

David A. Williams

Associate Research Professor

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Education

Ph.D., University of Alabama, Tuscaloosa, AL; Geology; 1998

Dissertation: Analytical/Numerical Modeling of the Emplacement and Erosional Potential of Archean and Proterozoic Komatiitic Lava Flows. **Advisor:** Dr. C. Michael Lesher (now at Laurentian University, Sudbury)

M.S., Arizona State University, Tempe, AZ; Geology; 1992

Thesis: Multispectral Studies of Selected Crater- and Basin-Filling Lunar Maria from *Galileo* Earth-Moon Encounter 1. **Advisor:** Dr. Ronald Greeley (deceased)

B.S., Indiana University, Bloomington, IN; Astronomy & Astrophysics; 1989

Minors: Mathematics, Geology

Professional Positions

Associate Research Professor, School of Earth & Space Exploration: Arizona State University, Tempe, AZ; July 2012-Present. U.S. Co-Investigator, ESA *Mars Express* Mission; U.S. Co-Investigator, NASA *Dawn* Mission to Ceres.

Director, NASA Planetary Regional Image Facility (RPIF) at Arizona State University (ASU), renamed **The Ronald Greeley Center of Planetary Studies**, March 2012-Present.

Principal Investigator, The Planetary Aeolian Laboratory (located at NASA Ames Research Center, Moffett Field, California, administered by ASU), March 2012-Present.

Member of the Graduate Faculty (Geological Sciences), School of Earth & Space Exploration: Arizona State University, Tempe, AZ; May 2010-Present.

Faculty Research Associate, School of Earth & Space Exploration (formerly Department of Geological Sciences): Arizona State University, Tempe, AZ; August 2003-June 2012. U.S. Co-Investigator, ESA *Mars Express* Mission; Participating Scientist, NASA *Dawn* Mission to Vesta.

Visiting Assistant Professor, Department of Geological Sciences: Arizona State University, Tempe, AZ; August 2001-May 2002.

Postdoctoral Research Associate, Department of Geological Sciences: Arizona State University, Tempe, AZ; August 1998-July 2003. Associate, Solid State Imaging Team, NASA *Galileo* Mission at Jupiter.

Graduate Council Research Fellow/Graduate Research Assistant/Graduate Teaching Assistant, Department of Geology: University of Alabama, Tuscaloosa, AL; August 1994-August 1998.

Graduate Research/Teaching Associate, Department of Geology: Arizona State University, Tempe, AZ; August 1989-August 1994.

Summer Research Assistant, Sacramento Peak Solar Observatory: National Optical Astronomy Observatories, Sunspot, New Mexico; Summer 1987.

Research Grants Received

Principal Investigator: Geologic Mapping of Ascreaeus Mons, Mars, NASA Mars Data Analysis Program; 2014-2017; with Co-Investigators Jacob Bleacher and W. Brent Garry. *Total Costs: \$287,745.*

Co-Investigator: Dawn – A Journey to the Beginning of the Solar System, NASA Dawn Mission to Ceres, Subcontract from UCLA, PI Christopher Russell, 2015-2016. *Total Costs: \$162,356.*

Co-Investigator: A Multi-wavelength Observing Program of Io Using Adaptive Optics and Interferometric Techniques, National Science Foundation, 2014-2017; with Principal Investigator Imke de Pater.

- Co-Investigator: Technology Development for a Topo Imager on the NASA Europa Clipper Mission**, NASA Instrument Concepts for Europa Exploration Program, 2014; with Principal Investigator Jim Bell.
- Principal Investigator: Modeling Erosion by Flowing Lava on the Moon, Mars, and Earth**, NASA Planetary Geology & Geophysics Program; 2013-2017; with Co-Investigators Laszlo Keszthelyi and Brent Garry. *Total Costs: \$470,000.*
- Principal Investigator: Identification, Analysis, and Mapping of Putative Igneous Deposits on Asteroid 4 Vesta**, NASA *Dawn* at Vesta Participating Scientists Program; 2010-2014. *Total Costs: \$260,000.*
- Principal Investigator: Geologic Mapping of Arsia & Pavonis Montes, Mars**, NASA Mars Data Analysis Program; 2010-2014; with Co-Investigators Jacob Bleacher and W. Brent Garry. *Total Costs: \$425,539.*
- Principal Investigator: Geologic Mapping of Olympus Mons, Mars**, NASA Mars Data Analysis Program; 2009-2012; with Co-Investigator Jacob Bleacher. *Total Costs: \$272,463.*
- Principal Investigator: Regional Planetary Image Facility (PI change from Ron Greeley)**, NASA Planetary Geology & Geophysics Program; 2011-2015; *Total Costs: Not Available.*
- Principal Investigator: Planetary Aeolian Laboratory (PI change from Ron Greeley)**, NASA Planetary Geology & Geophysics Program; 2011-2015; *Total Costs: Not Available.*
- Principal Investigator: Aeolian Patterns and Deposits Related to Small Craters (PI change from Ron Greeley)**, NASA Planetary Geology & Geophysics Program; 2010-2014. *Total Costs: \$410,022.*
- Principal Investigator: HRSC: Co-Investigation on ESA Mars Express Mission (PI change from Ron Greeley)**, NASA Mars Exploration Program, contract with JPL; 2014. *Total Costs: \$86,000.*
- Principal Investigator: Global Geologic Mapping of Io, Phase II: Database Construction and Regional Mapping**, NASA Outer Planets Research Program; 2008-2011; with Co-Investigator Julie Rathbun. *Total Costs: \$384,655.*
- Principal Investigator: Worlds of Fire: A Hands-On/Minds-On Investigation of Active Volcanism on Earth and Io**, NASA Education-Public Outreach Program; 2006-2009; with E/PO Lead Steven Kadel. *Total Costs: \$43,197.*
- Principal Investigator: Global Geologic Mapping of Io**, NASA Outer Planets Research Program; 2005-2009; with Co-Investigators Laszlo Keszthelyi and David Crown. *Total Costs: \$243,849.*
- Co-Investigator: Studies in Planetary Volcanology**, NASA Planetary Geology & Geophysics Program; 2003-2006; with Principal Investigator Ronald Greeley.
- Co-Investigator: Studies in Planetary Volcanology**, NASA Planetary Geology & Geophysics Program; 2002; with Principal Investigator Ronald Greeley.
- Co-Investigator: Studies of the Galilean Satellites**, NASA Jovian System Data Analysis Program; 1999-2001; with Principal Investigator Ronald Greeley and Co-Investigator Sarah Fagents.

Science Teams and Funded Research Collaborations

- Co-Investigator, ESA Mars Express High Resolution Stereo Camera Team**, Co-Investigator (replacing the late Ron Greeley) of the *Mars Express* HRSC team with responsibilities for planning, processing, and analyzing images of the martian surface, February 2012-present.
- Co-Investigator, NASA Dawn Mission to dwarf planet 1 Ceres**, Member of the *Dawn* Science Team with responsibilities to oversee the geologic mapping of Ceres, January 2015-present.
- Participating Scientist, NASA Dawn Mission to asteroid 4 Vesta**, Member of the *Dawn* Science Team with responsibilities to oversee the geologic mapping of Vesta, September 2010-December 2014.
- Associate Investigator, ESA Mars Express High Resolution Stereo Camera Team**, Associate member of the *Mars Express* HRSC team with responsibilities for planning, processing, and analyzing images of the martian surface, April 2003-February 2012.
- Associate Member, NASA Mars Polar Lander Imaging Team**, Associate member of the *MPL* camera team with responsibilities for planning, processing, and analyzing images of the martian south pole (mission failed on landing), January 1999-December 1999.
- Associate Member, NASA Galileo Solid State Imaging Team**, Associate member of the *Galileo* camera team with responsibilities for planning, processing, and analyzing images of the Galilean satellites, August 1998-September 2003.
- Student Assistant, NASA Galileo Solid State Imaging Team**, Graduate student assistant of the *Galileo* camera team with responsibilities for planning, processing, and analyzing images of the Moon during the Earth-Moon flybys, January 1991-August 1993.

Student Assistant, NASA Magellan Radar Imaging Team, Graduate student assistant of the *Magellan* radar imaging team with responsibilities for analyzing images of Venus in search of wind streaks, 1991-1992.

Professional Service

Chair, Geologic Mapping Subcommittee (GEMS), NASA Mapping and Planetary Spatial Information Infrastructure Team (MAPSIT), June 2014-Present

Member, NASA Planetary Geology & Geophysics Geologic Mapping Subcommittee (GEMS), March 2012-Present

External Proposal Reviewer, NASA Postdoctoral Program, December 2015.

Planetary Data Archiving, Restoration and Tools (PDART) Program Proposal Review Panel, Oct 2015.

Member of NASA peer review panel.

Mars Data Analysis Program (MDAP) Proposal Review Panel, January 2015.

Member of NASA peer review panel.

External Proposal Reviewer, NASA Solar System Workings Program, October 2014.

Steering Committee Member, NASA Outer Planets Assessment Group (OPAG), March 2008-July 2013

Planetary Geology and Geophysics Review Panel, 2013.

Member of NASA peer review panel.

Chair, Pellas-Ryder Best Student Paper Award Committee, January 2011-March 2012

Chair, 2012 GSA Planetary Geology Division G.K. Gilbert Award Committee, November 2011-February 2012

Chair, Planetary Geology Division, Geological Society of America, November 2010-November 2011

Co-Editor, GSA Special Publication, "Recent Advances in Lunar Stratigraphy", Fall 2009-Winter 2011

First Vice Chair, Planetary Geology Division, Geological Society of America, October 2009-November 2010

Stephen E. Dwornik Planetary Geoscience Student Presentation Judge, 41st Lunar and Planetary Science Conference, Houston, Texas, March 2010.

Member, Pellas-Ryder Best Student Paper Award Committee, January 2010-December 2010.

External Proposal Reviewer, NASA Postdoctoral Program, December 2009.

Session Co-convener, Geological Society of America Annual Meeting, October 2009.

Co-organizer of conference session T91: "Eruptive Deposits as Keys to Understanding Volcanic Systems on Planetary Bodies".

External Proposal Reviewer, NASA Postdoctoral Program, August 2009.

Stephen E. Dwornik Planetary Geoscience Student Presentation Chief Judge and Judging Organizer, 40th Lunar and Planetary Science Conference, Houston, Texas, March 2009.

External Proposal Reviewer, NASA Postdoctoral Program, February 2009.

Program Committee Member, 40th Lunar & Planetary Science Conference, Houston, Texas, January 2009.

Session Co-convener, American Geophysical Union Fall Meeting, 2008.

Co-organizer of conference session P02: "Recent Advances in Planetary Volcanism".

External Proposal Reviewer, Mars Fundamental Research Program, October 2008.

Second Vice Chair, Planetary Geology Division, Geological Society of America, Oct. 2008-Oct. 2009

Session Co-convener, Geological Society of America Annual Meeting, October 2008.

Co-organizer of conference session T106: "Current Research Issues in Lunar Stratigraphy".

Stephen E. Dwornik Planetary Geoscience Student Presentation Judge, 39th Lunar and Planetary Science Conference, Houston, Texas, March 2008.

Discovery and Scout Mission Capabilities Expansion Program Review Panel, 2008.

Member of NASA peer review panel.

External Proposal Reviewer, NASA Postdoctoral Program, December 2007.

Session Co-Chair, Pardee Keynote Symposium: New Eyes and Ears at Mars, Geological Society of America Annual Meeting, Denver, Colorado, October 2007.

External Proposal Reviewer, Planetary Geology and Geophysics Program, August 2007.

Mars Data Analysis Program Review Panel, 2007.

Member of NASA peer review panel.

Stephen E. Dwornik Planetary Geoscience Student Presentation Judge, 38th Lunar and Planetary Science Conference, Houston, Texas, March 2007.

Member, NASA Jovian System Observer Mission Study Science Definition Team (SDT), 2007.

Program Committee Member, 38th Lunar & Planetary Science Conference, Houston, Texas, January 2007.

Secretary-Treasurer, Planetary Geology Division, Geological Society of America, Oct. 2006 – Sept. 2008

External Proposal Reviewer, MESSENGER Participating Scientist Program, October 2006.
Cassini Data Analysis Program Review Panel, 2006.

Member of NASA peer review panel.

External Proposal Reviewer, Planetary Geology and Geophysics Program, August 2006.

Stephen E. Dwornik Planetary Geoscience Student Presentation Judge, 37th Lunar and Planetary Science Conference, Houston, Texas, March 2006.

Program Committee Member, 37th Lunar & Planetary Science Conference, Houston, Texas, January 2006.

External Proposal Reviewer, Outer Planets Research Program, August 2005.

External Proposal Reviewer, Planetary Geology and Geophysics Program, August 2005.

Session Co-Chair, Mars Express and HRSC I, 36th Lunar and Planetary Science Conference, Houston, Texas, March 2005.

Stephen E. Dwornik Planetary Geoscience Student Presentation Judge, 36th Lunar and Planetary Science Conference, Houston, Texas, March 2005.

Planetary Geology and Geophysics Review Panel, 2004.

Member of NASA peer review panel.

Mars Data Analysis Program Review Panel, 2004.

Member of NASA peer review panel.

Mars Fundamental Research Review Panel, 2003.

Member of NASA peer review panel.

Session Co-convener, American Geophysical Union Fall Meeting, 1999.

Co-organizer of conference session on "Ultramafic Volcanism: From Earth's Archean to Io's Present".

Steering Committee Member, Commission on Large-Volume Basaltic Provinces, International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI), 1993-1998.

Student Theses and Dissertations

Ph.D. Supervisory Committee Co-chair, Vincenzo Cataldo, *Modeling Erosion by Flowing Lava on the Moon, Mars, and Earth*, Ph.D. dissertation, Arizona State University, Anticipated 2017.

M.S. Supervisory Committee Co-chair, Kyle Mohr, *Geological Mapping of Ascræus Mons, Mars*, M.S. thesis, Arizona State University, Anticipated Spring 2017.

Ph.D. Supervisory Committee Member, Melissa Bunte, *Geological Studies of Europa and Io*, Ph.D. dissertation, Arizona State University, December 2013.

M.S. Supervisory Committee Co-chair, Leon Manfredi, *The Volcanic History of the Tempe Volcanic Province, Mars*, M.S. thesis, Arizona State University, December, 2012.

M.S. Supervisory Committee Member, Melissa Bunte, *Volcano-Tectonic Interactions on Io: The Zal, Hi'iaka, and Shamshu Regions*, M.S. thesis, Arizona State University, May, 2008.

Ph.D. Supervisory Committee Member, Jacob E. Bleacher, *Characterization of Shield Volcanoes on Earth and Mars from Slope Analyses and Lava Flow Mapping*, Ph.D. dissertation, Arizona State University, December, 2006.

Professional Organizations

American Association for the Advancement of Science (AAAS), 1998-present.

International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI), 1996-present.

American Geophysical Union (AGU), 1993-present.

Geological Society of America (GSA), Cordillera Section and Planetary Geology Division, 1991-present.

American Astronomical Society, Division for Planetary Sciences (DPS), 1992-present.

The Planetary Society, 1985-present.

National Space Society (NSS), 1996-present.

The Society of Sigma Gamma Epsilon (SGE) (Earth Science Honorary), 1990-1998.
Alpha Epsilon Lambda (AEL), (Graduate & Professional Student Honorary), 1998.

Honors and Awards

Honored by the IAU with naming of asteroid 10,461 DAWilliams, July 12, 2014
Elected to Fellowship, Geological Society of America, May 2014
NASA Group Achievement Award, Dawn Science Team (Vesta Encounter), 2013.
10-Year Service Award, School of Earth & Space Exploration, Arizona State University, August 2008.
5-Year Service Award, Department of Geological Sciences, Arizona State University, August 2003.
Promotion to Faculty Research Associate, Department of Geological Sciences, Arizona State University, 2002.
Award for Excellence in Research by a Doctoral Student, Graduate School, University of Alabama, 1997-1998.
Award for Excellence in Research by a Doctoral Student, College of Arts & Sciences, University of Alabama, 1997-1998.
Outstanding Research Award, Graduate Research Exposition, University of Alabama, April 1998.
Outstanding Research by a Doctoral Student, Department of Geology, University of Alabama, 1998.
Outstanding Research by a Doctoral Student, Department of Geology, University of Alabama, 1996.

Invited Scientific Presentations

Sudbury Geological Discussion Group, Laurentian University, Sudbury, Ontario, Canada, June 2004: *Latest Results from NASA Mars Exploration Rover and ESA Mars Express.*
Io Workshop, University of California, Berkeley, February 2003: *Volcanic Eruptions on Io: From Hot Ultramafics to Cold Sulfur and Beyond.*
Geological Society of America of America Conference, 2002 Annual Meeting, Denver, CO, October 2002: *High-Temperature Ultrabasic Eruptions on Jupiter's Moon Io: Latest Results from the Galileo Mission and Assessment of Eruption Styles.*

Selected Public Lectures

West Valley Engineers, Scientists, and Technologists Club, Sun City West, AZ; November 2014. Public presentation on NASA's Mars rover missions.
Phoenix Astronomical Society, Paradise Valley Community College, Paradise Valley, AZ; December 2010. Public presentation on NASA-ESA Europa-Jupiter System Mission (EJSM).
East Valley Astronomy Club (EVAC), Gilbert Public Library, Gilbert, AZ; August 2009. Public lecture titled *Water, Ice or Methane Everywhere: Recent Results from NASA's Planetary Missions.*
Creation Star Trek Convention, Las Vegas Hilton Convention Center, Las Vegas, NV; August 2009. Two public lectures on the *Water, Ice or Methane Everywhere: Recent Results from NASA's Planetary Missions* and *Red Planet: Insights into the Geology of Mars from Recent Missions.*
Arizona Science Center, Phoenix, AZ; May 2009. Public presentation, *Water, Ice or Methane Everywhere: Recent Results from NASA's Planetary Missions.*
STEM Club, Glendale Community College, Glendale, AZ; February 2009. Public presentation on recent results from NASA Solar System Exploration Program.
Phoenix Astronomical Society, Paradise Valley Community College, Paradise Valley, AZ; December 2008. Public presentation on recent results from NASA Mars Exploration Program.
Creation Star Trek Convention, Las Vegas Hilton Convention Center, Las Vegas, NV; August 2007. Two public lectures on the *History of Robotic Exploration of the Solar System* and *Insights into Mars Exploration from Recent Missions.*
Creation Star Trek Convention, Las Vegas Hilton Convention Center, Las Vegas, NV; August 2006. Two public lectures on the *History of Robotic Exploration of the Solar System* and *NASA Space Science Update*, including *Mars Express*, *MER*, *Cassini-Huygens*, *Stardust*, and *MRO-MOI*.
Leisure World Lion's Club, Mesa, AZ; May 23, 2006. Oral presentation on the ASU Space Photography Laboratory and results from *NASA Mars Exploration Rover* and *ESA Mars Express*.
2006 Nebula Awards Weekend, Tempe, AZ; May 2006. Oral presentation on active NASA Space Science Missions and recent results to members of the Science Fiction Writer's Association.

- Arizona Mills IMAX Theater**, Tempe, AZ; October 2005. Educational display and presentation on NASA *Apollo* Missions prior to educator screening of the IMAX movie *Magnificent Desolation*.
- Creation *Star Trek* Convention**, Las Vegas Hilton Convention Center, Las Vegas, NV; August 2005. Public lecture on NASA *Space Science Update*, including *Mars Express*, MER, *Cassini-Huygens*, *Deep Impact*, and MRO launch.
- Western Regional Science Fiction & Fantasy Convention (WesterCon 57)**, Wigwam Resort, Litchfield Park, AZ; July 2004. Two public presentation on the latest results from *Mars Express* and *Cassini* at Saturn.
- Boys & Girls Club of Scottsdale**, Scottsdale, AZ; May 2004. Public presentation on the latest results from NASA *Mars Exploration Rover* and ESA *Mars Express*.
- Challenger Space Science Center**, Peoria, AZ; May 2004. Public presentation on the results from NASA *Mars Exploration Rover* and ESA *Mars Express* as part of National Space Day activities.
- Phoenix Arcadia Rotary Club**, Mountain Shadows Resort, Scottsdale, AZ; April 2004. Public presentation on the initial results from NASA *Mars Exploration Rover* and ESA *Mars Express*.
- Challenger Space Science Center**, Peoria, AZ; January 2004. Public presentation on the initial results from NASA *Mars Exploration Rover* and ESA *Mars Express* as part of Mars Day activities.
- East Valley Astronomy Club (EVAC), Scottsdale Community College**, Scottsdale, AZ; January 2004. Public presentation on the initial results from NASA *Mars Exploration Rover* and ESA *Mars Express*.

Educational and Community Work

- Lecturer**, “The Geology of Io” and **Field Trip Co-Leader**, “Volcanoes of Northern Arizona” Field Trip, Glendale Community College, May 16-17, 2009: Part of Io-Earth Volcanism E/PO Project.
- Lecturer**, “The Geology of Io” and **Field Trip Co-Leader**, “Volcanoes of Northern Arizona” Field Trip, Glendale Community College, October 25-26, 2008: Part of Io-Earth Volcanism E/PO Project.
- Organizer, Space Science Display, Challenger Space Science Center**, Peoria, AZ, 2004-2005: Photographic display of latest press releases from various missions, including MER and *Mars Express*.
- Organizer, Special E/PO Event, Challenger Space Science Center**, Peoria, AZ, September 20, 2003: Farewell to *Galileo*: A NASA Mission Celebration, Public Lectures by *Galileo* SSI Team members and charity fundraiser.

Courses Taught and Curriculum Development

- Planetary Volcanology (3 cr)**, Arizona State University, 19 undergraduate and graduate students, Fall 2014.
- Special Topics: Planetary Volcanology (3 cr)**, Arizona State University, 10 undergraduate and graduate students, Spring 2011.
- Developed lecture materials for 8-module, 3 cr Scientific Communication course**, Grand Canyon University, Summer 2007.
- Special Topics: Planetary Volcanology (3 cr)**, Arizona State University, 14 undergraduate and graduate students, Spring 2007.
- Developed lecture and laboratory materials for 8-module, 3 cr Introduction to Astronomy course**, Grand Canyon University, Fall 2006.
- Developed lecture materials for 8-module, 3 cr Introduction to Geology course**, Grand Canyon University, Summer 2006.
- Co-organizer, Volcanology Seminar (1 cr)**, Arizona State University, ~10 undergraduate and graduate students, Fall 2004 – Fall 2005.
- Special Topics: Planetary Volcanology (3 cr)**, Arizona State University, 14 undergraduate and graduate students, Spring 2002.
- Physical Geology 101 (3 cr)**, Arizona State University, ~230 undergraduate students, Fall 2001.
- Lifetime Certified Instructor** (Astronomy, Chemistry, Geology, Mathematics), **State of Arizona Community College System**.

Guest Lectures

- Guest Lecturer: Dwarf Planets: Ceres and Pluto from NASA’s Dawn and New Horizons Mission, Astronomy 111 (3 cr)**, Arizona State University, ~200 undergraduates, Fall 2016.

- Guest Lecturer: Asteroids and NASA Dawn Mission to Vesta, Asteroids seminar (3 cr)**, Arizona State University, ~15 undergraduate and graduate students, Spring 2014.
- Guest Lecturer: Planetary Volcanology, Volcanology (3 cr)**, Arizona State University, ~10 undergraduate and graduate students, Fall 2013.
- Guest Lecturer: Asteroids and NASA Dawn Mission to Vesta, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~15 undergraduate and graduate students, Fall 2011.
- Guest Lecturer: Outer Planet Satellites, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~15 undergraduate and graduate students, Fall 2011.
- Guest Lecturer: Terrestrial Planets, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~15 undergraduate and graduate students, Fall 2011.
- Guest Lecturer: Outer Planet Satellites, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~15 undergraduate and graduate students, Fall 2010.
- Guest Lecturer: Terrestrial Planets, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~15 undergraduate and graduate students, Fall 2010.
- Guest Lecturer: The Geology of Io, Geology of the Outer Planet Satellites (3 cr)**, Arizona State University, ~10 undergraduate and graduate students, Spring 2010.
- Guest Lecturer: Overview of the Outer Planet Satellites, Geology of the Outer Planet Satellites (3 cr)**, Arizona State University, ~10 undergraduate and graduate students, Spring 2010.
- Guest Lecturer: Outer Planet Satellites, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~10 undergraduate and graduate students, Fall 2009.
- Guest Lecturer: Terrestrial Planets, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~10 undergraduate and graduate students, Fall 2009.
- Guest Lecturer: Outer Planet Satellites, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~10 undergraduate and graduate students, Fall 2008.
- Guest Lecturer: Terrestrial Planets, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~10 undergraduate and graduate students, Fall 2008.
- Guest Lecturer: Lava Flow Emplacement, Advanced Physical Volcanology (3 cr)**, Arizona State University, 6 undergraduate and graduate students, Spring 2008.
- Guest Lecturer: Outer Planet Satellites, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~10 undergraduate and graduate students, Fall 2007.
- Guest Lecturer: Terrestrial Planets, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~10 undergraduate and graduate students, Fall 2007.
- Guest Lecturer: Outer Planet Satellites, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~10 undergraduate and graduate students, Fall 2006.
- Guest Lecturer: Writing Scientific Papers & Proposals, Scientific Communication (3 cr)**, Grand Canyon University, ~2 undergraduate students, Fall 2006.
- Guest Lecturer: Planetary Volcanism, Volcanology (3 cr)**, Arizona State University, ~15 undergraduate and graduate students, Fall 2006.
- Guest Lecturer: Terrestrial Planets, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~10 undergraduate and graduate students, Fall 2006.
- Guest Lecturer: Outer Planet Satellites, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~15 undergraduate and graduate students, Fall 2005.
- Guest Lecturer: Terrestrial Planets, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~15 undergraduate and graduate students, Fall 2005.
- Guest Lecturer: Planetary Volcanism, Volcanology (3 cr)**, Arizona State University, ~15 undergraduate and graduate students, Fall 2004.
- Guest Lecturer: Impact Cratering, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~15 undergraduate and graduate students, Fall 2002.
- Guest Lecturer: Moon and Asteroids, Fundamentals of Planetary Geoscience (3 cr)**, Arizona State University, ~15 undergraduate and graduate students, Fall 2002.

Manuscripts in Preparation

Manfredi, L., T. Platz, J.E. Bleacher, A.B. Clarke, **D.A. Williams**, 2014, Volcanic history of the Tempe volcanic province, Planetary and Space Science, in preparation.

Bleacher, J.E., **D.A. Williams**, P.M. Mougini-Mark, S. Musiol, P.K. Byrne, D. Shean, G. Neukum, R. Greeley, K.L. Tanaka, 2015, Geologic Map of Olympus Mons, Mars, U.S. Geol. Surv. Sp. Inv. Map, 1:1,000,000, in preparation.

Sizemore, H.G., T. Platz, T.H. Prettyman, N. Schorghofer, D.A. Crown, N. Schmedemann, A. Neeseman, T. Kneissi, R.A. Yingst, S.C. Mest, **D.A. Williams**, P.M. Schenk, M.T. Bland, B.E. Schmidt, M.C. De Sanctis, F. Tosi, C.T. Russell, C. A. Raymond, 2016, Pitted Terrain on Dwarf Planet Ceres: Morphological evidence for shallow volatiles at low and mid latitudes, Journal, submitted.

Manuscripts in Review

Williams, D.A., D.L. Buczkowski, S.C. Mest, J.E.C. Scully, 2016, Introduction: The geological mapping of Ceres, *Icarus*, in review.

Ruesch, O., L.A. McFadden, **D.A. Williams**, K.H.G. Hughson, J.H. Pasckert, J. Scully, T. Kneissl, T. Roatsch, T. Platz, F. Preusker, N. Schmedemann, S. Marchi, H. Hiesinger, R. Jaumann, A. Nathues, C.A. Raymond, C.T. Russell, 2016, Geology of Ceres' north pole quadrangle with Dawn FC imaging data, *Icarus*, in review.

Williams, D.A., T. Kneissl, A. Neesemann, S.C. Mest, E. Palomba, T. Platz, A. Nathues, A. Longobardo, J.E.C. Scully, A. Ermakov, R. Jaumann, D.L. Buczkowski, M. Schäfer, G. Thangjam, C.M. Pieters, T. Roatsch, F. Preusker, S. Marchi, N. Schmedemann, H. Hiesinger, A. Frigeri, C.A. Raymond, C.T. Russell, 2016, The geology of the Kerwan quadrangle of dwarf planet Ceres: Investigating Ceres' oldest impact basin, *Icarus*, in review.

Scully, J.E.C., D.L. Buczkowski, A. Neesemann, **D.A. Williams**, S.C. Mest, C. A. Raymond, K.H.G. Hughson, T. Kneissl, J. H. Pasckert, O. Ruesch, A. Frigeri, A. Nass, S. Marchi, J-P. Combe, N. Schmedemann, B.E. Schmidt, H.T. Chilton, C. T. Russell, A.I. Ermakov, R. Jaumann, M. Hoffmann, A. Nathues, C. M. Pieters, T. Platz, F. Preusker, T. Roatsch, M. Schaefer, 2016. The localized distribution of water ice on Ceres, as evidenced by geologic mapping of the northern-mid-latitude Ezinu quadrangle, *Icarus*, in review.

Hughson, K.H.G., C.T. Russell, **D.A. Williams**, D.L. Buczkowski, S.C. Mest, J.H. Pasckert, J.E.C. Scully, J.-P. Combe, T. Platz, O. Ruesch, F. Preusker, R. Jaumann, A. Nass, T. Roatsch, A. Nathues, M. Schaefer, B.E. Schmidt, H.T. Chilton, A. Ermakov, L.A. McFadden, 2016, The Ac-H-5 (Fejokoo) quadrangle of Ceres: Geologic map and geomorphological evidence for ground ice mediated surface processes, *Icarus*, in review.

Krohn, K., R. Jaumann, K.A. Otto, F. Schulzeck, A. Neesemann, A. Nass, K. Stephan, F. Tosi, R.J. Wagner, F. Zambon, I. von der Gathen, **D.A. Williams**, D.L. Buczkowski, M.C. De Sanctis, E. Kersten, K.-D. Matz, S.C. Mest, C.M. Pieters, F. Preusker, T. Roatsch, J.E.C. Scully, C.T. Russell, C. A. Raymond, 2016, The unique geomorphology and structural geology of the Haulani crater of dwarf planet Ceres as revealed by geological mapping of equatorial quadrangle Ac-6 Haulani, *Icarus*, in review.

Schulzeck, F., K. Krohn, I.v.d. Gathen, N. Schmedemann, K. Stephan, R. Jaumann, **D.A. Williams**, D.L. Buczkowski, S.C. Mest, J.E.C. Scully, E. Kersten, K.-D. Matz, A. Nass, F. Preusker, T. Roatsch, C.A. Raymond, C.T. Russell, 2016. Geologic mapping of the Ac-11 Sintana quadrangle: Assessing diverse crater morphologies, *Icarus*, in review.

Peer-Reviewed Publications

h-index: 23 (Web of Science), 27 (Google Scholar)
m-parameter: 1.00 (Web of Science), 1.17 (Google Scholar)

2017

Birch, S.P.D., A.G. Hayes, W. Dietrich, A.D. Howard, C. Bristow, M.J. Malaska, J. Moore, M. Mastrogiuseppe, J.D. Hofgartner, **D.A. Williams**, O. White, J. Soderblom, J.W. Barnes, E. Turtle, J.I. Lunine, C. Wood, C.D. Neish, R. Kirk, E. Stofan, R.D. Lorenz, and R.M.C. Lopes, 2017, Geomorphologic mapping of Titan's polar terrains: Constraining Surface Processes and Landscape Evolution, *Icarus*, 282, 214-236.

2016

Krohn, K., R. Jaumann, K. Stephan, K.A. Otto, N. Schmedemann, R.J. Wagner, K.-D. Matz, F. Tosi, F. Zambon, I. von der Gathen, F. Schulzeck, S.E. Schröder, D.L. Buczkowski, H. Hiesinger, H.Y. McSween, C.M. Pieters, F. Preusker, T. Roatsch, C.A. Raymond, C.T. Russell, D.A. Williams, 2016, Cryogenic flow features on Ceres – Implications for crater-related cryovolcanism, *Geophys. Res. Lett.*, in press, <http://dx.doi.org/10.1002/2016GL070370>.

Buczkowski, D.L., B.E. Schmidt, **D.A. Williams**, S. Mest, J.E.C. Scully, A. Ermakov, F. Preusker, P. Schenk, K.A. Otto, H. Hiesinger, D. O'Brien, S. Marchi, H. Sizemore, K. Hughson, H. Chilton, M. Bland, S. Byrne, N. Schorghofer, T. Platz, R. Jaumann, T. Roatsch, M.V. Sykes, A. Nathues, M.C. De Sanctis, C.A. Raymond, C.T. Russell, 2016, The geomorphology of Ceres, *Science*, 353, <http://dx.doi.org/10.1126/science.aaf4332>.

Hiesinger, H., S. Marchi, N. Schmedemann, P. Schenk, J.H. Pasckert, A. Neesemann, D.P. O'Brien, T. Kneissl, A.I. Ermakov, R.R. Fu, M.T. Bland, A. Nathues, T. Platz, **D.A. Williams**, R. Jaumann, J.C. Castillo-Rogez, O. Ruesch, B. Schmidt, R.S. Park, F. Preusker, D.L. Buczkowski, C.T. Russell, C.A. Raymond, 2016, Cratering on Ceres: Implications for its crust and evolution, *Science*, 353, <http://dx.doi.org/10.1126/science.aaf4759>.

Ruesch, O., T. Platz, P. Schenk, L.A. McFadden, J.C. Castillo-Rogez, L.C. Quick, S. Byrne, S. Byrne, F. Preusker, D.P. O'Brien, N. Schmedemann, **D.A. Williams**, J.-Y. Li, M.T. Bland, H. Hiesinger, T. Kneissl, A. Neesemann, M. Schaefer, J.H. Pasckert, B.E. Schmidt, D.L. Buczkowski, M.V. Sykes, A. Nathues, T. Roatsch, M. Hoffmann, C.A. Raymond, C.T. Russell, 2016, Cryovolcanism on Ceres, *Science*, 353, <http://dx.doi.org/10.1126/science.aaf4286>.

Marchi, S., A.I. Ermakov, C.A. Raymond, R.R. Fu, D.P. O'Brien, M.T. Bland, E. Ammannito, M.C. De Sanctis, T. Bowling, P. Schenk, J.E.C. Scully, D.L. Buczkowski, **D.A. Williams**, H. Hiesinger, and C.T. Russell, 2016. The missing large impact craters on Ceres, *Nat. Comm.*, <http://dx.doi.org/10.1038/ncomms12257>.

Li, J.-Y., V. Reddy, A. Nathues, L. Le Corre, M.R.M. Izawa, E.A. Cloutis, M.V. Sykes, U. Carsenty, J.C. Castillo-Rogez, M. Hoffmann, R. Jaumann, K. Krohn, S. Mottola, T.H. Prettyman, M. Schaefer, P. Schenk, S.E. Schröder, **D.A. Williams**, D.E. Smith, M.T. Zuber, A.S. Konopliv, R.S. Park, C.A. Raymond, C.T. Russell, 2016, Surface Albedo and Spectral Variability of Ceres, *Ap. J. Lett.*, 817, <http://dx.doi.org/10.3847/2041-8205/817/2/L22>.

Malaska, M.J., R.M.C. Lopes, **D.A. Williams**, C.D. Neish, A. Solomonidou, J.M. Soderblom, A.M. Schoenfeld, S.P. Birch, A.G. Hayes, A. Le Gall, M.A. Janssen, T.G. Farr, R.D. Lorenz, J. Radebaugh, E.P. Turtle, 2016, Geomorphological map of the Afekan Crater region, Titan: Terrain relationships in the equatorial and mid-latitude regions, *Icarus*, 270, 130-161, <http://dx.doi.org/10.1016/j.icarus.2016.02.021>.

Musiol, S., E.P. Holohan, B. Cailleau, T. Platz, A. Dumke, T.R. Walter, **D.A. Williams**, and S. van Gasselt, 2016, Lithospheric flexure and gravity spreading of Olympus Mons volcano, Mars, *J. Geophys. Res.*, 121, doi:10.1002/2015JE004896.

de Pater, I., C. Laver, A.G. Davies, K. de Kleer, **D.A. Williams**, R.R. Howell, J.A. Rathbun, J.R. Spencer, 2016, Io: Eruptions at Pillan, and the time evolution of Pele and Pillan from 1996 to 2015, *Icarus*, 264, 198-212, <http://dx.doi.org/10.1016/j.icarus.2105.09.006>.

2015

Cataldo, V., **Williams, D.A.**, Dundas, C.M., and Keszthelyi, L.P., 2015, Limited role for thermal erosion by turbulent lava in proximal Athabasca Valles, Mars, *J. Geophys. Res.*, *120*, 1800-1900, doi:10.1002/2104JE004761.

Burr, D.M., Bridges, N.T., Smith, J.K., Marshall, J.R., White, B.R., **Williams, D.A.**, 2015, The Titan Wind Tunnel: A new tool for investigating extraterrestrial aeolian environments, *Aeolian Research*, *18*, 205-214.

Jaumann, R., D. Tirsch, E. Hauber, V. Ansan, G. Di Achille, G. Erkeling, F. Fueten, J. Head, M.G. Kleinbans, N. Mangold, G.G. Michael, G. Neukum, A. Pacifici, T. Platz, M. Pondrelli, J. Raack, D. Reiss, **D.A. Williams**, S. Adeli, D. Baratoux, G. de Villers, B. Foing, S. Gupta, K. Gwinner, H. Hiesinger, H. Hoffmann, L. Le Deit, L. Marinangeli, K.-D. Matz, V. Mertens, J.P. Muller, J.H. Pasckert, T. Roatsch, A.P. Rossi, F. Scholten, M. Sowe, J. Voigt, N. Warner, 2015, Quantifying Geological Processes on Mars - Results of the High Resolution Stereo Camera (HRSC) on Mars Express, *Planet. Space Sci.*, *112*, p. 53-97, <http://dx.doi.org/10.1016/j.pss.2014.11.029>.

Lopes, R.M.C., and **Williams, D.A.**, 2015, Volcanism on Io, in *The Encyclopedia of Volcanoes*, Elsevier, p. 747-762, <http://dx.doi.org/10.1016/B978-0-12-385938-9.00043-2>.

Veeder, G.J., A.G. Davies, D.L. Matson, T.V. Johnson, **D.A. Williams**, J. Radebaugh, 2015, Io: Heat flow from small volcanic features, *Icarus*, *245*, 379-410, <http://10.1016/j.icarus.2014.07.028>.

2014

Williams, D.A., R.A. Yingst, W.B. Garry, 2014, Introduction: The geologic mapping of Vesta, *Icarus*, *244*, 1-12, <http://dx.doi.org/10.1016/j.icarus.2014.03.001>.

Williams, D.A., B.W. Denevi, D.W. Mittlefehldt, S.C. Mest, P.M. Schenk, R.A. Yingst, D.L. Buczkowski, J.E.C. Scully, W.B. Garry, T.B. McCord, J.-Ph. Combe, R. Jaumann, C.M. Pieters, A. Nathues, L. Le Corre, M. Hoffmann, V. Reddy, T. Roatsch, F. Preusker, S. Marchi, T. Kneissl, N. Schmedemann, G. Neukum, H. Hiesinger, M.C. De Sanctis, E. Ammannito, A. Frigeri, T.H. Prettyman, C.T. Russell, C.A. Raymond, and the Dawn Science Team, 2014, The Geology of the Marcia Quadrangle of Asteroid Vesta: Assessing the Effects of Large, Young Craters, *Icarus*, *244*, 74-88, <http://dx.doi.org/10.1016/j.icarus.2014.01.033>.

Williams, D.A., R. Jaumann, H.Y. McSween, Jr., C.A. Raymond, S. Marchi, N. Schmedemann, C.T. Russell, 2014, The chronostratigraphy of protoplanet Vesta, *Icarus*, *244*, 158-165, <http://dx.doi.org/10.1016/j.icarus.2014.06.027>.

Blewett, D.T., D.L. Buczkowski, O. Ruesch, J.E.C. Scully, H. Hiesinger, D.P. O'Brien, R. Gaskell, T. Roatsch, **D.A. Williams**, 2014, Vesta's north polar quadrangle Av-1 (Albana): Geologic map and the nature of the south polar basin antipodes, *Icarus*, *244*, 13-22, <http://dx.doi.org/10.1016/j.icarus.2014.03.007>.

Scully, J.E.C., A. Yin, C.T. Russell, D.L. Buczkowski, **D.A. Williams**, D.T. Blewett, O. Ruesch, H. Hiesinger, C.M. Mercer, L. Le Corre, W.B. Garry, R.A. Yingst, R. Jaumann, T. Roatsch, F. Preusker, R.W. Gaskell, S.E. Schröder, E. Ammannito, C.M. Pieters, C.A. Raymond, and the Dawn Science Team, 2014, Saturnalia Fossa group of fossae and additional structures in Vesta's Northern Hemisphere, *Icarus*, *244*, 23-40, <http://dx.doi.org/10.1016/j.icarus.2014.01.013>.

Ruesch, O., H. Hiesinger, D.T. Blewett, J. Scully, D. Buczkowski, **D.A. Williams**, R.A. Yingst, C.T. Russell, and C.A. Raymond, 2014, Geologic map of the northern hemisphere of Vesta based on Dawn FC images, *Icarus*, *244*, 41-59, <http://dx.doi.org/10.1016/j.icarus.2014.01.035>.

Schaefer, M., L. Le Corre, A. Nathues, D.W. Mittlefehldt, D.L. Buczkowski, **D.A. Williams**, M. Hoffmann, T. Kneissl, G.S. Thanjam, V. Reddy, N. Schmedemann, J.E.C. Scully, T. Schaefer, J.-Y. Li, W.B. Garry, K. Krohn, R.A. Yingst, R. Gaskell, C.T. Russell, 2014, Imprint of the Rheasilvia impact on Vesta – Geologic mapping of quadrangles Gegania and Lucaria, *Icarus*, *244*, 60-73, <http://doi:10.1016/j.icarus.2014.06.026>.

- Buczowski, D.L., Wyrick, D.Y., Yingst, R.A., **Williams, D.A.**, Garry, W.B., Mest, S., Kneissl, T., Scully, J.E.C., Nathues, A., Le Corre, L., Reddy, V., De Sanctis, M.C., Ammanitto, E., Frigeri, A., Preusker, F., Roatsch, T., Raymond, C.A., Jaumann, R., Pieters, C.M., Russell, C.T., 2014, The Geology of Vesta Quadrangle Av-9 Numisia: Evaluating the unique geomorphology and physical properties of the Vestalia Terra plateau, *Icarus*, 244, 89-103, <http://dx.doi.org/10.1016/j.icarus.2014.03.035>.
- Garry, W.B., **D.A. Williams**, R.A. Yingst, S.C. Mest, D.L. Buczowski, F. Tosi, M. Schaefer, L. Le Corre, V. Reddy, R. Jaumann, C.M. Pieters, C.T. Russell, C.A. Raymond, and the Dawn Science Team, 2014, The geology of the Oppia quadrangle (Av-10) of asteroid (4) Vesta: Determining a relative stratigraphy and relative geologic timescale through geologic mapping, *Icarus*, 244, 104-119, <http://10.1016/j.icarus.2014.08.046>.
- Krohn, K., R. Jaumann, K.Otto, K. Stephan, R. Wagner, D.L. Buczowski, B. Garry, **D.A. Williams**, R.A. Yingst, J. Scully, M.C. De Sanctis, T. Kneissl, N. Schmedemann, E. Kersten, K.-D. Matz, C.M. Pieters, F. Preusker, T. Roatsch, P. Schenk, C.T. Russell, C.A. Raymond, 2014, Mass movement on Vesta at steep scarps and crater rims, *Icarus*, 244, 120-132, <http://dx.doi.org/10.1016/j.icarus.2014.03.013>.
- Kneissl, T., N. Schmedemann, V. Reddy, **D.A. Williams**, S. Walter, A. Neesemann, R. Jaumann, K. Krohn, F. Preusker, T. Roatsch, L. Le Corre, A. Nathues, M. Hoffmann, M. Schäfer, D. Buczowski, W.B. Garry, R.A. Yingst, S. Mest, C.T. Russell, C.A. Raymond, 2014, Geology of the Quadrangle Av-13 Tuccia, Vesta – Morphology and formation ages of mid-sized post-Rheasilvia craters, *Icarus*, 244, 133-157, <http://dx.doi.org/10.1016/j.icarus.2014.02.012>.
- Williams, D.A.**, D.P. O'Brien, P.M. Schenk, B.W. Denevi, U. Carsenty, S. Marchi, J.E.C. Scully, R. Jaumann, M.C. De Sanctis, E. Palomba, E. Ammannito, A. Longobardo, G. Magni⁸, A. Frigeri, C.T. Russell, C.A. Raymond, T.M. Davison, and the Dawn Science Team, 2014, Lobate and flow-like features on asteroid Vesta, *Planet. Space Sci.*, 103, p. 24-35, <http://dx.doi.org/10.1016/j.pss.2013.06.017>.
- Marchi, S., W.F. Bottke, D.P. O'Brien, P. Schenk, S. Mottola, M.C. De Sanctis, **D.A. Williams**, C.A. Raymond, C.T. Russell, 2014, Small crater populations on Vesta, *Planet. Space Sci.*, 103, p. 96-103, <http://dx.doi.org/10.1016/j.pss.2013.05.005>.
- Yingst, R.A., S.C. Mest, D.C. Berman, W.B. Garry, **D.A. Williams**, D. Buczowski, R. Jaumann, C.M. Pieters, M.C. De Sanctis, A. Frigeri, L. Le Corre, F. Preusker, C.A. Raymond, V. Reddy, C.T. Russell, T. Roatsch, and P.M. Schenk, 2014, Geologic mapping of Vesta, *Planet. Space Sci.*, 103, p. 2-23, <http://dx.doi.org/10.1016/j.pss.2013.12.014>.
- Jaumann, R., A. Nass, K. Otto, K. Krohn, K. Stephan, T.B. McCord, **D.A. Williams**, C.A. Raymond, D.T. Blewett, H. Hiesinger, R.A. Yingst, M.C. De Sanctis, E. Palomba, T. Roatsch, K.-D. Matz, F. Preusker, F. Scholten, C.T. Russell, 2014, The geological nature of dark material on Vesta and implications for the subsurface structure, *Icarus*, 240, 3-19, <http://dx.doi.org/10.1016/j.icarus.2014.04.035>.
- 2013**
- Russell, C.T., C.A. Raymond, R. Jaumann, H.Y. McSween, M.C. De Sanctis, A. Nathues, T.H. Prettyman, E. Ammannito, V. Reddy, F. Preusker, D.P. O'Brien, S. Marchi, B.W. Denevi, D.L. Buczowski, C.M. Pieters, T.B. McCord, J.-Y. Li, D.W. Mittlefehldt, J.-Ph. Combe, **D.A. Williams**, H. Hiesinger, R.A. Yingst, C.A. Polansky, and S.P. Joy, 2013, Dawn completes its mission at 4 Vesta, *Meteoritics and Planetary Science*, 48, 2076-2089.
- Byrne, P.K., C. Klimczak, **D.A. Williams**, D.M. Hurwitz, S.C. Solomon, J.W. Head, F. Preusker, J. Oberst, 2013, An Assemblage of Lava Flow Features on Mercury, *J. Geophys. Res.*, 118, 1-20, doi:10.1002/jgre.20052.
- Hamilton, C.W., C.D. Beggan, S. Still, M. Beuthe, R.M.C. Lopes, **D.A. Williams**, J. Radebaugh, and W. Wright, 2013, Spatial distribution of volcanoes on Io: Implications for tidal heating and magma ascent. *Earth and Planetary Science Letters*, 361, 272-286, doi.org/10.1016/j.epsl.2012.10.032.

2012

- McCord, T.B., Li, J.-Y., Combe, J.-Ph., McSween, H.Y., Jaumann, R., Reddy, V., Tosi, F., **Williams, D.A.**, Blewett, D.T., Turrini, D., Palomba, E., Pieters, C.M., De Sanctis, M.C., Ammannito, E., Capria, M.T., Le Corre, L., Longobardo, A., Nathues, A., Mittlefehldt, D.W., Schröder, S.E., Hiesinger, H., Beck, A.W., Capaccioni, F., Carsenty, U., Keller, H.U., Denevi, B.W., Sunshine, J.M., Raymond, C.A. and Russell, C.T., 2012, Dark Material on Vesta from the infall of carbonaceous volatile-rich material, *Nature*, *491*, 83-86, doi:10.1038/nature11561.
- Denevi, B.W., D. T. Blewett, D. L. Buczkowski, F. Capaccioni, M. T. Capria, M. C. De Sanctis, W. B. Garry, R. W. Gaskell, L. Le Corre, J.-Y. Li, S. Marchi, T. J. McCoy, A. Nathues, D. P. O'Brien, N. E. Petro, C. M. Pieters, F. Preusker, C. A. Raymond, V. Reddy, C. T. Russell, P. Schenk, J. E. C. Scully, J. M. Sunshine, F. Tosi, **D.A. Williams**, D. Wyrick, 2012, The Nature of Pitted Terrain on Vesta and Implications for the Presence of Volatiles, *Science*, *338*, 246-249.
- Buczkowski, D.L., Wyrick, D.Y., Iyer, K.A., Kahn, E.G., Scully, J.E.C., Nathues, A., Gaskell, R.W., Roatsch, T., Preusker, F., Schenk, P.M., Le Corre, L., Reddy, V., Yingst R.A., Mest S., **Williams, D.A.**, Garry, W.B., Barnouin O.S., Jaumann, R., Raymond, C.A., Russell, C.T, 2012, Large-scale troughs on Vesta: A signature of planetary tectonics, *Geophysical Research Letters*, *39*, L18205, doi:10.1029/2012GL052959.
- Veeder, G.J., A.G. Davies, D.L. Matson, T.V. Johnson, **D.A. Williams**, and J. Radebaugh, 2012, Io: Volcanic Thermal Sources and Global Heat Flow, *Icarus*, *219*, 701-722.
- Jaumann, R., **D.A. Williams**, D.L. Buczkowski, R.A. Yingst, F. Preusker, H. Hiesinger, N. Schmedemann, T. Kneissl, J.B. Vincent, D.T. Blewett, B.J. Buratti, U. Carsenty, B.W. Denevi, C.M. De Sanctis, W.B. Garry, H.U. Keller, E. Kersten, K. Krohn, J.-Y. Li, S. Marchi, K.D. Matz, T.B. McCord, H.Y. McSween, S.C. Mest, D.W. Mittlefehldt, S. Mottola, A. Nathues, G. Neukum, D.P. O'Brien, C.M. Pieters, T.H. Prettyman, C.A. Raymond, T. Roatsch, C.T. Russell, P. Schenk, B.E. Schmidt, F. Scholten, K. Stephan, M.V. Sykes, P. Tricario, R. Wagner, M. T. Zuber, H. Sierks, 2012, Vesta's Shape and Morphology, *Science*, *336*, 687-690.
- Schenk, P., D.P. O'Brien, S. Marchi, R. Gaskell, F. Preusker, T. Roatsch, R. Jaumann, D. Buczkowski, T. McCord, H.Y. McSween, **D.A. Williams**, A. Yingst, C. Raymond, C. Russell, 2012, The Giant Rheasilvia Impact Basin, the Evolution of Asteroid 4 Vesta and its Link to Meteorites, *Science*, *336*, 694-697.
- Xiao, L., J. Huang, P.R. Christensen, R. Greeley, **D.A. Williams**, J. Zhao, Q. He, 2012, Ancient volcanism and its implication for thermal evolution on Mars, *Earth Planet. Sci. Lett.*, *323-324*, p. 9-18.

2011

- Williams, D.A.**, Keszthelyi, L.P., Crown, D.A., Yff, J.A., Jaeger, W.L., Schenk, P.M., Geissler, P.E., and Becker, T.L., 2011e, Geologic map of Io, *U.S. Geological Survey Scientific Investigations Map 3168*, scale 1:15,000,000, 25 p., available at <http://pubs.usgs.gov/sim/3168/>.
- Williams, D.A.**, R.C. Kerr, C.M. Leshner, 2011d, Mathematical modeling of thermo-mechanical erosion beneath Proterozoic komatiitic basaltic sinuous rilles in the Cape Smith Belt, New Québec, *Mineralium Deposita*, *46*, #8, p. 943-958, doi:10.1007/s00126-011-0364-5.
- Williams, D.A.**, Fagents, S.A., Greeley, R., and McHone, J.F., 2011c, Field exercises in the Pinacate volcanic field, Mexico: An analog for planetary volcanism, in Garry, W.B., and Bleacher, J.E., eds., *Analogues for Planetary Exploration: Geological Society of America Special Paper 483*, p. 449-464, doi:10.1130/2011.2483(27).
- Williams, D.A.**, L.P. Keszthelyi, D.A. Crown, J.A. Yff, W.L. Jaeger, P.M. Schenk, P.E. Geissler, T.L. Becker, 2011b, Volcanism on Io: Insights from global geologic mapping, *Icarus*, *214*, 91-112, <http://dx.doi.org/10.1016/j.icarus.2011.05.007>.

Williams, D.A., J. Radebaugh, R.M.C. Lopes, and E. Stofan, 2011a, Geomorphologic mapping of the Menrva region of Titan, *Icarus*, 212, 744-750.

Ambrose, W.A., and **D.A. Williams**, 2011, Introduction, in Ambrose, W.A., and **Williams, D.A.**, eds., Recent Advances and Current Research Issues in Lunar Stratigraphy, *Geological Society of America Special Paper* 477, p. v-viii, doi: 10.1130/2011.2477(00).

Veeder, G.L., A.G. Davies, **D.A. Williams**, D.L. Matson, T.V. Johnson, J. Radebaugh, 2011, Io: Heat Flow from Dark Paterae, *Icarus*, 212, 236-261.

2010

Lopes, R.M.C., Mitchell, K.L., **Williams, D.**, and Mitri, G., 2010, Beyond Earth: How extra-terrestrial volcanism has changed our definition of a volcano, in Cañón-Tapia, E., and Szakács, A., eds., What Is a Volcano?: *Geological Society of America Special Paper* 470, p. 11–30, doi: 10.1130/2010.2470(02).

Hood, L.L., K.P. Harrison, B.A. Langlais, R.J. Lillis, F. Poulet, and **D.A. Williams**, 2010, Magnetic anomalies near Apollinaris Patera and Lucus Planum, Mars, *Icarus*, 208, 118-131.

Williams, D.A., R. Greeley, L. Manfredi, R. Fergason, J.-P. Combe, F. Poulet, P. Pinet, C. Rosemberg, H. Clenet, T.B. McCord, J. Raitala, G. Neukum, 2010a, Surface-Compositional Properties of the Malea Planum Region of the Circum-Hellas Volcanic Province, Mars, *Earth Planet. Sci. Lett.*, 294, 451-465.

Murray, J.B., B. van Wyk de Vries, A. Marquez, **D.A. Williams** and Paul Byrne, 2010, Late-stage water eruptions from Ascræus Mons volcano, Mars, *Earth Planet. Sci. Lett.*, 294, 479-491.

Williams, D.A., R. Greeley, L. Manfredi, J. Raitala, G. Neukum, 2010b, The Circum-Hellas Volcanic Province, Mars: Assessment of Wrinkle-Ridged Plains, *Earth Planet. Sci. Lett.*, 294, 492-505.

Bunte, M.K., **D.A. Williams**, R. Greeley, and W.L. Jaeger, 2010, Geologic mapping of the Hi'iaka and Shamshu regions of Io, *Icarus*, 207, 868-886.

2009

Leone, G. A.G. Davies, L. Wilson, **D.A. Williams**, L.P. Keszthelyi, W.L. Jaeger, and E.P. Turtle, 2009, Volcanic history, geologic analysis and map of the Prometheus Patera region on Io, *J. Volcan. Geotherm. Res.*, 187, 93-105.

Williams, D.A., R. Greeley, R.L. Fergason, R. Kuzmin, T.B. McCord, J-Ph. Combe, J.W. Head III, L. Xiao, L. Manfredi, F. Poulet, P. Pinet, D. Baratoux, J.J. Plaut, J. Raitala, G. Neukum, and the HRSC Co-Investigator Team, 2009, The Circum-Hellas Volcanic Province: Overview, *Planet. Space Sci.*, 57, 895-916, doi: 10.1016/j.pss.2008.08.010.

Bleacher, J.E., L.S. Glaze, R. Greeley, E. Hauber, S.M. Baloga, S.E.H. Sakimoto, **D.A. Williams**, T.D. Glotch, 2009, Spatial and alignment analyses for a field of small volcanic vents south of Pavonis Mons and implications for the Tharsis province, Mars, *J. Volcan. Geotherm. Res.*, 185, 96-102.

Hauber, E., J. Bleacher, K. Gwinner, **D. Williams**, R. Greeley, 2009, The topography and morphology of low shields and associated landforms of plains volcanism in the Tharsis region on Mars, *J. Volcan. Geotherm. Res.*, 185, 69-95.

2008

Williams, D. A., R. Greeley, S. C. Werner, G. Michael, D. A. Crown, G. Neukum, and J. Raitala, 2008, Tyrrhena Patera: Geologic history derived from Mars Express High Resolution Stereo Camera, *J. Geophys. Res.*, 113, E11005, doi:10.1029/2008JE003104.

Baptista, A., N. Mangold, V. Ansan, D. Baratoux, P. Lognonné, E.I. Alves, **D.A. Williams**, J.E. Bleacher, P. Masson, and G. Neukum, 2008, A swarm of small shield volcanoes on Syria Planum, Mars, *J. Geophys. Res.*, *113*, E09010, doi:10.1029/2007JE002945.

Stanzel, C., M. Pätzold, **D.A. Williams**, P.L. Whelley, R. Greeley, G. Neukum and the HRSC Co-Investigator Team, 2008, Comparison of Martian dust devils characteristics observed by the *Mars Express* High Resolution Stereo Camera and the Mars Exploration Rover *Spirit*, *Icarus*, *197*, 39-51.

Bunte, M.K., **D.A. Williams**, and R. Greeley, 2008, Geologic mapping of the Zal region of Io, *Icarus*, *197*, 354-367.

Oberst, J., G. Schwarz, T. Behnke, H. Hoffmann, K.-D. Matz, J. Flohrer, H. Hirsch, T. Roatsch, F. Scholten, E. Hauber, B. Brinkmann, R. Jaumann, **D. Williams**, R. Kirk, T. Duxbury, C. Leu, G. Neukum, 2008, The imaging performance of the SRC on *Mars Express*, *Planetary and Space Science*, *56*, 473-491.

2007

Williams, D.A., R. Greeley, W. Zuschneid, S.C. Werner, G. Neukum, D.A. Crown, T.K.P. Gregg, K. Gwinner, and J. Raitala (2007), Hadriaca Patera: Insights into its volcanic history from *Mars Express* High Resolution Stereo Camera, *J. Geophys. Res.*, *112*, E10004, doi:10.1029/2007JE002924.

Bleacher, J.E., R. Greeley, **D.A. Williams**, S.R. Cave, and G. Neukum, 2007, Trends in effusive style at the Tharsis Montes, Mars, and implications for the development of the Tharsis province, *J. Geophys. Res.*, *112*, E09005, doi:10.1029/2006JE002873.

Williams, D.A., L.P. Keszthelyi, D.A. Crown, W.L. Jaeger, and P.M. Schenk, 2007, Geologic mapping of the Amirani-Gish Bar region of Io: Implications for the global geologic mapping of Io, *Icarus*, *186*, 204-217.

Bleacher, J.E., R. Greeley, **D.A. Williams**, S. Werner, G. Neukum, 2007, Olympus Mons, Mars: Inferred changes in late Amazonian-aged effusive activity from lava flow mapping of *Mars Express* High Resolution Stereo Camera data, *J. Geophys. Res.*, *112*, E04003, doi:10.1029/2006JE002826.

2006

Williams, D.A., and R.R. Howell, 2006, 7. Active volcanism: Effusive eruptions, in *Io After Galileo: A New View of Jupiter's Volcanic Moon*, R.M. Lopes and J.R. Spencer, eds., Cambridge Planetary Science Series, Cambridge University Press, Cambridge, UK, p. 133-162.

2005

Williams, D.A., L.P. Keszthelyi, P.M. Schenk, M.P. Milazzo, R.M.C. Lopes, J.A. Rathbun, and R. Greeley, 2005, The Zamama-Thor region of Io: Insights from a synthesis of mapping, topography, and *Galileo* spacecraft data, *Icarus*, *177*, 69-88.

Greeley, R., R. Arvidson, J.F. Bell III, P. Christensen, D. Foley, A. Haldemann, R.O. Kuzmin, G. Landis, L.D.V. Neakrase, G. Neukum, S.W. Squyres, R. Sullivan, S.D. Thompson, P.L. Whelley, **D. Williams**, and the HRSC and Athena Science Teams, 2005, Martian variable features: New insight from the *Mars Express* orbiter and the Mars Exploration Rover, *Spirit*, *J. Geophys. Res.*, *110*, E06002, doi:10.1029/2005JE002403.

Williams, D.A., R. Greeley, E. Hauber, K. Gwinner, G. Neukum, 2005, Erosion by flowing Martian lava: New insights for Hecates Tholus from *Mars Express* and *MER* data, *J. Geophys. Res.*, *110*, E05006, doi:10.1029/2004JE002377.

Greeley, R., B.H. Foing, H. McSween, G. Neukum, P. Pinet, M. Van Kan, S.C. Werner, **D.A. Williams**, T.E. Zegers, 2005, Fluid lava flows in Gusev Crater, Mars, *J. Geophys. Res.*, *110*, E05008, doi:10.1029/2005JE002401.

Lopes, R.M.C., and **D.A. Williams**, 2005, Io after *Galileo*, *Rep. Prog. Phys.*, 68, 303-340.

2004

Schenk, P.M., and **D.A. Williams**, 2004, A potential thermal erosion lava channel on Io, *Geophys. Res. Lett.*, 31, L23702, doi:10.1029/2004GL021378.

Turtle, E.P., L.P. Keszthelyi, A.S. McEwen, J. Radebaugh, M. Milazzo, D. Simonelli, P. Geissler, **D.A. Williams**, J. Perry, W.L. Jaeger, K.P. Klaasen, H.H. Breneman, T. Denk, C.B. Phillips, and the *Galileo* SSI Team, 2004, The Final *Galileo* SSI Observations of Io: Orbits G28-I33, *Icarus*, 169/1, pp. 3-18.

Williams, D.A., P.M. Schenk, J.M. Moore, L.P. Keszthelyi, E.P. Turtle, W.L. Jaeger, J. Radebaugh, M.P. Milazzo, R.M.C. Lopes, and R. Greeley, 2004, Mapping of the Culann-Tohil region of Io from *Galileo* imaging data, *Icarus*, 169/1, pp. 80-97.

Lopes, R., L. W. Kamp, W.D. Smythe, P. Mougini-Mark, J. Kargel, J. Radebaugh, E. P. Turtle, J. Perry, **D.A. Williams**, R.W. Carlson, S. Douté, 2004, Lava Lakes on Io? Observations of Io's Volcanic Activity from *Galileo* during the 2001 fly-bys. *Icarus*, 169/1, pp. 140-174.

Williams, D.A., S.D. Kadel, R. Greeley, and C.M. Leshner, 2004, Erosion by flowing lava: Geochemical evidence in the Cave Basalt, Mount St. Helens, Washington, *Bulletin of Volcanology*, 66 (2), doi:10.1007/s00445-003-0301-2.

2003

Kargel, J., R. Carlson, A. Davies, B. Fegley, A. Gillespie, R. Greeley, R. Howell, K.L. Jessup, L. Kamp, L. Keszthelyi, R. Lopes, T. MacIntyre, F. Marchis, A. McEwen, M. Milazzo, J. Perry, J. Radebaugh, L. Schaefer, N. Schmerr, W. Smythe, J. Spencer, **D. Williams**, J. Zhang, and M. Zolotov, 2003, Extreme volcanism on Io: Latest insights at the end of the *Galileo* era, *Eos*, 84, #33, 313-318.

2002

Williams, D.A., J. Radebaugh, L.P. Keszthelyi, A.S. McEwen, R.M.C. Lopes, S. Douté, and R. Greeley, 2002, Geologic mapping of the Chaac-Camaxtli region of Io from *Galileo* imaging data, *J. Geophys. Res.*, 107 (E9), 5068, doi:10.1029/2001JE001821.

2001

Williams, D.A., A.G. Davies, L.P. Keszthelyi, and R. Greeley, 2001, The July 1997 eruption at Pillan Patera on Io: Implications for ultrabasic lava flow emplacement, *J. Geophys. Res.*, 106, 33,105-33,119.

Williams, D.A., R. Greeley, R.M.C. Lopes, and A.G. Davies, 2001, Evaluation of sulfur flow emplacement on Io from *Galileo* Data and numerical modeling, *J. Geophys. Res.*, 106, 33,161-33,174.

Keszthelyi, L.P., A.S. McEwen, C.B. Phillips, M. Milazzo, P.E. Geissler, **D.A. Williams**, E. Turtle, J. Radebaugh, D. Simonelli, and the *Galileo* SSI Team, 2001, Imaging of volcanic activity on Jupiter's moon Io by *Galileo* during GEM and GMM, *J. Geophys. Res.*, 106, 33,025-33,052.

Davies, A.G., L.P. Keszthelyi, **D.A. Williams**, C.B. Phillips, A.S. McEwen, R.M. Lopes-Gautier, W.D. Smythe, L.A. Soderblom, and R.W. Carlson, 2001, Thermal signature, eruption style, and eruption evolution at Pele and Pillan on Io, *J. Geophys. Res.*, 106, 33,079-33,103.

Williams, D.A., R.C. Kerr, C.M. Leshner, and S.J. Barnes, 2001, Analytical/numerical modeling of komatiite lava emplacement and thermal erosion at Perseverance, Western Australia, *Journal of Volcanology and Geothermal Research*, 110/1-2, p. 27-55.

2000

Greeley, R., P.H. Figueredo, **D.A. Williams**, F.C. Chuang, J.E. Klemaszewski, S.D. Kadel, L.M. Prockter, R.T. Pappalardo, J.W. Head III, G.C. Collins, N.A. Spaun, R.J. Sullivan, J.M. Moore, D.A. Senske, B.R. Tufts, T.V. Johnson, M.J.S. Belton, and K.L. Tanaka, 2000, Geologic mapping of Europa, *J. Geophys. Res.*, *105*, p. 22,559-22,578.

Williams, D.A., S.A. Fagents, and R. Greeley, 2000, A reevaluation of the emplacement and erosional potential of turbulent, low-viscosity lavas on the Moon, *J. Geophys. Res.*, *105*, p.20,189-20,206.

Pinkerton, H., **D.A. Williams**, S.A. Fagents, L.M. Prockter, P.M. Schenk, 2000, Exotic lava flows, p. 207-243, In *Environmental Effects on Volcanic Eruptions: From Deep Ocean to Deep Space*, (J.R. Zimbelman and T.K.P. Gregg, eds.), Plenum Press, New York, 260 pp.

Williams, D.A., L. Keszthelyi, and J. Stansberry, 2000, New Io data spurs discussion on ultrabasic lavas, *Eos v. 81*, #22, p. 249.

McEwen, A.S., M.J.S. Belton, H.H. Breneman, S.A. Fagents, P. Geissler, R. Greeley, J.W. Head, G. Hoppa, W.L. Jaeger, T.V. Johnson, L. Keszthelyi, K.P. Klaasen, R. Lopes-Gautier, K.P. Magee, M.P. Milazzo, J.M. Moore, R.T. Pappalardo, C.B. Phillips, J. Radebaugh, G. Schubert, P. Schuster, D.P. Simonelli, R. Sullivan, P.C. Thomas, E.P. Turtle, **D.A. Williams**, 2000, Galileo at Io: Results from high-resolution imaging, *Science* 288, 1193-1198.

Williams, D.A., A.H. Wilson, and R. Greeley, 2000, A komatiite analog to potential ultramafic materials on Io, *J. Geophys. Res.*, *105*, 1671-1684.

1999

Williams, D.A., R.C. Kerr, and C.M. Leshner, 1999, Thermal and fluid dynamics of komatiitic lavas associated with magmatic Ni-Cu-(PGE) sulphide deposits, in R.R. Keays, C.M. Leshner, P.C. Lightfoot, and C.E.G. Farrow (Editors), *Dynamic Processes in Magmatic Ore Deposits and their Application in Mineral Exploration*, *Geological Association of Canada Short Course*, v. 13, p. 367-412.

1998

Williams, D.A., R.C. Kerr, and C.M. Leshner, 1998, Emplacement and erosion by Archean komatiite lava flows at Kambalda: Revisited, *J. Geophys. Res.*, v. 103, p. 27,533-27,550.

Greeley, R., S.A. Fagents, R.S. Harris, S.D. Kadel, **D.A. Williams**, and J.E. Guest, 1998, Evidence for erosion by flowing lava and planetary implications, *J. Geophys. Res.*, v. 103, p. 27,325-27,346.

Graduate School

Williams, D.A., R. Greeley, G. Neukum, R. Wagner, S.D. Kadel, 1995, Multispectral studies of western limb and farside maria from Galileo Earth-Moon Encounter 1, *J. Geophys. Res.* *100*, 23,291-23,299.

Williams, D.A. and R. Greeley, 1994, Assessment of Antipodal-Impact Terrains on Mars, *Icarus*, *110*, 196-202.

Greeley, R., S.D. Kadel, **D.A. Williams**, et al., 1993, Galileo Imaging Observations of Lunar Maria and Related Deposits, *J. Geophys. Res.*, *98*, 17,183-17,206.

Recent Abstracts**2015**

- Williams, D.A.**, 2015, Magma Channelization on the Earth & Planets: Reevaluation of Formation Mechanisms, *EOS (Trans. AGU), Fall Meeting Supp.*, Abstract # V31C-3038.
- Cataldo, V., **Williams, D.A.**, and Leshner, C.M., 2015, Modeling mechanical and thermo-mechanical erosion by flowing lava at Raglan, Cape Smith Belt, New Québec, Canada, *EOS (Trans. AGU), Fall Meeting Supp.*, Abstract # V31C-3045.
- Mohr, K. and **Williams, D.A.**, 2015, Geologic Mapping of Ascraeus Mons, Mars, *EOS (Trans. AGU), Fall Meeting Supp.*, Abstract # P33C-2140.
- Cantrall, C., de Pater, I, Nelson, D., **Williams, D.A.**, de Kleer, K., 2015, Keck Near-Infrared AO Observation of Io in 2011, *EOS (Trans. AGU), Fall Meeting Supp.*, Abstract # ED33D-0976.
- Jaumann, R., et al. including **Williams, D.A.**, 2015, The Geology of Ceres: An Overview *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P42A-05.
- Marchi, S., et al. including **Williams, D.A.**, 2015, The collisional history of dwarf planet Ceres revealed by Dawn, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2185.
- Li, J.-Y., et al. including **Williams, D.A.**, 2015, Albedo and Spectral Variability on Ceres from Four Decades of Observations, *EOS (Trans. AGU), Fall Meeting Supp.*, Abstract # P53E-2183.
- Buczkowski, D.L., et al. including **Williams, D.A.**, 2015, Comparative tectonic features on Ceres and other planetary bodies, *EOS (Trans. AGU), Fall Meeting Supp.*, Abstract # P53E-2182.
- Buczkowski, D.L., et al. including **Williams, D.A.**, 2015, The topography of Ceres and implications for the formation of linear surface structures (invited), *EOS (Trans. AGU), Fall Meeting Supp.*, Abstract # P44B-05.
- McFadden, L.A., et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-1 Asari Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2167.
- Pasckert, J.H., et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-2 Coniraya Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2168.
- Kneissl, T, et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-3 Dantu Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2170.
- Scully, J.E.C., et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-4 Ezinu Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2171.
- Hughson, K., et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-5 Fejokoo Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2172.
- Krohn, K., et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-6 Haulani Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2173.
- Williams, D.A.**, Crown, D.A., Mest, S.C., Buczkowski, D.L., Schenk, P.M., Scully, J.E.C., Jaumann, R., Roatsch, T., Preusker, F., Platz, T., 2015, Preliminary Geologic Mapping of the Ac-H-7 Kerwan Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2174.

- Frigeri, A., et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-8 Nawish Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2175.
- Buczowski, D.L., et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-9 Occator Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2176.
- Platz, T., et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-10 Rongo and Ac-H-15 Zadeni Quadrangles of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2177.
- Schulzeck, F., et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-11 Sintana Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2178.
- Mest, S.C., et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-12 Toharu Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2179.
- Sizemore, H., et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-13 Urvara Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2180.
- Crown, D.A., et al. including **Williams, D.A.**, 2015, Preliminary Geologic Mapping of the Ac-H-14 Yalode Quadrangle of Ceres: An Integrated mapping study using Dawn spacecraft data, *EOS (Trans. AGU), Fall Meeting Supp.*, ##, Abstract #P53E-2181.
- Williams, D.A.**, Mest, S.C., Buczowski, D.L., Scully, J.E.C., Jaumann, R., Russell, C.T., Raymond, C.A., 2015, The Geologic Mapping Ceres Using Dawn Spacecraft Data, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.
- Jaumann, R., Russell, C.T., Raymond, C., McSween, H.Y., **Williams, D.**, Buczowski, D. L., Hiesinger, H., De Sanctis, M.C., and Nathues, A., 2015, GEOMORPHOLOGICAL SURFACE PROCESSES ON CERES, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.
- Hughson, K.H.G., Russell, C.T., Sschmidt, B.E., Chilton, H., Scully, J.E.C., Byrne, S., Platz, T., Ammannito, E., Schenk, P.M., and **Williams, D.A.**, 2015, SCALLOPED AND DEGRADED CRATERS AS GEOMORPHOLOGICAL EVIDENCE FOR PERVASIVE GROUND ICE ON CERES AS SEEN BY THE DAWN SPACECRAFT, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.
- Otto, K.A., Jaumann, R., Krohn, K., Buczowski, D.L., Von der Gathen, I., Mest, S.C., Schulzeck, F., Scully, J.E.C., and **Williams, D.A.**, 2015, PRELIMINARY INVESTIGATION OF POLYGONAL CRATERS ON (1) CERES, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.
- Buczowski, D.L., **Williams, D.A.**, Mest, S.C., Schenk, P.M., Scully, J.E.C., Jaumann, R., Nathues, A., Preusker, F., Park, R., and Russell, C.T., 2015, PRELIMINARY INVESTIGATION OF LINEAR STRUCTURES ON CERES, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.
- Von der Gathen, I., Jaumann, R., Krohn, K., **Williams, D.A.**, Buczowski, D.L., Raymond, C.A., Russell, C.T., Preusker, F., Roatsch, T., and Schenk, P.M., 2015, CERES: TECTONIC FEATURES JUXTAPOSED WITH ANALOGIES ON OTHER PLANETARY BODIES, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.
- Wagner, R., Jaumann, R., Schmedemann, N., Kneissl, T., Stephan, K., **Williams, D.A.**, Yingst, R.A., Mest, S.C., Raymond, C.A., and Russell, C.T., 2015, GLOBAL AND REGIONAL STRATIGRAPHY OF CERES FROM

GEOLOGIC MAPPING AND CRATER COUNTING IN IMAGING DATA OF THE DAWN FC2 FRAMING CAMERA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.

Ruesch, O., McFadden, L.A., Hiesinger, H., Scully, J.E.C., Kneissl, T. Hughson, K.H.G., **Williams, D.A.**, Roatsch, T. and Preusker, F., 2015, PRELIMINARY GEOLOGICAL MAP OF THE AC-H-1 ASARI QUADRANGLE OF CERES: AN INTEGRATED MAPPING STUDY USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.

Pasckert, J.H., Hiesinger, H., **Williams, D.A.**, Buczkowski, D.L., Crown, D.A., Schenk, P.M., Scully, J.E.C., Jaumann, R., Roatsch, T. and Raymond, C.A., 2015, INITIAL GEOLOGIC MAPPING OF THE AC-H-2 CONIRAYA QUADRANGLE OF CERES USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.

Kneissl, T., Schmedemann, N., Neesemann, A., **Williams, D.A.**, Crown, D.A., Mest, S.C., Buczkowski, D.L., Scully, J.E.C., Frigeri, A., and Ruesch, O., 2015, INITIAL GEOLOGIC MAPPING OF THE AC-H-3 DANTU QUADRANGLE OF CERES USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.

Scully, J.E.C., Raymond, C.A., **Williams, D.A.**, Buczkowski, D.L., Mest, S.C., Hughson, K.H.G., Russell, C.T., Kneissl, T., Ruesch, O. and Frigeri, A., 2015, INITIAL GEOLOGIC MAPPING OF THE AC-H-4 EZINU QUADRANGLE OF CERES USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.

Hughson, K.H.G., Russell, C.T., **Williams, D.A.**, Buczkowski, D.L., Mest, S.C., Scully, J.E.C., Hiesinger, H., Platz, T., Ruesch, O., and Raymond, C.A., 2015, INITIAL GEOLOGIC MAPPING OF THE AC-H-5 FEJOKOO QUADRANGLE OF CERES USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.

Krohn, K., **Williams, D.A.**, Jaumann, R., Buczkowski, D.L., Mest, S.C., Scully, J.E.C., Nass, A., Otto, K.A., Schulzeck, F. and Von der Gathen, I., 2015, INITIAL GEOLOGIC MAPPING OF THE AC-H-6 HAULANI QUADRANGLE OF DWARF PLANET CERES USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.

Williams, D.A., Crown, D.A., Mest, S.C., Buczkowski, D.L., Schenk, P.M., Scully, J.E.C., Jaumann, R., Roatsch, T., Preusker, F., Platz, T., 2015, INITIAL GEOLOGIC MAPPING OF THE AC-H-7 KERWAN QUADRANGLE OF CERES USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.

Frigeri, A., De Sanctis, M.C., Carrozzo, G., **Williams, D.A.**, Mest, S., Buczkowski, D.L., Preusker, F., Jaumann, R., Roatsch, T., and Scully, J.E.C., 2015, INITIAL GEOLOGIC MAPPING OF THE AC-H-8 NAWISH QUADRANGLE OF CERES USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.

Buczkowski, D.L., Yingst, R.A., **Williams, D.A.**, Mest, S.C., Schenk, P.M., Scully, J.E.C., Jaumann, R., Roatsch, T., Preusker, F. and Platz, T., 2015, INITIAL GEOLOGIC MAPPING OF THE AC-H-9 OCCATOR QUADRANGLE OF CERES USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.

Platz, T., Natheus, A., Crown, D.A., Mest, S.C., **Williams, D.A.**, Hoffmann, M., Schaefer, M., Sizemore, H.G., Ruesch, O., and Preusker, F., 2015, INITIAL GEOLOGICAL MAPS OF THE AC-H-10 RONGO AND AC-H-15 ZADENI QUADRANGLES OF CERES USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.

- Schulzeck, F., Jaumann, R., Krohn, K., **Williams, D.A.**, Buczkowski, D.L., Mest, S.C., Scully, J.E.C., Preusker, F., and Roatsch, T., 2015, INITIAL GEOLOGIC MAPPING OF THE AC-H-11 SINTANA QUADRANGLE OF CERES USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.
- Mest, S.C., **Williams, D.A.**, Crown, D.A., Yingst, R.A., Schenk, P.M., Jaumann, R., Roatsch, T., Nathues, A., Russell, C.T.⁸ and Raymond, C.A., 2015, INITIAL GEOLOGICAL MAPPING OF THE AC-H-12 TOHARU QUADRANGLE OF CERES USING DAWN SPACECRAFT DATA, 2015, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.
- Sizemore, H.G.**, Williams, D.A., Platz, T., O'Brien, D.P., Mest, S.C., Crown, D.A., Yingst, R.A., Buczkowski, D.L., Schenk, P.M. and Scully, J.E. C., 2015, INITIAL GEOLOGIC MAPPING OF THE AC-H-13 URVARA QUADRANGLE OF CERES USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.
- Yingst, R.A., Crown, D.A., Mest, S.C., Jaumann, R., Roatsch, T., Preusker, F., Nathues, A., Schaefer, M. Russell, C.T., and Raymond, C.A., 2015, INITIAL GEOLOGIC MAPPING OF THE AC-H-14 YALODE QUADRANGLE OF CERES USING DAWN SPACECRAFT DATA, *GSA Abst w/Prog.*, v. 47, ##, Abstract ##-#, p. ###.
- Platz, T., A. Nathues, M. Hoffmann, M. Schäfer, **D.A. Williams**, S.C. Mest, D.A. Crown, M.V. Sykes, J.-Y. Li, T. Kneissl, N. Schmedemann, O. Ruesch, I. Büttner, P. Gutierrez-Marques, J. Ripken, C.A. Raymond, C.T. Russell, T. Schäfer, G.S. Thangiam, 2015, Putative volcanic landforms on Ceres, *European Planetary Science Congress v. 10*, Abstract #EPSC2015-###.
- Mest, S.C., **D.A. Williams**, D.L. Buczkowski, J.E.C. Scully, D.A. Crown, R.A. Yingst, R. Jaumann, C.T. Russell, C.A. Raymond, K.A. Otto, P.M. Schenk, S. Marchi, D.P. O'Brien, T. Platz, A. Nathues, M. Hoffmann, M. Schäfer, T. Roatsch, E. Kersten, F. Preusker, 2015, Preliminary geologic mapping of the Ac-S-1 hemisphere of Ceres from NASA's Dawn mission, *European Planetary Science Congress v. 10*, Abstract #EPSC2015-###.
- Williams, D.A.**, D.L. Buczkowski, J.E.C. Scully, S.C. Mest, R. Jaumann, C.T. Russell, C.A. Raymond, P.M. Schenk, S. Marchi, D.P. O'Brien, A. Nathues, M. Hoffmann, M. Schäfer, T. Platz, R.A. Yingst, D.A. Crown, T. Roatsch, E. Kersten, F. Preusker, 2015, Preliminary geologic mapping of the Ac-S-2 hemisphere of Ceres from NASA's Dawn mission, *European Planetary Science Congress v. 10*, Abstract #EPSC2015-134.
- Buczkowski, D.L., R.A. Yingst, **D.A. Williams**, J.E.C. Scully, S.C. Mest, D.A. Crown, R. Jaumann, C.T. Russell, C.A. Raymond, P.M. Schenk, S. Marchi, D.P. O'Brien, A. Nathues, M. Hoffman, M. Schaefer, T. Platz, T. Roatsch, E. Kersten, F. Preusker, M.C. De Sanctis, K. Stephan, and A. Frigeri, 2015, Preliminary geologic mapping of the Ac-S-3 hemisphere of Ceres from NASA's Dawn mission, *European Planetary Science Congress v. 10*, Abstract #EPSC2015-###.
- Scully, J.E.C., **D.A. Williams**, D.L. Buczkowski, S.C. Mest, R. Jaumann, C.T. Russell, C.A. Raymond, A. Nathues, M. Hoffmann, M. Schäfer, T. Roatsch, E. Kersten, F. Preusker, 2015, Preliminary geologic mapping of the Ac-S-1 hemisphere of Ceres from NASA's Dawn mission, *European Planetary Science Congress v. 10*, Abstract #EPSC2015-###.
- Jaumann, R., C.T. Russell, C. Raymond, E. Ammannito, D.L. Buczkowski, M.C. De Sanctis, S. Elgner, H. Hiesinger, E. Kersten, K. Krohn, J.-Y. Li, K.D. Matz, T.B. McCord, H.Y. McSween, S.C. Mest, A. Nathues, K. Otto, F. Preusker, T. Roatsch, P. Schenk, F. Scholten, F. Schulzeck, J.E.C. Scully, K. Stephan, M. Sykes, I. von der Gathen, R. Wagner, **D.A. Williams**, 2015, Geomorphology of Ceres: First observations by Dawn, *European Planetary Science Congress v. 10*, Abstract #EPSC2015-83.
- Wagner, R.J., N. Schmedemann, T. Kneissl, K. Stephan, K. Otto, K. Krohn, S. Schröder, E. Kersten, T. Roatsch, R. Jaumann, **D.A. Williams**, R.A. Yingst, D. Crown, S.C. Mest, and C.T. Russell, 2015, Global stratigraphy of the dwarf planet Ceres from RC2 imaging data of the Dawn FC camera, *European Planetary Science Congress v. 10*, Abstract #EPSC2015-###.

- Krohn, K., K.-D. Matz, R. Jaumann, K. Otto, J.-Y. Li, D. Buczkowski, M.C. De Sanctis, I. von der Gathen, E. Kersten, T. Kneissl, S. Mest, F. Preusker, T. Roatsch, S. Schröder, F. Schulzeck, J. Scully, N. Schmedemann, K. Stephan, F. Tosi, R. Wagner, **D. Williams**, C.A. Raymond, C.T. Russell, 2015, Geomorphological related albedo features on Ceres, *European Planetary Science Congress v. 10*, Abstract #EPSC2015-###.
- Otto, K.A., R. Jaumann, K. Krohn, D. Buczkowski, I. von der Gathen, E. Kersten, S. Mest, F. Preusker, T. Roatsch, P. Schenk, S. Schröder, F. Schulzeck, J. Scully, K. Stephan, R. Wagner, **D. Williams**, C.A. Raymond, C.T. Russell, 2015, Polygonal craters on dwarf planet Ceres, *European Planetary Science Congress v. 10*, Abstract #EPSC2015-###.
- Williams, D.A.**, D.T. Blewett, D.L. Buczkowski, W.B. Garry, T. Kneissl, K. Krohn, S.C. Mest, O. Ruesch, M. Schaefer, J.E.C. Scully, R.A. Yingst, C.M. Pieters, R. Jaumann, C.A. Raymond, H.Y. McSween, S. Marchi, N. Schmedemann, C.T. Russell, 2015, Complete Global Geologic Map of Vesta from Dawn and Mapping Plans for Ceres, In *Lunar and Planetary Science XLVI*, Abstract #1126, Lunar and Planetary Institute, Houston (PDF).
- Williams, D.A.**, M.J. Malaska, R.M.C. Lopes, J. Radebaugh, J.W. Barnes, E.P. Turtle, R. Kirk, 2015, Geologic mapping of the Adiri region of Titan, In *Lunar and Planetary Science XLVI*, Abstract #1127, Lunar and Planetary Institute, Houston (PDF).
- Cataldo, V., **D.A. Williams**, and W.B. Garry, 2015, Erosion by lava on the Moon: Application to the rille of Vallis Schröteri, In *Lunar and Planetary Science XLVI*, Abstract #1582, Lunar and Planetary Institute, Houston (PDF).
- Slezak, T.J., A.G. Davies, L.P. Keszthelyi, C. Okubo, **D.A. Williams**, 2015, Slope stability analysis of scarps on Io's surface: Implications for upper lithospheric composition, In *Lunar and Planetary Science XLVI*, Abstract #2528, Lunar and Planetary Institute, Houston (PDF).
- Garry, W.B., **D.A. Williams**, J.E. Bleacher, and A.M. Dapremont, 2015, Geologic mapping of Olympus Mons and the Tharsis Montes, In *Lunar and Planetary Science XLVI*, Abstract #1008, Lunar and Planetary Institute, Houston (PDF).
- Bleacher, J.E., C.W. Hamilton, S.P. Scheidt, W.B. Garry, A. de Wet, P. Whelley, D.A. Williams, 2015, No erosion needed: Development of streamlined islands during lava channel construction, In *Lunar and Planetary Science XLVI*, Abstract #2182, Lunar and Planetary Institute, Houston (PDF).
- Dapremont, A.M., W.B. Garry, **D.A. Williams**, 2015, Geologic mapping of the Arsia Mons fan shaped deposit, Mars, In *Lunar and Planetary Science XLVI*, Abstract #1605, Lunar and Planetary Institute, Houston (PDF).
- Frigeri, A., M.C. De Sanctis, E. Ammannito, R.A. Yingst, **D.A. Williams**, F. Capaccioni, F. Tosi, E. Palomba, F. Zambon, R. Jaumann, C.M. Pieters, C.A. Raymond, C.T. Russell, and the Dawn Team, 2015, Geospatial investigation of the mineralogic and geologic maps of Vesta, In *Lunar and Planetary Science XLVI*, Abstract #1387, Lunar and Planetary Institute, Houston (PDF).
- Nathues, A., M.V. Sykes, I. Büttner, D.L. Buczkowski, U. Carsenty, J. Castillo-Rogez, U. Christensen, P. Gutierrez-Marques, I. Hall, M. Hoffmann, R. Jaumann, S. Joy, H.U. Keller, E. Kersten, K. Krohn, J.-Y. Li, S. Marchi, K.-D. Matz, T.B. McCord, L.A. McFadden, K. Mengel, V. Mertens, S. Mottola, W. Neumann, N. Mastrodemos, D.P. O'Brien, K. Otto, C. Pieters, S. Pieth, C. Polansky, F. Preusker, M.D. Rayman, C. Raymond, V. Reddy, J. Ripken, T. Roatsch, C.T. Russell, M. Schäfer, T. Schäfer, P. Schenk, N. Schmedemann, F. Scholten, S.E. Schröder, F. Schulzeck, H. Sierks, D. Smith, K. Stephan, G. Thangjam, M. Weiland, **D. Williams**, M. Zuber, 2015, Dawn Framing Camera Clear filter imaging on Ceres approach, In *Lunar and Planetary Science XLVI*, Abstract #2069, Lunar and Planetary Institute, Houston (PDF).
- Raymond, C.A., T.H. Prettyman, S. Diniega, and **the Pandora Team**, 2015, PANDORA – Unlocking the mysteries of the moons of Mars, In *Lunar and Planetary Science XLVI*, Abstract #2792, Lunar and Planetary Institute, Houston (PDF).

Frigeri, A., M.C. De Sanctis, E. Ammannito, R.A. Yingst, **D.A. Williams**, F. Capaccioni, F. Tosi, E. Palomba, F. Zambon, R. Jaumann, C.M. Pieters, C.A. Raymond, C.T. Russell, and the Dawn Team, 2015, Geospatial investigation of the mineralogic and geologic maps of Vesta, *Geophysical Research Abstracts 16 (EGU General Assembly)*, Abstract #EGU2015-####.

2014

Roatsch, T., R. Jaumann, G. Neukum, D. Tirsch, E. Hauber, H. Hoffmann, K. Gwinner, F. Scholten, G. DiAchille, T.C. Duxbury, G. Erkeling, S. van Gasselt, S. Gupta, J. W Head III, H. Hiesinger, W.-H. Ip, H.-U. Keller, M. G. Kleinans, T. Kneisl, T. B McCord, P. Muller, J. Murray, M. Pondrelli, T. Platz, P.C. Pinet, D. Reiss, A. P. Rossi, L. Wendt, **D. A. Williams**, N. Mangold, T. Spohn and HRSC Team, 2014, The Martian geomorphology as mapped by the Mars Express High Resolution Stereo Camera (HRSC): Implications for Geological Processes and Climate Conditions, Abstract P####-#### presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.

Williams, D.A., Bleacher, J.E., and Mouginis-Mark, P.J., 2014, Volcanism at Olympus Mons, Mars: Results from geologic mapping, *GSA Abst. w/Prog*, v. 46, #6, Abstract 25-8, p. 84.

Scully, J.E.C., Yin, A., Russell, C.T., Buczkowski, D.L., **Williams, D.A.**, Blewett, D.T., Ruesch, O., Hiesinger, H., Yingst, R.A., and Jaumann, R., 2014, Formation of the Saturnalia Fossae graben and half-graben, and adjacent structure, by impact-related processes on Vesta, *GSA Abst. w/Prog*, v. 46, #6, Abstract 50-7, p. 142.

Buczkowski, D.L., Wyrick, D.Y., De Sanctis, M.C., Raymond, C.A., **Williams, D.A.**, Toplis, M.I., Nathues, A., and Russell, C.T., 2014, Evidence of Volcano-Tectonic Interactions on Vesta, *GSA Abst. w/Prog*, v. 46, #6, Abstract 25-12, p. 85.

Jaumann, R., D. Tirsch¹, E. Hauber¹, H. Hoffmann¹, T. Roatsch¹, K. Gwinner¹, **D. A. Williams**³, S. van Gasselt², H. Hiesinger⁴, G. Neukum² and The HRSC Science Team, 2014, The Martian Geomorphology as mapped by the Mars Express High Resolution Stereo Camera (HRSC): Implications for Geological Processes and Climate Conditions, *GSA Abst. w/Prog*, v. 46, #6, Abstract 329-12, p. 729.

Williams, D.A., R. Jaumann, H.Y. McSween, Jr., C.A. Raymond, C.T. Russell, 2014, A proposed time-stratigraphic system for protoplanet Vesta, *Geophysical Research Abstracts 15 (EGU General Assembly)*, Abstract #EGU2014-1552.

Jaumann, R., G. Neukum, D. Tirsch, E. Hauber, H. Hoffmann, T. Roatsch, K. Gwinner, F. Scholten, V. Ansan, D. Baratoux, G. DiAchille, T. Duxbury, G. Erkeling, B. Foing, F. Fueten, S. van Gasselt, S. Gupta, J. W. Head, H. Hiesinger, W.-H. Ip, H.-U. Keller, M. Kleinans, T. Kneissl, L. Le Deit, N. Mangold, T.B. McCord, G. Micheal, J.P. Muller, J. Murray, A. Pacifici, T. Platz, P. Pinet, M. Pondrelli, J. Raack, D. Reiss, A.P. Rossi, T. Spohn, M. Sowe, K. Stephan, L. Wendt, **D. A. Williams** and The HRSC Science Team, 2014, The Martian geomorphology as mapped by the Mars Express High Resolution Stereo Camera (HRSC): Implications for Geological Processes and Climate Conditions, *Geophysical Research Abstracts 15 (EGU General Assembly)*, Abstract #EGU2014-3777.

Hiesinger, H., O. Ruesch, **D. A. Williams**, A. Nathues, T. H. Prettyman, F. Tosi, M. C. De Sanctis, J. E. C. Scully, P. M. Schenk, R. A. Yingst, B. W. Denevi, R. Jaumann, C. A. Raymond, C. T. Russell, 2014, An in-depth study of Marcia Crater, Vesta, *Geophysical Research Abstracts 15 (EGU General Assembly)*, Abstract #EGU2014-10635.

Musiol, S., B. Cailleau, E.P. Holohan, T.R. Walter, **D.A. Williams**, A. Dumke, T. Platz, S. van Gasselt, 2014, Finite element flexure and deformation models of Olympus Mons, Mars, *Geophysical Research Abstracts 15 (EGU General Assembly)*, Abstract #EGU2014-11746.

Williams, D.A., R. Jaumann, H.Y. McSween, Jr., C.A. Raymond, C.T. Russell, 2014, A proposed time-stratigraphic system for protoplanet Vesta, In *Lunar and Planetary Science XLV*, Abstract #1381, Lunar and Planetary Institute, Houston (CD-ROM).

- Jaumann, R., G. Neukum, D. Tirsch, E. Hauber, H. Hoffmann, T. Roatsch, K. Gwinner, F. Scholten, V. Ansan, D. Baratoux, G. DiAchille, T. Duxbury, G. Erkeling, B. Foing, F. Fueten, S. van Gasselt, S. Gupta, J. W. Head, H. Hiesinger, W.-H. Ip, H.-U. Keller, M. Kleinhans, T. Kneissl, L. Le Deit, N. Mangold, T.B. McCord, G. Micheal, J.P. Muller, J. Murray, A. Pacifici, T. Platz, P. Pinet, M. Pondrelli, J. Raack, D. Reiss, A.P. Rossi, T. Spohn, M. Sowe, K. Stephan, L. Wendt, **D. A. Williams** and The HRSC Science Team, 2014, The Martian geomorphology as mapped by the Mars Express High Resolution Stereo Camera (HRSC): Implications for Geological Processes and Climate Conditions, In *Lunar and Planetary Science XLV*, Abstract #1772, Lunar and Planetary Institute, Houston (CD-ROM).
- Decker, M.C., A. A. Ahern, J. Radebaugh, E. H. Christiansen, and **D. A. Williams**, 2014, Formation of Paterae on Io: Geologic Mapping and Experimental Models, In *Lunar and Planetary Science XLV*, Abstract #1626, Lunar and Planetary Institute, Houston (CD-ROM).
- Slezak, T., L.P. Keszthelyi, C. Okubo, D.A. Williams, 2014, Paterae on Io: Compositional Constraints from Slope Stability Analyses, In *Lunar and Planetary Science XLV*, Abstract #1552, Lunar and Planetary Institute, Houston (CD-ROM).
- Keszthelyi, L.P., W. L. Jaeger, C. M. Dundas, **D. A. Williams**, V. Cataldo, 2014, Evidence for Mechanical Erosion by Lava at Athabasca Valles, Mars from HiRISE and CTX Images and Topography, In *Lunar and Planetary Science XLV*, Abstract #1683, Lunar and Planetary Institute, Houston (CD-ROM).
- Ruesch, O., H. Hiesinger, **D. A. Williams**, A. Nathues, T. H. Prettyman, F. Tosi, M. C. De Sanctis, J. E. C. Scully, P. M. Schenk, R. A. Yingst, B. W. Denevi, R. Jaumann; C. A. Raymond, C. T. Russell, 2014, Marcia Crater, Vesta: Geology, Mineralogy, Composition, and Thermal Properties, In *Lunar and Planetary Science XLV*, Abstract #2010, Lunar and Planetary Institute, Houston (CD-ROM).
- Cataldo, V. and **D.A. Williams**, 2014, Erosion by Lava at Rimae Posidonius on the Moon, In *Lunar and Planetary Science XLV*, Abstract #1155, Lunar and Planetary Institute, Houston (CD-ROM).
- Cataldo, V., **D.A. Williams**, Colin Dundas, Laszlo Keszthelyi, 2014, Athabasca Valles, Mars: How Important was Erosion by Lava?, In *Lunar and Planetary Science XLV*, Abstract #1154, Lunar and Planetary Institute, Houston (CD-ROM).
- Garry, W.B., **D.A. Williams**, and J.E. Bleacher, 2014, Geologic Mapping of Arsia and Pavonis Montes, Mars, In *Lunar and Planetary Science XLV*, Abstract #2133, Lunar and Planetary Institute, Houston (CD-ROM).
- Scully, J.E.C., A. Yin, C.T. Russell, D.L. Buczkowski, D.A. Williams, D.T. Blewett, O. Ruesch, H. Hiesinger, L. Le Corre, C. Mercer, R.A. Yingst, W.B. Garry, R. Jaumann, T. Roatsch, F. Preusker, R.W. Gaskell, S.E. Schröder, E. Ammannito, C.M. Pieters, C.A. Raymond, 2014, Geomorphology and Structural Geology of Saturnalia Fossae and Adjacent Structures in the Northern Hemisphere of Vesta, In *Lunar and Planetary Science XLV*, Abstract #1809, Lunar and Planetary Institute, Houston (CD-ROM).
- Williams, D.A.**, R.A. Yingst, W.B. Garry, 2014, Strategies for the Geologic Mapping of Small Airless Bodies: The Vesta Example, In *Vesta In the Light of Dawn* Conference, Abstract #2014, Lunar and Planetary Institute, Houston (CD-ROM).
- Denevi, B.W., D. T. Blewett, D. L. Buczkowski, M. T. Capria, M. C. De Sanctis, L. Le Corre, J.-Y. Li, S. Marchi, A. Nathues, D. P. O'Brien, N. E. Petro, T. H. Prettyman, F. Preusker, V. Reddy, C. T. Russell, J. M. Sunshine, F. Tosi, **D. A. Williams**, 2014, The Preservation and Geologic Effects of Exogenic and Hydrated Materials on Vesta, In *Vesta In the Light of Dawn* Conference, Abstract #2029, Lunar and Planetary Institute, Houston (CD-ROM).
- Jaumann, R., C.T. Russell, C.A. Raymond, C.M. Pieters, R.A. Yingst, **D.A. Williams**, D.L. Buczkowski, P. Schenk, M.C. De Sanctis and the Dawn Team, 2014, Vesta geological features, In *Vesta In the Light of Dawn* Conference, Abstract #2011, Lunar and Planetary Institute, Houston (CD-ROM).

Mittlefehldt, D.W., A. Nathues, A. W. Beck, M. Hoffmann, M. Schaefer, **D. A. Williams**, 2014, Geologic Structures in the Walls of Vesta Craters, In *Vesta In the Light of Dawn* Conference, Abstract #2041, Lunar and Planetary Institute, Houston (CD-ROM).

2013

Jaumann, R., G. Neukum, E. Hauber, H. Hoffmann, T. Roatsch, K. Gwinner, F. Scholten, G. DiAchille, G. Erkeling, S. van Gasselt, J. W. Head, H. Hiesinger, W.-H. Ip, M. Kleinhans, T. Kneissl, L. LeDeit, A. Pacifici, T. Platz, P. Pinet, A.P. Rossi, T. Spohn, D. Tirsch, **D. A. Williams** and The HRSC Science Team, 2013, The Martian geomorphology as mapped by the *Mars Express* High Resolution Stereo Camera (HRSC): Implications for Geological Processes and Climate Conditions, Abstract P###-#### presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.

Williams, D.A., 2013, The Future of Io Exploration, *GSA Abst. w/Prog*, v. 45, #7, Abstract 305-6, p. 705.

Williams, D.A., C.W. Hamilton, and R.M.C. Lopes, 2013, Geologic Mapping of Jupiter's Moon Io and Implications for Interior Processes, *GSA Abst. w/Prog*, v. 45, #7, Abstract 163-14, p. 405.

Mest, S.C., R.A. Yingst, **D.A. Williams**, P. Schenk, W.B. Garry, 2013, Where do We Draw the Line? Evaluating Techniques for Mapping Impact Crater Deposits on Planetary Bodies, *GSA Abst. w/Prog*, v. 45, #7, Abstract 163-9, p. 404.

Bleacher, J.E., **D.A. Williams**, and P.J. Mouginis-Mark, 2013, Geologic Mapping of the Olympus Mons volcano, Mars, *GSA Abst. w/Prog*, v. 45, #7, Abstract 225-2, p. 541-542.

Buczkowski, D.L., DeSanctis, M.C., Raymond, C.A., Wyrick, D.Y., **Williams, D.A.**, Ammannito, E., Frigeri, A., Tosi, F., Nathues, A., Hoffman, M., Russell, C.T., 2013, Brumalia Tholus: An Indication of Magmatic Intrusion on Vesta, *GSA Abst. w/Prog*, v. 45, #7, Abstract 117-10, p. 296.

Buczkowski, D.L., DeSanctis, M.C., Raymond, C.A., Wyrick, D.Y., **Williams, D.A.**, Ammannito, E., Frigeri, A., Tosi, F., Nathues, A., Hoffman, M., Russell, C.T., 2013, The Unique Geomorphology and Physical Properties of the Vestalia Terra Plateau: Vesta Quadrangle Av-9 Numisia, *GSA Abst. w/Prog*, v. 45, #7, Abstract 225-8, p. 543.

Yingst, R.A., S.C. Mest, **D.A. Williams**, W.B. Garry, D.C. Berman, 2013, Geologic Mapping Methods for a Mission-Driven Mapping Scenario: The Dawn at Vesta Example, *GSA Abst. w/Prog*, v. 45, #7, Abstract 163-2, p. 403.

Williams, D.A., 2013, NASA's Planetary Aeolian Laboratory: Exploring Aeolian Processes on Earth, Mars, and Titan, In *Lunar and Planetary Science XLIV*, Abstract #1226, Lunar and Planetary Institute, Houston (CD-ROM).

Williams, D.A., D.P. O'Brien, P.M. Schenk, B.W. Denevi, U. Carsenty, S. Marchi, J.E.C. Scully, R. Jaumann, M.C. De Sanctis, E. Palomba, E. Ammannito, A. Longobardo, G. Magni, A. Frigeri, C.T. Russell, C.A. Raymond, T.M. Davison, and the *Dawn* Science Team, 2013, Impact-related flow features on asteroid Vesta, In *Lunar and Planetary Science XLIV*, Abstract #1611, Lunar and Planetary Institute, Houston (CD-ROM).

Bleacher, J.E., **D.A. Williams**, P.J. Mouginis-Mark, D. Shean, R. Greeley, 2013, Geologic map of the Olympus Mons volcano, Mars, In *Lunar and Planetary Science XLIV*, Abstract #2074, Lunar and Planetary Institute, Houston (CD-ROM).

Garry, W.B., **D.A. Williams**, and J.E. Bleacher, 2013, Geologic Mapping of Arsia and Pavonis Montes, Mars, In *Lunar and Planetary Science XLIV*, Abstract #1647, Lunar and Planetary Institute, Houston (CD-ROM).

- Decker, M.C., J. Smith, J. Radebaugh, E.H Christiansen, and **D.A. Williams**, 2013, Formation of paterae on Io: Geologic mapping and experimental models, In *Lunar and Planetary Science XLIV*, Abstract #2699, Lunar and Planetary Institute, Houston (CD-ROM).
- Kienenberger, R.L., R. Greeley, and **D.A. Williams**, 2013, Distribution of wind-blown sediment in small craters on Mars: Preliminary wind tunnel simulations, In *Lunar and Planetary Science XLIV*, Abstract #1670, Lunar and Planetary Institute, Houston (CD-ROM).
- Kneissl, T., N. Schmedemann, S. Walter, **D. Williams**, W.B. Garry, R.A. Yingst, V. Reddy, R. Jaumann, K. Krohn, F. Preusker, T. Roatsch, D. Buczkowski, C.A. Raymond, C.T. Russell, 2013, Prominent impact craters in the Av-13 quadrangle Tuccia on Vesta - Morphology, degradation, and ages of Tuccia, Eusebia, Vibidia, Galeria, and Antonia, In *Lunar and Planetary Science XLIV*, Abstract #1078, Lunar and Planetary Institute, Houston (CD-ROM).
- Buczkowski, D.L., DeSanctis, M.C., Raymond, C.A., Wyrick, D.Y., **Williams, D.A.**, Russell, C.T., 2013, Brumalia Tholus: An indication of magmatic intrusion on Vesta?, In *Lunar and Planetary Science XLIV*, Abstract #1996, Lunar and Planetary Institute, Houston (CD-ROM).
- Hiesinger, H., O. Ruesch, D.T. Blewett, J. Scully, **D.A. Williams**, R.A. Yingst, C.T. Russell, and C. A. Raymond, Geologic map of the northern hemisphere of Vesta based on Dawn FC images, In *Lunar and Planetary Science XLIV*, Abstract #2582, Lunar and Planetary Institute, Houston (CD-ROM).
- Buczkowski, D.L., DeSanctis, M.C., Raymond, C.A., Ammannito, E., Frigeri, A., Wyrick, D.Y., **Williams, D.A.**, Russell, C.T., 2013, Brumalia Tholus: Magmatic intrusion on Vesta?, *Geophysical Research Abstracts 15 (EGU General Assembly)*, Abstract #EGU2013-13036.
- Jaumann, R., K. Otto, A. Nass, K. Krohn, T.B. McCord, **D.A. Williams**, R.A. Yingst, K. Stephan, J.-P. Combe, E. Palomba, F. Tosi, M.C. DeSanctis, H. Hiesinger, D.T. Blewett, V. Reddy, L. LeCorre, C.A. Raymond, C.T. Russell, 2013, The Geology of Vesta's Dark Material, *Geophysical Research Abstracts 15 (EGU General Assembly)*, Abstract #EGU2013-2885.
- Krohn, K., R. Jaumann, K.Otto, K. Stephan, R. Wagner, D.L. Buczkowski, B. Garry, **D.A. Williams**, R.A. Yingst, J. Scully, M.C. De Sanctis, T. Kneissl, N. Schmedemann, E. Kersten, K.-D. Matz, C.M. Pieters, F. Preusker, T. Roatsch, P. Schenk, C.T. Russell, C.A. Raymond, 2013, Mass movements at steep scarps and crater rims in the Sextilia Quadrangle on Vesta, *Geophysical Research Abstracts 15 (EGU General Assembly)*, Abstract #EGU2013-3213.
- Hiesinger, H., O. Ruesch, D.T. Blewett, D.L. Buczkowski, J. Scully, **D.A. Williams**, R.A. Yingst, C.T. Russell, and C. A. Raymond, Geologic map of the northern hemisphere of Vesta, *Geophysical Research Abstracts 15 (EGU General Assembly)*, Abstract #EGU2013-12267.

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Non Peer-Reviewed Publications

- Williams, D.A.**, J. Radebaugh, R.M.C. Lopes, I. de Pater, N.M. Schneider, F. Marchis, J. Moses, A.G. Davies, J. Perry, J.S. Kargel, L.P. Keszthelyi, C. Paranicus, A.S. McEwen, K.L. Jessup, D. Goldstein, M. Bunte, J. Rathbun, M. McGrath, K. Khurana, S. Rodriguez, T.A. Hurford, A.R. Hendrix, M. Kirchoff, E. Turtle, 2009, Future Io Exploration for 2013-2013 and Beyond, Part 2: Recommendations for Missions, A white paper submitted for the 2011 NRC Planetary Decadal Survey, 7 pp., <http://www8.nationalacademies.org/ssbsurvey/publicview.aspx>
- Williams, D.A.**, J. Radebaugh, R.M.C. Lopes, I. de Pater, N.M. Schneider, F. Marchis, J. Moses, A.G. Davies, J. Perry, J.S. Kargel, L.P. Keszthelyi, C. Paranicus, A.S. McEwen, K.L. Jessup, D. Goldstein, M. Bunte, J.

- Rathbun, M. McGrath, K. Khurana, S. Rodriguez, T.A. Hurford, A.R. Hendrix, M. Kirchoff, E. Turtle, 2009, Future Io Exploration for 2013-2013 and Beyond, Part 1: Justification and Science Objectives, A white paper submitted for the 2011 NRC Planetary Decadal Survey, 7 pp., <http://www8.nationalacademies.org/ssbsurvey/publicview.aspx>
- McKinnon, W.B., and >25 coauthors including **D.A. Williams**, 2009, Exploration Strategy for the Outer Planets 2013-2022: Goals and Priorities, A white paper submitted for the 2011 NRC Planetary Decadal Survey, 7 pp., <http://www8.nationalacademies.org/ssbsurvey/publicview.aspx>
- Beauchamp, P.M., and >100 coauthors including **D.A. Williams**, 2009, Technologies for Outer Planet Missions: A Companion to the Outer Planet Assessment Group (OPAG) Strategic Exploration White Paper, A white paper submitted for the 2011 NRC Planetary Decadal Survey, 7 pp., <http://www8.nationalacademies.org/ssbsurvey/publicview.aspx>
- Coustenis, A., and 79 coauthors including **D.A. Williams**, 2009, Future *In Situ* Balloon Exploration of Titan's Atmosphere and Surface, A white paper submitted for the 2011 NRC Planetary Decadal Survey, 7 pp., <http://www8.nationalacademies.org/ssbsurvey/publicview.aspx>
- Phillips, C.B., and 66 coauthors including **D.A. Williams**, 2009, Exploration of Europa, A white paper submitted for the 2011 NRC Planetary Decadal Survey, 7 pp., <http://www8.nationalacademies.org/ssbsurvey/publicview.aspx>
- Pappalardo, R.T., and 100 coauthors including **D.A. Williams**, 2009, Science of the Europa-Jupiter System Mission, A white paper submitted for the 2011 NRC Planetary Decadal Survey, 7 pp., <http://www8.nationalacademies.org/ssbsurvey/publicview.aspx>
- Banerdt, W.B., and 194 coauthors including **D.A. Williams**, 2009, The rationale for a long-lived geophysical network mission to Mars, A white paper submitted for the 2011 NRC Planetary Decadal Survey, 7 pp., <http://www8.nationalacademies.org/ssbsurvey/publicview.aspx>
- Williams, D.A.**, 2008, Book Review: *Volcanism on Io: A Comparison with Earth* by Ashley G. Davies, *Physics Today*, 61, #11 (November 2008), 59-60.
- Williams, D.A.**, J.E. Bleacher, V.A. Zabala-Aliberto, A.A. Zabala, P.L. Whelley, S.R. Cave, and R. Greeley, 2007, Kissing Mars rocks with the Rover's RATs: An educational exercise to understand drilling rocks on Mars, *The Earth Scientist*, XXVI, #4, 13-19.
- Spencer, J.R., F. Bagenal, A.G. Davies, I. de Pater, F. Herbert, R.R. Howell, L.P. Keszthelyi, R.M.C. Lopes, M.A. McGrath, M.P. Milazzo, J. Moses, J. Perry, J. Radebaugh, J.A. Rathbun, N.M. Schneider, G. Schubert, W. Smythe, R.J. Terrile, E.P. Turtle, and **D.A. Williams**, 2002, The Future of Io Exploration, *in* The Future of Solar System Exploration, 2003-2013: Community Contributions to the NRC Solar System Exploration Decadal Survey, M.V. Sykes, ed., *Astron. Soc. Pac. Conf. Ser.*, v. 272, 201-215.
- Williams, D.A.**, and S.D. Kadel, 1995, Galileo Imaging Observations of the Palus Epidemiarum Region of the Moon, *The Compass of Sigma Gamma Epsilon*, 71, 81-95.