

# Jennifer G. Winters

## *Postdoctoral Fellow*

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## Education

### 2015 **Ph.D. in Astronomy**

Georgia State University, Atlanta, GA

Thesis Advisor: Todd J. Henry

Areas of Experience: Optical/IR Photometry, Astrometry, M Dwarf Multiplicity

### 2012 **M.S. in Physics** (Concentration in Astronomy)

Georgia State University, Atlanta, GA

### 2002-2007 **B.S. in Music Management**

Georgia State University, Atlanta, GA

### 1993-1996 Music & Women's Studies

University of Georgia, Athens, GA

### 1988-1992 Piano & Musicology Studies

University of Tennessee, Knoxville, TN

## Languages

English (native), French (conversational), Spanish (conversational)

## Work History

### 2003-2007 Astronomy Research Assistant at Georgia State University

Supervisor: Todd J. Henry

### 2001-2007 Restaurant Industry

Atlanta, GA

### 1999-2001 Private Yacht Industry

Europe, Caribbean, New England

### 1993-1999 Restaurant Industry

Atlanta, GA

### 1989-1993 Restaurant Industry

Knoxville, TN

## Awards

2014-2015 Outstanding Advanced Graduate Student, Astronomy

## Refereed Journal Publications

15. Chatelain, J., Henry, T., French, L., **Winters, J.**, Trilling, D., 2015, *Photometry of the Brightest Members of the Jupiter L5 Cloud* (submitted)
14. Horch, E.P., van Altena, W., Demarque, P., Howell, S B., Everett, M.E., Ciardi, D.R., Teske, J.K., Henry, T.J., **Winters, J.G.**, 2015, *Observations of Binary Stars with the Differential Speckle Survey Instrument. V. Toward an Empirical Metal-Poor Mass-Luminosity Relation*, AJ, 149, 151
13. Hosey, A.D., Henry, T.J., Jao, W.C., Dieterich, S.B., **Winters, J.G.**, Lurie, J.C., Riedel, A.R., Subasavage, J.P., 2015, *The Solar Neighborhood XXXVI: The Long-Term Photometric Variability of Nearby Red Dwarfs in the VRI Optical Bands*, AJ, 150, 6
12. Davison, C.L., White, R.J., Henry, T.J., Riedel, A.R., Jao, W.-C., Bailey, J.I., III, Quinn, S.N., Cantrell, J.R., Subasavage, J.P., **Winters, J.G.**, 2015, *A 3D Search for Companions to 12 Nearby M-Dwarfs*, AJ, 149, 106
11. **Winters, Jennifer G.**, Henry, T.J., Lurie, J.C., Hambly, N.C., Jao, W.C., Bartlett, J.L., Boyd, M.R., Dieterich, S.B., Finch, C.T., Hosey, A.D., Ianna, P.A., Riedel, A.R., Subasavage, J.P., Slatten, K.J., 2015, *The Solar Neighborhood XXXV: Distances to 1404 M Dwarf Systems Within 25 pc in the Southern Sky*, AJ, 149, 5
10. Lurie, J.C., Henry, T.J., Jao, W.C., Quinn, S.N., **Winters, J.G.**, Ianna, P.A., Koerner, D.W., Riedel, A.R., Subasavage, J.P., 2014, *The Solar Neighborhood. XXXIV. A Search for Planets Orbiting Nearby M Dwarfs using Astrometry*, AJ, 148, 91
9. Davison, C.L., White, R.J., Jao, W.-C., Henry, T.J., Bailey, J.I., III, Quinn, S.N., Cantrell, J.R., Adric, A.R., Subasavage, J.P., **Winters, J.G.**, Crockett, C.J., 2014, *The Closest M Dwarf Quadruple System to the Sun*, AJ, 147, 26
8. Riedel, A.R., Finch, C.T., Henry, T.J., Subasavage, J.P., Jao, W.-C., Malo, L., Rodriguez, D.R., White, R.J., Gies, D.R., Dieterich, S.B., **Winters, J.G.**, Davison, C.L., Nelan, E.P., Blunt, S.C., Cruz, K.L., Rice, E.L., Ianna, P.A., 2014, *The Solar Neighborhood. XXXIII. Parallax Results from the CTIOPI 0.9m Program: Trigonometric Parallaxes of Nearby Low-Mass Active and Young Systems*, AJ, 147, 85
7. Dieterich, S., Henry, T.J., Jao, W.-C., **Winters, J.G.**, Hosey, A.D.; Riedel, A.R.; Subasavage, J.P., 2014, *The Solar Neighborhood XXXII: The Hydrogen Burning Limit*, AJ, 147, 94
6. Jao, W.-C., Henry, T.J., Subasavage, J.P., **Winters, J.G.**, Riedel, A.R., Gies, D.R., Ianna, P.A., 2014, *The Solar Neighborhood XXXI: Discovery of an Unusual Red+White Dwarf Binary at ~25 pc via Astrometry and UV Imaging*, AJ, 147, 21
5. Mamajek, E.E., Bartlett, J.L., Seifahrt, A., Henry, T.J., Dieterich, S.B., Lurie, J.C., Kenworthy, M.A., Jao, W.-C., Riedel, A.R., Subasavage, J.P., **Winters, J.G.**, Finch, C.T., Ianna, P.A., Bean, J., 2013, *The Solar Neighborhood XXX. Fomalhaut C*, AJ, 146, 154
4. Boyd, Mark R., **Winters, Jennifer G.**, Henry, Todd J., Jao, Wei-Chun, Finch, Charlie T., Subasavage, John P., Hambly, Nigel C., 2011, *The Solar Neighborhood. XXV. Discovery of*

*New Proper Motion Stars with  $0.40 \text{ "yr}^{-1} > \mu \geq 0.18 \text{ "yr}^{-1}$  between Declinations  $-47^\circ$  and  $00^\circ$ , AJ, 142, 10*

3. Jao, Wei-Chun, Henry, Todd J., Subasavage, John P., **Winters, Jennifer G.**, Riedel, Adric R., Ianna, Philip A., 2011, *The Solar Neighborhood. XXIV. Parallax Results from the CTIOPI 0.9 m Program: Stars with  $\mu \geq 1.0 \text{ "yr}^{-1}$  (MOTION Sample) and Subdwarfs*, AJ, 141, 117

2. **Winters, Jennifer G.**, Henry, Todd J., Jao, Wei-Chun, Subasavage, John P., Finch, Charlie T., Hambly, Nigel C., 2011, *The Solar Neighborhood. XXIII. CCD Photometric Distance Estimates of SCR Targets—77 M Dwarf Systems within 25 pc*, AJ, 141, 21

1. Riedel, Adric R., Subasavage, John P., Finch, Charlie T., Jao, Wei-Chun, Henry, Todd J., **Winters, Jennifer G.**, Brown, Misty A., Ianna, Philip A., Costa, Edgardo, Mendez, Rene A., 2010, *The Solar Neighborhood. XXII. Parallax Results from the CTIOPI 0.9 m Program: Trigonometric Parallaxes of 64 Nearby Systems with  $0.5 \leq \mu \leq 1.0 \text{ "yr}^{-1}$  (SLOWMO Sample)*, AJ, 140, 897

## Conference Proceedings

Dupuy, T.J., Allen, P.R., Kraus, A.L., Biller, B., Blake, C.H., Davison, C., Deacon, N.R., Duchêne, G., Geller, A.M., King, R.R., Law, N.M., Nguyen, D.C., Reipurth, B., **Winters, J.G.**, Zhang, Z.H., 2013, *Multiplicity of Cool Dwarfs*, AN, 334, 36

## Invited & Contributed Talks & Papers

7. **Winters, Jennifer**, 2015 (IAUS #314), Contributed Talk: *M Dwarf Multiplicity in the Solar Neighborhood*

6. **Winters, Jennifer**, 2015 (AAS #225), Contributed Talk: *M Dwarf Multiplicity in the Solar Neighborhood*

5. **Winters, Jennifer**, 2014, Invited Paper: *Our Red Dwarf Neighbors*, NOAO Newsletter #110, 7

4. **Winters, Jennifer G.**, 2013 (Astronomy Club, Georgia State University), Invited Talk: *Stellar Multiplicity in the Solar Neighborhood*

3. **Winters, Jennifer G.**, Hosey, A.D., Lurie, J.C., Hambly, N., Henry, T.J., Jao, W., Riedel, A.R., Subasavage, J., 2013 (AAS #221), Contributed Talk: *Our Southern Neighbors - 2000 Nearby Red Dwarf Systems*

2. **Winters, Jennifer G.**, 2012 (17<sup>th</sup> Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun, Barcelona, Spain), Invited Talk: *Stellar Multiplicity in the Solar Neighborhood*

1. **Winters, Jennifer G.**, 2012 (Astrobiology Science Conference, Atlanta, GA), Invited Talk: *Stellar Multiplicity in the Solar Neighborhood*

## Science Colloquia

2. November 2012 Cerro Tololo Inter-American Observatory, La Serena, Chile

1. October 2012 Lowell Observatory, Flagstaff, AZ

## External Funding (Principal Investigator)

- 2015 *Red Dwarf Multiplicity in the Solar Neighborhood*  
\$2000 from the Georgia State University Dissertation Grant Program
- 2014 *Red Dwarf Multiplicity in the Solar Neighborhood*  
\$2400 from the Sigma Xi Committee on Grants-In-Aid of Research
- 2013 *Red Dwarf Multiplicity in the Solar Neighborhood*  
\$3600 from the Sigma Xi Committee on Grants-In-Aid of Research

## Funding Affiliate (unlisted Co-Investigator)

- 2011 - 2014 *More Than 1000 Points of Red Light --- A Survey of Red Dwarfs for Companions*  
\$232,361 from the National Science Foundation

## Successful Telescope Time Proposals

### Principal Investigator

- 2011 - 2012 *Finding Friends for 1200 Red Dwarfs*  
5 nights on the CTIO 0.9m telescope for thesis work from NOAO  
14 nights on the CTIO 1.0m telescope for thesis work from NOAO

### Co-Investigator

- 2015B *Searching for Companions to Nearby Stars on Solar System Scales*  
40 hours - Differential Speckle Survey Instrument (DSSI) - Gemini North
- 2015A *Searching for Companions to Nearby Stars on Solar System Scales*  
40 hours - Differential Speckle Survey Instrument (DSSI) - Gemini North
- 2014 *Searching for Companions to Nearby Stars on Solar System Scales*  
30 hours – Differential Speckle Survey Instrument (DSSI) - Gemini North
- 2014 *Pinpointing the Characteristics of Stars and Not Stars*  
9 orbits – Hubble Space Telescope
- 2009 - 2010 *Nearby Dwarf Stars: Duplicity, Binarity, and Masses*  
6 nights on the CTIO 4.0m telescope from NOAO

## Observing Experience

Optical/IR Imaging: Cerro Tololo Inter-American Observatory 0.9m: 124 nights (Co-I)  
Cerro Tololo Inter-American Observatory 1.0m: 12 nights (PI)  
Lowell Observatory 42in: 43 nights (PI)

Optical Spectroscopy: Lowell Observatory 72in: 4 nights

## Technical Skills (programming & database)

RECONS 25 pc Database (2006-present): co-construction & maintenance of 3600 lines (EMACS)

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Astrometry Database (2008-present): maintenance of 85,000 lines (EMACS)

Photometry Database (2003-present): construction & maintenance of 40,000 lines (EMACS)

Interactive Data Language (IDL): 5 years programming experience

Image Reduction & Analysis Facility (IRAF): 9 years photometry & astrometry experience

Supermongo (SM): graphical experience

## Teaching Experience

2012, 2014 Astronomy 1010 Substitute Lecturer for Professor Todd J. Henry

2006-2011 Teaching Assistant for Introductory Astronomy Laboratories at GSU

## Professional Affiliations

American Astronomical Society (AAS) - member since 2007

Sigma Xi Scientific Research Society – member since 2013

## Service and Public Outreach

2015 Local Organizing Committee – IAUS #314: Young Stars and Planets Near the Sun

2012 – 2015 CTIO/SMARTS 0.9m Graduate Fellow

2008 Science Olympiad at GSU

2007 – 2015 Hard Labor Creek Observatory Open Houses (2 per year)

## Presentations

29. Henry, Todd J.; Jao, Wei-Chun; Pewett, Tiffany; Riedel, Adric R.; Silverstein, Michele L.; Slatten, Kenneth J.; **Winters, Jennifer G.**; RECONS, 2015, *The RECONS 25 Parsec Database* (AAS #225)

28. Silverstein, Michele L.; Henry, Todd J.; Jao, Wei-Chun; **Winters, Jennifer G.**; RECONS Team, 2015, *Circumstellar Environments of Southern M Dwarfs in the Solar Neighborhood* (AAS #225)

27. Dieterich, Sergio B.; Boss, Alan P.; Weinberger, Alycia J.; Henry, Todd J.; **Winters, Jennifer G.**; Jao, Wei-Chun; RECONS, 2015, *HLIMIT 2.0: Towards a Deeper Understanding of the Low Mass End of the Main Sequence* (AAS #225)

26. Henry, Todd J., Jao, W., Pewett, T., Riedel, A.R., Rodriguez, J., Silverstein, M., Slatten, K., **Winters, J.**, 2014, *Reconnaissance of Stars Within Twenty-Five Parsecs: Red Dwarfs Rule the Galaxy* (AAS #224)

25. **Winters, Jennifer G.**, Henry, T.J., Hambly, N.C., Lurie, J.C., Hosey, A.D., Jao, W.C., Bartlett, J.L., Boyd, M.R., Dieterich, S.B., Finch, C.T., Ianna, P.A., Riedel, A.R., Subasavage, J.P., Slatten, K.J., 2014, *Our Southern Neighbors: Distances to 1750 Nearby M Dwarfs* (Cool Stars #18)

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24. Dieterich, Sergio, Henry, T.J., Jao, W., **Winters, J.G.**, Hosey, A.D., Riedel, A.R., Subasavage, J.P., RECONS, 2014, *The Hydrogen Burning Limit* (AAS #223)
23. Pewett, Tiffany, Henry, T.J., Hosey, A.D., Jao, W., Lepine, S., Riedel, A.R., **Winters, J.G.**, RECONS, 2014, *Exploring The Wide Main Sequence of Low Mass Stars* (AAS #223)
22. **Winters, Jennifer G.**, Dieterich, S., Hambly, N.C., Henry, T.J., Jao, W., Lurie, J.C., Riedel, A.R., Subasavage, J.P., RECONS, 2014, *Going the Distance: Parallaxes for SuperCOSMOS-RECONS (SCR) Stars* (AAS #223)
21. Davis, Allen B., Pasachoff, J.M., Babcock, B.A., Person, M.J., Zuluaga, C.A., Bosh, A.S., Levine, S., Naranjo, O.A., Navas, G.R., Gulbis, A., **Winters, J.G.**, Bianco, F., 2014, *Observation and Analysis of a Single-Chord Stellar Occultation by Kuiper Belt Object (50000) Quaoar* (AAS #223)
20. Chatelain, Joseph, Pewett, T., Henry, T., French, L., **Winters, J.**, 2013, *A Search for Colorful Characters Among the Jupiter Greeks and Trojans* (DPS #45)
19. Henry, Todd J., Dieterich, S.B., Ianna, P.A., Jao, W.-C., Koerner, D.W., Riedel, A.R., Slatten, K.J., Subasavage, J.P., **Winters, J.G.**, RECONS, 2013, *RECONS Answers Fundamental Questions in the Solar Neighborhood* (AAS #222)
18. Dieterich, Sergio, Henry, T.J., Jao, W., **Winters, J.G.**, RECONS, 2013, *Distinguishing the Least Massive Stars from the Most Massive Brown Dwarfs -- Parallaxes, Photometry, and Luminosities for Objects Near the Stellar/Substellar Boundary* (AAS #221)
17. Henry, Todd, J., Dieterich, S., Hosey, A.D., Ianna, P.A., Jao, W., Koerner, D.W., Riedel, A.R., Slatten, K.J., Subasavage, J., **Winters, J.G.**, RECONS, 2013, *The RECONS 25 Parsec Database: Who Are the Stars? Where Are the Planets?* (AAS #221)
16. Chatelain, Joseph, Henry, T.J., French, L.M., Stevens, R.D., Subasavage, J., **Winters, J.G.**, RECONS, 2012, *What Separates the Greeks From the Trojans?* (DPS #44)
15. Henry, Todd J., Dieterich, S.B., Jao, W., Riedel, A.R., Subasavage, J.P., **Winters, J.G.**, RECONS, 2012, *A Cast of Characters in the Solar Neighborhood* (AAS #220)
14. Hosey, Altonio D., **Winters, J.G.**, Boyd, M.R., Dieterich, S.B., Finch, C.T., Hambly, N.C., Henry, T.J., Ianna, P.A., Jao, W., Riedel, A.R., Subasavage, J.P., 2012, *Searching for Treasure in the South: Red Dwarfs within 25 Parsecs* (AAS #219)
13. Dieterich, Sergio, Henry, T.J., Hosey, A.D., Jao, W., **Winters, J.G.**, RECONS, 2012, *The Optical-IR Color-Magnitude Sequence Around the Hydrogen Burning Mass Limit: Optical Photometry and Trigonometric Parallaxes for Nearby M and L Dwarfs* (AAS #219)
12. Boyd, Mark, Finch, C.T., Hambly, N.C., Henry, T.J., Jao, W., Riedel, A.R., Subasavage, J.P., **Winters, J.G.**, RECONS, 2012, *A Search for Fine Wines: Discovering Close Red Dwarf-White Dwarf Binaries* (AAS #219)
11. Chatelain, J. P., Henry, T., Scott, N., **Winters, J.**, 2011, *How different are the Greeks from the Trojans?* (DPS #43)
10. Henry, T., Chatelain, J., Davison, C., Dieterich, S., Ianna, P., Jao, W., Koerner, D., Riedel, A., Subasavage, J., Tanner, A., White, R., **Winters, J.**, 2011, *The Search for Jovian*

*Exoplanets in the Solar Neighborhood (DPS #43)*

9. **Winters, Jennifer G.**; Henry, T., Jao, W., Subasavage, J., Finch, C., Hambly, N., 2011, *A SMARTS Distance Runner: The 0.9m At CTIO* (AAS #218)
8. Henry, Todd J., Boyd, M.R., Davison, C., Dieterich, S.B., Finch, C.T., Ianna, P.A., Jao, W., Koerner, D.W., Riedel, A.R., Subasavage, J.P., Tanner, A.M., **Winters, J.G.**, 2011, *The SMARTS Way to Build a Map to the Stars* (AAS #218)
7. **Winters, Jennifer G.**, Henry, T.J., Boyd, M.R., Hambly, N.C., 2011, *Finding Friends for Red Dwarfs* (AAS #217)
6. Henry, Todd J., Boyd, M.R., Dieterich, S.B., Finch, C.T., Ianna, P.A., Jao, W., Riedel, A.R., Subasavage, J.P., Tanner, A.M., **Winters, J.G.**, 2011, *RECONS Reaches to 25 Parsecs* (AAS #217)
5. Boyd, Mark, **Winters, J.G.**, Finch, C.T., Henry, T.J., Subasavage, J.P., Jao, W.C., Hambly, N.C., 2010, *MINIMO 2: Hitting Moving Targets in the Southern Sky* (AAS #215)
4. Henry, Todd J., Boyd, M.R., Dieterich, S., Finch, C.T., Jao, W.C., Riedel, A.R., Subasavage, J.P., **Winters, J.G.**, 2010, *Spying on Our Neighbors 2000-2010* (AAS #215)
3. **Winters, Jennifer G.**, Henry, T.J., Subasavage, J.P., Jao, W., Finch, C.T., Hambly, N.C., RECONS Team, 2009, *NOW SHOWING! The Big Picture -- Putting the SCR Sample in Context* (AAS #213)
2. Riedel, Adric R., Henry, T.J., **Winters, J.G.**, Hambly, N.C., RECONS; 2009, *Stellar Slowpokes: Nearby Stars with Tiny Proper Motions* (AAS #213)
1. **Winters, Jennifer G.**, Subasavage, J.P., Finch, C.T., Jao, W.C., Hambly, N.C., Henry, T.J., RECONS, 2008, *BEWARE! Neighborhood Watch Area --- SCR Discoveries within 25 Parsecs* (AAS #211)