

Robert C. Morehead | Curriculum Vitæ

Department of Astronomy & Astrophysics – Center for Exoplanets and Habitable Worlds
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Education

The Pennsylvania State University <i>Doctoral Candidate, Astronomy & Astrophysics</i> Advisor: Eric B. Ford	University Park, PA 2013–2014
The University of Florida <i>Master of Science, Astronomy</i> Advisor: Eric B. Ford	Gainesville, FL 2009–2013
Columbia University <i>Bachelor of Science, Astrophysics</i> Advisor: Caleb Scharf	New York, NY 2006–2009
South Puget Sound Community College	Olympia, WA 2004–2006

Awards and Fellowships

2013: Homer F. Braddock and Nellie H. and Oscar L. Roberts Fellowship Eberly College of Science, The Pennsylvania State University
2011–2014: National Science Foundation Graduate Research Fellowship
2005: Phi Theta Kappa

Research Experience

Professional Activities

Teaching

Education and Public Outreach

Podcast: *Tides: More Than What Floats Your Boat*, IYA 365 Days of Astronomy Podcast, May 25, 2009

Public Lecture: *Eight is Enough: The Great Pluto Debate*, Columbia University, July 11, 2008

Public Observing Volunteer: Rutherford Observatory, Columbia University, 2007–2009

Astronomy Club President: South Puget Sound Community College, 2005–2006

Public Talk: Strange New Worlds: The Planets of the Kepler Mission, Alachua Astronomy Club, Gainesville, FL, November 2011

Public Talk: Strange New Worlds: The Planets of the Kepler Mission, Robert Ferguson Observatory, Sonoma County, CA, May 2012

"Python Coding for Astronomers", University of Florida Graduate Astronomy Organization Professional Development Workshop Series, October-December 2012, Co-Instructor

"Updates from the Kepler Mission," University of Florida Astronomy and Astrophysics Society, Gainesville, FL, February 19th, 2013, Public Talk

"So You Want to Go to Graduate School" University of Florida Astronomy and Astrophysics Society, Gainesville, FL, October 24th, 2013, Panel Discussion

Publications

Publications with Significant Contribution.....

- **Transit timing observations from Kepler - VII. Confirmation of 27 planets in 13 multiplanet systems via transit timing variations and orbital stability**
Steffen, J. H., Fabrycky, D. C., Agol, E., Ford, E. B., **Morehead, R. C.**, Cochran, W. D., Lissauer, J. J., Adams, E. R., Borucki, W. J., Bryson, S., et al. Monthly Notices of the Royal Astronomical Society, Volume 428, Issue 2, p.1077-1087
- **Constraining the false positive rate for Kepler planet candidates with multicolour photometry from the GTC**
Colón, K. D., Ford, E. B., **Morehead, R. C.** Monthly Notices of the Royal Astronomical Society, Volume 426, Issue 1, pp. 342-353.
- **Constraining the False Positive Rate for Kepler Planet Candidates with Multi-Color Photometry from the GTC**
Colón, K. D., Ford, E. B., **Morehead, R. C.** eprint arXiv:1207.2481
- **Transit Timing Observations from Kepler. II. Confirmation of Two Multiplanet Systems via a Non-parametric Correlation Analysis**
Ford, E. B., Fabrycky, D. C., Steffen, J. H., Carter, J. A., Fressin, F., Holman, M. J., Lissauer, J. J., Moorhead, A. V., **Morehead, R. C.**, Ragozzine, D., et al. The Astrophysical Journal, Volume 750, Issue 2, article id. 113, 18 pp. (2012).
- **Architecture of Kepler's Multi-transiting Systems: II. New investigations with twice as many candidates**
Fabrycky, D. C., Lissauer, J. J., Ragozzine, D., Rowe, J. F., Steffen, J. H., Agol, E., Barclay, T., Batalha, N., Borucki, W., Ciardi, D. R., et al. eprint arXiv:1202.6328
- **Kepler's candidate multiple transiting planets (Lissauer+, 2011)**
Lissauer, J. J., Ragozzine, D., Fabrycky, D. C., Steffen, J. H., Ford, E. B., Jenkins, J. M., Shporer, A., Holman, M. J., Rowe, J. F., Quintana, E. V., et al. VizieR On-line Data Catalog: J/ApJS/197/8. Originally published in: 2011ApJS..197....8L
- **Architecture and Dynamics of Kepler's Candidate Multiple Transiting Planet Systems**
Lissauer, J. J., Ragozzine, D., Fabrycky, D. C., Steffen, J. H., Ford, E. B., Jenkins, J. M., Shporer, A., Holman, M. J., Rowe, J. F., Quintana, E. V., et al. The Astrophysical Journal Supplement, Volume 197, Issue 1, article id. 8, 26 pp. (2011).
- **The Distribution of Transit Durations for Kepler Planet Candidates and Implica-**

tions for Their Orbital Eccentricities

Moorhead, A. V., Ford, E. B., **Morehead, R. C.**, Rowe, J., Borucki, W. J., Batalha, N. M., Bryson, S. T., Caldwell, D. A., Fabrycky, D. C., Gautier, T. N., III, et al. The Astrophysical Journal Supplement, Volume 197, Issue 1, article id. 1, 15 pp. (2011).

- **A closely packed system of low-mass, low-density planets transiting Kepler-11**

Lissauer, J. J., Fabrycky, D. C., Ford, E. B., Borucki, W. J., Fressin, F., Marcy, G. W., Orosz, J. A., Rowe, J. F., Torres, G., Welsh, W. F., et al. Nature, Volume 470, Issue 7332, pp. 53-58 (2011).

- **The Architectures of Planetary Systems from Transit Observations**

Ford, E. B., Fabrycky, D. C., Holman, M. J., Lissauer, J. J., Moorhead, A. V., **Morehead, R. C.**, Ragozzine, D., Steffen, J. H., Koch, D., Kepler Science Team American Astronomical Society, AAS Meeting #217, #103.05; Bulletin of the American Astronomical Society, Vol. 43, 2011

- **Five Kepler Target Stars That Show Multiple Transiting Exoplanet Candidates**

Steffen, J. H., Batalha, N. M., Borucki, W. J., Buchhave, L. A., Caldwell, D. A., Cochran, W. D., Endl, M., Fabrycky, D. C., Fressin, F., Ford, E. B., et al. The Astrophysical Journal, Volume 725, Issue 1, pp. 1226-1241 (2010).

- **Kepler-9: A System of Multiple Planets Transiting a Sun-Like Star, Confirmed by Timing Variations**

Holman, M. J., Fabrycky, D. C., Ragozzine, D., Ford, E. B., Steffen, J. H., Welsh, W. F., Lissauer, J. J., Latham, D. W., Marcy, G. W., Walkowicz, L. M., et al. Science, Volume 330, Issue 6000, pp. 51- (2010).

- **Discovery of a Low-mass Companion to a Metal-rich F Star with the MARVELS Pilot Project**

Fleming, S. W., Ge, J., Mahadevan, S., Lee, B., Eastman, J. D., Siverd, R. J., Gaudi, B. S., Niedzielski, A., Sivarani, T., Stassun, K. G., et al. The Astrophysical Journal, Volume 718, Issue 2, pp. 1186-1199 (2010).

Other Peer-Reviewed Publications.....

- **Planetary Candidates Observed by Kepler IV: Planet Sample from Q1-Q8 (22 Months)**
Burke, C. J., Bryson, S. T., Mullally, F., Rowe, J. F., Christiansen, J. L., Thompson, S. E., Coughlin, J. L., Haas, M. R., Batalha, N. M., Caldwell, D. A., et al. The Astrophysical Journal Supplement, Volume 210, Issue 2, article id. 19, 12 pp. (2014).
- **Planet Occurrence within 0.25 AU of Solar-type Stars from Kepler**
Howard, A. W., Marcy, G. W., Bryson, S. T., Jenkins, J. M., Rowe, J. F., Batalha, N. M., Borucki, W. J., Koch, D. G., Dunham, E. W., Gautier, T. N., III, et al. The Astrophysical Journal Supplement, Volume 201, Issue 2, article id. 15, 20 pp. (2012).
- **Almost All of Kepler's Multiple-planet Candidates Are Planets**
Lissauer, J. J., Marcy, G. W., Rowe, J. F., Bryson, S. T., Adams, E., Buchhave, L. A., Ciardi, D. R., Cochran, W. D., Fabrycky, D. C., Ford, E. B., et al. The Astrophysical Journal, Volume 750, Issue 2, article id. 112, 15 pp. (2012).
- **Kepler's First Rocky Planet: Kepler-10b**
Batalha, N. M., Borucki, W. J., Bryson, S. T., Buchhave, L. A., Caldwell, D. A., Christensen-Dalsgaard, J., Ciardi, D., Dunham, E. W., Fressin, F., Gautier, T. N., III, et al. The Astrophysical Journal, Volume 729, Issue 1, article id. 27, 21 pp. (2011).
- **Ground-based Multisite Observations of Two Transits of HD 80606b**
Shporer, A., Winn, J. N., Dreizler, S., Colón, K. D., Wood-Vasey, W. M., Choi, P. I., Morley, C., Moutou, C., Welsh, W. F., Pollaco, D., et al. The Astrophysical Journal, Volume 722, Issue 1, pp. 880-887 (2010).

Other Publications and Conference Abstracts.....

- **A Test of Stellar Cohabitation in Multiple Transiting Planet Systems**
Morehead, R. C., Ford, E. B. American Astronomical Society, AAS Meeting #221, #343.04
- **Enhancing Multiple-Transiting Planet System Validation with Transit Duration Ratios**
Morehead, R. C., Ford, E. B., Prša, A., Ragozzine, D. American Astronomical Society, ESS meeting #2, #28.01
- **Validation of Candidate Multiple-Transiting Planet Systems and Assessing Possible False Positives based on Photometric Observables**
Morehead, R., Ford, E. B., Kepler Science Team American Astronomical Society, AAS Meeting #217, #140.09; Bulletin of the American Astronomical Society, Vol. 43, 2011
- **The Distribution of Orbital Eccentricities for Kepler Planet Candidates**
Moorhead, A., Ford, E. B., **Morehead, R.**, Kepler Science Team American Astronomical Society, AAS Meeting #217, #103.06; Bulletin of the American Astronomical Society, Vol. 43, 2011
- **Status of a Program Monitoring Optical Lunar Surface Transients**
Crotts, A. P. S., Berger, A., Cecil, G., Cseresnjcs, P., Ebel, D., Hickson, P., Joner, M., Pfrommer, T., Marka, S., **Morehead, R.**, et al. 40th Lunar and Planetary Science Conference, (Lunar and Planetary Science XL), held March 23-27, 2009 in The Woodlands, Texas, id.2373