thermonuclear Burst Spectra to Constrain Neutron Star Masses and Radii”, invited talk, Astrophysical Transients workshop, University of Washington, 18 July 2011
118. “Tidal Disruption of Tidally Separated Binaries”, invited seminar, Aspen workshop on low-mass and intermediate-mass black holes, Aspen, CO, 7 June 2011
119. “The Spins of Supermassive Black Holes”, invited seminar, Aspen workshop on supermassive black holes, Aspen, CO, 1 June 2011
120. “Middleweight Black Holes”, general relativity seminar, University of Maryland, 4 May 2011
121. “Probing NS EOS and Synergy with Advanced LIGO and Virgo”, invited talk, International X-ray Observatory meeting, Rome, Italy, 16 March 2011
122. “Using Millisecond Pulsars to Detect 10^{-9} to 10^{-7} Hz Gravitational Waves”, invited talk, Joint Space-Science Institute mini-symposium, College Park, MD, 25 February 2011
123. “Using Gravitational Waves to Constrain Neutron Star Structure”, general relativity seminar, Penn State, 15 February 2011
124. “New Results on the X-ray Spectra of Thermonuclear Bursts”, invited talk, HTRS meeting, Champéry, Switzerland, 9 February 2011
125. “Learning about Dense Matter from Neutron Stars”, astronomy colloquium, University of British Columbia, 10 January 2011
126. “Neutron Stars and the Extremes of Matter”, invited talk, III Challenges workshop, Campos do Jordao, Brazil, 16 December 2010
127. “Introduction to Gravitational Radiation”, invited talk, III Challenges workshop, Campos do Jordao, Brazil, 13 December 2010
128. “X-ray Burst Spectra”, invited talk, Exploring Physics with Neutron Stars, Tucson, Arizona, 19 November 2010
129. “A Possible Explanation for Puzzling Properties of X-ray Bursts”, astronomy colloquium, Caltech, 20 October 2010
130. “Dynamical processes in the production of EMRIs”, invited talk, LISA-GR meeting, Paris, France, 17 September 2010
131. “Putting a spin on supermassive black holes”, astronomy seminar, University of Melbourne, 11 August 2010
132. “What do we know about black holes?”, astronomy seminar, Monash University, Melbourne, Australia, 10 August 2010

Curriculum Vitae of M. Coleman Miller, Page 11

133. “AIGO and the structure of neutron stars”, astrophysics seminar, University of Western Australia, 6 August 2010
134. “Astrophysics with gravitational waves”, IAS masterclass, University of Western Australia, 5 August 2010
135. “Formation of stellar-mass black hole binaries”, invited talk, 460th Heraeus symposium, on black holes, Bad Honnef, Germany, 11 June 2010
136. “Learning about neutron stars with LIGO”, LIGO seminar, Caltech, 20 April 2010
137. “Probing the high-density matter of neutron stars”, ITC colloquium, Harvard, 1 April 2010
138. “Introduction to gravitational radiation”, invited talk, Advanced gravitational wave detectors and Advanced LIGO technology, Perth, Australia, 28 February 2010
139. “Astrophysical Influences on the Spins of Supermassive Black Holes”, colloquium, Naval Research Laboratory, Washington, DC, 25 February 2010
140. “Astrophysical Sources for Ground-Based Gravitational Wave Detectors”, invited talk, Advanced gravitational wave detectors and Advanced LIGO technology, Perth, Australia, 23 February 2010
141. “Prospects for gravitational wave detection”, invited talk, Probing Strong Gravity Near Black Holes, Prague, Czech Republic, 18 February 2010
142. “Extreme mass ratio inspirals”, invited talk, Stars and Singularities, Rehovot, Israel, 10 December 2009
143. “Neutron stars, high densities, and nuclear physics”, physics colloquium, Wake Forest University, 4 November 2009
144. “Observations of Black Holes”, invited talk, Shining Light on Black Holes, Ann Arbor, MI, 25 September 2009
145. “Signatures of Kicked Disks and Mass Loss”, invited talk, Matter and Electromagnetic Fields in Strong Gravity, College Park, MD, 27 August 2009
146. “Compact Binaries”, invited talk, Fujihara Seminar, Hayama, Japan, 27 May 2009
147. “Astrophysics With Few-Hz Gravitational Waves”, invited talk, GWADW meeting, Ft. Lauderdale, FL, 11 May 2009
148. “Astrophysical Influences on the Spins of Supermassive Black Holes”, invited talk, Observational Signatures of Black Hole Mergers, Space Telescope Science Institute, 1 April 2009
149. “Intermediate-Mass Black Holes”, Blackboard Lunch talk, Kavli Institute of Theoretical Physics, 23 March 2009
150. “The Spins and Eccentricities of Comparable-mass Black Hole Binaries”, TAPIR seminar, California Institute of Technology, 9 January 2009
151. “Extreme and Intermediate-Mass Ratio Inspirals”, invited talk, winter AAS meeting, Long Beach, CA, 5 January 2009
152. “Properties of Comparable-Mass Black Hole Binaries”, math seminar, Rochester Institute of Technology, 19 September 2008
153. “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
154. “Astrophysics with the Laser Interferometer Space Antenna”, invited talk, COSPAR Scientific Assembly, Montreal, Canada, 16 July 2008
155. “Models of Kilohertz Quasi-Periodic Brightness Oscillations”, invited talk, COSPAR Scientific Assembly, Montreal, Canada, 13 July 2008
156. “Intermediate-Mass Black Holes”, invited talk, Seventh International LISA Symposium, Barcelona, Spain, 20 June 2008
157. “How to Make a Stellar-Mass Black Hole Merge”, invited colloquium, University of Amsterdam, Amsterdam, Netherlands, 13 June 2008
158. “The Astrophysical Context of Black Hole Mergers”, invited talk, APS April meeting, St. Louis, Missouri, 14 April 2008

Curriculum Vitae of M. Coleman Miller, Page 12

159. “Astrophysical Consequences of Black Hole Kicks”, ASD colloquium, Goddard Space Flight Center 4 March 2008
160. “The Plasma Extremes of Neutron Stars”, plasma physics seminar, University of Maryland, 28 November 2007
161. “Gravitational Wave Observations as Probes of Dark Energy”, invited talk, dark energy workshop, University of Maryland, 15 November 2007
162. “Off the Edge: the Innermost Stable Circular Orbit around Neutron Stars”, astronomy colloquium, University of Michigan, Ann Arbor, Michigan, 13 September 2007
163. “Alignment of black holes in microquasars”, Microquasar workshop, Agios Nikolaos, Crete, Greece, 4 June 2007
164. “Getting a kick out of black hole spin alignment”, Lund Observatory seminar, Lund, Sweden, 31 May 2007
165. “Supermassive black hole alignment, merger, and spin kicks”, astrophysics colloquium, Albert Einstein Institute, Potsdam, Germany, 25 May 2007
166. “Implications of the spin distribution of LMXBs”, invited talk, workshop on neutron star populations, Green Bank, WV, 21 May 2007
167. “Intermediate-Mass Black Holes and Gravitational Radiation”, astrophysics colloquium, Institute for Advanced Study, Princeton, NJ, 6 March 2007
168. “Intermediate-Mass Black Holes”, astronomy colloquium, University of Virginia, Charlottesville, VA, 13 November 2006
169. “Massive Black Holes”, invited review talk, LISA EMRI workshop, Golm, Germany, 18 September 2006
170. “Observations of Massive Black Holes with LISA”, invited talk, LISA analysis workshop, Greenbelt, MD, 25 June 2006
171. “Compact Binaries as Sources of Gravitational Radiation”, invited talk, compact objects conference, Cefalu, Sicily, 20 June 2006
172. “Ultraluminous X-ray Sources”, invited talk, fourth Harvard Conference on astrophysics, Cambridge, MA, 18 May 2006
173. “Astrophysical Applications of Numerical Relativity”, invited talk, AANR meeting, Guanajuato, Mexico, 6 May 2006
174. “Gravitational Waves from Intermediate-Mass Black Holes”, invited talk, APS, Dallas, Texas, 24 April 2006
175. “Constraints on Alternatives to Supermassive Black Holes”, invited talk, MODEST-6a, Lund, Sweden, 15 December 2005
176. “Gravitational Wave Sources from Dense Star Clusters”, invited talk, MODEST-6, Evanston, IL, 31 August 2005
177. “QPO constraints on neutron stars”, invited talk, A Life With Stars, Amsterdam, Holland, 24 August 2005
178. “Astrophysics With LISA”, invited talk, LISA Data: Analysis, Sources, and Science, Aspen, CO, 30 May 2005
179. “Formation Mechanisms for Intermediate-Mass Black Holes”, invited talk, High Energy Phenomena of Compact Objects, Hsinchu, Taiwan, 14 March 2005
180. “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
181. “Why Neutron Stars Are Interesting”, physics colloquium, Georgetown University, 30 November 2004
182. “Gravitational Radiation from Inspirals of Intermediate-Mass Black Holes”, astronomy seminar, University of Pennsylvania, 20 October 2004
183. “Probing General Relativity With Mergers of Supermassive and Intermediate-Mass Black Holes”, solicited talk HEAD Meeting, New Orleans, LA, 9 Sep 2004
184. “Sources of Gravitational Radiation”, Hot Points in Astrophysics, Dubna, Russia, 11 Aug 2004

Curriculum Vitae of M. Coleman Miller, Page 13

185. “Quasi-Periodic Brightness Oscillations from Accreting Neutron Stars and Black Holes”, Hot Points in Astrophysics, Dubna, Russia, 4 Aug 2004
186. “Intermediate-Mass Black Holes”, invited review talk, Making Waves With Intermediate-Mass Black Holes, Penn State University, 20 May 2004
187. “And All the Rest (Primordial, Intermediate, and Orphan Black Holes)”, invited review talk, APS April Meeting, Denver, CO, 1 May 2004
188. “Intermediate-Mass Black Holes”, astronomy colloquium, Rutgers University, 26 March 2004
189. “Intermediate-Mass Black Holes”, talk presented to the Data Analysis Working Group of the LISA International Science Team, College Park, MD, 8 December 2003
190. “Fundamental Physics in Quasiperiodic Brightness Oscillations”, invited review talk, X-Ray Timing 2003 Meeting, Boston, MA, 5 November 2003
191. “Challenges for Models of Intermediate-Mass Black Holes”, theoretical astrophysics seminar, University of Illinois at Urbana-Champaign, 15 October 2003
192. “Searching for Gravitational Radiation Sources Using Fluctuation Analysis”, astronomy colloquium, University of Illinois at Urbana-Champaign, 14 October 2003
193. “Black Hole Binaries, Gravitational Waves, and Cockroaches”, astronomy colloquium, University of Maryland, 8 October 2003
194. “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
195. “Formation of Ultraluminous X-ray Sources”, invited talk, workshop on ULXs, Johns Hopkins University, Baltimore, MD, 12 September 2003
196. “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
197. “Sonic-Point and Spin Resonance Beat Frequency Model For Kilohertz QPOs”, contributed talk, Neutron Stars on Fire, Princeton, NJ, 11 May 2003
198. “Formation Scenarios for Intermediate-Mass Black Holes”, invited talk, The Astrophysics of Gravitational Wave Sources, College Park, MD, 25 April 2003
199. “Gravitational Waves from Intermediate-Mass Black Holes”, High Energy Astrophysics Division Meeting, Mt. Tremblant, Quebec, 26 March 2003
200. “Intermediate-Mass Black Holes and Gravitational Radiation”, Penn State Gravity Center colloquium, State College, PA, 3 March 2003
201. “Intermediate-Mass Black Holes and Gravitational Radiation”, invited talk, Aspen Winter Conference on Gravitational Waves, 3 February 2003
202. “Intermediate-Mass Black Holes”, Astronomy colloquium, Case Western Reserve University, Cleveland, OH, 15 January 2003
203. “Black Holes in Dense Stellar Regions”, Astronomy and Solar Physics colloquium, Goddard Space Flight Center, Greenbelt, MD, 7 November 2002
204. “Intermediate-Mass Black Holes and Gravitational Radiation”, colloquium, LIGO Science Center, 1 November 2002
205. “Black Hole Dynamics in Stellar Clusters”, astronomy seminar, Southwest Research Institute, 12 July 2002
206. “Origin and Implications of Intermediate-Mass Black Holes”, astronomy colloquium, University of Massachusetts at Amherst, 16 May 2002
207. “Intermediate-Mass Black Holes”, astrophysics seminar, Institute for Advanced Study, Princeton, New Jersey, 1 May 2002
208. “Medium-Size Black Holes”, plenary talk, April Meeting of the American Physical Society, Albuquerque, New Mexico, 20 April 2002

Curriculum Vitae of M. Coleman Miller, Page 14

209. "The Neutron Star Equation of State From Fast Timing of X-ray Bursts", XEUS Science Workshop, Munich, Germany, 12 March 2002
210. "Intermediate-Mass Black Holes", invited review talk, Black Holes: Theory Confronts Reality, Santa Barbara, California, 25 February 2002
211. "Gravitational Waves and X-rays from Black Holes in Dense Stellar Clusters", invited talk, AAS Winter Meeting, Washington, D.C., 9 January 2002
212. "Origin and Implications of Intermediate-Mass Black Holes", astronomy colloquium, University of Maryland, 31 October 2001
213. "Origin and Implications of Intermediate-Mass Black Holes", high energy seminar, Goddard Space Flight Center, Greenbelt, MD, 9 October 2001
214. "Production of Intermediate-Mass Black Holes in Globular Clusters", invited talk, Two Years of Science With Chandra, Washington, D.C., 7 September 2001
215. "Consequences of Accretion onto Primordial Compact Objects", invited talk, APS meeting, Washington, D.C., 28 April 2001
216. "Neutron Star Masses", invited review talk, Quark Matter 2001 Conference, Stony Brook, New York, 18 January 2001
217. "Strong Gravity and Dense Matter from Observations of Compact Objects", high energy seminar, Goddard Space Flight Center, Greenbelt, MD, 28 November 2000
218. "Strong Gravity and Neutron Star X-ray Binaries", invited talk, HEAD meeting, Honolulu, Hawaii, 9 November 2000
219. "Small-Scale Structure in Galactic Objects Deduced from X- and Gamma Ray Timing Measurements", invited talk, IAU Symposium #205, Manchester, England, 15 August 2000
220. "Fast Oscillations, General Relativity, and Dense Matter", Astronomy Colloquium, Pennsylvania State University, 26 April 2000
221. "Science With a Large-Area Timing Instrument", invited talk, Rossi 2000 meeting, Goddard Space Flight Center, 24 March 2000
222. "Strong Gravity and Ultradense Matter: Implications of Kilohertz Brightness Oscillations", Astronomy colloquium, University of Virginia, 28 September 1999
223. "Beat-Frequency Models", invited review talk, X-ray astronomy meeting, Bologna, Italy, 6 September 1999
224. "Recent Developments in Kilohertz QPOs", invited review talk, HEAD meeting, Charleston, SC, 12 April 1999
225. "Theoretical Interpretation of Kilohertz Brightness Oscillations", astrophysics colloquium, University of Maryland, 17 March 1999
226. "Taking the Pulse of a Neutron Star", astrophysics colloquium, University of Chicago, 6 January 1999
227. "Gravitational Lensing Limits on the Average Redshift of Gamma-Ray Bursts", contributed talk, 19th Texas Symposium on Relativistic Astrophysics, Paris, France, 16 December 1998
228. "A $2.3 M_{\odot}$ Neutron Star? Results from Kilohertz Brightness Oscillations", theory seminar, Institute of Astronomy, Cambridge, England, 9 December 1998
229. "Implications of Kilohertz Brightness Oscillations in Neutron Star Low-Mass X-ray Binaries", invited theory seminar, Max Planck Center for Theoretical Astrophysics, Garching, Germany, 2 December 1998
230. "Evidence for a 2.3 Solar Mass Neutron Star and Implications for Dense Matter", theory seminar, Argonne National Laboratory, Argonne, Illinois, 17 September 1998
231. "Constraints on Neutron Star Masses and Equations of State from Kilohertz QPOs", theory seminar, Harvard-Smithsonian Center for Astrophysics, Cambridge, Massachusetts, 11 February 1998
232. "General Relativistic Effects on Gas Dynamics and Radiation Transport Near Neutron Stars", invited talk, HEAD meeting, Estes Park, CO, 7 November 1997
233. "Neutron Star Mass and Radius Constraints from High-Frequency QPOs", contributed talk, HEAD meeting, Estes Park, CO, 6 November 1997

Curriculum Vitae of M. Coleman Miller, Page 15

234. "Constraints on Neutron Stars Implied by Kilohertz QPOs", invited talk, BeppoSAX/RXTE Symposium, Rome, 22 October 1997
235. "Models of Kilohertz Quasi-Periodic Brightness Oscillations", invited talk, 8th Annual October Astrophysics Conference, College Park, MD, 14 October 1997
236. "Sonic-Point Model for Kilohertz Brightness Oscillations in LMXBs", contributed talk, American Astronomical Society meeting, Winston-Salem, NC, 11 June 1997
237. "Theoretical Interpretation of Kilohertz QPO from LMXBs", invited talk, American Physical Society general meeting, Washington, DC, 19 April 1997
238. "The Origin of Cosmic Gamma-Ray Bursts", physics seminar, University of Illinois at Urbana-Champaign, Urbana, Illinois, 17 April 1997
239. "Entering a Data-Rich Era in the Study of Soft Gamma-Ray Repeaters", relativistic astrophysics seminar, University of Illinois at Urbana-Champaign, Urbana, Illinois, 16 April 1997
240. "The Songs of Neutron Stars: High-Frequency X-ray Brightness Oscillations", astrophysics colloquium, University of Illinois at Urbana-Champaign, Urbana, Illinois, 15 April 1997
241. "Sonic-Point Model for High-Frequency QPOs in Neutron Star Low-Mass X-ray Binaries", invited talk, 18th Texas Symposium on Relativistic Astrophysics, Chicago, Illinois, 19 December 1996
242. "Models for Kilohertz Brightness Oscillations", physics seminar, Stanford University, Palo Alto, California, 5 December 1996
243. "Sonic-Point Interpretation of High-Frequency QPOs", astronomy seminar, University of California at Berkeley, Berkeley, California, 3 December 1996
244. "Implications of Kilohertz QPOs", physics seminar, University of California at San Diego, San Diego, California, 26 November 1996
245. "A Model for High-Frequency Brightness Oscillations from Neutron-Star LMXBs", astronomy seminar, Yale University, New Haven, Connecticut, 21 November 1996
246. "Constraints on Neutron Stars in LMXBs from High-Frequency QPOs", astronomy seminar, Columbia University, New York City, 20 November 1996
247. "Sonic-Point Model for Kilohertz Brightness Oscillations", astronomy colloquium, Copernicus Astronomical Center, Warsaw, Poland, 30 October 1996
248. "Optical/Near-IR Observations of the Bursting Pulsar", astronomy seminar, Copernicus Astronomical Center, Torun, Poland, 28 October 1996
249. "Interpretation of High-Frequency Quasi-Periodic Oscillations", physics seminar, Nordita, Copenhagen, 23 October 1996
250. "Constraints on Neutron Star Masses and Radii from Kilohertz Oscillations", astronomy seminar, Astronomical Institute "Anton Pannekoek", Amsterdam, 21 October 1996
251. "Soft Gamma-Ray Repeaters: Probes of a New Physical Regime?", physics seminar, Naval Research Laboratory, Washington, DC, 9 July 1996
252. "Entering a Data-Rich Era in the Study of Soft Gamma-Ray Repeaters", high energy astrophysics physics seminar, Goddard Space Flight Center, Greenbelt, Maryland, 8 July 1996
253. "Soft Gamma-Ray Repeaters: Probes of a New Physical Regime?". physics seminar, University of Illinois, Urbana, Illinois, 13 May 1996
254. "Soft Gamma-Ray Repeaters and Ultrastrong Magnetic Fields", astronomy seminar, University of Wisconsin, Madison, Wisconsin, 4 April 1996
255. "Spectral Signatures of Supercritical Magnetic Fields", physics seminar, University of North Carolina, Chapel Hill, North Carolina, 1 March 1996
256. "Soft Gamma-Ray Repeaters", astronomy seminar, North Carolina State, Raleigh, North Carolina, 29 February 1996
257. "Developments in the Study of Soft Gamma-Ray Repeaters", astrophysics colloquium, University of Chicago, Chicago, Illinois, 21 February 1996

Curriculum Vitae of M. Coleman Miller, Page 16

258. “Critical Luminosities in Ultrastrong Magnetic Fields”, astronomy seminar, Northwestern University, Evanston, Illinois, 12 February 1996
259. “Optical/IR Observations of the Bursting Pulsar”, contributed talk, Aspen Workshop on Black-Hole X-ray Transients, Aspen, Colorado, 25 January 1996
260. “Compton Scattering Effects in the Spectra of Soft Gamma-Ray Repeaters”, contributed talk, Third Huntsville Symposium on Gamma-Ray Bursts, Huntsville, Alabama, 27 October 1995
261. “Radiation Drag near Slowly Rotating Neutron Stars”, contributed talk, High Energy Astrophysics Division Meeting, Napa, CA, 2 November 1994
262. “Radiation Drag Near Slowly Rotating Neutron Stars”, contributed talk, Lund workshop on neutron stars, Lund, Sweden, 1 April 1993
263. “Radiation Forces Near Neutron Stars — What a Drag!”, contributed talk, Compact Objects, Nordita, Copenhagen, Denmark, 24 March 1993
264. “Gamma-Ray Production by Neutron Stars Accreting From a Disk”, contributed talk, Compton Gamma-Ray Observatory meeting, St. Louis, Missouri, 16 October 1992
265. “Thermal Emission From Isolated Neutron Stars”, contributed talk, Isolated Pulsars, Taos, New Mexico, 24 February 1992

Publications

Articles in Journals

1. “Golden galactic binaries for LISA: mass-transferring white dwarf black hole binaries”, L. Sberna, A. Toubiana, and M. C. Miller 2020, *ApJ Letters*, submitted (arXiv:2010.05974).
2. “Investigating the I-Love-Q and w-mode Universal Relations Using Piecewise Polytropes”, E. Benitez, J. Weller, V. Guedes, C. Chirenti, and M. C. Miller 2020, *Phys. Rev. D*, submitted (arXiv:2010.02619).
3. “The origin of inequality: isolated formation of a 30+10Msun binary black-hole merger”, A. Olejak, M. Fishbach, K. Belczynski, D. E. Holz, J.-P. Lasota, M. C. Miller, and T. Bulik 2020, *MNRAS*, accepted (arXiv:2004.11866).
4. “Beaming as an explanation of the repetition/pulse width relation in FRBs”, L. Connor, M. C. Miller, and D. W. Gardinier 2020, *MNRAS*, **497**, 3076 (7 pages).
5. “Merger rates in primordial black hole clusters without initial binaries”, V. Korol, I. Mandel, M. C. Miller, R. P. Church, and M. B. Davies 2020, *MNRAS*, **496**, 994 (7 pages).
6. “The evolutionary roads leading to low effective spins, high black hole masses, and O1/O2 rates of LIGO/Virgo binary black holes”, K. Belczynski, J. Klencki, C. E. Fields, A. Olejak, E. Berti, G. Meynet, C. L. Fryer, D. E. Holz, R. OShaughnessy, D. A. Brown, T. Bulik, S. C. Leung, K. Nomoto, P. Madau, R. Hirschi, S. Jones, S. Mondal, M. Chruslinska, P. Drozda, D. Gerosa, Z. Doctor, M. Giersz, S. Ekstrom, C. Georgy, A. Askar, D. Wysocki, T. Natan, W. M. Farr, G. Wiktorowicz, M. C. Miller, B. Farr, and J.-P. Lasota 2020, *A&A*, **636**, A104 (40 pages).
7. “Star formation in accretion disks and SMBH growth”, A. Dittmann and M. C. Miller 2020, *MNRAS*, **493**, 3732 (12 pages).
8. “Constraining the equation of state of high-density cold matter using nuclear and astronomical measurements”, M. C. Miller, C. Chirenti, and F. K. Lamb 2020, *ApJ*, **888**, 12 (13 pages).
9. “NICER X-Ray Observations of Seven Nearby Rotation-powered Millisecond Pulsars”, S. Guillot, M. Kerr, P. S. Ray, S. Bogdanov, S. Ransom, J. S. Deneva, Z. Arzoumanian, P. Bult, D. Chakrabarty, K. C. Gendreau, W. C. G. Ho, G. K. Jaisawal, C. Malacaria, M. C. Miller, T. E. Strohmayer, M. T. Wolff, K. S. Wood, N. A. Webb, L. Guillemot, I. Cognard, and G. Theureau 2019, *ApJ Letters*, **887**, L27 (15 pages).
10. “Constraining the Neutron Star Mass-Radius Relation and Dense Matter Equation of State with NICER. II. Emission from Hot Spots on a Rapidly Rotating Neutron Star”, S. Bogdanov, F. K. Lamb, S. Mahmoodifar, M. C. Miller, S. M. Morsink, T. E. Riley, T. E. Strohmayer, A. K. Tung, A. L. Watts, A. J. Dittmann, D. Chakrabarty, S. Guillot, Z. Arzoumanian, and K. C. Gendreau 2019, *ApJ Letters*, **887**, L26 (23 pages).
11. “Constraining the Neutron Star Mass-Radius Relation and Dense Matter Equation of State with NICER. I. The Millisecond Pulsar X-Ray Data Set”, S. Bogdanov, S. Guillot, P. S. Ray, M. T. Wolff, D. Chakrabarty, W. C. G. Ho, M. Kerr, F. K. Lamb, A. Lommen, R. M. Ludlam, R. Milburn, S. Montano, M. C. Miller, M. Bauböck, F. Özel, D. Psaltis, R. A. Remillard, T. E. Riley, J. F. Steiner, T. E. Strohmayer, A. L. Watts, K. S. Wood, J. Zeldes, T. Enoto, T. Okajima, J. W. Kellogg, C. Baker, C. B. Markwardt, Z. Arzoumanian, and K. C. Gendreau 2019, *ApJ Letters*, **887**, L25 (20 pages).
12. “PSR J0030+0451 Mass and Radius from NICER Data and Implications for the Properties of Neutron Star Matter”, M. C. Miller, F. K. Lamb, A. J. Dittmann, S. Bogdanov, Z. Arzoumanian, K. C. Gendreau, S. Guillot, A. K. Harding, W. C. G. Ho, J. M. Lattimer, R. M. Ludlam, S. Mahmoodifar, S. M. Morsink, P. S. Ray, T. E. Strohmayer, K. S. Wood, T. Enoto, R. Foster, T. Okajima, G. Prigozhin, and Y. Soong 2019, *ApJ Letters*, **887**, L24 (28 pages).
13. “Searching for hypermassive neutron stars with short gamma-ray bursts”, C. Chirenti, M. C. Miller, T. Strohmayer, and J. Camp 2019, *ApJ Letters*, **884**, L16 (5 pages).

14. “A search for high-energy counterparts to fast radio bursts”, V. Cunningham, S. B. Cenko, E. Burns, A. Goldstein, A. Lein, D. Kocevski, M. Briggs, V. Connaughton, M. C. Miller, J. Racusin, and M. Stanbro 2019, *ApJ*, **879**, 40 (13 pages).
15. “Thermal X-ray emission identified from the millisecond pulsar PSR J1909-3744”, N. A. Webb, D. Leahy, S. Guillot, N. Baillot dEtivaux, D. Barret, L. Guillemot, J. Margueron, and M. C. Miller 2019, *A&A*, **627**, A141 (5 pages).
16. “Questions related to the equation of state of high-density matter”, M. C. Miller 2019, *Universe*, **5**, 100 (11 pages).
17. “The new frontier of gravitational waves”, M. C. Miller and N. Yunes 2019, *Nature*, **568**, 469–476.
18. “Probing neutron star structure via f-mode oscillations and damping in dynamical spacetime models”, S. Rosofsky, R. Gold, C. Chirenti, E. A. Huerta, and M. C. Miller 2019, *Phys. Rev. D*, **99**, 084024.
19. “Observatory science with eXTP”, J. J. M. in’t Zand et al. 2019, *Science China Physics*, **62**, 29506.
20. “Accretion in strong field gravity with eXTP”, A. De Rosa et al. 2019, *Science China Physics*, **62**, 29503.
21. “Dense matter with eXTP”, A. L. Watts et al. 2019, *Science China Physics*, **62**, 29504.
22. “On the Persistence of QPOs during the SGR 1806–20 Giant Flare”, M. C. Miller, C. Chirenti, and T. E. Strohmayer 2019, *ApJ*, **871**, 95.
23. “Cumulative Probability for the Sum of Exponentially-Distributed Variables”, C. Chirenti and M. C. Miller 2018, *College Mathematics Journal*, submitted (arXiv:1803.08363).
24. “A Unified Model for Tidal Disruption Events”, L. Dai, J. C. McKinney, N. Roth, E. Ramirez-Ruiz, and M. C. Miller 2018, *ApJ Letters*, **859**, L20.
25. “Did ASAS-SN Kill the Supermassive Black Hole Binary Candidate PG1302–102?”, T. Liu, S. Gezari, and M. C. Miller 2018, *ApJ Letters*, **859**, L12.
26. “r-process Nucleosynthesis in the Early Universe Through Fast Mergers of Compact Binaries in Triple Systems”, M. Bonetti, A. Perego, P. R. Capelo, M. Dotti, and M. C. Miller 2018, *PASA*, **34**, 17.
27. “A Strong Test of the Dark Matter Origin of a TeV Electron Excess Using IceCube Neutrinos”, Y. Zhao, K. Fang, M. Su, and M. C. Miller 2018, *JCAP*, **06**, 030.
28. “Neutron Star Mass and Radius Measurements from Atmospheric Model Fits to X-ray Burst Cooling Tail Spectra”, J. Nättilä, M. C. Miller, A. W. Steiner, J. J. E. Kajava, V. F. Suleimanov, and J. Poutanen 2017, *A&A*, **608**, 31.
29. “Distinguishing Spin-Aligned and Isotropic Black Hole Populations with Gravitational Waves”, W. M. Farr, S. Stevenson, M. C. Miller, I. Mandel, B. Farr, and A. Vecchio 2017, *Nature*, **548**, 426.
30. “Energetic Constraints on Electromagnetic Signals from Double Black Hole Mergers”, L. Dai, J. C. McKinney, and M. C. Miller 2017, *MNRAS*, **470**, 92.
31. “Gravitational Waves from f-modes Excited by the Inspiral of Highly Eccentric Neutron Star Binaries”, C. Chirenti, M. C. Miller, and R. Gold 2017, *ApJ*, **837**, 67.
32. “Identifying Ultrahigh-Energy Cosmic-Ray Accelerators with Future Ultrahigh-Energy Neutrino Detectors”, K. Fang, K. Kotera, M. C. Miller, K. Murase, and F. Oikonomou 2016, *JCAP*, **12**, 017.
33. “Disk-Wind Connection During the Heartbeats of GRS 1915+105”, A. Zoghbi, J. M. Miller, A. L. King, M. C. Miller, D. Proga, T. Kallman, A. C. Fabian, F. A. Harrison, J. Kaastra, J. Raymond, C. S. Reynolds, S. E. Boggs, F. E. Cristensen, W. Craig, C. J. Hailey, D. Stern, and W. W. Zhang 2016, *ApJ*, **833**, 165.
34. “The Role of the Kozai-Lidov Mechanism in Black Hole Binary Mergers in Galactic Centers”, J. H. VanLandingham, M. C. Miller, D. P. Hamilton, and D. C. Richardson 2016, *ApJ*, **828**, 77.
35. “A New Method for Finding Point Sources in High-energy Neutrino Data”, K. Fang and M. C. Miller 2016, *ApJ*, **826**, 102.
36. “Implications of the Gravitational Wave Event GW150914”, M. C. Miller 2016, *GRG*, **48**, 95.
37. “The Case for PSR J1614-2230 as a NICER Target”, M. C. Miller 2016, *ApJ*, **822**, 27.

38. “On the Origin of Broad Iron Lines in Neutron Star Low-mass X-ray Binaries”, C.-Y. Chiang, E. M. Cackett, J. M. Miller, D. Barret, A. Fabian, A. D’Ai, M. L. Parker, S. Bhattacharyya, L. Burderi, T. Di Salvo, E. Eggen, J. Homan, R. Iaria, D. Lin, and M. C. Miller 2016, *ApJ*, **821**, 105.
39. “Measuring the neutron star equation of state using X-ray timing”, A. L. Watts, N. Andersson, D. Chakrabarty, M. Feroci, K. Hebeler, G. Israel, F. K. Lamb, M. C. Miller, S. Morsink, F. Özel, A. Patruno, J. Poutanen, D. Psaltis, A. Schwenk, A. W. Steiner, L. Stella, L. Tolos, and M. van der Klis 2016, *RMP*, **88**, 021001.
40. “Observational constraints on neutron star masses and radii”, M. C. Miller and F. K. Lamb 2016, *EPJA*, **52**, 63.
41. “Soft X-ray Temperature Tidal Disruption Events from Stars on Deep Plunging Orbits”, L. Dai, J. C. McKinney, and M. C. Miller 2015, *ApJ*, **812**, L39.
42. “Flows of X-ray Gas Reveal the Disruption of a Star by a Massive Black Hole”, J. M. Miller, J. S. Kaastra, M. C. Miller, M. T. Reynolds, G. Brown, S. B. Cenko, J. J. Drake, S. Gezari, J. Guillochon, K. Gultekin, J. Irwin, A. Levan, D. Maitra, W. P. Maksym, R. Mushotzky, P. O’Brien, F. Paerels, J. de Plaa, E. Ramirez-Ruiz, T. Strohmayer, and N. Tanvir 2015, *Nature*, **526**, 542.
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