

DANIELLA NADINE MENDOZA DELLAGIUSTINA

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EDUCATION

Doctor of Philosophy in Geosciences (Geophysics/Seismology) 2021

The University of Arizona, minor in Planetary Sciences

Dissertation: Signal Processing of Seismic and Image Data for Planetary Exploration

Master of Science in Computational Physics 2011

The University of Alaska Fairbanks

Thesis: Regional modeling of Greenland's outlet glaciers with the Parallel Ice Sheet Model.

Bachelor of Science in Physics 2008

The University of Arizona, minor in Planetary Sciences

Thesis: Measuring Electrical Conductivity in Meteoritic Materials with Applications to Induction Heating Theory

CURRENT APPOINTMENTS

University of Arizona, Lunar and Planetary Laboratory

Tucson, AZ

Assistant Professor

January 2022 – Present

NASA's OSIRIS-APEX Mission to Apophis

Principal Investigator

April 2022 – Present

NASA's OSIRIS-REx Asteroid Sample Return Mission

Deputy Principal Investigator

June 2021 – Present

FORMER RESEARCH APPOINTMENTS

University of Arizona, Lunar and Planetary Laboratory

Tucson, AZ

Research Scientist

August 2014 – December 2021

OSIRIS-REx Lead Image Processing Scientist

July 2015 – May 2021

OSIRIS-REx Associate Image Processing Scientist

February 2014 – July 2015

University of Arizona, Department of Physics

Tucson, AZ

Assistant Research Scientist

August 2012 – January 2014

Northern Embedded Solutions LLC

Fairbanks, AK

Scientist

December 2011– August 2013

University of Alaska Fairbanks, The Geophysical Institute

Fairbanks, AK

Research Assistant

September 2009 – December 2011

University of Arizona, Lunar and Planetary Laboratory

Tucson, AZ

Research Assistant

May 2005 – June 2009

Institute for Study of Earth's Interior, Okayama University

Misasa, Japan

Research Intern

June 2008 – August 2008

FORMER TEACHING APPOINTMENTS

Pima Community College

Tucson, AZ

Adjunct Geology & Physics Instructor

August 2012 – December 2017

Instructor for undergraduate physical geology, algebra-based introductory physics, calculus-based mechanics, and electricity & magnetism laboratory courses.

CHRONOLOGY OF AWARDED FUNDING

Seismometer to Investigate Interior Asteroid Structure

Role: Principal Investigator

Total Award: \$3.1M

Award Period: 1/1/2023 – 1/1/2026

Source: Maturation of Instruments for Solar System Exploration (NNH22ZDA001N-MATISSE)

OSIRIS-Apophis Explorer (APEX) Mission PI and Science Support, Cruise Period of Performance

Role: Principal Investigator

Total Award: \$18.4M

Award Period: 10/1/2023 – 3/31/2027

Source: Planetary Mission Senior Review 2022 (PMSR22)

Seismometer for Ocean Worlds (SeisWorlds)

Role: Co-I, Project Scientist

PI: Samuel (“Hop”) Bailey, University of Arizona

Total Award: \$2.06M

Award Period: 6/1/2019 – 6/1/2023

Source: NASA ROSES Instrument Concepts for European Exploration 2 (NNH18ZDA001N-ICEE2)

Synthesis of Global Color Mosaics of Asteroid (433) Eros

Role: Principal Investigator

Total Award: \$619k

Award Period: 03/01/2019 – 03/01/2022

Source: NASA ROSES Planetary Data Archiving, Restoration, & Tools (NNH18ZDA001N-PDART)

Seismometer for a Lunar Network (SLN)

Role: Co-I, Project Scientist

PI: Samuel (“Hop”) Bailey, University of Arizona

Total Award: \$2.88M

Award Period: 1/1/2019 – 12/31/2023

Source: NASA ROSES Development & Advancement of Lunar Instrumentation (NNH18ZDA001N-DALI)

Seismometer to Investigate Ice and Ocean Structure (SIOS)

Role: Co-I, Project Scientist

PI: Samuel (“Hop”) Bailey, University of Arizona

Total Award: \$2.38M

Award Period: 8/1/2017 – 8/31/2023

Source: NASA ROSES Planetary Science Through Analog Research (NNH16ZDA001N-PSTAR)

Cold-Lightweight Imagers For Europa (C-LIFE)

Role: Co-I

PI: Shane Byrne, University of Arizona

Total Award: \$800k

Award Period: 12/1/2016 – 11/30/2018

Source: NASA ROSES Concepts for Ocean worlds Life Detection Technology (NNH16ZDA001N-CLDTCH)

OSIRIS-REx Asteroid Sample Return Mission PI and Science Support–Phases-B/C/D/E

Role: Deputy Principal Investigator, Co-I, Image Processing Working Group Lead

PI: Dante Lauretta, University of Arizona

Total Award: \$104.1M (Image Processing Working Group portion approximately \$5.5M)

Award Period: 12/16/2011 – 10/31/2023

Source: NASA MSFC New Frontiers Program Office (Contract NNM10AA11C)

Comparative Photovoltaic Module Study at the Tucson Electric Power Test Yard

Role: Project Lead

PI: Alexander Cronin, University of Arizona

Total Award: \$149k

Award Period: 8/1/2013 – 12/1/2014

Source: SunPower Corporation (Contract)

SERVICE & EXTRAMURALS

NASA's Mapping and Planetary Spatial Infrastructure Team (MAPSIT) Analysis Group

Steering Committee Member 2015-Present

MAPSIT was established by NASA in 2014, following recommendations from the Planetary Science Subcommittee of the Science Committee of the NASA Advisory Council. The mission of MAPSIT is to ensure that planetary data are usable for any purpose, now and in the future.

Nature Astronomy, Nature Communications, Scientific Reports, Acta Astronautica

Manuscript Peer-Reviewer 2014-Present

NASA Research Opportunities in Space and Earth Sciences (ROSES) Program

Proposal Reviewer 2014-Present

University of Arizona, Lunar and Planetary Laboratory

Director & Department Head Search Committee Member 2019-2020

University of Arizona's Space Institute (UASI)

Executive Council Member 2019-2020

Advancing the University of Arizona's role as the world's leading university for space science, human and robotic exploration, astrobiology/exoplanets research, space situational awareness research, and planetary defense.

Climbing Association of Southern Arizona (CASA)

Director 2014-2016

CASA is a 501c(3) non-profit corporation advocating for local rock climbers in Southern Arizona.

University of Arizona, Lunar and Planetary Laboratory Career Track Committee

Technical Staff Representative 2014-2015

The Career Track Committee exists to address issues related to career tracks within the Lunar & Planetary Laboratory, including job classification, progression, and supervision. This pertains mainly to non-faculty personnel that carry out significant scientific research and/or duties that contribute significantly to the scientific output of the Laboratory and other highly qualified technical staff, such as engineers.

STUDENTS ADVISED

- Namrah Habib (undergrad intern 2014-18). Currently Ph.D. student, University of Oxford
- C. Luke Hawley (undergrad intern 2014-15). Currently I.T. analyst, University of Arizona
- Mathilde Westermann (M.S. student 2015-16). Currently GIS engineer, University of Arizona
- Keara Burke (undergrad intern 2016-19). Currently systems engineer, University of Arizona
- Natalie Wagner (undergrad intern summer 2019). Currently M.S. student, University of Arizona
- Nicholas Porter (undergrad intern 2019-20). Currently geospatial engineer, Maxar Technologies
- J. Isabella Brodbeck (undergrad intern 2017-2021). Currently lab technician, University of Arizona

AWARDS & HONORS

- 2022 ♦ Named one of the “[Brilliant 10](#)” by Popular Science
- 2022 ♦ Named University of Arizona “[Woman of Impact](#)”
- 2020 ♦ NASA Silver Achievement Medal for OSIRIS-REx Site Selection
- 2020 ♦ NASA Group Achievement Award for the OSIRIS-REx Approach & Preliminary Survey
- 2019 ♦ Meteoritical Society Travel Award to Hokkaido, Japan
- 2018 ♦ NASA Group Achievement Award for the OSIRIS-REx Earth Gravity Assist
- 2017 ♦ NASA Group Achievement Award for development of the OSIRIS-REx mission ground system
- 2017 ♦ [Asteroid 133744](#) renamed “Dellagiustina” by the International Astronomical Union
- 2016 ♦ OSIRIS-REx Principal Investigator’s Award of Distinction
- 2010 ♦ University of Alaska Center for Global Change Student Research Award
- 2008 ♦ International Astronomical Union Travel Award to Tenerife, Spain
- 2008 ♦ University of Arizona Student Showcase 1st Prize in Physical Sciences
- 2007 ♦ Josep Comas i Solà International Summer School in Astrobiology Scholarship
- 2007 ♦ University of Arizona Student Showcase 1st Prize in Engineering, 2nd Prize Physical Sciences
- 2006 ♦ NASA Institute of Advanced Concepts (NIAC) [Student Research Award](#)
- 2006 ♦ Arthur C. Clarke Foundation’s John McLucas Astronaut Safety Research Prize
- 2006 ♦ Meteoritical Society Travel Award to Zurich, Switzerland
- 2006 ♦ University of Arizona Honors College Research Award
- 2006 ♦ University of Arizona Student Showcase 2nd Prize in Physical Sciences
- 2005 ♦ NASA Space Grant Undergraduate Research Award

CONFERENCE & INVITED PRESENTATIONS

“OSIRIS-APEX: A Proposed OSIRIS-REx Extended Mission to Apophis.” *Invited Talk.*

Apophis T-7 Years: Knowledge Opportunities for the Science of Planetary Defense, May 11–12, 2022.

“Gathering Asteroid Dust.” *Invited Talk.*

SXSW Wonder House, March 11, 2022.

“Color Maps of Asteroid Bennu.” *Invited Talk.*

Hayabusa Symposium 2021, November 15-16, 2021.

“Gathering asteroid dust, guided by OSIRIS-REx images.” *Invited Talk.*

U.S. Frontiers in Engineering Symposium, National Academy of Engineering, September 22-24, 2021.

“Material from (4) Vesta on (101955) Bennu.” *Invited Talk.*

SS-728-Astron, American Astronomical Society, Div. of Planetary Science Virtual Meeting, October 26-30, 2020.

“Asteroid science in the age of OSIRIS-REx and Hayabusa2.” *Keynote Talk.*

Europlanet Science Congress Virtual Meeting, September 24, 2020.

“Relationships Between Color & Morphology on Bennu.” *Invited Talk.*

#481, Europlanet Science Congress Virtual Meeting, September 21 – October 9, 2020.

“Color and albedo heterogeneity of asteroid Bennu and implications for its origin.” Talk.

#P51A-02, American Geophysical Union Fall Meeting in Washington D.C., December 9-13, 2019.

“Optical seismometer for the Lunar Geophysical Network.” Lightning Talk.

#P33D-07, American Geophysical Union Fall Meeting in Washington D.C., December 9-13, 2019.

“Interpretation of Color and Albedo Variation on Bennu.” Talk.

#1074-1, EPSC-DPS Joint Meeting in Geneva, Switzerland, September 15-20, 2019.

“Spacecraft Seismology at an Ocean Worlds Analog Site.” Poster.
#1086-2, EPSC-DPS Joint Meeting in Geneva, Switzerland, September 15-20, 2019.

“Olivine Inclusions in the Fukang Pallasite and Implications for the Main-Group Parent Body.” Poster.
#6398, 82nd Annual Meteoritical Society Meeting in Hokkaido, Japan July 7-12, 2019.

“OSIRIS-REX: NASA’s First Asteroid Sample Return Mission.” *Invited Talk*.
Dean Lecture, Morrison Planetarium, California Academy of Sciences in San Francisco, CA. March 3, 2019.

“First Resolved Images of Asteroid (101955) Benu.” Talk.
#P21A-04, American Geophysical Union Fall Meeting Washington D.C., December 10-14, 2018.

“The Seismometer to Investigate Ice and Ocean Structure: Greenland analog mission.” *Invited Talk*.
Lunar and Planetary Laboratory Colloquium in Tucson, Arizona. September 11, 2018.

“OSIRIS-REX: Overcoming challenges associated with mapping small bodies.” *Invited Talk*.
Southwest Research Institute Colloquium in Boulder, Colorado. March 6, 2018.

“The planetary spatial data infrastructure for the OSIRIS-REx mission.” Poster.
#P33E-2920, American Geophysical Union Fall Meeting in New Orleans, Louisiana, December 11-15, 2017.

“SIIOS in Alaska – Testing an ‘in-vault’ option for a Europa Lander seismometer.” Poster.
#DI21A-0387, American Geophysical Union Fall Meeting in New Orleans, Louisiana, December 11-15, 2017.

“Image processing for the OSIRIS-REx mission to (101955) Benu.” Poster.
Asteroids, Comets, Meteors 2017 in Montevideo, Uruguay, April 10-14, 2017.

“OSIRIS-REx asteroid sample-return mission.” *Invited Talk*.
#NH12A-01, American Geophysical Union Fall Meeting in San Francisco, California, December 12-16, 2016.

“Cartographic planning for the OSIRIS-REx asteroid sample return mission.” Talk.
#1903, 47th Annual Lunar and Planetary Science Conference in The Woodlands, Texas, March 21-25, 2016.

“Comparison of digital terrain models derived using different techniques: results from PhotoScan.” Talk.
Planetary Data Workshop in Flagstaff, Arizona, June 8-11, 2015.

“A digital terrain model of the NEAR-Shoemaker landing Site on asteroid (433) Eros.” Poster.
#46, #213.01, American Astronomical Society, DPS Meeting in Tucson, Arizona, November 9-14, 2014.

"Characterization of a Sinton FMT-350 flash tester at the Tucson Electric Power solar test yard." Talk.
#1793370, Optical Society of America's Optics for Solar Energy Meeting, in Tucson, Arizona, November 3-6, 2013.

"Century-scale evolution of Jakobshavn Isbræ flow." Poster.
#C23D-0518, American Geophysical Union Fall Meeting in San Francisco, California, December 12-16, 2011.

"Implications of the presence of tridymite in the Fukang pallasite." Poster.
#1915, 42nd Annual Lunar and Planetary Science Conference in the Woodlands, Texas. March 7-11, 2011.

"Regional modeling of outlet glaciers using the Parallel Ice Sheet Model (PISM)." Poster.
#C21C-0547, American Geophysical Union Fall Meeting in San Francisco, California, December 13-17, 2010.

"Regional ice-sheet modeling with the Parallel Ice Sheet Model (PISM)." Talk.
Northwest Glaciologist's Meeting in Fairbanks, Alaska, October 8-10, 2010.

"A Re-evaluation of the role of magnetic fields during planet formation in the early Solar System." Talk. #23, IAU Symposium 259: Cosmic Magnetic Fields in Tenerife, Spain, November 3-7, 2008.

"Near-earth resources: asteroid radiation shielding during a human mission to Mars." Talk. American Association of Petroleum Geologists Annual Convention in San Antonio, Texas, April 20-23, 2008.

"The Martian bus schedule: An innovative technique for protecting humans on a journey to Mars." Talk. NASA Institute for Advanced Concepts Annual Meeting in Atlanta, Georgia, March 6-7, 2007.

"Induction heating in asteroids part1: observations & theory." Talk. #5380, 69th Annual Meteoritical Society Meeting in Zurich, Switzerland August 6-11, 2006.

"Meteoritic evidence for induction heating in asteroids." Talk. Arizona/NASA Space Grant Undergraduate Research Internship Symposium, April 29, 2006.

PEER REVIEWED ARTICLES & PROCEEDINGS

2022

(#63) DellaGiustina, D.N., Beck, S.L., Rivermann, K., Koch, C.D., Habib, N. **Passive Seismicity Reveal Subglacial Structure and Firn Densitification of the Greenland Ice Sheet.** Submitted to *Journal of Geophysical Research: Earth Surface*. In Revision.

(#63) Lauretta, D.S., Adam, C.D., Allen, A.J., Ballouz, R.-L., Barnouin, O.S., Becker, K.J., Becker, T., Bennett, C.A., Bierhaus, E.B., Bos, B.J., Burns, R.D., Campins, H., Cho, Y., Christensen, P.R., Church, E.C.A., Clark, B.E., Connolly, H.C., Jr., Daly, M.G., DellaGiustina, D.N., d'Aubigny, C.Y.D., Emery, J.P., Enos, H.L., Kasper, S.F., Garvin, J.B., Getzandanner, K., Golish, D.R., Hamilton, V.E., Hergenrother, C.W., Kaplan, H.H., Keller, L.P., Lessac-Chenen, E.J., Liounis, A.J., Ma, H., McCarthy, L.K., Miller, B.D., Moreau, M.C., Morota, T., Nelson, D.S., Nolau, J.O., Olds, R., Pajola, M., Pelgrift, J.Y., Polit, A.T., Ravine, M.A., Reuter, D.C., Rizk, B., Rozitis, B., Ryan, A.J., Sahr, E.M., Sakatani, N., Seabrook, J.A., Selznick, S.H., Skeen, M.A., Simon, A.A., Sugita, S., Walsh, K.J., Westermann, M.M., Wolner, C.W.V., Yumoto, K. **Spacecraft sample collection and subsurface excavation of asteroid (101955) Bennu** (2022) *Science*, 377 (6603), pp. 285-291. DOI: 10.1126/science.abm1018

(#62) Walsh, K.J., Ballouz, R.-L., Jawin, E.R., Avdellidou, C., Barnouin, O.S., Bennett, C.A., Bierhaus, E.B., Bos, B.J., Cambioni, S., Connolly, H.C., Delbo, M., DellaGiustina, D.N., DeMartini, J., Emery, J.P., Golish, D.R., Haas, P.C., Hergenrother, C.W., Ma, H., Michel, P., Nolan, M.C., Olds, R., Rozitis, B., Richardson, D.C., Rizk, B., Ryan, A.J., Sánchez, P., Scheeres, D.J., Schwartz, S.R., Selznick, S.H., Zhang, Y., Lauretta, D.S. **Near-zero cohesion and loose packing of Bennu's near subsurface revealed by spacecraft contact** (2022) *Science Advances*, 8 (27), art. no. abm6229. DOI: 10.1126/sciadv.abm6229

(#61) Delbo, M., Walsh, K.J., Matonti, C., Wilkerson, J., Pajola, M., Al Asad, M.M., Avdellidou, C., Ballouz, R.-L., Bennett, C.A., Connolly, H.C., Jr., DellaGiustina, D.N., Golish, D.R., Molaro, J.L., Rizk, B., Schwartz, S.R., Lauretta, D.S. **Alignment of fractures on Bennu's boulders indicative of rapid asteroid surface evolution** (2022) *Nature Geoscience*, 15 (6), pp. 453-457. DOI: 10.1038/s41561-022-00940-3

(#60) Perry, M.E., Barnouin, O.S., Daly, R.T., Bierhaus, E.B., Ballouz, R.-L., Walsh, K.J., Daly, M.G., DellaGiustina, D.N., Nolan, M.C., Emery, J.P., Al Asad, M.M., Johnson, C.L., Ernst, C.M., Jawin, E.R., Michel, P., Golish, D.R., Bottke, W.F., Seabrook, J.A., Lauretta, D.S. **Low surface strength of the asteroid Bennu inferred from impact ejecta deposit.** (2022) *Nature Geoscience*, 15 (6), pp. 447-452. DOI: 10.1038/s41561-022-00937-y

(#59) Bierhaus, E.B., Trang, D., Daly, R.T., Bennett, C.A., Barnouin, O.S., Walsh, K.J., Ballouz, R.-L., Bottke, W.F., Burke, K.N., Perry, M.E., Jawin, E.R., McCoy, T.J., Connolly, H.C., Jr., Daly, M.G., Dworkin, J.P., DellaGiustina, D.N., Gay, P.L., Brodbeck, J.I., Nollau, J., Padilla, J., Stewart, S., Schwartz, S., Michel, P., Pajola, M., Lauretta, D.S. **Crater population on asteroid (101955) Benu indicates impact armouring and a young surface.** (2022) *Nature Geoscience*, 15 (6), pp. 440-446. DOI: 10.1038/s41561-022-00914-5

(#58) Jawin, E.R., McCoy, T.J., Walsh, K.J., Connolly, H.C., Jr, Ballouz, R.-L., Ryan, A.J., Kaplan, H.H., Pajola, M., Hamilton, V.E., Barnouin, O.S., Emery, J.P., Rozitis, B., DellaGiustina, D.N., Daly, M.G., Bennett, C.A., Golish, D.R., Perry, M.E., Daly, R.T., Bierhaus, E.B., Nolan, M.C., Enos, H.L., Lauretta, D.S. **Global geologic map of asteroid (101955) Benu indicates heterogeneous resurfacing in the past 500,000 years.** (2022) *Icarus*, 381, art. no. 114992. DOI: 10.1016/j.icarus.2022.114992

(#57) Walsh, K.J., Bierhaus, E.B., Lauretta, D.S., Nolan, M.C., Ballouz, R.-L., Bennett, C.A., Jawin, E.R., Barnouin, O.S., Berry, K., Burke, K.N., Brodbeck, B., Burns, R., Clark, B.C., Clark, B.E., Cambioni, S., Connolly, H.C., Jr., Daly, M.G., Delbo, M., DellaGiustina, D.N., Dworkin, J.P., Enos, H.L., Emery, J.P., Gay, P., Golish, D.R., Hamilton, V.E., Hoover, R., Lujan, M., McCoy, T., Mink, R.G., Moreau, M.C., Nollau, J., Padilla, J., Pajola, M., Polit, A.T., Robbins, S.J., Ryan, A.J., Selznick, S.H., Stewart, S., Wolner, C.W.V. **Assessing the Sampleability of Benu's Surface for the OSIRIS-REx Asteroid Sample Return Mission.** (2022) *Space Science Reviews*, 218 (4), art. no. 20. DOI: 10.1007/s11214-022-00887-2

(#56) Barnouin, O.S., Daly, M.G., Seabrook, J.A., Zhang, Y., Thuillet, F., Michel, P., Roberts, J.H., Daly, R.T., Perry, M.E., Susorney, H.C.M., Jawin, E.R., Ballouz, R.-L., Walsh, K.J., Sevalia, M.M., Al Asad, M.M., Johnson, C.L., Bierhaus, E.B., Gaskell, R.W., Palmer, E.E., Weirich, J., Rizk, B., Drouet D'Aubigny, C.Y., Nolan, M.C., DellaGiustina, D.N., Scheeres, D.J., McMahon, J.W., Connolly, H.C., Jr., Richardson, D.C., Wolner, C.W.V., Lauretta, D.S. **The Formation of Terraces on Asteroid (101955) Benu.** (2022) *Journal of Geophysical Research: Planets*, 127 (4), art. no. e2021JE006927. DOI: 10.1029/2021JE006927

(#55) Marusiak, A.G., Schmerr, N.C., Pettit, E.C., Avenson, B., Bailey, S.H., Bray, V.J., Dahl, P., DellaGiustina, D.N., Wagner, N., Weber, R.C. **The Detection of Seismicity on Icy Ocean Worlds by Single-Station and Small-Aperture Seismometer Arrays** (2022) *Earth and Space Science*, 9 (3), art. no. e2021EA002065. DOI: 10.1029/2021EA002065

(#54) Golish, D.R., Simon, A.A., Reuter, D.C., Ferrone, S., Clark, B.E., Li, J.-Y., DellaGiustina, D.N., Drouet d'Aubigny, C., Rizk, B., Lauretta, D.S. **Cross-Instrument Comparison of MapCam and OVIRS on OSIRIS-REx.** (2022) *Space Science Reviews*, 218 (2), art. no. 5. DOI: 10.1007/s11214-022-00873-8

(#53) Sutter, B., Hatten, N., Hughes, K., Getzandanner, K.M., Englander, J., Mudek, A., Wibben, D., Williams, K., Penas, M.B., Moreau, M., Lauretta, D.S., DellaGiustina, D.N., Nolan, M., Polit, A.T. **OSIRIS-REx Extended Mission Trajectory Design & Target Search.** (2022) AIAA Science and Technology Forum and Exposition, *AIAA SciTech Forum 2022*, art. no. AIAA 2022-2469. DOI: 10.2514/6.2022-2469

2021

(#52) Cambioni, S., Delbo, M., Poggiali, G., Avdellidou, C., Ryan, A.J., Deshapriya, J.D.P., Asphaug, E., Ballouz, R.-L., Barucci, M.A., Bennett, C.A., Bottke, W.F., Brucato, J.R., Burke, K.N., Cloutis, E., DellaGiustina, D.N., Emery, J.P., Rozitis, B., Walsh, K.J., Lauretta, D.S. **Fine-regolith production on asteroids controlled by rock porosity.** (2021) *Nature*, 598(7879), pp.49-52. DOI: 10.1038/s41586-021-03816-5

(#51) Tatsumi, E., Popescu, M., Campins, H., de León, J., García, J.L.R., Licandro, J., Simon, A.A., Kaplan, H.H., DellaGiustina, D.N., Golish, D.R. and Lauretta, D.S. **Widely distributed exogenic materials of varying compositions and morphologies on asteroid (101955) Benu.** (2021) *Monthly Notices of the Royal Astronomical Society*, 508(2), pp. 2053-2070. DOI: 10.1093/mnras/stab2548

- (#50) Maguire, R., Schmerr, N.C., Pettit, E.C., Riverman, K., Gardner, C., DellaGiustina, D.N., Avenson, B., Wagner, N., Marusiak, A. G., Habib, N., Broadbeck, J. I., Bray, V.J., Bailey, S.H. **Geophysical constraints on the properties of a subglacial lake in northwest Greenland.** (2021) *The Cryosphere*, DOI: 10.5194/tc-2020-321
- (#49) Golish, D.R., Li, J.Y., Clark, B.E., DellaGiustina, D.N., Zou, X.D., Rizos, J.L., Hasselmann, P.H., Bennett, C.A., Fornasier, S., d'Aubigny, C.D. Rizk, B., Daly, M.G., Barnouin, O.S., Seabrook, J.A., Philpott, L., Al Asad, M.M., Johnson, C.L., Rozitis, B., Ryan, A.J., Emery, J.P., Lauretta, D.S. **Regional Photometric Modeling of Asteroid (101955) Benu.** (2021) *The Planetary Science Journal*, 2(4), p.124. DOI: 10.3847/PSJ/abfd3c
- (#48) Sen, A., Clark, B.E., Cloutis, E.A., DellaGiustina, D.N., Hendrix, A.R., Simon, A.A., Applin, D.M., Parkinson, A., Turenne, N., Connell, S., Ferrone, S.M., Li, J.-Y., Lim, L.F., Lauretta, D.S. **Spectral effects of varying texture and composition in two-component “mudpie” simulations: Insights for Asteroid (101955) Benu.** (2021) *Meteoritics and Planetary Science*, DOI: 10.1111/maps.13699
- (#47) Li, J.-Y., Zou, X.-D., Golish, D.R., Clark, B.E., Ferrone, S., Fornasier, S., Hasselmann, P.H., Ryan, A.J., Rozitis, B., Emery, J.P., Siegler, M.A., Simon, A.A., DellaGiustina, D.N., Reuter, D.C., Hamilton, V.E., Lauretta, D.S. **Spectrophotometric Modeling and Mapping of (101955) Benu.** (2021) *The Planetary Science Journal*, 2 (3), p.117. DOI: 10.3847/PSJ/abfd2d
- (#46) Le Corre, L., Reddy, V., Bottke, W.F., DellaGiustina, D.N., Burke, K.N., Nollau, J., Van Auken, R.B., Golish, D.R., Sanchez, J.A., Li, J.Y. and d'Aubigny, C.Y.D., Rizk, B., Lauretta, D.S. **Characterization of Exogenic Boulders on the Near-Earth Asteroid (101955) Benu from OSIRIS-REx Color Images.** (2021) *The Planetary Science Journal*, 2 (3), pp.114. DOI: 10.3847/PSJ/abfbe2
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