

Linda C. Watson

Curriculum Vitae

Work Address

Institute of Astrophysics
Pontificia Universidad Católica de Chile
Avenida Vicuña Mackenna 4860
Santiago, Chile

Contact Information

Phone: +56 22 354 5840
E-mail: lwatson@eso.org
<http://www.sc.eso.org/~lwatson/>

Research Interests

Star formation and the interstellar medium in nearby galaxies, extended ultraviolet disk galaxies, secular evolution, active galactic nuclei on the $M_{\text{BH}} - \sigma$ relation

Education

Ph.D. in Astronomy, The Ohio State University Aug. 2011
Thesis Title: “Properties of Bulgeless Disk Galaxies: Atomic Gas and Star Formation”
Thesis Advisor: Paul Martini

M.S. in Astronomy, The Ohio State University Dec. 2007

B.S. in Astronomy, *summa cum laude*, The University of Florida Apr. 2005
B.S. in Physics, The University of Florida Apr. 2005

Employment

European Southern Observatory Postdoctoral Fellow, Santiago, Chile Sep. 2014 –
Submillimeter Array Postdoctoral Fellow, Harvard-Smithsonian Center for Astrophysics 2011 – 2014
Graduate Research Assistant, The Ohio State University 2005 – 2011
Undergraduate Research Assistant, The University of Florida 2003 – 2005
Research Experience for Undergraduates, Harvard-Smithsonian Center for Astrophysics summer 2004

Honors and Awards

Allan Markowitz Graduate Award in Observational Astronomy (department fellowship) 2011
National Science Foundation Graduate Research Fellowship 2006 – 2009
Ohio State University Distinguished University Fellowship 2005, 2010

Professional Activities

Referee for ApJ and MNRAS	
National Science Foundation Review Panel Member	
The American Astronomical Society	member since 2003
JAO Colloquium Team Member	2016 - 2017
JAO Astro-ph Discussion Coordinator	2016 - 2017
SOC Member for “Formation and Evolution of Galaxy Outskirts” meeting	Mar. 2016
CfA Radio and Geoastronomy Lunch Talk Coordinator	2012 - 2014

Allocations of Telescope Time

Atacama Large Millimeter/submillimeter Array PI: “CO-Dark Molecular Gas in the Extended Ultraviolet Disk of M83 Revealed by Dust Continuum Observations”	8.2 hours in Cycle 5
Jansky Very Large Array CoI: “An HI View of Quenching in Nascent Groups” (PI: K. Eckert)	30.9 hours in 2017A
Atacama Large Millimeter/submillimeter Array CoI: “Searching for the Emergence of Conformity in Nascent Groups” (PI: D. Stark)	15 hours in Cycle 4
Magellan Baade 6.5–m CoI: “IMACS Spectroscopy of an XUV Disk” (PI: B. Madore)	5 nights in 2015B
Anglo-Australian Telescope 3.9–m CoI: “Dynamical Masses of Gas-rich Dwarf Galaxies for the RESOLVE Velocity Function” (PI: K. Eckert)	3 nights in 2014B
Arecibo Observatory 305–m CoI: “A Volume-Limited, Complete View of HI in the $z=0$ Galaxy Population” (PI: S. Kannappan)	156 hours in 2014A 220 hours in 2013B
James Clerk Maxwell Telescope 15–m CoI: “JCMT/SCUBA-2 Observations of Edge-On Spiral Galaxies” (PI: B. Holwerda)	12 hours in 2014A 12 hours in 2013B
Submillimeter Array 8×6 –m PI: “The Resolved Vertical Structure of Molecular Gas in Edge-on Disk Galaxies”	23.2 hours in 2013B 50 hours in 2012B 5.8 hours in 2012A
NOAO Survey Program with SOAR 4.1–m and Gemini 8.1–m CoI: “RESolved Spectroscopy Of a Local VolumE: The RESOLVE Survey in Stripe 82” (PI: S. Kannappan)	2013B and 2014B SOAR - 14 nights Gemini - 88 hours

Green Bank Telescope 100-m CoI: "Tracking Gas Accretion as a Function of Cosmic Structure" (PI: D. Stark)	80 hours in 2013B
Institut de Radioastronomie Millimétrique (IRAM) 30-m PI: "The Star Formation - Molecular Gas Connection in an Extended UV Disk"	7.3 hours in winter 2011 6.7 hours in summer 2010
Chandra X-ray Observatory CoI: "Black Hole - Galaxy Co-evolution at the End of the Hubble Sequence" (PI: S. Mathur)	80 ksec in Cycle 12
Gemini North 8.1-m CoI: "The High Mass End of the Black Hole Mass - Stellar Velocity Dispersion Relation in AGNs" (PI: B. Peterson)	8.9 hours in 2010B 16.7 hours in 2010A 6.0 hours in 2008B

Advising, Teaching, and Public Outreach Experience

Co-Instructor, Astronomy 191: Advanced Astrophysics Laboratory (undergraduate course at Harvard University)	fall 2012, spring 2014
Co-Advised Brian Claus, Harvard University undergraduate "A Study of Hydrogen Recombination Masers in MWC349A"	Feb. - Sep. 2013
Planetarium Show Presenter, ~30 shows given at Ohio State University	2006 - 2010
University of Florida Campus Teaching Observatory Public Night Volunteer	2001 - 2005

Observing Experience and Observatory Service

Atacama Large Millimeter/submillimeter Array Astronomer on duty for queue observing	128 nights, 2014 - 2017
Quality Assurance 2	90 days, 2014 - 2017
Proposal Review Panel Technical Secretary	2016, 2017
Cycle 4 Proposal Technical Assessor	2016
Magellan Baade 6.5-m IMACS spectroscopy of XUV disk	5 nights, Oct. 2015
Submillimeter Array 8 × 6-m Operator for queue observing	51 nights, 2011 - 2014
Large Binocular Telescope 2 × 8.4-m Queue observing with the Large Binocular Camera	5 nights, Jan. 2009
MDM 2.4-m telescope H α imaging of bulgeless disk galaxies	8 nights, Nov. 2008
Spectroscopic follow-up of SDSS supernovae	19 nights, 2006 - 2007

MDM 1.3–m telescope	
Spectral atlas of reverberation mapped AGNs	7 nights, Apr. 2008
Spectroscopic observations for reverberation mapping of AGNs	8 nights, Apr. 2007
Kitt Peak National Observatory Mayall 4–m telescope	
Calcium triplet spectral observations	2 nights, Sep. 2006
Spectral observations for single-epoch AGN black hole mass estimates	1.5 nights, Feb. 2005
Kitt Peak National Observatory WIYN 0.9–m telescope	
Orientation to imaging observing	10 nights, Jul. 2003

Talks, Posters, and Summer Schools

Invited Talks:

Universidad de Chile Colloquium	Apr. 2017
The Passage of Light within Spiral Galaxies	May 2014
Workshop in Leiden, The Netherlands	
Boston University Lunch Talk	Apr. 2014
Universidad Nacional Autónoma de México Instituto de Astronomía Colloquium	May 2013
Brown Astrophysics Seminar Series	Nov. 2012
Harvard-Smithsonian Center for Astrophysics Summer Colloquium Series	Jul. 2012
214th American Astronomical Society Meeting	Jun. 2009
Science with Adaptive Optics on Large Telescopes Session	

Contributed Talks:

Sociedad Chilena de Astronomía (SOCHIAS) XIV Annual Meeting	Jan. 2017
Meeting in Maitencillo, Chile	
Carnegie Observatories Lunch Talk	Sep. 2016
Formation and Evolution of Galaxy Outskirts	Mar. 2016
Meeting in Toledo, Spain	
A 3D View on Galaxy Evolution: from Statistics to Physics	Jul. 2015
Meeting in Heidelberg, Germany	
Dissecting Galaxies Near and Far: High Resolution Views of Star Formation and the ISM	Mar. 2015
Meeting in Santiago, Chile	
The Submillimeter Array: First Decade of Discovery	Jun. 2014
Meeting in Cambridge, MA	
Princeton University Lunch Talk	May 2014
University of Massachusetts Amherst Lunch Talk	Apr. 2014
Universidad de Chile Seminar	Dec. 2013
Pontificia Universidad Católica de Chile Seminar	Dec. 2013
Joint ALMA Observatory Talk	Nov. 2013
National Radio Astronomy Observatory (Charlottesville) Lunch Talk	Nov. 2013
Galactic Scale Star Formation: Observation Meets Theory	Jul. 2012
Meeting in Heidelberg, Germany	
Global Properties of HI in Galaxies	Apr. 2012
Workshop in Green Bank, WV	
217th American Astronomical Society Meeting	Jan. 2011
AGN Science with the Magdalena Ridge Observatory	May 2008
Workshop in Socorro, NM	

Posters:

Half a Decade of ALMA: Cosmic Dawns Transformed Meeting in Indian Wells, CA, USA	Sep. 2016
223rd American Astronomical Society Meeting	Jan. 2014
UP: Have Observations Revealed a Variable Upper End of the Initial Mass Function Meeting in Sedona, AZ	Jun. 2010
From Stars to Galaxies: Connecting our Understanding of Star and Galaxy Formation Meeting in Gainesville, FL	Apr. 2010
205th American Astronomical Society Meeting	Jan. 2005

Summer Schools Attended:

Eleventh Synthesis Imaging Workshop, Socorro, NM	Jun. 2008
AGN at the Highest Angular Resolution: Theory and Observations Summer School, Toruń, Poland	Aug. 2007

Publications

Refereed Publications (5 published first-author papers):

22. Zhang, Q., Claus, B., **Watson, L. C.**, & Moran, J., “Angular Momentum in Disk Wind Revealed in the Young Star MWC349A,” 2017, ApJ, 837, 53
21. Stark, D. V., and 19 coauthors incl. **L. C. Watson**, “The RESOLVE Survey Atomic Gas Census and Environmental Influences on Galaxy Gas Reservoirs,” 2016, ApJ, 832, 126
20. **Watson, L. C.**, Martini, P., Lisenfeld, U., Böker, T., & Schinnerer, E. “Testing the Molecular-Hydrogen Kennicutt-Schmidt Law in the Low-Density Environments of Extended Ultraviolet Disk Galaxies,” 2016, MNRAS, 455, 1807
19. ALMA Partnership and 248 coauthors incl. **L. C. Watson**, “The 2014 ALMA Long Baseline Campaign: An Overview,” 2015, ApJL, 808, L1
18. ALMA Partnership and 69 coauthors incl. **L. C. Watson**, “The 2014 ALMA Long Baseline Campaign: Observations of Asteroid 3 Juno at 60 Kilometer Resolution”, 2015, ApJL, 808, L2
17. ALMA Partnership and 84 coauthors incl. **L. C. Watson**, “The 2014 ALMA Long Baseline Campaign: First Results from High Angular Resolution Observations toward the HL Tau Region,” 2015, ApJL, 808, L3
16. ALMA Partnership and 80 coauthors incl. **L. C. Watson**, “The 2014 ALMA Long Baseline Campaign: Observations of the Strongly Lensed Submillimeter Galaxy HATLAS J090311.6+003906 at $z = 3.042$,” 2015, ApJL, 808, L4
15. Somers, G., and 5 coauthors incl. **L. C. Watson**, “Discovery of a Large Population of Ultraluminous X-ray Sources in the Bulge-less Galaxies NGC 337 and ESO 501-23,” 2013, ApJ, 777, 7
14. Grier, C. J., Martini, P., **L. C. Watson**, and 7 coauthors, “Stellar Velocity Dispersion Measurements in High-Luminosity Quasar Hosts and Implications for the AGN Black Hole Mass Scale,” 2013, ApJ, 773, 90
13. **Watson, L. C.**, Martini, P., Lisenfeld, U., Wong, M.-H., Böker, T., & Schinnerer, E. “Properties of Bulgeless Disk Galaxies. II. Star Formation as a Function of Circular Velocity,” 2012, ApJ, 751, 123

12. **Watson, L. C.**, Schinnerer, E., Martini, P., Böker, T., & Lisenfeld, U. “Properties of Bulgeless Disk Galaxies. I. Atomic Gas,” 2011, *ApJS*, 194, 36
11. Denney, K. D., and 42 coauthors incl. **L. C. Watson**, “Reverberation Mapping Measurements of Black Hole Masses in Six Local Seyfert Galaxies,” 2010, *ApJ*, 721, 715
10. Villforth, C., and 47 coauthors incl. **L. C. Watson**, “Variability and stability in blazar jets on time-scales of years: optical polarization monitoring of OJ 287 in 2005-2009,” 2010, *MNRAS*, 402, 2087
9. Denney, K. D., and 42 coauthors incl. **L. C. Watson**, “Diverse Kinematic Signatures from Reverberation Mapping of the Broad-Line Region in AGNs,” 2009, *ApJL*, 704, L80
8. Denney, K. D., **Watson, L. C.**, and 31 coauthors, “A Revised Broad-line Region Radius and Black Hole Mass for the Narrow-line Seyfert 1 NGC 4051,” 2009, *ApJ*, 702, 1353
7. Valtonen, M. J., and 40 coauthors incl. **L. C. Watson**, “Tidally Induced Outbursts in OJ 287 during 2005-2008,” 2009, *ApJ*, 698, 781
6. Grier, C. J., and 16 coauthors incl. **L. C. Watson**, “The Mass of the Black Hole in the Quasar PG 2130+099,” 2008, *ApJ*, 688, 837
5. **Watson, L. C.**, Martini, P., Dasyra, K. M., Bentz, M. C., Ferrarese, L., Peterson, B. M., Pogge, R. W., & Tacconi, L. J. “First Stellar Velocity Dispersion Measurement of a Luminous Quasar Host with Gemini North Laser Guide Star Adaptive Optics,” 2008, *ApJ*, 682, L21
4. Zheng, C., and 79 coauthors incl. **L. C. Watson**, “First-Year Spectroscopy for the Sloan Digital Sky Survey-II Supernova Survey,” 2008, *AJ*, 135, 1766
3. Gaudi, B. S., and 21 coauthors incl. **L. C. Watson**, “Discovery of a Very Bright, Nearby Gravitational Microlensing Event,” 2008, *ApJ*, 677, 1268
2. Frieman, J. A., and 100 coauthors incl. **L. C. Watson**, “The Sloan Digital Sky Survey-II Supernova Survey: Technical Summary,” 2008, *AJ*, 135, 338
1. **Watson, L. C.**, Mathur, S., & Grupe, D. “Revisiting the Black Hole Masses of Soft X-Ray-Selected Active Galactic Nuclei,” 2007, *AJ*, 133, 2435

Invited Reviews:

1. **Watson, L. C.** & Koda, J. “Molecular Gas in the Outskirts,” 2017, Book chapter in “Outskirts of Galaxies”, Eds. J. H. Knapen, J. C. Lee and A. Gil de Paz, Astrophysics and Space Science Library, 434, 175

Other Publications:

4. **Watson, L. C.** “The Connection between Molecular Gas and Star Formation in XUV Disks,” 2017, Proceedings of IAUS 321, 214
3. **Watson, L. C.**, Martini, P., Böker, T., Lisenfeld, U., Schinnerer, E., & Wong, M.-H. “Testing the Star Formation Law in Bulgeless Disk Galaxies,” 2010, *ASPC*, 440, 393
2. **Watson, L. C.**, “Probing a Quasar Host Galaxy with Gemini Laser Guide Star Adaptive Optics,” 2008, Gemini Focus Newsletter

1. Prieto, J. L., **Watson, L. C.**, & Stanek, K. Z. "Strong radio emission from SN 2007bg one year after the explosion - detection of spreading, off-axis GRB jet?" 2009, The Astronomer's Telegram, 2065, 1

Coauthor on twelve Central Bureau Electronic Telegrams, all associated with supernova classification, 2005-2007