

PROF. DEEPTO CHAKRABARTY
Curriculum Vitae

Kavli Institute for Astrophysics and Space Research
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Date of Birth: June 28, 1966

Citizenship: United States

Research Interests: Observational high-energy astrophysics; neutron stars; ultracompact stellar binaries.

Education

1996: Ph.D. Physics, California Institute of Technology
1992: M.S. Physics, California Institute of Technology
1988: S.B. Physics, Massachusetts Institute of Technology

Positions

2008–date: Astrophysics Division Head, Department of Physics, Massachusetts Institute of Technology
2008–date: Professor of Physics, Massachusetts Institute of Technology
2004–2008: Associate Professor of Physics, Massachusetts Institute of Technology
1999–2004: Assistant Professor of Physics, Massachusetts Institute of Technology
1996–1999: Postdoctoral Fellow, Center for Space Research, Massachusetts Institute of Technology
1990–1995: Graduate Student in Physics, Space Radiation Laboratory, California Institute of Technology
1988–1990: Technical Staff, Supernova Cosmology Group, Lawrence Berkeley (National) Laboratory

Visitor Positions

Sep.–Dec. 2007: Visiting Professor, Harvard-Smithsonian Center for Astrophysics
Sep.–Nov. 2004: Visiting Scientist, Institute of Astronomy, University of Cambridge
May–Aug. 2003: Visiting Scientist, Columbia Astrophysics Laboratory, Columbia University
Jan.–May 2003: General Member, Kavli Institute for Theoretical Physics, University of California, Santa Barbara
Sep.–Oct. 1998: Visiting Research Fellow, Astrophysics Sub-Department and Balliol College, University of Oxford

Awards and Honors

Bruno Rossi Prize in High Energy Astrophysics, American Astronomical Society, 2006
Alfred P. Sloan Research Fellowship, 2001–2003
Buechner Teaching Prize in Physics, Massachusetts Institute of Technology, 2001
NASA Compton GRO Postdoctoral Fellowship, 1996–1999
NASA GSRP Graduate Fellowship, 1993–1995

Selected Professional Activities

2008–2010: LIGO Program Advisory Committee
2008: Peer review subpanel chair, NASA *Spitzer Space Telescope*
2004–2006: Executive Committee, High Energy Astrophysics Division, American Astronomical Society
2002: Peer review subpanel chair, NASA *Chandra X-Ray Observatory*
2001–date: MIT Time Allocation Committee, Magellan 6.5-m Telescopes (Las Campanas Observatory, Chile)
2001–2003: NASA High Energy Astrophysics Archive Research Center (HEASARC) Users Group
1999–date: NASA *Rossi X-Ray Timing Explorer (RXTE)* Users Group
1999: NASA X-Ray Astronomy Program Working Group (XAPWG)

Selected Talks

- *The Spin Distribution of Millisecond X-Ray Pulsars* (Rossi Prize Lecture)
AAS meeting, Seattle, 2007
- *A Debris Disk Around an Isolated Young Neutron Star* (colloquium)
Space Telescope Science Institute, 2006
- *Endpoints in Stellar Evolution* (invited review)
Session on Stars from Cradle to Grave, APS April Meeting, Philadelphia, 2003
- *Burst Oscillations at the Spin Frequency of a Millisecond Pulsar* (invited talk)
AAS High Energy Astrophysics Division Meeting, Quebec, March 2003
- *Ultracompact Binaries with Neon-Rich Degenerate Donors*
New Visions of the X-ray Universe in the *XMM-Newton* and *Chandra* Era, Netherlands, November 2001
- *Focusing on the X-Ray Sky: The New Era in X-Ray Astronomy*
Astrophysics Colloquium, Caltech, April 2000
- *Torque Reversals in Accretion-Powered Pulsars: A Challenge for Magnetic Disk Accretion Theory* (invited talk)
Workshop on Dynamics of Astrophysical Disks, Isaac Newton Institute, Cambridge University, February 1998
- *Ultraviolet, Optical, and Infrared Observations of X-Ray Binaries: Progress and Prospects* (invited review)
Topical Session on X-Ray Binaries, AAS Meeting, Winston-Salem, NC, June 1997

Summary of Publications by Topic

- **Rapid variability in accreting neutron stars, millisecond pulsars:**
78, 71, 70, 68, 65, 60, 59, 58, 51, 50, 48, 45, 39, 34, 32, 31, 26, 23
- **Physics of thermonuclear X-ray bursts:**
83, 72, 65, 63, 59, 57, 51, 50, 44
- **Young neutron stars and magnetars:**
79, 74, 64, 56, 49, 46, 43, 36, 33, 30, 28, 27
- **Ultracompact stellar binaries:**
81, 76, 69, 67, 62, 55, 54, 48, 42, 38, 18, 17, 7
- **Interstellar medium:**
77, 66
- **Neutron star masses, orbits, equation of state, and supporting observations:**
83, 75, 73, 71, 53, 52, 47, 37, 24, 12, 1
- **Classical X-ray pulsars**
82, 80, 29, 25, 22, 21, 16, 14, 13, 10, 9, 8, 7, 6, 3, 1
- **Optical, infrared, and ultraviolet studies of compact objects:**
82, 79, 74, 73, 70, 67, 61, 52, 49, 47, 41, 40, 37, 35, 20, 19, 17, 15, 12, 11, 5, 4, 2

Summary of Publications by Technique

- **X-ray timing:**
84, 80, 78, 68, 65, 64, 63, 60, 59, 58, 56, 53, 51, 50, 48, 43, 39, 36, 32, 31, 28, 27, 25, 23, 22, 18, 16, 14, 10, 9, 8, 7, 6, 3, 1
- **X-ray spectroscopy:**
84, 81, 77, 76, 71, 69, 68, 66, 64, 62, 57, 55, 54, 46, 45, 44, 42, 38, 33, 30, 29
- **Optical/ultraviolet/infrared:**
82, 79, 74, 73, 70, 67, 61, 52, 49, 47, 41, 40, 37, 35, 20, 19, 17, 15, 12, 11, 5, 4, 2
- **Theoretical interpretation:**
34, 26, 24, 21, 13

PROF. DEEPTO CHAKRABARTY
Refereed Publications

2008

- 88.** A SEARCH FOR THE NEAR-IR COUNTERPART TO GCRT J1745–3009
Kaplan, D. L., Hyman, S. D., Roy, S., Bandyopadhyay, R. M., Chakrabarty, D., Kassim, N. E., Lazio, T. J. W., & Ray, P. S. (2008), *Astrophys. J.*, accepted for publication. (arXiv:0807.1507)
- 87.** THERMONUCLEAR (TYPE I) X-RAY BURSTS OBSERVED BY THE ROSSI X-RAY TIMING EXPLORER
Galloway, D. K., Muno, M. P., Hartman, J. M., Savov, P., Psaltis, D., & Chakrabarty, D. (2008), *Astrophys. J. Suppl.*, **179**, in press. (astro-ph/0608259)
- 86.** TIMING AND SPECTRAL PROPERTIES OF THE ACCRETING MILLISECOND PULSAR SWIFT J1756.9–2508
Linares, M., Wijnands, R., van der Klis, M., Krimm, H., Markwardt, C., & Chakrabarty, D. (2008), *Astrophys. J.*, **677**, 515–519.
- 85.** THE LONG-TERM EVOLUTION OF THE SPIN, PULSE SHAPE, AND ORBIT OF THE ACCRETION-POWERED MILLISECOND PULSAR SAX J1808.4–3658
Hartman, J. M., Patruno, A., Chakrabarty, D., Kaplan, D. L., Markwardt, C. B., Morgan, E. H., Ray, P. S., van der Klis, M., & Wijnands, R. (2008), *Astrophys. J.*, **675**, 1468–1486.

2007

- 84.** DISCOVERY OF THE ACCRETION-POWERED MILLISECOND PULSAR SWIFT J1756.9–2508 WITH A LOW-MASS COMPANION
Krimm, H. A., Markwardt, C. B., Deloye, C. J., Romano, P., Chakrabarty, D., Campana, S., Cummings, J. C., Galloway, D. K., Gehrels, N., Hartman, J. M., Kaaret, P., Morgan, E. H., & Tueller, J. (2007), *Astrophys. J. Lett.*, **668**, L147–L150.
- 83.** THE COLD NEUTRON STAR IN THE SOFT X-RAY TRANSIENT 1H 1905+000
Jonker, P. G., Steeghs, D., Chakrabarty, D., & Juett, A. M. (2007), *Astrophys. J. Lett.*, **655**, L147–L150.
- 82.** LOST AND FOUND: A NEW POSITION AND INFRARED COUNTERPART FOR THE X-RAY BINARY SCUTUM X-1
Kaplan, D. L., Levine, A. M., Chakrabarty, D., Morgan, E. H., Erb, D. K., Cameron, P. B., & Moon, D.-S. (2007), *Astrophys. J.*, **661**, 437–446.
- 81.** HIGH-RESOLUTION X-RAY SPECTROSCOPY OF THE ULTRACOMPACT LMXB PULSAR 4U 1626–67
Krauss, M. I., Schulz, N. S., Chakrabarty, D., Juett, A. M., & Cottam, J. (2007), *Astrophys. J.*, **660**, 605–614.
- 80.** PULSATIONS DETECTED FROM ACCRETING HIGH MASS X-RAY BINARIES AT LOW LUMINOSITIES
Rutledge, R. E., Bildsten, L., Brown, E. F., Chakrabarty, D., Pavlov, G. G., & Zavlin, V. E. (2007), *Astrophys. J.*, **658**, , 514–519.
- 79.** A SEARCH FOR FALLBACK DISKS IN FOUR YOUNG SUPERNOVA REMNANTS
Wang, Z., Kaplan, D. L., & Chakrabarty, D. (2007), *Astrophys. J.*, **655**, 261–268.
- 78.** INTERMITTENT PULSATIONS IN AN ACCRETION-POWERED MILLISECOND PULSAR
Galloway, D. K., Morgan, E. H., Krauss, M. I., Kaaret, P., & Chakrabarty, D. (2007), *Astrophys. J. Lett.*, **654**, L73–L76.

2006

- 77.** HIGH-RESOLUTION SPECTROSCOPY OF THE INTERSTELLAR MEDIUM. II. NEON AND IRON ABSORPTION EDGES.
Juett, A. M., Schulz, N. S., Chakrabarty, D., & Gorczyca, T. W. (2006), *Astrophys. J.*, **648**, 1066–1078.
- 76.** DETECTION OF HIGHLY IONIZED METAL ABSORPTION LINES IN THE ULTRACOMPACT X-RAY DIPPER 4U 1916–05
Juett, A. M. & Chakrabarty, D. (2006), *Astrophys. J.*, **646**, 493–498.

75. THE NEUTRON STAR SOFT X-RAY TRANSIENT 1H 1905+000 IN QUIESCENCE

Jonker, P. G., Bassa, C. G., Nelemans, G., Juett, A. M., Brown, E. F., & Chakrabarty, D. (2006), *Mon. Not. R. Astron. Soc.*, **368**, 1803–1810.

74. A DEBRIS DISK AROUND AN ISOLATED YOUNG NEUTRON STAR

Wang, Z., Chakrabarty, D., & Kaplan, D. L. (2006), *Nature*, **440**, 772–775.

73. OPTICAL DETECTION OF TWO INTERMEDIATE MASS BINARY PULSAR COMPANIONS

Jacoby, B. A., Chakrabarty, D., van Kerkwijk, M. H., Kulkarni, S. R., & Kaplan, D. L. (2006), *Astrophys. J. Lett.*, **640**, L183–L186.

72. EDDINGTON-LIMITED X-RAY BURSTS AS DISTANCE INDICATORS. II. POSSIBLE COMPOSITIONAL EFFECTS IN BURSTS FROM 4U 1636–636

Galloway, D. K., Psaltis, D., Muno, M. P., & Chakrabarty, D. (2006), *Astrophys. J.*, **639**, 1033–1038.

2005

71. CHANDRA OBSERVATIONS OF THE MILLISECOND X-RAY PULSAR IGR J00291+5934 IN QUIESCENCE

Jonker, P. G., Campana, S., Steeghs, D., Torres, M. A. P., Galloway, D. K., Markwardt, C. B., Chakrabarty, D., & Swank, J. (2005), *Mon. Not. R. Astron. Soc.*, **361**, 511–516.

70. THE X-RAY POSITION AND OPTICAL COUNTERPART OF THE ACCRETION-POWERED MILLISECOND PULSAR XTE J1814–338

Krauss, M. I., Wang, Z., Dullighan, A., Juett, A. M., Kaplan, D. L., Chakrabarty, D., van Kerkwijk, M. H., Steeghs, D., Jonker, P. G., & Markwardt, C. B. (2005), *Astrophys. J.*, **627**, 910–914.

69. X-RAY SPECTROSCOPY OF CANDIDATE ULTRACOMPACT BINARIES

Juett, A. M. & Chakrabarty, D. (2005), *Astrophys. J.*, **627**, 926–932.

68. DISCOVERY OF THE ACCRETION-POWERED MILLISECOND X-RAY PULSAR IGR J00291+5934

Galloway, D. K., Markwardt, C. B., Morgan, E. H., Chakrabarty, D., & Strohmayer, T. E. (2005), *Astrophys. J. Lett.*, **622**, L45–L48.

2004

67. THE ORBITAL PERIOD OF THE ULTRACOMPACT LOW-MASS X-RAY BINARY 4U 1543–624

Wang, Z. & Chakrabarty, D. (2004), *Astrophys. J. Lett.*, **616**, L139–L142.

66. HIGH-RESOLUTION SPECTROSCOPY OF THE INTERSTELLAR MEDIUM: STRUCTURE AT THE OXYGEN ABSORPTION EDGE

Juett, A. M., Schulz, N. S., & Chakrabarty, D. (2004), *Astrophys. J.*, **612**, 308–318.

65. THE EFFECT OF NEUTRON STAR ROTATION ON THE PROPERTIES OF THERMONUCLEAR X-RAY BURSTS

Muno, M. P., Galloway, D. K., & Chakrabarty, D. (2004), *Astrophys. J.*, **608**, 930–934.

64. CHANGES IN THE X-RAY EMISSION FROM THE MAGNETAR CANDIDATE 1E 2259+586 DURING ITS 2002 OUTBURST

Woods, P. M., Kaspi, V. M., Thompson, C., Gavriil, F. P., Marshall, H. L., Chakrabarty, D., Flanagan, K., Heyl, J., & Hernquist, L. (2004), *Astrophys. J.*, **605**, 378–399.

63. PERIODIC THERMONUCLEAR X-RAY BURSTS FROM GS 1826-24 AND THE FUEL COMPOSITION AS A FUNCTION OF ACCRETION RATE

Galloway, D. K., Cumming, A., Kuulkers, E., Bildsten, L., Chakrabarty, D., & Rothschild, R. E. (2004), *Astrophys. J.*, **601**, 466–473.

2003

62. X-RAY SPECTROSCOPY OF THE LOW-MASS X-RAY BINARIES 2S 0918–549 AND 4U 1543–624: EVIDENCE FOR NEON-RICH DEGENERATE DONORS

Juett, A. M. & Chakrabarty, D. (2003), *Astrophys. J.*, **599**, 498–508.

- 61.** A SEARCH FOR THE OPTICAL AND NEAR-INFRARED COUNTERPART OF THE ACCRETING MILLISECOND X-RAY PULSAR XTE J1751–305
Jonker, P. G., Nelemans, G., Wang, Z., Kong, A. J. H., Chakrabarty, D., Garcia, M., Groot, P. J., van der Klis, M., Kerr, T., Mobasher, B., Sullivan, M., Augusteijn, T., Stappers, B. W., Challis, P., Kirshner, R. P., Hjorth, J., & Delsanti, A. (2003), *Mon. Not. Royal Astron. Soc.*, **344**, 201–206.
- 60.** QUASI-PERIODIC X-RAY BRIGHTNESS FLUCTUATIONS IN AN ACCRETING MILLISECOND PULSAR
Wijnands, R., van der Klis, M., Homan, J., Chakrabarty, D., Markwardt, C. B., & Morgan, E. H. (2003), *Nature*, **424**, 44–47.
- 59.** NUCLEAR-POWERED MILLISECOND PULSARS AND THE MAXIMUM SPIN FREQUENCY OF NEUTRON STARS
Chakrabarty, D., Morgan, E. H., Munro, M. P., Galloway, D. K., Wijnands, R., van der Klis, M., & Markwardt, C. B. (2003), *Nature*, **424**, 42–44.
- 58.** THE ENERGY DEPENDENCE OF MILLISECOND OSCILLATIONS IN THERMONUCLEAR X-RAY BURSTS
Munro, M. P., Özel, F., & Chakrabarty, D. (2003), *Astrophys. J.*, **595**, 1066–1076.
- 57.** EDDINGTON-LIMITED X-RAY BURSTS AS DISTANCE INDICATORS. I. SYSTEMATIC TRENDS AND SPHERICAL SYMMETRY IN BURSTS FROM 4U 1728–34
Galloway, D. K., Psaltis, D., Chakrabarty, D., & Munro, M. P. (2003), *Astrophys. J.*, **590**, 999–1007.
- 56.** A MAJOR SOFT GAMMA REPEATER-LIKE OUTBURST AND ROTATION GLITCH IN THE NO-LONGER-SO-ANOMALOUS X-RAY PULSAR 1E 2259+586
Kaspi, V. M., Gavriil, F. P., Woods, P. M., Jensen, J. B., Roberts, M. S. E., & Chakrabarty, D. (2003), *Astrophys. J. Lett.*, **588**, L93–L96.
- 55.** X-RAY SPECTROSCOPY OF THE ACCRETING MILLISECOND PULSAR XTE J0929–314 IN OUTBURST
Juett, A. M., Galloway, D. K., & Chakrabarty, D. (2003), *Astrophys. J.*, **587**, 754–760.
- 54.** XMM-NEWTON SPECTROSCOPY OF THE ACCRETION-DRIVEN MILLISECOND X-RAY PULSAR XTE J1751–305 IN OUTBURST
Miller, J. M., Wijnands, R., Méndez, M., Tiengo, A., Kendziorra, M., Tiengo, A., van der Klis, M., Chakrabarty, D., Gaensler, B. M., & Lewin, W. H. G. (2003), *Astrophys. J. Lett.*, **583**, L99–L102.
- 2002**
- 53.** THE ORBIT OF THE HIGH-MASS X-RAY BINARY PULSAR 1E 1145.1–6141
Ray, P. S. & Chakrabarty, D. (2002), *Astrophys. J.*, **581**, 1293–1296.
- 52.** ROTATIONAL BROADENING MEASUREMENT FOR THE NEUTRON STAR X-RAY TRANSIENT XTE J2123–058
Tomsick, J. A., Heindl, W. A., Chakrabarty, D., & Kaaret, P. (2002) *Astrophys. J.*, **581**, 570–576
- 51.** THE AMPLITUDE EVOLUTION AND HARMONIC CONTENT OF MILLISECOND OSCILLATIONS IN THERMONUCLEAR X-RAY BURSTS
Munro, M. P., Özel, F., & Chakrabarty, D. (2002), *Astrophys. J.*, **581**, 550–561.
- 50.** THE FREQUENCY STABILITY OF MILLISECOND OSCILLATIONS IN THERMONUCLEAR X-RAY BURSTS
Munro, M. P., Chakrabarty, D., Galloway, D. K., & Psaltis, D. (2002) *Astrophys. J.*, **580**, 1048–1059.
- 49.** THE LIKELY NEAR-INFRARED COUNTERPART TO THE ANOMALOUS X-RAY PULSAR 1E 1048.1–5937
Wang, Z. & Chakrabarty, D. (2002), *Astrophys. J. Lett.*, **579**, L33–L36.
- 48.** DISCOVERY OF A HIGH-LATITUDE ACCRETING MILLISECOND PULSAR IN AN ULTRACOMPACT BINARY
Galloway, D. K., Chakrabarty, D., Morgan, E. H., & Remillard, R. A. (2002), *Astrophys. J. Lett.*, **576**, L137–L140
- 47.** THE X-RAY POSITION AND INFRARED COUNTERPART OF THE ECLIPSING X-RAY PULSAR OAO 1657–415
Chakrabarty, D., Wang, Z., Juett, A. M., Lee, J. C., & Roche, P. (2002), *Astrophys. J.*, **573**, 789–793.
- 46.** CHANDRA HIGH-RESOLUTION SPECTRUM OF THE ANOMALOUS X-RAY PULSAR 4U 0142+61
Juett, A. M., Marshall, H. L., Chakrabarty, D., & Schulz, N. S. (2002), *Astrophys. J. Lett.*, **568**, L31–L34.

45. HOW DO Z AND ATOLL X-RAY BINARIES DIFFER?

Muno, M. P., Remillard, R. A., & Chakrabarty, D. (2002), *Astrophys. J. Lett.*, **568**, L35–L39.

44. THE BURST BEHAVIOR OF THE ECLIPSING LOW-MASS X-RAY BINARY MXB 1659–298

Wijnands, R., Muno, M. P., Miller, J. M., Franco, L. M., Strohmayer, T., Galloway, D. K., & Chakrabarty, D. (2002), *Astrophys. J.*, **566**, 1060–1068.

43. A PHASE-COHERENT TIMING SOLUTION FOR THE MAGNETAR CANDIDATE 1E 1841–045

Gotthelf, E. V., Gavriil, F. P., Kaspi, V. M., Vasisht, G., & Chakrabarty, D. (2002), *Astrophys. J. Lett.*, **564**, L31–L34.

2001

42. DOUBLE-PEAKED X-RAY LINES FROM THE OXYGEN/NEON-RICH ACCRETION DISK IN 4U 1626–67

Schulz, N. S., Chakrabarty, D., Marshall, H. L., Canizares, C. R., Lee, J. C., & Houck, J. (2001), *Astrophys. J.*, **563**, 941–949.

41. THE OPTICAL COUNTERPART OF THE ACCRETING MILLISECOND PULSAR SAX J1808.4–3658 IN OUTBURST: CONSTRAINTS ON THE BINARY INCLINATION

Wang, Z., Chakrabarty, D., Roche, P., Charles, P. A., Kuulkers, E., Shahbaz, T., Simpson, C., Forbes, D. A., & Helsdon, S. F. (2001), *Astrophys. J. Lett.*, **563**, L61–L65.

40. MILLIHERTZ OPTICAL/UV OSCILLATIONS IN 4U 1626–67: EVIDENCE FOR A WARPED ACCRETION DISK

Chakrabarty, D., Homer, L., Charles, P. A., & O’Donoghue, D. (2001), *Astrophys. J.*, **562**, 985–991.

39. THE ERRATIC LUMINOSITY BEHAVIOR OF SAX J1808.4–3658 DURING ITS 2000 OUTBURST

Wijnands, R., Méndez, M., Markwardt, C., van der Klis, M., Chakrabarty, D., & Morgan, E. H. (2001), *Astrophys. J.*, **560**, 892–896.

38. ULTRACOMPACT X-RAY BINARIES WITH NEON-RICH DEGENERATE DONORS

Juett, A. M., Psaltis, D., & Chakrabarty, D. (2001), *Astrophys. J. Lett.*, **560**, L59–L63.

37. KECK MEASUREMENT OF THE XTE J2123–058 RADIAL VELOCITY CURVE

Tomsick, J. A., Heindl, W. A., Chakrabarty, D., Halpern, J. P., & Kaaret, P. (2001), *Astrophys. J. Lett.*, **559**, L123–L126

36. LONG-TERM ROSSI X-RAY TIMING EXPLORER MONITORING OF THE ANOMALOUS X-RAY PULSAR 1E 1048.1–5937

Kaspi, V. M., Gavriil, F., Chakrabarty, D., Lackey, J. R., & Muno, M. P. (2001), *Astrophys. J.*, **558**, 253–262.

35. THE OPTICAL COUNTERPART TO SAX J1808.4–3658: OBSERVATIONS IN QUIESCENCE

Homer, L., Charles, P. A., Chakrabarty, D., & van Zyl, L. (2001), *Mon. Not. R. Astron. Soc.*, **325**, 1471

34. A BROWN DWARF COMPANION FOR THE ACCRETING MILLISECOND PULSAR SAX J1808.4–3658

Bildsten, L. & Chakrabarty, D. (2001), *Astrophys. J.*, **557**, 292–296.

33. ANOMALOUS X-RAY PULSARS AND SOFT γ -RAY REPEATERS: SPECTRAL FITS AND THE MAGNETAR MODEL

Perna, R., Heyl, J. S., Hernquist, L. E., Juett, A. M., & Chakrabarty, D. (2001), *Astrophys. J.*, **557**, 18–23.

32. MILLISECOND OSCILLATIONS AND PHOTOSPHERIC RADIUS EXPANSION IN THERMONUCLEAR X-RAY BURSTS

Muno, M. P., Chakrabarty, D., Galloway, D. K., & Savov, P. (2001), *Astrophys. J. Lett.*, **553**, L157–L160.

31. DISCOVERY OF A 270 HZ X-RAY BURST OSCILLATION IN THE X-RAY DIPPER 4U 1916–05

Galloway, D. K., Chakrabarty, D., Muno, M., & Savov, P. (2001), *Astrophys. J. Lett.*, **549**, L85–L88.

30. THE CENTRAL X-RAY POINT SOURCE IN CASSIOPEIA A

Chakrabarty, D., Pivovarov, M. J., Hernquist, L., Heyl, J. S., & Narayan, R. (2001), *Astrophys. J.*, **548**, 800–810.

2000

29. ASCA OBSERVATION OF THE NEW TRANSIENT X-RAY PULSAR XTE J0111.2-7317 IN THE SMALL MAGELLANIC CLOUD

Yokogawa, J., Paul, B., Ozaki, M., Nagase, F., Chakrabarty, D., & Takeshima, T. (2000), *Astrophys. J.*, **539**, 191–196.

28. A GLITCH IN AN ANOMALOUS X-RAY PULSAR

Kaspi, V. M., Lackey, J. R., & Chakrabarty, D. (2000), *Astrophys. J. Lett.*, **537**, L31–L34.

1999

27. PRECISION TIMING OF TWO ANOMALOUS X-RAY PULSARS

Kaspi, V. M., Chakrabarty, D., & Steinberger, J. (1999), *Astrophys. J. Lett.*, **525**, L33–L36.

26. THE DISK-MAGNETOSPHERE INTERACTION IN THE ACCRETION-POWERED MILLISECOND PULSAR SAX J1808.4–3658

Psaltis, D. & Chakrabarty, D. (1999), *Astrophys. J.*, **521**, 332–340.

25. THE OUTBURSTS AND ORBIT OF THE ACCRETING PULSAR GS 1843–02 = 2S 1845–024

Finger, M. H., Bildsten, L., Chakrabarty, D., Prince, T. A., Scott, D. M., Wilson, C. A., Wilson, R. B., & Zhang, S. N. (1999), *Astrophys. J.*, **517**, 449–459.

24. NEUTRON STAR MASS MEASUREMENTS. I. RADIO PULSARS

Thorsett, S. E. & Chakrabarty, D. (1999), *Astrophys. J.*, **512**, 288–299.

1998

23. THE TWO-HOUR ORBIT OF A BINARY MILLISECOND X-RAY PULSAR

Chakrabarty, D. & Morgan, E. H. (1998), *Nature*, **394**, 346–348.

22. DISCOVERY OF THE 198 SECOND X-RAY PULSAR GRO J2058+42

Wilson, C. A., Finger, M. H., Harmon, B. A., Chakrabarty, D., & Strohmayer, T. (1998), *Astrophys. J.*, **499**, 820–827.

21. WARPED DISKS AS A POSSIBLE ORIGIN OF TORQUE REVERSALS IN ACCRETION-POWERED PULSARS

van Kerkwijk, M. H., Chakrabarty, D., Pringle, J. E., & Wijers, R. A. M. J. (1998), *Astrophys. J. Lett.*, **499**, L27–L30.

20. A SEARCH FOR OPTICAL PULSATIONS FROM TWO YOUNG SOUTHERN PULSARS

Chakrabarty, D. & Kaspi, V. M. (1998), *Astrophys. J. Lett.*, **498**, L37–L40.

19. INFRARED SPECTROSCOPY OF GX 1+4: EVIDENCE FOR A FAST RED GIANT WIND?

Chakrabarty, D., van Kerkwijk, M. H., & Larkin, J. E. (1998), *Astrophys. J. Lett.*, **497**, L39–L42.

18. SIDEBANDS DUE TO QUASI-PERIODIC OSCILLATIONS IN 4U 1626–67

Kommers, J. M., Chakrabarty, D., & Lewin, W. H. G. (1998), *Astrophys. J. Lett.*, **497**, L33–L37.

17. HIGH-SPEED OPTICAL PHOTOMETRY OF THE ULTRACOMPACT X-RAY BINARY 4U 1626–67

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