

Jonathan C. Bird — Curriculum Vitae

jonathan.bird@vanderbilt.edu
http://vpac00.phy.vanderbilt.edu/~birdjc1/

Department of Physics and Astronomy
Vanderbilt University
6301 Stevenson Circle
Nashville, TN 37235

Employment

VIDA Postdoctoral Fellow *Vanderbilt University* Sep. 2012 –

Education

Ph.D., Astronomy *The Ohio State University* Aug. 2012
— Thesis: *The Formation and Evolution of Disk Galaxies*
— Advisor: *David Weinberg*
M.S., Astronomy (*GPA 3.9*) *The Ohio State University* Aug. 2008
B.S., Physics (*with Honors*) *California Institute of Technology* June. 2003

Financial Support

VIDA Postdoctoral Fellowship *Vanderbilt University* (2012–present)
Distinguished University Fellow *The Ohio State University* (2006–2007 & 2011–2012)
Graduate Research Assistant *The Ohio State University* (2009–2011)

Honors and Awards

Vanderbilt Initiative for Data-intensive Astrophysics Fellowship September 2012
AAS Rodger Doxsey Prize (1 of 8 awarded for all 2012 dissertation talks) November 2011
Distinguished University Fellowship, OSU September 2011
Hayes Graduate Research Forum, Finalist, MAPS Division, OSU April 2009
Distinguished University Fellowship, OSU September 2006

Publications

1. “The Vertical Metallicity Gradient of the Milky Way Disk: Transitions in $[\text{Fe}]$ Populations”, Katharine J. Schlesinger, Jennifer A. Johnson, Constance M. Rockosi, Young Sun Lee, Timothy C. Beers, Paul Harding, Carlos Allende Prieto, **Jonathan C. Bird**, Ralph Schnrich, Brian Yanny, Donald P. Schneider, Benjamin A. Weaver, Jon Brinkmann, 2014, *ApJ*, 791, 112S
2. “Inside Out and Upside Down: Tracing the Assembly of a Simulated Disk Galaxy Using Mono-Age Stellar Populations”, **J. C. Bird**, S. Kazantzidis, D. H. Weinberg, J. Guedes, S. Callegari, L. Mayer, P. Madau, 2013, *ApJ*, 773, 43B
3. “The Tenth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-III Apache Point Observatory Galactic Evolution Experiment”, Christopher P. Ahn and 230 coauthors including **Jonathan C. Bird**, 2014, *ApJS*, 211, 17A
4. “The Structure of the Broad-line Region in Active Galactic Nuclei. I. Reconstructed Velocity-delay Maps”, C.J. Grier and 40 coauthors including **Jonathan C. Bird**, 2013, *ApJ*, 764, 47G

5. “The Lifetime and Powers of FR IIs in Galaxy Clusters”, J. Antognini, **J. C. Bird**, P. Martini, 2012, ApJ, 756, 116A
6. “The Apache Point Observatory Galactic Evolution Experiment: First Detection of High-velocity Milky Way Bar Stars”, D. L. Nidever, G. Zasowski, S. R. Majewski, **J. Bird**, A. C. Robin, I. Martinez-Valpuesta, and 30 coauthors, 2012, ApJ, 755L, 25N
7. “Radial Mixing in Galactic Disks: The Effects of Disk Structure and Satellite Bombardment”, **J. C. Bird**, S. Kazantzidis, D. H. Weinberg, 2012, MNRAS, 420, 913B2011
8. “A Reverberation Lag for the High-Ionization Component of the Broad Line Region in the Narrow-Line Seyfert 1 Mrk 335”, C.J. Grier and 38 coauthors including **Jonathan C. Bird**, 2012, ApJ, 744L, 4G2011
9. “Formation and Evolution of the Disk System of the Milky Way: [alpha/Fe] Ratios and Kinematics of the SEGUE G-Dwarf Sample”, Y.S. Lee, T.C. Beers, D. An, Z. Ivezić, A. Just, C. M. Rockosi, H. L. Morrison, J. A. Johnson, R. Schonrich, **J. Bird**, B. Yanny, P. Harding, H. J. Rocha-Pinto, 2011, ApJ, 738, 187L
10. “A Bound on the Light Emitted During the TP-AGB Phase”, **Jonathan C. Bird** and Marc H. Pinsonneault, 2011, ApJ, 733, 81B
11. “Reverberation Mapping Measurements of Black Hole Masses in Six Local Seyfert Galaxies”, K. D. Denney, and 42 coauthors including **J. C. Bird**, 2010, ApJ, 721, 715D
12. “Variability and stability in blazar jets on time-scales of years: optical polarization monitoring of OJ 287 in 2005-2009”, C. Villforth and 50 coauthors including **J. C. Bird**, 2010, MNRAS, 402, 2087
13. “Diverse Kinematic Signatures From Reverberation Mapping of the Broad-Line Regions in Active Galactic Nuclei”, Kelly D. Denney, and 42 coauthors including **Jonathan C. Bird**, 2009, ApJL, 704, L80
14. “Extreme Magnification Microlensing Event OGLE-2008-BLG-279: Strong Limits on Planetary Companions to the Lens Star”, J. C. Yee, A. Udalski, T. Sumi, S. Dong, S. Kozłowski, **J. C. Bird**, and 80 coauthors, 2009, ApJ, 703, 2082
15. “A Revised Broad-Line Region Radius and Black Hole Mass for the Narrow-Line Seyfert 1 NGC 4051”, K. D. Denney, and 32 coauthors including **J. C. Bird**, 2009, ApJ, 702, 1353
16. “Tidally Induced Outbursts in OJ 287 during 2005-2008”, M. J. Valtonen, and 43 coauthors including **J. C. Bird**, 2009, ApJ, 698, 781
17. “Using Ultra Long Period Cepheids to Extend the Cosmic Distance Ladder to 100 Mpc and Beyond”, **J. C. Bird**, K. Z. Stanek, and J. L. Prieto, 2009, ApJ, 695, 874
18. “The Mass of the Black Hole in the Quasar PG 2130+099”, C. J. Grier, and 16 coauthors including **J. Bird**, 2008, ApJ, 688, 837
19. “The Lifetime of FR II Sources in Groups and Clusters: Implications for Radio-Mode Feedback”, **J. C. Bird**, P. Martini, and C. Kaiser, 2008, ApJ, 676, 147

Grants and Recognition

SDSS Young Astronomer Assistance Grant	July 2011
AAS International Travel Grant	March 2011
Edward G. Mayers Graduate Travel Fellowship	June 2010
Nominated Finalist for 2009 Rolex Award: Young Laureates Programme	2009

Professional Services and Synergistic Activities

- Referee for “The Astrophysical Journal” (2013–present)
Founder and coordinator for ‘AstroBrew’ at Vanderbilt;
a department-wide ArXiv discussion group (2012–present)
Contributed original video content for Blended and Online Learning Design (BOLD) module,
incorporated into the curriculum for Vanderbilt graduate course
ASTR 353: Structure and Dynamics of Galaxies (2013–present)

Press and Public Outreach

- Nature* News and Views: “Climbing Up the Cosmic Ladder” June 4, 2009
Ohio State University Press Release: “To 300 Million Light Years, and Beyond! A
New Way to Measure Cosmic Distances” June 8, 2009
Science: “Star Studies Yield Better Yardsticks” June 19, 2009
Discover: “A Yardstick for the Universe” (work discussed, not featured) October 2009
Ciel et Espace: “Les Arpenteurs du Ciel Trouvent un Nouvel Outil” October 2009
Web Sites: Work featured on *MSNBC.com*, *Space.com*, and numerous others June-September 2009
- GRASP (Girls Reaching to Achieve in Sports and Physics) — Camp Counselor 2010, 2011
So Fun Summerfest (Columbus, OH) — Astronomy Lecturer August 2010
Math and Physics Tutor/Mentor for *Infinite Family* 2011

Conference and Department Talks

Invited

- “APOGEE 2: A Global Perspective of the Disk Now and Then”, SDSS Collaboration Meeting,
University of Utah, August 2014
- “Forming Realistic Spiral Galaxies in a Cosmological Context”, Colloquium, New Mexico State
University, April 2014
- “New Insights from the Milky Way and Simulated Assembly Histories: Disk Galaxies may Form
Upside-Down”, Colloquium, Indiana University, February 2014
- “Kinematic Separation of the Bulge and Disk in APOGEE”, SDSS Collaboration Meeting, John
Hopkins University, June 2013
- “The Upside-Down Formation of Disk Galaxies”, Department Guest and Speaker, U. Virginia and
NRAO, May 2013
- “Migration and Mergers”, Stars without Borders, Medana, Solvenia, May 2012
- “Numerical Simulations of Disk Dynamics”, Department Guest and Speaker, UC Santa Cruz, November
2011
- “Radial Migration and Phase Space Substructure in Accretion Scenarios”, Colloquium, Max Planck
Institute for Astrophysics (MPA), Garching, Germany
- “Advances in Observational Cosmology: Using Ultra Long Period Cepheids to Extend the Cosmic
Distance Ladder to 100 Mpc and Beyond”, Invited Press Conference at AAS (Pasadena, CA), June
2009

Contributed

- “Tracing Galaxy Assembly with Mono-age populations”, Structure and Dynamics of Disk Galaxies conference, Mount Juliet, AK, August 2013
- “A New Way to Assemble Disk Galaxies” (self-requested), Astronomy Seminar, U. Washington, March 2013
- “Simulating the Past: Creating Testable Predictions of the Milky Way’s Assembly History Using Numerical Experiments”, Dissertation Talk, AAS (Austin, TX), January 2012
- “Radial Migration: A Probe of Galaxy Assembly History?” (self-requested), Astronomy Seminar, U. Washington, November 2011
- “Disk Phase Space Substructure and Galaxy Formation Scenarios”, SDSS-III Collaboration Meeting, Vanderbilt University, August 2011
- “Radial Mixing in Galactic Disks: The Effects of Disk Geometry and Satellite Bombardment”, Assembling the Puzzle of the Milky Way, Grand Bornand, France, April 2011
- “Disk Dynamics and Accretion Scenarios”, The Formation of the Milky Way: The SEGUE perspective, CCAPP, OSU, March 2011
- “Signatures of Disk Heating in Radial Velocity: Implications for APOGEE”, SDSS-III Collaboration Meeting, IAP and APC Laboratories, Paris, September 2010
- “Radial Mixing in Galactic Disks”, SDSS-III Collaboration Meeting, IAP and APC Laboratories, Paris, September 2010
- “Interaction between Satellites and the Galactic Disk”, The CCAPP Symposium 2009: Towards Fundamental Breakthroughs in Astrophysics and Cosmology within the Next Decade, CCAPP, OSU, October 2009
- “The Lifetimes of FRIIs: Implications for Radio-mode Feedback”, SDSS-II Collaboration Meeting, Drexel University, March 2007