

Jacqueline Marie Radigan

Curriculum Vitae

Department of Astronomy & Astrophysics
University of Toronto
50 St. George Street, Toronto ON M5S 3H4, Canada

Phone: +1 (416) 946 5832
Email: radigan@astro.utoronto.ca
Web: www.astro.utoronto.ca/~radigan/

Education

Ph. D. Candidate

Department of Astronomy & Astrophysics, University of Toronto, Canada (Sep 2007 – Present)
Weather on Substellar Worlds: A Large J-Band Survey for Cloud-Induced Variability in Cool Brown Dwarfs
Thesis Advisor: Ray Jayawardhana
Expected Completion: May 2012

B.Sc. Honors Physics

Department of Physics & Astronomy, Queen's University, Canada (Sep 2003 – May 2007)

Awards

Canada Vanier Scholarship: \$150,000

National Science and Engineering Research Council of Canada (2009-2012)

Alexander Graham Bell Canada Graduate Scholarship: \$17,000

National Science and Engineering Research Council of Canada (2008-2009)

Ontario Graduate Scholarship: \$15,000

Government of Ontario (2007-2008)

Mary H. Beatty Fellowship: \$1900

Department of Astronomy, University of Toronto (2008)

Helen Sawyer Hogg Entrance Award: \$7000

Department of Astronomy, University of Toronto (2007)

3rd Prize Research Presentation

Canadian Undergraduate Physics Conference, Halifax, NS (2006)

Undergraduate Research Award: \$6000

National Science and Engineering Research Council of Canada (2006)

Annie Bentley Lillie Book Prize in Mathematics

Queen's University (2003)

Refereed Publications

- **Radigan, J.**, Jayawardhana, R., Lafrenière, D., Artigau, E., Marley, M., Saumon, D., *High Amplitude, Periodic Variability of a Cool Brown Dwarf: Evidence for Patchy, High-Contrast Cloud Features*, 2011, ApJ submitted (MS#54584)
- Artigau, É., **Radigan, J.**, Folkes, S., et al., *DENIS J081730.0-615520: An Overlooked Mid-T Dwarf in the Solar Neighborhood*, 2010, ApJL, 718, L38
- **Radigan, J.**, Lafrenière, D., Jayawardhana, R., & Doyon, R. *Discovery of the Widest Very Low Mass Field Binary*, 2009, ApJ, 698, 405
- **Radigan, J.**, Lafrenière, D., Jayawardhana, R., & Doyon, R. *Discovery of a Wide Substellar Companion to a Nearby Low-Mass Star*, 2008, ApJ, 689, 471

Conference Proceedings and Abstracts

- **Radigan, J.**, Jayawardhana, R., Lafrenière, D., Artigau, E., 2010, Poster: *Observations of Heterogeneous Clouds and Weather in Substellar Atmospheres*. Extreme Solar Systems II, Jackson Lake, WY.
- **Radigan, J.**, Jayawardhana, R., Lafrenière, D., & Artigau, E., 2011, *Large Amplitude, Quasi-Periodic Variability of a Cool Brown Dwarf*, Bulletin of the American Astronomical Society, #121.01
- **Radigan, J.**, Jayawardhana, R., Lafrenière, D., Liu, M., & Dupuy, T., *Discovery of the First Resolved Triple T-dwarf*, 2011, Bulletin of the American Astronomical Society, 43, #226.01
- **Radigan, J.**, Jayawardhana, R., Lafrenière, D., Artigau, E., 2010, *Extreme Weather at the L/T Transition: A Large Survey For Variability of Cool Brown Dwarfs*, Proceedings of Cool Stars 16, Seattle WA, in Press.
- **Radigan, J.**, Jayawardhana, R., Lafrenière, D., Artigau, E., 2010, Poster: *Extreme Weather on Substellar Worlds*. IAU Symposium 276, Torino, Italy.
- **Radigan, J.**, Lafrenière, D., Jayawardhana, *Weather on Substellar Worlds: A Large J-Band Survey for Variability of Cool Brown Dwarfs*, 2009, Meeting of the Canadian Astronomical Society, Toronto
- **Radigan, J.**, Lafrenière, D., Jayawardhana, R., & Doyon, R., *Wide Ultracool Binaries and Brown Dwarfs in a Cross-Match of the Two Micron All Sky Survey and the Sloan Digital Sky Survey*, 2009, Bulletin of the American Astronomical Society, 41
- **Radigan, J.**, Jayawardhana, R., Lafrenière, D., Artigau, E., *Observations of Heterogeneous Clouds and Weather in Substellar Atmospheres*

Research Grants

- Data Analysis Funding for Spitzer Program 80213 (130 hours, PI:**Radigan**). Amount: \$88,000.

Telescope Time Allocations

- **Radigan, J.** et al. Spitzer Space Telescope (Cycle 8): *Weather on Substellar Worlds: Mapping the Atmospheres of Cool Brown Dwarfs (PID:80213)*. Photometric monitoring with IRAC. 130 hours (Priority 1).
- **Radigan, J.** et al. W.M. Keck Observatory Telescope, (2011B): *Resolved Spectroscopy and Imaging of the First Triple T-dwarf System*. Resolved spectroscopy using OSIRIS/LGS AO. 5 hours.
- Metchev, S., **Radigan, J.** et al. Spitzer Space Telescope, (Cycle 8): *Weather on Other Worlds: A Survey of Cloud-Induced Variability in Brown Dwarfs (PID: 80179)*. Photometric monitoring with IRAC. 830 hours.
- Daniel, A., Reid I. N., **Radigan, J.**, Burrows, A., Jayawardhana, R. Hubble Space Telescope (Cycle 19): *Physics and Chemistry of Condensate Clouds across the L/T Transition - A SNAP Spectral Mapping Survey*. Time-resolved spectroscopy using WFC3. 60 orbits.
- **Radigan, J.** et al. Gemini South (2010B): *Confirming the First Detection of Cloud-Related Variability on a Peculiar Blue L-dwarf*. Imaging and long-slit spectroscopy using GMOS. 5 hours.
- Goldman, B., **Radigan, J.** et al. ESO 2.2-m Telescope (P87): *Studying the brown dwarf dust cloud structure through variability*. Photometric monitoring using GROND. 18 hours.
- **Radigan, J.** et al. ESO VLT (Apr 2009): *ToO Observations of a Large-Scale Storm on a Cool Brown Dwarf*. Time-resolved spectroscopy using ISAAC/FORS2. 6.6 hours.
- **Radigan, J.** et al. W.M. Keck Observatory Telescope (2009B): *Complementary Keck LGS AO Observations of T-dwarfs Targeted in a Variability Monitoring Program*. High-contrast imaging using NIRC2/LGS AO. 5 hours.
- **Radigan, J.** et al. Canada-France-Hawaii Telescope (2009B): *Toward Understanding Cloud Clearing in Substellar Atmospheres: A J-band Monitoring Program for Weather-Induced Photometric Variability on T-dwarfs*. Photometric monitoring using WIRCcam. 28 hours.
- Du Pont 2.5-m Telescope, 60 nights (July 2009 - May 2010)
Purchased using an RTI grant from the National Sciences and Engineering Research Council of Canada awarded to R. Jayawardhana (grant application co-authored by **J. Radigan**)

Seminars and Contributed Talks

- Star Formation Lunch Seminar, Steward Observatory, Tucson, Aug 22 2011
- Contributed Talk, Cool Stars 16, Seattle, WA, Sep 1 2010
- Visiting Seminar, Max-Planck-Institut für Astronomie, Heidelberg, Feb 9 2010
- Contributed Talk, Ontario Star Formation Jamboree, University of Western Ontario, Oct 18 2008

Teaching and Public Outreach

Teaching Assistant (University of Toronto, 2007 – 2011)

AST 101: The Sun and Its Neighbours (Tutorials, teaching, planetarium shows, marking)

AST 210: Great Moments in Astronomy (Administrative duties, marking.)

AST 251: Life on Other Worlds (Administrative duties, marking.)

Lecturing (University of Toronto, Winter 2010)

Delivered lecture, *Habitability on Mars*, for AST 251

Public Telescope Tours (University of Toronto, 2007 – 2009)

Led public tours and viewings through the Department of Astronomy's 16-inch telescope.