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CURRICULUM VITAE OF TONY WONG

Personal

Born in Lawrence, Kansas, USA in 1973. US and Australian citizen.

Education

University of California, Berkeley (1994–2000)

Received M. A. in December 1996 in Astronomy.

Received Ph.D. in December 2000 in Astrophysics.

Thesis Title: Radial Gas Flows and Star Formation in Spiral Galaxies

Thesis Committee: L. Blitz (chair), C. F. McKee, C. H. Townes

Harvard University (1990–1994)

Received B. A. in June 1994, *summa cum laude*.

Fields of concentration: Physics and Astronomy and Astrophysics.

Phi Beta Kappa, inducted November 1993 (top 5% of class).

Employment

2006–present: *University of Illinois at Urbana-Champaign.* Assistant Professor of Astronomy (tenure-track). Member, Laboratory for Astronomical Imaging, a partner in the Combined Array for Research in Millimeter-wave Astronomy (CARMA).

2003–2006: *CSIRO Australia Telescope National Facility and University of New South Wales.* ARC-CSIRO Linkage Postdoctoral Fellow. ATNF 3mm Project Scientist. Development of on-the-fly (OTF) mapping mode at Mopra telescope. Multi-wavelength studies of star formation and the interstellar medium in the Large Magellanic Cloud. Imaging of dense gas in extragalactic starburst regions.

2001–2003: *CSIRO Australia Telescope National Facility.* Bolton Postdoctoral Fellow. Studies of the neutral interstellar medium in spiral galaxies, including the edge-on galaxy NGC 891. Testing of ATCA 3mm system and support for users. ATCA observations of molecular gas in selected targets, including evolved stars, massive star-forming regions, and nearby galaxies.

1996–2000: *University of California, Berkeley.* Research Assistant for UCB Radio Astronomy Laboratory, under direction of Prof. Leo Blitz. Observations of CO(1-0) emission in nearby galaxies, using the BIMA interferometer and NRAO 12m telescope. Modeling of CO and HI kinematics and comparison with star formation tracers. Team member, BIMA Survey of Nearby Galaxies (BIMA SONG), including development of data reduction pipelines.

1995–1996: *University of California, Berkeley.* Research Assistant for Prof. Don Backer. Dual-frequency pulsar timing using a Coherent Dispersion Removal Processor (CDRP) system attached to the 85-ft (26-m) radio telescope at NRAO Green Bank, WV. Analyzed pulsar glitches, timing noise, and variable interstellar dispersion and scattering.

1993–1994: *Harvard University.* “Neutral Hydrogen Holes in the Dwarf Galaxy DDO 47,” B.A. thesis completed May 1994 under the direction of Dr. Daniel Puche at the Center for Astrophysics. Compared 21-cm and optical observations of a dI galaxy to study the origin of widespread holes in the neutral gas.

Refereed Publications

Yim, K., Wong, T., Howk, J. C., & van der Hulst, J. M. 2009, “The Interstellar Medium and Star Formation in Edge-On Galaxies - I. NGC 891,” *Astrophysical Journal*, submitted.

Wong, T., & 12 coauthors, 2009, “Molecular and Atomic Gas in the Large Magellanic Cloud - I. Conditions for CO Detection,” *Astrophysical Journal*, in press, eprint arXiv:0902.1578.

Wong, T., & 14 coauthors, 2008, “Molecular Line Mapping of the Giant Molecular Cloud Associated with RCW 106 - II. Column Density and Dynamical State of the Clumps,” *Monthly Notices of the Royal Astronomical Society*, 386, 1069–1084.

Minamidani, T., & 28 coauthors, 2008, “Submillimeter Observations of Giant Molecular Clouds in the Large Magellanic Cloud: Temperature and Density as Determined from J=3-2 and J=1-0 Transitions of CO,” *Astrophysical Journal Supplement Series*, 175, 485–508.

Ott, J., Wong, T., Pineda, J. L., Hughes, A., Muller, E., Li, Z.-Y., Wang, M., Staveley-Smith, L., Fukui, Y., Weiß, A., Henkel, C., & Klein, U. 2008, “The Molecular Ridge Close to 30 Doradus in the Large Magellanic Cloud,” *Publications of the Astronomical Society of Australia*, 25, 129–137.

Longmore, S. N., Burton, M. G., Barnes, P. J., Wong, T., Purcell, C. R., & Ott, J. 2007, “Multiwavelength Observations of Southern Hot Molecular Cores Traced by Methanol Masers - I. Ammonia and 24-GHz Continuum Data,” *Monthly Notices of the Royal Astronomical Society*, 379, 535–572.

Breen, S. L., Ellingsen, S. P., Johnston-Hollitt, M., Wotherspoon, S., Bains, I., Burton, M. G., Cunningham, M., Lo, N., Senkbeil, C. E., & Wong, T. 2007, “A Search for 22-GHz Water Masers Within the Giant Molecular Cloud Associated With RCW 106,” *Monthly Notices of the Royal Astronomical Society*, 377, 491–506.

Wong, T., Whiteoak, J. B., Ott, J., Chin, Y.-N., & Cunningham, M. R. 2006, “Synthesis Imaging of Dense Molecular Gas in the N113 HII Region of the Large Magellanic Cloud,” *Astrophysical Journal*, 649, 224–234.

Paladino, R., Murgia, M., Helfer, T. T., Wong, T., Ekers, R., Blitz, L., Gregorini, L., & Moscadelli, L. 2006, “Thermal and Non-thermal Components of the Interstellar Medium at Sub-kiloparsec Scales in Galaxies,” *Astronomy & Astrophysics*, 456, 847–859.

Hughes, A., Wong, T., Ekers, R., Staveley-Smith, L., Filipovic, M., Maddison, S., Fukui, Y., & Mizuno, N. 2006, “A Multi-resolution Analysis of the Radio-FIR Correlation in the Large Magellanic Cloud,” *Monthly Notices of the Royal Astronomical Society*, 370, 363–379.

Bains, I., Wong, T., and 23 co-authors, 2006, “Molecular Line Mapping of the Giant Molecular Cloud Associated with RCW 106 - I. ^{13}CO ,” *Monthly Notices of the Royal Astronomical Society*, 367, 1609–1628.

Murgia, M., Helfer, T. T., Ekers, R., Blitz, L., Moscadelli, L., Wong, T., & Paladino, R. 2005, “The Molecular Connection to the FIR-Radio Continuum Correlation in Galaxies,” *Astronomy & Astrophysics*, 437, 389–410.

Ladd, N., Purcell, C., Wong, T., & Robertson, S. 2005, “Beam Size, Shape and Efficiencies for the ATNF Mopra Radio Telescope at 86-115 GHz,” *Publications of the Astronomical Society of Australia*, 22, 62–72.

Schöier, F. L., Olofsson, H., Wong, T., Lindqvist, M., & Kerschbaum, F. 2004, “Probing the Inner Wind of AGB Stars: Interferometric Observations of SiO Millimetre Line Emission from the Oxygen-rich Stars R Dor and L2Pup,” *Astronomy and Astrophysics*, 422, 651–663.

Wong, T., Blitz, L., & Bosma, A. 2004, “A Search for Kinematic Evidence of Radial Gas Flows in Spiral Galaxies,” *Astrophysical Journal*, 605, 183–204.

Wong, T., Blitz, L., & van der Hulst, J. M. 2004, “Comparing the CO and HI Distributions in Nearby Spiral Galaxies at High Resolution,” *Astrophysics & Space Science*, 289, 211–214.

Wong, T., Schöier, F. L., Lindqvist, M., & Olofsson, H. 2004, “Australia Telescope Compact Array Imaging of Circumstellar HCN Line Emission from R Scl,” *Astronomy & Astrophysics*, 413, 241–249.

Wilner, D. J., Bourke, T. L., Wright, C. M., Jørgensen, J. K., van Dishoeck, E. F., & Wong, T. 2003, “Disks Around the Young Stars TW Hydrae and HD 100546 Imaged at 3.4 Millimeters with the Australia Telescope Compact Array”, *Astrophysical Journal*, 596, 597–602.

Helfer, T. T., Thornley, M. D., Regan, M. W., Wong, T., Sheth, K., Vogel, S. N., Blitz, L., & Bock, D. C.-J. 2003, “The BIMA Survey of Nearby Galaxies (BIMA SONG). II. The CO Data,” *Astrophysical Journal Supplement Series*, 145, 259–327.

Wong, T. & Blitz, L. 2002, “The Relationship between Gas Content and Star Formation in Molecule-Rich Spiral Galaxies,” *Astrophysical Journal*, 569, 157–183.

Wong, T. & Melatos, A. 2002, “Millimetre Science With the Upgraded Australia Telescope,” *Publications of the Astronomical Society of Australia*, 19, 475–485.

Regan, M. W., Thornley, M. D., Helfer, T. T., Sheth, K., Wong, T., Vogel, S. N., Blitz, L., & Bock, D. C.-J. 2001, “The BIMA Survey of Nearby Galaxies. I. The Radial Distribution of CO Emission in Spiral Galaxies,” *Astrophysical Journal*, 561, 218–237.

Wong, T., Backer, D. C., & Lyne, A. G. 2001, “Observations of a Series of Six Recent Glitches in the Crab Pulsar,” *Astrophysical Journal*, 548, 447–459.

Backer, D. C., Wong, T., & Valanju, J. 2000, “A Plasma Prism Model for an Anomalous Dispersion Event in the Crab Pulsar,” *Astrophysical Journal*, 543, 740–753.

Wong, T. & Blitz, L. 2000, “Non-Circular Gas Kinematics and Star Formation in the Ringed Galaxy NGC 4736,” *Astrophysical Journal*, 540, 771–796.

van Dyk, S. D., Puche, D., & Wong, T. 1998, “The Recent Star Formation in Sextans A,” *Astronomical Journal*, 116, 2341–2362.

Research Students Supervised

University of Illinois: Kijeong Yim (2006–), David Rebolledo (2008–), Rui Xue (2008–)

Swinburne University of Technology: Annie Hughes (2004–), co-supervisor

University of New South Wales: Steven Longmore (2004–2006), co-supervisor

Teaching Experience

U. of Illinois at Urbana-Champaign

“The Solar System” (Astronomy 121), Course Instructor. An introductory astronomy class for non-science majors. Taught **Fall 2007**, **Spring 2008**, **Spring 2009**.

“Galactic Astronomy” (Astronomy 496/596), Course Instructor. A graduate-level class on the Milky Way and nearby galaxies. Taught **Fall 2008**.

UC Berkeley

“Life and the Universe” (Astronomy 9), Course Instructor. An introductory course in astrobiology for undergraduates. Taught **Spring 1999**.

“Introduction to Astrophysics” (Astronomy 7), sole teaching assistant in **Spring 1995** (J. Graham, instructor).

“Introduction to General Astronomy” (Astronomy 10), teaching assistant (TA) in **Fall 1994** (A. Filipenko, instructor), head TA in **Fall 1996** (L. Blitz, instructor).

Honors & Awards

Mary Elizabeth Uhl Prize, Department of Astronomy, UC Berkeley, 2000.
 Phi Beta Kappa of Northern California Scholarship Award, 1999.
 Outstanding Graduate Student Instructor Award, UC Berkeley, 1997.
 Lydia Lo Scholarship, UC Berkeley, 1994–5.
 NSF Graduate Fellowship Program, Honorable Mention, 1994.
 Goldberg Prize for Outstanding Undergraduate Research in Astronomy, Harvard, 1994.
 John Harvard Scholarship, 1991–2 and 1992–3.
 Valedictorian, Stuyvesant High School, New York City, 1990.
 National Merit Finalist, 1990.

Activities & Service

UIUC Astronomy Department

Spring 2008, 2009: Graduate Admissions Committee
Spring 2007, 2008, 2009: Graduate Qualifying Exam Committee
Spring 2007, Fall 2007: Astronomy colloquium chair

Referee for ApJ, PASA, Nature.

2007–2008: AUI Committee on the Future of US Radio Astronomy.

2006 May: Anglo Australian Time Allocation Committee.

2005–2006: ATNF Astrophysics Advisory Committee.

2001 Dec & 2003 Dec: Research Supervisor for ATNF Summer Vacation Student Program.

2001–2004: Member, Australia Telescope Users Committee.

1999–2000: Volunteer, Project ASTRO, a program to bring astronomers into K-12 classrooms.

1998: Designed and instituted a peer mentoring system for incoming Berkeley graduate students.

1996–1998: Student Representative, Graduate Council of the Academic Senate, UC Berkeley. Participated in department reviews and provided input on policies related to graduate education.

Invited Talks

Physics Department, U. of Notre Dame, 2009 February.

Kavli Institute for Cosmological Physics, U. of Chicago, 2008 January.

Star Formation at High Angular Resolution, IAU Symposium 221, Sydney, Australia, 2003 July.

Harley Wood Winter School, Batemans Bay, NSW, Australia, 2002 June.

Center for Star Formation Studies Workshop, Santa Cruz, 2001 July.

Skills

Languages: English (native), Mandarin and Cantonese Chinese (fluent), German (basic proficiency).

Programming: Fortran, C, C-shell, HTML, Perl.

Operating systems: SunOS Unix, Linux, Windows, Mac OS X.