

Daniel C. Berman

Senior Scientist

Planetary Science Institute
1700 E. Ft. Lowell Rd., Suite 106
Tucson, AZ 85719
Phone: (520) 382-0599
Fax: (520) 622-8060
E-mail: bermandc@psi.edu

EDUCATION

M.S., Geosciences, University of Arizona, 2003, Thesis “Hillside gullies and possible glacial landforms associated with the degradation of highland craters on Mars,” (Faculty advisor: Victor R. Baker).

B.S., Astronomy and Astrophysics, University of Michigan (Honors College), 1998.

PROFESSIONAL EXPERIENCE

Senior Scientist (October 2018 to present)

Research Scientist (April 2011 to September 2018) Planetary Science Institute, Tucson, AZ

Associate Research Scientist/GIS Specialist (Nov. 2008 to April 2011) Planetary Science Institute, Tucson, AZ

Research Associate/GIS Specialist (Dec. 2003 to Nov. 2008) PSI Planetary Geosciences Group

- Analyzed satellite data for fluvial, aeolian, volcanic, glacial features on Mars

- Support work for Group scientists, including image processing and analysis, GIS database creation and management, and crater count studies of volcanic, fluvial, and glacial landforms on Mars

Graduate Research Assistant (Aug. 2001 to Dec. 2003) PSI Planetary Geosciences Group

- Support work for Group scientists
- Independent research projects

Research Assistant for William K. Hartmann (Nov. 1998 to Aug. 2001) PSI

- Analyzed data from Mars Global Surveyor MOC: image calibration, surface dating from crater counts, and other photo-geological interpretations
- Assessed potential landing sites for future Mars missions
- Independent research projects

Graduate Research Associate (Aug. 2002 to May 2003) University Of Arizona, Department of Geosciences

- Used ERDAS Imagine software to georeference satellite imagery of terrestrial canyon systems

RESEARCH INTERESTS

Planetary geology, fluvial, glacial, and aeolian geomorphology, photogeologic interpretation and image processing, chronologic interpretations via crater counting, and crater evolution based on morphologies and degradational states.

CURRENT RESEARCH GRANTS

Geology of the Alba Mons Summit Region, Mars.

PI Dr. David A. Crown (PSI; Dan Berman is Co-I), NASA Mars Data Analysis Program
Geologic Evolution of the Western Flank of Alba Mons, Mars.

PI Dr. David A. Crown (PSI; Dan Berman is Co-I), NASA Mars Data Analysis Program

A Revised Global Geologic Map of Vesta from Dawn Image, Spectral and Elemental Data.
PI Dr. R. Aileen Yingst (PSI; Dan Berman is Co-I), NASA Discovery Data Analysis Program
Geologic Mapping of Dark Mantle Deposits in Sinus Aestum and Mare Vaporum
PI Dr. Catherine Weitz (PSI; Dan Berman is Co-I), NASA Lunar Data Analysis Program
Geologic Map of Southern Circum-Chryse and Margaritifer Terra, Mars
PI Dr. Alexis Rodriguez (PSI; Dan Berman is Co-I), NASA Mars Data Analysis Program

PAST RESEARCH GRANTS AS PRINCIPAL INVESTIGATOR

Investigations of Transverse Aeolian Ridges on Mars.
PI Daniel Berman, NASA Mars Data Analysis Program, 2011-2015
Geologic Mapping of the Source Region of Shalbatana Vallis, Mars.
PI Daniel Berman, Nasa Planetary Geology and Geophysics Program, 2014-2019

MISSION PARTICIPATION

MRO HiRISE Science Team –Science Theme Lead (2010-present)
DAWN Mission – Co-I for Guest Investigator Scott Mest (2015-2018)
Co-I for Participating Scientist Aileen Yingst (2011-2014)
MSL Mission – Co-I for Participating Scientist Becky Williams (2012-2016)

PROFESSIONAL AWARDS

NASA Group Achievement Award – HiRISE Science Team, 2011
NASA Group Achievement Award – Dawn Science Team,
NASA Group Achievement Award – MSL Extended Mission-1 Science and Operations Team, 2017

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

American Geophysical Union (AGU)
Geological Society of America (GSA)

PROFESSIONAL ACTIVITIES

NASA PG&G panel reviewer 2012
Peer-reviewer, *Icarus*, *Planetary & Space Science*, *other journals* 2002-present
External proposal reviewer, NASA 2002-present
Graduate Teaching Assistant, Department of Aug. 2001 to May 2002
Geosciences, *University of Arizona*
Webmaster, *Planetary Science Institute* May 1999 to May 2002
Astronomy tutor, *University of Michigan* 1997 to 1998

COMPUTER SKILLS

Operating systems: LINUX, Macintosh OSX, Windows 10
Languages: FORTRAN, HTML
Specialized software: ArcGIS 10, ENVI, Photoshop, ISIS, ERDAS Imagine, IRAF

ACADEMIC AWARDS

Bert S. Butler Scholarship, Dept. of Geosciences, Univ. of Arizona 2001
Sulzer Earth Science Scholarship, Dept. of Geosciences, Univ. of Arizona 2001
Robert C. Byrd Honors Scholarship, State of Michigan 1994 to 1998
-Highest award given by State of Michigan to two students each year

UNDERGRADUATE ACTIVITIES

Student Astronomical Society, member 1994 to 1998

- Vice president, May 1996 to May 1997
- Ran public viewing nights at Angell Hall Observatory
- Participated in outreaches with Elementary school students
- Offered free tutoring for introductory astronomy students

Publications and Presentations

Peer-Reviewed Publications

- Berman, D.C.**, J.A.P. Rodriguez, C.M. Weitz, and D.A. Crown, Geologic map of the source region of Shalbatana Vallis, Mars, *U.S. Geological Survey*, in review, 2019.
- Chuang, F.C., D.A. Crown, and **D.C. Berman**, Geology of the northeastern flank of Apollinaris Mons, Mars: Constraints on erosional history from morphology, topography, and crater populations, *Icarus*, doi.org/10.1016/j.icarus.2019.06.008, 2019.
- Rodriguez, J.A.P., and 11 others (including **D.C. Berman**), The 1997 Mars Pathfinder spacecraft landing site: Spillover deposits from an early Mars inland sea *Scientific reports*, 9(1), 4045, 2019.
- Sizemore, H.G., and 29 others (including **D.C. Berman**), A global inventory of ice-related morphological features on dwarf planet Ceres: Implications for the evolution and current state of the cryosphere, *J. Geophys. Res.*, doi:10.1029/2018JE005699, 2019.
- Berman, D.C.**, M.R. Balme, J.R. Michalski, S.C. Clark, and E.C.S. Joseph, High resolution investigations of Transverse Aeolian Ridges on Mars, *Icarus*, 312C, pp. 247-266, 2018.
- Crown, D.A., H.G. Sizemore, R.A. Yingst, S.C. Mest, T. Platz, **D.C. Berman**, N. Schmedemann, D.L. Buczkowski, D.A. Williams, T. Roatsch, F. Preusker, C.A. Raymond, C.T. Russell, and the Dawn Science Team, Geologic mapping of the Urvara and Yalode Quadrangles of Ceres, *Icarus*, doi:10.1016/j.icarus.2017.08.004, 2017.
- Williams, R.M.E., F.C. Chuang, **D.C. Berman**, Multiple Surface Wetting Events in the Greater Meridiani Planum Region, Mars: Evidence from Valley Networks within Ancient Cratered Highlands. *Geophys. Res. Lett.*, 44, doi:10.1002/2016GL072259, 2017.
- Rodriguez, J.A.P., J.S. Kargel, V.R. Baker, V.C. Gulick, **D.C. Berman**, A.G. Fairen, R. Linares, M. Zarroca, J. Yan, H. Miyamoto, and N. Glines, Martian outflow channels: How did their source aquifers form, and why did they drain so rapidly? *Sci. Rep.*, 5, 13404, 2015.
- Berman, D.C.**, D.A. Crown, and E.C.S. Joseph, Formation and mantling ages of lobate debris aprons on Mars: Insights from categorized crater counts, *Planet. Space Sci.*, 111, 83-99, 2015.
- Hartmann, W.K., V. Ansan, **D.C. Berman**, N. Mangold, F. Forget, Comprehensive analysis of glaciated martian crater Greg, *Icarus* 228, 96-120, 2014.
- Weitz, C. M., J. L. Bishop, L. L. Baker, and **D. C. Berman**, Fresh exposures of hydrous Fe-bearing amorphous silicates on Mars, *Geophys. Res. Lett.*, 41, 8744–8751, doi:10.1002/2014GL062065, 2014.
- Yingst, R.A., S.C. Mest, **D.C. Berman**, W.B. Garry, D.A. Williams, D. Buczkowski, 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, P.M. Schenk, Geologic mapping of Vesta, *Planet. Space Sci.* 103, 2-23, 2014.
- Berman, D.C.**, M.R. Balme, S. Rafkin, and J.R. Zimbelman, Transverse Aeolian Ridges (TARs) on Mars II: Distributions, orientations, and ages, *Icarus* 213, 116-130, doi:10.1016/j.icarus.2011.02.014, 2011.
- Rodriguez, J.A.P., M. Bourke, K.L. Tanaka, H. Miyamoto, J. Kargel, V. Baker, A.G. Fairen, R.J. Davies, L. Bridget, R.L. Santiago, M.Z. Hernandez, **D.C. Berman**, Infiltration of Martian outflow channel floodwaters into lowland cavernous systems, *Geophys. Res. Lett.*, 39, L22201, doi:[10.1029/2012GL053225](https://doi.org/10.1029/2012GL053225), 2012.
- Rodriguez, J.A., Kargel, J.S., Tanaka, K.L., Crown, D.A., **Berman, D.C.**, Fairén, A.G., Baker, V.R., Furfaro, R., Candelaria, P., Sasaki, S., Secondary chaotic terrain formation in the higher outflow

- channels of southern circum-chryse, mars, *Icarus* 213, 150-194, doi: 10.1016/j.icarus.2010.09.027, 2011.
- Jones, A.P., A.S. McEwen, L.L. Tornabene, V.R. Baker, H.J. Melosh, **D.C. Berman**, A geomorphic analysis of Hale crater, Mars: The effects of impact into ice-rich crust, *Icarus* 211, 259-272, 2011.
- Rodriguez, J.A.P., K.L. Tanaka, **D.C. Berman**, and J.S. Kargel, Late Hesperian formation and degradation in a low sedimentation zone of the northern plains, Mars, *Icarus* 210, 116-134, 2010.
- Rodriguez, J.A.P., Tanaka, K.L., Yamamoto, A., **Berman, D. C.**, Zimbelman, J. R., Kargel, J.S., Sasaki, S., Jinguo, Y., Miyamoto, H., The sedimentology and dynamics of crater-affiliated wind streaks in western Arabia Terra, Mars and Patagonia, Argentina, *Geomorphology* 121, p. 30-54, doi:10.1016/j.geomorph.2009.07.020, 2010.
- Berman, D.C.**, D.A. Crown, and L.F. Bleamaster III, Degradation of mid-latitude craters on Mars, *Icarus* 200, 77-95, 2009.
- Balme, M.R., **D.C. Berman**, M.C. Bourke, and J.R. Zimbelman, Transverse Aeolian Ridges (TARs) on Mars, *Geomorphology*, 101, 703-720, 2008.
- Mahaney, W.C., H. Miyamoto, J.M. Dohm, V.R. Baker, N.A. Cabrol, E.A. Grin, and **D.C. Berman**, Rock glaciers on Mars: Earth-based clues to Mars' recent paleoclimatic history, *Planet. Space Sci.* 55, pp. 181-192, 2007.
- Popova, O.P., W.K. Hartmann, I.V. Nemtchinov, D.C. Richardson, and **D.C. Berman**, Crater clusters on Mars: Shedding light on martian ejecta launch conditions, *Icarus* 190, pages 50-73, 2007.
- Berman, D. C.**, W. K. Hartmann, D. A. Crown, and V. R. Baker, The role of arcuate ridges and gullies in the degradation of craters in the Newton Basin region of Mars, *Icarus*, 178, pages 465-486, 2005.
- Berman, D.C.** and W.K. Hartmann, Recent fluvial, volcanic, and tectonic activity on the Cerberus Plains of Mars, *Icarus* 159, 1-17, 2002.
- Hartmann, W.K. , J. Anguita, M. de la Casa, **D.C. Berman**, and E. Ryan, Martian cratering 7: The role of impact gardening, *Icarus*, 149, 37-53, 2001.
- Hartmann, W.K., and **D.C. Berman**, Elysium Planitia lava flows: Crater count chronology and geological implications, *J. Geophys. Res.* 105, 15011-15026, 2000.

Thesis

- Berman, D.C.**, Hillside gullies and possible glacial landforms associated with the degradation of highland craters on Mars, M.S. thesis, University of Arizona, 191 pp., Dec. 2003.

Special Projects

- Kelly, L., R. Zimmerman, M. Delitsky, J. Grier, and **D. Berman**, Student Scientist Training Guide: Red Rover Goes to Mars Training Mission. Mars Sample Return Landing Site Selection. Special project; publication prepared by The Planetary Society in cooperation with NASA, Jet Propulsion Laboratory, Malin Space Science Systems, ASU Mars K-12 Education Program, and Visionary Products Inc., 2000.

Conference Abstracts and Presentations

- Berman, D.C.** and Crown, D.A., 2019, Chronology of volcanism in southern Tharsis, Mars: Constraints from lava flows in Daedalia Planum, *50th Lunar Planet. Sci. Conf*, Abstract 1418.
- Berman, D.C.**, Crown, D.A., and Conway, S.J., 2019, Gullies emanating from the margins of lobate flow features in Nereidum Montes, Mars, *50th Lunar Planet. Sci. Conf*, Abstract 2607.
- Crown, D.A., **Berman, D.C.**, Scheidt, S.P., and Hauber, E., 2019, 1: 1M-scale geologic mapping investigations of Alba Mons, Mars, *50th Lunar Planet. Sci. Conf*, Abstract 7023.
- Crown, D.A., Scheidt, S.P., **Berman, D.C.**, 2019, Distribution and morphology of lava tube systems on the western flank of Alba Mons, Mars, *50th Lunar Planet. Sci. Conf*, Abstract 1417.
- Rodriguez, J.A.P., Kargel, J.S., Baker, V.R., Robertson, D.K., Komatsu, G, **Berman, D.C.**, Leonard, G.J., 2019, A NASA spacecraft may have landed on an early Mars mega-tsunami deposit in 1976, *50th Lunar Planet. Sci. Conf*, Abstract 2757.

- Scheidt, S.P., Crown, D.A., and **Berman, D.C.**, 2019, Distribution and morphology of valley networks on the flanks of Alba Mons, Mars, *50th Lunar Planet. Sci. Conf*, Abstract 2014.
- Yingst, R.A., **Berman, D.C.**, Mest, S.C., Williams, D.A. and Gregg, T.K.P., 2019, Geologic mapping methods for small, rocky bodies: The Vesta example, *50th Lunar Planet. Sci. Conf*, Abstract 7030.
- Berman, D.C.**, Weitz, C.M., Rodriguez, J.A.P., and Crown, D.A., 2018, Geologic map of the source region of Shalbatana Vallis, Mars, *49th Lunar Planet. Sci. Conf*, Abstract 1549.
- Berman, D.C.**, Smith, I.B., Chuang, F.C., and Crown, D.A., 2018, Radar detections of ice within lobate flows in Nereidum Montes, Mars, *49th Lunar Planet. Sci. Conf*, Abstract 1544.
- Chuang, F.C., Crown, D.A., and **Berman, D.C.**, 2018, Geology of the northeastern flank of Apollinaris Mons, Mars: Constraints on the erosional history from morphology, topography and crater populations, *49th Lunar Planet. Sci. Conf*, Abstract 1776.
- Crown, D.A., **Berman, D.C.**, Scheidt, S.P., and Hauber, E., 2018, Geologic mapping of the western flank of Alba Mons, Mars, *49th Lunar Planet. Sci. Conf*, Abstract 1638.
- Mest, S.C., Crown, D.A., Yingst, R.A., **Berman, D.C.**, Williams, D.A., Buczkowski, D.L., Scully, J.E.C., Platz, T., Hiesinger, H., Pasckert, J.H., Neesemann, A., Marchi, S., Jaumann, R., Roatsch, T., Preusker, F., Nathues, A., Raymond, C.A., Russell, C.T., and the Dawn Science Team, 2018, The HAMO-based global geologic map and chronostratigraphy of Ceres, *49th Lunar Planet. Sci. Conf*, Abstract 2730.
- Pathare, A.V., Joseph, E.C.S., Crown, D.A., **Berman, D.C.**, and Koutnik, M.R., 2018, Glacial flow within martian lobate debris aprons: Evidence from surface texture mapping in Deuteronilus Mensae, *49th Lunar Planet. Sci. Conf*, Abstract 1879.
- Rodriguez, J.A.P., Domingue, D.L., Kargel, J.S., Baker, V.R., Teodoro, L.F., **Berman, D.C.**, Miyamoto, H., and Banks, M., 2018, *49th Lunar Planet. Sci. Conf*, Abstract 1309.
- Scheidt, S.P., Crown, D.A., and **Berman, D.C.**, 2018, Topographic analyses of valley networks and volcanic ridges on the flanks of Alba Mons, Mars, *49th Lunar Planet. Sci. Conf*, Abstract 1570.
- Sizemore, H.G., Chilton, H.T., Hughson, K.H.G., Sori, M.M., Buczkowski, D.L., Bland, M.T., Quick, L.C., Scully, J.E.C., Schmidt, B.E., Durarte, K., Platz, T., **Berman, D.C.**, Crown, D.A., Mest, S.C., Otto, K.A., Marchi, S., Nass, A., hangjam, G., Nathues, A., Ahrens, C., Schorghofer, N., Landis, M.E., Prettyman, T.H., De Sanctis, M.C., Raymond, C.A., and Russell, C.T., 2018, A global inventory of ice-related morphological features on dwarf planet Ceres, *49th Lunar Planet. Sci. Conf*, Abstract 1624.
- Berman, D.C.**, Crown, D.A., Chuang, F.C., and Rice, J.W., 2017, HiRISE digital terrain models of volcanic features on Mars, *Lunar and Planetary Science Conference XLVIII*, Abstract 2203, Lunar and Planetary Institute, Houston.
- Berman, D.C.**, Weitz, C.M., Rodriguez, J.A.P., and Crown, D.A., 2017, Geologic mapping and spectral analyses of the source region of Shalbatana Vallis, Mars, *Lunar and Planetary Science Conference XLVIII*, Abstract 1513, Lunar and Planetary Institute, Houston.
- Berman, D.C.**, Weitz, C.M., Rodriguez, J.A.P., and Crown, D.A., 2017, Geologic map of the source region of Shalbatana Vallis, Mars, *3rd Planetary Data Workshop*, Abstract 7082.
- Chuang, F.C., Crown, D.A., and **Berman, D.C.**, 2017, Erosional history of the northeastern flank of Apollinaris Mons, Mars: Insights from high-resolution morphology, topography, and crater populations, *Lunar and Planetary Science Conference XLVIII*, Abstract 2126, Lunar and Planetary Institute, Houston.
- Crown, D.A., **Berman, D.C.**, Platz, T., and Scheidt, S.P., 2017, Geologic mapping of Alba Mons, Mars: Constraints on summit evolution and eruptive history, *Lunar and Planetary Science Conference XLVIII*, Abstract 2301, Lunar and Planetary Institute, Houston.
- Crown, D.A., **Berman, D.C.**, Platz, T., and Scheidt, S.P., 2017, Lava flow fields on the western flanks of Alba Mons, Mars, IAVCEI 2017 Scientific Assembly, Abstract 554.
- Crown, D.A., **Berman, D.C.**, Platz, T., Scheidt, S.P., Hauber, E., and Weitz, C.M., 2017, Geologic mapping of the summit and western flank of Alba Mons, Mars, *3rd Planetary Data Workshop*, Abstract 7034.

- Crown, D.A., Sizemore, H.G., Yingst, R.A., Mest, S.C., Platz, T., **Berman, D.C.**, Schmedemann, N., Buczkowski, D.L., Williams, D.A., Roatsch, T., Preusker, F., Raymond, C.A., and Russell, C.T., 2017, Geologic mapping of the Urvara and Yalode Quadrangles of Ceres, *Lunar and Planetary Science Conference XLVIII*, Abstract 1496, Lunar and Planetary Institute, Houston.
- Karimova, R. Hauber, E., Crown, D.A., Platz, T., **Berman, D.C.**, Scheidt, S.P., and Weitz, C.M., 2017, Fault populations on Alba Mons, Mars, and their age relationships to volcanic, fluvial, and glacial processes, *European Planetary Science Congress 2017, 11*, EPSC2017-207, Riga, Latvia.
- Mest, S.C., Crown, D.A., Yingst, R.A., **Berman, D.C.**, Williams, D.A., Buczkowski, D.L., Scully, J.E.C., Platz, T., Jaumann, R., Roatsch, T., Preusker, F., Nathues, A., Hiesinger, H., Pasckert, J.H., Raymond, C.A., Russell, C.T., and the Dawn Science Team, 2017, The global geologic map of Ceres based on Dawn HAMO observations, *Lunar and Planetary Science Conference XLVIII*, Abstract 2512, Lunar and Planetary Institute, Houston.
- Mest, S.C., Crown, D.A., Yingst, R.A., **Berman, D.C.**, Williams, D.A., Buczkowski, D.L., Scully, J.E.C., Platz, T., Jaumann, R., Roatsch, T., Preusker, F., Nathues, A., Hiesinger, H., Pasckert, J.H., Raymond, C.A., Russell, C.T., and the Dawn Science Team, 2017, The HAMO-based global geologic map of Ceres, Abstract EGU2017-11711, EGU General Assembly, Vienna, Austria, 23-28 April.
- Mest, S.C., Crown, D.A., Yingst, R.A., **Berman, D.C.**, Williams, D.A., Buczkowski, D.L., Scully, J.E.C., Platz, T., Jaumann, R., Roatsch, T., Preusker, F., Nathues, A., Hiesinger, H., Pasckert, J.H., Raymond, C.A., Russell, C.T., and the Dawn Science Team, 2017, The HAMO-based global geologic map of Ceres, *3rd Planetary Data Workshop*, Abstract 7105.
- Mest, S.C., Crown, D.A., Yingst, R.A., **Berman, D.C.**, Williams, D.A., Buczkowski, D.L., Scully, J.E.C., Platz, T., Hiesinger, H., Pasckert, J.H., Neesemann, A., Marchi, S., Jaumann, R., Roatsch, T., Preusker, F., Nathues, A., Raymond, C.A., and Russell, C.T., 2017, The HAMO-based global geologic map of Ceres from NASA's Dawn Mission, *Geol. Soc. Amer. Abstracts with Program*, Abstract 304100.
- Pathare, A.V., Joseph, E.C.S., Crown, D.A., Chuang, F.C., **Berman, D.C.**, and Koutnik, M.R., 2017, Glacial flow within martian lobate debris aprons: Evidence from surface texture mapping in eastern Hellas, *Lunar and Planetary Science Conference XLVIII*, Abstract 2859, Lunar and Planetary Institute, Houston.
- Weitz, C.M., E.Z. Noe Dobrea, and **D.C. Berman**, Geologic mapping and spectral analysis of Gorgonum Basin, Mars, *Lunar and Planetary Science Conference XLVIII*, Abstract 2010, Lunar and Planetary Institute, Houston.
- Yingst, R.A., F.C. Chuang, **D.C. Berman**, and S.C. Mest, Geologic mapping of the Planck Quadrangle of the Moon (LQ-29), *Lunar and Planetary Science Conference XLVIII*, Abstract 1680, Lunar and Planetary Institute, Houston.
- Berman, D.C.** and J.A.P. Rodriguez, Evidence for magmatism as a trigger for catastrophic floods in Ravi Vallis, Mars, *Lunar Planet. Sci. Conf. 47*, abstract 2674, 2016.
- Berman, D.C.**, J.A.P. Rodriguez, C.M. Weitz, and D.A. Crown, Geologic Mapping in Xanthe Terra, Mars, *Ann. Planet. Geologic Mappers Meeting*, abstract 7032, 2016.
- Chuang, F.C., R.M.E Williams, **D.C. Berman**, J.M. Davis, M.R. Balme, P.M. Grindrod, Mapping of fine-scale valley networks and candidate paleolakes in greater Meridiani Planum, Mars: Understanding past surface aqueous activity, *Lunar Planet. Sci. Conf. 47*, abstract 1490, 2016.
- Crown, D.A., R.A. Yingst, S.C. Mest, T. Platz, H.G. Sizemore, **D.C. Berman**, D.A. Williams, T. Roatsch, F. Preusker, A. Nathues, M. Hoffman, M. Schaefer, C.A. Raymond, C.T. Russell, and the Dawn Science Team, Geologic mapping of the Ac-H-14 Yalode Quadrangle of Ceres from NASA's Dawn mission, *Lunar Planet. Sci. Conf. 47*, abstract 1602, 2016.
- Crown, D.A., **D.C. Berman**, and T. Platz, Geologic mapping of Alba Mons, Mars, *Lunar Planet. Sci. Conf. 47*, abstract 2383, 2016.

- Crown, D.A., **D.C. Berman**, F.C. Chuang, and T. Platz, Geologic mapping of the volcanic regions on Mars: Investigations of southern Tharsis lava flow fields and the Alba Mons summit, *Ann. Planet. Geologic Mappers Meeting*, abstract 7031, 2016.
- Joseph, E.C.S., A.V. Pathare, D.A. Crown, **D.C. Berman**, and F.C. Chuang, Surface characteristics of martian lobate debris aprons: Insights from HiRISE images and topography, *Lunar Planet. Sci. Conf. 47*, abstract 2962, 2016.
- Mest, S.C., **D.C. Berman**, N.E. Petro, and R.A. Yingst, Update on geologic mapping of the lunar south pole quadrangle (LQ-30), *Ann. Planet. Geologic Mappers Meeting*, abstract 7045, 2016.
- Noe Dobrea, E.Z., C.R. Stoker, **D.C. Berman**, M. Krco, A.F. Davila, and C.P. McKay, Timescales for crater degradation and burial in the Phoenix landing region, *Lunar Planet. Sci. Conf. 47*, abstract 2721, 2016.
- Pathare, A.V., **D.C. Berman**, D.A. Crown, E.C.S. Joseph, F.C. Chuang, and M.R. Koutnik, Glacial flow timescales of martian lobate debris aprons in eastern Hellas, *Lunar Planet. Sci. Conf. 47*, abstract 2563, 2016.
- Rice, J.W., F.C. Chuang, **D.C. Berman**, and D.A. Crown, Morphologic and topographic analyses of geologic features in the Columbia Hills, Gusev crater, Mars, *Lunar Planet. Sci. Conf. 47*, abstract 2904, 2016.
- Weitz, C.M., **D. Berman**, A. Rodriguez, and J.L. Bishop, Geologic mapping and studies of diverse deposits at Noctis Labyrinthus, Mars, *Ann. Planet. Geologic Mappers Meeting*, abstract 7029, 2016.
- Yingst, R.A., F.C. Chuang, **D.C. Berman**, and S.C. Mest, Geologic mapping of the Planck Quadrangle of the Moon (LQ-29), *Lunar Planet. Sci. Conf. 47*, abstract 1188, 2016.
- Yingst, R.A., D.A. Crown, H.G. Sizemore, S.C. Mest, **D.C. Berman**, T. Platz, N. Schmedemann, R. Wagner, F. Preusker, A. Nathues, M. Hoffman, M. Schaefer, and the Dawn Science Team, Urvara and Yalode Basins: Stratigraphic markers in the geologic record of Ceres, *Lunar Planet. Sci. Conf. 47*, abstract 1787, 2016.
- Yingst, R.A., F.C. Chuang, D.C. Berman, and S.C. Mest, Geologic mapping of the Planck quadrangle of the Moon (LQ-29), *Ann. Planet. Geologic Mappers Meeting*, abstract 7008, 2016.
- Berman, D.C.**, J.R. Michalski, and M.R. Balme, Analyses of Transverse Aeolian Ridges on Mars, *Lunar Planet. Sci. Conf. 46*, abstract 2210, 2015.
- Berman, D.C.**, D.A. Crown, and E.C. Joseph, Categorized crater counts on Martian lobate debris aprons, *Wkshp. On Issues in Crater Studies*, abstract 9014, 2015.
- Clark, S.C. and **D.C. Berman**, Regional analyses of Transverse Aeolian Ridges on Mars: Orientation, morphology, and morphometry, *Geol. Soc. Am.*, paper 133-2, 2015.
- Crown, D.A., **D.C. Berman**, and M.S. Ramsey, Lava flow fields of southern Tharsis, Mars: Flow types, interactions, and ages, *Lunar Planet. Sci. Conf. 46*, abstract 1439, 2015.
- Mest, S.C., **D.C. Berman**, N.E. Petro, and R.A. Yingst, Update on the geologic mapping of the lunar south pole quadrangle (LQ-30): Evaluating mare, cryptomare and impact melt deposits, *Lunar Planet. Sci. Conf. 46*, abstract 2510, 2015.
- Berman, D.C.**, D.A. Crown, and F.C. Chuang, Preservation and mobilization of ice-rich mantling deposits in Nereidum Montes, Mars, *Lunar Planet. Sci. Conf. 45*, abstract 1553, 2014.
- Berman, D.C.** and M.R. Balme, Transverse Aeolian Ridges on Mars: Sediment sources, volumes and ages, *AGU Fall Meeting*, abstract P33A-4022, 2014.
- Chuang, F.C., D.A. Crown, **D.C. Berman**, Glacial modification of eastern Nereidum Montes, Mars: Observations from southern hemisphere mapping of lobate debris aprons and ice-rich flow features, *Lunar Planet. Sci. Conf. 45*, abstract 2066, 2014.
- Chuang, F.C., D.A. Crown, **D.C. Berman**, and E.C.S. Joseph, Lobate debris aprons and ice-rich flow features in eastern Hellas, Mars: Mapping using THEMIS IR and CTX data, *Lunar Planet. Sci. Conf. 45*, abstract 2081, 2014.
- Crown, D.A., D.C. Berman, E. Herrick, Chronologic studies of lava flow fields in the southern Tharsis region of Mars, *AGU Fall Meeting*, abstract P41B-3906, 2014.

- Weitz, C.M., J.L. Bishop, L. Baker, and **D.C. Berman**, Fresh exposures of allophane in association with channels and debris aprons in Coprates Chasma, Mars, *Lunar Planet. Sci. Conf. 45*, abstract 1386, 2014.
- Berman, D.C.**, M.R. Balme, J.R. Michalski, and T.I. Michaels, Further investigations of Transverse Aeolian Ridges on Mars, *Lunar Planet. Sci. Conf. 44*, abstract 2359, 2013.
- Chuang, F.C., D.A. Crown, **D.C. Berman**, and E.C.S. Joseph, Mapping lobate debris aprons and related ice-rich flow features in the southern hemisphere of Mars, *Lunar Planet. Sci. Conf. 44*, abstract 2512, 2013.
- Crown, D.A., **D.C. Berman**, and F.C. Chuang, Geologic mapping of the southern extent of Tharsis volcanism in MTM -35137 Quadrangle, Daedalia Planum, Mars, *Lunar Planet. Sci. Conf. 44*, abstract 2499, 2013.
- Joseph, E.C.S., D.A. Crown, F.C. Chuang, and **D.C. Berman**, Formation and modification of Martian debris aprons: Insights from surface textures and categorized crater counts, *Lunar Planet. Sci. Conf. 44*, abstract 2774, 2013.
- Yingst, R.A., S. Mest, D.A. Williams, W.B. Garry, **D.C. Berman**, C.M. Pieters, R. Jaumann, C.T. Russell, and C.A. Raymond, Geologic mapping methods for a mission-driven mapping scenario: The Dawn at Vesta example, *2013 GSA Annual Meeting in Denver*. 2013.
- Berman, D.C.**, M.R. Balme, and T.I. Michaels, Investigations of Transverse Aeolian Ridges on Mars, *Third International Planetary Dunes Workshop*, LPI Contribution No. 1673, abstract 7025, 2012.
- Bourke, M.C., E.J.R. Parteli, S. Byrne, **D.C. Berman**, Dune migration in the north polar region of Mars, *Third International Planetary Dunes Workshop*, LPI Contribution No. 1673, abstract 7007, 2012.
- Berman, D.C.**, D.A. Crown, and E.C.S. Joseph, Constraints on the Formation and Modification of Lobate Debris Aprons through Categorized Crater Counts, *Lunar Planet. Sci. Conf. 43*, abstract 1593, 2012.
- Berman, D.C.** and M.R. Balme, Investigations of Transverse Aeolian Ridges on Mars, *Lunar Planet. Sci. Conf. 43*, abstract 1598, 2012.
- Crown, D.A. and **D.C. Berman**, Geologic Mapping of MTM -35137 Quadrangle: Daedalia Planum Region of Mars, *Lunar Planet. Sci. Conf. 43*, abstract 2055, 2012.
- Crown, D.A., M.S. Ramsey, and **D.C. Berman**, Morphologic and Chronologic Studies of Lava Flow Fields in the Southern Tharsis Region of Mars, *Lunar Planet. Sci. Conf. 43*, abstract 2138, 2012.
- Mest, S.C., D.A. Crown, and **D.C. Berman**, Chronology of Hesperia Planum, Mars using Impact Craters as Stratigraphic Markers, *Lunar Planet. Sci. Conf. 43*, abstract 2268, 2012.
- White, O.L., R.A. Yingst, **D. Berman** and 12 others, Geologic Mapping of the AV-15 Rheasilvia Quadrangle of Asteroid 4 Vesta, *Lunar Planet. Sci. Conf. 43*, abstract 1264, 2012.
- Yingst, R.A., S. Mest, W.B. Garry, D.A. Williams, **D.C. Berman**, and 13 others, A preliminary Global Geologic Map of Vesta Based on High-Altitude Mapping Orbit Data, *Lunar Planet. Sci. Conf. 43*, abstract 1359, 2012.
- Berman, D.C.**, D.A. Crown, and E.C.S. Joseph, Determining erosional/depositional history of Deuteronilus Mensae, Mars using categorized crater size-frequency distributions, *Lunar Planet. Sci. Conf. 42*, abstract 1435, 2011.
- Berman, D.C.**, W.K. Hartmann, and M.R. Balme, Small impact crater statistics: A tool for analysis of geologic processes in martian volatile-rich surfaces, *Lunar Planet. Sci. Conf. 42*, abstract 1513, 2011.
- Crown, D.A., M.S. Ramsey, and **D.C. Berman**, Lava flow fields of southern Tharsis, Mars: Mapping, morphologic, and chronologic studies, *Lunar Planet. Sci. Conf. 42*, abstract 2352, 2011.
- Crown, D.A., M.S. Ramsey, and **D.C. Berman**, Flow field evolution in southern Tharsis, Mars: Constraints from mapping, morphology, and impact crater distributions, *AGU Fall Meeting*, abstract V31A-2514, 2011.
- Joseph, E.C.S., D.A. Crown, **D.C. Berman**, and F.C. Chuang, Using CTX-based crater size-frequency distributions to refine the geologic history of Deuteronilus Mensae, Mars, *Lunar Planet. Sci. Conf. 42*, abstract 1206, 2011.

- Kargel, J.S., R. Furfaro, D. Wibben, **D.C. Berman**, B. Hubbard, R.E. Milliken, J. Pelletier, and J.A.P. Rodriguez, Melting a martian viscous flow feature: A modern-climate, dust-blanketed glacier model, *Lunar Planet. Sci. Conf.* 42, abstract 2266, 2011.
- Berman, D.C.**, D.A. Crown, E.C.S. Joseph, and F. Chuang, Refining the Geologic History of Deuteronilus Mensae, Mars Using CTX-based Crater Size-Frequency Distributions, abstract P51A-1416, presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec, 2010.
- Berman, D.C.**, D.A. Crown, E.C.S. Joseph, and F.C. Chuang, Impact craters as stratigraphic markers using CTX-based crater size-frequency distributions, *Lunar Planet. Sci. Conf.* 41, abstract #1163, 2010.
- Crown, D.A., M.S. Ramsey, and **D.C. Berman**, Mapping Arsia Mons lava flow fields: Insights into flow emplacement processes and flow field development, *Lunar Planet. Sci. Conf.* 41, abstract #2225, 2010.
- Mest, S.C., **D.C. Berman**, and N.E. Petro, Geologic mapping of impact crater floor deposits near the lunar south pole, *Lunar Planet. Sci. Conf.* 41, abstract #2363, 2010.
- Rodriguez, J.A.P., K.L. Tanaka, and **D.C. Berman**, Geochronologic implications of non-random distribution of pedestal craters in the circum-polar plains south of Gemini Scopuli, Mars, *Lunar Planet. Sci. Conf.* 41, abstract #2387, 2010.
- Berman, D.C.**, W.C. Feldman, and J.A.P. Rodriguez, Volatile-driven morphologies relating to zones of high WEH in Xanthe Terra, *Lunar Planet. Sci. Conf.* 40, abstract #1333, 2009.
- Berman, D.C.**, M.R. Balme, M.C. Bourke, S. Rafkin, and J.R. Zimbelman, Transverse Aeolian Ridges on Mars: Distribution, orientations, and ages, *Lunar Planet. Sci. Conf.* 40, abstract #1973, 2009.
- Crown, D.A., **D.C. Berman**, R. Rivas, and M.S. Ramsey, Arsia Mons lava flows: Insights into flow field emplacement and stratigraphy from CTX and HiRISE images, *Lunar Planet. Sci. Conf.* 40, abstract #2252, 2009.
- Philippoff, A.J., L.L. Tornabene, A.S. McEwen, V.R. Baker, H.J. Melosh, **D.C. Berman**, and the HiRISE Science Team, Geomorphic mapping of Hale Crater, Mars, *Lunar Planet. Sci. Conf.* 40, abstract #1737, 2009.
- Rodriguez, J.A.P., K.L. Tanaka, and **D.C. Berman**, Depression systems in western Planum Boreum, Mars: Distributions, orientations and cross-cutting relationships, *Lunar Planet. Sci. Conf.* 40, abstract #2371, 2009.
- Rodriguez, J.A.P., J.S. Kargel, K.L. Tanaka, and **D.C. Berman**, Construction of a volatile-rich martian upper crust during the impact cataclysm, *Lunar Planet. Sci. Conf.* 40, abstract #2347, 2009.
- Balme, M.R., **D.C. Berman**, M.C. Bourke, and J.R. Zimbelman, Transverse Aeolian Ridges on Mars, *Planetary Dunes Workshop: A Record of Climate Change (Lunar and Planetary Institute)*, Alamogordo, New Mexico, Abstract # 7017, 2008.
- Berman, D.C.**, D.A. Crown, and L.F. Bleamaster III, Degradation of mid-latitude craters on Mars, 11th Meeting of the Mars Crater Consortium, USGS, Flagstaff, Abstract #1106, 2008.
- Berman, D.C.**, M.R. Balme, M.C. Bourke, and J.R. Zimbelman, The distribution of transverse aeolian ridges on Mars, *Lunar Planet. Sci. Conf.* XXXIX, abstract #1784, The Lunar and Planetary Institute, Houston, 2008.
- Berman, D.C.**, D.A. Crown, and L.F. Bleamaster III, Degradation of mid-latitude craters on Mars: Gullies, arcuate ridges, and small flow lobes, *Workshop on Martian Gullies: Theories and Tests*, The Lunar and Planetary Institute, Houston, abstract #8033, 2008.
- Crown, D.A., L.F. Bleamaster III, and **D.C. Berman**, Gullies in the Eastern Hellas region of Mars, *Workshop on Martian Gullies: Theories and Tests*, The Lunar and Planetary Institute, Houston, abstract #8030, 2008.
- Berman, D. C.**, D. A. Crown, and L. F. Bleamaster III, Degradational Morphologies of Mid-Latitude Craters on Mars, *Lunar Planet. Sci. Conf.* XXXVIII, abstract #1400, The Lunar and Planetary Institute, Houston, 2007.
- Berman, D. C.**, D. A. Crown, and L. F. Bleamaster III, Degradational Morphologies of Mid-latitude Martian Craters, submitted to Fall Meeting, Amer. Geophys. Union, abstract 5745, 2006.

- Balme, M.R., **D.C. Berman**, and M.C.Bourke, Transverse Aeolian Ridges (TARs) on Mars, European Planetary Science Congress, EPSC2006-A-00553, 2006
- Balme, M.R., **D.C. Berman**, and M.C.Bourke, Transverse Aeolian Ridges on Mars, International Conference on Aeolian Research, Guelph Canada, 2006.
- Berman, D. C.**, D. A. Crown, and L. F. Bleamaster III, Survey of mid-latitude Martian craters: Volatile-driven degradational morphologies, *Lunar Planet. Sci. Conf. XXXVII*, abstract #1781, The Lunar and Planetary Institute, Houston, 2006.
- Crown, D. A., **D. C. Berman**, T. K. Gregg, Hesperia Planum, Mars: New Constraints on Fluvial Modification and History, submitted to Fall Meeting, Amer. Geophys. Union, abstract 9495, 2006.
- Crown, D. A., F. C. Chuang, **D. C. Berman**, and H. Miyamoto, Ice-driven degradation styles in the Martian mid-latitudes: Constraints from lobate debris aprons, lineated valley fill, and small flow lobes, *Lunar Planet. Sci. Conf. XXXVII*, abstract #1861, The Lunar and Planetary Institute, Houston, 2006.
- Berman, D. C.**, D. A. Crown, and W. K. Hartmann, Tyrrhena Patera, Mars: Insights into volcanic and erosional history from high-resolution images and impact crater populations, submitted to Fall Meeting, Amer. Geophys. Union, abstract 2805, 2005.
- Berman, D.C.**, W. K. Hartmann, D.A. Crown, and V.R. Baker, Arcuate ridges and gullies in Martian craters: Dependence on orientation and latitude, *Lunar Planet. Sci. Conf. XXXVI*, abstract #1213, The Lunar and Planetary Institute, Houston, 2005.
- Bleamaster III, L. F., **D. C. Berman**, D. A. Crown, Morphologic Variability and Ages of Deposits Along the Arabia Terra Dichotomy Boundary, Mars, submitted to Fall Meeting, Amer. Geophys. Union, abstract 8462, 2005.
- Crown, D. A., **D. C. Berman**, L. F. Bleamaster, F. C. Chuang, and W. K. Hartmann, Martian highland paterae: Studies of volcanic and degradation histories from high-resolution images and impact crater populations, *Lunar Planet. Sci. Conf. XXXVI*, abstract #1476, The Lunar and Planetary Institute, Houston, 2005.
- Berman, D.C.**, W.K. Hartmann, D.A. Crown, and V.R. Baker, Survey of craters with arcuate ridges and gullies in the Newton Basin region on Mars, Abstract #0708, 7th Mars Crater Consortium Meeting, Flagstaff, 2004.
- Berman, D.C.**, W.K. Hartmann, and D.A. Crown, The distribution of gullies and tongue-shaped ridges and their role in the degradation of Martian craters, *Lunar Planet. Sci. Conf. XXXV*, abstract #1391, The Lunar and Planetary Institute, Houston, 2004.
- Hartmann, W. K., **Berman, D. C.**, Crown, D. A., Turtle, E., Mars Old and New: Updated Chronology and Role of Ice Flow, American Astronomical Society, DPS Meeting #34, #03.04; Bulletin of the American Astronomical Society, Vol. 34, p.838, 2002.
- Grier, J. A., **Berman, D. C.**, Hartmann, W. K., Bottke, W. F., Kesthelyi, L. P., Active Volcanism Late in Martian History - Evidence from Crater Counts in the Tharsis Region, American Astronomical Society, DPS Meeting #33, #36.14; Bulletin of the American Astronomical Society, Vol. 33, p.1105, 2001.
- Grier, J. A., W. Bottke, W. K. Hartmann, and **D. C. Berman**, Mars: Chronological studies of the large volcanoes in Tharsis, *Lunar Planet. Sci. XXXII*, abstract #1823, The Lunar and Planetary Institute, Houston, 2001.
- Lane, M. D., W. K. Hartmann, and **D. C. Berman**, Update on studies of the Martian hematite-rich areas, *Lunar Planet. Sci. XXXII*, abstract #1984, The Lunar and Planetary Institute, Houston, 2001.
- Burr, D., A. McEwen, S. Sakimoto, B. Bradley, P. Lanagan, **D. Berman** and W. Hartmann, Recent aqueous flooding in the Cerberus Plains region, Mars, submitted to the *European Geophysical Society* meeting, March 2001.
- Berman, D.C.** and W.K. Hartmann, Preliminary observations of martian channels from Mars Global Surveyor, *Lunar Planet. Sci. XXXI*, abstract #1523, The Lunar and Planetary Institute, Houston, 2000.

- Grier, J. A., Hartmann, W. K., **Berman, D. C.**, Goldman, E. B., Esquerdo, G. A., Constraining the Age of Martian Polar Strata by Crater Counts, American Astronomical Society, DPS Meeting #32, #58.03; Bulletin of the American Astronomical Society, Vol. 32, p.1111, 2000.
- Hartmann, W. K., Grier, J. A., **Berman, D. C.**, Bottke, W., Gladman, B. Morbidelli, A., Petit, J.-M., Dones, L., Martian Chronology: New Mars Global Surveyor Results on Absolute Calibration, Geologically Young Volcanism, and Fluvial Episodes, 31st Annual Lunar and Planetary Science Conference, Houston, Texas, abstract no. 1179, 2000.
- Hartmann, W. K., Grier, J. A., **Berman, D. C.**, Esquerdo, G. A., The Case for Youthful Geological Activity on Mars, American Astronomical Society, DPS Meeting #32, #58.02; Bulletin of the American Astronomical Society, Vol. 32, p.1111, 2000.
- Hartmann, W. K., J. A. Grier, **D.C. Berman**, W. Bottke, B. Gladman, A. Morbidelli, J.-M. Petit, and L. Dones, Martian chronology: New Mars Global Surveyor results on absolute calibration, geologically young volcanism, and fluvial episodes, *Lunar Planet. Sci. XXXI*, abstract #1179, The Lunar and Planetary Institute, Houston, 2000.
- Kelsey, C., W. K. Hartmann, J. A. Grier, and **D. C. Berman**, Observations of a hematite-rich region within Sinus Meridiani, *Lunar Planet. Sci. XXXI*, abstract #1524, The Lunar and Planetary Institute, Houston, 2000.
- Hartmann, W. K., **Berman, D. C.**, Esquerdo, G. A., Goldman, E. B.; Grier, J., Anguita, J., de La Casa, M., Martian History: Progress from Mars Global Surveyor Data on Martian Crater Populations, American Astronomical Society, DPS meeting #31, #43.01, 1999.
- Hartmann, W. K., **D. C. Berman**, and G. A. Esquerdo, Mars: New results from Mars Global Surveyor, *Lunar Planet. Lab. II*, presentation, The Lunar and Planetary Laboratory, Tucson, 1999.
- Hartmann, W. K., **D. C. Berman**, G. A. Esquerdo, and A. McEwen, Recent martian volcanism: New evidence from Mars Global Surveyor, abstract #1270, *Lunar Planet. Sci. XXX*, The Lunar and Planetary Institute, Houston, 1999.