Robert C. Morehead | Curriculum Vitæ

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

The Pennsylvania State University — **University Park, PA**
Doctoral Candidate, Astronomy & Astrophysics — *2013–2014*
Advisor: Eric B. Ford

The University of Florida — **Gainesville, FL**
Master of Science, Astronomy — *2009–2013*
Advisor: Eric B. Ford

Columbia University — **New York, NY**
Bachelor of Science, Astrophysics — *2006–2009*
Advisor: Caleb Scharf

South Puget Sound Community College — **Olympia, WA**
2004–2006

Awards and Fellowships

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

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 Implications 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., Cseresnjes, 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