

JOSHUA E. COLWELL
Pegasus Professor
[REDACTED]
University of Central Florida
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Orlando FL 32816-2385
[REDACTED]

EDUCATION

Ph.D. December 1989. University of Colorado at Boulder, Dept. of Astrophysical, Planetary, and Atmospheric Sciences. *The Origin and Evolution of the Uranian Dust Rings.*

B.S. May 1985. Stetson University, Major in Physics, Minor in Applied Mathematics. (Honors Program, summa cum laude).

PROFESSIONAL CAREER

University of Central Florida

Interim Dean, College of Sciences: July 2025 – present.

Associate Dean, College of Sciences: June 2024 – June 2025. (Interim March – June 2024)

Department Chair: May 2021 – July 2024.

Pegasus Professor: 2019 – present.

Interim Chair: December 2015 – May 2016.

Founding Director, Stephen W. Hawking Center for Microgravity Research and Education: 2012-2023.

Professor: Department of Physics, August 2012 – present.

Associate Professor: Department of Physics, August 2009 – August 2012.

Associate Chair: Department of Physics, January 2011 – May 2021.

Assistant Director: Florida Space Institute, October 2011 – 2021.

Assistant Professor: Department of Physics, December 2006 – August 2009.

University of Colorado

Visiting Associate Professor: Laboratory for Atmospheric and Space Physics, August 2010 – 2012.

Visiting Assistant Professor: Laboratory for Atmospheric and Space Physics, December 2006 to August 2010.

Research Scientist III: Laboratory for Atmospheric and Space Physics, July 2002 – December 2006.

Research Scientist II: Laboratory for Atmospheric and Space Physics, July 1993 – June 2002.

Post-Doctoral Research Associate: Laboratory for Atmospheric and Space Physics, November 1989 - June 1993.

Instructor: Department of Astrophysical, Planetary, and Atmospheric Sciences, August 1990 – December 2006.

Fulbright Senior Research Scholar: Observatoire Midi-Pyrénées, Toulouse, France. (September 1995 - May 1996).

SUMMARY OF ADMINISTRATIVE DUTIES AND ACTIVITIES

University of Central Florida

Interim Dean, College of Sciences, July 2025 – present.

Lead the College of Sciences in pursuit of the college's and university's strategic goals for excellence in research, education, community engagement, partnerships, and impact.

Associate Dean, Research and Facilities, College of Sciences, January 2024 – present.

I assumed acting duties as Associate Dean for Research and Facilities in January 2024, was appointed Interim Associate Dean in March 2024, and was appointed Associate Dean in June 2024. I worked with the Dean's Senior Leadership group to establish and implement the college's strategic plan.

Chair: Department of Physics, May 2021 – July 2024.

The chair is responsible for leading the department in the execution of its mission in research, education, and community outreach and engagement.

Director: Stephen W. Hawking Center for Microgravity Research and Education, 2012-2023. This center was officially established in 2021 from the Center for Microgravity Research, a Center in the Department of Physics.

Interim Chair: Department of Physics, December 2015 – May 2016.

Associate Chair: Department of Physics, January 2011 – May 2021.

Assistant Director: Florida Space Institute, October 2011 – May 2021.

TEACHING EXPERIENCE

University of Central Florida

AST 2002, AST 2002H: Astronomy

PHY 1038: Physics of Energy, Climate Change, and the Environment (created the course, face to face, hybrid, and online modalities; Quality Course designation from UCF CDL)

PHY 2053: College Physics 1 (Lectures and recitations)

PHY 2054: College Physics 2 (Lectures and recitations)

AST 6112: Origin and Evolution of Planetary Systems (created the course)

Several graduate and undergraduate level directed research and independent study courses and honors in the major theses on planetary rings, planet formation, and solar system dynamics.

University of Colorado

APAS 1120: "General Astronomy: Stars and Galaxies"

ASTR 1110: "General Astronomy: The Solar System"

APAS/ASTR 3750: "Planets, Moons, and Rings"

APAS 3210: "Intermediate Astronomy: The Solar System"

PHYS: Independent study in the Physics Department.

Graduate student thesis and exam committees.

CURRENT RESEARCH PROJECTS

- Principal Investigator for "Mesoscale Structures in Saturn's Rings: Clues to Origin and Evolution". NASA Cassini Data Analysis Program. \$480,461. 2020-2026.
- Cassini UVIS Data Product Enhancement. NASA Planetary Data Analysis and Research Tools Program as sub-contract from University of Colorado, Boulder (P.I. K.-Michael Aye, M. Tiscareno (P.I. changed in 2023)). \$208,062. 2020-2026 (work suspended due to P.I. change and resumed with NCE in 2025).

PREVIOUS RESEARCH PROJECTS

- Principal Investigator for “Collisions Into Dust Experiment-3” selected by NASA’s Flight Opportunities Program for flight on the next flight to space of Virgin Galactic’s SpaceShipTwo.
- Principal Investigator of “CubeSat Particle Aggregation and Collision Experiment” \$444,934. 2016-2021. NASA Small Innovative Missions for Planetary Exploration (SIMPLEx).
- Co-Investigator of “Center for Lunar and Asteroid Surface Science 2” selected by NASA’s Solar System Exploration Research Virtual Institute. \$8M for 2019-2024. Professor Dan Britt (Physics) is P.I.
- University CubeSat Ground Station. NASA Florida Space Grant Consortium. \$29,978. 2021.
- Principal Investigator of “Investigating the Collisional and Dynamical Evolution of Comets Subcontract from CSUSB”. University Enterprises Corporation of California State University (CSUSB). \$66,570. (2016-2020).
- Co-Investigator: Cassini Ultraviolet Imaging Spectrograph (1997 – 2019). L. W. Esposito P. I., University of Colorado on contract from NASA. \$858,000 awarded 9/27/2010-9/30/2019. (I’m UCF P.I.)
- Principal Investigator for “Collisions Into Dust Experiment-3” selected by NASA’s Flight Opportunities Program for flight on the first two flights to space of Virgin Galactic’s SpaceShipTwo and on Blue Origin’s New Shepard rocket.
- Principal Investigator for “CORE: Collection Of Regolith Experiment” selected by NASA’s Flight Opportunities Program for flight on a commercial suborbital vehicle; slated for next flight of Blue Origin’s New Shepard.
- Principal Investigator of “Center for Microgravity Research” funded by Space Florida at \$1.152M total, 2011-2018.
- Co-Investigator of “Suborbital Particle Aggregation and Collision Experiment-2 (SPACE-2)”. NASA Flight Opportunities and Space Technology program. \$91,653 (2015-2017). (Julie Brisset, my former post-doc, is P.I.)
- Principal Investigator of “The Center for Microgravity Research”, Florida High-Tech Corridor Industry matching grant, \$315,000 total for 3 years, 2010-2018.
- Co-Investigator of “Center for Lunar and Asteroid Surface Science” selected by NASA’s Solar System Exploration Research Virtual Institute. \$4M for 2014-2018. Professor Dan Britt (Physics) is P.I.
- Principal Investigator of “Cu-PACE: CubeSat Particle Aggregation and Collision Experiment”. CubeSat selected in 2015 by NASA CubeSat Launch Initiative Program.
- Principal Investigator of “PRIME-4.0: Miniaturized and Reusable Asteroid Regolith Microgravity Experiment for Suborbital and Orbital Use”. NASA Flight Opportunities and Space Technology program. \$140,375 (2015-2018).

- ❑ Principal Investigator of “Particle Sizes and Clumps as Tracers of Local Dynamical Phenomena in Saturn’s Rings” \$342,828 for 3 years (2015-2018). NASA Cassini Data Analysis and Participating Scientist Program.
- ❑ Principal Investigator of “Experimental Studies of Pebble Accretion in the Protoplanetary Disk” \$269,614 for 3 years (2014-2018 (extended)). National Science Foundation.
- ❑ Principal Investigator of NASA Outer Planets Research project “Regolith Evolution of Small Outer Planet Satellites”, \$300,255 for 3 years (2012-2018 (extended)).
- ❑ Principal Investigator of “Microgravity Experiments on Digging and Anchoring Strategies for Missions to Rubble Pile Asteroids.” NASA Flight Opportunities and Space Technology Program for parabolic airplane flight, Institutional P.I. \$12,334. Dr. Karen Daniels, North Carolina State University, is overall P.I. (2018).
- ❑ Principal Investigator of NASA Origins of Solar Systems project “Experimental and Numerical Investigations of the Early Stages of Planetesimal Formation” (2009-2014) \$406,500 total, extended to 2015.
- ❑ Principal Investigator of the MEDEA (Microgravity Experiment on Dust Environments in Astrophysics) for flight on the New Shepard commercial suborbital launch vehicle. Experiment supplied for flight on a no-exchange-of-funds basis with Blue Origin, LLC. 2009-present. Two experiment flights.
- ❑ Principal Investigator on the NASA Undergraduate Student Instrument Project “Microgravity Experiment on Accretion in Space Environments” \$49,672 for 2 years (2013-2015).
- ❑ Principal Investigator for “PRIME: Physics of Regolith Impacts in Microgravity Experiment” selected by NASA’s Flight Opportunities Program for a microgravity parabolic flight campaign; flown in August 2014.
- ❑ Principal Investigator of “Strata-1 Experiment Design, Fabrication and Testing” \$23,000 (2015). NASA Johnson Space Center.
- ❑ Principal Investigator of NASA Cassini Data Analysis Program project “Structure and Particle Surface Properties of Saturn’s Rings from Cassini UV Imaging and Occultation Data” (2010-2013) \$226,303 total for three years.
- ❑ Principal Investigator of NASA Planetary Geology and Geophysics Program project “Numerical and Experimental Studies of Small Body Regolith Evolution”, \$68,000. 2011-2012.
- ❑ Principal Investigator of State University System New Florida Clustering Initiative grant “Microgravity Research and Education in Partnership with the Commercial Space Industry”. \$375,000. 2011-2012.
- ❑ UCF lead Principal Investigator of UCF-UF Space Related Research Initiative, “Electrostatic Dust Hazard Prediction and Control for Lunar and Mars Missions” (2009-2012), \$480,000 total to UCF for three years.
- ❑ Principal Investigator of NASA Outer Planets Research Program project, “Dynamics of Interplanetary Dust in the Outer Solar System” (2006-2011). \$57,000/year to UCF.

- ❑ Principal Investigator of NASA Cassini Data Analysis Program project “Spatial Distribution of Particles in Saturn’s Rings” (2008-2010) \$164,580 total for two years.
- ❑ UCF Principal Investigator of NASA Cassini Data Analysis Program project “Properties of Saturn’s Ring Particles from Occultations and Thermal Observations” (2008-2010) \$17,000/year for two years to UCF. Stuart Pilorz, SETI Institute, P.I.
- ❑ UCF Principal Investigator on NASA Cassini Data Analysis Program project “Compositional Evolution of Saturn’s Rings” (2007-2009) \$10,000/year for two years to UCF. Paul Estrada, SETI Institute, P.I.
- ❑ Principal Investigator of NASA Discovery Data Analysis Program project, “Evolution of the Topography and Mantles of Comet Nuclei” (2006-2009). \$61,000/year (University of Colorado).
- ❑ UCF Principal Investigator on “Autonomous Lunar Dust Observer”, NASA project, subcontract from Ball Aerospace. \$20,000 in 2008. Christian Grund, Ball Aerospace, P.I.
- ❑ Co-Investigator of NASA Outer Planets Research Program project “Density Waves in Planetary Rings” (2006-2008). G. R. Stewart P. I.
- ❑ Co-Investigator of NASA Interdisciplinary Exploration Science project “Dusty Plasma Issues for Surfaces in Space” (2006-2009). M. Horányi P. I.
- ❑ Principal Investigator of NASA Discovery Data Analysis Program project “Collisional and Electrostatic Transport of Dust in the Regolith of Eros” (2004-2006) \$180,000.
- ❑ Institutional Co-Principal Investigator on NASA “Project Dust” (Masami Nakagawa, Colorado School of Mines, Project Leader), “Mitigation of Dust and Electrostatic Accumulation for Human and Robotic Systems for Lunar and Martian Missions” (2005, \$40,000)
- ❑ Principal Investigator of NASA Microgravity Fluid Physics Program project “Dynamics of Charged Dust Near Surfaces in Space” (2002-2006) \$460,000.
- ❑ Principal Investigator of NASA Microgravity Fluid Physics Program project “PRIME: Physics of Regolith Impacts in Microgravity Experiment” (1999-2003) \$340,000.
- ❑ Principal Investigator of NASA flight project “Collisions Into Dust Experiment – 2 (COLLIDE-2)” (1999-2002) \$114,000.
- ❑ Principal Investigator. Science Opportunity Analyzer Design, Testing, and Documentation. Contract from Jet Propulsion Laboratory. (2002) \$75,000.
- ❑ Principal Investigator. CASPER and Science Opportunity Analyzer Support. Contract from Jet Propulsion Laboratory. (1998-2001) \$177,000.
- ❑ Principal Investigator of NASA Innovative Research Program project “Microgravity Experiment on Low Velocity Impacts” (COLLIDE) (1995-1998) \$180,000.
- ❑ Principal Investigator of NASA Neptune Data Analysis Program (NDAP) project, “The Collisional Origin and Evolution of Neptune’s Rings,” (1991 - 1993, \$192,000).
- ❑ Member of ISS ICAPS (Interactions in Cosmic and Atmospheric Particle Systems) Facility Science Team, team leader Jürgen Blum, University of Jena, Germany.

HONORS AND AWARDS

- Asteroid 29605 joshuacolwell
- Pegasus Professor, 2019.
- UCF Excellence in Mentoring Doctoral Students, 2019
- NASA Group Achievement Award, Cassini Solstice & Grand Finale, UVIS Team 2018
- UCF Luminary Award, 2018
- UCF Teaching Incentive Program Award (TIP), 2018
- NASA Group Achievement Award, Rosetta Alice Team, 2017
- UCF Research Incentive Award (RIA), 2017
- UCF Excellence in Undergraduate Teaching Award, 2017
- UCF SGA Lifesaver Award, 2014
- UCF Teaching Incentive Program Award (TIP), 2013
- UCF Mentor of the Year, 2012-2013, Office of Undergraduate Research
- UCF Research Incentive Award (RIA), 2012
- NASA Group Achievement Award, Cassini UVIS Team, 2009
- NASA Group Achievement Award, Cassini Rings Target Working Team, 2009
- NASA Space Act Board Award, SOA, 2005.
- NASA JPL Interplanetary Network Directorate Team Award, SOA, 2004.
- University of Colorado Academic Life Teaching Excellence Award 2003.
- NASA Group Achievement Award, Cassini, 1998.
- NASA Group Achievement Award, Voyager PPS Investigation, 1989.
- University of Colorado Graduate Fellowship: 1985/86, 1986/87, 1987/88, 1988/89.

PROFESSIONAL AND UNIVERSITY SERVICE ACTIVITIES

- Member and chair of various UCF College of Sciences committees including chair search committees (2020-2021).
- Co-Lead for Networked Improvement Community on Instructional Practices for a \$1.5M grant to the Florida Consortium of Metropolitan Research Universities from the Leona M. and Harry B. Helmsley Charitable Trust (2017).
- Creator, Producer and Host of “Walkabout the Galaxy” an astronomy podcast for the general public, published 2-3 times per month, 40-50-minute episodes. More than 488,000 downloads as of March 2025.
- Associate Chair of the UCF Department of Physics (January 2011 – May 2021).
- Interim Chair of the UCF Department of Physics (December 2015 – May 2016).

- Assistant Director of the Florida Space Institute (October 2011 – May 2021).
- Chaired and served on multiple Physics Department standing committees including Undergraduate Curriculum, Web, Space.
- Member of the UCF University Research Council (September 2010 to August 2013).
- Chaired and served on multiple Physics Department hiring committees for faculty and staff.
- Served as member of multiple College of Sciences committees including Dean’s Advisory Committee, Research Committee, Lecturer Promotion Committee, TIP and RIA Selection Committees.
- Scientific Program Committee, Cassini Science Symposium, Boulder CO 2018.
- Scientific Program Committee, 45th DPS meeting, Denver CO 2013.
- Lead Local Organizer and Member of Scientific Program Committee for 2011 Next-Generation Suborbital Researchers Conference, University of Central Florida, February 27-March 2, 2011.
- Scientific Program Committee for 2010 Next-Generation Suborbital Researchers Conference, Boulder Colorado, February 2010.
- Member DPS Governing Committee, 2008-2011 (elected position).
- Member of Suborbital Applications Research Group, advisory to the Commercial Spaceflight Federation, (2009-2017).
- Chair of Scientific Program and member Local Organizing Committee for Rings 2008 Workshop, June 2008, Paris France.
- Local Organizing Committee and Scientific Program Committee, 39th DPS meeting, Orlando FL 2007.
- Visiting Researcher, National Center for Earth and Space Science Education (formerly Challenger Center for Space Science Education; 2003-2008): weeklong visits to classrooms at schools in underserved school districts in 2004 (twice), 2006. Presentations to more than 4000 K-12 students and members of the public.
- Presentations to local K-12 schools.
- Comet Consultant, “Deep Impact”, Paramount/DreamWorks Pictures. Zanuck/Brown Production, 1998.
- Scientific Consultant, “Gates Planetarium: A Cosmic Journey”, Denver Museum of Nature and Science, 2003.
- Developed and presented 12 times the show “Saturn: The Jewel of the Solar System” at the Fiske Planetarium, University of Colorado.
- Contributing Reviewer, Earth and Sky Radio Series.
- Reviewer for NASA Planetary Geology and Geophysics, Origins, Planetary Atmospheres, Outer Planets Research, Planetary Instrument Definition and Development, Cassini Data Analysis, and Lunar Advanced Science for Exploration Research programs; special NASA

lunar science directed research review panel; NSF astronomy program; NASA post-doc programs; and the Research Corporation.

- Reviewer for *Science*, *Nature*, *Icarus*, *J. Geophys. Res.*, *Geophys. Res. Lett.*, *Mon. Not. Roy. Astron. Soc.*, *Plan. Space Sci.*, *Adv. Physics*, *Astrophys. J. Lett.*, *Astrophys. J.*, *Astron. J.*, *New Astron.*, Addison-Wesley Longman textbooks, Pearson textbooks, Cambridge University Press.
- LASP Computer Systems Advisory Committee (2001-2006, Chair 2004-2006).
- American Geophysical Union (1987 - present).
- Division of Planetary Sciences of the American Astronomical Society (1988 - present).
- Screen Actors Guild (2004 – present).
- Advisory Council of the NASA Planetary Data System Rings Node (1990 - present).
- Local Organizing Committee, 25th DPS meeting, Boulder CO 1993.

GRADUATE STUDENTS SUPERVISED

Current:

Elizabeth Faulkner, University of Central Florida, Physics Department Ph.D. program (Planetary Sciences Track), Modeling of Saturn’s Rings and Analysis of Data from Cassini (pre-candidacy).

Melody Raechel Green, University of Central Florida, Modeling and Simulation, working toward Ph.D. Post-candidacy.

Previous:

Stephanie Eckert, Ph.D., University of Central Florida, Physics Department (Planetary Sciences Track), “Characterizing the Particle Size Distribution in Saturn’s Rings Using Cassini UVIS Stellar Occultation Data”, May 2022.

Isabel Rivera, M.S., University of Central Florida, Physics Department (Planetary Sciences Track), “Simulating Ejecta Blown Off the Lunar Surface Due to Landing Spacecraft Using the Mercury N-Body Integrator”, August 2021.

Stephanie Gibson Jarmak, Ph.D., University of Central Florida, Physics Department (Planetary Sciences Track), “Experimental and Numerical Investigations of Granular Dynamics in Microgravity”, May 2020. Recipient of Order of Pegasus.

Richard Jerousek, Ph.D., University of Central Florida, Physics Department (Planetary Sciences Track), “Determining the Small-Scale Structure and Particle Properties in Saturn’s Rings from Stellar and Radio Occultations”, May 2018.

Tracy Becker, Ph.D., University of Central Florida, Physics Department (Planetary Sciences Track), “Saturn’s Rings: Measuring Particle Size Distributions Using Cassini UVIS Occultation Data”, May 2016. Recipient of Order of Pegasus. Recipient of College of Sciences Outstanding Dissertation Award.

Akbar Whizin, Ph.D., University of Central Florida, Physics Department (Planetary Sciences Track), “Dynamical Formation of Planetesimals”, May 2016.

Kevin Baillé, Ph.D., University of Central Florida, Physics Department (Planetary Sciences Track), “Fine-Scale Structures in Saturn’s Rings: Waves, Wakes, and Ghosts”, August 2011.

Amanda Sickafoose Gulbis, Ph.D., University of Colorado, Department of Astrophysical and Planetary Sciences, 2002. “Experimental Dust Charging and Dynamics with Applications for Planetary Environments”.

Heather Tollerud, M.S., University of Colorado, Department of Astrophysical and Planetary Sciences, 2006. “Saturn’s Rings in the Ultraviolet: Cassini UVIS Observations”.

Anna Haugsjaa Hughes, M. S., University of Colorado, Department of Astrophysical and Planetary Sciences, 2006. “Modeling Electrostatic Dust Transport on Eros”.

Other Graduate Thesis Committees

Current:

Jared Long-Fox, University of Central Florida, Physics Department, working toward Ph.D.

Kayla Schang, University of Central Florida, Physics Department, working toward Ph.D.

Brittany Harvison, University of Central Florida, Physics Department, working toward Ph.D.

Previous:

Jennifer Larsen, University of Central Florida, Physics Department, working toward Ph.D.

Wesley Chambers, University of Central Florida, Physics Department, Ph.D., 2020.

Kelsey Hargrove, University of Central Florida, Physics Department, Ph.D., 2015.

Emily Kramer, University of Central Florida, Physics Department, Ph.D., 2014.

Christine Hartzell, University of Colorado, Department of Aerospace Engineering, Ph.D., 2012.

John Weiss, University of Colorado, Department of Astrophysical and Planetary Sciences, Ph.D., 2005

Nathaniel Putzig, University of Colorado, Department of Astrophysical and Planetary Sciences, Ph.D., 2006

Advait Kantak, University of Colorado, Department of Chemical and Biological Engineering, Ph.D., 2005.

REFEREED PUBLICATIONS – JOURNALS

As of February 4, 2026, h-index=39 based on 123 publications and total citations of 4912 from ISI Web of Science, and h-index=45 and 7364 total citations based on Google Scholar (<https://scholar.google.com/citations?user=cowArVYAAAAAJ>).

1. French, R. G., P. D. Nicholson, M. M. Hedman, H. Salo, E. A. Marouf, C. A. McGhee-French, N. M. Rappaport, J. Colwell, R. Jerousek, V. M. Afigbo, S. Flury, J. Fong, R. Maguire, G. Steranka, M. S. Tiscareno 2025. Further Reverberations of the 1983 Impact with Saturn's C Ring. *Icarus* **431**, 116463.
2. Esposito, L. W., J. E. Colwell, S. Eckert, M. R. Green, R. G. Jerousek, S. Madhusudhanan 2025. Statistics of Saturn's Ring Occultations: Implications for Structure, Dynamics, and Origins. *Icarus* **429**, 116386.
3. Wang, X., L. Li, X. Jiang, Patrick Fry, Robert West, Conor Nixon, Larry Guan, Thishan D Karandana G, Ronald Albright, Joshua Colwell, Tristan Guillot, Mark Hofstadter, Matthew Kenyon, Anthony Mallama, Santiago Pérez-Hoyos, Agustin Sanchez-Lavega, Amy Simon, Daniel Wenkert, and Xi Zhang 2024. Cassini Spacecraft Reveals Global Energy Imbalance of Saturn. *Nature Comms.* **15**, doi:10.1038/s41467-024-48969-9.
4. Green, M. R., J. E. Colwell, L. W. Esposito, R. G. Jerousek 2024. Particle sizes in Saturn's rings from UVIS stellar occultations 2. Outlier populations in the C ring and Cassini Division. *Icarus* **416**, 116081.
5. Jerousek, R. G., J. E. Colwell, L. W. Esposito, M. S. Tiscareno, M. C. Lewis, L. Pohl, D. A. Benavides 2024. The smallest structures in Saturn's rings from UVIS stellar occultations. *Icarus* **415**, 116069.
6. Sega, D. D., G. Stewart, J. E. Colwell, G. M. Duvvuri, R. Jerousek, L. Esposito 2024. The dynamics of self-gravity wakes in the Mimas 5:3 bending wave: Modifying the linear theory. *Icarus* **413**, 115987.
7. Bradley, E. T., J. E. Colwell, L. W. Esposito 2024. Retrieval of Albedo and Compositional Properties of Saturn's Rings from Cassini UVIS Spectra. *Icarus* (submitted).
8. French, R. G., P. D. Nicholson, C. A. McGhee-French, P.-Y. Longaretti, M. M. Hedman, J. Colwell, E. A. Marouf, N. Rappaport, S. Flury, J. Fong 2023. The complex shape of the outer edge of Saturn's B ring, as observed in Cassini occultation data. *Icarus* **405**, 115678, doi:10.1016/j.icarus.2023.115678.
9. Nicholson, P. D., R. G. French, C. A. McGhee-French, P.-Y. Longaretti, M. M. Hedman, M. El Moutamid, J. Colwell, E. A. Marouf, N. Rappaport, S. Flury, J. Fong, R. Maguire, G. Steranka 2023. The Seven-lobed Shape of the Outer Edge of Saturn's A Ring. *Icarus* **390**, 115287, doi:10.1016/j.icarus.2022.115287.

10. Jarmak, S. G., T. M. Becker, J. E. Colwell, R. G. Jerousek, L. W. Esposito 2022. Solar Occultation Observations of Saturn's Rings with Cassini UVIS. *Icarus* **388**, 115237, doi:10.1016/j.icarus.2022.115237.
11. Brisset, J., C. Cox, J. Metzger, T. Miletich, N. Mohammed, A. Rascon, L. Forczyk, A. Dove, J. Colwell 2022. *Plan. Sci. J.* **3**, 176, doi:10.3847/PSJ/ac779a.
12. Featherstone, J., R. Bullard, T. Emm, A. Jackson, R. Reid, S. Shefferman, A. Dove, J. Colwell, J. E. Kollmer, K. E. Daniels 2021. Stick-slip Dynamics in Penetration Experiments on Simulated Regolith. *Plan. Sci. J.* **2**, id.243, doi:10.3847/PSJ/ac3de2.
13. Jarmak, S., J. Colwell, A. Dove, J. Brisset 2021. The Adhesive Response of Regolith to Low-Energy Disturbances in Microgravity. *Gravitational and Space Research*, **9**, 1-12, doi:10.2478/gsr-2021-0001.
14. Eckert, S., J. E. Colwell, T. M. Becker, L. W. Esposito 2021. Sizes of the Smallest Particles at Saturn's Ring Edges. *Icarus* **357**, 114224, doi:10.1016/j.icarus.2020.114224.
15. Jerousek, R. G., J. E. Colwell, M. Hedman, R. French, E. Marouf, L. W. Esposito, P. D. Nicholson 2019. Saturn's C Ring and Cassini Division: Particle Sizes from Cassini UVIS, VIMS, and RSS Occultations. *Icarus*, **344**, 113565, doi:10.1016/j.icarus.2019.113565.
16. Hansen, C. J., L. W. Esposito, J. E. Colwell, A. R. Hendrix, G. Portyankina, A. I. F. Stewart, R. A. West 2020. The Composition and Structure of Enceladus' Plume from the Complete Set of Cassini UVIS Occultation Observations. *Icarus* **344**, 113461, doi:10.1016/j.icarus.2019.113461.
17. Tiscareno, M. S., J. A. Burns, J. E. Colwell, J. N. Cuzzi, M. M. Hedman, C. D. Murray, P. D. Nicholson, L. J. Spilker, E. J. Baker, S. M. Brooks, R. N. Clark, N. J. Cooper, E. Déau, C. Ferrari, G. Filacchione, R. G. Jerousek, S. Le Mouélic, R. Morishima, S. Pilorz, S. Rodriguez, M. R. Showalter 2019. Close-Range Remote Sensing of Saturn's Rings During Cassini's Ring Grazing Orbits and Grand Finale. *Science*, **364**, eaau1017.
18. Brisset, J., T. Miletich, J. Metzger, A. Rascon, A. Dove, J. Colwell 2019. Multi-Particle Collisions in Microgravity: Coefficient of Restitution and Sticking Threshold for Systems of mm-Sized Particles. *Astron. Astrophys.* **631**, A35, doi:10.1051/0004-6361/201936228.
19. Déau, E., L. Dones, L. Spilker, A. Flandes, K. Baillié, M. El Moutamid, J. E. Colwell 2019. Cassini CIRS and ISS Opposition Effects of Saturn's Rings: 1. C Ring Narrow or Broad Surge? *Mon. Not. Roy. Astron. Soc.* **489**, 2775-2991, doi:10.1093/mnras/sty2587.
20. Jarmak, S., J. Brisset, J. Colwell, A. Dove, D. Maukonen, S. A. Rawashdeh, J. Blum, L. Roe 2019. CubeSat Particle Aggregation Collision Experiment (Q-PACE): Design of a 3U CubeSat mission to investigate planetesimal formation. *Acta Astronautica*, **155**, 131-142, doi:10.1016/j.actastro.2018.11.029.

21. Gratz, F., M. Seiß, J. Schmidt, J. Colwell, F. Spahn 2019. Sharp Gap Edges in Dense Planetary Rings: An Axisymmetric Diffusion Model. *Astrophys. J.* **872**, 153, doi:10.3847/1538-4357/ab007e.
22. Brisset, J., J. E. Colwell, A. Dove, S. Abukhalil, C. Cox, N. Mohammed 2018. Regolith Behavior under Asteroid-Level Gravity Conditions: Low-Velocity Impact Experiments. *Prog. Earth Plan. Sci.*, **5**, #73, doi:10.1186/s40645-018-02220-5.
23. Fries, M., J. E. Colwell, L. Graham, S. Love, K. John, V. Rodriguez, A. Whizin, P. Abell, D. Britt, J. Brisset, C. Hartzell, K. Hrovat, M. Leonard, J. Morgan, J. Poppin, A. Dove, D. Durda, D. Kerrer, D. P. Sanchez, D. Scheeres 2018. The Strata-1 Experiment on Small Body Regolith Segregation. *Acta Astronautica*, **142**, 87-94, doi:10.1016/j.actastro.2017.10.025.
24. Becker, T. M., J. E. Colwell, L. W. Esposito, N. O. Attree, C. D. Murray 2018. Cassini UVIS Solar Occultations by Saturn's F Ring and the Detection of Collision-Produced Micron-Sized Dust. *Icarus* **306**, 171-199, doi:10.1016/j.icarus.2018.02.006.
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75. J. Payne-Avary, J. E. Colwell, M. Green, S. Eckert, L. W. Esposito 2018. Microstructure of Saturn's Rings from Higher Order Moments of Cassini-UVIS Stellar Occultation Data. American Geophysical Union Fall Meeting, Washington DC, 9-14 December, Paper #P53E-3013.
76. Colwell, J. 2018. Saturn's Ring Particles and Clumps. 15th Annual Meeting of the Asia Oceania Geosciences Society, Honolulu HI 3-8 June, 2018. Paper #PS05-A001. **Invited.**
77. Brisset, J., J. Colwell, A. R. Dove, C. Cox, N. Mohammed 2018. Slow Impacts on Surfaces of Small Bodies: Coefficient of Restitution and Penetration Depth into the Regolith. American Astronomical Society, DPS meeting #50, Knoxville TN, Paper #40404B.
78. Eckert, S., J. Colwell, R. Green, J. Payne-Avary, L. Esposito 2018. Sizes of Particles, Clumps, and Holes in Saturn's Rings from Cassini UVIS Stellar Occultation Statistics. American Astronomical Society, DPS meeting #50, Knoxville TN, Paper #11704E.
79. Jarmak, S., J. Colwell, J. Brisset, A. R. Dove, A. Brown 2018. Experimental and Numerical Studies of Planetesimal Formation via Collisional Accretion. American Astronomical Society, DPS meeting #50, Knoxville TN, Paper #11305J.
80. Colwell, J., L. W. Esposito, J. Cooney 2018. Clumps and Holes in Saturn's Rings from Cassini UVIS Stellar Occultations. 42nd COSPAR Scientific Assembly, 14-22 July, 2018, Pasadena CA, Paper #B5.2-8-18.
81. Jarmak, S. G., J. E. Colwell, J. Brisset, A. Dove, A. Q. Brown 2017. Mass Transfer via Low-Velocity Rebound in a Microgravity Environment. American Geophysical Union Fall Meeting, New Orleans LA, 10-15 December, Paper #P51A-2561.
82. Colwell, J. E., D. N. Sega, R. G. Jerousek, J. H. Cooney, L. W. Esposito 2017. Evidence for Break-Up of Clumps in Dynamically Stirred Regions of Saturn's Rings. American Geophysical Union Fall Meeting, New Orleans LA, 10-15 December, Paper #P34A-03.
83. Becker, T. M., J. E. Colwell, L. W. Esposito, N. Attree, C. D. Murray 2017. Detecting Collisions and Dust in Saturn's F Ring from Diffraction Signatures in Cassini UVIS Solar Occultation Data. American Geophysical Union Fall Meeting, New Orleans LA, 10-15 December, Paper #P23B-2732.

84. Bradley, E. T., J. E. Colwell, L. W. Esposito 2017. Retrieval of Composition and Shadowing Properties of Saturn's Rings from Cassini UVIS Spectra. American Geophysical Union Fall Meeting, New Orleans LA, 10-15 December, Paper #P23B-2727.
85. Eckert, S., J. E. Colwell, T. M. Becker, L. W. Esposito 2017. Sizes of the Smallest Particles at Saturn Ring Edges from Diffraction in UVIS Stellar Occultations. American Geophysical Union Fall Meeting, New Orleans LA, 10-15 December, Paper #P23B-2726.
86. Esposito, L. W., M. Rehnberg, J. E. Colwell, M. Sremcevic 2017. Size of Self-Gravity Wakes from Cassini UVIS Tracking Occultations and Ring Transparency Statistics. American Geophysical Union Fall Meeting, New Orleans LA, 10-15 December, Paper #P23B-2721.
87. Jerousek, R. G., J. E. Colwell, M. M. Hedman, E. A. Marouf, R. G. French, L. W. Esposito, P. D. Nicholson 2017. The Particle Size Distribution in Saturn's Main Rings from VIMS and UVIS Stellar Occultations and RSS Radio Occultations. American Geophysical Union Fall Meeting, New Orleans LA, 10-15 December, Paper #P23B-2718.
88. Esposito, L. W., M. Rehnberg, J. E. Colwell, M. Sremcevic 2017. Size of Self-Gravity Wakes from Cassini UVIS Tracking Occultation and Ring Transparency Statistics. American Astronomical Society, DPS meeting #49, Provo UT, Paper #212.06.
89. Hansen, C., L. Esposito, J. Colwell, A. Hendrix, G. Portyankina 2017. Enceladus Plume Morphology and Variability from UVIS Measurements. American Astronomical Society, DPS meeting #49, Provo UT, Paper #207.04.
90. Brisset, J., J. E. Colwell, A. Dove, S. Jarmak, S. Anderson 2017. Cohesion of mm- to cm-sized Asteroid Simulant Grains: An Experimental Study. American Astronomical Society, DPS meeting #49, Provo UT, Paper #204.12.
91. Jerousek, R. G., J. Colwell, M. M. Hedman, R. G. French, E. A. Marouf, L. W. Esposito, P. D. Nicholson 2017. The Particle Size Distribution in Saturn's C Ring from UVIS and VIMS Stellar Occultations and RSS Radio Occultations. American Astronomical Society, DPS meeting #49, Provo UT.
92. Colwell, J., J. Brisset, A. R. Dove, L. Roe, J. Blum 2017. Q-PACE: A Cubesat Microgravity Mission to Study Collisions in the Protoplanetary Disk. 12th Low Cost Planetary Missions Conference. August 15-17, Pasadena CA.
93. Colwell, J., J. Blum et al. 2017. Laplace – A Comprehensive Experimental Protoplanetary Dust Growth Simulation Under Long Duration Microgravity Conditions. 12th Low Cost Planetary Missions Conference. August 15-17, Pasadena CA.
94. Colwell, J. E. 2017. Science and Science Fiction: The Boundary Between Fantasy and Futurism. American Chemical Society annual meeting, San Francisco CA, April 2017. **Invited.**
95. Colwell, J. E., L. W. Esposito, J. Cooney 2016. Radial Variations in Particle Clumping in Perturbed Regions of Saturn's Rings from Cassini UVIS Stellar Occultations. American Astronomical Society, DPS meeting #48, Pasadena CA, Paper #121.09.
96. John, K. K., P. Abell, J. Brisset, D. Britt, J. Colwell, D. Durda, A. Dove, M. Fries, L. Graham, C. Hartzell, M. Leonard, S. Love, D. P. Sanchez, D. J. Scheeres 2016. Strata-1: A Planetary Science Experiment on the Behavior of Asteroid Regolith in Microgravity. 3rd International Workshop on Instrumentation for Planetary Mission, held 24-27 October, 2016 in Pasadena, California. LPI Contribution No. 1980, id.4092.
97. Brisset, J., J. E. Colwell, A. Dove, A. Rascon, N. Mohammed, C. Cox 2016. Low-velocity impacts into cryogenic icy regolith. American Astronomical Society, DPS meeting #48, Pasadena CA, Paper #518.05.

98. Jarmak, S., J. E. Colwell, J. Brisset, A. Dove 2016. Mass Transfer via Low Velocity Impacts into Regolith. American Astronomical Society, DPS meeting #48, Pasadena CA, Paper #318.11.
99. Whizin, A., J. E. Colwell, A. Dove, J. Brisset, R. Cruz, Z. Foster 2016. Collision experiments between centimeter-sized protoplanetesimals in microgravity. American Astronomical Society, DPS meeting #48, Pasadena CA, Paper #318.10.
100. Hansen, C., L. W. Esposito, G. Portyankina, A. Hendrix, J. E. Colwell, K.-M. Aye 2016. Enceladus' Supersonic Gas Jets' Role in Diurnal Variability of Particle Flux. American Astronomical Society, DPS meeting #48, Pasadena CA, Paper #214.07.
101. Jorges, J., A. Dove, J. E. Colwell 2016. Collision of Dual Aggregates (CODA): Experimental observations of low-velocity collisions. American Astronomical Society, DPS meeting #48, Pasadena CA, Paper #121.15.
102. Eckert, S., J. E. Colwell, T. M. Becker, L. W. Esposito 2016. Sizes of the Smallest Particles at the Outer B Ring Edge, Huygens Ringlet, and Strange Ringlet. American Astronomical Society, DPS meeting #48, Pasadena CA, Paper #121.08.
103. Sega, D. D., J. E. Colwell 2016. Structure of the Mimas 5:3 Bending Wave in Saturn's Rings. American Astronomical Society, DPS meeting #48, Pasadena CA, Paper #121.06.
104. Jerousek, R. G., J. E. Colwell, M. M. Hedman, E. A. Marouf, L. W. Esposito, P. D. Nicholson, R. G. French 2016. Sub-cm Particles in Saturn's Rings from VIMS, UVIS, and RSS occultations. American Astronomical Society, DPS meeting #48, Pasadena CA, Paper #107.08.
105. Fries, M., Abell P., Brisset J., Britt D., Colwell J., Durda D., Dove A., Graham L., Hartzell C., John K., Leonard, M., Love, S., Sánchez, D.P., Scheeres D.J. 2016. The Strata-1 Experiment on Microgravity Regolith Segregation. 79th Annual Meeting of the Meteoritical Society, held 7-12 August, 2016 in Berlin, Germany. LPI Contribution No. 1921, id.6547.
106. Fries M., Abell P., Brisset J., Britt D., Colwell J., Durda D., Dove A., Graham L., Hartzell C., John K., Leonard, M., Love, S., Sánchez, D.P., Scheeres D.J., "Strata-1: An International Space Station Experiment into Fundamental Regolith Processes in Microgravity", *47th Lunar and Planetary Science Conference* (2016) Abstract #2799.
107. Colwell, J. E., A. R. Dove, K. Lai, S. Lane, B. Hoover, A. Whitaker, C. Tiller, S. Benjamin 2015. CATE: A Case Study of an Interdisciplinary Student-Led Microgravity Experiment. American Geophysical Union Fall Meeting, 14-18 December, San Francisco. **Invited.**
108. Colwell, J. E., A. R. Dove, J. C. Brisset, A. N. Rascon, K. Brightwell 2015. Ejecta Production in Microgravity from Low Velocity Impacts in Regolith. American Geophysical Union Fall Meeting, 14-18 December, San Francisco.
109. Bradley, E. T., J. E. Colwell, L. W. Esposito 2015. Light Scattering and Compositional Analysis of Saturn's Rings Using Cassini UVIS Spectral Observations. American Geophysical Union Fall Meeting, 14-18 December, San Francisco.
110. Jerousek, R. G., J. E. Colwell, L. W. Esposito, P. D. Nicholson, M. M. Hedman 2015. Particle Sizes and Self Gravity Wakes in Saturn's A Ring. American Geophysical Union Fall Meeting, 14-18 December, San Francisco.
111. Becker, T. M., J. E. Colwell, L. W. Esposito, N. O. Attree, C. D. Murray 2015. Transient F Ring Dust Features in Cassini UVIS Solar Occultations. American Geophysical Union Fall Meeting, 14-18 December, San Francisco.
112. Brisset, J., J. E. Colwell, A. Dove, D. Maukonen, N. Brown, K. Lai, B. Hoover 2015. NanoRocks: A Long-Term Microgravity Experiment to Study Planet Formation and Planetary Ring Particles. American Geophysical Union Fall Meeting, 14-18 December, San Francisco.

113. Dove, A. R., J. Jorges, J. E. Colwell 2015. From Pebbles to Dust: Experiments to Observe Low-Velocity Collisional Outcomes. American Geophysical Union Fall Meeting, 14-18 December, San Francisco.
114. Spilker, L. J., E. Deau, G. Filacchione, R. Morishima, M. Hedman, P. Nicholson, J. E. Colwell, E. T. Bradley, M. Showalter, S. Pilorz, S. Brooks. Studies of Saturn's Main Rings at Multiple Wavelengths. American Geophysical Union Fall Meeting, 14-18 December, San Francisco.
115. Whizin, A., J. E. Colwell, J. Blum, M. C. Lewis 2015. Collisional Properties and Dynamical Accretion of Centimeter-Sized Protoplanetesimals. American Astronomical Society, DPS meeting #47, National Harbor, Washington DC, Paper #507.01.
116. Hansen, C., L. Esposito, J. Colwell, A. Hendrix, G. Prtyankina, D. Shemansky, R. West 2015. Deriving the Structure and Composition of Enceladus' Plume from Cassini UVIS Observations. American Astronomical Society, DPS meeting #47, National Harbor, Washington DC, Paper #411.04.
117. Lewis, M. C., J. E. Colwell 2015. Modeling Cassini Occultations for High Resolution Simulations of Saturn's Rings. American Astronomical Society, DPS meeting #47, National Harbor, Washington DC, Paper #218.08.
118. Spilker, L. J., E. Deau, R. Morishima, G. Filacchione, M. Hedman, P. Nicholson, J. Colwell, T. Bradley, M. Showalter, S. Pilorz, S. Brooks and M. Ciarniello 2015. Investigations of Saturn's Main Rings over Broad Range of Wavelengths. American Astronomical Society, DPS meeting #47, National Harbor, Washington DC, Paper #218.01.
119. Colwell, J. E., J. Brisset, A. R. Dove, J. Metzger, A. Rascon 2015. NanoRocks: Experimental Study of Collisional Damping and Aggregation at Low Velocities. American Astronomical Society, DPS meeting #47, National Harbor, Washington DC, Paper #104.10.
120. Becker, T. M., J. E. Colwell, L. W. Esposito, N. O. Attree, C. D. Murray 2015. Particle Sizes in Saturn's Rings from Diffraction Signals in Cassini UVIS Occultation Data. American Astronomical Society, DPS meeting #47, National Harbor, Washington DC, Paper #104.03.
121. Whizin, A. D., J. Blum, J. E. Colwell 2015. Accretion of Proto-Planetesimals Through Microgravity Collisions of Dust Aggregates. 46th Lunar and Planetary Science Conference, held March 16-20, 2015 in The Woodlands, Texas. LPI Contribution No. 1832, p.2693
122. Jerousek, R., J. Colwell, P. Nicholson, M. Hedman, L. Esposito, and R. Harbison 2014. Particle Size Distribution in Saturn's C Ring and Cassini Division from VIMS and UVIS Stellar Occultations. American Geophysical Union Fall Meeting, 15-19 December, San Francisco. P11B-3756.
123. Pilorz, S., N. Altobelli, J. Colwell, and M. Showalter 2014. Thermal Transport in Saturn's B Ring Inferred from Cassini CIRS Observations. American Geophysical Union Fall Meeting, 15-19 December, San Francisco. P11B-3760.
124. Becker, T., J. Colwell, and L. Esposito 2014. Sub-Centimeter Particles in Saturn's A Ring. American Geophysical Union Fall Meeting, 15-19 December, San Francisco. P11B-3754.
125. Dove, A., Y. Li, J. Curtis, and J. Colwell 2014. Coupled Laboratory and Numerical Studies of Impacts into Planetary Regoliths. American Geophysical Union Fall Meeting, 15-19 December, San Francisco. P13D-3865.
126. Lane, S., K. Lai, B. Hoover, A. Whitaker, C. Tiller, S. Benjamin, A. Dove and J. Colwell 2014. Social Media and Student Engagement in a Microgravity Planetary Science Experiment. American Geophysical Union Fall Meeting, 15-19 December, San Francisco. ED43C-3492.

127. Colwell, J., R. Jerousek, and L. Esposito 2014. Clumping in the Cassini Division and C Ring: Constraints from Stellar Occultations. American Geophysical Union Fall Meeting, 15-19 December, San Francisco. P11B-3761.
128. Colwell, J., A. Dove, A. Kehoe, and T. Becker 2014. Walkabout the Galaxy: Podcasting for Informal and Accessible Astronomy Outreach and Education. American Geophysical Union Fall Meeting, 15-19 December, San Francisco. ED21A-3438.
129. Dove, A., J. Colwell, and N. Brown. Experimental Studies of Low-Velocity Collisions in Protoplanetary Disks and Planetary Rings 2014. American Astronomical Society, DPS meeting #46, #420.03.
130. Whizin, A., J. Blum, and J. Colwell 2014. Microgravity Collisions of Dust Aggregates as an Analogue to Early Planetesimal Formation. American Astronomical Society, DPS meeting #46, #410.04.
131. Becker, T. M., J. E. Colwell, and L. W. Esposito 2014. Modeling Diffraction Spikes to Characterize the Particle Size Distribution in Saturn's A Ring. American Astronomical Society, DPS meeting #46, #402.07.
132. Nicholson, P. D., R. G. French, M. M. Hedman, J. E. Colwell, E. A. Marouf, and C. McGhee 2014. Architecture of the Cassini Division Revisited. American Astronomical Society DDA meeting #45, #402.01.
133. Esposito, L. W., J. Colwell, M. Sremcevic, and P. Madhusudhanan 2014. Predator-Prey Model for Haloes in Saturn's Rings. 40th COSPAR Scientific Assembly, 2-10 August 2014 Moscow, Russia, B0.5-12-14.
134. Colwell, J. E., R. Jerousek, P. D. Nicholson, M. M. Hedman, L. W. Esposito and R. Harbison 2014. Abundance of Small Particles in Saturn's Rings from Cassini UVIS and VIMS Stellar Occultations. European Geosciences Union General Assembly, April 27-May 2 2014, Vienna, Austria, EGU2014-2479.
135. Nicholson, P. D., R. G. French, M. M. Hedman, J. E. Colwell, E. A. Marouf, and C. McGhee 2014. Architecture of the Cassini Division Revisited. American Astronomical Society Division of Dynamical Astronomy meeting #45, May 2014, #402.01.
136. Colwell, J. E., J. Cooney, L. W. Esposito, and M. Sremcevic 2013. Saturn's Rings Particle and Clump Sizes from Cassini UVIS Occultation Statistics. American Geophysical Union 2013 Fall Meeting, San Francisco, December 2013, P21E-01. **Invited.**
137. Becker, T. M., J. E. Colwell, and L. W. Esposito 2013. Measuring Particle Sizes in Saturn's F Ring from Cassini UVIS Solar Occultations. American Geophysical Union 2013 Fall Meeting, San Francisco, December 2013, P23D-1819.
138. Esposito, L. W., P. Madhusudhana, J. E. Colwell, M. Sremcevic, and E. T. Bradley 2013. Predator-Prey Model for A-Ring Haloes. American Geophysical Union 2013 Fall Meeting, San Francisco, December 2013, P23D-1821.
139. Spilker, L. J., Deau, E., Filacchione, G. Morishima, R., Hedman, M. M., Nicholson, P. D., and Colwell, J. E. 2013. Multiwavelength Studies of Saturn's Rings. American Geophysical Union 2013 Fall Meeting, San Francisco, December 2013, P23D-1815.
140. Whizin, A. D., J. E. Colwell, and M. C. Lewis 2013. Numerical Simulations of Low-Velocity Collisions of Rubble-Piles and Aggregates. American Geophysical Union 2013 Fall Meeting, San Francisco, December 2013, P51A-1730.
141. Dove, A. R., and J. E. Colwell 2013. Investigations of Charged Particle Motion on the Surfaces of Dusty, Airless Solar System Bodies. American Geophysical Union 2013 Fall Meeting, San Francisco, December 2013, P53F-01. **Invited.**

142. Dove, A., J. Colwell, C. Vamos, C. Tiller, and A. Whitaker 2013. Experimental Studies of Low-Velocity Dust Aggregate Collisions. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #510.08.
143. Stemm, M., J. Colwell, M. C. Lewis, D. Denis, T. Ordonez 2013. N-Body Simulations of Low-Velocity Impact Experiments. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #415.13.
144. Lewis, M. C., A. Whizin, and J. E. Colwell 2013. Dynamics of Colliding Clusters of Millimeter Sized Adhesive Particles. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #415.09.
145. Whizin, A., J. E. Colwell, and M. C. Lewis 2013. Building a Planetesimal: Low-Velocity Collisions Between Centimeter Sized Proto-Planetesimals. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #415.08.
146. Kehoe, A. J., T. J. Kehoe, J. E. Colwell, and S. F. Dermott 2013. Understanding Asteroid Disruptions Using Very Young Dust Bands. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #402.03.
147. Sremcevic, M., L. W. Esposito, and J. E. Colwell 2013. Cassini UVIS Highest Resolution Occultations of Saturn's Rings. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #210.17.
148. Bratcher, A., and J. E. Colwell 2013. Analysis of Bending Waves in Saturn's Rings with Cassini UVIS Stellar Occultations. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #210.12.
149. Bradley, T., J. Colwell, L. Esposito, and R. Clark 2013. Compositional and Mixing Model Analysis of Cassini UVIS Spectra of Saturn's Rings. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #210.09.
150. Cooney, J., J. E. Colwell, and L. W. Esposito 2013. Higher Order Moments in the Statistics of Stellar Occultations of Saturn's Rings. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #210.07.
151. Colwell, J. E., R. G. Jerousek, P. D. Nicholson, M. M. Hedman, L. W. Esposito, R. Harbison, and R. A. West 2013. Small Particle Population in Saturn's A Ring from Self-Gravity Wake Observations. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #210.06.
152. Esposito, L. W., P. Madhusudhanan, J. E. Colwell, E. Bradley, and M. Sremcevic 2013. Predator-Prey Model for Haloes in Saturn's Rings. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #210.03.
153. Becker, T. M., J. E. Colwell, and L. W. Esposito 2013. Measuring Particle Sizes from Diffraction Spikes at Saturn's Ring Edges with Cassini UVIS Stellar Occultations. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #206.11.
154. Nicholson, P. D., R. G. French, M. M. Hedman, J. E. Colwell, E. A. Marouf, C. McGhee, K. Lonergan, and T. Sepersky 2013. Normal Modes in Saturn's Rings. American Astronomical Society Division of Planetary Sciences meeting #45, Denver Colorado, October 2013, #206.07.
155. Esposito, L. W., E. T. Bradley, J. E. Colwell, M. Sremcevic, and P. Madhusudhanan 2013. Predator-Prey Model for Saturn's A Ring Haloes. Dusty Visions Conference. Stuttgart Germany, July 2013.
156. Spilker, L., E. Deau, R. Morishima, G. Filacchione, M. Hedman, P. Nicholson, J. Colwell, and T. Bradley. Constraints on Saturn Ring Particle Properties and Ring Structure: Studies of

- Saturn's Rings from UV to far IR. EGU General Assembly 2013, 7-12 April, 2013, Vienna Austria, EGU2013-2494.
157. Esposito, L. W., E. T. Bradley, J. E. Colwell, P. Madhusudhanan, M. Sremcevic. Predator-Prey Model for Haloes in Saturn's A Ring. EGU General Assembly 2013, 7-12 April, 2013, Vienna Austria, EGU2013-2487.
 158. Esposito, L. W., E. T. Bradley, J. E. Colwell, P. Madhusudhanan, M. Sremcevic. Predator-Prey Model for Haloes in Saturn's A Ring. 44th Lunar and Planetary Science Conference, 18-22 March 2013, The Woodlands, Texas, LPI Contribution No. 1719, p. 1362.
 159. Hansen, C. J., L. W. Esposito, J. E. Colwell, A. R. Hendrix, D. E. Shemansky, I. Stewart, R. A. West. Deriving the Structure and Composition of Enceladus' Plume from Cassini Occultation Observations. American Geophysical Union 2012 Fall Meeting, San Francisco, December 2012, P32A-10.
 160. Spilker, L. J., E. Deau, R. Morishima, G. Filacchione, M. M. Hedman, P. Nicholson, J. E. Colwell, and E. T. Bradley. Studies of Saturn's rings from UV to far IR: Constraints on ring particle properties and ring structure. American Geophysical Union 2012 Fall Meeting, San Francisco, December 2012, P51B-2028.
 161. Becker, T. M., J. E. Colwell, A. D. Bratcher, and L. W. Esposito. The Population of Small Particles in Saturn's Rings from Diffraction in Stellar Occultations. American Geophysical Union 2012 Fall Meeting, San Francisco, December 2012, P51B-2030.
 162. Colwell, J. E., R. Jerousek, and L. W. Esposito. Variations in Self-Gravity Wake Structures Across Saturn's Rings. American Geophysical Union 2012 Fall Meeting, San Francisco, December 2012, P51B-2031.
 163. Bradley, E. T., J. E. Colwell, and L. W. Esposito. Constraining Small Scale Compositional Variations in Saturn's Rings Through Analysis of Cassini UVIS Far Ultraviolet Reflectance Spectra. American Geophysical Union 2012 Fall Meeting, San Francisco, December 2012, P51B-2033.
 164. Esposito, L. W., E. T. Bradley, J. E. Colwell, and M. Sremcevic. Haloes seen in UVIS reflectance. American Geophysical Union 2012 Fall Meeting, San Francisco, December 2012, P51B-2034.
 165. Dove, A., J. E. Colwell, E. T. Bradley, and C. Vamos. Low-Velocity Aggregate Collisions Simulating Planetary Ring Dynamics. American Geophysical Union 2012 Fall Meeting, San Francisco, December 2012, P54B-05.
 166. Baillié, K., J. E. Colwell, L. W. Esposito, and M. C. Lewis. Small Propeller Signatures in the C Ring and Cassini Division. American Geophysical Union 2012 Fall Meeting, San Francisco, December 2012, P54B-01. **Invited.**
 167. Whizin, A., J. Cuzzi, R. Hogan, A. Dobrovolskis, J. Colwell, J. Scargle, L. Dones, and M. Showalter. Orbital Evolution of Particles and Stable Zones at the F Ring Core. American Astronomical Society Division of Planetary Sciences meeting #44, #513.02, Reno Nevada, October 2012.
 168. Cuzzi, J. N., A. Whizin, R. C. Hogan, A. Dobrovolskis, J. Colwell, J. Scargle, L. Dones, and M. Showalter. Saturn's F Ring Core: Calm in the Midst of Chaos. American Astronomical Society Division of Planetary Sciences meeting #44, #513.01, Reno Nevada, October 2012.
 169. Bradley, E. T., J. E. Colwell, L. W. Esposito, A. R. Hendrix. Analysis of Cassini UVIS Far Ultraviolet Reflectance Spectra to Constrain the Non-Ice Material in Saturn's Rings and Icy Moons. American Astronomical Society Division of Planetary Sciences meeting #44, #501.07, Reno Nevada, October 2012.

170. Esposito, L. W., E. Bradley, J. Colwell, and M. Sremcevic. Haloes Seen in UVIS Reflectance Spectra. American Astronomical Society Division of Planetary Sciences meeting #44, #501.06, Reno Nevada, October 2012.
171. Colwell, J. E., J. H. Cooney, L. W. Esposito, and M. Sremcevic. Particle Sizes and Small-Scale Structure in Saturn's Rings from Stellar Occultation Statistics. American Astronomical Society Division of Planetary Sciences meeting #44, #501.05, Reno Nevada, October 2012.
172. Becker, T. M., J. E. Colwell, and L. W. Esposito. Particle Sizes in Saturn's F Ring and Strands from Cassini Solar Occultation. American Astronomical Society Division of Planetary Sciences meeting #44, #501.04, Reno Nevada, October 2012.
173. Spilker, L. J., E. Deau, R. Morishima, G. Filacchione, M. M. Hedman, P. Nicholson, T. Bradley, and J. Colwell. Multi-wavelength Studies of Saturn's Rings to Constrain Ring Particle Properties and Ring Structure. American Astronomical Society Division of Planetary Sciences meeting #44, #501.01, Reno Nevada, October 2012.
174. Bratcher, A., J. E. Colwell, and B. Bolin. Analysis of a Triple Star System Occulted by Saturn's Rings. American Astronomical Society Division of Planetary Sciences meeting #44, #414.13, Reno Nevada, October 2012.
175. Lewis, M. C., D. G. Korycansky, and J. E. Colwell. Optimizing Polyhedra Collision Detection and Handling for Planetary Ring Simulations. American Astronomical Society Division of Planetary Sciences meeting #44, #414.11, Reno Nevada, October 2012.
176. Schmidt, J., J. Colwell, H. Salo, F. Spahn, and M. Tiscareno. On the Linear Damping Relation for Density Waves in Saturn's Rings. American Astronomical Society Division of Planetary Sciences meeting #44, #414.07, Reno Nevada, October 2012.
177. Pryor, W. R., L. W. Esposito, A. Jouchoux, G. Holsclaw, J. Gustin, J. E. Colwell, Cassini UVIS Team, F. J. Crary, S. W. H. Cowley, D. G. Mitchell, and U. Dyudina. Ultraviolet Auroral Pulsations on Saturn from Cassini UVIS. American Astronomical Society Division of Planetary Sciences meeting #44, #413.05, Reno Nevada, October 2012.
178. Seward, L. M., J. Colwell, M. Mellon, and B. Stemm. Low-Energy Impacts onto Lunar Regolith Simulant. American Astronomical Society Division of Planetary Sciences meeting #44, #311.08, Reno Nevada, October 2012.
179. Dove, A., J. Colwell, and C. Vamos. Growth and Destruction from Low-Velocity Dust Aggregate Collisions. American Astronomical Society Division of Planetary Sciences meeting #44, #311.07, Reno Nevada, October 2012.
180. Filacchione, G., F. Capaccioni, M. Ciarniello, P. D. Nicholson, M. M. Hedman, R. N. Clark, P. Cerroni, L. J. Spilker, J. Colwell, and T. Bradley. Multi-wavelength studies of Saturn's rings to constrain particle properties and ring structure: the VIMS perspective. Page 7039. EGU General Assembly 2012, 22-27 April 2012, Vienna Austria.
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193. Seward, L. M., and J. E. Colwell. Low-Energy Impacts onto Lunar Regolith. American Geophysical Union 2011 Fall Meeting, San Francisco, December 2011, P11A-1594.
194. Colwell, J. E., J. Cooney, and L. W. Esposito. Properties of Saturn's Rings from Stellar Occultation Statistics. American Geophysical Union 2011 Fall Meeting, San Francisco, December 2011, P12B-03. **Invited.**
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221. Colwell, J. Dust Levitation and Transport on Asteroids. 38th COSPAR Scientific Assembly. Held 18-15 July 2010, in Bremen, Germany, p.2. **Invited.**
222. Colwell, J., K. Baillié, L. W. Esposito. Seeing Ghosts in Saturn's Rings: Ephemeral Gaps in Cassini UVIS Stellar Occultations. 38th COSPAR Scientific Assembly. Held 18-15 July 2010, in Bremen, Germany, p.4.
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245. Colwell, J. E., Hughes, A. H., Grund, C. Dust Dynamics Near Planetary Surfaces. 37th COSPAR Scientific Assembly, July 2008, Montreal. **Invited.**
246. Colwell, J. E., Esposito, L. W., Jerousek, R. G., Lissauer, J. J. Vertical Structure of Saturn's Rings from Cassini UVIS Stellar Occultations. 37th COSPAR Scientific Assembly, July 2008, Montreal.
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264. Spitale, J., C. Porco, and J. Colwell. Shapes and Kinematics of Eccentric Features in Saturn's Rings from Cassini Imaging and Occultation Observations. AAS/Division for Planetary Sciences Meeting #38, Abs 51.05. Sep. 2006, Pasadena CA.
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