

CURRICULUM VITAE:

KEIVAN GUADALUPE STASSUN

Vanderbilt University, Department of Physics & Astronomy
 VU Station B 1807, Nashville, TN 37235
 Phone: 615-322-2828, FAX: 615-343-7263
keivan.stassun@vanderbilt.edu

DEGREES EARNED***University of Wisconsin—Madison***

Degree: Ph.D. in Astronomy, 2000

Thesis: *Rotation, Accretion, and Circumstellar Disks among Low-Mass Pre-Main-Sequence Stars*

Advisor: Robert D. Mathieu

University of California at Berkeley

Degree: A.B. in Physics/Astronomy (double major) with Honors, 1994

Thesis: *A Simultaneous Photometric and Spectroscopic Variability Study of Classical T Tauri Stars*

Advisor: Gibor Basri

EMPLOYMENT HISTORY***Vanderbilt University***

Professor of Physics and Astronomy, 2011-present

Director, Vanderbilt Initiative in Data-intensive Astrophysics (VIDA), 2007-present

Co-Director, Fisk-Vanderbilt Masters-to-PhD Bridge Program, 2004-present

Fisk University

Adjunct Professor of Physics, 2006-present

Vanderbilt University

Associate Professor of Physics and Astronomy, 2008-11

Assistant Professor of Physics and Astronomy, 2003-08

University of Wisconsin—Madison

NASA Hubble Postdoctoral Research Fellow, Astronomy, 2001-03

Area: *Observational Studies of Low-Mass Star Formation*

Mentor: Robert D. Mathieu

University of Wisconsin—Madison

Assistant Director and Postdoctoral Fellow, NSF Graduate K-12 Teaching Fellows Program, 2000-01

Duties: *Development of program, graduate course in science education research*

Mentor: Terrence Millar

HONORS AND AWARDS

Martin Luther King Visiting Professor, Massachusetts Institute of Technology—2011-12

Marsico Distinguished Visiting Scholar, University of Denver—2010

Fletcher Foundation Fellow (\$50,000 prize for significant work advancing race relations)—2009-10

Caroline Herschel Distinguished Visiting Scholar, Space Telescope Science Institute—2007-08

Ford Foundation Fellow (sabbatical leave at Fisk University)—2007-08

Research Corporation Cottrell Scholar Award, Vanderbilt University—2006-10

Vanderbilt Affirmative Action and Diversity Initiatives Award, Vanderbilt University—2005

NSF Career Award, Vanderbilt University—2004-11

NASA Hubble Postdoctoral Fellowship, UW Madison—2001-03
 NSF Astronomy and Astrophysics Postdoctoral Fellowship (declined)—2001
 Ford Foundation Minority Postdoctoral Fellowship (declined)—2001
 NSF GK-12 Postdoctoral Fellowship, UW Madison—2000-01
 Minority Scholar-In-Residence, UW Madison—2000-01
 Ford Foundation Minority Dissertation Fellowship, UW Madison—1999-2000
 University of Wisconsin Graduate Fellowship, UW Madison—1998-99
 NSF Graduate Research Fellowship, UW Madison—1995-98
 Valedictorian, Physics/Astronomy, UC Berkeley—1994
 Dorothy K. Roberts Prize for Outstanding Achievement in Astronomy, UC Berkeley—1994
 Chancellor’s Scholar, UC Berkeley—1990-94

LEADERSHIP AND SERVICE

General Councillor, American Physical Society—2011-present
 NSF Committee on Equal Opportunity in Science and Engineering—2011-present
 Invited Member, Scientific Organizing Committee, Ringberg Conference on Brown Dwarfs—2011-12
 Invited Member, Scientific Organizing Committee, 17th Conference on Cool Stars and the Sun—2011-12
 Invited witness, House of Representatives Committee on Science and Technology, Hearing on Broadening Participation in STEM—March 2010
 Chair, Survey Science Team, Sloan Digital Sky Survey III MARVELS project—2010-present
 Executive Committee Member, Sloan Digital Sky Survey III—2010-present
 Advisory Council Member, Sloan Digital Sky Survey III—2010-present
 Vice Chair, Large Synoptic Space Telescope, Astroinformatics Science Working Group—2010-present
 Executive Committee Member, Large Synoptic Survey Telescope—2009-present
 Astro2010 Decadal Survey, State of the Profession Study Group, National Research Council—2009-10
 Vice Chair, Committee on Diversity and the Future of the Workforce, Associated Universities for Research in Astronomy—2008-present
 Graduate Education Task Force, Vanderbilt University—2008-09
 Visiting Committee, National Optical Astronomy Observatories—2008-09
 Executive Committee, Vanderbilt Center for Integration of Research Teaching and Learning—2008-present
 Director, Vanderbilt Initiative in Data-Intensive Astrophysics (VIDA)—2007-present
 Organizing Committee, Conference of Ford Fellows—2007-09
 Congressional FACA Astronomy and Astrophysics Advisory Committee—2006-09
 External Review of Associated Universities for Research in Astronomy, National Science Foundation—2006
 Committee of Visitors, NSF Astronomy Division—2005
 Executive Board, NSF-funded Institute for Broadening Participation—2005-present
 Co-Director, Fisk Astronomy and Space Science Training (FASST) program—2004-present
 Co-Director, Fisk-Vanderbilt Masters-to-PhD Bridge Program—2003-present
 Organizing Committee, National Society of Black Physicists Annual Conference—2004-present
 Content Adviser, NASA PlanetQuest Español website, 2005
 Organizing Committee, NASA Chicago 2004 Conference on Diversity—2004
 Faculty Mentor, NSF Astronomy & Astrophysics Postdoctoral Fellows Program—2004-05
 Session Organizer, SACNAS Annual Conference—2003-present
 Chair, American Astronomical Society Committee on Status of Minorities in Astronomy—2003-08
 Editor, American Astronomical Society *Spectrum* Newsletter on Diversity in the Sciences—2002-08
 Content Adviser, Astronomical Society of the Pacific’s “El Universo a Sus Pies” Project—2001
 Director, *Scopes for Schools* astronomy outreach program—1998-present
 Proposal Reviewer: NSF (AST division, REC division, DGE division) and NASA (Spitzer, HST)
 Manuscript referee: *Astrophysical Journal*, *Astronomical Journal*, *Astronomy & Astrophysics*, *Nature*

STUDENTS AND POSTDOCS ADVISED***Former postdoctoral associates placed in permanent positions:***

1. David James (currently tenure-track astronomer at CTIO)
2. Erika Grundstrom (currently director of astronomy laboratories at Vanderbilt University)

PhDs completed:

1. Alicia Aarnio, PhD 2010 (currently postdoc at U Michigan)
2. Phillip Cargile, PhD 2010 (currently postdoc at Vanderbilt)
3. Yilen Gomez Maqueo Chew, PhD 2010 (currently postdoc at Queen's University Belfast)

Postdoctoral associates supervised:

1. Nathan De Lee (Vanderbilt University)—2011-present
2. Phillip Cargile (Vanderbilt University)—2010-present
3. Leslie Hebb (Vanderbilt University)—2009-present
4. Martin Paegert (Vanderbilt University)—2009-present
5. Ian Nieves (Fisk University)—2009-11
6. Joshua Pepper (Vanderbilt University)—2007-present
7. Erika Grundstrom (Vanderbilt University)—2007-10
8. David James (Vanderbilt University)—2004-08

PhD dissertations supervised, dissertation committees chaired:

1. Fabienne Bastien (Vanderbilt University)—2010-present
2. Trey Mack (Vanderbilt University)—2009-present
3. Julia Bodnarik (Vanderbilt University, NASA Co-op Fellow)—2007-present
4. Deatrick Foster (Vanderbilt University, co-advised by K. Holley-Bockelmann)—2007-present
5. Thompson LeBlanc (Vanderbilt University, NASA Graduate Research Fellow)—2006-present
6. Saurav Dhital (Vanderbilt University)—2006-present
7. Phillip Cargile (Vanderbilt University)—2005-10
8. Alicia Aarnio (Vanderbilt University)—2005-10
9. Yilen Gomez Maqueo Chew (Vanderbilt University)—2004-10

PhD dissertation committees served:

1. Brittany Kamai (Vanderbilt University)—2011-present
2. Matthew Richardson (Vanderbilt University)—2011-present
3. Heather Cegla (Queen's University Belfast)—2010-present
4. Matt McCrumb (Queen's University Belfast)—2010-present
5. Cullen Blake (Harvard University)—2009
6. Ebonee Walker (Vanderbilt University)—2008-present
7. Sonali Shukla (Vanderbilt University)—2007-09
8. Soeren Meibom (University of Wisconsin—Madison)—2003-04

MA theses supervised, thesis committees chaired:

1. Charee Peters (Fisk University)—2011-present
2. Rose Perea (Fisk University)—2011-present
3. Teresa Monsue (Fisk University)—2011-present
4. Dan Burger (Vanderbilt University)—2011-present
5. Eugenio Garcia (Fisk University)—2010-present
6. Fabienne Bastien (Fisk University, now PhD student at Vanderbilt)—2008-10
7. Felipe Colazo (Fisk University, now technical staff at Gemini South Observatory)—2008-10
8. Sharina Haynes (Fisk University, now PhD student at Delaware State University)—2008-10
9. Brittany Kamai (Fisk University)—2008-present
10. Erica Morgan (Fisk University)—2008-present
11. Matthew Richardson (Fisk University, now PhD student at Vanderbilt University)—2008-10
12. Trey Mack (Fisk University, now PhD student at Vanderbilt University)—2007-09

13. Melissa Harrison (Fisk University, now PhD student at Vanderbilt University)—2005-07
14. Jedidah Isler (Fisk University, now PhD student at Yale University)—2005-07
15. Julia Bodnarik (Fisk University, now PhD student at Vanderbilt University)—2005-07
16. Luisa Zambrano (Fisk University, now PhD student at University of Texas Brownsville)—2005-06
17. Helen Jackson (Fisk University, now PhD student at Air Force Institute of Technology)—2004-06
18. Tomas Yan (Fisk University, now PhD student at Vanderbilt University)—2004-07
19. Thompson LeBlanc (Fisk University, now PhD student at Vanderbilt University)—2004-06

MA thesis committees served:

1. Michael Williams (Fisk University)—2011
2. Jessica Harris (Fisk University)—2010
3. Lauren Palladino (Fisk University)—2009
4. Desmond Campbell (Fisk University)—2008
5. Ariel Ruffin (Fisk University)—2007

BA honors theses supervised, thesis committees chaired:

1. Woody Austin (Vanderbilt University)—2011-present
2. Alisha Kundert (Vanderbilt University)—2010-present
3. Kristie Canaday (Fisk University)—2010-11
4. Byron Price (Vanderbilt University)—2010-11
5. Daniel Lee (Fisk University)—2009-11
6. Dylan Wood (Vanderbilt University, now PhD student at UNLV)—2009-11
7. Rebecca Rattray (Vanderbilt University, now PhD student at Virginia Tech)—2010-11
8. Dan Burger (Vanderbilt University, now technical staff at Vanderbilt University)—2009-10
9. Calen Henderson (Vanderbilt University, now PhD student at Ohio State University)—2006-09
10. Lawrence Staten (Vanderbilt University, completed MBA at Vanderbilt University)—2006-07
11. James Ovelmen (Vanderbilt University, now PhD student at University of Texas)—2005-06
12. Felipe Colazo (Fisk University, now technical staff at Gemini South Observatory)—2005-08
13. David Hill (Fisk University, now MA student at Fisk University)—2005-08
14. Matthew Richardson (Fisk University, now PhD student at Vanderbilt University)—2005-08
15. Matthew Miller (Swarthmore College, now working in industry)—2003-04

BA honors thesis committees served:

1. Amanda Benson (Vanderbilt University)—2009
2. Katherine Robbins (Vanderbilt University)—2009
3. Jackson Norris (Vanderbilt University)—2008
4. Chris Saling (Vanderbilt University)—2008
5. Andrew Collazzi (Vanderbilt University)—2006
6. James Schlaereth (Vanderbilt University)—2004

Summer REU undergraduate interns supervised:

1. Charee Peters (University of Denver, now Fisk-Vanderbilt Bridge student)—2010
2. Alex Richert (University of Hawaii, now PhD student at Penn State University)—2010
3. Roxanna Shohadaee (University of Tennessee)—2010
4. Mark Bryant (Southern University)—2009
5. Heather Cegla (Minnesota State University, now PhD student at Queens University Belfast)—2009
6. Eugenio Garcia (Johns Hopkins University, now MA student at Fisk)—2009
7. Francilia Samuel (Depauw University)—2008
8. Nathalia Alzate (Florida Tech, now MA student at Northern Arizona University)—2007
9. India Anderson (Southern University, now PhD student at Louisiana State University)—2007
10. Ximena Fernandez (Vassar College, now PhD student at Columbia University)—2007
11. Brittany Kamai (University of Hawaii, now MA student at Fisk University)—2007
12. Trey Mack (University of North Carolina, now PhD student at Vanderbilt University)—2006

GRANTS AS PI OR CO-PI

Agency	Period	Role	Type	Title	Amount
NASA ADAP	2011-14	PI	Research	The EB Factory: Harnessing the Power of Eclipsing Binary Stars in the Kepler Archive	\$369K
NSF CRPA	2011-13	PI	Outreach	Tennessee Explorers	\$150K
NASA	2011-14	PI	Training	Graduate Research Fellowships Program	\$135K
NSF HRD	2011-12	PI	Training	The Universities Network for Leadership Through Diversity (UN-LTD)	\$150K
NSF PHY	2010-13	Co-PI	Training	Research Experiences for Undergraduates in Physics at Vanderbilt University	\$328K
NSF AST	2009-14	PI	Research / Training	Graduate Opportunities at Fisk in Astronomy and Astrophysics Research (GO-FAAR)	\$2.5M
NASA	2009-12	PI	Training	Graduate Research Fellowships Program	\$135K
DoEd GAANN	2009-12	PI	Training	Graduate Assistance in Areas of National Need: Physics and Astronomy at Vanderbilt University	\$784K
NSF HRD	2009-14	PI	Research / Training	Broadening Participation in Materials Science through Institutionalization of a Masters-PhD Bridge Program	\$1.25M
NSF AST	2009-12	PI	Research	Wide Low-Mass Binaries: Testing Theories of Star Formation and Evolution	\$342K
Vanderbilt University	2009-11	PI	Research	Discovery Grant: Development of REDDnet for Data-Intensive Astrophysics Applications	\$200K
NSF AST	2008-11	PI	Research	X-ray Production and Angular Momentum Evolution in Low-Mass Stars	\$290K
NSF PAARE	2008-09	PI	Research / Training	Graduate Opportunities at Fisk in Astronomy and Astrophysics Research	\$240K
Vanderbilt University	2007-12	PI	Research	The Vanderbilt Initiative in Data-intensive Astrophysics (VIDA)	\$2.2M
NSF REU	2007-10	Co-PI	Training	Research Experiences for Undergraduates in Physics at Vanderbilt University	\$300K
NASA Spitzer	2007-09	PI	Research	Spectral Energy Distribution of the First Brown-Dwarf Eclipsing Binary	\$15K
Research Corp.	2006-11	PI	Research	Cottrell Scholar Award	\$100K
NSF AST	2006-08	PI	Research	A Fundamental Calibration of Pre-Main-Sequence Evolution Models for Brown Dwarfs	\$125K
NSF Career	2004-09	PI	Research	Order-of-Magnitude Problems in Star Formation and Minority Representation	\$1.0M
NASA HST	2004-06	Co-PI	Research	The HST Survey of the Orion Nebula Cluster	\$848K
NASA MUCERPI	2003-06	Co-PI	Research / Training	Toward a Comprehensive Space Science Program at Fisk University	\$825K
NASA	2001-03	PI	Research	Hubble Postdoctoral Fellows Program	\$216K
NSF AST	2001-04	Co-PI	Research	Observational Tests of Pre-Main-Sequence Stellar Evolution Theory	\$415K
NASA Chandra	2001-02	Co-PI	Research	The Rotation-Activity Relationship Among Young Stars in Orion	\$60K
NSF GK-12	2000-03	Co-PI	Training	K-12 and Graduate Student Professional Development Partnership Program	\$1.1M

GRANTS WITH POSTDOCTORAL ASSOCIATES AS PI

Agency	Period	Role	Type	Title	Amount
NSF AST	2011-14	Co-PI	Research	Triangulating on the Ages of Stars: Using Open Clusters to Calibrate Stellar Chronometers from Myr to Gyr Ages (P. Cargile, PI)	\$372K
NSF AST	2010-13	Co-PI	Research	Bringing eclipsing binary stars to the next level of benchmark precision (L. Hebb, PI)	\$351K
NASA Fermi	2010-12	Co-PI	Outreach	Bringing the Excitement of Astronomy to Underserved Audiences (E. Grundstrom, PI)	\$36K
Vanderbilt University	2007-10	Co-PI	Outreach	Connecting Astronomy Research and Learning Sciences Research (E. Grundstrom, PI)	\$120K
NASA Spitzer	2005-07	Co-PI	Research	The Angular Momentum Evolution of Young, Low-Mass Stars (D. James, PI)	\$67K
NASA Space Grant	2005-06	Co-PI	Outreach	The Fisk-Vanderbilt NASA Roadshow: Outreach to Underserved Communities with a Traveling Planetarium (D. James, PI)	\$20K

INVITED AND PLENARY TALKS—RESEARCH (indicates conference plenary speaker)**

1. Yale University, Astronomy Colloquium, 2011
2. Dartmouth College, Physics Colloquium, 2011
3. Massachusetts Institute of Technology, Astrophysics Colloquium, 2011
4. Yale University, Physics Colloquium, 2011
5. University of Florida, Astronomy Colloquium, 2011
6. ** International Symposium on the Origin of Stellar Masses, Exeter University, 2010
7. University of California at San Diego, Astronomy Colloquium, 2010
8. University of California at Berkeley, Astronomy Colloquium, 2010
9. ** 16th Cambridge Symposium on Cool Stars and the Sun, University of Washington, 2010
10. ** Gordon Research Conference, Mt. Holyoke College, 2010
11. University of Denver, Marsico Distinguished Lecture, 2010
12. Carnegie Institution of Washington, Astronomy Colloquium, 2010
13. ** IAU Symposium on the Ages of Stars, 2009
14. Space Telescope Science Institute, Colloquium, 2009
15. University of Chicago, Astronomy Colloquium, 2009
16. University of Iowa, Astronomy Colloquium, 2008
17. ** 14th Cambridge Workshop on Cool Stars and the Sun, University of St. Andrews, 2008
18. Space Telescope Science Institute, Caroline Herschel Distinguished Lecture, 2008
19. ** International Gemini Observatory Key Science Symposium, 2007
20. University of Michigan, Astronomy Colloquium, 2007
21. Boston University, Astronomy Colloquium, 2007
22. Villanova University, Astronomy Colloquium, 2007
23. ** From Stars to Planets Symposium, University of Florida, 2007
24. University of Maryland, Astronomy Colloquium, 2007
25. Yale University, Astronomy Colloquium, 2006
26. Columbia University, Astronomy Colloquium, 2006
27. University of Virginia, Astronomy Colloquium, 2006
28. University of Arizona, Astronomy Colloquium, 2006
29. ** Protostars & Planets V Conference, University of Hawaii, 2005
30. American Astronomical Society Special Session, San Diego, 2005

31. University of Texas at Austin, Astronomy Colloquium, 2004
32. ** Large Synoptic Survey Telescope Science Workshop, Seattle, 2004
33. ** Gemini Observatory International Symposium, Vancouver, 2004
34. SUNY Stony Brook, Astronomy Colloquium, 2004
35. American Astronomical Society Special Session, Nashville, 2003
36. University of Washington, Astronomy Colloquium, 2003
37. Carnegie Institution of Washington, Astronomy Colloquium, 2003
38. University of Minnesota, Astronomy Colloquium, 2003
39. San Francisco State University, Astronomy Colloquium, 2003
40. American Astronomical Society Special Session, Albuquerque, 2002
41. McDonald Observatory, Astronomy Colloquium, 2002
42. Laboratoire d'Astrophysique Grenoble, Astronomy Colloquium, 2002
43. ** IAU Symposium on the Formation of Binary Stars, Potsdam, Germany, 2001
44. ** IAU Symposium on the Origin and Evolution of Young Stellar Clusters, 2001
45. Ohio State University, Astronomy Colloquium, 2001
46. ** IAU Symposium on Stellar Clusters and Associations, 2000
47. University of California at Berkeley, Astronomy Colloquium, 2000
48. Utrecht University, The Netherlands, Astronomy Colloquium, 2000
49. ** European Southern Observatory International Symposium, Palermo, Italy, 1999

INVITED AND PLENARY TALKS— DIVERSITY, EDUCATION, OUTREACH (indicates conference plenary speaker)**

1. MIT, Committee on Race and Diversity, 2011
2. Yale University, Physics Department, 2011
3. American Physical Society Meeting, 2011
4. NSF MPS Distinguished Lecture, 2011
5. NSF Astronomy & Astrophysics Postdoctoral Fellows Symposium, 2011
6. ** University of Michigan Symposium on Diversity in STEM, 2010
7. American Physical Society Meeting, 2010
8. Harvard University, Center for Astrophysics, 2009
9. Women and Minorities in Astronomy Meeting, 2009
10. ** The Future of Diversity and Opportunity in Higher Education Conference, Rutgers University, 2008
11. University of Iowa, Astronomy Department, 2008
12. Boston University, Astronomy Department, 2008
13. ** Ford Foundation Fellows Annual Conference, 2008
14. American Physical Society Meeting, 2008
15. Yale University, Astronomy Department, 2007
16. ** University of Michigan ADVANCE Symposium, 2007
17. American Physical Society Gender and Diversity Conference, 2007
18. Columbia University, Astronomy Department, 2006
19. University of Texas at Austin, Astronomy Department, 2004
20. NSF IGERT PI Meeting, 2004
21. ** Women in Astronomy II Meeting, 2003
22. ** American Association of Physics Teachers Meeting, 2003
23. University of Washington, Astronomy Department, 2003
24. University of Minnesota, Astronomy Department, 2003
25. American Astronomical Society Special Session, 2003
26. Ohio State University, Astronomy Department, 2001
27. American Astronomical Society Special Session, Atlanta, 2000

PUBLICATIONS—PEER REVIEWED JOURNALS—IN PRINT OR ACCEPTED

Citation count as of 15 Dec 2011: 1911. (*h index = 24*)

1. Henderson, C., **Stassun**, K.G. 2012, *Astrophysical Journal*, “Time-Series Photometry of Stars in and around the Lagoon Nebula. I. Rotation Periods of 290 Low-Mass Pre-Main-Sequence Stars in NGC 6530”, in press
2. S. Dhital, A.A. West, K.G. **Stassun**, J.J. Bochanski, A.P. Massey, F.A. Bastien, 2012, *Astronomical Journal*, “Refined Metallicity Indices for M Dwarfs Using the SLOWPoKES Catalog of Wide, Low-mass Binaries”, in press
3. Gomez Maqueo Chew, Y., **Stassun**, K.G., Prsa, A., Stempels, E., Hebb, L., Barnes, R., Heller, R., Mathieu, R.D. 2012, *Astrophysical Journal*, “Luminosity Discrepancy in the Equal-Mass, Pre-Main-Sequence Eclipsing Binary Par 1802: Non-Coevality or Tidal Heating?”, in press
4. N. Da Rio, M. Robberto, L. Hillenbrand, T. Henning, K.G. **Stassun**, 2012, *Astrophysical Journal*, “The Initial Mass Function of the Orion Nebula Cluster across the H-burning limit”, in press
5. Bastien, F., **Stassun**, K.G., Weintraub, D. 2011, *Astronomical Journal*, “High Cadence Time-Series Photometry of V1647 Orionis”, Vol. 142, p. 141
6. LeBlanc, T., Covey, K., **Stassun**, K.G. 2011, *Astronomical Journal*, “Spectral Energy Distributions of Young Stars in IC 348: The Role of Disks in Angular Momentum Evolution of Young, Low-Mass Stars”, Vol. 142, p. 55
7. Prsa, A., Pepper, J., **Stassun**, K.G. 2011, *Astronomical Journal*, “Expected Large Synoptic Survey Telescope (LSST) Yield of Eclipsing Binary Stars”, Vol. 142, p. 52
8. Fleming, S., Maxted, P., Hebb, L., **Stassun**, K.G., Ge, J., Cargile, P., Ghezzi, L., De Lee, N., Wisniewski, J., Gary, B., Porto de Mello, G., Ferreira, L., Zhao, B., Anderson, D., Wan, X., Hellier, C., Guo, P., West, R., Mahadevan, S., Pollacco, D., Lee, B., Collier Cameron, A., van Eyken, J., Skillen, I., Crepp, J., Nguyen, D., Kane, S., Paegert, M., da Costa, L., Maia, M., Santiago, B. 2011, *Astronomical Journal*, “Eclipsing Binary Science Via the Merging of Transit and Doppler Exoplanet Survey Data -- A Case Study With the MARVELS Pilot Project and SuperWASP”, Vol. 142, p. 50
9. Garcia, E.V., **Stassun**, K.G., Hebb, L., Gomez Maqueo Chew, Y., Heiser, A. 2011, *Astronomical Journal*, Apsidal Motion of the Massive, Benchmark Eclipsing Binary V578 Mon, Vol. 142, p. 27
10. Hebb, L., Cegla, H., **Stassun**, K.G., Stempels, E., Cargile, P., & Palladino, L. 2011, *Astronomy & Astrophysics*, “Precise Orbit Solution and Mass Measurements of MML 53, a Low-Mass, Pre--Main-Sequence Eclipsing Binary in the Lupus Cloud”, Vol. 531, p. 61
11. Meibom, S., Mathieu, R.D., **Stassun**, K.G., Liebesny, P., Saar, S.H. 2011, *Astrophysical Journal*, “The Color-Period Diagram and Stellar Rotational Evolution: New Rotation Period Measurements in the Open Cluster M34”, Vol. 733, p. 115
12. M. Povich, N. Smith, S. Majewski, K. Getman, L. Townsley, B. Babler, P. Broos, R. Indebetouw, M. Meade, T. Robitaille, K.G. **Stassun**, B. Whitney, Y. Yonekura, Y. Fukui 2011, *Astrophysical Journal*, “A Pan-Carina YSO Catalog: Intermediate-Mass Young Stellar Objects in the Carina Nebula Identified Via Mid-Infrared Excess Emission”, Vol. 194, p. 14
13. Wolk, S., Broos, P., Getman, K., Feigelson, E., Preibisch, T., Townsley, L., Wang, J., **Stassun**, K.G., King, R., McCaughrean, M., Moffat, A., Zinnecker, H., 2011, *Astrophysical Journal*, “The Chandra Carina Complex Project View of Trumpler 16”, Vol. 194, p. 12
14. Feigelson, E., Getman, K., Townsley, L., Broos, P., Povich, M., Garmire, G., King, R., Montmerle, T., Preibisch, T., Smith, N., **Stassun**, K.G., Wang, J., Wolk, S., Zinnecker, H. 2011, *Astrophysical Journal*, “X-ray Star Clusters in the Carina Complex”, Vol. 194, p. 9
15. Wang, J., Feigelson, E., Townsley, L., Broos, P., Getman, K., Wolk, S., Preibisch, T., **Stassun**, K.G., Moffat, A., Garmire, G., King, R., McCaughrean, M., Zinnecker, H. 2011, *Astrophysical Journal*, “A Chandra ACIS Study of the Young Star Cluster Trumpler 15 in Carina and Correlation with Near-infrared Sources”, Vol. 194, p. 11
16. Townsley, L., et al. 2011, *Astrophysical Journal*, “An Introduction to the Chandra Carina Complex

- Project”, Vol. 194, p. 1
17. Lee, B., **Stassun**, K.G., and the SDSS-III MARVELS Team. 2011, “Discovery of a Substellar Mass Companion to TYC 1240: Evidence for a Brown Dwarf Residing in the ‘Brown Dwarf Desert’”, *Astrophysical Journal*, Vol. 728, p. 32
 18. **Stassun**, K.G., Sturm, S., Holley-Bockelmann, K., Burger, A., Ernst, D., Webb, D. 2010, “The Fisk-Vanderbilt Masters-to-PhD Bridge Program: Broadening Participating of Underrepresented Minorities in the Physical Sciences. Recognizing, enlisting, and cultivating ‘unrealized or unrecognized potential’ in students”, *American Journal of Physics*, Vol. 79, p. 374
 19. Aarnio, A.N., **Stassun**, K.G., & Hughes, J. “A Calibration of the Relationship Between Solar X-ray Flares and Coronal Mass Ejections”, *Solar Physics*, Vol. 268, p. 195
 20. Dhital, S., Burgasser, A., Looper, D., **Stassun**, K.G. 2010, “Resolved Spectroscopy of M Dwarf/L Dwarf Binaries. IV. Discovery of an M9 + L6 Binary Separated by Over 100 AU”, *Astronomical Journal*, Vol. 141, p. 7
 21. Mohanty, S., **Stassun**, K. G., & Doppmann, G. W. 2010, “High Resolution Spectroscopy during Eclipse of the Young Substellar Eclipsing Binary 2MASS 0535-0546. I. Primary Spectrum: Cool Spots versus Opacity Uncertainties”, *Astrophysical Journal*, Vol. 722, p. 1138
 22. Da Rio, N., Robberto, M., Soderblom, D. R., Panagia, N., Hillenbrand, L. A., Palla, F., & **Stassun**, K. G. 2010, “A Multi-color Optical Survey of the Orion Nebula Cluster. II. the H-R diagram”, *Astronomical Journal*, Vol. 722, p. 1092
 23. Exter, K., Bond, H., **Stassun**, K.G., Smally, B., Maxted, P., Pollacco, D. 2010, “The Exotic Eclipsing Nucleus of the Ring Planetary Nebula SuWt 2”, *Astrophysical Journal*, Vol. 140, p. 1414
 24. Hebb, L., Pollacco, D., Stempels, E., **Stassun**, K.G. 2010, “MML 53: a new low-mass, pre-main sequence eclipsing binary in the Lupus Cloud discovered by SuperWASP”, *Astronomy & Astrophysics*, Vol. 522, p. 37
 25. Law, N., Dhital, S., Kraus, A., **Stassun**, K.G., & West, A.A. 2010, “The High-Order-Multiplicity of Unusually Wide M-dwarf Binaries: Eleven New Triple and Quadruple Systems”, *The Astrophysical Journal*, Vol. 720, pp. 1727-1737
 26. **Stassun**, K.G., Burger, A., & Lange, S.E. 2010, “The Fisk-Vanderbilt Masters-to-PhD Bridge Program: A Model for Broadening Participation of Underrepresented Groups in Physical Sciences through Effective Partnerships with Minority-Serving Institutions”, *Journal of Geosciences Education*, Vol. 58, p. 3
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COURSES TAUGHT (** INDICATES NEW COURSE DEVELOPED)

1. **Astronomy 102: Stars, Galaxies, and Cosmology** [3 credit hours]
This is a general introductory astronomy course intended primarily for non-science majors. This course explores the Universe with a focus on the physical processes that have led to the chemical evolution that makes life on Earth possible.
2. **** Astronomy 205: Principles of Astrophysics** [3 credit hours]
This is an introductory astrophysics course intended for physics majors (especially those on the astronomy/astrophysics track), astronomy minors, other science and engineering majors, or any student interested in a rigorous, math- and physics-based introduction to astronomy. Prerequisites are one semester each of college-level physics and calculus.
3. **** Astronomy 222/322: Observational Astronomy Laboratory** [3 credit hours]
ASTR 222 is a hands-on astronomy laboratory course for physics majors (especially those on the astronomy/astrophysics track), astronomy minors, other science and engineering majors, or any student interested in doing real astronomy experiments. The course meets at the Dyer Observatory one evening per week at 6-11pm. An emphasis is placed on experimental design, data collection methods, data analysis (including some computer programming), error analysis, and statistical methods. Prerequisites are one year each of college-level physics and calculus. The graduate-level equivalent (ASTR 322) includes an additional hour per week of introduction to statistical techniques for astronomers, and discussion of techniques for effectively presenting quantitative information.
4. **** Astronomy 300: Topical Seminar in Astronomy: Star Formation** [3 credit hours]
A graduate seminar exploring theoretical and observational topics in the formation of stars, through readings of primary research articles. Topics include: physical properties of the interstellar medium; molecular clouds, including heating and cooling physics; cloud stability and collapse; protostars; binary stars; jets and outflows; effects on environment due to massive star evolution; young solar-type stars.
5. **** Astronomy 307: Topical Seminar in Astronomy: Exoplanets** [3 credit hours]

A graduate seminar exploring theoretical and observational topics related to exoplanets. Topics include: an overview of star formation and stellar evolution (emphasis on protoplanetary disks); methods for determining basic physical properties of stars which are relevant to the determination of exoplanet properties; planet formation and evolution theory; exoplanet detection techniques, limits, and surveys; statistical distributions of known exoplanets and comparisons to model predictions; exoplanet atmospheres; habitability and searches for life.

6. **** Physics 302: Learning to Teach, Teaching to Learn** [1 credit hour]

This seminar course focusing on college science teaching is primarily aimed at first-time teaching assistants, and other students interested in improving teaching skills. Through readings, the course provides an introduction to science education research, cognitive science, and education theory. Through group discussions, the course provides an opportunity for reflection on teaching techniques that promote learning in the classroom. Finally, the course provides an opportunity for development of a teaching portfolio, which is becoming increasingly important in the academic job market.

7. **** Education 3900: Epistemology Foundations of Math and Science** [3 credit hours]

This course examines the social, cognitive, and material arrangements and mechanisms that contribute to how we know what we know in mathematics and in sciences. Knowing how we know is the domain of epistemology. The focus on epistemology is intended as counterpoint to more traditional approaches to education, which take the content to be taught as fixed and the aim of pedagogy as being to develop effective methods (e.g., “best practices”) for delivery of this knowledge. This course focuses instead on considering what makes knowing challenging in these disciplines, because such a perspective offers alternative framings of the problem of teaching. Questions include: How well do current instructional designs help students understand the nature of knowing in sciences and in mathematics? How might alternative instructional designs be informed by analysis of forms of knowledge and ways of knowing (i.e., practices) in math and science?