

Dawn E. Peterson

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Personal

- **Date of Birth:** September 29, 1975
- **Place of Birth:** Rochelle, Illinois
- **Citizenship:** United States

Current Position

Research Associate, University of Virginia

Education

- **Ph.D.**, 2005, Department of Physics & Astronomy, University of Rochester.
Title: *The Pre-Main Sequence & Brown Dwarf Populations of OMC 2/3: A Multiwavelength Study*
Advisers: Judith L. Pipher & S. Thomas Megeath
- **M.A.**, 2000, *Physics*, Department of Physics & Astronomy, University of Rochester.
- **B.A.**, 1998, *Astronomy & Physics with distinction*, College of Arts and Sciences, Boston University.

Refereed Publications

1. *The Orion Molecular Cloud 2/3 and NGC 1977 Regions*, **Peterson, Dawn E.** & Megeath, S. Thomas, chapter in *Handbook of Star Forming Regions*, Bo Reipurth, editor, Astronomical Society of the Pacific Conference Series, San Francisco, 2007, submitted.
2. *New Young Brown Dwarfs in the Orion Molecular Cloud 2/3 Region*, **Peterson, Dawn E.**, Megeath, S. T., Luhman, K. L., Pipher, J. L., Stauffer, J. R., Barrado y Navascués, D., Wilson, J. C., Skrutskie, M. F., Nelson, M. J., & Smith, J. D., 2007, submitted to *Astrophysical Journal* (in revision process).
3. *Searching for hidden Wolf-Rayet stars in the Galactic Plane – 15 new Wolf-Rayet stars*, Hadfield, L. J., VanDyk, S. D., Morris, P. W., Smith, J. D., Marston, A. P., & **Peterson, D. E.** 2007, *Monthly Notices of the Royal Astronomical Society*, 376, 248-262.
4. *Characterizing Young Brown Dwarfs using Low Resolution Near-IR Spectra*, Allers, K. N., Jaffe, D. T., Luhman, K. L., Liu, M. C., Wilson, J. C., Skrutskie, M. F., Nelson, M., **Peterson, D. E.**, Smith, J. D., & Cushing, M. C. 2007, *Astrophysical Journal*, 657, 511-520.
5. *Discovery of a Young Substellar Companion in Chamaeleon*, Luhman, K. L., Wilson, J. C., Brandner, W., Skrutskie, M. F., Nelson, M. J., Smith, J. D., **Peterson, D. E.**, Cushing, M. C., & Young, E., 2006, *Astrophysical Journal*, 649, 894-899.
6. *Near-infrared spectra of the leading and trailing hemispheres of Enceladus*, Verbiscer, A. J., **Peterson, Dawn E.**, Skrutskie, M. F., Cushing, M. C., Helfenstein, P., Nelson, M. J., Smith, J. D., & Wilson, J. C., 2006, *Icarus*, 182, 211-223.
7. *Spectroscopic Confirmation of the Least Massive Known Brown Dwarf in Chamaeleon*, Luhman, K. L., **Peterson, Dawn E.**, and Megeath, S. T., 2004, *Astrophysical Journal*, 617, 565-568.
8. *Photometric Distances to Small Dark Clouds: CB 24*, **Peterson, Dawn E.**, and Clemens, Dan P., 1998, *Astronomical Journal*, 116, 881-889.

Poster Presentations

1. *Cluster Formation in Isolation: Spitzer's View of Bok Globule CB 34*, Peterson, D. E., Gutermuth, R. A., Skrutskie, M. F., Megeath, S. T., Pipher, J. L., Allen, L. E., Myers, P. C., 2007 (January), *American Astronomical Society Meeting 209*, 105.20.

2. *Triggered Star Formation in the Isolated Cluster CB 34?*, Peterson, D. E., Gutermuth, R. A., Skrutskie, M. F., Megeath, S. T., Pipher, J. L., Allen, L. E., Myers, P. C., 2006 (August), *IAUXXXVI Session 237: Triggered Star Formation in a Turbulent Interstellar Medium*.
3. *Disks Around Young Brown Dwarfs in the Orion Molecular Clouds 2 and 3 Region*, Peterson, D. E., Megeath, S. T., Luhman, K. L., Pipher, J. L., Barrado y Navascués, D., Stauffer, J. R., 2005 (October), *Protostars & Planets V*.
4. *Optical/Near-Infrared Selected Brown Dwarf Candidates in OMC 2/3*, Peterson, D. E., Megeath, S. T., Luhman, K. L., Pipher, J. L., Barrado y Navascués, D., Stauffer, J. R., Allen, L. E., Myers, P. C., 2004 (January), *American Astronomical Society Meeting 203*, 6.01.
5. *Optical/Near-Infrared Selected Brown Dwarf Candidates in OMC 2/3*, Peterson, D. E., Megeath, S. T., Luhman, K. L., Pipher, J. L., Barrado y Navascués, D., Stauffer, J. R., Allen, L. E., Myers, P. C., 2003 (July), *IAUXXXV Session 221: Star Formation at High Angular Resolution*.
6. *Optical/Near-Infrared Selected Brown Dwarf Candidates in the OMC 2/3 Protostellar Cluster*, Peterson, D. E., Megeath, S. T., Luhman, K. L., Pipher, J. L., Barrado y Navascués, D., Stauffer, J. R., Allen, L. E., Myers, P. C., 2003 (January), *American Astronomical Society Meeting 201*, 93.17.
7. *Mapping the Initial Configuration of Young Stellar Clusters: Deep Near-Infrared Observations of OMC 2/3*, Peterson, D. E., Megeath, S. T., Pipher, J. L., Myers, P. C., Allen, L. E., 2002 (January), *American Astronomical Society Meeting 199*, 4.06.
8. *Photometric Distances to Dark Clouds and Small Bok Globules: Reddening Law Sensitivities*, Peterson, D. E., and Clemens, D. P., 1998 (January), *American Astronomical Society Meeting 191*, 7.08.
9. *Photometric Distances to Dark Clouds and Small Bok Globules: CB 24*, Peterson, D. E., and Clemens, D. P., 1997 (June), *American Astronomical Society Meeting 190*, 41.10.

Invited Talks

1. *The Pre-Main Sequence and Brown Dwarf Populations of OMC 2/3: A Multiwavelength Study*, Colloquium for the Institute for Astrophysical Research, Boston University, November 2004.

Contributed Talks

1. *Disks Around Brown Dwarfs and Low Mass Stars in the Orion Molecular Clouds 2 and 3*, Star Formation in the Era of Three Great Observatories Workshop, 2005.
2. *Brown Dwarf Candidates in OMC 2/3*, Astronomical Society of New York, 2002.
3. *New Near-Infrared Observations of OMC 2/3*, Astronomical Society of New York, 2001.

Observing Awards and Experience

1. Megeath, S. T., Pipher, J. L., Allen, L. E., Luhman, K. L., Peterson, D. E., 2003, *How do Brown Dwarfs Form?*, Hubble Space Telescope time with NICMOS, 6 orbits allocated during Cycle 12.
2. Peterson, D. E., Megeath, S. T., Luhman, K. L., Pipher, J. L., Allen, L. E., Rayner, J., Cushing, M. C., 2005, *Near-Infrared Selected Brown Dwarf Candidates in the Orion Molecular Clouds 2 and 3 Region*, using the SpeX spectrograph at the NASA Infrared Telescope Facility, Mauna Kea, 3 nights allocated, January 2-4, 2006 (time allocated for the same project in 2003 and 2004 as well).
3. Megeath, S. T., Pipher, J. L., Peterson, D. E., Myers, P. C., Li, D., Allen, L., 2005, *Mapping the Structure of Dark Filaments in OMC 3 with the IRS*, Spitzer Space Telescope GO time with IRS, 12 hours allocated during Cycle 2.
4. Bary, J. S., Skrutskie, M. F., Peterson, D. E., 2006 (and 2005) *A Multi-Epoch IRS Accretion Variability Study of Actively Accreting T Tauri Stars*, Spitzer Space Telescope GO time with IRS, 7.7 hours allocated during Cycle 3 (8.4 hours allocated during Cycle 2).

I have extensive near-infrared and optical imaging and spectroscopic experience at various telescopes using several instruments. This includes the CorMASS spectrograph at the Vatican Advanced Technology Telescope, Apache Point Observatory 3.5-m, and the Magellan (Clay) telescopes as well as SpeX at the IRTF. For imaging, I have used the Stelircam and 4-Shooter cameras on the 1.2-m telescope at Fred Lawrence Whipple Observatory and the Simultaneous Quad Infrared Imaging

Device (SQIID) on the Kitt Peak 2-m telescope. In addition, I have several nights experience using the Red Channel Spectrograph, Hectospec and FLAMINGOS (imaging) at the MMT Observatory.

Research Experience

- Research Associate: Department of Astronomy, University of Virginia, October 2004 - present.
- Graduate Research Assistant: Near-Infrared Astrophysics Lab, Department of Physics & Astronomy, University of Rochester, July 1998 - September 2004.
- Undergraduate Research Assistant: Department of Astronomy with Professor Dan Clemens, Boston University, September 1995 - May 1998.

Teaching Experience

- Teaching Assistant: AST 105 *Introduction to the Milky Way Galaxy* with Professor Adam Frank, January 1999 - May 1999.
- Teaching Assistant: AST 102 *Black Holes, Time Warps and the Large Scale Structure of the Universe* with Professor Dan Watson, September 1998 - December 1998.

Computer Experience

- Operating Systems: UNIX-like systems, particularly Linux; Windows.
- Astronomical Image Reduction Software: IDL, IRAF.
- Programming Languages: Fortran.
- Document preparation systems: LaTeX, TeX.

Honors and Awards

- Department of Education Graduate GAANN Fellowship in Physics and Astronomy at the University of Rochester, September 1998 - May 2001.
- Graduated with distinction from the Department of Astronomy: Boston University, May 1998.
- University Merit Scholarship: Boston University, September 1994 - May 1998.

Professional Associations

- Member of the American Astronomical Society since 1997.

References

- **Mike Skrutskie**, Department of Astronomy, University of Virginia, Charlottesville, VA 22903, USA, phone: (434) 924-4328, email: mfs4n@virginia.edu.
- **Judy Pipher**, Department of Physics and Astronomy, University of Rochester, Rochester, NY 14627-0171, USA, phone: (585) 275-4402, email: jlipher@astro.pas.rochester.edu.
- **Tom Megeath**, Department of Physics and Astronomy, University of Toledo, Toledo, OH 43606, USA, phone: (419) 530-7812 email: megeath@physics.utoledo.edu.
- **Dan Watson**, Department of Physics and Astronomy, University of Rochester, Rochester, NY 14627-0171, USA, phone: (585) 275-8576, email: dmw@pas.rochester.edu.
- **Kevin Luhman**, Department of Astronomy and Astrophysics, Pennsylvania State University, University Park, PA 16802, USA, phone: (814) 863-4957, email: kluhman@astro.psu.edu.
- **Dan Clemens**, Institute for Astrophysical Research and Department of Astronomy, Boston University, 725 Commonwealth Avenue, Boston, MA 02215, USA, phone: (617) 353-6140, email: clemens@bu.edu.