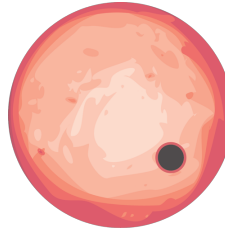


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Research Interests:

I use small telescopes to discover transiting exoplanets and large telescope to study these planets' atmospheres. I aim to connect our limited views of thousands of exoplanets to our much more detailed view of our one local Solar System. My work makes practical advances toward the long-term goal of searching for life around other stars.

Teaching Statement:

My goal is to nurture seeds of curiosity into lifelong scientific mindsets. I believe engaging hands-on with the beautiful mysteries of the Universe is the best way for students of diverse backgrounds and strengths to cultivate a passion for discovery and a willingness to explore.

Academic Experience:

University of Colorado at Boulder, Assistant Professor, 2016–
Massachusetts Institute of Technology, Torres Fellow for Exoplanet Research, 2013–2016
Harvard University, Ph.D. in Astronomy, 2008–2013
Princeton University, A. B. in Astrophysical Sciences with Highest Honors, 2003–2007

Ongoing Collaborations:

Working group lead for JWST Transiting Exoplanet Community ERS, to study exoplanet atmospheres
Collaborator on the NASA TESS mission, to find the closest transiting exoplanets
Member of the MEarth Project, to search for habitable planets transiting small stars

Selected Publication Highlights:

(38 total refereed publications, 1848 citations, h-index=25; as Z. K. Berta until 2013)

- R. Vanderspeck and 46 others including **Z. K. Berta-Thompson**, "TESS Discovery of an ultra-short-period planet around the nearby M dwarf LHS 3844", submitted 2018, arXiv:1809.07242.
- J. Bean, K. Stevenson, N. Batalha, **Z. K. Berta-Thompson**, and many others, "The Transiting Exoplanet Community Early Release Science Program for JWST", 2018, Publications of the Astronomical Society of the Pacific, 130, 993.
- H. Diamond-Lowe, **Z. K. Berta-Thompson**, D. Charbonneau, E. Kempton, "Ground-based Optical Transmission Spectroscopy of the Small, Rocky Exoplanet GJ 1132b", 2018, *The Astronomical Journal*, 156, 2, 42.
- J. A. Dittmann, J. Irwin, D. Charbonneau, X. Bonfires, N. Astudillo-Defru, R. Haywood, **Z. K. Berta-Thompson**, E. R. Newton, J. Rodriguez, J. Winters, T-G. Tan, J-M. Almenara, F. Bouchy, X. Delfosse, T. Forveille, C. Lovis, F. Murgas, F. Pepe, N. Santos, S. Udry, "A temperate rocky super-Earth transiting a nearby cool star", 2017, *Nature*, 544, 7650, 333

- **Z. K. Berta-Thompson**, J. Irwin, D. Charbonneau, E. R. Newton, J. A. Dittmann, N. Astudillo-Defru, X. Bonfils, M. Gillon, E. Jehin, A. A. Stark, B. Stalder, F. Bouchy, X. Delfosse, T. Forveille, C. Lovis, M. Mayor, V. Neves, F. Pepe, N. C. Santos, S. Udry, A. Wunsche "A rocky planet transiting a nearby low-mass star", 2015, *Nature*, 527, 204-207
- **Z. K. Berta**, J. Irwin, D. Charbonneau, C. Burke, E. Falco, "Transit Detection in the MEarth Survey of Nearby M Dwarfs: Bridging the Clean-First, Search-Later Divide" 2012, *The Astronomical Journal*, 144, 145
- **Z. K. Berta**, D. Charbonneau, J.-M. Désert, E. Kempton, P. McCullough, C. Burke, J. Fortney, J. Irwin, P. Nutzman, D. Homeier "The Flat Transmission Spectrum of the Super-Earth GJ1214b from Wide Field Camera 3 on the Hubble Space Telescope" 2012, *The Astrophysical Journal*, 747, 35
- D. Charbonneau, **Z. K. Berta**, J. Irwin, C. J. Burke, P. Nutzman, L. A. Buchhave, C. Lovis, X. Bonfils, D. W. Latham, S. Udry, R. A. Murray-Clay, M. J. Holman, E. E. Falco, J. N. Winn, D. Queloz, F. Pepe, M. Mayor, X. Delfosse, T. Forveille, "A super-Earth transiting a nearby low-mass star", 2009, *Nature*, 462, 7275

Selected Teaching Highlights:

CU Boulder — *ASTR3400*: an undergraduate course in astronomical research methods (fall 2018), with a focus on hands-on discovery with data from the Kepler and TESS telescopes; see zkbt.github.io/henrietta/ for more details

CU Boulder — *ASTR5810*: a graduate-level introduction to planetary atmospheres (fall 2017), emphasizing important concepts for understanding Earth, Solar System, and exoplanet atmospheres, with hands-on practice with research skills (zkbt.bitbucket.io/astr5810/)

CU Boulder — *ASTR1030*: advanced introduction to astrophysics & planetary science (spring 2017), emphasizing quantitative reasoning, scientific thought, and interactive engagement with astrophysical concepts through labs and telescope observations

CU Boulder — *ASTR2600*: an introduction to scientific computing in Python (fall 2016, spring 2019), emphasizing creativity and curiosity in coding as a craft, making use of in-class computational tutorials and a final N-body gravitational dynamics project

MIT — "Crafting the Cosmos", *Independent Activities Period*, (January 2016)
astrophysics concepts (the curvature of space-time) paired with crafts (knitting the Schwarzschild metric with yarn), to inspire creativity & growth mindset (bit.ly/craftingcosmos)

Selected Recent Talks:

colloquium	University of California Berkeley, Berkeley, CA, Mar. 2018
colloquium	Jet Propulsion Lab Astrophysics, Pasadena, CA, Feb. 2018
invited talk	Habitable Worlds 2017, Laramie, WY, Nov. 2017
colloquium	University of California Los Angeles, Los Angeles, CA, Jun. 2017
invited talk	Breakthrough Discuss, Stanford, CA, Apr. 2017
colloquium	University of Texas Austin, TX, Apr. 2017
colloquium	University of Wyoming, WY, Mar. 2017
invited talk	Exoplanets I Conference, Davos, Switzerland, Jul. 2016