

# CURRICULUM VITAE

University of Idaho

**NAME:** Jason W. Barnes

**DATE:** 2019 June 3

**RANK:** Professor

**DEPARTMENT:** Physics

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Room 331  
Campus Stop 440903

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**DATE OF FIRST EMPLOYMENT:** 2008 August 17

**DATE OF TENURE:** 2013 August 18

**DATE OF PRESENT RANK:** 2013 August 19

## EDUCATION:

### Degrees:

|       |                                    |          |    |           |                   |
|-------|------------------------------------|----------|----|-----------|-------------------|
| Ph.D. | University of Arizona              | Tucson   | AZ | 2004 May  | Planetary Science |
| B.S.  | California Institute of Technology | Pasadena | CA | 1998 June | Astronomy         |

### Certificates and Licenses:

Private Pilot License 1998 December

**EXPERIENCE:****Teaching and Research Appointments:**

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|--------------------------------|--|
| 2019 August – present          | Professor of Physics<br>University of Idaho<br>Moscow, Idaho<br>Planetary Science  |
| 2013 August – 2019 August      | Associate Professor of Physics<br>University of Idaho<br>Moscow, Idaho<br>Planetary Science  |
| 2008 August – 2013 August      | Assistant Professor of Physics<br>University of Idaho<br>Moscow, Idaho<br>Planetary Science  |
| 2007 January – 2008 July       | NASA Postdoctoral Program Fellow<br>NASA Ames Research Center<br>Mountain View, CA<br>Dr. William J. Borucki, advisor<br>Characterizing Transiting Planets with <i>Kepler</i>                        |
| 2004 May – 2006 December       | Postdoctoral Research Associate<br>Dr. Robert H. Brown, advisor<br>University of Arizona<br>Tucson, Arizona<br><i>Cassini</i> VIMS studies of Titan's Surface  |
| 1999 September – 2004 May      | Graduate Research Associate<br>Dr. Robert H. Brown, advisor<br>University of Arizona<br>Tucson, Arizona<br>Theoretical and Observational Studies of Extrasolar Planets                               |
| 1999 January – 2004 May        | Graduate Teaching Assistant<br>various instructors (see Teaching Accomplishments)<br>University of Arizona<br>Tucson, Arizona  |
| 1998 September – 1998 December | Graduate Research Assistant<br>Dr. William B. Hubbard, advisor<br>University of Arizona<br>Tucson, Arizona<br>Modelling of Giant Planet Interiors  |
| 1995 – 1998 Summers            | Caltech Summer Undergraduate Research Fellow<br>Dr. Victoria S. Meadows, advisor<br>NASA Jet Propulsion Laboratory<br>Pasadena, CA<br>Analysis of Near-IR Spectral Mapping of Venus and SL-9/Jupiter |

**TEACHING ACCOMPLISHMENTS:**

**Areas of Specialization:** Planetary Science, Astrophysics, Astronomy

**Courses Taught:**

- 2019 Spring Taught double-section of freshman mechanics (Phys211)  
 2018 Fall Taught General Astronomy for non-majors (Phys103)  
 2018 Spring Taught senior-undergrad/graduate level astrophysics (Phys484/584)  
 2017 Fall Taught junior-level analytical mechanics (Phys321)  
 2017 Spring Taught 250-student section of freshman mechanics (Phys211)  
 2016 Spring Taught senior-undergrad/graduate level astrophysics (Phys484/584)  
 2015 Fall Taught junior-level analytical mechanics (Phys321)  
 2014 Fall Taught General Astronomy for non-majors (Phys103)  
 2014 Spring Taught senior-undergrad/graduate level astrophysics (Phys484/584)  
 2013 Spring Taught 2 sections of freshman mechanics (Phys211)  
 2012 Fall Taught junior-level analytical mechanics (Phys321)  
 2012 Spring Taught senior-undergrad/graduate level astrophysics (Phys484/584)  
 2011 Fall Taught freshman-level calculus-based mechanics (Phys211)  
 2011 Spring Taught freshman-level calculus-based mechanics (Phys211)  
 2010 Fall Taught General Astronomy for non-majors (Phys103)  
 2010 Fall Taught one-third of the course Physics of Everyday Life (CorS221)  
 2010 Spring Taught senior-undergrad/graduate level astrophysics (Phys484/584)  
 2009 Fall Taught one-third of the course Physics of Everyday Life (CorS221)  
 2009 Spring Taught freshman-level calculus-based mechanics (Phys211)  
 2008 Fall Taught senior-undergrad/graduate level astrophysics (Phys484/584)  
 2006 Fall Led planetary science field trip to K/T boundary layer in Colorado (PtyS594a)  
 2005 Fall Designed and helped lead planetary science field trip to Baja California (PtyS594a)  
 2003 Spring Teaching Assistant, PtyS206: “The Golden Age of Planetary Exploration”, Dr. Michael Drake  
 2002 Spring Organized planetary science field trip to Washington State  
 PtyS594a: “Graduate Planetary Field Practicum”  
 25 Graduate Students, 3 Postdocs, 5 Professors, Budget of \$13,500.  
 2002 Fall Teaching Assistant, NATS102: “The Universe and Humanity”, Dr. Caitlin Griffith  
 2002 Spring Teaching Assistant, NATS102, Dr. John Lewis  
 2001 Fall Teaching Assistant, NATS102, Dr. Timothy Swindle  
 Rewrote undergraduate lab, “Solar Energy”  
 1999 Spring Teaching Assistant, NATS102, Dr. Robert Brown  
 1998 Spring Undergraduate Teaching Assistant at Caltech, Ay1, Dr. Roger Blandford

**Students Advised:**

Undergraduate Students Advised: Aaron Achord, Derek Arnold, Kevin Baker, Olivia Balemba, Nathan Bartel, Asahel Beckwith, Uplav Bhandari, Kevin Borts, Jacob Bow, Aaron Burton, David Catts, Madison Dabolt, Nathanael Davis, James Hager, Sarah Horvath, Micah Kramer, Kevin Lewallen, Kalyn Lopez, Sarah Lynn, Juan Martinez Cortes, Tanner Mauseth, Kyle McElhiney, Ross Miller, Samuel Myers, Matthew Stone, Cameron Weller, Cory Ytsma

Undergraduates Doing Research: Jacob Bow (2009-2011) – Titan surface maps  
 Sarah Francis (2009 REU student) – Extrasolar planet orbits  
 Jacob Schwartz (2010 REU student) – RADAR views of Titan  
 Ethan Linscott (2011 REU student) – Spin-orbit alignment of KOI-13.01  
 Michael Jones (2012-2013) – Gravity computer game  
 Kairav Joshi (2012-2014) – Why is our inner solar system empty?  
 Corbin Hennen (2012-2014) – Seasonal Titan haze changes  
 Shayne Seubert (2012-2016) – Spin-orbit alignment of KOI-368.01  
 Chase Chivers (2015-2017) – Spectral mapping of Titan  
 Sarah Horvath (2016-2018) – Fitting  $\delta$ -Scuti stars  
 William Miller (2016-2018) – Titan data deliveries  
 Samuel Myers (2016-) – Asteroseismology of  $\delta$ -Scuti stars  
 Mason Footh (2018-) – Mapping Titan  
 Gunnar Edwards (2018-) – Planets around  $\delta$ -Scuti stars  
 Jett Kauffman (2019-) – Titan radiative transfer modeling

Graduate Students: Graham Vixie 2008-2014 graduated PhD  
 Takashi Sasaki 2008-2014 graduated PhD  
 Casey Cook 2010-2014 graduated MS  
 Timothy Hatchett 2012-2015 graduated MS  
 Shannon MacKenzie 2012-2017 graduated PhD  
 Johnathon Ahlers 2012-2018 graduated PhD  
 Rajani Dhingra 2014-present  
 Steven Kreyche 2017-present  
 Daniel Coulter 2018-present  
 Michael Heslar 2018-present  
 William Miller 2019-present  
 Teyen Widdicombe 2019-present

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Brendan Gordon (Graduate student in Music), 2008-2010

Jessica Roberts (pre-doctoral student, graduated from Caltech 2009) 2009-2011

Advised to completion of degree as major professor:

Graham Vixie — M.S. 2009; Ph.D. 2014  
 Takashi Sasaki — M.S. 2011; Ph.D. 2014  
 Casey Cook — M.S. 2014  
 Timothy Hatchett — M.S. 2015  
 Johnathon Ahlers — M.S. 2015; Ph.D. 2018  
 Shannon MacKenzie — M.S. 2015; Ph.D. 2017  
 Rajani Dhingra — M.S. 2017; Ph.D. 2019

Served on graduate committee:

Yukta Timalisina (Ph.D. 2012), Jamie Hass (Ph.D. 2012), Ada Zhan, Ahmed Alnazi (Ph.D. 2017)

**Non-credit Classes, Workshops, Seminars, Invited Lectures, etc.:**

1. “Why it is exciting to be a science student”, talk to incoming freshman class of the University of Idaho College of Science, 2018 August 17.
2. “Idaho’s Total Eclipse”, talk to incoming freshman class of the University of Idaho College of Science, 2017 August 18.

3. “Why it is exciting to be a science student”, talk to incoming freshman class of the University of Idaho College of Science, 2016 August 19.
4. “Why it is exciting to be a science student”, talk to incoming freshman class of the University of Idaho College of Science, 2015 August 21.
5. “Searching for Earths from the *Kepler* Space Telescope”, invited guest lecture at the University of Portland, 2014 October 31.
6. “Why it is exciting to be a science student”, talk to incoming freshman class of the University of Idaho College of Science, 2014 August 22.
7. “Why it is exciting to be a science student”, talk to incoming freshman class of the University of Idaho College of Science, 2013 August 23.
8. University of Idaho, CORS 217 Exploring the Solar System: “Saturn’s Moon Titan”, Guest Lecture, 2012 April 16.
9. University of Idaho, CORS 217 Exploring the Solar System: “Saturn’s Moon Titan”, Guest Lecture, 2010 November 30.
10. University of Idaho, Physics 200 Seminar Course, Moscow, ID: “The *Kepler* Mission and the Hunt for Earth-Like Planets Around Other Stars”, Invited lecture, 2010 October 27.
11. University of Idaho, Department of Electrical Engineering, ECE 591, Moscow, ID: “Engineering Design for an Autonomous Robotic Airplane for Saturn’s Moon Titan”, Invited lecture, 2010 September 23.
12. University of Idaho, Physics 200 Seminar Course, Moscow, ID: “The *Kepler* Mission’s Search for Earth-Like Planets in Other Solar Systems”, Invited lecture, 2009 December 2.
13. University of Idaho, Physics 200 Seminar Course, Moscow, ID: “Saturn’s Moon Titan from *Cassini*”, Invited lecture, 2008 October 1.

**SCHOLARSHIP ACCOMPLISHMENTS:****Publications, Exhibitions, Performances, Recitals:**

(Key: \* – corresponding author; **blue** – Jason W. Barnes; **green** – my student author; **brown** – advisor / former advisor)

**Refereed:**

105. Chandler, Clayton K.; Radebaugh, Jani; McBride, John H.; Morris, Thomas H.; Arnold, Karl; Lorenz, Ralph D.; **Barnes, Jason W.**; Hayes, Alexander G.; Narteau, Clement; Rodriguez, Sebastien; Ritzenour, Tammy, “NEAR-SURFACE STRUCTURE OF A LARGE LINEAR DUNE AND AN ASSOCIATED CROSSING DUNE OF THE NORTHER NAMIB SAND SEA FROM GROUND PENETRATING RADAR: IMPLICATIONS FOR THE HISTORY OF LARGE LINEAR DUNES ON EARTH AND TITAN”,  Aeolian Research, submitted 2018 July 3.
104. Quarles, Billy; **Barnes, Jason W.**; Lissauer, Jack J.; Chambers, John, “OBLIQUITY EVOLUTION OF THE POTENTIALLY HABITABLE EXOPLANET KEPLER-62F”,  Astrobiology, resubmitted 2019 January 15.
103. Martin, Kyle P.; MacKenzie, Shannon M.; **Barnes, Jason W.**, Ytreberg, F. Marty, “Protein Stability in Titan’s Subsurface Water Ocean”,  Astrobiology, in revision 2019 January 23.

↑ submitted, but not yet accepted ↑

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↓ accepted in journal, but not yet published ↓

102. **Ahlers, John P.**; **Barnes, Jason W.**; **Myers, Samuel A.**, “DEALING WITH  $\delta$ -SCUTI STARS: TRANSIT LIGHT CURVE ANALYSIS OF PLANETS ORBITING RAPIDLY ROTATING, SEISMICALLY ACTIVE A/F STARS”,  The Astronomical Journal, accepted 2019 June 10.
101. Lorenz, Ralph D.; Imanaka, Hiroshi; Trainer, Melissa; Osiander, Robert; Hunter, Gary; Mastandrea, Andrew; Turtle, Elizabeth; McKay, Christopher; **Barnes, Jason W.**; Makel, Darby, “HYDROGEN SENSING IN TITAN’S ATMOSPHERE: MOTIVATIONS AND TECHNIQUES”,  Planetary and Space Science, in press 2019 May 20.

↑ accepted but not yet published in dead-tree form ↑

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↓ fully published in dead-tree journal form ↓

100. Lopes, Rosaly M. C.; Wall, Stephen D.; Elachi, Charles; Lorenz, Ralph D.; Solomonidou, Anezina; Birch, Samuel; Mastrogiuseppe, Marco; Poggiali, Valerio; Notarnicola, Claudia; Neish, Catherine; Mitri, Guiseppe; Zebker, Howard; LeGall, Alice; Paillou, Philippe; Tosi, Federico; Janssen, Michael; Wood, Charles; Paganelli, Flora; Lunine, Jonathan; Radebaugh, Jani; Rodriguez, Sebastien; Hayes, Alex; Todi, Federico; Hofgartner, Jason D.; Coustenis, Athena; Schoenfeld, Ashley; Malaska, Michael J.; Soderblom, Jason M.; Stogan, Ellen R.; Farr, Thomas G.; Mitchell, Karl L.; Paul, Ries A.; Zhang, Z.Z.; Turtle, Elizabeth; Alberti, Giovanni; **Barnes, Jason W.**; Callegari, Mattia; Casarano, Domenico; Grima, Cyril; Hemingway, Doug; Karatekin, Ozgur; Lucas, Antoine; Ori, Gian Gabriele; Orosei, Roberto; Riccio, Daniele; Schaller, Emily; Ventura, Bartolomeo; Wye, Lauren, “TITAN AS REVEALED BY THE CASSINI RADAR”,  Space Science Reviews, Volume 215 Issue 4 #33, 2019 June.
99. **MacKenzie, Shannon M.**; **Barnes, Jason W.**; Hedman, Matthew M.; Lucas, Antoine; Turtle, Elizabeth P.; Sotin, Christophe; Hofgartner, Jason; Birch, Samuel, “THE CASE FOR SEASONAL SURFACE CHANGES AT TITAN’S LAKE DISTRICT”,  Nature Astronomy, Vol 1, 2019 April 15.

98. [Dhingra, Rajani](#); [Barnes, Jason W.](#); Brown, Robert H.; Buratti, B. J.; Clark, R. N.; Soderblom, J. M.; Jaumann, Ralph; Rodriguez, Sebastien; LeMouelic, Stephane; Turtle, Elizabeth P.; Perry, Jason; Cottini, Valeria; Jennings, Don, “RAIN-WETTED SURFACE AT THE NORTH POLE OF TITAN FROM THE “WET-SIDEWALK EFFECT””, Geophysical Research Letters, Volume 46, pp1205-1212, 2019 February 16.
97. Le Mouélic, Stéphane; Cornet, Thomas; Rodriguez, Sebastien; Sotin, Christophe; Seignovert, Benoit; [Barnes, Jason W.](#); Brown, Robert H.; Baines, Kevin H.; Buratti, Bonnie J.; Clark, Roger N.; Nicholson, Philip D.; Lasue, J.; Soderblom, Jason M., “The Cassini VIMS archive of Titan: from browse products to global infrared color maps”, Icarus, Vol. 319, pp121-132, doi:10.1016/j.icarus.2018.09.017, 2019 February.
96. [Barnes, Jason W.](#); MacKenzie, Shannon M.; Lorenz, Ralph D.; Turtle, Elizabeth P., “TITAN’S TWILIGHT AND SUNSET SOLAR ILLUMINATION”, The Astronomical Journal, Vol. 156 Issue 5 id247, 2018 November.
95. Lorenz, Ralph D.; Turtle, Elizabeth P.; [Barnes, Jason W.](#); Trainer, Melissa G.; Adams, Douglas S.; Hibbard, Kenneth E.; Sheldon, Colin Z.; Zacny, Kris; Peplowski, Patrick N.; Lawrence, David J.; Ravine, Michael A.; McGee, Timothy G.; Sotzen, Kristin S.; [MacKenzie, Shannon M.](#); Langelaaan, Jacob W.; Schmitz, Sven; Wolfarth, Larry S.; Bedini, Peter, “DRAGONFLY : A ROTORCRAFT LANDER CONCEPT FOR SCIENTIFIC EXPLORATION AT TITAN”, JHU APL Technical Digest, Vol. 34 #3, 2018 October.
94. Rodriguez, S.; Le Mouélic, S.; [Barnes, J. W.](#); Charnay, B.; Sotin, C.; Soderblom, J. M.; Brown, R. H.; [Bow, J.](#); [Vixie, G.](#); Lucas, A.; Courrech du Pont, S.; Narteau, C.; Radebaugh, J.; Maltagliati, L.; Appéré, T.; Hirtzig, M.; Coustenis, A.; Rannou, P.; Griffith, C. A.; Cornet, T.; Bourgeois, O.; Jaumann, R.; Stephane, K.; Baines, K. H.; Buratti, B. J.; Clark, R. N.; Nicholson, P. D., “EQUINOCTIAL DUST STORMS AND AEOLIAN ACTIVITY OVER TITAN’S DUNE FIELDS”, Nature Geoscience, doi:10.1038/s41561-018-0233-2, 2018 September 24.
93. Le Mouélic, S.\*; Rodriguez, S.; Robidel, R.; Rousseau, R.; Seignovert, B.; Sotin, C.; [Barnes, J. W.](#); [Brown, R.H.](#); Buratti, B.; Clark, R.N.; Nicholson, P.D.; Rannou, P., “MAPPING POLAR ATMOSPHERIC FEATURES ON TITAN WITH VIMS: FROM THE DISSIPATION OF THE 2 NORTHERN CLOUD TO THE ONSET OF A SOUTHERN POLAR VORTEX”, Icarus, Vol. 311, pp371-383, 2018 September 1, doi:10.1016/j.icarus.2018.04.028.
92. [Ahlers, John P.](#); [Barnes, Jason W.](#); [Horvath, Sarah A.](#); [Myers, Samuel A.](#), “LASR-GUIDED VARIABILITY SUBTRACTION: THE LINEAR ALGORITHM FOR SIGNIFICANCE REDUCTION”, Astronomy & Astrophysics, Vol. 615, #A128, 2018 July.
91. Giuseppe Mitri\*, Abel Bernd, Alexander Hayes, Anastassios E. Petropoulos, Andre Wong, Andrea Martelli, Andrea d’Ottavio, Athena Coustenis, Audrey Vorburger, Christophe Sotin, Francesca Ferri, Frank Postberg, Gabriel Tobie, J. Schmidt, Jason Soderblom, [Jason W. Barnes](#), Jean Pierre de Vera, Jean-Pierre Lebreton, Jon K. Hillier, Kim Reh, Marco Zannoni, Marco Berga, Nathalie Carasco, Paolo Tortora, Paul Hayne, Peter Wurz, Ralf Srama, Ralph Lorenz, Roberto Orosei, Sascha Kempf, Véronique Vuitton, “EXPLORER OF ENCELADUS AND TITAN (E2T): INVESTIGATING OCEAN WORLDS’ EVOLUTION AND HABITABILITY IN THE SOLAR SYSTEM”, Planetary and Space Science, Vol. 155, pp73-90, 2018 June.
90. [Barnes, Jason W.](#); [MacKenzie, Shannon M.](#); Young, Eliot F.; Trouille, Laura E.; Rodriguez, Sébastien; Sotin, Christophe; Ádámkóvics, Máté; Soderblom, Jason, “SPHERICAL RADIATIVE TRANSFER IN C++ (SRTC++): A PARALLEL MONTE-CARLO RADIATIVE TRANSFER MODEL FOR TITAN”, The Astronomical Journal, Vol. 155 #6, article #264, 2018 June 6.

89. Neish, Catherine D.; Lorenz, Ralph D.; Turtle, Elizabeth P.; **Barnes, Jason W.**; Trainer, Melissa; Stiles, Brian; Kirk, Randolph P.; Hibbitts, Carl A., "STRATEGIES FOR DETECTING BIOLOGICAL MOLECULES ON TITAN", *Astrobiology*, Vol. 18 #5, 2018 May 1, doi:10.1089/ast.2017.1758.
88. **Hatchett, W. Timothy\***; **Barnes, Jason W.**; **Ahlers, John P.**; **MacKenzie, Shannon M.**; Hedman, Matthew M., "UPPER LIMITS ON THE PRESENCE OF RING SYSTEMS AROUND LONG-PERIOD KEPLER GIANT PLANET CANDIDATE KOI-422", *New Astronomy*, Vol. 60, pp 88-94, 2018 April, doi:10.1016/j.newast.2017.11.001.
87. **Dhingra, Rajani D.\***; **Barnes, Jason W.**; Yanites, Brian J.; Kirk, Randolph L., "LARGE CATCHMENT AREA RECHARGES TITAN'S ONTARIO LACUS", *Icarus*, Vol. 299, pp331-338, 2018 January 1, doi:10.1016/j.icarus.2018.04.028.
86. Birch, Sam P.D.\*; Hayes, Alex G.; Dietrich, William; Howard, Andrew D.; Bristow, Charlie; Malaska, Michael J.; Moore, Jeff; Mastrogioseppe, Marco; Hofgartner, Jason D.; Williams, D.A.; White, O.; Soderblom, Jason; **Barnes, Jason W.**; Turtle, Elizabeth; Lunine, Jonathan I.; Wood, Charles; Neish, Catherine; Kirk, Randolph; Stofan, Ellen; Lorenz, Ralph; Lopes, Rosaly M.C., "GEOMORPHOLOGIC MAPPING OF TITAN'S POLAR TERRAINS: CONSTRAINING SURFACE PROCESSES AND LANDSCAPE EVOLUTION", *Icarus*, Vol. 282, pp214-236, 2017 January 15.
85. **Ahlers, John P.**, "INSOLATION AROUND FAST-ROTATORS", *The Astrophysical Journal*, doi: 10.3847/0004-637X/832/1/93, Vol. 832 #1, 2016 November 18.
84. **Barnes, Jason W.\***; Quarles, Billy; Lissauer, Jack J.; Chambers, John; Hedman, Matthew M., "OBLIQUITY VARIABILITY OF A POTENTIALLY HABITABLE EARLY VENUS", *Astrobiology*, doi: 10.1089/ast.2015.1427, Vol. 16, No. 7, 2016 July.
83. Cordier, D.; Cornet, T.\*; **Barnes, J. W.**; Le Bahers, T.; Nna Mvondo, D.; Rannou, P.; Ferreira, A. G., "STRUCTURE OF TITAN'S EVAPORITES", *Icarus* Vol. 270, pp41-56, 2016 May 15.
82. **Ádámkóvics, Máté\***; Mitchell, Jonathan L.; Hayes, Alexander G.; Rojo, Particio; Corlies, Paul; **Barnes, Jason W.**; Barnes, Robert H.; Baines, Kevin H.; Buratti, Bonnie J.; Clark, Roger N.; Nicholson, Philip D.; Sotin, Christophe, "MERIDIONAL VARIATION IN TROPOSPHERIC METHANE ON TITAN OBSERVED WITH AO SPECTROSCOPY AT KECK AND VLT", *Icarus* Vol. 270 pp376-388, 2016 May 15.
81. **MacKenzie, Shannon M.\***; **Barnes, Jason W.**, "COMPOSITIONAL SIMILARITIES AND DISTINCTIONS BETWEEN TITAN'S EVAPORITIC TERRAINS", *The Astrophysical Journal*, Volume 821 Number 1, 2016 April 10.
80. Radebaugh, Jani\*; Ventra, Dario; Lorenz, Ralph D.; Farr, Tom; Kirk, Randy; Hayes, Alex; Makaska, Mike; Birch, Sam; Liu, Zac Y.-C.; Lunine, Jonathan; **Barnes, Jason**; LeGall, Alice; Lopes, Rosaly; Stofan, Ellen; Wall, Steve; Paillou, Phillipe, "ALLUVIAL AND FLUVIAL FANS ON SATURN'S MOON TITAN REVEAL PROCESSES, MATERIALS AND REGIONAL GEOLOGY", *Journal of the Geological Society*, 440, doi:10.1144/SP440.6.
79. **Ahlers, John P.\***; **Barnes, Jason W.**; Barnes, Rory, "SPIN-ORBIT MISALIGNMENT OF TWO-PLANET-SYSTEM KOI-89 VIA GRAVITY DARKENING", *The Astrophysical Journal*, Vol. 814 Number 11, 2015 November 20.
78. **Vixie, Graham\***; **Barnes, Jason W.**; Jackson, Brian; Rodriguez, Sebastien; Le Mouélic, Stéphane; Sotin, Christophe; MacKenzie, Shannon; Wilson, Paul, "POSSIBLE TEMPERATE LAKES ON TITAN", *Icarus*, Vol. 257, pp313-323, 2015 September 1.

77. Ciardi, David R.\*; van Eyken, Julian; **Barnes, Jason**; Beichman, Charles; Carey, Sean; Crockett, Chris; Eastman, Jason; Johns-Krull, Chris; Howell, Steve; Kane, Stephen; Mclane, Jacob; Plavchan, Peter; Prato, Lisa; Stauffer, John; van Belle, Gerard; von Braun, Kaspar, “FOLLOW-UP OBSERVATIONS OF PTFO 8-8695: A 3 MYR OLD T-TAURI STAR HOSTING A JUPITER-MASS PLANETARY CANDIDATE”, The Astrophysical Journal, 2015 August 10.
76. **Barnes, Jason W.\***; Ahlers, Johnathon; Seubert, Shayne; Relles, Howard, “PROBABLE SPIN-ORBIT ALIGNED SUPER-EARTH PLANET CANDIDATE KOI2138.01”, Astrophysical Journal Letters, Vol 808, L38, doi:10.1088/2041-8205/808/2/L38, 2015 August 1.
75. Cook, Casey\*; **Barnes, Jason W.**; Kattenhorn, Simon A.; Hurford, Terry; Radebaugh, Jani; Stiles, Bryan, “GLOBAL CONTRACTION/EXPANSION AND POLAR LITHOSPHERIC THINNING ON TITAN FROM PATTERNS OF TECTONISM”, Journal of Geophysical Research — Planets, Vol 120, Issue 6, pp1220-1236, doi:10.1002/2014JE004645, 2015 July 14.
74. **Barnes, Jason W.\***; Lorenz, Ralph D.; Radebaugh, Jani; Hayes, Alexander G.; Arnold, Karl; Chandler, Clayton, “PRODUCTION AND GLOBAL TRANSPORT OF TITAN’S SAND PARTICLES”, Planetary Science, 4:1, 2015 June 17.
73. Neish, C. D.\*; **Barnes, J. W.**; Sotin, C.; MacKenzie, S.; Soderblom, J. M.; Le Mouélic, S.; Kirk, R. L.; Stiles, B. W.; Malaska, M; Le Gall, A.; **Brown, R. H.**; Baines, K. H.; Buratti, B.; Clark, R. N.; Nicholson, P. D., “SPECTRAL PROPERTIES OF TITAN’S IMPACT CRATERS IMPLY CHEMICAL WEATHERING OF ITS SURFACE”, Geophysical Research Letters, doi:10.1002/2015GL063824, 2015 April 1.
72. MacKenzie, Shannon\*; **Barnes, Jason W.\***; Sotin, Christophe; **Brown, Robert H.**; Buratti, Bonnie J.; Clark, Roger N.; Nicholson, Philip D.; Baines, Kevin H.; Le Mouélic, Stéphane; Rodriguez, Sebastien; Soderblom, Jason; McCord, Thomas B., “EVIDENCE OF TITAN’S CLIMATE HISTORY FROM EVAPORITE DISTRIBUTION”, Icarus, Volume 243, pp191-207, 2014 November 15.
71. Anderson, C. M.\*; Samuelson, R. E.; Achterberg, R. K.; **Barnes, J. W.**; Flasar, F. M., “SUBSIDENCE-INDUCED METHANE CLOUDS IN TITAN’S WINTER POLAR STRATOSPHERE AND UPPER TROPOSPHERE”, Icarus, Vol. 243, pp129-138, 2014 November 15.
70. Sasaki, Takashi\*; **Barnes, Jason W.**, “LONGEVITY OF MOONS AROUND HABITABLE PLANETS”, International Journal of Astrobiology, Volume 13, Issue 3, pp324-336, 2014 October.
69. **Barnes, Jason W.\***; Sotin, Christophe; Soderblom, Jason M.; **Brown, Robert H.**; Hayes, Alexander G.; Donelan, Mark; Rodriguez, Sebastien; Le Mouélic, Stéphane; Baines, Kevin H.; McCord, Thomas B., “CASSINI/VIMS OBSERVES ROUGH SURFACES ON TITAN’S PUNGA MARE IN SPECULAR REFLECTION”, Planetary Science, 3:3, 2014 August 21.
68. Hofgartner, J. D.\*; Hayes, A. G.; Lunine, J. I.; Zebker, H.; Stiles, B. W.; Sotin, C.; **Barnes, J. W.**; Turtle, E. P.; Baines, K. H.; **Brown, R. H.**; Buratti, B. J.; Clark, R. N.; Encrenaz, P.; Kirk, R. D.; Le Gall, A.; Lopes, R. M.; Lorenz, R. D.; Malaska, M. J.; Mitchell, K. L.; Nicholson, P. D.; Paillou, P.; Radebaugh, J.; Wall, S. D.; Wood, C., “TRANSIENT FEATURES IN A TITAN SEA”, Nature Geoscience, Vol. 7, pp493-496, 2014 June 22.
67. Ahlers, Johnathon\*; Seubert, Shayne; **Barnes, Jason W.**, “MEASUREMENT OF THE SPIN-ORBIT ALIGNMENT OF KOI-368.01 FROM ITS GRAVITY-DARKENED KEPLER LIGHTCURVE”, The Astrophysical Journal, Vol. 786. #2, paper 131, 2014 May 10.
66. Rodriguez, S.\*; Garcia, A.; Lucas, A.; Appéré, R.; Le Gall, A.; Reffet, E.; Le Corre, L.; Le Mouélic, S.; Cornet, T.; Courrech du Pont, S.; Narteau, C.; Bourgeois, O.; Radebaugh, J.; Arnold, K.; **Barnes,**

- J. W.**; Sotin, C.; **Brown, R. H.**; Lorenz, R. D.; Turtle, E. P., “GLOBAL MAPPING AND CHARACTERIZATION OF TITAN’S DUNE FIELDS WITH *Cassini*: CORRELATION BETWEEN RADAR AND VIMS OBSERVATIONS”, *Icarus*, Volume 230, pp168-179, 2014 February.
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9. **Barnes, Jason W.\***; **Brown, Robert H.**; Radebaugh, Jani; Buratti, Bonnie J.; Sotin, Christophe; Le Mouelic, Stephane; Rodriguez, Sebastien; Turtle, Elizabeth P.; Perry, Jason; Clark, Roger; Baines, Kevin H.; Nicholson, Phillip D. “CASSINI OBSERVATIONS OF FLOW-LIKE FEATURES IN WESTERN TUI REGIO, TITAN”, Geophysical Research Letters, Volume 33, Issue 16, CiteID L16204 — 2006 August 30.
8. **Brown, Robert H.\***; Clark, Roger N.; Buratti, Bonnie J.; Cruikshank, Dale P.; **Barnes, Jason W.**; Mastrapa, Rachel M. E.; Bauer, J.; Newman, S.; Momary, T.; Baines, K. H.; Bellucci, G.; Capaccioni, F.; Cerroni, P.; Combes, M.; Coradini, A.; Drossart, P.; Formisano, V.; Jaumann, R.; Langevin, Y.; Matson, D. L.; McCord, T. B.; Nelson, R. M.; Nicholson, P. D.; Sicardy, B.; Sotin, C. “COMPOSITION AND PHYSICAL PROPERTIES OF ENCELADUS’ SURFACE”, Science, Volume 311, Issue 5766, pp. 1425-1428 — 2006 March 10.
7. Griffith, C. A.\*; Pentead, P.; Baines, K.; Drossart, P.; **Barnes, J.**; Bellucci, G.; Bibring, J.; **Brown, R.**; Buratti, B.; Capaccioni, F.; Cerroni, P.; Clark, R.; Combes, M.; Coradini, A.; Cruikshank, D.; Formisano, V.; Jaumann, R.; Langevin, Y.; Matson, D.; McCord, T.; Mennella, V.; Nelson, R.; Nicholson, P.; Sicardy, B.; Sotin, C.; Soderblom, L. A.; and Kursinski, R. “THE EVOLUTION OF TITAN’S MID-LATITUDE CLOUDS”, Science, Volume 310, Issue 5747, pp. 474-477 — 2005 October 21.
6. **Barnes, Jason W.\***; **Brown, Robert H.**; Turtle, Elizabeth P.; McEwen, Alfred S.; Lorenz, Ralph D.; Janssen, Michael; Schaller, Emily L.; Brown, Michael E.; Buratti, Bonnie J.; Sotin, Christophe; Griffith, Caitlin; Clark, Roger; Perry, Jason; Fussner, Stephanie; Barbara, John; West, Richard; Elachi, Charles; Bouchez, Antonin H.; Roe, Henry G.; Baines, Kevin H.; Bellucci, Giancarlo; Bibring, Jean-Pierre; Capaccioni, Fabrizio; Cerroni, Priscilla; Combes, Michel; Coradini, Angioletta; Cruikshank, Dale P.; Drossart, Pierre; Formisano, Vittorio; Jaumann, Ralf; Langevin, Yves; Matson, Dennis L.; McCord, Thomas B.; Nicholson, Phillip D.; and Sicardy, Bruno. “A 5-MICRON-BRIGHT SPOT ON TITAN: EVIDENCE FOR SURFACE DIVERSITY”, Science, Volume 310, Issue 5745, pp. 92-95 — 2005 October 7.
5. **Barnes, Jason W.\*** and Fortney, Jonathan J. “TRANSIT DETECTABILITY OF RING SYSTEMS AROUND EXTRASOLAR GIANT PLANETS”, The Astrophysical Journal, Volume 616 pp. 1193-1203 — 2004 December 1.
4. **Barnes, Jason W.\*** and Fortney, Jonathan J. “MEASURING THE OBLATENESS AND ROTATION OF TRANSITING EXTRASOLAR GIANT PLANETS”, The Astrophysical Journal, Volume 588 pp. 545-556 — 2003 May 1.
3. **Barnes, Jason W.\*** and O’Brien, D. P. “STABILITY OF SATELLITES AROUND CLOSE-IN EXTRASOLAR GIANT PLANETS”, The Astrophysical Journal, Volume 575 pp. 1087-1093 — 2002 August 20.
2. Meadows, Victoria\*; Crisp, David; **Barnes, Jason**; Orton, Glenn; Spencer, John. “AAT OBSERVATIONS OF THE SL9 FRAGMENT C, D, G, K, N, R, V, AND W IMPACTS WITH JUPITER: LIGHTCURVES AND IMAGING”, Icarus, Volume 152, Issue 2, pp. 366-383 2001 August.
1. Trilling, D. E.\*; Koerner, D. W.; **Barnes, J. W.**; Ftaclas, C.; **Brown, R. H.** “NEAR-INFRARED CORONAGRAPHIC IMAGING OF THE CIRCUMSTELLAR DISK AROUND TW HYDRAE”, The Astrophysical Journal, Volume 552, Issue 2, pp. L151-L154 2001 May 10.

**Other:**

3. Lorenz, Ralph\*; Jackson, Brian K.; **Barnes, Jason W.**; Spitale, Joseph N.; Radebaugh, Jani; Baines, Kevin H., “Study Finds Wind Unlikely Sole Mover of Death Valley Mystery Rocks”, Bulletin of the American Meteorological Society, 2012 March.
2. Withers, Paul\*; and **Barnes, Jason W.**, “Using Satellites to Probe Extrasolar Planet Formation”. The Astrophysics of Planetary Systems: Formation, Structure, and Dynamical Evolution, International Astronomical Union Symposium #276, doi:10.1017/S1743921312000038, 2012.

1. Stephan, Katrin\*; Jaumann, Ralf; Karkoschka, Erich; **Barnes, Jason W.**; Turtle, Elizabeth, P.; LeCorre, Lucille; Langhans, Mirjam; LeMouelic, Stephane; Tomasko, Martin G.; Lorenz, Ralph D.; Perry, Jason, “BOOK CHAPTER 19: MAPPING PRODUCTS OF TITAN’S SURFACE”, in book Titan from Cassini-Huygens, ISBN: 978-1402092145 Springer 2009 October 1.

**Invited Presentations:**

48. “Age of the Universe”, invited talk at New Saint Andrews College, Moscow, Idaho, 2019 May 2.
47. “The Dragonfly Mission Proposal: Prebiotic Chemistry and a search for Biosignatures on Saturn’s Moon Titan”, invited talk at New Quests in Stellar Astrophysics IV: Astrochemistry, Astrobiology, and the Origin of Life, Puerto Vallarta, Mexico, 2019 April 5.
46. “Dragonfly: A Quadcopter to Explore Saturn’s Moon Titan”, invited talk to the Boise State University Physics Department, Boise, Idaho 2018 April 6.
45. “Titan Spectra Interpreted with a Spherical Radiative Transfer Monte Carlo Model”, invited at the Bear Fight Center, Winthrop, WA, 2016 June 27.
44. “Spin-Orbit Alignment of Extrasolar Planets as a Probe of their Origin and Evolution”, invited talk at the American Physical Society Northwest annual meeting, Pullman, Washington, 2015 May 16.
43. “Titan’s Dynamic Seas”, invited colloquium at the University of California Santa Cruz Institute for Geophysics and Planetary Physics, Santa Cruz, California, 2015 April 17.
42. “Life, Jim, but not as we know it: Prospects for Life in Titan’s Hydrocarbon Seas”, invited colloquium at the SETI Institute, Mountain View, California, 2015 March 3.
41. “Life, Jim, but not as we know it: Prospects for Life in Titan’s Hydrocarbon Seas”, invited colloquium at the University of Idaho Department of Physics, Moscow, Idaho, 2015 February 23.
40. “Searching for Earths from the *Kepler* Space Telescope”, invited guest lecture at the University of Portland, 2014 October 31.
39. “Life, Jim, but Not as We Know It: Prospects for Life in Titan’s Hydrocarbon Seas”, invited colloquium for the University of Washington’s Astrobiology Colloquium Series, 2014 October 14.
38. “Why it is exciting to be a science student”, talk to incoming freshman class of the University of Idaho College of Science, 2014 August 22.
37. “Alignment and Origins of Exoplanets from Transits across Gravity-Darkened Stars”, invited colloquium for the Washington State University Department of Physics, 2014 March 25.
36. “Spin-Orbit Alignment of Exoplanets from Gravity Darkening: Clues to the Origin of Hot Jupiters”, invited colloquium at the Southwest Research Institute in Boulder, CO, 2014 March 14.
35. “Field Studies of Longitudinal Dunes in Namibia as Analogs for Titan”, invited colloquium at the University of Idaho Geology Department, 2014 January 23.
34. “Rapid Precession for a Spin-Orbit Misaligned Planet Transiting a Pre-Main-Sequence Star”, invited lunch seminar at Cornell University Astronomy Department, 2013 December 16.
33. “Why it is exciting to be a science student”, talk to incoming freshman class of the University of Idaho College of Science, 2013 August 23.
32. “Alignment and Origins of Exoplanets from Transits across Gravity-Darkened Stars”, invited colloquium at the Florida Institute of Technology Department of Physics and Space Sciences, 2013 September 20.

31. Carl Sagan Summer Exoplanet Workshop, Caltech, Pasadena, California: “Rings and Other Unusual Features”, Invited Lecture, 2012 July 27.
30. Seattle Museum of Flight, Seattle, Washington: “Flying the Friendly Skies of Saturn’s Largest Moon”, public lecture at the Public Lecture, 2012 May 5.
29. Spokane Astronomical Society, Spokane, Washington: “Autonomous Aviation in Titan’s Atmosphere”, Public Lecture, 2012 May 4.
28. Spokane Astronomical Society, Spokane, Washington: “The Kepler Mission’s New Planetary Systems: Placing the Solar System in Context”, Public Lecture, 2011 November 4.
27. Gonzaga University, Department of Physics, Spokane, Washington: “The Kepler Mission’s New Planetary Systems: Placing the Solar System in Context”, Public Lecture, 2011 November 4.
26. University of Idaho, Department of Physics, Moscow, ID: “Variations in Earth’s Axis Tilt Over Time: How Necessary is a Moon for Climatic Stability?”, Invited Seminar, 2011 October 24.
25. Geological Society of America Annual Meeting, Minneapolis, MN: “From Voyager to Cassini: 30 Years of Exploring Titan’s Geology”, Invited Review Talk, 2011 October 11.
24. Science on Tap, Coeur d’Alene, Idaho: “Pluto’s Demotion”, Public Lecture / Discussion, 2011 February 8.
23. University of Idaho, Department of Physics, Moscow, ID: “Physics of Dry Lakebeds on Earth and Titan”, Invited Seminar, 2010 October 18.
22. University of Idaho, Department of Geology, Moscow, ID: “Dry Lakebeds on Earth and Titan: The Moving Rocks of Racetrack Playa and Titan’s Evaporites”, Invited seminar, 2010 September 2.
21. Idaho EPSCoR Meeting, College of Idaho, Caldwell, ID: “A New Camera for Future Titan Exploration”, Invited Talk, 2010 August 19.
20. Reed College, Department of Physics, Portland, OR: “From Sand Dunes to the Sea on Saturn’s Moon Titan”, Invited Seminar, 2010 February 17.
19. University of Idaho, Department of Physics, Moscow, ID: “AVIATR: Designing a Future Titan Airplane Mission”, Invited Seminar, 2010 January 25.
18. University of Idaho, Department of Physics, Moscow, ID: “Discovering Extrasolar Planets with NASA’s *Kepler* Mission”, Invited Seminar, 2009 November 30.
17. University of Idaho REU Program, Moscow, ID: “*Kepler* and the Search for Earth-Like Planets”, Invited Talk, 2009 July 21.
16. California Institute of Technology (Caltech), Department of Geological and Planetary Sciences, Pasadena, CA: “Composition and Geomorphology of Titan’s Surface from Cassini VIMS”, Invited Seminar, 2009 June 2.
15. American Physical Society Northwest Section Annual Meeting, Vancouver, WA: “Finding and Characterizing Extrasolar Planets with *Kepler*”, Invited Talk, 2009 May 16.
14. University of Washington, Department of Astronomy, Seattle, WA: “Titan – An Oasis in the Outer Solar System”, Invited Seminar, 2009 April 16.
13. University of Idaho Space Grant Fellows Dinner, Moscow, ID: “Launch of NASA’s *Kepler* Spacecraft”, Invited Talk, 2009 April 8.

12. Washington State University, Department of Physics and Astronomy, Pullman, WA: “Titan: Saturn’s Earthly-Looking Moon”, Invited Seminar, 2009 March 31.
11. Spokane Astronomical Society, Spokane, Washington: “The Surface of Titan as Revealed by *Cassini/Huygens*”, Public Lecture, 2009 February 6.
10. Idaho RISE (Research Involving Students and Engineers) program annual banquet dinner, Moscow, ID: “Titan: The Solar System’s Ballooning Paradise”, Invited Presentation, 2008 October 20.
9. University of Idaho, Department of Physics, Moscow, ID: “Cassini and the Case of Titan’s Missing Ethane”, Invited Seminar, 2008 March 24.
8. George Mason University, Department of Physics and Astronomy, Fairfax, VA: “Cassini and the Case of Titan’s Missing Ethane”, Invited Seminar, 2008 February 21.
7. SETI Institute, Mountain View, CA: “Titan’s Sand Dunes: Window to a New World”, Invited Seminar, 2007 November.
6. Planetary Science Institute, Tucson, AZ: “Titan’s Sand Dunes: Window to a New World”, Invited Seminar, 2007 October.
5. University of California Berkeley, Center for Integrative Planetary Science, Berkeley, CA: “Titan’s Sand Seas”, Invited Seminar, 2007 October.
4. University of Arizona, Lunar and Planetary Laboratory, Tucson, AZ: “A VIMS Tour-de-Titan”, Invited Seminar, 2006 March.
3. Ventura County Astronomical Society, annual banquet, Ventura, CA: “Cassini Reveals Titan”, Public Lecture, 2006 December.
2. Sun City West Astronomical Society, Sun City, AZ: “Discovering Titan”, Public Lecture, 2005 November.
1. Green Valley Community Center, Green Valley, AZ: “Discovering Titan”, Public Lecture, 2005 January.

**Professional Meeting Papers and Workshops:**

91. Astronomy NWxSW regional meeting, Vancouver, British Columbia, Canada, Talk, 2018 November 3.
90. Division for Planetary Sciences Meeting, American Astronomical Society, Knoxville, Tennessee, Talk, 2018 October 23.
89. Titan Surface Working Meeting: “Origin and History of Titan’s Water Ice Surface Material”, Talk, 2018 May 10.
88. Lunar and Planetary Science Conference, Houston, Texas: “Dragonfly: Diversity of Mission Sampling Targets”, Poster, 2018 March 20.
87. American Astronomical Society / Division for Planetary Sciences (DPS) meeting, Provo, Utah: “Dragonfly: A New Frontiers Titan Astrobiology Lander”, Poster, 2017 October 18.
86. 5th Planetary Dunes Workshop, St. George, Utah: “Dragonfly: A New Frontiers Titan Dune Lander”, Poster, 2017 May 18.

85. Astrobiology Science Conference, Mesa, Arizona: “Dragonfly: A New Frontiers Titan Astrobiology Lander”, Talk, 2017 April 27.
84. *Cassini* Titan Surface Meeting, Paris, France: “Spherical Radiative Transfer in C++”, Talk, 2016 November 3.
83. Division for Planetary Sciences / European Planetary Science Congress, Pasadena, California: “SRTC++: a New Monte Carlo Radiative Transfer Model for Titan”, Poster, 2016 October 19.
82. *Cassini*/VIMS Science Team Meeting, Berlin, Germany: “VIMS as a Pathfinder for Future Titan Surface Imaging”, Talk, 2016 September 28.
81. American Astronomical Society meeting, San Diego, California: “Obliquity Variations of a Potentially Habitable Early Venus”, Talk, 2016 June 16.
80. International Meeting of Sedimentologists, Marrakech, Morocco: “Physical and Chemical Processes in Titan’s Interdunes”, Talk, 2016 May 25.
79. Geological Society of America Rocky Mountain Section, Moscow, Idaho: “Titan’s Evaporites: Investigating Surface-Atmosphere Interactions in Time”, Talk, 2016 May 18.
78. *Cassini*/VIMS Science Team Meeting, Ithaca, New York: “Interdunes on Titan and Earth”, Talk, 2016 May 12.
77. Extreme Solar Systems III, Waikoloa, HI: “KOI2138.01: First of the Intermediate-Period Spin-Orbit Aligned Super-Earths”, poster, 2015 December 1.
76. Division for Planetary Sciences Meeting, Washington, DC: “KOI2138 – a Spin-Orbit Aligned Intermediate Period Super-Earth”, poster, 2015 November 12.
75. *Cassini* Titan Surface Working Meeting, Moscow, Idaho: “Imaging Titan’s Surface: Future Mission Considerations”, Talk, 2015 September 15.
74. *Cassini* Titan Surface Working Meeting, Moscow, Idaho: “T111 VIMS High-res Tui/Hotei Views”, Talk, 2015 September 14.
73. Fourth International Planetary Dunes Workshop, Boise, Idaho: “Global Connectivity and Transport within Titan’s Sand Sea”, Talk, 2015 May 20.
72. *Cassini*/VIMS Science Team Meeting, Rome, Italy: “Compositional Commonality of 5-Micron-Bright Terrains”, Talk, 2015 May 14.
71. Division for Planetary Sciences of the American Astronomical Society annual meeting, Tucson, AZ: “Production Mechanisms for the Sand on Titan and the Prospects for a Global Sand Sea”, Talk, 2014 November 10.
70. *Cassini* Titan Surface Working Meeting, Ithaca, NY: “Production and Transport of Titan’s Sand Particles”, Talk, 2014 October 8.
69. *Cassini*/VIMS Science Team Meeting, Boston, MA: “Giant Planet Nightside Spectra as Analogs for Extrasolar Planets”, Talk, 2014 May 29.
68. Titan through Time 3 Workshop, Laurel, MD: “Specular Reflections from Titan’s Punga Mare Seen by Cassini/VIMS Indicate Surface Roughness: Waves?”, Talk, 2014 April 9.
67. Lunar and Planetary Science Conference, Houston, TX: “Specular Reflections from Titan’s Punga Mare Seen by Cassini/VIMS Indicate Surface Roughness: Waves?”, Talk, 2014 March 17.

66. *Cassini* *Cassini* Project Science Group meeting, Pasadena, CA: “Roughness Detected on Punga Mare by VIMS: Waves?”, Talk, 2014 February 11.
65. *Cassini* Titan Surface Working Meeting, Melbourne, FL: “Possible Waves on Punga Mare from T85”, Talk, 2014 January 28.
64. *Cassini* Project Science Group Meeting, Pasadena, CA: “Potential Discovery of Wave Activity on Punga Mare from a VIMS Specular Reflection on T85”, Talk, 2014 February 11.
63. *Cassini* Titan Surface Workshop, Melbourne, FL: “Waves on Punga Mare”, Talk, 2014 January 28.
62. *Cassini* VIMS Science Team Meeting, Tucson, AZ: “Waves on Punga Mare”, Talk, 2013 November 13.
61. *Cassini* VIMS Science Team Meeting, Tucson, AZ: “Sand Production and Transport on Titan”, Talk, 2013 November 13.
60. American Astronomical Society Division for Planetary Sciences: “Probing Titan’s North Polar Atmosphere using a Specular Reflection of the Sun”, Talk, 2013 October 8.
59. International Astronomical Union Symposium 299, Victoria, BC, Canada: “Spin-Orbit Misalignment and Rapid Nodal Precession of the First Planet Transiting a Pre-Main-Sequence Star”, Poster, 2013 June 7.
58. *Cassini* VIMS Science Team Meeting, Berlin, Germany: “Titan’s North Polar Atmospheric Opacity from T85 Specular Reflection off of Kivu Lacus”, Talk, 2013 May 1.
57. *Cassini* Titan Surface Working Meeting, Tucson, AZ: “Using the T85 Specular Reflection to Resolve the Degeneracy between Surface and Atmospheric Absorptions”, Talk, 2013 January 30.
56. *Cassini*/VIMS Science Team meeting, Tucson, Arizona: “T85 Specular Reflection: A Titan Rosetta Stone”, Talk, 2012 November 8.
55. International Geological Congress, Brisbane, Australia: “Combining RADAR Imaging with Near-Infrared Spectroscopy for Interpretation of Surface Geology on Saturn’s Moon Titan”, Talk, 2012 August 9.
54. VIMS-Titan Workshop, Nantes, France: “Observational Constraints on Titan’s Hydrological Cycle from Cassini/VIMS”, Talk, 2012 May 25.
53. *Cassini*/VIMS Science Team meeting, Nantes, France: “Update to Post-Rainfall Surface Brightness Evolution”, Talk, 2012 May 23.
52. American Astronomical Society Division for Dynamical Astronomy, Timberline Lodge, OR: “Long-Term Obliquity Variations of a Moonless Earth”, Talk, 2012 May 8.
51. Titan through Time 2, Greenbelt, MD: “VIMS Near-Infrared Imaging and Spectra of Precipitation-Associated Surface Changes”, Talk, 2012 April 3.
50. Lunar and Planetary Science Conference, Houston, TX: “*Cassini*/VIMS Spectra and Time-Evolution of Precipitation-Associated Surface Brightenings on Titan”, Talk, 2012 March 19.
49. *Cassini* Project Science Group (PSG) meeting: “Distribution, Composition, and Texture of Titan’s Evaporites”, Talk, 2012 January 31.
48. *Cassini*/RADAR Dunes Workshop, Pasadena, CA: “VIMS context for RADAR’s Upside-Down Dunes”, Talk, 2012 January 30.

47. Kepler Science Conference, Moffett Field, CA: “Measuring the Spin-Orbit Misalignment of KOI-13.01 from Kepler Transit Photometry Using Gravity Darkening”, Talk, 2011 December 7.
46. *Cassini*/VIMS Science Team Meeting, Tucson, AZ: “Semi-Permanent Surface Spectral Changes from Rainfall”, Talk, 2011 December 1.
45. NASA Outer Planets Assessment Group Meeting, Pasadena, CA: “AVIATR: Titan Airplane”, Talk, 2011 October 20.
44. American Astronomical Society / Division for Planetary Sciences (DPS) Meeting, Nantes, France: “KOI-13.01: A Spin-Orbit Misaligned Giant Planet Orbiting a Fast-Rotating Star”, Talk, 2011 October 4.
43. Extreme Solar Systems 2, Moran, WY: “Measurement of the Spin-Orbit Misalignment of Planet Candidate KOI-13.01 from Gravity Darkening”, Poster, 2011 September 15.
42. *Cassini* Titan Surface Workshop, Pasadena, CA: “Permanent Surface Changes in Titan’s Tropics Seen by VIMS”, Talk, 2011 July 25.
41. Fifth Workshop on Titan Chemistry – Observations, Experiments, Computations, and Modeling; Poipu, HI: “Discovery of Evaporites and Other *Cassini*/VIMS Constraints on Titan’s Surface Chemistry”, Talk, 2011 April 12.
40. *Cassini*/VIMS Science Team Meeting, Pasadena, CA: “Toward a Quantitative Determination of Titan’s Surface Albedos”, Talk, 2011 March 3.
39. American Geophysical Union conference, San Francisco, CA, “*Cassini*/VIMS Discovery of Organic Evaporite Deposits in Titan’s Dry Lakebeds”, Poster, 2011 December 14.
38. American Astronomical Society Division for Planetary Sciences conference, Pasadena, CA: “Constraining Waves on Titan’s Northern Lake Jingpo Lacus using VIMS Specular Reflection Observations”, Talk, 2010 October 8.
37. American Astronomical Society Division for Planetary Sciences conference, Pasadena, CA: “Titan AVIATR - Aerial Vehicle for In Situ and Airborne Titan Reconnaissance”, Poster, 2010 October 5.
36. American Physical Society NorthWest meeting, Walla Walla, WA: “Space Mission Concept for a Nuclear-Powered Airplane for Saturn’s Moon Titan”, Talk, 2010 October 2.
35. International Planetary Probe Workshop, Barcelona, Spain: “Science, Instrumentation, and Operations Concepts for a Titan Airplane”, Talk, 2010 June 16.
34. *Cassini* VIMS team meeting, Rome, Italy: “Time-Evolution of Titan’s Haze from Ta through T67”, Talk, 2010 May 26.
33. Titan Through Time workshop, NASA Goddard Space Flight Center, Greenbelt, MD, “Titan’s atmosphere and surface in 2026: the AVIATR Titan Airplane Mission”, Poster, 2010 April 7.
32. Titan Through Time workshop, NASA Goddard Space Flight Center, Greenbelt, MD, “Titan’s Haze Through a Brief Period of Time”, Talk, 2010 April 7.
31. *Cassini* Titan Surface Workshop, Tucson, AZ: “Empirical Constraints on Titan’s Waves from VIMS Specular Lightcurves”, Talk, 2010 March 15.
30. Lunar and Planetary Science Conference (LPSC), Houston, TX: “AVIATR: Aerial Vehicle for In-situ and Airborne Titan Reconnaissance”, Poster, 2010 March 2.

29. *Huygens* Legacy and Future Titan Exploration workshop, Barcelona, Spain: “AVIATR: Exploring Titan’s Diversity from an Airplane”, Talk, 2010 January 15.
28. *Kepler* Science Team Meeting, Cape Canaveral, Florida: “Transit Lightcurves for Planets Orbiting Fast-Rotating Stars”, 2009 March 3.
27. *Cassini* Titan Surface Workshop, JHU Applied Physics Laboratory, Columbia, Maryland: “*Cassini*/VIMS Titan Observations during the Prime Mission”, 2009 March 12.
26. *Cassini* VIMS Science Team Meeting, SETI Institute, Mountain View, CA: “Titan’s Fog and Haze”, 2009 April 6.
25. *Cassini* VIMS Science Team Meeting, University of Arizona, Tucson, AZ: “VIMS Titan Observations during the Primary Mission”, 2008 October 27.
24. American Astronomical Society Division for Planetary Sciences Conference, Cornell University, Ithaca, NY: “Evidence for Past Lake-Level Change in Titan’s Ontario Lacus”, 2008 October 13.
23. American Astronomical Society Conference, St. Louis, MO: “The Effects of Dynamically-Driven Shapes of Extrasolar Giant Planets on Transit Lightcurves”, 2008 June 1.
22. International Astronomical Union (IAU) Transiting Planets Conference, Cambridge, MA: “Detecting Extrasolar Moons with Kepler”, 2008 May 20.
21. Planetary Dunes Workshop, Alamogordo, NM: “Imaging and Spectroscopy of Titan’s Dunes in the Near-Infrared”, 2008 April 30.
20. *Cassini* Titan Surface Workshop, SETI Institute, Mountain View, CA: “Geomorphology of Ontario Lacus from VIMS/T38”, internal Cassini Titan Surface Workshop, 2008 February 4 (host).
19. American Astronomical Society Conference, Austin, TX: “Detectability and Lightcurves of Transiting Planets on Eccentric Orbits”, 2008 January 10.
18. American Geophysical Union Conference, San Francisco, CA: “Photoclinometry, Morphometry, and Spectroscopy of Titan’s Sand Dunes from Cassini / VIMS” 2007 December 11.
17. American Astronomical Society Division of Planetary Sciences Meeting, Orlando, FL: “Cassini/VIMS Near-Infrared Imaging and Spectroscopy of Titan’s Sand Dunes”, Talk, 2007 October.
16. Workshop on Ices, Oceans, and Fire: Satellites of the Outer Solar System, Boulder, CO: “Titan as an Icy Moon”, Talk, 2007 August.
15. *Cassini* Titan Surface Workshop, Flagstaff, AZ: “Near-IR Imaging and Spectroscopy of Titan’s Sand Dunes and Geologic History of Sinlap Crater”, Talk, 2007 July.
14. CIPS Titan workshop II: Titan after Cassini, Berkeley, CA: “Titan’s Surface in the Near-IR”, Invited review talk, 2007 May.
13. Lunar and Planetary Science Conference, Houston, TX: “Near-Infrared Spectral Mapping of Titan’s Mountains and Channels”, Talk, 2007 March.
12. *Cassini* Titan Surface Workshop, Noordwijk, Netherlands: “Near-Infrared Spectral Mapping of Titan’s Mountains and Channels”, Talk, 2007 February.
11. American Geophysical Union Conference, San Francisco, CA: “Studies of Titan’s 5-Micron-Bright Regions Using Combined VIMS and ISS Observations”, Talk 2006 December.

10. American Astronomical Society Division of Planetary Sciences Conference, Pasadena, CA: “Global Spectral Diversity of Titan’s Surface”, Talk, 2006 October.
9. *Cassini* Titan Surface Workshop, Boulder, CO: “Global Maps of Titan from VIMS”, Talk, 2006 April.
8. Lunar and Planetary Science Conference, Houston, TX: “Titan’s Enigmatic 5-Micron-Bright Terrain”, Talk, 2006 March.
7. *Cassini* Titan Surface Workshop, Tucson, AZ: “Preliminary Results from VIMS Spectral Unit Classification”, Talk, 2005 November.
6. American Astronomical Society Division of Planetary Sciences Conference, Cambridge, UK: “The Brightest Spot on Titan”, Poster, 2005 October.
5. Lunar and Planetary Laboratory Conference, Tucson, AZ: “Extrasolar Planets: Recent Developments and Future Expectations”, Invited review talk, May 2004.
4. American Astronomical Society Division of Planetary Sciences Conference, Monterey, CA: “Detectability of Planetary Rings around Transiting Extrasolar Giant Planets”, Talk, 2003 October.
3. Scientific Frontiers in Research on Extrasolar Planets conference, Washington, DC: “Galactic Open Cluster Arizona Transit Survey”, Poster, June 2002.
2. American Astronomical Society Division of Planetary Sciences Conference, Birmingham, AL: “Measuring the Oblateness and Rotation of Transiting Extrasolar Giant Planets”, Poster, 2002 October.
1. American Astronomical Society Division of Planetary Sciences Conference, New Orleans, LA: “Stability of Satellites around Close-in Extrasolar Giant Planets”, Talk, 2001 November.

**Grant Support:**

**Source:** NASA *Cassini* Data Analysis Program

**Title:** Exploring Titan's "Wet Sidewalk Effect"

**PI:** Jason W. Barnes (UIIdaho)

**Co-I** Shannon MacKenzie (JHU/APL)

**Award Amount:** \$337,619.19 over 3 years

**Period Covered by Award:** 2019 January 1 - 2021 December 31

**Type:** external, competed, PI      **Status:** submitted 2018 June 22

**Source:** NASA *Cassini* Data Analysis Program

**Title:** Jupiter and Saturn as Brown Dwarf Analogs

**PI:** Jason W. Barnes (UIIdaho)

**Co-I** Jonathan J. Fortney (UCSC)

**Award Amount:** \$401,810.68 over 3 years

**Period Covered by Award:** 2019 January 1 - 2021 December 31

**Type:** external, competed, PI      **Status:** submitted 2018 August 14

**Source:** Idaho NASA EPSCoR Research Initiation Grant

**Title:** Imaging for a Future Titan Orbiter

**PI:** Jason W. Barnes (UIIdaho)

**Award Amount:** \$45,000 over 6 months

**Period Covered by Award:** 2019 January 1 - 2019 May 31

**Type:** external, competed, PI      **Status:** current

**Source:** NASA Habitable Worlds

**Title:** Tidal Obliquity Variations of Potentially Habitable Planets

**PI:** Jason W. Barnes (UIIdaho)

**Co-I** Jack J. Lissauer (NASA Ames)

**Co-I** Billy Quarles (University of Oklahoma)

**Award Amount:** \$211,096 over 2 years

**Period Covered by Award:** 2018 December 10 - 2020 December 9

**Type:** external, competed, PI      **Status:** funding imminent; delayed due to gov't shutdown

**Source:** NASA New Frontiers

**Title:** Dragonfly

**PI:** Elizabeth Turtle (JHU/APL)

**Deputy PI** Jason W. Barnes (UIIdaho)

**Award Amount:** potentially \$849,000,000 over 21 years

**Award Amount:** \$4,000,000 over 1 year for Phase A

**Period Covered by Award:** 2018 January 1 - 2038 September 30

**Type:** external, competed, Deputy PI      **Status:** submitted 2017 April 27, selected for Phase A 2017 December 20

**Source:** NASA Cassini Data Analysis & Participating Scientists

**Title:** Waves and Rain on Titan from Specular Sun Glints

**PI:** Jason W. Barnes (UIIdaho)

**Co-I** Jason M. Soderblom (MIT)

**Co-I** Christophe Sotin (JPL/Caltech)

**Award Amount:** \$404,571.10 over 3 years

**Period Covered by Award:** 2015 June 1 - 2018 May 31

**Type:** external, competed, PI      **Status:** current

**Source:** NASA Planetary Data Archiving, Restoration, and Tools  
**Title:** Archival of Cassini VIMS, ISS, and RADAR Global Datamap Products for Titan  
**PI:** [Jason W. Barnes \(UIdaho\)](#)  
**Co-I** Elizabeth Turtle (JHU/APL), Ralph Lorenz (JHU/APL)  
**Co-I** Jason Perry (U. Arizona)  
**Award Amount:** \$242,225 over 3 years  
**Period Covered by Award:** 2015 June 1 - 2018 May 31  
**Type:** external, competed, **PI**     **Status:** current

**Source:** NASA Earth and Space Sciences Fellowship  
**Title:** Physical Processes in Titan's Arctic  
**PI:** [Jason W. Barnes \(UIdaho\)](#)  
**Graduate Fellow:** Shannon MacKenzie **Award Amount:** \$90,000 over 3 years  
**Period Covered by Award:** 2014 October 1 - 2017 September 30  
**Type:** external, competed, **PI**     **Status:** current

**Source:** Cassini / JPL / University of Arizona  
**Title:** Analysis of Titan's Surface and Atmosphere from Proprietary Cassini/VIMS Data  
**PI:** [Jason W. Barnes \(UIdaho\)](#)  
**Award Amount:** \$90,000 over 3 years  
**Period Covered by Award:** 2014 October 1 - 2017 September 30  
**Type:** external, subcontract, **PI**     **Status:** current

**Source:** NASA Astrobiology: Exobiology and Evolutionary Biology  
**Title:** Obliquity Variations of Potentially Habitable Worlds  
**PI:** [Jason W. Barnes \(UIdaho\)](#)  
**Co-I** Jack J. Lissauer (NASA Ames)  
**Award Amount:** \$232,635.91 over 3 years  
**Period Covered by Award:** 2014 July 10 - 2017 July 9  
**Type:** external, competed, **PI**     **Status:** current

**Source:** NASA Astrophysics Data Analysis Program  
**Title:** Origins of Intermediate-Period Planets from Spin-Orbit Alignment  
**PI:** [Jason W. Barnes \(UIdaho\)](#)  
**Award Amount:** \$271,571 over 3 years  
**Period Covered by Award:** 2014 May 14 - 2017 May 13  
**Type:** external, competed, **PI**     **Status:** current

**Source:** NSF Astronomy and Astrophysics Grant Program  
**Title:** Atmospheric and Surface Composition of Titan from Specular Reflections  
**PI:** [Jason W. Barnes \(UIdaho\)](#)  
**Award Amount:** \$174,337 over 2 years  
**Period Covered by Award:** 2013 August 1 - 2016 July 31  
**Type:** external, competed, **PI**     **Status:** current

**Source:** NASA Cassini Data Analysis and Participating Scientists  
**Title:** Distribution, Composition, and Texture of Titan's Evaporites  
**PI:** [Jason W. Barnes \(UIdaho\)](#)  
**Co-I:** —  
**Award Amount:** \$315,379 over 3 years (\$315,379 to Barnes)  
**Period Covered by Award:** 2012 January 1 - 2014 December 31  
**Type:** external, competed, **PI**     **Status:** ended

- Source:** NASA MOST Guest Observer Program  
**Title:** MOST Photometry of HD80606b at Periastron  
**PI:** [Jason W. Barnes \(UIIdaho\)](#)  
**Co-I:** Jason Rowe (SETI/NASA Ames Research Center), Jonathan Fortney (UCSC Astronomy)  
**Award Amount:** \$35,000 over 1 year (\$25,752 to Barnes)  
**Period Covered by Award:** 2010 February 1 - 2011 January 31  
**Type:** external, competed, **PI**     **Status:** ended
- Source:** NASA Outer Planets Research  
**Title:** Global Patterns of Tectonism on Titan  
**PI:** [Jason W. Barnes \(UIIdaho\)](#)  
**Co-I:** Simon Kattenhorn (UIIdaho Geology), Terry Hurford (NASA Goddard Space Flight Center)  
**Award Amount:** \$333,918.68 over 3 years (\$173,603 to Barnes)  
**Period Covered by Award:** 2010 October - 2014 September  
**Type:** external, competed, **PI**     **Status:** ended
- Source:** Idaho Space Grant Consortium  
**Title:** Is Saturn Unique?  
**PI:** [Jason W. Barnes \(UIIdaho\)](#)  
**Award Amount:** \$50,000 over 2 years  
**Period Covered by Award:** 2013 August 1 - 2016 July 31  
**Type:** internal, competed, **PI**     **Status:** current
- Source:** NASA Astrobiology: Exobiology and Evolutionary Biology  
**Title:** Orbital Stability of Habitable Moons and Moons of Habitable Planets  
**PI:** [Jason W. Barnes \(UIIdaho\)](#)  
**Co-I:** —  
**Award Amount:** \$175,516.07 total over 3 years (\$175,516.07 to Barnes)  
**Period Covered by Award:** 2009 June 22 - 2013 June 21  
**Type:** external, competed, **PI**     **Status:** ended
- Source:** NASA Outer Planets Research Program  
**Title:** The Role of Sand in Titan's Geologic Cycle  
**PI:** [Jason W. Barnes \(UIIdaho\)](#)  
**Co-I:** —  
**Award Amount:** \$174,144 over 3 years (\$174,144 to Barnes)  
**Period Covered by Award:** 2009 July 15 - 2013 July 14  
**Type:** external, competed, **PI**     **Status:** ended
- Source:** NASA Cassini Data Analysis & Participating Scientists  
**Title:** Seas, Lakes, Channel Networks and Hillslopes  
**PI:** Alexander G. Hayes (Cornell)  
**Co-I:** Antoine Lucas, [Jason W. Barnes](#), William Detrich  
Randolph Kirk, Karl Mitchell, Elizabeth Turtle  
**Sub-Award Amount:** \$17,180.45 over 3 years to UIIdaho  
**Period Covered by Award:** 2013 October 1 - 2016 September 30  
**Type:** external, competed, Co-I     **Status:** current
- Source:** NASA Cassini Data Analysis Program  
**Title:** Mapping, Characterization, and Analysis of Channel/Valley Features on Titan  
**PI:** Devon Burr, University of Tennessee, Knoxville  
**Co-I:** [Jason W. Barnes \(UIIdaho\)](#)  
**Award Amount:** \$5089 over 2 years to CoI Barnes

**Period Covered by Award:** 2008 October - 2010 September  
**Type:** external, competed, Co-I      **Status:** ended

**Source:** NASA Outer Planets Research Program

**Title:** Dunes on Titan: Dune properties, global winds, and climate  
**PI:** Jani Radebaugh, Brigham Young University  
**Co-I:** Jason W. Barnes (UIIdaho), Elizabeth Turtle (JHU/APL)  
**Sub-Award Amount:** \$15,048 for 3 years to CoI Barnes  
**Period Covered by Award:** 2009 August 15 - 2012 November 30  
**Type:** external, competed, Co-I      **Status:** ended

**Source:** NSF Astronomy & Astrophysics

**Title:** A Long Baseline Investigation of Clouds, Haze, and Methane Distributions on Titan  
**PI:** Eliot F. Young, SouthWest Research Institute (SwRI)  
**Co-PI:** Jason W. Barnes (UIIdaho)  
**Award Amount:** \$30,000 over 3 years for Co-PI Barnes  
**Period Covered by Award:** 2009 November - 2012 October  
**Type:** external, competed, Co-I      **Status:** ended

**Source:** NASA/U. Arizona *Cassini* Visual and Infrared Mapping Spectrometer Science Team

**Title:** Travel and Logistical Support for VIMS Titan Surface Science  
**subaward PI:** Jason W. Barnes (UIIdaho)  
**Award Amount:** \$155,000 over 5 years (\$155,000 to Barnes)  
**Period Covered by Award:** 2008 October - 2013 September  
**Type:** external, non-competed, subaward      **Status:** ended

**Source:** NASA Jet Propulsion Laboratory

**Title:** Building Toward the Design of a Next-Generation Titan Imaging Spectrometer  
**PI:** Jonathan Lunine (U. Arizona)  
**Co-I:** Jason W. Barnes (UIIdaho)  
**Sub-Award Amount:** \$9000 for 1 year (\$9000 to Barnes)  
**Period Covered by Award:** 2009 June 15 - 2009 August 31  
**Type:** external, non-competed, subaward      **Status:** ended

**Source:** NASA Jet Propulsion Laboratory

**Title:** Development of a Camera/Imaging Spectrometer Concept Relevant to Outer Planet Science-Goals  
**PI:** Jonathan Lunine (U. Arizona)  
**Co-I:** Jason W. Barnes (UIIdaho)  
**Sub-Award Amount:** \$9800 for 1 year (\$9800 to Barnes)  
**Period Covered by Award:** 2010 June 15 - 2010 August 31  
**Type:** external, non-competed, subaward      **Status:** ended

**Source:** Idaho Space Grant Consortium Research Initiation Grant

**Title:** Characterizing Transiting Extrasolar Planets with NASA's *Kepler* Mission  
**PI:** Jason W. Barnes (UIIdaho)  
**Co-I:** — **Award Amount:** \$50,000 over 2 years (\$50,000 to Barnes)  
**Period Covered by Award:** 2009 June 1 - 2011 March 15  
**Type:** internal, competed, PI      **Status:** ended

**Source:** Idaho Space Grant Consortium Research Initiation Grant

**Title:** AVIATR: A Titan Airplane Mission to be Proposed to the NASA Discovery Program  
**PI:** Jason W. Barnes (UIIdaho)  
**Co-I:** David Atkinson (UIIdaho Electrical Engineering) **Award Amount:** \$50,000 over 2 years (\$50,000

to Barnes)

**Period Covered by Award:** 2010 March 31 - 2012 March 15

**Type:** **internal, competed, PI**      **Status:** **ended**

**Source:** Idaho NASA EPSCoR Collaboration Grant

**Title:** Next-Generation Camera for a Future Mission to Saturn's Moon Titan

**PI:** **Jason W. Barnes**

**Co-I:** — **Award Amount:** \$3967 for 1 year (\$3967 to Barnes)

**Period Covered by Award:** 2009 October - 2010 September

**Type:** **internal, competed, PI**      **Status:** **ended**

**Source:** NASA EPSCoR Research Initiation Grant

**Title:** AVIATR Unmanned Aerial Explorations of Titan

**PI:** **Jason W. Barnes (UIdaho)**

**Co-I:** David Atkinson (UIdaho Electrical Engineering), Simon Kattenhorn (UIdaho Geology)

**Award Amount:** \$30,000 over 1 years (\$30,000 to Barnes)

**Period Covered by Award:** 2010 August 1 - 2011 July 31

**Type:** **internal, competed, PI**      **Status:** **ended**

**Source:** University of Idaho (VP Research, Colleges of Science & Engineering)

**Title:** Engineering to Propose AVIATR to the NASA Discovery Program

**PI:** **Jason W. Barnes (UIdaho)**

**Co-I:** David Atkinson (UIdaho Electrical Engineering), Simon Kattenhorn (UIdaho Geology)

**Award Amount:** \$25,000 one-time (\$25,000 to Barnes)

**Awarded:** 2010 May

**Type:** **internal, non-competed, PI**      **Status:** **ended**

**Source:** *Cassini* Visual and Infrared Mapping Spectrometer Science Team

**Title:** Travel and Logistical Support for VIMS Titan Surface Science

**subaward PI:** **Jason W. Barnes (SETI Institute)**

**Award Amount:** \$12,278

**Period Covered by Award:** 2007 October - 2008 September

**Type:** **external, non-competed, subaward**      **Status:** **ended**

**Source:** NASA Postdoctoral Program

**Title:** Characterization of *Kepler*'s Transiting Extrasolar Giant Planets

**PI:** **Jason W. Barnes (NASA Ames Research Center)**

**Award Amount:** \$65,000/year (2 years)

**Period Covered by Award:** 2007 January - 2008 December

**Type:** **external, competed, fellowship**      **Status:** **ended**

**Honors and Awards:**

- 2003 Winner of the Kuiper Memorial Award for excellence  
in academic work and research from the University  
of Arizona Lunar and Planetary Laboratory.
- 
- 2014 Presidential Mid-Career Award recipient at  
University of Idaho

**SERVICE:****University:****Major Committee Assignments:**

|   |              |
|---|--------------|
| Chair, Observatory Committee, 2008 September - present  | Departmental |
| Member, Recruitment and Retention Committee, 2008 September - present   | Departmental |
| Member, Safety Committee, 2010 Spring   | Departmental |
| Member, Physics department chair search committee, 2010 Spring  | Departmental |
| Member, Physics instructor search committee, 2009 Fall  | Departmental |
| Member, Physics instructor search committee, 2010 Fall  | Departmental |
| Member, Physics instructor search committee, 2011 Spring  | Departmental |
| Member, Laboratory coordinator search committee, 2011 Spring  | Departmental |
| Member, Biophysics faculty search committee, 2012 Fall - 2014 Spring  | Departmental |
| Member, Bylaws Committee, 2013 October - 2014 May   | Departmental |
| Chair, Curriculum Revamp Committee, 2014 August - 2015 May  | Departmental |
| Member, Curriculum Committee, 2015 August - present   | Departmental |
| Member, Bylaws Committee, 2017 November - present   | Departmental |
| Chair, Physics Chair Search Committee, 2018 September - present   | Departmental |
| Member, Austin Lecture Committee, 2011 Nov - 2014 June  | College      |
| Core Science Representative Member,<br>Undergraduate Committee on General Education (UCGE), 2011 Sep - 2012 Aug<br>meets 1.5 hours/week | University   |
| Member, Contract Administrator search committee<br>for Office of Sponsored Programs, 2012 January - February                            | University   |

**University Service:**

**Department** Advertised Physics Department at Moscow High School Recruiting Fair, 2010 February 11.

**Department** Hosted prospective undergraduate student Madeline Magnuson, 2009 March 30.

**Department** Hosted prospective undergraduate student Brady Pearson, 2009 June 15.

**Department** Hosted prospective graduate student Paul Williams, 2009 June 26.

**Department** Hosted prospective undergraduate student Benjamin Knapp, 2009 October 29.

**Department** Hosted prospective undergraduate student Justin Rogow, 2010 June 30.

**Department** Hosted prospective undergraduate student Matthew Shubert, 2010 November 3.

**Department** Hosted prospective undergraduate student Shayne Seubert, 2010 November 5.

**Department** Hosted prospective undergraduate transfer student Ian Kirk, 2012 April 27.

**Department** Hosted prospective undergraduate student Travis Glenn, 2012 July 24.

**Department** Hosted prospective undergraduate student Hailee Blunt, 2012 October 3.

**Department** Hosted prospective undergraduate student Sleight Smith, 2014 Spring.

**College** Recommended and helped to host Dr. Carolyn Porco, 2009 College of Science Austin Memorial Lecture speaker.



**Editorial Services:**

Managing Guest Editor for the Titan, Saturn, and Saturn's Magnetosphere special issue of Planetary and Space Science, 2008 August - 2009 December.

Editorial board member for the journal Planetary Sciences, 2010 June 23 - 2011 December 8.

Associate Editor, Planetary Sciences, 2011 December 8 - 2015 October.

Served as referee for 46 papers for refereed journals The Astrophysical Journal, The Astrophysical Journal — Letters, The Astronomical Journal, Astronomy and Astrophysics, Icarus, Geophysical Research Letters, Nature, Nature Geoscience, Nature Communications, Remote Sensing, Journal of Geophysical Research — Planets, Astrobiology, Monthly Notices of the Royal Astronomical Society, Planetary and Space Science, Reports on Progress in Physics, and Proceedings of the Astronomical Society of Japan.

Chaired NASA Outer Planets Research grant proposal evaluation subpanel, 2010 March 25 - 2010 June 11.

Served on grant proposal review panels for the NASA *Cassini* Data Analysis Program (2007), the NSF Astronomy/Astrophysics CAREER Program (2008), the NASA Outer Planets Research (OPR) program (2011), the NASA *Kepler* Participating Scientist program (2013), NASA Exoplanets Research Program (XRP) (2015).

External reviewer for for 28 different proposals in the NASA *Cassini* Data Analysis Program, the NASA Outer Planets Research Program, the NASA Jupiter Data Analysis Program, the NASA Postdoctoral Program, the NASA Origins Program, the NASA New Frontiers Data Analysis Program, and the Netherlands Organisation for Scientific Research.

Served on mission review panel for NASA Discovery Step-2 (2012) — hired as consultant for one month of work for which NASA paid me \$150/hr.

Served on space mission instrument review panel for NASA JUICE (2012).

Served on space mission instrument review panel for NASA Europa Clipper (2014-2015).

Served on Europa Enhancement Assessment Panel for NASA, 2015 November - 2016 March.

Served as external letter writer for tenure review in the University of Alaska Anchorage Department of Physics & Astronomy (2017).

**Outreach Service:**

Interviewed for article in The Inlander, 2019 May 15.

<https://www.inlander.com/spokane/u-of-i-scientists-are-learning-more-about-what-makes-titan-so-earth>

Press release and associated articles, “New Study Finds Evidence of Changing Seasons, Rain on Titan's North Pole”, American Geophysical Union, 2019 January 16

<https://news.agu.org/press-release/new-study-finds-evidence-of-changing-seasons-rain-on-titans-north>

Interviewed for article in Idaho State Journal, “Brace Yourself, it's a Super Blood Wolf Moon Total Lunar Eclipse coming our way”, 2019 January 15.

<https://www.idahostatejournal.com/news/local/brace-yourself-it-s-a-super-blood-wolf-moon-total/arti>

Student Rajani Dhingra interviewed for Moscow-Pullman Daily News, Spokane Spokesman-Review regarding New Horizons flyby, 2019 January 8 <http://www.spokesman.com/stories/2019/jan/08/university-of-idaho-g>

Live Boise Public Radio interview about discovery of Dust Storms on Titan, 2018 October 2.

<http://www.boisestatepublicradio.org/post/university-idaho-researcher-discovers-dust-storms-titan#>

Email interview with German journalist Thomas Schumann regarding Flensburg Sinus on Titan, 2018 August 7.

Interviewed by the Lewiston Tribune (Inland 360) about the Perseid meteor shower, 2018 August 1.

Email interview with Polish magazine Wiedza i Zycie about Dragonfly, 2018 June 19.

Interviewed for Boise Public Radio show Idaho Matters, aired 2018 May 1. <http://boisestatepublicradio.org/post/drag>

Gave public lecture in Boise, Idaho 2018 April 6. Title: “Dragonfly: A Quadcopter to Explore Saturn’s Moon Titan”.

University of Idaho press release about Dragonfly 2018 March, “Physicist Hopes to Lead Drone Mission to Titan”. <http://www.uidaho.edu/sci/news/features/2018/dragonfly-b>

Gave lecture to Moscow/Pullman Rotary Clube, “Idaho’s Total Solar Eclipse”, 2017 August 16.

Mentioned in [astronomy.com](http://www.astronomy.com) article 2017 March, “Exploring Titan with Aerial Platforms”, <http://www.astronomy.com/ne>

Consultant for journalist Ryan Willams on National Geographic article about the Moon’s role in Earth’s habitability, 2017.

Created and shepherded to public release image of Titan’s biggest crater Menrva: 2015 November.

Created and shepherded to public release image of a glint off of Titan’s seas: 2014 September.

Interviewed for articles about Titan’s waves in Nature (news), Astrobiology Magazine, UI Argonaut, Fox News, others: published 2014 April.

Helped to lead 2012 Spaceward Bound Idaho field trip, NASA-sponsored training for in-service high school science teachers, 2012 June 26-30.

Interviewed for article on the future of drone technology for Wired magazine, subject AVIATR, 2012 April 22.

Science News 1-paragraph blurb about LPSC talk, subject rainfall associated surface changes on Titan, published 2012 April 21.

Interviewed for article on [space.com](http://space.com) and [msnbc.com](http://msnbc.com), subject AVIATR, published 2012 January 11.

Interviewed for article in Moscow-Pullman Daily News, subject AVIATR, published 2012 January 6.

Interviewed for article in Universe Today, subject AVIATR, published 2012 January 2.

Interviewed for National Public Radio (NPR) Talk of the Nation Science Friday, subject ‘Climate Stability of Moonless Planets’, 2011 November 18.

Appeared on Idaho Public Television show “Dialog for Kids”, subject ‘The Moon’, 2011 November 15.

Interviewed about Titan and *Cassini* Participating Scientist award for University of Idaho newsroom, 2011 October.

Interviewed about the AVIATR Student Raindrop Detector (SRD) engineering development for KBYI radio station from Rexburg, Idaho, 2011 March 29.

Participated in the construction of the Moscow Planet Walk along the bike path at the northwest end of campus; featured in front-page article in Moscow-Pullman Daily News, 2011 May 26.

Provided a 35-minute radio interview for the [astronomy.fm](http://arcticsaxifrage.blogspot.com/2010/10/dr-jason-barnes-conversations-at-dps.html) astronomy radio show “Live from York University”, 2010 October 24,  
<http://arcticsaxifrage.blogspot.com/2010/10/dr-jason-barnes-conversations-at-dps.html>

Subject of and interviewed for front-page Moscow-Pullman Daily News article, “Looking to the Skies for Answers (Sidewalk Series)”, 2010 September 24.

Interviewed for The University of Idaho Argonaut article, “Lisa Pratt Lecture”, 2010 September 21.

Interviewed for The University of Idaho Argonaut article, “Teaching the Palouse about Astronomy”, 2010 September 9.

Interviewed for Science online article, “Stars Steal their Planet’s [sic] Moons”, 2010 August 12.

Interviewed for Smithsonian Air and Space article, “Titan Air”, 2010 July 1.

Authored article in public magazine Glimpse, “Seeing Titan”, 2009 December issue.

Hosted multiple International Year of Astronomy (IYA) public star parties at University of Idaho Observatory, 2009 - 2010.

Mentored Moscow High School student Jessica Curry as part of the Extended Learning Internship project – 10 1-hour meetings designed to help her achieve her career goal of becoming an astronaut. 2009 February 21-2009 May 20.

Author of Sky and Telescope article, “Titan: Earth’s Frozen Sibling”, 2008 December.

Appearance on Idaho Public Television show “Dialog for Kids” discussing planets, with Gary Bennett, 2008 December 16.

Scientific contributor to article in Finnish aerospace magazine Tähdet ja Avaruus on Jupiter’s interior, “Näin Kurkistetaan ka Asujättien Ytimeen”, 2007 November.

**PROFESSIONAL DEVELOPMENT:**

**Scholarship:**

Attended JPL Team-X 1-week graduate student summer-school, Pasadena, CA, 2003.

**Administration/Management:**

Attended University of Idaho New Faculty orientation, 2008 August 17-19.

Attended Physics Department 2-day meeting with Provost Doug Baker, Dean Scott Wood, and facilitator in regards to the proposed physics undergraduate degree closure, 2009 February 23-24.