VITA: *Saeqa Dil Vrtilek*

Smithsonian Astrophysical Observatory
60 Garden Street
Cambridge, MA 02138

Tel. : (617)495-7094
Fax: (617)496-7577
E-Mail: svrtilek@cfa.harvard.edu

EDUCATION:

1982-1985	Ph.D. Astronomy, Columbia University
1982-1985	M. Phil. Astronomy, Columbia University
1977-1978	M.A. Physics, Brandeis University
1970-1975	B.S. Physics, Massachusetts Institute of Technology

FIELDS OF INVESTIGATION AND INTEREST:

My primary research interests lie in the area of compact binary stars and accretion disks. Accretion onto compact objects is one of the most efficient energy generation mechanisms in the Universe and understanding the physics of accretion is one of the major challanges for modern astrophysics. I use tomographic methods to indirectly image the emission regions of X-ray binaries at different wavelengths. I use a multi-dimensional approach to identify the nature of the compact object (whether a black hole or a neutron star) in these systems. I am also very interested in providing serious education on science for non-science majors and on making science accessible for the general public.

CURRENT POSITIONS:

1991-	Astrophysicist, High Energy Astrophysics Division, Smithsonian Astrophysical Observatory
1988-	Associate, Harvard College Observatory

PAST POSITIONS:

2005-2007	Director, NSF Research Experiences for Undergraduates at SAO.
1995-1996	Visiting Associate Professor of Astronomy, Harvard University
1993-1995	Visiting Associate Professor of Astronomy, University of Maryland
Spring 1990	MPE Fellow, Max-Planck Institute for Extraterrestrial Physics.
1989-1995	Research Astrophysicist, Smithsonian Astrophysical Observatory.
1986-1988	National Academy of Sciences/National Research Council Resident Research Associate, Laboratory for High Energy Astrophysics, NASA/GSFC
Fall 1983	Visiting Scientist, Department of Astronomy, Oxford University.
1983	Summer Faculty, Department of Astronomy, Columbia University.
1979	Research Staff, Center for Space Research, MIT
1975-1977	Research Assistant, Earth and Planetary Physics, Harvard University

SPECIAL APPOINTMENTS (current):

2011-2012	Chair, CSWP Site Visit Committee
2011-2012	Chair, APS Maria Goeppert Mayer Fellowship Selection Committee.
2011-2013	Member, Committee on Sections, American Association for the Advancement of Science (AAAS).
2010-2014	Secretary, Astronomy Section, AAAS.
2009-	Member, Harvard-Smithsonian Center for Astrophysics Telescope Allocation Committee

SPECIAL APPOINTMENTS (current, continued):

2008-	Lecturer, Dept. of Physics, Northeastern University.
2009-2011	Member, Committee on the Status of Women in Physics,American Physical Society.
2008-	Lecturer, Department of Physics, Northeastern University.
2007-	Coordinator, PAN-STAARS observations of X-ray binaries for Key Project CIVET
2007-	FST Science Panel Member (Accretion Physics in Stellar Systems)

HONORS/AWARDS:

2010-2011	Smithsonian Institution Scholarly Studies Grant
2010	Elected Fellow, American Association for the Advancement of Science
2007-2008	Smithsonian Institution Endowment Grant
2005-2007	American Astronomical Society, Shapley Lecturer
1993-1996	Visiting Professorship for Women, National Science Foundation.
1991-1992	Marie Curie Fellow, American Association of University Women.
1988-1989	Science Scholar, Bunting Institute, Radcliffe College.
1983-1984	Amelia Earhart Fellow, Zonta International
1984-1985	Amelia Earhart Fellow, Zonta International

SPECIAL APPOINTMENTS (past):

2010	Panel member, NASA Postdoctoral Program Review
2010	Member, Maria Goeppert Mayer Award Selection committee of the American Physical Society
2010	Panel member, Hubble Space Telescope peer review
2010	Panel member, NSF Graduate Research Fellowship review
2009	Panel member, NASA/Fermi peer review
2009	Scientific Session co-organizer (with Virginia Trimble and David DeVorkin), "How the Earth became a Planet" AAAS Annual meeting.
2008	Panel member, Hubble Space Telescope peer review
2008	Panel member, NASA Postdoctoral Program Review
2008	Panel member, NSF Graduate Research Fellowship review
2007	Member, Scientific Organizing Committee, "A Population Explosion: The Nature & Evolution of X-ray Binaries in Diverse Environments St. Pete Beach (Florida), 28–2 Nov.
2007	Panel member, NASA/GLAST Peer Review
2007	Panel member, NSF Stellar and Astrophysics Peer Review
2007	Panel member, NSF Graduate Research Fellowships
2006	Nominating Committee, APS/NES; Lead Judge, AAAS student posters
2006	Panel member, NASA/Suzaku Peer Review
2006	Scientific Session Organizer, "Great Space Observatories: Challenges and Rewards" AAAS Annual Meeting, St. Louis, MO, Feb 19.
2006	Session Organizer, "Astronomy nexus: Connecting with Colleagues and the Cosmos". Networking event at the AAAS Annual Meeting, St. Louis, MO, Feb 19.
2005	Reviewer for Department of Energy proposals

2005	Scientific Session co-organizer, "Astrotomography: New Techniques for Imaging Objects in Space" AAAS Annual Meeting, Washington, DC, Feb 19.
2004-2005	Chair, CfA Pre-doctoral Oversight Committee
2004	Panel Chair, NASA/Chandra Cycle 6 Peer Review
2004	Panel member, NASA/GALEX Cycle 1 Peer Review
2003-2004	Chair, CfA Fellowship Selection Committee
2003-2004	Chair, CfA Pre-doctoral Selection Committee
2003	Panel Chair, NASA/RXTE Cycle 9 Peer Review
2002-2003	Member, CfA Fellowship Selection Committee
2002	Session co-organizer, "Women of Science: Shattering the Glass Ceiling" scientific session AAAS Annual Meeting, Boston, MA, Feb 15.
2001	Panel Chair, NASA Astrophysics Data Program and Long Term Space Astrophysics Peer Review
2001	Member, Scientific Organizing committee and co-editor of proceedings, "The High Energy Universe at Sharp Focus", July 16-18, 2001, St. Paul, MN.
2000	Panel member, NASA Astrophysics Theory Program Review
2000	Scientific Session Co-Organizer, "New Views of the Invisible Universe: First Light from Chandra" AAAS Annual Meeting, Washington, DC, Feb. 17-22.
1998	Panel member, NASA Senior Review, HST and Chandra Peer Reviews
1997-2009	Secretary, Section D (Astronomy) of the AAAS.
1997	Panel member, NASA/RXTE peer review.
1997	Session Organizer, "Taking the Pulse of the Universe: The First Year of Results from the Rossi X-ray Timing Explorer" scientific session AAAS Annual Meeting in Seattle, Washington February 13-18, 1997.
1996	Reviewer for American Association of University Women International Fellowships
1996	Session organizer, "All Eyes on the Universe: Multiwavelength Astrophysics" scientific session AAAS Annual Meeting, Baltimore, MD, February 8-13, 1996.
1995	Nominating committee, American Astronomical Society/High Energy Astrophysics Division
1995-1997	Panel member, AAUW International Fellowships Awards review
1995	Reviewer for NASA Mission Concepts proposals
1995-1998	AAS representative to the AAAS.
1994	Reviewer for AAUW Amercan Fellowships.
1994	Reviewer for NSF proposals.
1988	Referee for *Astrophysical Journal (Letters), Astrophysical Journal, Astrophysical Journal (Supplements). Nature, Publications of the Astronomical Society of the Pacific, Monthly Notices of the Royal Astronomical Society, Astronomical Journal, Astronomy & Astrophysics*
1983	Guest Observer: *Einstein* Observatory; EXOSAT; Kitt Peak National Observatory; International Ultraviolet Explorer; ROSAT; Whipple Observatory; Extreme Ultraviolet Explorer; ASCA; Hubble Space Telescope; Rossi X-ray Timing Explorer, FUSE, NOAO, Chandra X-ray Observatory;

XMM-Newton, Las Companas Observatory.

PROFESSIONAL SOCIETIES:

2001-	Astronomical Society of the Pacific
1994-	American Association for the Advancement of Science
1991-	International Astronomical Union
1991-	American Association of University Wome
1986-1990	New York Academy of Sciences
1984-1991	Royal Astronomical Society
1984-	American Physical Society
1982-	American Astronomical Society

GRANTS/CONTRACTS: Principal Investigator

2011-2012	"Imaging Black Hole Binaries" Smithsonian Scholarly Studies Grant, $36,000.00
2007-2009	"Inflows and Outflows in X-ray Binaries: Getting the Big Picture" NASA ROSES ADP. $223,100.
2007-2009	"The Spectral Energy Distributions of X-ray Binaries" SI Endowment. $41,113.
2007-2009	"Superorbital Variation of LMC X-4: Exploring the Accretion Flow" NASA Suzaku Cycle 2. $23,199
2005-2008	"Modulation Tomography of X-ray Binaries" 3-year NSF Astronomy and Astrophysics. $236,618.
2005	"The Location and Spatial Structure of X-ray Emitting Plasma" Chandra AO6. $30,289.
2005	"X-ray Emission from Fast Moving Shocks in the Protostellar Jet HH154." Chandra AO6. $22,353.
2005	"The Issue of Coronal Abundances." Chandra AO5. $19,472.
2005	"Activity Cycles and Maunder Minima Stars" XMM AO5. $13,453.
2005	"X-ray Monitoring of Saturated M Dwarfs" XMM AO4. $9,629.
2004	"Coronal Emission from Saturated Stars" XMM AO3. $8,684.
2001	"Chandra Grating Spectroscopy of X-ray Binaries" Chandra AO3 Archival, $70,000.00.
2000	"Spectral Variability of a supergiant X-ray Binary" AXAF AO1. $9,900.
2000	"X-ray Spectra of Newly-Detected DQ Her objects" ASCA AO5. $19,000.
2000	"High Resolution UV/X-ray Spectroscopy of SMC X-1", Chandra AO2, $54,000.00.
2000	"High Resolution UV/X-ray Spectroscopy of SMC X-1", HST Cycle 9, $80,396.00.
1999	"Spectroscopy of Low Mass X-ray Binaries: New Insights Into Accretion" XMM AO1, $44,700.00.
1999	"High Resolution X-ray Spectroscopy of Compact Binaries". AXAF AO1 $58,700.00.
1997-2002	"The Physics of Accretion in Compact Objects", NASA (Long-Term Space Astrophysics Program, Senior) $567,000.00.
1996	"High Resolution Ultraviolet Spectroscopy of Hercules X-1/HZ Herculis", (HST Cycle 7), ($173,000.00 at SAO).

1996	"UV Echos of X-ray Pulsars: LMC X-4", (HST Cycle 5), ($51,332.00 at SAO).

GRANTS/CONTRACTS (continued): Principal Investigator

1995	"UV/X-ray Spectroscopy of Cyg X-2", (HST Cycle 5), ($47,524.00 at SAO).
1995	"The UV Energy Distribution of White Dwarfs: DP Leo, U Gem, and OY Car", (HST Archival), ($46,560.00 at UMD).
1995	"UV Echos of X-ray Pulsars: LMC X-4", NASA (ASCA AO3), ($18,635.00 at UMD).
1995	"X-ray/UV Spectroscopy of Cyg X-2", NASA (ASCA AO3), ($18,635.00 at UMD).
1994	"Accretion Disk Dynamics of Her X-1", NASA (ASCA AO2) ($10,000.00 at UMD).
1993	"Lines and Edges in the Spectra of X-ray Binaries", NASA (ASCA AO1), ($10,000.00 at UMD).
1993	"Pulse Phase Spectroscopy of LMC X-4", NASA (ASCA AO1), ($5,000.00 at UMD).
1993	"Multiwavelength Observations of Her X-1", NASA (IUE), ($1,500.00 at UMD).
1993	"Multiwavelength Studies of Her X-1", NASA (R OSAT AO4), ($22,000.00 at UMD).
1993-1996	"Multiwavelength Studies of X-ray Binaries", NSF, ($169,800.00 at UMD).
1993	"EUV Observations of Her X-1", NASA (EUVE), ($44,478.00 at UMD).
1991-1996	"Multiwavelength Spectroscopy of X-ray Binaries", NASA (Long-Term Space Astrophysics Data Program), ($453,900.00 at SAO).
1991	"Soft X-ray Emission from Boundary Layers in Cataclysmic Variables", NASA (ROSAT AO2), ($18 ,000.00 at SAO).
1990	"Soft X-ray Emission from Boundary Layers in Cataclysmic Variables", NASA (ROSAT AO1), ($22 ,742.00 at SAO).
1989	"Multiwavelength Studies of Sco X-1", NASA (IUE), ($15,800.00 at SAO).
1988	"Multiwavelength Studies of Cyg X-2", NASA (IUE), ($36,500.00 at SAO).
1987	"Circumsource Structure of Her X-1 and Cen X-3", NASA (Astrophysics Data Program), ($5,000.00 at NASA/GSFC).

In addition I have been co-Investigator on over 30 successful proposals.

BIBLIOGRAPHY: *Saeqa Dil Vrtilek*
Publications in refereed journals and conference proceedings (since 1990):

2012 "Model independent means of categorizing X-ray binaries. I: Color-Color Intensity Diagrams" (Vrtilek and Boroson), submitted to MNRAS.

2012 "A Shrinking Disk in V926 Sco?" (Connolly and Vrtilek), MNRAS, in review.

2012 "A Tomographic study of V691 Cra: evidence for precession?" (Peris and Vrtilek), MNRAS, in press.

2010 Suzaku X-ray Spectra and Pulse Profile Variations during the Superorbital Cycle of LMC X-4 (L. Hung, R. Hickox, B.S. Boroson, & S.D. Vrtilek), ApJ, 720, 1202.

2010 X-ray Variations at the Orbital Period from Cygnus X-1 in the High/Soft State (B.S. Boroson, & S.D. Vrtilek), ApJ, 710, 197.

2009 Doppler and Modulation Tomography of XTE J1118+480 in Quiescence (D.E. Calvelo, S.D. Vrtilek, J. Neilsen, M. Torres, D. Steeghs, J.I.G. Hernandez, & A.V. Fillipenko), MNRAS, 399, 539.

2009 Spectroscopic Signatures of the Superorbital Period in the Neutron Star Binary LMC X-4 (J. Neilsen, J.C. Lee, M.A. Nowak, K. Dennerl, S.D. Vrtilek) ApJ, 696, 182.

2008 Ultraviolet Observations of the X-ray Photoionized Wind of Cygnus X-1 during X-ray Soft/High State (S.D. Vrtilek, B. Boroson, A. Hunacek, D. Geis, & C.T. Bolton), ApJ, 678, 1248.

2008 The Eccentric Accretion Disc of the Black Hole A0620-00 (J. Neilsen, D. Steeghs, & S.D. Vrtilek), MNRAS, 384, 849.

2007 FUSE Observations of a Full Orbit of Hercules X-1: Signatures of Disk, Star, and Wind (B.S. Boroson, S.D. Vrtilek, J.C. Raymond, & M. Still), ApJ, 667, 1087.

2006 Rotational modulation of X-ray emission in Orion Nebula young stars. (E. Flaccomio, G. Micela, S. Sciortino, E.D. Feigelson, W. Herbst, F. Favata, F.R. Harnden Jr., & S.D. Vrtilek), Mem SAIS, 9, 244.

2005 Pulse-phase spectroscopy of SMC X1 with Chandra and XMM-Newton: reprocessing by a precessing disk? (R.C. Hickox, & S.D. Vrtilek), ApJ, 637, 1148.

2005 Rotational modulation of X-ray emission in Orion Nebula young stars. (E. Flaccomi, G. Micela, S. Sciortino, E.D. Feigelson, W. Herbst, F. Favata, F.R. Harnden Jr., & S.D. Vrtilek), ApJS, 160, 450.

2005 Photoionized Lines in the X-ray Spectra of SMC X-1. (S.D. Vrtilek, J.C. Raymond, B.S. Boroson, & R. McCray), ApJ, 626, 307.

2004 Phase Variation in the Pulse Profile of SMC X-1. (J. Neilsen, R.C. Hickox, & S.D. Vrtilek), ApJ, 616L, 135.

2004 Long-term X-ray Variability and the Importance of the ASM. (S.D. Vrtilek), X-ray Timing 2003: Rossi and Beyond. AIP Conference Proceedings, Vol. 714. Eds P. Kaaret, F.K. Lamb, and J.H. Swank. Melville, NY: American Institute of Physics, p.331-336

2004 Doppler Tomography of X-ray Binaries. (S.D. Vrtilek, H. Quaintrell, B. Boroson, & M. Shields), AN, 325, 209.

2003 Simultaneous ASCA and HST/GHRS Observations of Cygnus X-2/V1341 Cygni. (S.D. Vrtilek, J.C. Raymond, B. Boroson, R. McCray, A. Smale, T. Kallman, & F. Nagase), PASP, 115, 1124.

2003 Nebular vs. Stellar Wind Abundances in NGC 654. (H. Maness & S. D. Vrtilek), PASP, 115, 1002.

2003 Chandra Grating Spectroscopy of the X-Ray Binary 4U 1700-37 in a Flaring State. (Bram Boroson, Saeqa Dil Vrtilek, Timothy Kallman, and Michael Corcoran), ApJ, 592, 516.

2003 A Compact X-Ray Source and X-Ray Jet within the Planetary Nebula Menzel 3. (J. H. Kastner, B. Balick, E. G. Blackman, A. Frank, N. Soker,

S. D. Vrtilek, and J. Li), ApJLetters, 591, 37.

2003 Abundance Anomalies in the X-Ray Spectra of the Planetary Nebulae NGC 7027 and BD +30-Degree 3639. (H. L. Maness, S. D. Vrtilek, J.H. Kastner, & N. Soker), ApJ, 589, 439.

2002 On the Asymmetries of Extended X-Ray Emission from Planetary Nebula. (J. Kastner, J. Li, S.D. Vrtilek, I. Gatley, K.M. Merrill, & N. Soker), ApJ, 581, 1225.

2002 High Energy Universe at Sharp Focus: Chandra Science, proceedings of a conference held in St. Paul, MN, 16-18 July 2001. ASP Conference Proceedings Vol. 262. Edited by Eric M. Schlegel and Saeqa D. Vrtilek. ISBN:1-58381-102-8. San Francisco: Astronomical Society of the Pacific, 2002

2002 The UV Light Curve of LMC X-4: X-ray Heating of the O Star and Accretion Disk. (M.E. Preciado, B. Boroson, & S.D. Vrtilek), PASP, 114, 340.

2001 The Chandra View of X-ray Binaries (S.D. Vrtilek) in High Energy Universe at Sharp Focus: Chandra Science ASP Conference Proceedings Vol. 262. Edited by Eric M. Schlegel and Saeqa D. Vrtilek. ISBN:1-58381-102-8. San Francisco: Astronomical Society of the Pacific, 2002, p. 215.

2001 Simultaneous Chandra/HST Observations of SMC X-1 (S. D. Vrtilek, J.C. Raymond, B. Boroson, T. Kallman, H. Quaintrell, & R. McCray), ApJ, 563, L139.

2001 Observations of Cen X-3 in an Intermediate Intensity Flaring State (M.D. Audley, F. Nagase, R.L. Kelley, & S.D. Vrtilek) New Century of X-ray Astronomy, ASP Conference Proceedings Vol. 251. Edited by H. Inoue and H. Kunieda. ISBN: 1-58381-091-9. San Francisco: Astronomical Society of the Pacific, 2001., p.336

2001 Hot Outflowing Gas from the X-ray Binary Hercules X-1 (B. Boroson, T. Kallman, S. D. Vrtilek), ApJ, 562, 925.

2001 Spectral signatures of reprocessing on Hercules X-1/HZ Herculis (H. Quaintrell, M.D. Still, S.D. Vrtilek, B.S. Boroson, & P. Roche), AIP Conference Proceedings, 599, 878.

2001 Keck II spectroscopy of mHz quasi-periodic oscillations in Hercules X-1 (K. O'brien, K. Horne, B. Boroson, M. Still, R. Gomer, J.B. Oke, P. Boyd, & S.D. Vrtilek), MNRAS, 326, 1067.

2001 Complete and Simultaneous Spectral Observations of the Black-Hole X-ray Nova XTE J1118+480 (McClintock *et al.*), ApJ, 555, 477.

2001 Atmospheric reflection during an anomalous low-state of Hercules X-1 (M. Still *et al.*), ApJ, 554, 352.

2001 RXTE observations of Hercules X-1 during the 1998 July Short-high State. (M. Still *et al.*), ApJ, 553, 776.

2001 Discovery of Extended X-Ray Emission from the Planetary Nebula NGC 7027 by the Chandra X-Ray Observatory (J.H. Kastner, S.D. Vrtilek, & N. Soker), ApJL, 550, 189.

2001 Structure of the X-Ray Emission from the Jet of 3C 273 (H.L. Marshall *et al.*) ApJ, 549L, 167.

2001 Multiwavelength Stuydies of Hercules X-1 During a Short-high and an Anomalous Low State: On again, Off again (S.D. Vrtilek, H. Quaintrell,

B. Boroson, M. Still, H. Fiedler, K. O'Brien, & R. McCray), ApJ, 549, 522.

2000 Chandra X-ray Observatory Detection of extended X-ray emission from the Planetary Nebula Bd +30 3639 (Kastner, J., Soker, N., Vrtilek, S.D., & Knill-Dgani, R.), ApJ, 545L, 57.

2000 Discovery of MHz UV Quasiperiodic Oscillations in Hercules X-1 (B. Boroson, K. O'Brien, K. Horne, T. Kallman, M. Still, P.T. Boyd, H. Quaintrell, & S.D. Vrtilek), ApJ, 545, 399.

2000 Hercules X-1 (B. Boroson, S.D. Vrtilek, P. Boyd, & A. Levine) IAU Circ. 7522, 2.

2000 Hercules X-1 (S.D. Vrtilek) a review article for the Encyclopedia of Astronomy and Astrophysics published by the Nature Publishing Group, January 2001.

2000 Hercules X-1: Empirical Models of UV Emission Lines (B. Boroson, T. Kallman, S.D. Vrtilek, J.C. Jaymond, Still, M., Bautista, M., & H. Quaintrell), ApJ, 529, 414.

1999 HST STIS UV Spectra of Hercules X-1/HZ Herculis (H. Quaintrell, S.D. Vrtilek, M.D. Still, & B. Boroson). In proceedings of "X-ray Astronomy: Stellar Endpoints, AGN and the Diffuse X-ray Background". September 6-10, 1999 - CNR Conference Centre, Bologna, Italy.

1999 Models of X-ray Photoionization Effects in LMC X-4: Slices of a Stellar Wind. (B. Boroson, T. Kallman, R. McCray, S.D. Vrtilek, & J.C. Raymond) ApJ, 519, 191.

1998 Simultaneous HST/RXTE Observations of Sco X-1 (T. Kallman, B. Boroson, & S.D. Vrtilek), ApJ, 502, 441.

1997 Hopkins Ultraviolet Telescope Observations of Her X-1 (B. Boroson, W.P. Blair, A.F. Davidsen, K.S. Long, S.D. Vrtilek, J.C. Raymond, & R. McCray), ApJ, 491, 903.

1997 Simultaneous HST/ASCA Observations of LMC X-4: X-ray Ionization Effects on a Stellar Wind (S.D. Vrtilek, B. Boroson, F.H. Cheng, R. McCray, & F. Nagase), ApJ, 490, 377.

1997 HST synthetic spectral analysis of U Gem in early and late quiescence: A heated white dwarf and accretion belt? (F.H.Cheng, K. Horne, E. Sion, I. Hubeny, & S.D. Vrtilek), AJ, 114, 1165.

1997 HST synthetic spectral analysis of U Gem in early and late quiescence: a heated white dwarf and accretion belt (F.H. Cheng, E.M. Sion, K. Horne, I. Hubeny, M. Huang, & S.D. Vrtilek), in proceedings of the 10th European Workshop on White Dwarfs, held in Blanes, Spain, 17-21 June 1996. Eds. J. Isern, M. Hernanz, and E. Gracia-Berro. Publisher: Dordrecht: Kluwer Academic Publishers, 1997, Astrophysics and Space Science Library, Vol. 214, ISBN: 0792345851, p.359

1996 X-ray Binaries: Beyond the Decade of Discovery (S.D. Vrtilek) in Proceedings of the High Throughput X-ray Spectroscopy Workshop, Boston, MA 29 Sep - 1 Oct, 1996.

1996 Pulsations and Line Profile Changes in the Ultraviolet Spectrum of Hercules X-1: Results from a Multiwavelength Campaign (B. Boroson, S.D. Vrtilek, R. McCray, T. Kallman, & F. Nagase), ApJ, 473 1079.

1996 ROSAT PSPC Observations of the Intermediate Polar TV Columbae (S.D. Vrtilek, A. Silber, F.A. Primini, & J.C. Raymond), ApJ, 465, 951.

1996 The UV/Optical Continuum of Her X-1/HZ Her (S.D. Vrtilek & F.H. Cheng), ApJ, 465, 915.

1996 Multiwavelength Studies of Her X-1 (S.D. Vrtilek, J. Truemper, P. Kahabka, W. Voges, K. Dennerl, & P. Serlemitsos) Technical Report, Maryland Univ. College Park, MD.

1996 EUV Spectroscopy of Hercules X-1 (S.D. Vrtilek, H. Marshall, & J.C. Raymond) Technical Report, Maryland Univ. College Park, MD.

1996 An Archival Study of HST Observations of Her X-1/HZ Her (F.H. Cheng, S.D. Vrtilek, & J.C. Raymond), in Cataclysmic Variables and Related Objects, eds. A. Evans and J. Wood, Kluwer academic publishers: Dordecht, pp. 381-2.

1996 Accretion Disk Dynamics of Hercules X-1 (S.D. Vrtilek & F.H. Cheng), in Cataclysmic Variables and Related Objects, eds. A. Evans and J. Wood, Kluwer academic publishers: Dordecht, pp. 377-380.

1995 An Archival Study of *Hubble Space Telescope* Observations of Hercules X-1/HZ Herculis (F.H. Cheng, S.D. Vrtilek, & J.C. Raymond), ApJ, 452, 825.

1995 Phase-Resolved IUE and Optical Observations of the Polar BY Camelopardalis (D. Zucker, J.C. Raymond, A. Silber, P. Mason, S. Curiel, S.D. Vrtilek, & E. Schlegel), ApJ, 449, 310.

1994 Multiwavelength Observations of Hercules X-1/HZ Herculis (S.D. Vrtilek *et al.*), ApJL, 436, L9.

1994 Concurrent X-ray and Optical Observations of two Dwarf Novae in Outburst (A. Silber, S.D. Vrtilek & J.C. Raymond), ApJ, 425, 829.

1994 ROSAT Observations of Cataclysmic Variables: A Search for the Boundary Layer Emission (S.D. Vrtilek, A. Silber, J.C. Raymond, & J. Patterson), ApJ, 425, 787.

1994 ROSAT Observations of SU UMa and RU Peg in Outburst (A. Silber, S.D. Vrtilek, & J.C. Raymond), in Interacting Binaries, ed. A. Shafter, ASP Conference Series, 56, 306.

1994 A Search for Boundary Layer Emission from Cataclysmic Variables using the ROSAT PSPC (S.D. Vrtilek, A. Silber, & J.C. Raymond) in Interacting Binaries, ed. A. Shafter, ASP Conference Series, 56, 324.

1993 A Catalog of Intracluster Gas Temperatures (L.P. David, A. Slyz, C. Jones, W. Forman, S.D. Vrtilek, & K. Arnaud), ApJ, 412, 479.

1993 Effects of Inclination Angle on the Spectra of X-ray Binaries (S.D. Vrtilek, N. Soker, and J.C. Raymond), ApJ, 404, 696.

1992 Am Herculis, (P.A. Mason, G. Chanmugan, J. Raymond, S. Vrtilek, N.V. Borisov, N.M. Shakhovsky, I.L. Andronov, & C. Mauche) IAU Circular 5545. June 15.

1992 Soft X-ray Emission from Boundary Layers in Cataclysmic Variables (S.D. Vrtilek), in *Cataclysmic Variable Stars* ASP Conference Series 29, ed. N. Vogt, p. 384,

1991 The *Einstein* OGS Survey of Galactic Binary X-ray Sources (S.D. Vrtilek, J.E. McClintock, F.D. Seward, S.M. Kahn, and B.J. Wargelin), ApJS, 76, 1127.

1991 Observations of Scorpius X-1 with IUE: Ultraviolet Results from a Multiwavelength Campaign (S.D. Vrtilek, W. Penninx, J.C. Raymond, F. Ver-

bunt, P. Hertz, K. Wood, W.H.G. Lewin, and K. Mitsuda), ApJ, 376, 278.

1991 The UV Spectrum of Sco X-1 (T.R. Kallman, J.C. Raymond, and S.D. Vrtilek), ApJ, 370, 717.

1990 Observations of Cygnus X-2 with IUE: Ultraviolet Results from a Multiwavelength Campaign (S.D. Vrtilek, J.C. Raymond, M.R. Garcia, F. Verbunt, G. Hasinger, and M. Kurster), A&A,

Selected Colloquia, Invited, and Public Talks (past five years):

"What the Dickens? Women in Science!" Invited lecture for Harvard Summer School EPP series "O tempora, o mores: 2012 in diachronic perspective" Aug. 7, 2012

"Putting X-ray Binaries in their Proper Place" CfA High Energy Division Lunch Talk, February 8, 2012.

"Intersections of Gender and Power: Improving the Status of Women in Physics", Invited talk at the APS March 2012 meeting, Feb. 28. 2012

"STARRSLC CCI investigations of X-ray Binaries." Wide-Field Seminar Pizza Lunch, Phillips Auditorium, CfA July 21, 2011.

"A New Jet Line for XRBs?" Talk at the New England Regional Accreting Binary Annual Meeting. Yale, May 20, 2011.

"Intersections of Gender and Power: Improving the Status of Women in Science" Harvard Summer School Lecture, Jul 6, 2010.

"Doppler and Modulation tomography: imaging on microarcsecond scales" Talk at the New England Regional Accreting Binary Annual Meeting, Kavli Center for Space Research, MIT, Nov 9, 2009.

"Doppler tomography: imaging on microarcsecond scales" Institute for Theory and Computation Forum, Center for Astrophysics, Cambridge, MA. May 7, 2008.

"Multiwavelength Studies of X-ray Binaries" invited talk at A Population Explosion: The Nature and Evolution of X-ray Binaries. St. Petersburg, FL, Oct 29, 2007.

"Jets and Disks in X-ray Binaries" invited talk for session on Large Community Projects for the Great Observatories, at Cool Stars 14, Pasadena, CA. Nov 7, 2006.

"Cosmic Rings and Butterflies: The Flamboyant Deaths of Stars" Harvard Summer School Lecture, Aug 8, 2006.

"The Chandra View of X-ray Binaries" Astronomy and Physics colloquium at UCSD, Friday May 26th, 2006.

Selected as Shapley Lecturer by the American Astronomical Society for 2005-2006 and 2006-2007.

"New Beasts in the Astronomical Zoo." Harvard Summer School Lecture, Aug 2, 2005.

Keynote talk at the Chandra Calibration Workshop: XRBs with Chandra. Oct 25, 2004. Cambridge, Sheraton-Commander.

"Cosmic Rings and Butterflies". Center for Astrophysics, Observatory Night Public Lecture, Cambridge, MA. (Oct. 20, 2003).

"The Chandra View of X-ray Binaries" (**invited review**) at the ASP's 113th Annual Meeting. "The X-ray Universe at Sharp Focus" St. Paul, Mi (Jul 17, 2001).

I have given talks or poster presentations at over 80 meetings. These papers and abstracts have over 1870 citations in the NASA ADS: http://adsabs.harvard.edu/abstract_service.html. (Use Vrtilek, Dil, Dil-Vrtilek and Dil Vrtilek for author).