

Contact Information

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Education

The Ohio State University, Columbus, OH
Ph.D. Astronomy, Advisor: Prof. B. Scott Gaudi, August 2015

The Ohio State University, Columbus, OH
M.S. Astronomy, Advisor: Prof. B. Scott Gaudi, December 2013

Vanderbilt University, Nashville, TN
B.A. Physics & Astronomy, Summa Cum Laude, High Honors in Astronomy, May 2009

Research Areas

Exoplanet Detection and Characterization
Gravitational Microlensing

Honors and Awards

NASA Postdoctoral Program Fellowship, Jet Propulsion Laboratory, September 2015–present
Distinguished University Fellowship, The Ohio State University (OSU), 2009–2015
National Science Foundation (NSF) Graduate Research Fellowship (GRF), OSU, 2011–2014
NSF Graduate Research Opportunities Worldwide, Taken to South Korea, June–September 2013
NSF GRF Honorable Mention, May 2010, May 2009
Joel Tellinghuisen Phi Beta Kappa Award, Vanderbilt University (VU), May 2009
Larry Ross Cathey Award, VU, April 2009
Chambliss Astronomy Achievement Award, American Astronomical Society (AAS), January 2009
William and Nancy McMinn Honor Scholarship in Natural Science, VU, 2007–2009
Winner, Blair School of Music Collegiate Concerto Competition, VU, April 2007
Ernest A. Jones Scholarship, VU, April 2007
Eagle Scout Award, Boy Scouts of America, 2002

Professional Service

Member, AAS, 2008–present
Member, Phi Beta Kappa, 2009–present
Referee, *New Astronomy*, 2014

Proposals

PI: *High-resolution Near-infrared Follow-up of K2 Microlensing Systems*
K2 Cycle 3, selected to be on K2 Campaign 9 Microlensing Science Team (October 2015)

First-author Papers

5. *Prospects for Characterizing Host Stars of the Planetary System Detections Predicted for the Korean Microlensing Telescope Network*
Henderson, C. B., 2015, *ApJ*, 800, 58
4. *Optimal Survey Strategies and Predicted Planet Yields for the Korean Microlensing Telescope Network*
Henderson, C. B.; Gaudi, B. S.; Han, C.; Skowron, J.; Penny, M. T.; Nataf, D.; Gould, A., 2014, *ApJ*, 794, 52
3. *Candidate Gravitational Microlensing Events for Future Direct Lens Imaging*
Henderson, C. B.; Park, H.; Sumi, T.; and 76 coauthors, 2014, *ApJ*, 794, 71
2. *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*
Henderson, C. B. & Stassun, K. G., 2012, *ApJ*, 747, 51
1. *An R- and I-band Photometric Variability Survey of the Cygnus OB2 Association*
Henderson, C. B.; Stanek, K. Z.; Pejcha, O.; Prieto, J. L., 2011, *ApJS*, 194, 27

Astronomy Coffee Briefs [views on YouTube]

4. *Prospects for Characterizing Host Stars of the Planetary System Detections Predicted for the Korean Microlensing Telescope Network*
Henderson, C. B., 2014, *YouTube* [274] (<http://tinyurl.com/ny4l3oe>)
3. *Optimal Survey Strategies and Predicted Planet Yields for the Korean Microlensing Telescope Network*
Henderson, C. B.; et al., 2014, *YouTube* [229] (<http://tinyurl.com/mhnsqtb>)
2. *Candidate Gravitational Microlensing Events for Future Direct Lens Imaging*
Henderson, C. B.; et al., 2014, *YouTube* [302] (<http://tinyurl.com/ndxmt6l>)
1. *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*
Henderson, C. B. & Stassun, K. G., 2012, *YouTube* [784] (<http://tinyurl.com/mbdl5ll>)

Observing Experience

CTIO 1.3m

Optical+near-infrared photometry of microlensing events, 16 nights, June–July 2015

MDM 1.3m

Optical spectroscopy of AGNs, 8 nights, March–April 2014

Optical spectroscopy of AGNs, 7 nights, April 2012

Optical spectroscopy of AGNs, 4 nights, November–December 2010

Optical spectroscopy of AGNs, 7 nights, September 2010

Optical spectroscopy of photometrically variable stars, 14 nights, June–July 2010

SAAO 1.0m

Optical photometry of microlensing events, 7 nights, July 2012

Optical photometry of microlensing events, 15 nights, August 2010

MDM 2.4m

Optical spectroscopy of photometrically variable stars, 10 nights, July 2011

CTIO 1.0m

Optical photometry of candidate transiting exoplanets, 7 nights, May–June 2009

Optical photometry of stellar rotation periods, 14 nights, June–July 2006

WIYN 0.9m

Optical photometry of open clusters, 3 nights, June 2007

Invited Talks

2. *The Search for Another Solar System*
Astronomical Society of Kansas City, August 2015
1. *The Search for Another Solar System*
United States Naval Academy, January 2015

Contributed Talks

14. *Using K2 to find Free-floating Planets*
K2 Sci Con, November 2015
13. *Using K2 to find Free-floating Planets*
ExSoCal 2015, September 2015
12. *The Importance of Near-infrared Observations: Simultaneous with K2's Campaign 9 and High-resolution Follow-up*
K2 Microlensing Campaign Workshop, May 2015
11. *KMTNet: A Cold Exoplanet Census Through a Global Microlensing Survey*
Vanderbilt University, March 2015
10. *Prospects for Characterizing Host Stars of the Planetary System Detections Predicted for KMTNet*
19th International Conference on Microlensing, January 2015
9. *KMTNet: A Cold Exoplanet Census Through a Global Microlensing Survey*
AAS Meeting #225, January 2015
8. *K2 and Spitzer: Paving the Way for WFIRST*
2014 Conference on Wide-field InfraRed Surveys: Science and Techniques, November 2014
7. *KMTNet: A Cold Exoplanet Census Through a Global Microlensing Survey*
IPAC Lunch Seminar, October 2014
6. *KMTNet: A Cold Exoplanet Census Through a Global Microlensing Survey*
JPL/Caltech Astrophysics Luncheon Seminar, October 2014
5. *KMTNet: A Cold Exoplanet Census Through a Global Microlensing Survey*
LCOGT Seminar Series, August 2014
4. *Predicted Planet Yields for the Korean Microlensing Telescope Network*
Católica-OSU Astrophysics Workshop, May 2014
3. *Predicted Planet Yields for the Korean Microlensing Telescope Network*
18th International Conference on Microlensing, January 2014
2. *Enabling an Exoplanet Census with the Korean Microlensing Telescope Network: Optimal Survey Strategies and Predicted Planet Yields*
AAS Meeting #223, January 2014
1. *Planet Yields and Optimal Survey Strategies for the Korean Microlensing Telescope Network (KMTNet)*
1st Doha International Astronomy Conference, February 2013

Poster Presentations

7. *The Korean Microlensing Telescope Network (KMTNet)*
Emerging Researchers in Exoplanet Science Symposium, May 2015
6. *LGBT Workplace Climate in Astronomy*
AAS Meeting #221, January 2013
5. *Realistic Simulations of the Planetary Yields of KMTNet, a Next-generation Microlensing Survey*
AAS Meeting #220, June 2012
4. *Realistic Simulations of the Planetary Yields of a Next-generation Microlensing Survey*
The 16th International Conference on Gravitational Microlensing, February 2012
3. *Pre-Main Sequence Eclipsing Binaries and Stellar Rotation Periods in the Lagoon Nebula*
Cardiff School of Physics and Astronomy Constellation School on Numerical Astrophysics and its Role in Star Formation, January 2009
2. *The Search for Pre-Main Sequence Eclipsing Binary Stars in the Lagoon Nebula*
AAS Meeting #213, January 2009
1. *WIYN Open Cluster Study: UBVRI CCD Photometry of Open Cluster NGC 2506*
AAS Meeting #211, January 2008

Service, Outreach, and Diversity

AAS Astronomy Ambassador, AAS, 2013–present

Encourage, learn about, and disseminate methods of effective communication with the public

Planetarium Presenter, OSU, 2009–2015

Give dozens of shows to K-12 field trips, scout and church groups, general public, and more

Star Party Volunteer, OSU, 2009–2015

Use telescopes and field questions during our semi-annual night sky observing events

AAS Working Group on LGBTIQ Equality, AAS, 2012–2015

Research and promote equality based on sexual orientation and identity expression

Co-leader of Astrophysics Breakfast of Science Champions Site, OSU, 2013–2014

Bring local public school students to OSU and teach science via hands-on activities

Planetarium Renovation Committee, OSU, 2011–2013

Researched digital projectors, A/V systems, seating, and dome construction

Vanderbilt Student Volunteers for Science (VSVS), VU, 2005–2009

Traveled to local public middle schools and taught general science lessons

VSVS Team Leader, VU, 2007–2009

Assisted in content development and helped teachers tailor lessons to curriculum

Additional Publications

24. *Mass Measurements of Isolated Objects from Space-based Microlensing*
Zhu, W.; Calchi Novati, S.; Gould, A.; and 78 coauthors including **Henderson, C. B.**,
arXiv:1510.02097
23. *Criteria for Sample Selection to Maximize Planet Sensitivity and Yield from Space-Based Microlens Parallax Surveys*
Yee, J. C.; Gould, A.; Beichman, C.; and 8 coauthors including **Henderson, C. B.**,
2015, ApJ, 810, 155
22. *Spitzer IRAC Photometry for Time Series in Crowded Fields*
Calchi Novati, S.; Gould, A.; Yee, J. C.; and 22 coauthors including **Henderson, C. B.**,
arXiv:1509.00037, submitted to ApJ
21. *Spitzer Parallax of OGLE-2015-BLG-0966: A Cold Neptune in the Galactic Disk*
Street, R. A.; Udalski, A.; Calchi Novati, S.; and 106 coauthors including **Henderson, C.**,
arXiv:1508.07027, submitted to ApJ
20. *Spitzer Microlens Measurement of a Massive Remnant in a Well-Separated Binary*
Shvartzvald, Y.; Udalski, A.; Gould, A.; and 63 coauthors including **Henderson, C. B.**,
arXiv:1508.06636, submitted to ApJ
19. *Planet Sensitivity from Combined Ground- and Space-based Microlensing Observations*
Zhu, W.; Gould, A.; Beichman, C.; and 45 coauthors including **Henderson, C. B.**,
arXiv:1508.03336, submitted to ApJ
18. *OGLE-2011-BLG-0265Lb: a Jovian Microlensing Planet Orbiting an M Dwarf*
Skowron, J.; Shin, I.-G.; Udalski, A.; and 121 coauthors including **Henderson, C.**,
2015, ApJ, 804, 33
17. *Reverberation Mapping of the Seyfert 1 Galaxy NGC 7469*
Peterson, B. M.; Grier, C. J.; Horne, K.; and 43 coauthors including **Henderson, C. B.**,
2014, ApJ, 795, 149
16. *MOA-2011-BLG-262Lb: A Sub-Earth-Mass Moon Orbiting a Gas Giant Primary or a High Velocity Planetary System in the Galactic Bulge*
Bennett, D. P.; Batista, V.; Bond, I. A.; and 97 coauthors including **Henderson, C. B.**,
2014, ApJ, 785, 155
15. *A Super-Jupiter Orbiting a Late-type Star: A Refined Analysis of Microlensing Event OGLE-2012-BLG-0406*
Tsapras, Y.; Choi, J.-Y.; Street, R. A.; and 129 coauthors including **Henderson, C. B.**,
2014, ApJ, 782, 48
14. *MOA-2010-BLG-328Lb: A Sub-Neptune Orbiting very Late M Dwarf?*
Furusawa, K.; Udalski, A.; Sumi, T.; and 123 coauthors including **Henderson, C. B.**,
2013, ApJ, 779, 91
13. *MOA-2010-BLG-311: A Planetary Candidate below the Threshold of Reliable Detection*
Yee, J. C.; Hung, L.-W.; Bond, I. A.; and 129 coauthors including **Henderson, C. B.**,
2013, ApJ, 769, 77
12. *Microlensing Discovery of a Population of Very Tight, Very Low Mass Binary Brown Dwarfs*
Choi, J.-Y.; Han, C.; Udalski, A.; and 127 coauthors including **Henderson, C. B.**,
2013, ApJ, 768, 129
11. *A Giant Planet beyond the Snow Line in Microlensing Event OGLE-2011-BLG-0251*
Kains, N.; Street, R. A.; Choi, J.-Y.; and 128 coauthors including **Henderson, C.**,
2013, A&A, 552, 70
10. *The Structure of the Broad-line Region in Active Galactic Nuclei. I. Reconstructed Velocity-delay Maps*

- Grier, C. J.; Peterson, B. M.; Horne, K.; and 38 coauthors including **Henderson, C. B.**, 2013, ApJ, 764, 47
9. *MOA-2010-BLG-523: “Failed Planet” = RS CVn Star*
Gould, A.; Yee, J. C.; Bond, I. A.; and 122 coauthors including **Henderson, C. B.**, 2013, ApJ, 763, 141
 8. *A New Type of Ambiguity in the Planet and Binary Interpretations of Central Perturbations of High-magnification Gravitational Microlensing Events*
Choi, J.-Y.; Shin, I.-G.; Han, C.; and 123 coauthors including **Henderson, C.**, 2012, ApJ, 756, 48
 7. *MOA-2011-BLG-293Lb: A Test of Pure Survey Microlensing Planet Detections*
Yee, J. C.; Shvartzvald, Y.; Gal-Yam, A.; and 77 coauthors including **Henderson, C.**, 2012, ApJ, 755, 102
 6. *Characterizing Low-mass Binaries from Observation of Long-timescale Caustic-crossing Gravitational Microlensing Events*
Shin, I.-G.; Han, C.; Choi, J.-Y.; and 124 coauthors including **Henderson, C.**, 2012, ApJ, 755, 91
 5. *Reverberation Mapping Results for Five Seyfert 1 Galaxies*
Grier, C. J.; Peterson, B. M.; Pogge, R. W.; and 40 coauthors including **Henderson, C. B.**, 2012, ApJ, 755, 60
 4. *MOA 2010-BLG-477Lb: Constraining the Mass of a Microlensing Planet from Microlensing Parallax, Orbital Motion, and Detection of Blended Light*
Bachelet, E.; Shin, I.-G.; Han, C.; and 144 coauthors including **Henderson, C. B.**, 2012, ApJ, 754, 73
 3. *Characterizing Lenses and Lensed Stars of High-magnification Single-lens Gravitational Microlensing Events with Lenses Passing over Source Stars*
Choi, J.-Y.; Shin, I.-G.; Park, S.-Y.; and 154 coauthors including **Henderson, C. B.**, 2012, ApJ, 751, 41
 2. *Additional Massive Binaries in the Cygnus OB2 Association*
Kiminki, D. C.; Kobulnicky, H. A.; Ewing, I.; and 6 coauthors including **Henderson, C. B.**, 2012, ApJ, 747, 41
 1. *A Reverberation Lag for the High-ionization Component of the Broad-line Region in the Narrow-line Seyfert 1 Mrk 335*
Grier, C. J.; Peterson, B. M.; Pogge, R. W.; and 37 coauthors including **Henderson, C. B.**, 2012, ApJ, 744, 4