Contact

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Education

2017 **Pennsylvania State University,** State College, PA
Dual PhD, Astronomy and Astrophysics and Astrobiology
"A Synergistic Approach to Interpreting Planetary Atmospheres"
Supervised by James F. Kasting, Steinn Sigurdsson

2013 **Cornell University**, Ithaca, NY
B.A., Physics
University of New South Wales, Sydney, Australia
Abroad Honors Thesis, Physics and Astronomy

Appointments

2018 **University of California Santa Cruz**, Santa Cruz, CA
UC President's Postdoctoral Fellowship

2017 **Space Telescope Science Institute,** Baltimore, MD
Postdocoral Fellow in Science Mission Office

2013 **Space Telescope Science Institute,** Baltimore, MD
Space Astronomy Summer Program

2011 **Goddard Space Flight Center,** Greenbelt, MD
Undergraduate Research Associates in Astrobiology

2009-2013 **Spacecraft Planetary Imaging Facility,** Ithaca, NY
Assistant Manager

Awards and Fellowships

2018 University of California Postdoctoral Fellowship
2017 Ford Foundation Fellowship, Honorable Mention
2016-2017 Alfred P. Sloan Foundation's Minority Graduate Scholarship
2016 Kavli Student Fellow
2015 NAI Early Career Collaboration Award
2015 Stephen B. Brumbach Graduate Fellowship in Astrophysics
2014-2017 National Science Foundation Graduate Research Fellowship
2013 STEM Scholar Graduate Fellow
2012 Douglas and Dorothy K. Wood Scholarship
2011 NASA/NY Space Grant Consortium

Refereed Publications

2018 **Batalha, N.E.,** Smith, A., Lewis, N.K., Marley, M., Fortney, J. *Color Classification of Extrasolar Giant Planets: Prospects and Cautions,* AJ https://arxiv.org/abs/1807.08453

Batalha, N.E., Lewis, N.K., Line, M.R. et al. *Strategies for Constraining the Atmospheres of Temperate Terrestrial Planets with JWST*, ApJL https://arxiv.org/abs/1803.07983

Batalha, N.E., et al., *Reply to Shaw.* EPSL, 484, 415-417

Blumenthal, S., Mandell, A., Herbrard, E., **Batalha, N.E.**, et al. *Comparison of Simulated JWST Observations Derived from Equilibrium and Non-Equilibrium Chemistry Models of Giant Exoplanets,* ApJ https://arxiv.org/abs/1712.01121

2017 Kopparapu, R., Wolf, E., Arney, G., **Batalha, N.E**., et al., *Habitable Moist Atmospheres on Terrestrial Planets Near the Inner Edge of the Habitable Zone around M-Dwarfs*. ApJ, https://arxiv.org/abs/1705.10362

Christiansen, J., 27 others, **Batalha, N.E**., et al., *Three's Company: An Additional Non-Transiting Super-Earth in the Bright HD 3167 System, and Masses for All Three Planets*, AJ, https://arxiv.org/abs/1706.01892

Batalha, N.E., et al., *PandExo: A Community Tool for Exoplanet Science with the JWST and HST.* PASP, 129, 976 https://arxiv.org/abs/1702.01820

Batalha, N.E., Kempton, E., & Mbarek, R., *Challenges in Constraining Exoplanet Masses via Transmission Spectroscopy*, 2017, ApJL, 836, L5, https://arxiv.org/abs/1701.00012

Batalha, N.E., & Line, M.R., *Information Content Analysis for Selection of Optimal JWST Observing Modes for Transiting Exoplanet Atmospheres.* ApJ, 153, 4, https://arxiv.org/abs/1612.02085

2016 **Batalha, N.E**., et al., *Climate Cycling on Early Mars Caused by the Carbonate-Silicate Cycle.* EPSL, 455, 7-13 https://arxiv.org/abs/1609.00602

Haqq-Misra, J., Kopparapu, R., **Batalha, N.E.**, et al. Limit Cycles Can Reduce the Width of the Habitable Zone, ApJ, https://arxiv.org/abs/1605.07130

2015 **Batalha, N.E**., et al., *Testing the Early Mars H2-CO2 Greenhouse Hypothesis with a 1-D Photochemical Model*. Icarus, 258, 337-349 https://arxiv.org/abs/1507.02569

Cowan, N.B, Greene, T., Angerhausen., D., **Batalha, N.E**. et al. *Characterizing Transiting Planet Atmospheres Through 2025*. PASP, 127, 949 https://arxiv.org/abs/1502.00004

2014 **Batalha, N.E**., et al. *Transiting Exoplanet Simulations with the James Webb Space Telescope*. JWST White Paper, https://arxiv.org/abs/1507.02655

2011 Agueros, M., Covey, K., 3 others, **Batalha, N.E**. et al., *The Factory and the Beehive. I. Rotation Periods of Low-Mass Stars in Praesepe* Apj, 740, 110

Accepted Proposals

2017 Co-Investigator, HST-GO-14918 (10 orbits) *Definitive Measurement of WASP-17b's Water Abundance in Preparation of JWST,* PI: Wakeford

Teaching & Mentoring

2017 K-12 Instructor at Project Favela Rocinha, Rio de Janeiro, Brazil
2013-2017 Mentored students from underserved backgrounds through Learn to Be Foundation 501(c)(3) nonprofit

Education and Public Outreach

Involvement in Media and Online Content

2017	AAAS Catalyzing Advocacy in Science and Engineering https://www.aaas.org/page/about-0e
2014-2016	Astrobites Writer & Editor http://astrobites.com/author/nbatalha
2014-2015	NASA FameLab Science Communication https://www.youtube.com/watch?v=ioNSVlNsW9I https://www.youtube.com/watch?v=T_7wlmzbLCs https://www.youtube.com/watch?v=dLrjPr6SFtA
2014-2015	New York Film Academy Science Animation Advisor http://sites.psu.edu/natashabatalha/nyfa-animations/

Involvement with Groups Underrepresented in STEM

2014-2017	Instructor for Centre County Prison Society Education Program
2013-2017	Director of Programs, Learn to Be Foundation 501(c)(3) nonprofit
2014-2015	Graduate Women in Science Girl Scout Co-Chair
2014	McNair Scholar Graduate Student Panelist

Involvement in Education: Curriculum, Teachers, Training

July 2015	High School and Middle School Teacher Workshop, State College, PA

Conference Presentations, Seminars, Colloquia

Invited Talks

Jul. 2017	Enabling Transiting Exoplanet Observations with JWST, STScI *Introduction to PandExo*
Apr. 2016	Department of Terrestrial Magnetism, Carnegie Institute *Transiting Exoplanet Science with the James Webb Space Telescope*
Aug. 2016	Planetary Systems: A Synergistic View, Quy Nhon, Vietnam *Transiting Exoplanet Science with the James Webb Space Telescope*
May 2015	Penn State Board of Visitors, University Park, PA *How to search for life when we don't know what we are looking for*
May 2015	Penn State Dean of Eberly College of Science Advisory Committee *How to search for life when we don't know what we are looking for*

Contributed, Seminar & Colloquia

Jul. 2018	Exoplanets II, Cambridge, UK *Color Classification of Extrasolar Giant Planets*
Jan. 2018	Winter AAS Conference, Washington DC *Optimal Strategies for Probing Terrestrial Atmospheres with JWST*
Feb. 2017	School of Earth and Space Exploration, Arizona State University, Seminar *Transiting Exoplanet Science with the James Webb Space Telescope*
Jan. 2017	Winter AAS Conference, Grapevine, Texas *Key Exoplanets in the JWST Era*
Oct. 2016	Division of Planetary Sciences Conference, Pasadena, CA *Climate Cycling on Early Mars via the Carbonate Silicate Cycle*

Feb. 2016	Jet Propulsion Laboratory, Seminar *Transiting Exoplanet Science with the James Webb Space Telescope*
Mar. 2016	Goddard Space Flight Center, Greenbelt, MD, Seminar *A Community Tool for Exoplanet Science with JWST*
Mar. 2016	Center for Exoplanets and Habitable Worlds, Penn State, Seminar *A Community Tool for Exoplanet Science with JWST*
Mar. 2015	Center for Exoplanets and Habitable Worlds, Penn State University, Seminar *Testing the Early Mars H2-CO2 Greenhouse Hypothesis*
Jan. 2014	Winter AAS Conference, Washington, DC *Transiting Exoplanet Simulations with JWST*
Aug. 2013	Space Telescope Science Institute, Seminar *Using NIRISS and NIRSpec for Transiting Exoplanet Science*
Oct. 2012	Cornell Planet Lunch Series, Ithaca, NY, Seminar *Characterizing Transiting Exoplanet GJ1214b with KECK II*

Contributed Posters

Mar. 2016	Linking Disks and Exoplanet Compositions Workshop, Baltimore, MD *A Community Tool for Exoplanet Characterization with JWST*
Mar. 2014	Exoplanet, Biosignatures & Instrumentation, Tucson, AZ *Warming Early Mars with H_2 and CO_2*
Mar. 2014	Exoplanet, Biosignatures & Instrumentation, Tucson, AZ *Characterizing Exoplanets with JWST*

Service

2017	Referee, ApJ, ApJL
2014	ExoPAG: Science Analysis Group 10: Characterizing Exoplanets through 2025
2014	Emerging Researchers in Exoplanets Science Symposium Organizing Committee
2014	Astrobiology Graduate Conference Organizing Committee