

Dr. Ali M. Bramson

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EDUCATION

University of Arizona, Tucson, AZ, 2012–2018

- Ph.D. Planetary Sciences, minor in Geosciences (Aug. 2018)
- M.S. Planetary Sciences (Dec. 2015)

University of Wisconsin-Madison, Madison, WI, 2007–2011

- B.S. Physics and Astronomy-Physics, certificate (minor) in Computer Science (Dec. 2011)
- Graduated with distinction (honor's thesis); named on UW's Dean's List 6 semesters

RESEARCH POSITIONS HELD

Assistant Professor: Department of Earth, Atmospheric and Planetary Sciences, Purdue University,
Starting Aug. 2020

Postdoctoral Research Associate: Lunar & Planetary Laboratory, University of Arizona, Sep. 2018–present
Advisor: Prof. Lynn Carter

- Targeting and data analysis of bistatic radar data with the Mini-RF instrument onboard the Lunar Reconnaissance Orbiter

Graduate Research Associate: Lunar & Planetary Laboratory, University of Arizona, Aug. 2012–Aug. 2018
Advisor: Prof. Shane Byrne

- Dissertation Title: “Radar Analysis and Theoretical Modeling of the Presence and Preservation of Ice on Mars”

Undergraduate Research Assistant: Astronomy Department, University of Wisconsin, Dec. 2008–May 2012
Advisor: Prof. Eric M. Wilcots

- Senior Thesis Title: “Using networking algorithms to assess the environments of galaxy groups”

REU Student: SETI Institute, June 2010–Aug. 2010

Advisor: Dr. Cynthia Phillips

- Searching for ongoing geologic activity on Jupiter's satellites

REU Student: Arecibo Observatory/Cornell University, May 2009–Aug. 2009

Advisors: Dr. Michael Nolan and Dr. Ellen Howell

- Modeling of 25143 Itokawa to improve radar-based shape estimation methods

Undergraduate Research Assistant: Nanoscale Science and Engineering Center (NSEC), University of Wisconsin, June 2007–May 2009

Advisors: Dr. Kevin M. Metz and Prof. Joel A. Pedersen

- Environmental transformations of metal nanoparticles and solution-based growth of nanoparticles

HONORS AND AWARDS (Total amount awarded: \$409,183)*Postdoctoral:*

- Named a 2019 “Forward Under 40” awardee by the Wisconsin Alumni Association

Graduate (\$352,583):

- Gerard P. Kuiper Memorial Award (2018) - \$1,000
- Student Travel Grant from NASA’s MEPAG (Mars Exploration Program Analysis Group) to attend the Mars Workshop on Amazonian and Present-Day Climate (2018) - \$1,200
- University of Arizona (UA) Graduate and Professional Student Council Travel Grant (2018) - \$741
- LPI (Lunar and Planetary Institute) Career Development Award (2017) - \$1,000
- Wisconsin Alumni Association Presidents’ Circle of Excellence (2017)
- NASA Earth and Space Science Fellowship (NESSF) (awarded 2016) - \$30,000/year for up to 3 years
- LPL Shirley D. Curson Travel Award in Planetary Science (2015) - \$1,500
- UA Graduate and Professional Student Council Travel Grant (2015) - \$739
- Student Travel Grant from NASA’s MEPAG to attend the 8th Intl. Conference on Mars (2014) - \$1,000
- Roy P. Drachman Galileo Scholarship for the College of Science Outstanding Graduate Student Teaching Award (2014) - \$1,000
- UA College of Science Teaching Award for the Lunar and Planetary Laboratory (2014)
- UA Galileo Circle Scholarship (2014, 2017) - \$2,000
- Outstanding Student Paper Award at the American Geophysical Union (AGU) Fall Meeting (2013)
- National Science Foundation (NSF) Graduate Research Fellowship (2013–2016) - \$194,859
- Lieut. Colonel Kenneth Rondo Carson and Virginia Bryan Carson Graduate Fellowship (2012–2013)
- Arizona Space Grant Consortium Assistantship (2012–2013); combined with Carson - \$57,544

Undergraduate (\$56,600):

- UW-Madison Astronomy Dept. Lowell Doherty Award for Excellence in Astronomy recognizing a graduating senior's exceptional performance in astronomical research and in the classroom (2012) - \$500
- Phi Beta Kappa Honor Society (joined 2011)
- NSF Undergraduate Research and Mentoring (URM) Fellow at UW-Madison (2008–2011) - \$36,000
- Wisconsin Space Grant Consortium Undergraduate Research Grant (2011) - \$3,500
- David H. Durra Scholarship for undergraduates pursuing degrees in the physical sciences (2011) - \$2,000
- Wisconsin Space Grant Consortium Undergraduate Scholarship (2010–2011) - \$1,500
- SETI Institute’s 2010 Research Experiences for Undergraduates (REU) in Astrobiology - \$5,600
- Bernice Durand Undergraduate Scholarship for undergraduate women or minorities majoring in Physics or Astronomy (2009) - \$1,900
- Arecibo Observatory’s 2009 Research Experiences for Undergraduates (REU) - \$4,500
- William F. Vilas Scholarship to freshman who demonstrate strong academic performance (2007) - \$400
- Verona Area Community Theater Fine Arts Scholarship (2007) - \$700

RESEARCH GRANTS FUNDED (Total amount funded: \$640,307)

As Co-I (PI of the UA subcontracts):

- *Microstructural evolution of solar system ices through sintering*, funded by NASA’s Solar System Workings Program (Total budget = \$410,307)
 - PI: Jamie Molaro

- *Subsurface Water Ice Mapping (SWIM) in the Northern Hemisphere of Mars*, funded by JPL to support NASA's Mars Exploration Program (Total budget = \$230,000)
 - PIs: Nathaniel E. Putzig and Gareth A. Morgan

SKILLS

Spacecraft:

- Analysis of data from the *High Resolution Imaging Science Experiment (HiRISE)*, *Context Camera (CTX)* and *Shallow Radar (SHARAD)* instruments onboard the Mars Reconnaissance Orbiter; the *Mini-RF* radar instrument onboard the Lunar Reconnaissance Orbiter; the *Solid State Imager (SSI)* onboard Galileo; the *Long-Range Reconnaissance Imager (LORRI)* onboard New Horizons; and shape models of asteroid 25143 Itokawa from Arecibo Observatory and JAXA's Hayabusa spacecraft
- Participant of the 2016 Planetary Science Summer School at NASA's Jet Propulsion Laboratory
 - Role: Project/Proposal Manager
 - Mission Concept: New Frontiers-class Uranus orbiter mission
- Produced 11 HiRISE Digital Terrain Models archived on the Planetary Data System (PDS)
- Attended science team meetings for the HiRISE, CaSSIS, SHARAD, MARSIS, and Dawn missions/instruments
- Attended and presented at Project Science Group meetings for the Mars Reconnaissance Orbiter
- Attended the Navigation and Ancillary Information Facility (NAIF)'s SPICE training workshop

Remote Sensing:

- Esri's geospatial ArcGIS software
- SeisWare seismic software
- USGS's image processing software Integrated Software for Imagers and Spectrometers (ISIS)
- Socet Set digital mapping software
- HiRISE Digital Terrain Model (DTM) creation
- SHAPE asteroid shape modeling software

Computer:

- Microsoft, Mac, and Linux OS
- Languages: Java, Matlab, Maple, MIPS R2000 Assembly Language, BASIC, Visual Basic, C, C++, and IDL

Field Work:

- Ice coring and Ground Penetrating Radar (GPR) at 200, 350, and 900 MHz of the Langjökull glacier, Iceland with Dr. Lynn Carter and colleagues
- Differential GPS of lava flow margins, surface roughness and stereophotogrammetric ground control points at:
 - Craters of the Moon, Idaho with NASA's 2016 FINESSE (Field Investigations to Enable Solar System Science and Exploration) field campaign
 - Iceland's Holuhraun 2014–2015 lava flow and the Laki lava flow with Dr. Christopher Hamilton's 2015 field workshop on active lava-water interactions
- Participated in 12 semesters of Planetary Geology Field Studies to study the local geology and planetary analogs in: Tucson; Flagstaff; the Mojave Desert; Northern New Mexico and the K/T Boundary; Hawaii; Southern New Mexico; Southeastern Utah and Canyonlands; the Salton Sea; the Chiricahua Mountains and San Bernardino Valley; Southwestern Utah, and Bryce and Zion Canyons; Page, AZ; Death Valley; Canyon de Chelly
- Participated in field trips to explore Mars analogs at the HiRISE team meetings to Utah, Idaho, Iceland, and Flagstaff

Lab:

- Aqueous synthesis of metal nanoparticles
- Scanning electron microscopy
- Dynamic light scattering
- UV-Visible spectroscopy

Group Management and Interpersonal Training:

- Intergroup Dialogue Facilitation – Office of Inclusion and Multicultural Engagement, U. of Arizona
- General Education Safe Zone Training – Office of LGBTQ Affairs, U. of Arizona
- LGBT Safe Zone Training – UW-Madison
- Gay, Lesbian and Straight Education Network (GLSEN) of South-Central Wisconsin

PROFESSIONAL ACTIVITIES AND DEPARTMENTAL INVOLVEMENT

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- Served on NASA Review Panels
 - Reviewer for *Nature*, *Geophysical Research Letters*, *Icarus*, and *Advances in Space Research*
 - Session Chair for a variety of conferences, including *LPSC*, *6th Mars Polar*, *Amazonian Climate*, etc.
 - Reviewer for the GSA Planetary Geology Division's Dornik Award
 - *Wisconsin Alumni Association Tucson Chapter*: President 2014–2018
 - *UA Graduate and Professional Student Council*: Travel Grant Reviewer 2015
 - *UA Lunar and Planetary Laboratory Graduate Student Activities*:
 - Representative to the faculty 2016–2018
 - Prospective graduate student visit weekend coordinator 2014, 2015
 - Grad student website webmaster 2014–2017
 - Lunar and Planetary Laboratory Conference (LPLC) session chair 2014, 2016, 2017
 - LPL Bratfest coordinator 2012–2017
 - *Society of Physics Students, UW-Madison chapter*
 - President 2010–2011
 - Vice President 2009–2010
 - Events Coordinator 2008–2009
 - Member 2007–2012
 - *The Ogg Association at UW-Madison*: Educational Programs Coordinator 2007–2008

OUTREACH

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- *Bringing the Universe to America's Classrooms, K–12 instructional resources by PBS/NASA* 2018–present
 - Content advisor, <https://www.pbslearningmedia.org/universe/>
 - *Steward Public Evening Lecture Series* March 2019
 - Gave public talk for 115 people in Tucson, Arizona
 - *Boise State's First Friday Public Astronomy Event* March 2019
 - Gave public talk for over 150 people in Boise, Idaho
 - *"From Madison to Mars", public talk at the Verona Area Community Theater* Oct. 2018
 - Gave public talk for 90 people in my hometown of Verona, Wisconsin
 - *Wisconsin Science Festival* Nov. 2017
 - Panelist for the "Mars Invades Madison" event about life on Mars
 - *Summer Science Saturday at LPL* July 2017
 - Discussed craters and NASA's HiRISE camera with the public
 - *Core Knowledge Charter School* Dec. 2016

- Spoke with 44 third-graders about life as a planetary scientist
Deep Astronomy, Live Nov. 2016
- Panelist for the “Footsteps to Mars” live web broadcast about water on Mars
Glacier Edge Elementary School Oct. 2016
- Spoke with 174 fourth and fifth-graders about life as a planetary scientist
Tucson Festival of Books March 2013, 2015, 2016
- Ran activities on comparative planetology, meteorite hunting, exoplanet discovery and characterization, and science art for the public
The Art of Planetary Science Dec. 2013, Oct. 2015, Feb. 2017
- Volunteered with and submitted “data art” to this exhibition to bring together scientists and artists in Tucson
Space Drafts Public Talk Series, Borderlands Brewery Feb. 2015
- Gave public lecture on “Crazy Craters!!! Windows into Martian Ice”
Astronomy Ambassador for the American Astronomical Society Nov. 2014
- <http://aas.org/outreach/aas-astronomy-ambassadors-program>
Arizona Science and Astronomy Expo Nov. 2012
- Explained an impact cratering demo for the public
Sugar Creek Elementary School Nov. 2011
- Read books about the Moon and the Mars rovers and explained various astronomical phenomena to three second-grade classes.
EAGLE Middle School Science Mentor Program (Fitchburg, WI) Spring 2011
- Mentored an 8th grade student
Universe in the Park Summer 2010, 2011
- Gave 30-minute astronomy presentations at WI state parks, preceded by telescope viewings
“SETI Gurls” Summer 2010
- Co-created this video about the SETI REU program that has over 11,000 views on YouTube, and was featured on NPR’s Science Friday, the Huffington Post and Astronomy Magazine.
SETIcon Aug. 2010
- Ran planetarium shows and helped with a Build-Your-Own Galileoscope workshop
Wonders of Physics Feb. 2008 & 2009
- Volunteered at this program for the public and supervised/explained topics in the physics museum

TEACHING AND CURRICULUM DEVELOPMENT

Entering Research, 2nd Edition

- Author of active learning materials contributed to this curriculum to support undergraduate and graduate research trainees. Publisher: Macmillan; Editors: J. Branchaw, A. Butz, and A. Smith.
- <https://store.macmillanlearning.com/us/product/Entering-Research/p/1319263682>

Center for the Improvement of Mentored Experiences in Research (CIMER)

- Master Consultant: Trained to help individuals and institutions develop their own implementation plan of theoretically-grounded, evidence-based, and culturally-responsive research mentee curricula

LASC/SCI 397 B & C: Entering Research I & II (University of Arizona) 2013–2018

- Instructor of Record; founded this 2-semester workshop for undergraduate researchers at the UA
- Coordinated and mentored other graduate student facilitators on learner-centered teaching practices and experiential learning involved with teaching this course

Geology 460:224: Geology of Moons and Planets (Rutgers University) Spring 2018

- Guest Lecturer (undergraduate non-majors survey course)

- Astro 340: Planetary Astrophysics* (UW-Madison) Fall 2011 and Fall 2017
- Guest lecturer (undergraduate astronomy majors course)
 - Helped develop new final class project
- PTYS 554: Evolution of Planetary Surfaces* (University of Arizona) Fall 2015
- Guest Lecturer (graduate level course)
- Biology 260 & 261: Entering Research I & II* (UW-Madison) Fall 2010–Spring 2011
- Co-facilitated this class for undergraduates beginning independent research projects
- Astro 104: Our Exploration of the Solar System* (UW-Madison) Fall 2010
- Guest lecturer and reviewer of students' final projects on designing a solar system mission (undergraduate general education course)
- Physics Learning Center* (UW-Madison) 2009–2010
- Peer Mentor Tutor (PMT): led 2+ small group sessions per week for introductory physics classes
 - Participated in weekly training seminars on teaching strategies

STUDENTS MENTORED

Undergraduate

- Claire W. Cook (Univ. of Arizona) 2017–2019
Senior Honors Thesis “*Radar Constraints on the Thickness of Subsurface Ice Near Hellas Planitia, Mars*” and NASA Arizona Space Grant Consortium Intern

PRESS

- Interviewed for UA News series commemorating LPL's role in the Apollo missions, including articles “*Exploring a Desert Portal to Other Worlds*” and “*Mapping the Moon and Worlds Beyond*”
- Meet 2019 “Forward Under 40” recipient Ali Bramson '11 for the Wisconsin Alumni Association
- Interviewed by NPR's member station BSPR for a segment about finding ice on Mars on the “*Idaho Matters*” podcast
- 2019 GRL paper, *Water on Mars, with a grain of salt: local heat anomalies are required for basal melting of ice at the south pole today*, syndicated by:
 - Space.com, Newsweek, Arizona Daily Star, EurekAlert, Science News, and others
- Profiled in *The Washburn Observer* for “What can you do with a UW degree in astronomy?”
- Featured in *The Verona Press* for the public lecture I gave in my hometown after my PhD defense
- 2018 Nature Astronomy paper, *Cryovolcanic rates on Ceres revealed by topography*, syndicated by:
 - National Geographic, Science News, Gizmodo, Astronomy Magazine, Phys.org, and others
- *Eos Research Spotlight* on 2018 JGR paper on Hrad Vallis lava-ice interactions
- 2018 Science paper, *Exposed subsurface ice sheets in the Martian mid-latitudes*, syndicated by:
 - Time, National Geographic, Washington Post, Gizmodo, Wired, Astronomy.com, and others
- Interviewed for Science's press article about the exposed subsurface ice sheets on Mars paper
- NASA Press Release about the exposed subsurface ice sheets on Mars paper
- 2017 GRL paper on *The Vanishing Cryovolcanoes of Ceres* syndicated by:
 - Space.com, Astronomy.com, UA News, and others
- Arizona Sonora News interview for the article, “*The Space Race of the past launched astronomy's future in Tucson*”
- Profiled for a “*Women in Science*” article in the Daily Wildcat, the UA's student newspaper
- 2015 GRL paper, *Widespread Excess Ice in Arcadia Planitia*, syndicated by:
 - CBS News, Space.com, UA News, and others

- NASA's JPL Martian Diaries Blog Post about Subsurface Ice and Terraced Craters
- Planetary Society Blog Post about Terraced Craters
- UW Alumni Magazine's Class of 2011 Feature
- Profiled in The Washburn Observer (UW-Madison Astronomy Department Newsletter)
- "SETI Gurls" mentioned on NPR's Science Friday and in the Huffington Post

INVITED TALKS

- Geology Seminar Series, Department of Geological Sciences
University of Idaho, Moscow, ID March 2019
- EAS Seminar, Department of Earth and Atmospheric Sciences
Georgia Institute of Technology, Atlanta, GA March 2019
- Departmental Seminar, Department of Physics
Boise State University Boise, ID March 2019
- Department Colloquium, Department of Geology and Geophysics
University of Utah, Salt Lake City, UT Feb. 2019
- EAPS Colloquium, Department of Earth, Atmospheric, and Planetary Sciences
Purdue University, West Lafayette, IN Feb. 2019
- Department Seminar, Department of Earth and Planetary Sciences
Rutgers University, New Brunswick, NJ Jan. 2019
- Department Colloquium, Department of Earth, Environmental, and Planetary Sciences
Brown University, Providence, RI Jan. 2019
- Solicited Presentation for the 42nd Assembly of the Committee on Space Research
Pasadena, CA July 2018
- Lunch Seminar, Center for Space and Habitability
University of Bern, Bern, Switzerland Sept. 2017
- Planetary Lunch Colloquium, Earth, Atmospheric and Planetary Sciences Department
Massachusetts Institute of Technology, Cambridge, MA March 2017
- Lunch Seminar, Department of Astronomy
University of Wisconsin-Madison, Madison, WI Oct. 2015
- Colloquium, Planetary Science Directorate
Southwest Research Institute, Boulder, CO Sept. 2015

PEER-REVIEWED PUBLICATIONS

† = research advisee; * = shared first-authorship

- [14] †Cook, C. W., **A. M. Bramson**, S. Byrne, J. W. Holt, M. S. Christoffersen, D. Viola, C. M. Dundas, T. A. Goudge (Submitted), Radar Constraints on the Thickness of Subsurface Ice Near Hellas Planitia, Mars.
- [13] Martellato, E., **A. M. Bramson**, G. Cremonese, A. Lucchetti, F. Marzari, M. Massironi, C. Re, and S. Byrne (Submitted), Martian Ice Revealed by Modeling of Simple Terraced Crater Formation.
- [12] **Bramson, A. M.**, S. Byrne, J. Bapst, I. B. Smith, and T. McClintock (2019) A Migration Model for the Polar Spiral Troughs of Mars. *Journal of Geophysical Research: Planets*, <https://doi.org/10.1029/2018JE005806>.

- [11] *Sori, M. M. and ***A. M. Bramson** (2019) Water on Mars, with a grain of salt: local heat anomalies are required for basal melting of ice at the south pole today. *Geophysical Research Letters*, 46, <https://doi.org/10.1029/2018GL080985>.
- [10] Diniega, S., I.B. Smith, and **A. M. Bramson** (2019), Updates on understanding Mars's recent and present-day climate. *Eos*, 100, <https://doi.org/10.1029/2019EO114411>.
- [9] Sori, M. M., H. G. Sizemore, S. Byrne, **A. M. Bramson**, M. T. Bland, N. T. Stein, and C. T. Russell (2018), Cryovolcanic rates on Ceres revealed by topography. *Nature Astronomy*, <https://doi.org/10.1038/s41550-018-0574-1>
- [8] Hamilton, C. W., P. J. Mouginis-Mark, M. M. Sori, S. P. Scheidt, and **A. M. Bramson** (2018), Episodes of aqueous flooding and effusive volcanism associated with Hrad Vallis, Mars. *Journal of Geophysical Research: Planets*, 123, 1484–1510, <https://doi.org/10.1029/2018JE005543>.
- [7] Elder, C. M., **A. M. Bramson**, L. W. Blum, H. T. Chilton, A. Chopra, C. Chu, A. Das, A. B. Davis, A. Delgado, J. Fulton, L. Jozwiak, A. Khayat, M. E. Landis, J. L. Molaro, M. Slipski, S. Valencia, J. Watkins, C. L. Young, C. J. Budney, and K. L. Mitchell (2018), OCEANUS: A high science return Uranus orbiter with a low-cost instrument suite. *Acta Astronautica*, 148, 1–11, <https://doi.org/10.1016/j.actaastro.2018.04.019>.
- [6] Dundas, C. M., **A. M. Bramson**, L. Ojha, J. J. Wray, M. T. Mellon, S. Byrne, A. S. McEwen, N. E. Putzig, D. Viola, S. Sutton, E. Clark and J. W. Holt (2018), Exposed subsurface ice sheets in the Martian mid-latitudes. *Science*, 359, 6372, 199–201, <https://doi.org/10.1126/science.aao1619>.
- [5] Smith, I. B., S. Diniega, D. W. Beaty, T. Thorsteinsson, P. Becerra, **A. M. Bramson**, S. M. Clifford, C. S. Hvidberg, G. Portyakina, S. Piqueux, A. Spiga and T. N. Titus (2018), Introduction to the special issue on Mars polar science and exploration: Conference summary and five top questions. *Icarus*, 308, 2–14, <https://doi.org/10.1016/j.icarus.2017.06.027>.
- [4] **Bramson, A. M.**, S. Byrne, J. Bapst (2017), Preservation of Mid-Latitude Ice Sheets on Mars. *Journal of Geophysical Research: Planets*, 122, 2250–2266, <https://doi.org/10.1002/2017JE005357>. (JGR Editor's Highlight)
- [3] Sori, M. M., J. N. Bapst, **A. M. Bramson**, S. Byrne, and M. E. Landis (2017), A Wunda-full world? Carbon dioxide ice deposits on Umbriel and other Uranian moons. *Icarus*, 290, 1–13, <https://doi.org/10.1016/j.icarus.2017.02.029>.
- [2] Sori, M. M., S. Byrne, M. T. Bland, **A. M. Bramson**, A. I. Ermakov, C. W. Hamilton, K. A. Otto, O. Ruesch, C. T. Russell (2017), The vanishing cryovolcanoes of Ceres. *Geophysical Research Letters*, 44, <https://doi.org/10.1002/2016GL072319>.
- [1] **Bramson, A. M.**, S. Byrne, N. E. Putzig, S. Sutton, J. J. Plaut, T. C. Brothers, and J. W. Holt (2015), Widespread excess ice in Arcadia Planitia, Mars. *Geophysical Research Letters*, 42, <https://doi.org/10.1002/2015GL064844>.

SELECTED CONFERENCE ABSTRACTS/PRESENTATIONS

† = research advisee; * = shared first-authorship

— 2019 —

- G.A. Morgan, N.E. Putzig, H.G. Sizemore, D.M.H. Baker, **A.M. Bramson**, E.I. Petersen, Z.M. Bain, R.H. Hoover, M.R. Perry, M. Mastrogiuseppe, I.B. Smith, B.A. Campbell, A.V. Pathare, and C.M. Dundas (July 2019) The Science Value of Ice Resource Mapping: Mars Subsurface Water Ice Mapping (SWIM). LPI Contrib. No. 2089, p.6418, *9th International Conference on Mars (9th Mars)*, Pasadena, CA.
- Z.M. Bain, N.E. Putzig, S.J. Robbins, R.H. Hoover, A.M. Bramson, E.I. Petersen, and G.A. Morgan (July 2019) Analysis of Layered Ejecta Craters with Mars Reconnaissance Orbiter Shallow Radar (SHARAD) Data. LPI Contrib. No. 2089, p.6423, *9th Mars*, Pasadena, CA.
- N.E. Putzig, G.A. Morgan, H.G. Sizemore, D.M.H. Baker, **A.M. Bramson**, E.I. Petersen, Z.M. Bain, R.H. Hoover, M.R. Perry, M. Mastrogiuseppe, I.B. Smith, B.A. Campbell, A.V. Pathare, and C.M. Dundas (July 2019) Results of the Mars Subsurface Water Ice Mapping (SWIM) Project. LPI Contrib. No. 2089, p.6427, *9th Mars*, Pasadena, CA.
- A.M. Bramson**, L.M. Carter, G.W. Patterson, and M.M. Sori (March 2019) Radar Response of Lunar Cryptomaria and Pyroclastic Deposits in Mini-RF Data. LPI Contrib. No. 2132, p.2673, Oral presentation at the *50th Lunar and Planetary Science Conference (LPSC)*, The Woodlands, TX.
- †C.W. Cook, **A.M. Bramson**, M.S. Christoffersen, S. Byrne, J.W. Holt, D. Viola, C.M. Dundas, T.A. Goudge (March 2019) Radar Constraints on the Thickness of Subsurface Ice Near Hellas Planitia, Mars. LPI Contrib. No. 2132, p.2245, *50th LPSC*, The Woodlands, TX.
- *M.M. Sori and ***A.M. Bramson** (March 2019) A Story of Water, Ice, and Fire on Mars: Conditions for generating Liquid Water under the South Polar Layered Deposits. LPI Contrib. No. 2132, p.1073, *50th LPSC*, The Woodlands, TX.
- A.M. Bramson**, E.I. Petersen, Z.M. Bain, N.E. Putzig, G.A. Morgan, M. Mastrogiuseppe, M.R. Perry, I.B. Smith, H.G. Sizemore, D.M.H. Baker, R.H. Hoover, and B.A. Campbell. (March 2019) Mars Subsurface Water Ice Mapping (SWIM): Radar Subsurface Reflectors. LPI Contrib. No. 2132, p.2069, *50th LPSC*, The Woodlands, TX.
- G.A. Morgan, N.E. Putzig, M.R. Perry, **A.M. Bramson**, E.I. Petersen, Z.M. Bain, M. Mastrogiuseppe, D.M.H. Baker, I.B. Smith, R.H. Hoover, H.G. Sizemore, and B.A. Campbell (March 2019) The Mars Subsurface Water Ice Mapping (SWIM) Project. LPI Contrib. No. 2132, p.2918, *50th LPSC*, The Woodlands, TX.
- N.E. Putzig, D.M. Hollibaugh Baker, G.A. Morgan, Z.M. Bain, **A.M. Bramson**, R.H. Hoover, M. Mastrogiuseppe, M.R. Perry, E.I. Petersen, H.G. Sizemore, I.B. Smith, and B.A. Campbell (March 2019) Mars Subsurface Water Ice Mapping (SWIM): Geomorphic Mapping. LPI Contrib. No. 2132, p.2087, *50th LPSC*, The Woodlands, TX.
- M.R. Perry, Z.M. Bain, N.E. Putzig, G.A. Morgan, **A.M. Bramson**, E.I. Petersen, M. Mastrogiuseppe, D.M.H. Baker, R.H. Hoover, H.G. Sizemore, I.B. Smith, and B.A. Campbell (March 2019) Mars Subsurface Water Ice Mapping (SWIM): Geomorphic Mapping. LPI Contrib. No. 2132, p.3083, *50th LPSC*, The Woodlands, TX.
- Z.M. Bain, G.A. Morgan, N.E. Putzig, B.A. Campbell, **A.M. Bramson**, E.I. Petersen, M. Mastrogiuseppe, M.R. Perry, D.M.H. Baker, I.B. Smith, R.H. Hoover, and H.G. Sizemore (March 2016) Mars Subsurface Water Ice Mapping (SWIM): Radar Surface Reflectivity. LPI Contrib. No. 2132, p.2726, *50th LPSC*, The Woodlands, TX.
- R.H. Hoover, H.G. Sizemore, Z. Bain, N.E. Putzig, G.A. Morgan, M.R. Perry, M. Mastrogiuseppe, D.M.H. Baker, **A.M. Bramson**, E. Petersen, I.B. Smith, and B. A. Campbell (March 2019) Mars Subsurface Water Ice Mapping (SWIM): Thermal Analysis. LPI Contrib. No. 2132, p.1679, *50th LPSC*, The Woodlands, TX.

— 2018 —

- A.M. Bramson** (July 2018), The Amazonian climate of Mars: A cold and dry summary (Invited), Abstract B4.1-0004-18, Oral presentation at the *42nd Assembly of the Committee on Space Research (COSPAR)*, Pasadena, CA.
- A.M. Bramson**, S. Byrne, J. Bapst, and I.B. Smith (June 2018), The mass balance of Mars' spiral troughs. LPI Contrib. No. 2086, p.4023, Oral presentation at the *Mars Workshop on Amazonian Climate 2018*, Lakewood, CO.
- †C.W. Cook, **A.M. Bramson**, S. Byrne, D. Viola, J.W. Holt, M.S. Christoffersen, and C.M. Dundas (June 2018), Searching for subsurface ice in Hellas Planitia using SHARAD. LPI Contrib. No. 2086, p.4041, *Mars Workshop on Amazonian Climate 2018*, Lakewood, CO.
- A.M. Bramson**, S. Byrne, J. Bapst, and I.B. Smith (March 2018), The role of sublimation in the migration of Mars' spiral polar troughs. LPI Contrib. No. 2083, p.2611, Oral presentation at the *49th Lunar and Planetary Science Conference (LPSC)*, The Woodlands, TX.
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