

Curriculum Vitae

D. Michael Crenshaw

Professor
Department of Physics and Astronomy
Georgia State University

Education

Ph.D., in Astronomy, The Ohio State University, 1985
B.S., cum laude, in Physics, Georgia State University, 1979

Professional Credentials

Graduate Director for Astronomy (Department of Physics and Astronomy, Georgia State University (November 2011 – present)
Full Professor, Department of Physics and Astronomy, Georgia State University (August 2007 – present)
Associate Professor, Department of Physics and Astronomy, Georgia State University (August 2001 – July 2007)
Research Assistant Professor, Department of Physics, The Catholic University of America (January 1997 – July 2001)
Goddard High Resolution Spectrograph (GHRS) Research Associate, Computer Sciences Corporation, NASA's Goddard Space Flight Center (January 1990 – September 1997)
Adjunct Associate Professor, University of Maryland (September 1988 – July 1994)
International Ultraviolet Explorer (IUE) Resident Astronomer, Computer Sciences Corporation, NASA's Goddard Space Flight Center (July 1985 – December 1989)

Teaching Experience

Department of Physics and Astronomy, Georgia State University (August 2001 – present): undergraduate introductory astronomy courses, graduate courses on the interstellar medium and extragalactic astronomy
Department of Astronomy, University of Maryland (September 1988 – July 1994): introductory astronomy

Service Experience (at Georgia State University)

Graduate Director for Astronomy (November 2011 – present)
Undergraduate Advisor for Astronomy (August 2009 – present)
Astronomy Club Advisor (August 2009 – present)
Society of Physics Students (SPS) Advisor (August 2008 – present)
Executive Committee, Department of Physics and Astronomy (August 2009 – present)
Promotion and Tenure Committee, Dept. of Physics and Astronomy (August 2008 – present)
Curriculum Committee, Department of Physics and Astronomy (June 2008 – present)
Astronomy Summer Student Program Committee, Co-Chair (August 2001 – present)
Introductory Astronomy Textbook Committee (August 2001 – present)
Astronomy Graduate Curriculum Committee (August 2001 – present)
Astronomy Graduate Recruitment Committee (August 2001 – present)

Astronomy Ph.D. Qualifying Examination Committee (August 2001 – present)
 Coordinator for SPS Sponsored Competitions, Georgia Science Olympiad
 Tournament at GSU (February 2009)
 Faculty Awards Committee, College of Arts and Sciences (August 2005 – August 2007),
 Chair (August 2005 – August 2006)
 Executive Committee, College of Arts and Sciences (August 2004 – August 2006)
 Geosciences Fact-Finding Subcommittee Chair (Exec. Comm.) (October 2005)
 Coordinator for annual “Reach for the Stars” event, Georgia Science Olympiad
 Tournament at GSU (2003 – 2005)
 Graduate Council, College of Arts and Sciences (September 2003 – August 2004)

Business and Professional Experience (at NASA’s Goddard Space Flight Center)
 Operation of astronomical satellites (1985 – 1989)
 Calibration of astronomical instrumentation (1985 – 1997)
 Flight software testing (1985 – 1997)

Courses Taught at Georgia State University

Astr 1010 – introductory solar system astronomy
 Astr 1020 – introductory stellar and extragalactic astronomy
 Astr 4010 – undergraduate astronomical methods laboratory
 Phys 4950 – senior research
 Astr 8300 – graduate interstellar medium
 Astr 8400 – graduate extragalactic astronomy
 Astr 8710 – research topics in astronomy
 Astr 8900 – graduate seminar in astronomy
 Astr 8910 – directed study in astronomy
 Astr 9999 – doctoral dissertation research

Doctoral Dissertations Supervised (current and previous)

José R. Ruiz, CUA, “Examining the Kinematics of Narrow-Line Region Gas in Active Galaxies using the Hubble Space Telescope” (Ph.D. received October 2003)
 Varendra Das, GSU, “Kinematics of the Narrow-Line Regions in the Seyfert Galaxies NGC 4151 and NGC 1068” (Ph.D. received August 2006)
 Rajesh Deo, GSU, “Dust within the Central Regions of Seyfert Galaxies” (Ph.D. received August 2007)
 Jay P. Dunn, GSU, “Intrinsic Absorption with the Far Ultraviolet Spectroscopic Explorer” (Ph.D. received December 2007)
 Margaret Trippe, GSU, “A Multiwavelength Investigation of Seyfert 1.8 and 1.9 Galaxies” (Ph.D. received August 2009)
 Stephen Rafter, GSU, “Fundamental Properties of Low-Redshift AGN in the Sloan Digital Sky Survey” (Ph.D. received May 2010)
 Travis Fischer, GSU, “Determining the Inclinations of Active Galactic Nuclei Using Narrow-Line Region Kinematics” (Ph.D. expected August 2012)

Additional Doctoral Dissertation Committees (completed)

Jack R. Gabel, “The Physical Nature of Low-Ionization Nuclear Emission Line Regions

- and their Relation to Active Galactic Nuclei” (CUA, Ph.D. received October 2000)
- M. Virginia McSwain, “The Evolution of Massive Stars: The Be Star and Microquasar Phenomenon” (GSU, Ph.D. received May 2004)
- Amy. M. Campbell, “The Character of Optical Variability for X-ray Selected Blazars” (GSU, Ph.D. received May 2004)
- John P. McFarland, “Rest-Frame Variability Characteristics of Blazars” (GSU, Ph.D. received May 2005)
- Nick R. Collins, “Photoionization Models of the Narrow-Line Region in the Seyfert Galaxy Mrk 3” (The Catholic University of America, Ph.D. received May 2006)
- Paramita Barai, “Modeling the Power Evolution of Classical Double Radio Galaxies over Cosmological Scales” (GSU, Ph.D. received August 2006)
- M. Angela Osterman, “New Multiwavelength Variability and Optical Microvariability Investigations of X-ray and Radio Loud Selected Blazars” (GSU, Ph.D. received December 2006)
- Kevin Marshall, “X-ray Variability of Seyfert Galaxies” (GSU, Ph.D. received December 2006)
- Eunwoo Choi, “Numerical Hydrodynamics of Relativistic Extragalactic Jets” (GSU, Ph.D. received May 2007)
- Marcio Melendez, “Constraining the AGN Contribution in a Multiwavelength Study of Seyfert Galaxies (Catholic University of America, Ph.D. received May 2008)
- Wesley Ryle, “Investigation of Fundamental Black Hole Properties of AGN Through Optical Variability” (GSU, Ph.D. received August 2008)
- Paola Rodriguez Hidalgo, “High Velocity Outflows in Quasars” (University of Florida, Ph.D. received December 2008)
- Sebastian Zamfir, “Sloan Digital Sky Survey QSOs in the Context of the 4D Eigenvector 1 Parameter Space” (University of Alabama, Ph.D. received May 2009)
- Ayao Mamert Sossah, “Photoionization of the Potassium Isoelectronic Sequence: Ca^+ and Transition Metal Ions” (GSU, Ph.D. received August 2010)
- Megan Johnson, GSU, “The Evolution of Dwarf Irregular Galaxy NGC 1569: A Kinematic Study of the Stars and Gas” (GSU, Ph.D. August 2011).
- Branyon May, “Multiwavelength Selection of Obscured AGN and Contributions to the X-ray Background” (University of Alabama, Ph.D. in Physics received August 2011)

Additional Master’s Thesis Committees (completed)

- Alana May, “Testing the Sersic Bulge – Black Hole Mass Relation in Seyfert Galaxies” (University of Alabama, M.S. received May 2010)
- Hannah Marine Clemens, “Microvariability of the Quasar 3C 279” (GSU, M.S. received August 2010)
- Erin Darnell, “Diffuse Ionized Regions in the Vicinity of Active Galaxies” (University of Alabama, M.S. in Physics received December 2011)

Additional Students Supervised

- 2 high school senior projects (1992, 1999)
- 18 undergraduate research projects (1987 – present)
- 5 additional graduate research projects (1987 – present)

Postdoctoral Researchers Supervised

Matthias Dietrich, GSU (October 2002 – September 2004)

Jack R. Gabel, CUA (January 2001 – August 2003)

Publications in Refereed Journals

1. “HST Observations of the Double-Peaked Emission Lines in the Seyfert Galaxy Markarian 78: Mass Outflows from a Single AGN”, Fischer, T.C., **Crenshaw, D.M.**, Kraemer, S.B., Schmitt, H.R., Mushotzky, R.F., & Dunn, J.P. 2011, ApJ, 727, 71.
2. “Radio Properties of Low-Redshift Broad-line Active Galactic Nuclei Including Extended Radio Sources”, Rafter, S.E., **Crenshaw, D.M.**, & Wiita, P.J. 2011, AJ, 141, 85.
3. “Multiwavelength Probes of Obscuration Towards the Narrow Line Regions in Seyfert Galaxies”, Kraemer, S.B., Schmitt, H.R., **Crenshaw, D.M.**, Melendez, M., Turner, T.J., Guainazzi, M., & Mushotzky, R.F. 2011, ApJ, 727, 130.
4. “Contemporaneous Chandra HETG and Suzaku X-ray observations of NGC 4051”, Lobban, A.P., Reeves, J.N., Miller, L., Turner, T.J., Braito, V., Kraemer, S.B., & **Crenshaw, D.M.** 2011, MNRAS, 414, 1965.
5. “Galactic-scale Absorption Outflow in the Low-luminosity Quasar IRAS F04250-5718: Hubble Space Telescope/Cosmic Origins Spectrograph Observations”, Edmonds, D., et al. (including **Crenshaw, D.M.**), 2011, ApJ, 739, 7.
6. “The Geometry of Mass Outflows and Fueling Flows in the Seyfert 2 Galaxy Mrk 3”, **Crenshaw, D.M.**, Kraemer, S.B., Schmitt, H.R., Jaffé, Y.L., Deo, R.P., Collins, N.R., & Fischer, T.C. 2010, AJ, 139, 871.
7. “Radial Velocity Offsets Due to Mass Outflows and Extinction in Active Galactic Nuclei”, **Crenshaw, D.M.**, Schmitt, H.R., Kraemer, S.B., Mushotzky, R.F., & Dunn, J.P. 2010, ApJ, 708, 419.
8. “A Multiwavelength Study of the Nature of Type 1.8/1.9 Seyfert Galaxies”, Trippe, M.L., **Crenshaw, D.M.**, Deo, R.P., Dietrich, M., Kraemer, S.B., Rafter, S.E., & Turner, T.J., 2010, ApJ, 725, 1749.
9. “Modeling the Outflow in the Narrow-line Region of Markarian 573: Biconical Illumination of a Gaseous Disk”, Fischer, T.C., **Crenshaw, D.M.**, Kraemer, S.B., Schmitt, H.R., & Trippe, M.L. 2010, AJ, 140, 577.
10. “Physical Conditions in the Ultraviolet Absorbers of IRAS F22456-5125”, Dunn, J.P., **Crenshaw, D.M.**, Kraemer, S.B., & Trippe, M.L. 2010, ApJ, 713, 900.
11. “Spectral variability and reverberation time delays in the Suzaku X-ray spectrum of NGC 4051”, Miller, L., Turner, T.J., Reeves, J.N., Lobban, A., Kraemer, S.B., & **Crenshaw, D.M.** 2010, MNRAS, 403, 196.

12. “Significant X-ray Line Emission in the 5-6 keV Band of NGC 4051”, Turner, T.J., Miller, L., Reeves, J.N., Lobban, A., Braitto, V., Kraemer, S.B., & **Crenshaw, D.M.** 2010, ApJ, 712, 209.
13. “Mass Outflow in the Seyfert 1 Galaxy NGC 5548”, **Crenshaw, D.M.**, Kraemer, S.B., Schmitt, H.R., Kaastra, J.S., Arav, N., Gabel, J.R., & Korista, K.T. 2009, ApJ, 698, 281.
14. “The Mid-Infrared Continua of Seyfert Galaxies”, Deo, R.P., Richards, G.T., **Crenshaw, D.M.**, & Kraemer, S.B. 2009, ApJ, 705, 14.
15. “Physical Conditions in the Inner Narrow-Line Region of the Seyfert 2 Galaxy Markarian 573”, Kraemer, S.B., Trippe, M.L., **Crenshaw, D.M.**, Meléndez, M., Schmitt, H.R., & Fischer, T.C. 2009, ApJ, 698, 106.
16. “Physical Conditions in the Narrow-Line Region of Markarian 3. II. Photoionization Modeling Results”, Collins, N.R., Kraemer, S.B., **Crenshaw, D.M.**, Bruhweiler, F.C.; & Meléndez, M. 2009, ApJ, 694, 756.
17. “Radio Properties of Low Redshift Broad Line Active Galactic Nuclei”, Rafter, S.E., **Crenshaw, D.M.**, & Wiita, P.J. 2009, AJ, 137, 42.
18. “Constraining the AGN Contribution in a Multiwavelength Study of Seyfert Galaxies”, Meléndez, M., Kraemer, S.B., Schmitt, H.R., **Crenshaw, D.M.**, Deo, R.P., Mushotzky, R.F., & Bruhweiler, F.C., 2008, ApJ, 689, 95.
19. “Intrinsic Absorption Properties in Active Galaxies Observed with the Far Ultraviolet Spectroscopic Explorer”, Dunn, J.P., **Crenshaw, D.M.**, Kraemer, S.B., & Trippe, M.L. 2008, AJ, 136, 1201.
20. “Long-Term Variability in the Optical Spectrum of the Seyfert Galaxy NGC 2992”, Trippe, M.L., **Crenshaw, D.M.**, Deo, R., & Dietrich, M. 2008, AJ, 135, 2048.
21. “New Indicators for AGN Power: The Correlation between [O IV] 25.89 μm and Hard X-Ray Luminosity for Nearby Seyfert Galaxies”, Meléndez, M., Kraemer, S.B., Armentrout, B.K., Deo, R.P., **Crenshaw, D. M.**, Schmitt, H.R., Mushotzky, R.F., Tueller, J., Markwardt, C.B., & Winter, L. 2008, ApJ, 682, 94.
22. “Probing the Ionization Structure of the Narrow-Line Region in the Seyfert 1 Galaxy NGC 4151”, Kraemer, S.B., Schmitt, H.R., & **Crenshaw, D.M.** 2008, ApJ, 679, 1128.
23. “Stellar Wind Variations during the X-Ray High and Low States of Cygnus X-1”, Gies, D.R., Bolton, C.T., Blake, R.M., Caballero-Nieves, S. M., **Crenshaw, D.M.**, et al. 2008 ApJ, 678, 1237.

24. “Mass Outflow from the Nucleus of the Seyfert 1 Galaxy NGC 4151”, **Crenshaw, D.M.** & Kraemer, S.B. 2007, ApJ, 659, 250.
25. “A Survey of Intrinsic Absorption in Active Galaxies using the Far Ultraviolet Spectroscopic Explorer”, Dunn, J.P., **Crenshaw, D.M.**, & Kraemer, S.B. 2007, AJ, 134, 1061.
26. “Spitzer/IRS Observations of Seyfert 1.8s and 1.9s: A Comparison with Seyfert 1s and Seyfert 2s”, Deo, R.P., **Crenshaw, D.M.**, Kraemer, S.B., Dietrich, M., Elitzur, M., Teplitz, H., & Turner, T.J. 2007, ApJ, 671, 124.
27. “The Black Hole Mass of NGC 4151: Comparison of Reverberation Mapping and Stellar Dynamical Measurement”, Onken, C.A., Valluri, M., Peterson, B. M., Pogge, R.W., Bentz, M.C., Ferrarese, L., Vestergaard, M., **Crenshaw, D.M.**, et al. 2007, ApJ, 670, 105.
28. “On the Effects of Dissipative Turbulence on the Narrow Emission-Line Ratios in Seyfert Galaxies”, Kraemer, S. B., Bottorff, M. C., & **Crenshaw, D. M.** 2007, ApJ, 668, 730.
29. “Dynamics of the Narrow-Line Region in the Seyfert 2 Galaxy NGC 1068”, Das, V., **Crenshaw, D.M.**, & Kraemer, S.B. 2007, ApJ, 656, 699.
30. “Hubble Space Telescope Ultraviolet Spectroscopy of Fourteen Low-Redshift Quasars”, Ganguly, R. Brotherton, M.S., Arav, N., Heap, S.R., Wisotzki, L., Aldcroft, T.L., Alloin, D., Behar, E., Canalizo, G., **Crenshaw, D.M.**, et al. 2007, AJ, 133, 479.
31. “Kinematics of the Narrow-Line Region in the Seyfert 2 Galaxy NGC 1068: Dynamical Effects of the Radio Jet”, Das, V., **Crenshaw, D.M.**, Kraemer, S.B. & Deo, R.P. 2006, AJ, 132, 620.
32. “The Host Galaxies of Narrow-Line Seyfert 1s: Nuclear Dust Morphology and Starburst Rings”, Deo, R.P., **Crenshaw, D.M.**, & Kraemer, S.B. 2006, AJ, 132, 321.
33. “An Internet Database of Ultraviolet Continuum Light Curves for Seyfert Galaxies”, Dunn, J.P., Jackson, B., Deo, R.P., Farrington, C., Das, V., & **Crenshaw, D.M.** 2006, PASP, 118, 572.
34. “Simultaneous Ultraviolet and X-ray Observations of the Seyfert Galaxy NGC 4151. II. Physical Conditions in the UV Absorbers”, Kraemer, S.B., **Crenshaw, D.M.**, Gabel, J.R., Kriss, G.A., Netzer, H., Peterson, B.M., George, I.M., Gull, T.R., Hutchings, J.B., Mushotzky, R.F., & Turner, T.J. 2006, ApJ, 633, 693.
35. “The Connection Between the Narrow-Line Region and the UV Absorbers in Seyfert Galaxies”, **Crenshaw, D.M.** & Kraemer, S.B. 2005, ApJ, 625, 680.

36. “Mapping the Kinematics of the Narrow-Line Region in the Seyfert Galaxy NGC 4151”, Das, V., **Crenshaw, D.M.**, Kraemer, S.B., Hutchings, J.B., Deo, R.P., Gull, T.R., Kaiser, M.E., Nelson, C.H., & Weistrop, D. 2005, AJ, 130, 945.
37. “Simultaneous Ultraviolet and X-ray Observations of the Seyfert Galaxy NGC 4151. I. Physical Conditions in the X-ray Absorbers”, Kraemer, S.B., George, I.M., **Crenshaw, D.M.**, Gabel, J.R., Turner, T.J., Gull, T.R., Hutchings, J.B., Kriss, G.A., Mushotzky, R.F., Netzer, H., Peterson, B.M., & Behar, E. 2005, ApJ, 633, 693.
38. “The Ionized Gas and Nuclear Environment in NGC 3783. V. Variability and Modeling of the Intrinsic Ultraviolet Absorption”, Gabel, J.R., Kraemer, S.B., **Crenshaw, D.M.**, Brandt, W.N., George, I.M., Hamann, F.W., Kaiser, M.E., Kaspi, S., Kriss, G.A., Mathur, S., Mushotzky, R.F., Nandra, K., Netzer, H., Peterson, B.M., Shields, J.C., Turner, T.J., & Zheng, W. 2005, ApJ, 631, 741.
39. “Probing the Ionizing Continuum of Narrow-Line Seyfert 1 Galaxies. I. Observational Results”, Dietrich, M., **Crenshaw, D.M.**, & Kraemer, S.B. 2005, ApJ, 623, 700.
40. “Physical Conditions in the Narrow-Line Region of Markarian 3. I. Observations”, Collins, N.R., Kraemer, S.B., **Crenshaw, D.M.**, Ruiz, J.R., Deo, R.J., & Bruhweiler, F.C. 2005, ApJ, 619, 116.
41. “Probing the Kinematics of the Narrow-Line Region in Seyfert Galaxies with Slitless Spectroscopy: Observational Results”, Ruiz, J.R., **Crenshaw, D.M.**, Kraemer, S.B., Bower, G.A., Gull, T.R., Hutchings, J.B., Kaiser, M.E., & Weistrop, D. 2005, AJ, 129, 73.
42. “Simultaneous X-ray and Ultraviolet Spectroscopy of the Seyfert Galaxy NGC 5548. II. Physical Conditions in the X-ray Absorber”, Steenbrugge, K.C., Kaastra, J.S., **Crenshaw, D.M.**, Kraemer, S.B., Arav, N., George, I.M., Liedahl, D.A., van der Meer, R.L.J., Paerels, F.B.S., Turner, T.J., & Yaqoob, T. 2005, A&A, 434, 569.
43. “High-Resolution Ultraviolet Spectra of the Dwarf Seyfert 1 Galaxy NGC 4395: Evidence for Intrinsic Absorption”, **Crenshaw, D.M.**, Kraemer, S.B., Gabel, J.R., Schmitt, H.R., Filippenko, A.V., Ho, L.C., Shields, J.C., & Turner, T.J. 2004, ApJ, 612, 152.
44. “Simultaneous X-ray and Ultraviolet Spectroscopy of the Seyfert galaxy NGC 5548. III. X-ray Time Variability”, Kaastra, J.S., Steenbrugge, K.C., **Crenshaw, D.M.**, Kraemer, S.B., Arav, N., George, I.M., Liedahl, D.A., van der Meer, R.L.J., Paerels, F.B.S., Turner, T.J., & Yaqoob, T. 2004, A&A, 422, 97.
45. “On the Relationship Between the Optical Emission-Line and X-ray Luminosities in Seyfert 1 Galaxies”, Kraemer, S.B., George, I.M., **Crenshaw, D.M.**, & Gabel, J.R. 2004, ApJ, 607, 794.

46. “The Spectral Energy Distribution and Emission-Line Properties of the NLS1 Galaxy Arakelian 564”, Romano, P., Mathur, S., Turner, T.J., Kraemer, S.B., **Crenshaw, D.M.**, et al. 2004, ApJ, 602, 635.
47. “Emission Line Properties of AGN from a Post-COSTAR FOS HST Spectral Atlas”, Kuraszkiwicz, J.K., Green, P.J., **Crenshaw, D.M.**, Dunn, J.P., Forster, K., Vestergaard, M., & Aldcroft, T.L. 2003, ApJS, 150, 165.
48. “The Host Galaxies of Narrow-Line Seyfert 1s: Evidence for Bar-Driven Fueling”, **Crenshaw, D.M.**, Kraemer, S.B., & Gabel, J.R. 2003, AJ, 126, 1690.
49. “Simultaneous UV and X-ray Spectroscopy of the Seyfert 1 Galaxy NGC 5548. I. Physical Conditions in the UV Absorbers”, **Crenshaw, D.M.**, Kraemer, S.B., Gabel, J.R., Kaastra, J.S., Steenbrugge, K.C., Brinkman, A.C., Dunn, J.P., George, I.M., Liedahl, D.A., Paerels, F.B.S., Turner, T.J., & Yaqoob, T. 2003, ApJ, 594, 116.
50. “The Ionized Gas and Nuclear Environment in NGC 3783. IV. Variability and Modeling of the 900 ks Chandra Spectrum”, Netzer, H., Kaspi, S., Behar, E., Brandt, W.N., Chelouche, D., George, I.M., **Crenshaw, D.M.**, Gabel, J.R., Hamann, F.W., Kraemer, S.B., Kriss, G.A., Nandra, K., Peterson, B.M., Shields, J.C., & Turner, T.J. 2003, ApJ, 599, 933.
51. “The Ionized Gas and Nuclear Environment in NGC 3783. III. Detection of a Decreasing Radial Velocity in an Intrinsic Ultraviolet Absorber”, Gabel, J.R., **Crenshaw, D.M.**, Kraemer, S.B., Brandt, W.N., George, I.M., Hamann, F.W., Kaiser, M.E., Kaspi, S., Kriss, G.A., Mathur, S., Mushotzky, R.F., Nandra, K., Netzer, H., Peterson, B.M., Shields, J.C., Turner, T.J., & Zheng, W. 2003, ApJ, 595, 120.
52. “Probing the Complex and Variable X-ray Absorption of Markarian 6 with XMM Newton”, Immler, S., Brandt, W.N., Vignall, C., Bauer, F.E., **Crenshaw, D.M.**, Feldmeier, J.J., & Kraemer, S.B. 2003, AJ, 126, 153.
53. “The Ionized Gas and Nuclear Environment in NGC 3783. II. Averaged HST/STIS and FUSE Spectra”, Gabel, J.R., **Crenshaw, D.M.**, Kraemer, S.B., Brandt, W.N., George, I.M., Hamann, F.W., Kaiser, M.E., Kaspi, S., Kriss, G.A., Mathur, S., Mushotzky, R.F., Nandra, K., Netzer, H., Peterson, B.M., Shields, J.C., Turner, T.J., & Zheng, W. 2003, ApJ, 583, 178.
54. “The Kinematics and Physical Conditions of the Ionized Gas in Markarian 509. I. Chandra High-Energy Grating Spectroscopy”, Yaqoob, T., McKernan, B., Kraemer, S.B., **Crenshaw, D.M.**, Gable, J.R., George, I.M., & Turner, T.J. 2003, ApJ, 582, 105.

55. “The Kinematics and Physical Conditions of the Ionized Gas in Markarian 509. II. STIS Echelle Observations”, Kraemer, S.B., **Crenshaw, D.M.**, Yaqoob, T., McKernan, B., Gabel, J.R., George, I.M., Turner, & Dunn, J.P. 2003, ApJ, 582, 125.
56. “Balmer and He I Absorption in the Nuclear Spectrum of NGC 4151”, Hutchings, J.B., **Crenshaw, D.M.**, Kraemer, S.B., Gabel, J.R., Kaiser, M.E., Weistrop, D., & Gull, T.R. 2002, AJ, 124, 2543.
57. “Reddening, Emission-Line, and Intrinsic Absorption Properties in the Narrow-Line Seyfert 1 Galaxy Akn 564”, **Crenshaw, D.M.**, Kraemer, S.B., Turner, T.J., Collier, S., Peterson, B.M., Brandt, W.N., Clavel, J., George, I.M., Horne, K., Kriss, G.A., Mathur, S., Netzer, H., Pogge, R.W., Pounds, K.A., Romano, P., Shemmer, O., & Wamstecker, W. 2002, ApJ, 566, 187.
58. “Variable UV Absorption in the Seyfert 1 Galaxy NGC 3516: The Case for Associated UV and X-ray Absorption”, Kraemer, S.B., **Crenshaw, D.M.**, George, I.M., Netzer, H., Turner, T.J., & Gabel, J.R. 2002, ApJ, 577, 98.
59. “The Spectral Energy Distribution of the Seyfert Galaxy Ton S180”, Turner, T.J., Romano, P., Kraemer, S.B., George, I.M., Yaqoob, T., **Crenshaw, D.M.**, Storm, J., Alloin, D., Lazzaro, D., Da Silva, L., Pritchard, J.D., Kriss, G., Zheng, W., Mathur, S., Wang, J., Dobbie, P., & Collins, N.R. 2002, ApJ, 568, 120.
60. “The Density and Location of the X-Ray-Absorbing Gas in NGC 3516”, Netzer, H., Chelouche, D., George, I.M., Turner, T.J., **Crenshaw, D.M.**, Kraemer, S.B., & Nandra, K. 2002, ApJ, 571, 256.
61. “The Detection of Circumnuclear X-Ray Emission from the Seyfert Galaxy NGC 3516”, George, I.M., Turner, T.J., Netzer, H., Kraemer, S.B., Ruiz, J., Chelouche, D., **Crenshaw, D.M.**, Yaqoob, T., Nandra, K., & Mushotzky, R.F. 2002, ApJ, 571, 265.
62. “The Ionized Gas and Nuclear Environment in NGC 3783. I. Time-Averaged 900 Kilosecond Chandra Grating Spectroscopy”, Kaspi, S., Brandt, W.N., George, I.M., Netzer, H., **Crenshaw, D.M.**, Gabel, J.R., Hamann, F.W., Kaiser, M.E., Koratkar, A., Kraemer, S.B., Kriss, G.A., Mathur, S., Mushotzky, R.F., Nandra, K., Peterson, B.M., Shields, J.C., Turner, T.J., & Zheng, W. 2002, ApJ, 574, 643.
63. “On the Nature of Intrinsic Absorption in Reddened Seyfert 1 Galaxies”, **Crenshaw, D.M.**, & Kraemer, S.B. 2001, ApJ, 562, L29.
64. “Kinematics of the Narrow-Line Region in the Seyfert 2 Galaxy Mrk 3”, Ruiz, J.R., **Crenshaw, D.M.**, Kraemer, S.B., Bower, G.A., Gull, T.R., Hutchings, J.B., Kaiser, M.E., & Weistrop, D. 2001, AJ, 122, 2961.

65. “Multiwavelength Monitoring of the Narrow-Line Seyfert 1 Galaxy Akn 564. II. Ultraviolet Continuum and Emission-Line Variability”, Collier, S., **Crenshaw, D.M.**, et al. 2001, ApJ, 561, 146.
66. “HST/STIS Observations of PG 0946+301: The Highest Quality UV Spectrum of a BALQSO”, Arav, N., de Kool, M., Korista, K.T., **Crenshaw, M.**, et al. 2001, ApJ, 561, 118.
67. “The X-ray Emission from the Nucleus of the Dwarf Elliptical Galaxy NGC 3226”, George, I.M., Mushotzky, R.F., Yaqoob, T., Turner, T.J., Kraemer, S., Ptak, A.F., Nandra, K., **Crenshaw, D.M.**, & Netzer, H. 2001, ApJ, 559, 167.
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Invited Talks (since August 2001)

1. “Observations of Active Galactic Nuclei” (10 lectures), in the Beijing International Summer School on “The Physics and Evolution of AGN”, Beijing, China, <http://indico.ihep.ac.cn/conferenceDisplay.py?confId=1870> (September 2011)
2. “FUV NALS, BALS, and their Kinematics”, High Energy View of Accreting Objects: AGN and X-ray Binaries” conference, Agios Nikolaos, Crete, Greece (October 2010)
3. “Mass Outflows in Active Galactic Nuclei”, Department of Physics, Virginia Tech, Blacksburg, VA (September 2008)
4. “X-ray Grating Spectroscopy of Active Galactic Nuclei”, X-ray Grating Spectroscopy Workshop, Boston, MA (July 2007)
5. “UV and X-ray Warm Absorbers in Seyfert Galaxies”, The Central Engine of Active Galactic Nuclei conference, Xian, China (October 2006)
6. “Mass Outflows from AGN in Emission and Absorption”, Active Galactic Nuclei: from Atoms to Black Holes conference, Tel Aviv, Israel (February 2006)
7. “Seyfert Galaxy Outflows in Emission and Absorption”, AGN Winds in the Caribbean conference, St. John, Virgin Islands (November 2005)
8. “Mass Outflow from the Nuclei of Active Galaxies” Department of Physics and Astronomy, University of Oklahoma, Norman, OK (October 2005)
9. “The Connection Between Mass Outflow and the Narrow-Line Region in Seyfert Galaxies”, Center for Astrophysics and Space Astronomy, University of Colorado, Boulder, CO (May 2005)
10. “Mass Outflow from Active Galaxies”, Department of Physics and Astronomy, University of Alabama, Tuscaloosa, AL (April 2005)

11. “Mass Outflow from the Nuclei of Active Galaxies”, Department of Physics and Astronomy, University of Kentucky, Lexington, KY (February 2005)
12. “Mass Outflow from the Nucleus of the Seyfert 1 Galaxy NGC 3783”, Department of Astronomy, The Ohio State University, Columbus, OH (April 2004)
13. “High Spatial Resolution Spectroscopy of Nearby AGN with HST”, The Structure and Composition of Active Galactic Nuclei: Optical Interferometry and Adaptive Optics of NGC 1068, workshop at the Lorentz Center, Leiden, The Netherlands (January 2004)
14. “HST and FUSE Spectroscopy of Photoionized Gas in Active Galactic Nuclei”, Frontiers in Laboratory Astrophysics workshop, Athens, GA (June 2003)
15. “Intrinsic UV Absorption and Reddening in Seyfert 1 Galaxies”, Space Telescope Science Institute, Baltimore, MD (December 2002)
16. “Mass Outflow in the Seyfert 1 Galaxy NGC 4151” Department of Astronomy, University of Florida, Gainesville, FL (September 2001)

Contributed Presentations (since August 2001)

1. “Measuring Feedback in Nearby AGN”, **Crenshaw, D.M.** 2011, AGN Winds in Charleston conference, Charleston, SC, October 2011.
2. “Mass Outflows in Narrow-Line Seyfert 1 Galaxies”, **Crenshaw, D.M.** 2011, Narrow-Line Seyfert 1 Galaxies and their place in the Universe” conference, Milan, Italy, April 2011.
3. “Determining AGN Feedback Parameters from Seyfert Galaxy Outflows”, **Crenshaw, D.M.**, Kraemer, S.B., Schmitt, H.R., & Fischer, T.C. 2011, American Astronomical Society, Seattle, WA, January 2011.
4. “Double-Peaked Emission Lines in the Seyfert Galaxy Markarian 78: Mass Outflows from a Single AGN”, Fischer, T.C., **Crenshaw, D.M.**, Kraemer, S.B., & Schmitt, H.R. 2011, American Astronomical Society, Seattle, WA, January 2011.
5. “Optical Spectra of the Teacup AGN”, Gagne, J., **Crenshaw, D.M.**, Keel, W.C., & Fischer, T.C. 2011, American Astronomical Society, Seattle, WA, January 2011.
6. “Multi-wavelength Probes of Obscuration Towards the Narrow Line Region in Seyfert Galaxies”, Kraemer, S.B., Schmitt, H., Crenshaw, D.M., Melendez, M., Turner, J., Guainazzi, M., & Mushotzky, R. 2011, American Astronomical Society, Seattle, WA, January 2011.
7. “X-ray and Optical Observations of Naked Seyfert 2 Galaxies”, **Crenshaw, D.M.**, Trippe, M., Kraemer, S., and Turner, J. 2010, High Energy Astrophysics Division, Waikoloa, Hawaii, March 2010.

8. "The Distribution of X-ray Column Densities in Seyfert 1.8 and 1.9 Galaxies", Trippe, M.L., **Crenshaw, D.**, Kraemer, S., & Turner, J. 2010, High Energy Astrophysics Division, Waikoloa, Hawaii, March 2010.
9. "Revealing the Innermost Regions of AGN Through Deep Chandra and Suzaku Observations of NGC 4051", Reeves, J.T., Turner, J., Miller, L., Lobban, A., Braitto, V., Kraemer, S., & **Crenshaw, D.** 2010, High Energy Astrophysics Division, Waikoloa, Hawaii, March 2010.
10. "Outflows and Fueling Flows in the Seyfert 1 Galaxy Mrk 3", **Crenshaw, D.M.**, Kraemer, S., Schmitt, H., Jaffe, Y., Deo, R., Collins, N., & Fischer, T., American Astronomical Society, Washington, DC, January 2010.
11. "Kinematic Modeling of Mrk 573: Biconical Outflow", Fischer, T.C., **Crenshaw, D.M.**, Kraemer, S.B., Schmitt, H.R., & Trippe, M.L., American Astronomical Society, Washington, DC, January 2010.
12. "Exploring the Inner Narrow-Line Regions of Seyfert Galaxies", Kraemer, S.B., **Crenshaw, D.M.**, Schmitt, H.R., Trippe, M.L., & Melendez, M., & Fischer, T.C., American Astronomical Society, Washington, DC, January 2010.
13. "The Relative Contributions of the Fe II Pseudo-Continuum in the Narrow-Lined Type 1 Seyferts Ark 564 and I Zw 1", Eufrasio, R.T., Bruhweiler, F.C., Verner, E., Wills, B., and **Crenshaw, M.**, American Astronomical Society, Washington, DC, January 2010.
14. "Velocity Offsets and Outflows in Seyfert Galaxies". **Crenshaw, D.M.**, Multi-Messenger Relativistic Astrophysics Conference, Georgia Tech, Atlanta, May 2009.
15. "Mass Outflows from AGN in Emission and Absorption", **Crenshaw, D.M.** & Kraemer, S.B., American Astronomical Society, Austin, TX, 7 – 11 January 2008.
16. "Extreme Long-Term Variability in the Optical Spectrum of the Seyfert Galaxy NGC 2992", Trippe, M.L. & **Crenshaw, D.M.**, American Astronomical Society, Austin, TX, 7 – 11 January 2008.
17. "Radio Loudness Of Broad Line AGN In The SDSS And First Survey", Rafter, S.E. & **Crenshaw, D.M.**, American Astronomical Society, Austin, TX, 7 – 11 January 2008.
18. "Decomposition Of Seyfert Mid-IR Spectra: The Starburst And The Active Nucleus", Deo, R.P., **Crenshaw, D.M.**, & Kraemer, S.B., American Astronomical Society, Austin, TX, 7 – 11 January 2008.
19. "Probing The Properties Of The Obscuring Material Around the Nucleus Of NGC 4151", Kraemer, S.B., Schmitt, H.R., & **Crenshaw, D.M.**, American Astronomical Society, Austin, TX, 7 – 11 January 2008.
20. The Correlation Between [O IV] λ 25.89 μ and the Hard X-ray Luminosities for a Sample of Nearby Seyfert Galaxies, Melendez, M., Kraemer, S.B., Deo, R.P., **Crenshaw, M.**, Schmitt, H.R., Mushotzky, R.F., Tueller, J., Markwardt, C.B., & Winter, L., American Astronomical Society, Austin, TX, 7 – 11 January 2008.

21. “FUSE Analysis of Intrinsic Absorption in NGC 3516”, Dunn, J.P., **Crenshaw, D.M.**, & Kraemer, S.B. 2006, American Astronomical Society, Calgary, Alberta, 4 – 8 June 2006.
22. “High-Resolution X-ray and UV Spectra of the Seyfert 1 galaxy NGC 4151. II. STIS and FUSE Observations of the Intrinsic UV Absorption”, **Crenshaw, D.M.**, Kraemer, S.B., & Gabel, J.R., American Astronomical Society, Washington, DC, 8 – 12 January 2006, poster.
23. “High-Resolution X-ray and UV Spectra of the Seyfert 1 galaxy NGC 4151. I. Physical Conditions in the X-ray Absorbers”, Kraemer, S.B., **Crenshaw, D.M.**, George, I.M., & Gabel, J.R., American Astronomical Society, Washington, DC, 8 – 12 January 2006, poster.
24. “Spitzer/IRS Observations of Seyfert 1.8 and 1.9 Galaxies”, Deo, R.P., **Crenshaw, D.M.**, & Kraemer, S.B., American Astronomical Society, Washington, DC, 8 – 12 January 2006, poster.
25. “A Photoionization Model of the Markarian 3 Narrow Line Region”, Collins, N.R., Kraemer, S.B., & **Crenshaw, D.M.**, American Astronomical Society, Washington, DC, 8 – 12 January 2006, poster
26. “Radial Outflows from the Narrow-Line Regions of Seyfert Galaxies: No Evidence for Jet Acceleration”, Das, V., & **Crenshaw, D.M.**, AGN Winds in the Caribbean, St. John, Virgin Islands, 28 November – 2 December 2005, poster.
27. “The Connection Between Outflowing UV Absorbers and the Inner Narrow-Line Region in Seyfert Galaxies”, **Crenshaw, D.M.** & Kraemer, S.B., American Astronomical Society, Minnesota, 29 May – 2 June 2005, poster.
28. “Kinematic Modeling of the NLR of NGC 1068”, Das, V., **Crenshaw, D.M.**, & Kraemer, S.B., American Astronomical Society, Minnesota, 29 May – 2 June 2005, poster.
29. “Dust Morphology of Narrow-Line Seyfert 1 Galaxies”, Deo, R.P., **Crenshaw, D.M.**, & Kraemer, S.B., American Astronomical Society, Minnesota, 29 May – 2 June 2005, poster.
30. “Intrinsic Absorption in the Dwarf Seyfert NGC 4395”, **Crenshaw, D.M.**, Kraemer, S.B., & Gabel, J.R. 2004, American Astronomical Society, Atlanta, 4 - 8 January 2004, poster.
31. “Emission-Line Properties of Active Galactic Nuclei from a Post-COSTAR HST Spectral Atlas”, Kuraszek, J., Green, P.J., **Crenshaw, D.M.**, Dunn, J., Forster, K., Vestergaard, M., & Aldcroft, T.L. 2004, American Astronomical Society, Atlanta, 4 - 8 January 2004, poster.

32. “Ultraviolet Lightcurve Internet Database of Active Galactic Nuclei”, Dunn, J., **Crenshaw, D.M.**, Jackson, B. 2004, American Astronomical Society, Atlanta, 4 - 8 January 2004, poster.
33. “Mapping the Kinematics of the Narrow-Line Regions in NGC 4151 and NGC 1068”, Das, V. & **Crenshaw, D.M.** 2004, American Astronomical Society, Atlanta, 4 - 8 January 2004, poster.
34. “Probing the Circumnuclear Geometry of Three Seyfert Galaxies”, Deo, R.P., & **Crenshaw, D.M.** 2004, American Astronomical Society, Atlanta, 4 - 8 January 2004, poster.
35. “The EUV Continuum Shape and Strength of NLS1 Galaxies”, Dietrich, M., **Crenshaw, D.M.**, & Kraemer, S.B. 2004, American Astronomical Society, Atlanta, 4 - 8 January 2004, contributed poster.
36. “Optical and IR Variability Study of ESO141-G55 and IRAS09149-6206”, Tomovic, T., Dietrich, M., & **Crenshaw, D.M.** 2004, American Astronomical Society, Atlanta, 4 - 8 January 2004, poster.
37. “Combined HST/STIS, FUSE, and Chandra Observations of the Seyfert 1 Galaxy NGC 4151”, Kraemer, S.B., **Crenshaw, D.M.**, Gabel, J.R., & George, I.M. 2004, American Astronomical Society, Atlanta, 4 - 8 January 2004, poster.
38. “The Connection Between Mass Outflow and the Narrow-Line Region in Seyfert Galaxies”, **Crenshaw, D.M.**, et al., The 2004 Ringburg Castle Workshop on AGN Physics, Germany, November 2004, talk.
39. “Mass Outflow from the Nucleus of the Seyfert 1 Galaxy NGC 3783”, **Crenshaw, D.M.**, et al., High Energy Astrophysics Division Meeting, New Orleans, 8 – 11 September 2004, talk.
40. “Mapping the Kinematics of the Narrow-Line Region in NGC 4151”, Das, V.D. & **Crenshaw, D.M.**, American Astronomical Society, Nashville, 26 – 29 June 2003, poster.
41. “Relative Orientations of Seyfert Mass Outflows and Associated Galactic Disks”, Deo, R.P. & **Crenshaw, D.M.**, American Astronomical Society, Nashville, 26 – 29 June 2003, poster.
42. “The Host Galaxies of Narrow-Line Seyfert 1 Galaxies: Evidence for Bar-Driven Fueling”, **Crenshaw, D.M.** & Kraemer, S.B., American Astronomical Society, 26 – 29 June 2003, Nashville, talk.

43. “Intrinsic Absorption and Reddening in Seyfert 1 Galaxies”, **Crenshaw, D.M.**, & Kraemer, S.B., American Astronomical Society, Washington, DC, 7 – 10 January 2002, poster.
44. “Variable Intrinsic UV Absorption in the Seyfert 1.5 Galaxy NGC 3516”, Kraemer, S.B., **Crenshaw, D.M.**, George, I.M., Netzer, H., & Turner, T.J., American Astronomical Society, Washington, DC, 7 – 10 January 2002, poster.
45. “HST/STIS and FUSE Observations of the UV Intrinsic Absorption in NGC 3783”, Gabel, J.R., **Crenshaw, D.M.**, & Kraemer, S.B., American Astronomical Society, Washington, DC, 7 – 10 January 2002, poster.
46. “Physical Conditions of the Narrow Line Region in Markarian 3”, Collins, N.R., Kraemer, S.B., **Crenshaw, D.M.**, & Ruiz, J.R., American Astronomical Society, Washington, DC, 7 – 10 January 2002, poster.
47. “A Kinematic Study of the NLR gas in 10 Seyfert galaxies: Early Results”, Ruiz, J.R., **Crenshaw, D.M.**, Kraemer, S.B., Bower, G.A., Gull, T.R., Hutchings, J.B., Kaiser, M.E., & Weistrop, D., American Astronomical Society, Washington, DC, 7 – 10 January 2002, poster.

Editorial/Review Activities

1. Referee for articles in the *Astrophysical Journal* (ApJ), the *Astronomical Journal* (AJ), *Monthly Notices of the Royal Astronomical Society* (MNRAS), *Astronomy & Astrophysics* (A&A), *Publications of the Astronomical Society of the Pacific* (PASP), *Astrophysics and Space Science* (Ap&SS), *Publications of the Astronomical Society of Japan* (PASJ) (1986 – present)
2. Member of peer review committees for proposals to use the International Ultraviolet Explorer (IUE), the Extreme Ultraviolet Explorer (EUVE), the Chandra X-ray Observatory (CXO), the Galaxy Evolution Explorer (GALEX), the Hubble Space Telescope (HST), and NASA’s Astrophysics Data Program (ADP) (1988 – present)
3. Chair of CXO Peer Review Panel on Active Galactic Nuclei (June 2004)
4. Member of Chandra Fellowship Committee (January 2007)
5. Member of NSF review panel for Research Experiences for Undergraduates proposals (November 2007) and Astronomy & Astrophysics Research Grants (May 2010)
6. Referee for National Science Foundation (NSF), Cerro Tololo Inter-American Observatory (CTIO), Dutch NWO, and U.S. Civilian Research and Development Foundation (CRDF) proposals (1998 – present)

Internal Grants (Crenshaw as GSU Co-PI, 2001 – present)

1. “Program in Extragalactic Astronomy”, GSU Research Program Enhancement (non-competing renewal), 7/1/02 - 6/30/03, \$45K
2. “Program in Extragalactic Astronomy”, GSU Research Program Enhancement (non-competing renewal), 7/1/03 - 6/30/04, \$45K
3. “Program in Extragalactic Astronomy”, GSU Research Program Enhancement (competitive renewal), 7/1/04 - 6/30/05, \$45K
4. The previous RPE program has been transformed to provide continuing long-term support of graduate students within the Department of Physics and Astronomy.

External Grants (Crenshaw as GSU Principal Investigator, 2001 – present)

1. “Post-COSTAR FOS Spectra of Quasars”, Harvard-Smithsonian Center for Astrophysics, 10/1/01 - 9/30/02, \$22.9K
2. “Determining the Nature of the Variable Absorption in AGN: Monitoring NGC 3783 with HST and Chandra”, Space Telescope Science Institute, NASA, 9/1/01 - 8/31/03, \$132.2K
3. “Simultaneous HST/Chandra Observations of the X-ray/UV Absorbers in Seyfert 1 Galaxies”, Space Telescope Science Institute, NASA, 9/1/01 - 8/31/03, \$25.9K
4. “Resolving the Warm Absorber in NGC 5548”, Space Telescope Science Institute, NASA, 2/1/02 - 1/31/04, \$36.3K
5. “Resolving the Warm Absorber in NGC 5548”, Chandra X-ray Observatory, NASA, 2/4/02 - 2/3/04, \$41.9K
6. “Revealing the Nature of the X-ray Absorption in NGC 4151”, Space Telescope Science Institute, NASA, 5/1/02 - 4/30/04, \$24.7K
7. “Connecting the UV and X-ray Absorbers in NGC 5548”, Space Telescope Science Institute, NASA, 2/1/04 - 1/31/06, \$17.1K
8. “AGN Black Hole Masses from Stellar Dynamics”, Space Telescope Science Institute, NASA, 2/1/04 - 1/31/06, \$11.7K
9. “Radial-Velocity Variations of an Intrinsic Absorber in NGC 3783”, Far Ultraviolet Spectroscopic Explorer program, NASA, 5/1/04 - 4/30/05, \$38.7K

10. "A Comprehensive FUSE Survey of Mass Outflow from AGN", Astrophysics Data Program, NASA, 1/15/05 - 1/14/08, \$189.0K (\$61.2K received for 1st year, \$63.0K received for 2nd year, \$64.8K received for 3rd year)
11. "Variable Absorption in the Seyfert Galaxy NGC 3516: Evidence for an Accretion-Disk Wind?", Far Ultraviolet Spectroscopic Explorer program, NASA, , 7/1/06 – 6/30/08, \$25.0K
12. "Are Narrow-Line Seyfert 1 Galaxies Viewed Pole-on?", Space Telescope Science Institute, NASA, 6/1/09 – 5/30/11, \$50.8K
13. "Deconstructing AGN X-ray Spectra", Space Telescope Science Institute, NASA, 12/1/09 – 11/30/11, \$30.4K
14. "Probing the Highest Ionization Gas in the Narrow-Line Regions of Active Galaxies", Astrophysics Data Analysis Program, NASA, 12/16/09 – 12/15/11, \$171.2K
15. "What are the Locations and Kinematics of Mass Outflows in AGN?", Space Telescope Science Institute, NASA, 11/1/10 – 10/31/13, \$133.2K

Professional Affiliations

American Astronomical Society
 International Astronomical Union
 Sigma Pi Sigma Physics Honor Society

Other Professional Activities

Hubble Space Telescope Financial Review Committee (August 2011 – present)
 Scientific Organizing Committee for "AGN Winds in Charleston" conference, Charleston, SC (October 2011)
 Multi-mission Archive at Space Telescope (MAST) Users Group (MUG) (July 2009 – September 2011)
 Scientific Organizing Committee for "Future Directions in Ultraviolet Spectroscopy" conference, Baltimore, MD (October 2008)
 Scientific Organizing Committee for "The Central Engine of AGN" conference, Xian, China (October 2006)
 Scientific Organizing Committee for "AGN Winds in the Caribbean" conference, Virgin Islands (November 2005)
 NASA's FUSE Observers Advisory Committee (June 2004 – November 2007)
 Press Release on "Galactic Bars Feed Supermassive Black Holes" at the American Astronomical Society Meeting, Nashville, TN (26 May 2003)
 Co-chairman of workshop on "Mass Outflow in AGN", CUA (March 2001)

Honors and Awards

CSC Professional Paper Honorarium Award (1991, 1995, 1997)

NASA Group Achievement Award: HST GHRS Development Team (1991)

NASA Group Achievement Award: IUE Operations (1988)

Lowell Observatory Summer Fellow (1983)