

Juliette Becker

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Education

University of Michigan

currently in pursuit of a PhD in Astronomy and Astrophysics

Ann Arbor, MI

August 2014 - Present

University of Michigan

M.S. in Astronomy and Astrophysics

Ann Arbor, MI

August 2016

California Institute of Technology

B.S. Astrophysics with honor with a minor in English

Pasadena, CA

September 2010 - June 2014

- *Senior Thesis:* An Analysis of Serendipitous Asteroids, Elusive Stellar Granules, and the Precision of High-Speed Photometry Using Case Studies HAT-P-20 and TrES-3

Publications

- Vanderburg, A., **Becker, J. C.**, Kristiansen, M. H., et al. "Five Planets Transiting a Ninth Magnitude Star." 2016, ApJL, Accepted
- **Becker, J. C.**, & Adams, F. C. "Oscillations of Relative Inclination Angles in Compact Extrasolar Planetary Systems." 2016, MNRAS, 455, 2980
- **Becker, J. C.**, Vanderburg, A., Adams, F.C., Rappaport, S.A., & Schwengeler, H. M. "WASP-47: A Hot Jupiter System with Two Additional Planets Discovered by K2" ApJL, 812, L18
- **Becker, J. C.**, Johnson, J. A., Vanderburg, A., & Morton, T. D. "Extracting Radial Velocities of A-and B-type Stars from Echelle Spectrograph Calibration Spectra" 2015, ApJS 217 29
- Fox, O., Silverman, J., Filippenko, A., Mauerhan, J., **Becker, J.**, et al. "Suppressed [Fe III] in Type Ia-CSM Supernovae: Optical and Near-Infrared Spectra of SNe 2012ca and 2013dn". 2015, MNRAS, 447, 772
- Schaefer, G., Brummelaar, T., Gies, D., et al including **Becker, J.** "Imaging the Expanding Fireball of Nova Delphini 2013." 2014, Nature, 515 (7526). pp. 234-236.
- Howard, A., Marcy, G., Fischer, D., et al including **Becker, J.** "The NASA-UC-UH Eta-Earth Program: IV. A Low-mass Planet Orbiting an M Dwarf 3.6 PC from Earth." 2014, ApJ, 794, 51
- Muirhead, P. S., **Becker, J.**, Feiden, G. A., et al. "Characterizing the Cool KOIs. VI. H- and K-band Spectra of Kepler M Dwarf Planet-Candidate Hosts." 2014, ApJS, 213, 5
- **Becker, J.**, & Batygin, K. "Dynamical Measurements of the Interior Structure of Exoplanets." 2013, ApJ, 778, 100
- Muirhead, P. S., Vanderburg, A., Shporer, A., **Becker, J.**, et al. "Characterizing the Cool KOIs. V. KOI-256: A Mutually Eclipsing Post-common Envelope Binary." 2013, ApJ, 767, 111
- Ben-Ami, S., Gal-Yam, A., Filippenko, A. V., et al including **Becker, J.** "Discovery and Early Multi-wavelength Measurements of the Energetic Type Ic Supernova PTF12gzk: A Massive-star Explosion in a Dwarf Host Galaxy." 2012, ApJ, 760, L33

Oral Presentations

- **Becker, J. (presenting)**, & Adams, F. C. "Inclination Excitation in Compact Extrasolar Planetary Systems." 2015, AAS/Division of Dynamical Astronomy Meeting, 46, #101.05
- **Becker, J. (presenting)**, & Adams, F. C. "The Dynamics of WASP-47." 2016, AAS/Division of Dynamical Astronomy Meeting

Poster Presentations

- **Becker, J. (presenting)**, & Adams, F. C. "Inclination Excitation in Extrasolar Planetary Systems." 2015, American Astronomical Society Meeting Abstracts, 225, #257.28
- Montet, B., **Becker, J.**, & Johnson, J. "A Transit Timing Posterior Distribution Catalog for all Kepler Planet Candidates." 2015, American Astronomical Society Meeting Abstracts, 225, #122.06
- **Becker, J. C. (presenting)**, Johnson, J., Vanderburg, A., Morton, T. "Extracting Radial Velocities of A- and B-type Stars from Echelle Spectrograph Calibration Spectra." 2014, MIRA Circumstellar Disks and Planet Formation Conference
- **Becker, J. C. (presenting)**, Montet, B., Swift, J., Johnson, J. "A TTV-fueled study of non-resonant companions to multiple-transiting systems in the Kepler sample." 2014, AAS Meeting Abstracts, 3, #245
- **Becker, J. (presenting)**, Montet, B., Swift, J., Johnson, J. "A TTV-fueled study of non-resonant companions to multiple-transiting systems in the Kepler sample." 2013, Kepler Science Meeting, 1, #113
- **Becker, J. (presenting)**, & Batygin, K. "Dynamical Measurements of the Interior Structure of Exoplanets." 2013, AAS/Division for Planetary Sciences Meeting Abstracts, 45, #113.09
- **Becker, J. (presenting)**, Johnson, J. A., & Morton, T. "A Serendipitous Doppler Survey of B-type Stars at Keck with HIRES." 2013, American Astronomical Society (AAS) Meeting Abstracts, 221, #252.12
- **Becker, J. (presenting)**, Vanderburg, A., Muirhead, P., Morton, T., Johnson, J. "Identification of a White Dwarf/M-Dwarf Binary System in the Kepler Field." 2012, Palomar Science Meeting.

Awards

Jackson High School Valedictorian	2010
Everett School District Superintendent Scholar	2010
Walsh-Platt scholar-athlete scholarship (Everett School District)	2010
Robert C. Byrd Scholarship (WA State)	2010 - 2014
Lingle Merit Award (Caltech)	2011
SCIAC (Southern California Intercollegiate Athletic Conference) Scholar-Athlete Award	2011, 2012, 2013, 2014
ARCS (Achievement Rewards for College Scientists) Fellowship	2012, 2013, 2014
Celia Peterson Leadership Award (Caltech)	2012, 2013
Golden Ankle Dedication and Leadership Award (Caltech Athletic Department)	2011, 2013, 2014
Chambliss Astronomy Achievement Student Awards, honorable mention	2014
Peirce Fellowship, Harvard University (<i>declined</i>)	2014
National Science Foundation Graduate Research Fellowship	2014-2019
DDA/AAS Raynor L. Duncombe Prize for Student Research	2015

Leadership, Service, Teaching

Caltech NCAA Intercollegiate Cross Country Team Captain	2012, 2013
Caltech Ay 21 (Cosmology) Teaching Assistant	2013, 2014
Caltech NCAA Intercollegiate Track and Field Team Captain	2013, 2014
Caltech Innworks Curriculum Chair	2012 - 2013
Caltech Upperclassman Counselor	2013
Caltech Astrophysics Option Mentor	2013 - 2014
Caltech Ay 1 (The Evolving Universe) Teaching Assistant	2014
University of Michigan, Astro 101 (The Solar System and the Search for Life Beyond Earth) Graduate Student Instructor	2015
University of Michigan, Astro 115 (Astrobiology) Graduate Student Instructor	2015
Referee for ApJ	2016 - current