

VITA

Bruce A. Wilking

Department of Physics & Astronomy
University of Missouri-St. Louis
1 University Boulevard
St. Louis, Missouri 63121
Phone: (314) 516-5023
Email: bwilking@umsl.edu

Personal:

Birthdate: March 24, 1954
Birthplace: Decatur, Illinois
Citizenship: USA

Education:

B.S. in Astronomy, Univ. of Illinois, Urbana, Illinois, 1976
Ph.D. in Planetary Science, Univ. of Arizona, Tucson, Arizona, 1981, (Advisor: Charles Lada)

Employment:

9/00-present Chairperson, Dept. of Physics & Astronomy, Univ. of Missouri-St. Louis
9/93-present Professor of Astronomy, Univ. of Missouri-St. Louis
9/90-8/91 Visiting Scientist, Harvard-Smithsonian Center for Astrophysics
9/88-9/93 Associate Professor of Astronomy, Univ. of Missouri-St. Louis
9/84-9/88 Assistant Professor of Astronomy, Univ. of Missouri St. Louis
9/83-9/84 Lecturer in the Astronomy Department, Univ. of Texas at Austin
8/81-9/84 Postdoctoral research associate in the Astronomy Department, Univ. of Texas at Austin
9/76-8/81 Graduate research assistant in Planetary Sciences, Univ. of Arizona

Scholastic Honors:

Phi Beta Kappa, 1975
Magna Cum Laude, Highest Distinction in Astronomy, University of Illinois, 1976

Membership in Professional Societies:

American Astronomical Society
Sigma Xi

Professional Service:

User's Committee, Infrared Processing and Analysis Center, Pasadena, CA, 1987-1992.
Committee on Operations and Plans, NEROC Haystack Observatory, Westford, MA, 1991-1993.
Telescope Allocation Committee, Infrared Telescope Facility (IRTF), Mauna Kea, Hawaii, 1995-1997.
NSF CAREER Proposal Panelist, Division of Astronomical Sciences, Washington, DC, January 1997.
Panelist in Young Stellar Object Group, Support Capabilities for Large Telescopes Workshop, NOAO, Tucson, AZ, September 1997.
Proposal Reviewer for NRAO 12-Meter Telescope, 1999-2000
Proposal Reviewer for Hubble Space Telescope Cycle 13, March 2004

Recent Presentations:

“Young Brown Dwarfs”, colloquium presented at East Carolina University, May 2004.

“Young Stellar and Substellar Objects in the Rho Ophiuchi Molecular Cloud”, poster presentation at Protostars and Planets V, Kona, Hawaii, October 2005.

“Brown Dwarfs in Young Star Clusters”, colloquium presented at Truman State University, February 2007.

“Multi-Epoch VLBI Observations of Water Masers Associated with NGC 1333/IRAS4A and IRAS4B”, poster presentation at Transformational Science with ALMA: Through Disks to Stars and Planets, Charlottesville, VA, June 2007.

“The Surface Population of the Serpens Molecular Cloud”, poster presentation at the 212th meeting of the American Astronomical Society, St. Louis, MO, June 2008.

“Star Formation in the Rho Ophiuchi Molecular Cloud: A Laboratory for Low Mass Star Formation”, O.M. Stewart Colloquium, University of Missouri-Columbia, February 2009.

Research Grants:

Internal Awards

1984–UM-St. Louis - Improved Research Quality. \$6,243. “Theoretical and Observational Studies of the Formation of Star Clusters.”

1985–Univ. of Missouri - Weldon Spring Research Award. \$12,615. “The Formation of Star Clusters.”

1986–UM-St. Louis - Summer Research Fellowship. \$3,500. “Infrared Observations and Theoretical Models of Young Star Clusters.”

1989–Univ. of Missouri - Weldon Spring Research Award. \$11,000. “Low Mass Star Formation in Southern Molecular Clouds”.

1994–Univ. of Missouri Research Board. \$27,700. “The Relationship Between Water Masers and Star Formation”.

1994–UM-St. Louis. \$8,684. “High Resolution Observations of Water Masers Associated with Low Mass Stars”.

2001–Univ. of Missouri Research Board. \$19,820. “Brown Dwarfs in the NGC 1333 Star-Forming Cloud”.

2008–Univ. of Missouri Research Board. \$15,300. “The First Wave of Star Formation in the Ophiuchus and Serpens Molecular Clouds”.

External Awards

1986–NASA. \$18,800. “An IRAS General Investigator Program Proposal to Study the Luminosity Function of Young Dust-Embedded Clusters.”

1987–NASA. \$20,866. “A SADAP Proposal to Study the Luminosity Functions of Young Dust-Embedded Clusters.”

1989–NASA. \$24,000. “An ADP Proposal to Study the Formation and Evolution of Dust-Embedded Clusters”.

1991–NASA. \$31,273. “Comparative Studies of Dust-Embedded Populations”.

1991–NATO. \$4,800. “Evolution of Pre-Main Sequence Binary Stars”.

1993–NATO. \$4,950. “Evolution of Pre-Main Sequence Binary Stars”.

1995–NSF. \$60,938. “Toward the Mass Function of the Rho Ophiuchi Infrared Cluster”(2 year award).

1997–NSF. \$2,000. Supplement for Research Experience for Undergraduates.

1998–NASA. \$51,400. “The Nature of Weak Radio Sources in the Rho Oph Core”.

1999–NSF. \$129,406. “Substellar Populations and the Mass Functions in Young Clusters” (3 year award).

2004–NASA. \$13,142. “The Origins of Substellar Masses”
2004–NASA. \$41,698. “NASA/Missouri Space Grant Consortium: UM-St. Louis Program.”
2005–NASA. \$30,713. “NASA/Missouri Space Grant Consortium: UM-St. Louis Program.”
2006–NASA. \$53,796. “NASA/Missouri Space Grant Consortium: UM-St. Louis Program.”
2007–NASA. \$45,000. “NASA/Missouri Space Grant Consortium: UM-St. Louis Program.”
2008–NASA. \$55,000. “NASA/Missouri Space Grant Consortium: UM-St. Louis Program.”

Recent Published Papers:

69. “A Spectral Line Study of Serpens S68 FIRS1 Region”, McMullin, J. P., Mundy, L. G., Blake, G. A., Wilking, B. A., & Mangum, J. G., *Astrophysical Journal*, **536**, 835-856, 2000.
70. “Infrared Properties of Weak Radio Sources in the ρ Ophiuchi Molecular Cloud”, Wilking, B. A., Bontemps, S., Schuler, R., Greene, T. P., & André, P., *Astrophysical Journal*, **551**, 357-366, 2001.
71. “Overview of Cluster Properties”, Wilking, B., invited review *From Darkness to Light: Origin and Evolution of Young Stellar Clusters*, eds. T. Montmerle & Ph. André, (ASP: San Francisco), pp. 353-366, 2001.
72. “Spectroscopy of Brown Dwarf Candidates in the NGC 1333 Molecular Cloud”, Wilking, B., Mikhail, A., Carlson, G., Meyer, M., & Greene, T., in *Brown Dwarfs: IAU Symposium 211*, ASP Conference Series Vol. 211, ed. E. L. Martin, (ASP: San Francisco), pp. 97-101, 2003.
73. “Low Mass Stars and Substellar Objects in the NGC 1333 Molecular Cloud”, Wilking, B., Meyer, M., Greene, T., Mikhail, A., & Carlson, G., *Astronomical Journal*, **127**, 1131-1146, 2004.
74. “Optical Spectroscopy of the Surface Population of the Rho Ophiuchi Molecular Cloud: The First Wave of Star Formation”, Wilking, B. A., Meyer, M. R., Robinson, J. R., Greene, T. P., *Astronomical Journal*, **130**, 1733-1751, 2005.
75. “Coordinated Multiwavelength Observations of 3C 66A during the WEBT campaign of 2003-2004”, Boettcher, M., Tartar, J. B., Wilking, B. A., and 67 co-authors, *Astrophysical Journal*, **631**, 169-186, 2005.
76. “Searching for proto-brown dwarfs: Extending near IR spectroscopy of protostars below the hydrogen-burning limit”, Covey, K., Greene, T., Doppmann, G., Lada, C., & Wilking, B., *Astronomische Nachrichten*, **326**, 886-890, 2005.
77. “Testing the inverse-Compton catastrophe scenario in the intra-day variable blazar S5 0716+71 I. Simultaneous broadband observations during November 2003”, Ostorero, L., Tartar, J. B., Wilking, B. A., and 82 co-authors, *Astronomy & Astrophysics*, **451**, 797-807, 2006.
78. “HST/NICMOS Observations of NGC 1333: The Ratio of Stars to Sub-stellar Objects”, Greissl, J., Meyer, M. R., Wilking, B. A., Fanetti, T., Schneider, G., Greene, T. P., and Young, E., *Astronomical Journal*, **133**, 1321-1330, 2007.
79. “Time-Resolved AU-Scale Jets Traced by Masers in the IRAS 4A/B Regions in NGC 1333”, Marvel, K. B., Wilking, B. A., Claussen, M. J., & Wootten, H. A., *Astrophysical Journal*, **685**, 285-297, 2008.
80. “Star Formation in the Rho Ophiuchi Molecular Cloud”, Wilking, B. A., Gagné, M., & Allen, L. E., invited review chapter in **Handbook of Star Forming Regions, Vol II The Southern Sky**, ASP Monograph Series Vol. 5, ed. B. Reipurth, (ASP: San Francisco), 351-380, 2008.
81. “Infrared Spectra of Young Stars Embedded in the R Coronae Australis Cloud Core”, Meyer, M. R. & Wilking, B. A. 2009, *Publications of the Astronomical Society of the Pacific*, **121**, 350-358, 2009.