

Brian Jackson

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Education:

Ph.D. Planetary Sciences U of AZ 2009 May
– Advisor: Prof. Richard Greenberg
– Dissertation Title: “Tidal Evolution of Extra-Solar Planets”
B.S. (Summa cum Laude) Physics Georgia Institute of Technology 2004 May

Positions:

Assistant Prof., Boise State Physics 2014-Present
Carnegie DTM Astronomy Postdoctoral Fellow 2011-2014
External Committee Member/Advisor for Nicole Thom (MS), U of ND, Space Sciences
– Thesis title: “Atmospheric Escape and Orbital Evolution of Exoplanets” 2011-2012
Instructor, U of MD Astronomy Dept. 2010
NASA internship mentor/geology field trip leader 2010, 2011
NASA Postdoctoral Program Fellow, NASA’s Goddard 2009-2011
NASA Earth and Space Sciences Graduate Fellow (NESSF), U of AZ 2008-2009
Graduate Research Associate, U of AZ 2004-2008
Georgia Space Grant Fellow, Jet Propulsion Lab 2004
Caltech Summer Undergraduate Research Fellow, Jet Propulsion Lab 2003

Funded Grant Proposals

“Fossil Cores in the *Kepler* Data”, NASA’s Astrophys. Data Anal. Program 2014-2017
– Proposal PI: Brian Jackson, Carnegie DTM
– Program Point-of-Contact: Doug Hudgins, Douglas.M.Hudgins@nasa.gov
– Total Budget: \$271,200
“The Origins of Close-in Extrasolar Planets”, NASA’s Origins of Solar Systems 2013-2015
– Proposal PI: Kaloyan Penev, Princeton University
– Program Point-of-Contact: Mario R. Perez, mario.perez@nasa.gov
– Total Budget: \$104,000

Service:

Journal Club organizer at Carnegie DTM
Library Committee member at Carnegie DTM
Exoplanet and Astrobiology Journal Club founder at NASA Goddard
Manuscript Referee for *Astrophysical Journal*, *Planetary Science*, *Astrobiology*, *Nature*
Reviewer for *Comparative Climatology of Terrestrial Planets*, UA Press
Panel and External reviewer for NASA ROSES and NSF Astronomy/Astrophysics

Publications:

Refereed Articles

- R. Heller, M. Hippke, & **B. JACKSON**. Modeling the Orbital Sampling Effect of Extrasolar Moons. *ApJ*, 820:88, 2016.
- B. JACKSON** & R. Lorenz. A multiyear dust devil vortex survey using an automated search of pressure time series. *Journal of Geophysical Research: Planets*, 120(3):401–412, 2015. ISSN 2169-9100. 2014JE004712.
- R. D. Lorenz & **B. JACKSON**. Dust devils and dustless vortices on a desert playa observed with surface pressure and solar flux logging. *GeoResJ*, 5:1–11, 2015.
- R. Luger, R. Barnes, E. Lopez, J. Fortney, **B. JACKSON**, & V. Meadows. Habitable Evaporated Cores: Transforming Mini-Neptunes into Super-Earths in the Habitable Zones of M Dwarfs. *Astrobiology*, 15:57–88, 2015.
- G. Vixie, J. W. Barnes, **B. JACKSON**, S. Rodriguez, S. Le Mouélic, C. Sotin, S. MacKenzie, & P. Wilson. Possible temperate lakes on Titan. *Icarus*, 257:313–323, 2015.
- R. D. Lorenz & **B. JACKSON**. Declining rock movement at Racetrack Playa, Death Valley National Park: An indicator of climate change? *Geomorphology*, 211:116–120, 2014.
- R. D. Lorenz, J. M. Norris, **B. JACKSON**, R. D. Norris, J. W. Chadbourne, & J. Ray. Trail formation by ice-shoved "sailing stones" observed at Racetrack Playa, Death Valley National Park. *Earth Surface Dynamics Discussions*, 2:1005–1022, 2014.
- R. D. Norris, J. M. Norris, R. D. Lorenz, J. Ray, & **B. JACKSON**. Sliding Rocks on Racetrack Playa, Death Valley National Park: First Observation of Rocks in Motion. *PLOS ONE*, 9:8, 2014.
- K. Penev, M. Zhang, & **B. JACKSON**. POET: A Model for Planetary Orbital Evolution Due to Tides on Evolving Stars. *PASP*, 126:553–564, 2014.
- J. W. Barnes, J. C. van Eyken, **B. JACKSON**, D. R. Ciardi, & J. J. Fortney. Measurement of Spin-orbit Misalignment and Nodal Precession for the Planet around Pre-main-sequence Star PTFO 8-8695 from Gravity Darkening. *ApJ*, 774:53, 2013.
- B. JACKSON**, C. C. Stark, E. R. Adams, J. Chambers, & D. Deming. A Survey for Very Short-period Planets in the Kepler Data. *ApJ*, 779:165, 2013.
- C. C. Stark, A. P. Boss, A. J. Weinberger, **B. JACKSON**, M. Endl, W. D. Cochran, M. Johnson, C. Caldwell, E. Agol, E. B. Ford, J. R. Hall, K. A. Ibrahim, & J. Li. A Search for Exozodiacal Clouds with Kepler. *ApJ*, 764:195, 2013.
- D. Deming, J. D. Fraine, P. V. Sada, N. Madhusudhan, H. A. Knutson, J. Harrington, J. Blecic, S. Nymeyer, A. M. S. Smith, & **B. JACKSON**. Infrared Eclipses of the Strongly Irradiated Planet WASP-33b, and Oscillations of Its Host Star. *ApJ*, 754:106, 2012.
- B.-O. Demory, M. Gillon, S. Seager, B. Benneke, D. Deming, & **B. JACKSON**. Detection of Thermal Emission from a Super-Earth. *ApJ*, 751:L28, 2012.
- B. JACKSON**, N. K. Lewis, J. W. Barnes, L. Drake Deming, A. P. Showman, & J. J. Fortney. The EVIL-MC Model for Ellipsoidal Variations of Planet-hosting Stars and Applications to the HAT-P-7 System. *ApJ*, 751:112, 2012.
- K. Penev, **B. JACKSON**, F. Spada, & N. Thom. Constraining Tidal Dissipation in Stars from the Destruction Rates of Exoplanets. *ApJ*, 751:96, 2012.
- P. V. Sada, D. Deming, D. E. Jennings, **B. JACKSON**, C. M. Hamilton, J. Fraine, S. W. Peterson,

- F. Haase, K. Bays, A. Lunsford, & E. O’Gorman. Extrasolar Planet Transits Observed at Kitt Peak National Observatory. *PASP*, 124:212–229, 2012.
- D. Deming, P. V. Sada, **B. JACKSON**, S. W. Peterson, E. Agol, H. A. Knutson, D. E. Jennings, F. Haase, & K. Bays. Kepler and Ground-based Transits of the Exo-Neptune HAT-P-11b. *ApJ*, 740:33, 2011.
- R. D. Lorenz, **B. JACKSON**, J. W. Barnes, J. N. Spitale, & J. M. Keller. Ice rafts not sails: Floating the rocks at Racetrack Playa. *American Journal of Physics*, 79(1):2361, 2011a.
- R. D. Lorenz, **B. JACKSON**, J. W. Barnes, J. N. Spitale, J. Radebaugh, & K. H. Baines. Meteorological Conditions at Racetrack Playa, Death Valley National Park: Implications for Rock Production and Transport. *Journal of Applied Meteorology and Climatology*, 50:2361, 2011b.
- R. Barnes, S. N. Raymond, R. Greenberg, **B. JACKSON**, & N. A. Kaib. CoRoT-7b: Super-Earth or Super-Io? *ApJ*, 709:L95–L98, 2010.
- J. H. Debes & **B. JACKSON**. Too Little, Too Late: How the Tidal Evolution of Hot Jupiters Affects Transit Surveys of Clusters. *ApJ*, 723:1703–1710, 2010.
- B. JACKSON**, N. Miller, R. Barnes, S. N. Raymond, J. J. Fortney, & R. Greenberg. The roles of tidal evolution and evaporative mass loss in the origin of CoRoT-7 b. *MNRAS*, 407:910–922, 2010.
- R. D. Lorenz, **B. JACKSON**, & J. W. Barnes. Inexpensive time-lapse digital cameras for studying transient meteorological phenomena: dust devils and playa flooding. *Journal of Atmospheric and Oceanic Technology*, 27:246, 2010a.
- R. D. Lorenz, **B. JACKSON**, & A. Hayes. Racetrack and Bonnie Claire: southwestern US playa lakes as analogs for Ontario Lacus, Titan. *Planet. Space Sci.*, 58:724–731, 2010b.
- P. V. Sada, D. Deming, **B. JACKSON**, D. E. Jennings, S. W. Peterson, F. Haase, K. Bays, E. O’Gorman, & A. Lundsford. Recent Transits of the Super-Earth Exoplanet GJ 1214b. *ApJ*, 720:L215–L218, 2010.
- J. W. Barnes, R. H. Brown, J. M. Soderblom, L. A. Soderblom, R. Jaumann, **B. JACKSON**, S. Le Mouélic, C. Sotin, B. J. Buratti, K. M. Pitman, K. H. Baines, R. N. Clark, P. D. Nicholson, E. P. Turtle, & J. Perry. Shoreline features of Titan’s Ontario Lacus from Cassini/VIMS observations. *Icarus*, 201:217–225, 2009a.
- R. Barnes, **B. JACKSON**, R. Greenberg, & S. N. Raymond. Tidal Limits to Planetary Habitability. *ApJ*, 700:L30–L33, 2009b.
- R. Barnes, **B. JACKSON**, S. N. Raymond, A. A. West, & R. Greenberg. The HD 40307 Planetary System: Super-Earths or Mini-Neptunes? *ApJ*, 695:1006–1011, 2009c.
- B. JACKSON**, R. Barnes, & R. Greenberg. Observational Evidence for Tidal Destruction of Exoplanets. *ApJ*, 698:1357–1366, 2009.
- R. Barnes, S. N. Raymond, **B. JACKSON**, & R. Greenberg. Tides and the Evolution of Planetary Habitability. *Astrobiology*, 8:557–568, 2008.
- B. JACKSON**, R. Barnes, & R. Greenberg. Tidal heating of terrestrial extrasolar planets and implications for their habitability. *MNRAS*, 391:237–245, 2008a.
- B. JACKSON**, R. Greenberg, & R. Barnes. Tidal Evolution of Close-in Extrasolar Planets. *ApJ*, 678:1396–1406, 2008b.
- B. JACKSON**, R. Greenberg, & R. Barnes. Tidal Heating of Extrasolar Planets. *ApJ*, 681:1631–1638, 2008c.
- J. P. Dunn, **B. JACKSON**, R. P. Deo, C. Farrington, V. Das, & D. M. Crenshaw. An Internet Database of Ultraviolet Continuum Light Curves for Seyfert Galaxies. *PASP*, 118:572–579,

2006.

Book Chapters

B. JACKSON, R. Barnes, & R. Greenberg. Tides and Exoplanets. In *Formation and Evolution of Exoplanets*, pages 243–266. 2010.

Conference Abstracts

B. JACKSON, P. Arras, S. Peacock, & K. Penev. Tidal Decay and Disruption of Gaseous Exoplanets. In *American Astronomical Society Meeting Abstracts*, volume 225 of *American Astronomical Society Meeting Abstracts*, page 408.07. 2015.

R. Luger, R. Barnes, E. Lopez, J. Fortney, **B. JACKSON**, & V. Meadows. Habitable Evaporated Cores: Transforming Mini-Neptunes into Super-Earths in the Habitable Zones of M Dwarfs. *Astrobiology*, 15:57–88, 2015.

E. R. Adams, **B. JACKSON**, M. Endl, C. C. Stark, J. Chambers, & D. Deming. A Survey for Very Short-Period Planets in the Kepler Data. In *AAS/Division for Planetary Sciences Meeting Abstracts*, volume 46 of *AAS/Division for Planetary Sciences Meeting Abstracts*, page 210.01. 2014.

B. JACKSON & R. Lorenz. A Multi-Year Dust Devil Vortex Survey Using an Automated Search of Pressure Time-Series. In *AAS/Division for Planetary Sciences Meeting Abstracts*, volume 46 of *AAS/Division for Planetary Sciences Meeting Abstracts*, page 300.05. 2014.

B. JACKSON, C. C. Stark, E. R. Adams, J. E. Chambers, & D. Deming. A Survey for Very Short-Period Planets in the Kepler Data. In *American Astronomical Society Meeting Abstracts #223*, volume 223 of *American Astronomical Society Meeting Abstracts*, page 132.02. 2014.

D. R. Klassen, A. Roman, **B. JACKSON**, & N. Schneider. DPS Listing of Planetary Science Graduate Programs: A Resource for Students and Advisors. In *AAS/Division for Planetary Sciences Meeting Abstracts*, volume 46 of *AAS/Division for Planetary Sciences Meeting Abstracts*, page #212.01. 2014.

R. Luger, R. Barnes, E. Lopez, J. J. Fortney, B. K. Jackson, & V. Meadows. Habitable Evaporated Cores: Converting Mini-Neptunes into Super-Earths in the Habitable Zone of M Dwarfs. In *American Astronomical Society Meeting Abstracts #223*, volume 223 of *American Astronomical Society Meeting Abstracts*, page #325.05. 2014.

K. Penev & **B. JACKSON**. Tidal Alignment of Exoplanets Around Low Mass Stars. In *American Astronomical Society Meeting Abstracts #224*, volume 224 of *American Astronomical Society Meeting Abstracts*, page #416.01. 2014.

B. JACKSON, C. C. Stark, E. R. Adams, G. Anglada-Escudé, N. Law, & M. Endl. A Survey for Very Short-Period Planets in the Kepler Data. In *Kepler Conference II Abstracts*. 2013a.

B. JACKSON, C. C. Stark, E. R. Adams, M. Endl, P. Arras, A. Boss, & D. Deming. A Survey for Very Short-Period Planets in the Kepler Data. In *AAS/Division for Planetary Sciences Meeting Abstracts #45*, volume 45 of *AAS/Division for Planetary Sciences Meeting Abstracts*. 2013b.

B. JACKSON & J. Carlberg. Ellipsoidal Variation Analysis of Kepler Observations Using the EVIL-MC Model. In *AAS/Division for Planetary Sciences Meeting Abstracts #44*, volume 44 of *AAS/Division for Planetary Sciences Meeting Abstracts*. 2012.

B. JACKSON, N. K. Lewis, J. W. Barnes, D. Deming, A. P. Showman, & J. J. Fortney. The EVIL-

- MC Model for Ellipsoidal Variations of Planet-Hosting Stars and Applications to the HAT-P-7 System. In *Cool Stars Proceedings*. 2012.
- M. P. Milazzo, D. K. Weiss, **B. JACKSON**, & J. Barnes. Columnar Jointing on Mars: Earth Analog Studies. In *Lunar and Planetary Institute Science Conference Abstracts*, volume 43 of *Lunar and Planetary Inst. Technical Report*, page 2726. 2012.
- N. Thom & **B. JACKSON**. Atmospheric Mass Loss and Orbital Evolution of Exoplanets. In *Lunar and Planetary Institute Science Conference Abstracts*, volume 43 of *Lunar and Planetary Inst. Technical Report*, page 2717. 2012.
- G. Vixie, J. W. Barnes, **B. JACKSON**, & P. Wilson. Temperate Lakes Discovered on Titan. In *Lunar and Planetary Institute Science Conference Abstracts*, volume 43 of *Lunar and Planetary Inst. Technical Report*, page 2766. 2012a.
- G. Vixie, J. W. Barnes, **B. JACKSON**, & P. Wilson. Temperate Lakes Discovered on Titan. In V. Cottini, C. Nixon, & R. Lorenz, editors, *Titan Through Time; Unlocking Titan's Past, Present and Future*, page 32. 2012b.
- D. K. Weiss, **B. JACKSON**, M. P. Milazzo, & J. W. Barnes. A New Look at Cooling Models for Martian Flood Basalt Columns. In *Lunar and Planetary Institute Science Conference Abstracts*, volume 43 of *Lunar and Planetary Inst. Technical Report*, page 1150. 2012.
- B. JACKSON** & D. Deming. Analysis Of Kepler Observations Of HAT-P-7 b. In *AAS/Division for Extreme Solar Systems Abstracts*, volume 2 of *AAS/Division for Extreme Solar Systems Abstracts*, page 306. 2011a.
- B. JACKSON** & D. Deming. The Effects of Tidal Distortion on Transit Lightcurves. In *EPSC-DPS Joint Meeting 2011*, page 172. 2011b.
- B. JACKSON**, K. Penev, & R. Barnes. Constraining Tidal Dissipation in Stars and Destruction Rates of Exoplanets. In *American Astronomical Society Meeting Abstracts 217*, volume 43, page 402.06. 2011.
- D. K. Weiss, **B. JACKSON**, M. P. Milazzo, & J. W. Barnes. Modeling Cooling Rates of Martian Flood Basalt Columns. *AGU Fall Meeting Abstracts*, page B1769, 2011.
- B. JACKSON**. Hermean Atmospheres of Hot Rocky Exoplanets. In *AAS/Division for Planetary Sciences Meeting Abstracts 42*, volume 42, page 1078. 2010.
- B. JACKSON**, R. Barnes, S. N. Raymond, J. Fortney, & R. Greenberg. Is CoRoT-7 B the Remnant Core of an Evaporated Gas Giant? In *American Astronomical Society Meeting Abstracts 215*, volume 42, page 339.05. 2010.
- B. JACKSON** & J. Debes. Effects of Tidal Evolution of Hot Jupiters on Transit Surveys. In *Cool Stars Conference Abstracts 16*. 2010a.
- B. JACKSON** & J. Debes. How the Tidal Evolution of the Orbits of Hot Jupiters Affect Transit Surveys of Clusters. In *National Capital Area Disks Workshop III*. 2010b.
- B. JACKSON**, R. Barnes, & R. Greenberg. Planetary Transits and Tidal Evolution. In *IAU Symposium*, volume 253 of *IAU Symposium*, pages 217–229. 2009a.
- B. JACKSON**, R. Barnes, S. Raymond, & R. Greenberg. Effects of Secular, Resonant and Tidal Perturbations on Planetary Habitability. In *AAS/Division for Planetary Sciences Meeting Abstracts #41*, volume 41 of *AAS/Division for Planetary Sciences Meeting Abstracts*, page #05.05. 2009b.
- B. JACKSON**, R. Greenberg, & R. Barnes. The Effects of Tides on Close-In Exoplanets. In *American Astronomical Society Meeting Abstracts 213*, volume 41 of *Bulletin of the American Astronomical Society*, page #351.01. 2009c.

- B. JACKSON**, R. Barnes, & R. Greenberg. Tidal Heating of Extrasolar Terrestrial-scale Planets and Constraints on Habitability. In *AAS/Division for Planetary Sciences Meeting Abstracts 40*, volume 40 of *Bulletin of the American Astronomical Society*, page 391. 2008a.
- B. JACKSON**, R. Greenberg, & R. Barnes. Tidal evolution of close-in extra-solar planets. In Y.-S. Sun, S. Ferraz-Mello, & J.-L. Zhou, editors, *IAU Symposium*, volume 249 of *IAU Symposium*, pages 187–196. 2008b.
- B. JACKSON**, R. Barnes, & R. Greenberg. Tidal Evolution of Close-in Extra-Solar Planets. In *American Astronomical Society Meeting Abstracts*, volume 39 of *Bulletin of the American Astronomical Society*, page 857. 2007a.
- B. JACKSON**, R. Greenberg, & R. Barnes. Tidal Evolution of Extrasolar Planets. In *AAS/Division of Dynamical Astronomy Meeting 38*, volume 38 of *AAS/Division of Dynamical Astronomy Meeting*, page #15.02. 2007b.
- B. JACKSON**, C. A. Griffith, & Cassini VIMS Team. VIMS Observations of Titan’s South Polar Haze. In *AAS/Division for Planetary Sciences Meeting Abstracts 37*, volume 37 of *Bulletin of the American Astronomical Society*, page 1569. 2005.
- G. Orton, B. Fischer, M. Ressler, & **B. JACKSON**. Exploring the 18-20 Micron Window in Titan’s Atmosphere: Rotational and Time Variability. In *Geophysical Research Abstracts*, volume 6, page 04044. 2004.

Courses Taught:

Spring 2016: PHYS 341 Mechanics @ Boise State University Physics

– <https://sites.google.com/site/bsu2016phys341/>

PHYS 205 Stellar Astronomy @ Boise State University Physics

– <https://sites.google.com/site/bsu2016phys205wiki/>

Fall 2015: PHYS 104/204 Planets and Astrobiology @ Boise State University Physics

– <https://sites.google.com/site/bsu2015phys104/>

– <https://sites.google.com/site/bsu2015phys204wiki/>

Spring 2015: PHYS 341 Mechanics @ Boise State University Physics

– <https://sites.google.com/site/bsu2015phys341/>

Fall 2014: PHYS 405 Astrophysics @ Boise State University Physics

– <https://sites.google.com/site/bsu2014phys405/>

Spring 2010: ASTR 330 Solar-System Astronomy @ University of Maryland Astronomy

Seminars, Colloquia, and Public Lectures:

2016 Feb 5: Keynote Speaker for Aerospace Day @ Boise State University, Boise ID - Host: Christine Chang Gillespie, Boise State Instfor STEM and Diversity Initiatives

2016 Jan 25: Physics Dept. Colloquium @ Idaho State University, Pocatello ID - Host: Prof. Steven Shropshire

2015 Dec 4: Astronomy Dept. Colloquium @ New Mexico State University, Las Cruces NM - Host: Prof. Jim Murphy

2015 Sep 24: Geosciences Dept. Seminar @ Brigham Young University, Provo UT - Host: Prof. Jani Radebaugh

2015 Sep 23: Physics & Astronomy Dept. Seminar @ Brigham Young University, Provo UT - Host: Prof. Clark Christensen

2015 Sep 4: Physics Dept. Seminar @ Boise State University, Boise ID - Host: Prof. Charles Hanna

2015 Jun 26: Planetary Astronomy Lunch Seminar @ University of Maryland, College Park MD - Host: Dr. Michael Kelley

2014 Oct 27: Geosciences Department Seminar @ Boise State University, Boise ID Host: Prof. David Wilkins

2014 Apr 17: Monthly Meeting Lecture @ Howard Astronomical League, Howard Co., MD Host: Chris Todd

2014 Mar 4: Departmental Seminar @ Boise State Univ., Boise ID Host: Prof. Daryl Macomb

2014 Feb 27: Departmental Seminar @ U of NE, Kearney, Kearney NE Host: Prof. W. Lee Powell

2014 Feb 4: Planetary Astronomy Lunch Seminar (PALS) @ U of MD, College Park MD Host: Dr. Michael Kelley

2013 Dec 19: Department Seminar @ Carnegie DTM, Washington DC – Host: Dr. Alycia Weinberger

2013 Dec 19: Department Seminar @ Carnegie DTM, Washington DC – Host: Dr. Alycia Weinberger

2013 Dec 11: Astronomy Colloquium @ US Naval Observatory, Washington DC – Host: Dr. Mark Stollberg

2013 Sep 24: Exoplanets Seminar @ NASA Goddard, Greenbelt MD – Host: Dr. Marc Kuchner

2013 Sep 12: Dept. of Astronomy TUNA Talk @ University of Virginia, Charlottesville VA – Host: Prof. Phil Arras

2013 Mar 21: Adler Planetarium Invited Seminar, Chicago IL – Host: Dr. Geza Gyuk

2013 Feb 13: Physics and Space Sciences Dept. Colloquium @ Florida Institute of Technology, Melbourne FL – Host: Prof. Terry Oswalt

2012 Nov 20: NASA's Goddard Exoplanets Seminar @ NASA/GSFC, Greenbelt MD – Host: Dr. Marc Kuchner

2012 Nov 14: University of Maryland Astronomy Dept. Colloquium @ University of Maryland, College Park MD – Host: Prof. Richard Mushotzky

2012 Oct 31: Carnegie DTM Colloquium @ Carnegie DTM, Washington DC – Host: Dr. Matt Fouch

2012 Oct 8: Special Talk @ Space Telescope Science Institute (STScI), Baltimore MD – Host: Dr. Anand Sivaramakrishan

2012 Apr 27: Geology Dept. Colloquium @ University of South Florida, Tampa FL - Host: Prof. Matthew Pasek

2012 Mar 1: Astronomy Dept. Lunch Talk @ Vanderbilt University, Nashville TN - Host: Dr. Joshua Pepper

2012 Feb 8: Physics Dept. Colloquium @ Lehigh University, Bethlehem PA - Host: Prof. George McCluskey

2011 Nov 3: Astronomy Dept. Colloquium @ Univ. of Virginia, Charlottesville VA – Host: Prof. Phil Arras

- 2011 Jun 7: Heraeus Seminar, Physikzentrum Bad Honnef, Germany (invited)
- 2011 May 12: Physics and Astronomy Dept. Colloquium @ Georgia State Univ., Atlanta GA - Host: Prof. Michael Crenshaw
- 2011 Feb 1: National Capital Astronomers monthly meeting (invited)
- 2010 May 7: Physics Dept. Colloquium @ Univ. of Idaho, Moscow ID - Host: Prof. Jason Barnes
- 2010 Apr 24: Northern Virginia Astronomy Clubs Astronomy Day (invited)
- 2010 Mar 21: Science and Exploration Director's Science Seminar @ NASA/GSFC, Greenbelt MD - Host: Joseph Nuth
- 2010 Mar 17: Wednesday Lunch Talk (Wunch) @ Princeton Astrophysics Dept., Princeton NJ - Hosts: Tim Brandt and Prof. Adam Burrows
- 2010 Feb 23: Institute for Theoretical Computation Lunch Talk @ Harvard CfA, Boston MA - Host: Dr. Darin Ragozzine
- 2010 Feb 19: Special Planetary Science Seminar @ MIT Earth, Atmospheric, and Planetary Sciences Dept., Boston MA - Host: Prof. Sara Seager
- 2010 Feb 2: Kleigel Planetary Science Seminar @ Caltech Geological and Planetary Sciences Dept., Pasadena CA - Host: Prof. Michael Brown
- 2010 Jan 13: Science Brown-Bag Seminar @ NASA Headquarters, Washington D.C. - Host: Joe Bredekamp
- 2009 Nov 19: Physics and Astronomy Dept. Colloquium @ Franklin and Marshall College, Lancaster PA – Host: Dr. Delphine Perrodin
- 2009 Oct 29: Physics and Astronomy Dept. Colloquium @ State Univ. of New York Stony Brook, Stony Brook NY – Host: Prof. Deane Peterson
- 2009 Oct 27: Astronomy and Astrophysics Dept. Pizza Lunch Seminar @ Columbia Univ., New York NY – Host: Prof. Kristen Menou
- 2009 Sep 17: Exoplanets Group Talk @ Goddard Space Flight Center, Greenbelt MD - Host: Dr. Marc Kuchner
- 2009 Jul 21: Astronomy Dept. Colloquium @ Univ. of Washington, Seattle WA - Host: Dr. Rory Barnes
- 2009 Jun 5: Astronomy Dept. Colloquium @ Univ. of California Santa Cruz, Santa Cruz CA - Host: Prof. Jonathan Fortney

Public Outreach and Education:

Panelist for discussion of science and theater in “Cosmic Conversations” –

2016 Feb

American Assoc. of Physics Teachers New Faculty Workshop, College Park MD – 2015 Jun 22-25
Board Member for Montgomery County MD Science Fair 2013
Judge for Montgomery County MD Science Fair 2012, 2013
Participant in several science documentaries 2011 Aug
Astronomy partner with Towson U.'s Project ASTRO 2011-2012
Astronomy partner with U of AZ Project ASTRO 2005-2006
Regular contributor to "Astronomy" Magazine's "Ask Astro"
Professional NASA media training
Numerous public lectures to amateur astronomy clubs
Numerous press releases, e.g. "The Mysterious Roving Rocks of Racetrack Playa"