

Edwin Kite

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Appointments:

University of Chicago: January 2015 –
Assistant Professor.

Princeton University: January 2014 – December 2014
Harry Hess Prize Fellow. Joint postdoc, Astrophysics and Geoscience departments.

California Institute of Technology: January 2012 – January 2014
O.K. Earl Prize Fellow, Division of Geological & Planetary Sciences

Education:

M.Sci & B.A. **Cambridge University: June 2007**
M.Sci Natural Sciences Tripos (Geological Sciences). First Class.
B.A. Natural Sciences Tripos (Geological Sciences). First Class.

Ph.D. **University of California, Berkeley: December 2011**
Berkeley Fellowship.

Awards and Distinctions:

National Academy of Sciences - Committee on Astrobiology and Planetary Science 2017-
American Geophysical Union - Greeley Early Career Award in Planetary Science 2016.
National Academy of Sciences - CAS Forum for New Leaders in Space Science 2015-2016.
Princeton University Astrophysics/Geoscience Fellowship 2014.
Caltech O.K. Earl Postdoctoral Fellowship 2012-2013 (Division-wide prize fellowship).
AAAS Newcomb Cleveland Prize 2009 (most outstanding *Science* paper; shared).
Berkeley Fellowship 2007-2009.
Harkness Prize (first-placed geologist, Cambridge University).
High-school leaving examination results (A-levels) among the top five in England.

Papers

30. **Kite, E.S.**, Goldblatt, C., Gao, P., Mischna, M., Mayer, D.P., & Yung, Y., “Duration and rapid shutdown of post-Noachian lake-forming climates on Mars explained by methane bursts,” accepted in principle by *Nature Geoscience*.
29. Melwani Daswani, M., & **Kite, E.S.**, “Paleoclimatology constrained by the origin of the chloride-bearing deposits on Mars,” minor revisions requested.
28. Gabasova, L., & **Kite, E.S.**, “Compaction and sedimentary basin analysis on Mars,” moderate revisions requested.
27. **Kite, E.S.**, Sneed, J., Mayer, D.P. & Wilson, S.A., “Persistent or repeated surface habitability on Mars during the Late Hesperian - Amazonian,” *Geophys. Res. Lett.*, doi:10.1002/2017GL072660.
26. **Kite, E.S.**, & Mayer, D.P., 2017, “Mars sedimentary rock erosion rates constrained using crater counts, with applications to organic-matter preservation and to the global dust cycle,” *Icarus*, doi:10.1016/j.icarus.2016.10.010.
25. **Kite, E.S.**, Sneed, J., Mayer, D.P., Lewis, K.W., Michaels, T.I., Hore, A., & Rafkin, S.C.R., 2016, “Evolution of major sedimentary mounds of Mars: build-up via anti-compensational stacking modulated by climate change,” *J. Geophys. Res. - Planets*, doi:10.1002/2016JE005135.
24. Richter, F., Chaussidon, M., Mendybaev, R., & **Kite, E.S.**, 2016, “Reassessing the cooling rate and geologic setting of Martian nakhlite meteorites,” *Geochim. Cosmochim. Acta*, 182, 1-23.
23. **Kite, E.S.**, & Rubin, A., 2016, “Sustained eruptions on Enceladus explained by turbulent dissipation in tiger stripes,” *Proc. Natl. Acad. Sci. USA*, doi:10.1073/pnas.1520507113.

22. **Kite, E.S.**, Fegley, B., Schaefer, L., & Gaidos, E., 2016, "Atmosphere-interior exchange on hot rocky exoplanets," *Astrophys. J.*, 828, 80, 20 pp.
21. **Kite, E.S.**, Howard, A., & Lucas, A., 2015, "Resolving the era of river-forming climates on Mars using stratigraphic logs of river-deposit dimensions," *Earth Planet. Sci. Lett.*, 420, 55-65.
20. **Kite, E.S.**, Howard, A., Lucas, A., Armstrong, J.C., Aharonson, O., & Lamb, M.P., 2015, "Stratigraphy of Aeolis Dorsa, Mars: stratigraphic context of the great river deposits," *Icarus*, 253, 223-242.
19. Borlina, C., Ehlmann, B.L., & **Kite, E.S.**, 2015, "Modeling the thermal and physical evolution of Mount Sharp's sedimentary rocks, Gale Crater, Mars," *J. Geophys. Res. – Planets*, doi:10.1002/2015JE004799.
18. **Kite, E.S.**, Williams, J.-P., Lucas, A., & Aharonson, O., 2014, "Low palaeopressure of the Martian atmosphere estimated from the size distribution of ancient craters," *Nature Geoscience*, 7, 335-339.
17. **Kite, E.S.**, Lewis, K.W., Lamb, M.P., Newman, C.E., & Richardson, M.I., 2013, "Growth and form of the mound in Gale Crater, Mars: Slope-wind enhanced erosion and transport," *Geology*, 41, 543-546, doi:10.1130/G3309.1 (Science "Highlight of the Meeting": Science, 338, 1522).
16. **Kite, E.S.**, Halevy, I., Kahre, M.A., Manga, M., & Wolff, M., 2013, "Seasonal melting and the formation of sedimentary rocks on Mars," *Icarus*, 223, 181-210.
15. **Kite, E.S.**, Lucas, A., & C.I. Fassett, "Pacing Early Mars river activity: Embedded craters in the Aeolis Dorsa region imply river activity spanned $\geq(1-20)$ Myr," *Icarus*, 225, 850-855.
14. Mangold, N., **Kite, E.S.**, Kleinhans, M., Newsom, H.E., Ansan, V., Hauber, E., Kraal, E., Quantin-Nataf, C. & K. Tanaka, 2012, "The origin and timing of fluvial activity at Eberswalde Crater, Mars," *Icarus*, 220, 530-551.
13. Rappaport, S., Levine, A., Chiang, E., El Mellah, I., Jenkin, J., Kalomeni, B., **Kite, E.S.**, Kotson, M., Nelson, L., Rousseau-Nepton, & Tran, K., 2012, "Possible disintegrating short-period Super-Mercury orbiting KIC 12557548," *Astrophys. J.*, 752.
12. Sramek, O., McDonough, W., **Kite, E.S.**, Lekic, V., Zhong, S.T., & Dye, W.F., "Geophysical and geochemical constraints on geoneutrino fluxes from Earth's mantle," *Earth Planet. Sci. Lett.*, doi:10.1016/j.epsl.2012.11.001. (Nature Geoscience "Research Highlight": Nature Geoscience, 4, 580).
11. **Kite, E.S.**, Gaidos, E. & M. Manga, 2011. "Climate instability on tidally locked exoplanets," *Astrophys. J.*, 743, 41, 12 pp.
10. **Kite, E.S.**, Michaels, T.I., Rafkin, S.C.R., Manga, M., & W.E. Dietrich, 2011. "Localized precipitation and runoff on Mars," *J. Geophys. Res. – Planets*, 116, E07002, 20 pp. doi:10.1029/2010JE003783. (Reported by "New Scientist").
9. **Kite, E.S.**, Rafkin, S.C.R., Michaels, T.I., Dietrich, W.E., & Manga, M., 2011. "Chaos terrain, storms, and past climate on Mars," *J. Geophys. Res. – Planets*, 116, E10002, 26 pp., doi:10.1029/2010JE003792 ("Research Highlight" at Nature Geoscience).
8. Manga, M., Patel, A., Dufek, J., & **Kite, E.S.**, 2012. "Wet surface and dense atmosphere on early Mars inferred from the bomb sag at Home Plate, Mars," *Geophys. Res. Lett.*, doi:10.1029/2011GL050192
7. Chiang, E., **Kite, E.**, Kalas, P., Graham, J. R., & Clampin, M., 2009. "Fomalhaut's Debris Disk and Planet: Inferring the Mass and Orbit of Fomalhaut b Using Disk Morphology," *Astrophys. J.*, 693, 734-749.
6. **Kite, E.S.**, Matsuyama, I., Manga, M., Perrofn, J.T., & Mitrovica, J.X., 2009, "True polar wander driven by late-stage volcanism and the distribution of paleopolar deposits on Mars," *Earth Planet. Sci. Lett.*, 280, 254-267.
5. **Kite, E.S.**, Manga, M., & Gaidos, E., 2009. "Geodynamics and rate of volcanism on massive Earth-like planets," *Astrophys. J.*, 700, 1732-1749.

4. Kalas, P., Graham, J. R., Chiang, E., Fitzgerald, M. P., Clampin, M., **Kite, E. S.**, Stapelfeldt, K., Marois, C., & Krist, J., 2008. "Optical Images of a Planet 25 Light Years from Earth," *Science*, 322, 1345-1348. (*Science* #2 "Breakthrough of the Year").
3. **Kite, E.S.**, & R.C.A. Hindmarsh, 2007. "Did ice streams shape the largest channels on Mars?," *Geophys. Res. Lett.*, 34, L19202
2. **Kite, E.S.**, 2004. "Jupiter exploration: high risks and high rewards," *EoS: Trans. AGU*, 85(50), 544

Group Papers

1. Ehlmann, B., and 46 others including Kite, E.S., 2016. "The Sustainability of Habitability on Terrestrial Planets: Insights, Questions, and Needed Measurements from Mars for Understanding the Evolution of Earth-like Worlds," *J. Geophys. Res. - Planets*, doi: 10.1002/2016JE005134.

In preparation

- **Kite, E.S.**, "Cycle-independent planetary habitability."
- **Kite, E.S.**, & Mischna, M.A., "Climate optimum on Mars initiated by atmospheric loss."
- Spencer, J., Hurford, T., Ingersoll, A., **Kite, E.S.**, Nimmo, F., Rhoden, A., Schmidt, J. "Plume plumbing and origins," *in* Enceladus and the Icy Moons of Saturn, University of Arizona Press: Space Science Series.

Advising

PhD program: currently advising Samuel Holo (UChicago, 2021-anticipated) & Megan Mansfield (UChicago, 2021-anticipated).
 PhD Thesis Advisory Committee for Predrag Popovic (UChicago, 2019-anticipated), Jenika Greer (UChicago, 2021-anticipated), Matous Ptacek (UChicago, 2021-anticipated), Jade Checlair (UChicago, 2021-anticipated), & Andrew Malone (UChicago, 2017).
 MSci Thesis Advisory Committee for Nathan Baskin (UChicago, 2015-2016).
 Summer project advisor for Leila Gabasova (University of Paris) (2015) & Bowen Fan (Peking University) (2017).
 Postdoctoral advisor for Mohit Melwani Daswani (UChicago, 2015-2017) & Liam Steele (UChicago, 2017-).

Instructor for: GEOS 32060 / GEOS 22060 / ASTR 45900, What makes a planet habitable? (Winter 2016, University of Chicago)
 GEOS 38600. Earth and Planetary Surface Processes. (Winter 2017, University of Chicago)

Invited talks University of Bern (4/2017); AGU Fall Meeting (12/2016); Enceladus Focus Group (Berkeley, 6/2016); Arizona State University (2/2016); McGill University (10/2015); NIU (9/2015); University of Washington (5/2015); Planetary and Space Sciences Research Institute (UK) (2/2015); Kavli Institute of Theoretical Physics (2/2015); University of Illinois (1/2015), NOAA GFDL (12/2014); Rice University (9/2014); Columbia University / Earth Institute (3/2014); Weizmann Institute of Science (Israel) (6/2013); University of Arizona (4/2013); Princeton (3/2013); Johns Hopkins (3/2013); University of Chicago (3/2013); UCLA (11/2012); U. T. Austin (10/2012); iPLEX (10/2012); JPL Science Division (7/2012); Purdue (4/2012); UC Santa Cruz (10/2011); Space Sciences Laboratory (11/2010)f; JPL Mars Exploration Directorate (11/2010); AGU Fall Meeting (12/2009); SETI Institute (5/2009); UC Santa Cruz (5/2009).

Telescope experience:

Hubble Space Telescope: Co-I on GO/DD Program 11818 (PI: Paul Kalas).
Spitzer Space Telescope: Warm IRAC phase curves of exoplanet HAT-P-7b (PI: Heather Knutson).
 + assisted with observing at Shane Telescope, Mt. Hamilton Observatory.

Field experience:

Central India (Proterozoic paleobiology). Greece, SE Spain, England, Scotland, California, Hawaii (fieldwork, mapping courses). NW Spain (independent mapping project, 6 weeks). Utah (GSI for Professor W. Alvarez).

Reviewer for: *Science, Nature Geoscience, Geophysical Research Letters, Earth and Planetary Science Letters, Astrophysical Journal Letters, Aeolian Research, Journal of Geophysical Research, Physics of the Earth and Planetary Interiors, Journal of Maps, Astrobiology, Icarus, Meteoritics & Planetary Science, Planetary and Space Science, Fonds de recherche du Québec, European Research Council, Hungarian Science Agency, Oxford University Press, NASA Postdoctoral Program, NASA SMD (panelist for HW, EW, MDAP), NASA HEOMD.*

Grants: PI, NASA Solar System Workings (geomorphology), 2015-2018.
PI, NASA Exoplanet Research Program, 2016-2019.
(Raised \$1.2M external funds in 13 months) PI, NASA Mars Data Analysis Program, 2016-2019.
PI, NASA Solar System Workings (climate science), 2016-2019.
Co-I, NASA Mars Data Analysis Program, 2016-2019.

Research or mission design experience at locations other than college or graduate school:

Visiting Associate at JPL (2012-2015): Multiple projects.
Weizmann Institute, Israel (2013): Visiting scholar.
Keck Institute for Space Studies (2012): Study on instrumentation for an asteroid mission.
JPL Planetary Science Summer School (2010): As PI, led 19 graduate students and post-docs in mission design exercise (Io Explorer).
Carl Sagan Center, SETI Institute, Mountain View (2010): Stereo topography.
Ganymede Observer New Frontiers 3 proposal (2009):
Participated in mission concept work responsive to NASA AO.
Kavli Institute for Theoretical Physics (2008): Deep Earth Summer School.
Planetary and Space Sciences Research Institute (2006):
Prize internship. Worked on chondrite Raman spectroscopy, and Mars meteoritics.
Caltech (2004): Summer Undergraduate Research Fellowship.
MIT (2004): Undergraduate exchange student.
Centro de Astrobiología, CSIC/INTA, Madrid (2003): Mass spectroscopy.
Summer Science Program (2001): Asteroid orbit determination. Ojai campus.

First-authored presentations at conferences, workshops, e.t.c.:

Kite, E.S., Mischna, M., Gao, P., & Yung, Y., “Climate optimum on Mars initiated by atmospheric collapse?,” talk, *for presentation at 48th Lunar and Planetary Science Conference.*

Kite, E.S., Sneed, J., Mayer, D.P., Wilson, S., 2016, “Mars alluvial fan formation during the Amazonian and Late Hesperian spanned >10 Myr,” *for presentation at 48th Lunar and Planetary Science Conference.*

Kite, E.S., Sneed, J., Mayer, D.P., Lewis, K.W., Michaels, T.I., Hore, A., & Rafkin, S.C.R., 2016, “Making major mounds on Mars: shaping by wind-terrain feedbacks,” invited talk, *AGU Fall Meeting.*

Kite, E.S., Goldblatt, C., Gao, P., Mayer, D.P., Sneed, J., & Wilson, S.A., 2016, “A Narrowing Target for Early Mars Climate: Which Models Survive the Confrontation with Improved Hydrology Constraints?,” talk, *AGU Fall Meeting.*

Kite, E.S., Goldblatt, C., & Gao, P., 2016, “Cadence and cause of lake-forming climates on Mars,” *for presentation at the meeting of the American Astronomical Society Division for Planetary Sciences / European Planetary Science Congress, Pasadena, California.*

Kite, E.S., 2016, “Sustained Eruptions on Enceladus Explained by Turbulent Dissipation in Tiger Stripes,” talk, *Conference on Enceladus and the Icy Moons of Saturn, Boulder, Colorado.*

- Kite, E.S.**, 2016, “Sustaining cryovolcanic eruptions via turbulence on Enceladus,” talk, *Enceladus Focus Group*, Berkeley, California.
- Kite, E.S.**, Armstrong, J.C., Goldblatt, C., Gao, P., & Mayer, D.P., 2016, “Cadence and cause of lake-forming climates on Mars,” talk, *47th Lunar and Planetary Science Conference*, abstract #1312.
- Kite, E.S.**, Fegley, B., Schaefer, L., & Gaidos, E., 2016, “Volcanism on Magma Planets: Extreme Volcanism is Regulated by Planet Mass, Temperature, and Initial Composition,” *47th Lunar and Planetary Science Conference*, abstract #1601.
- Kite, E.S.**, “Sustaining cryovolcanic eruptions via turbulence on Enceladus,” talk, *National Academy of Science - Chinese Academy of Science Forum for New Leaders in Space Science*, Shanghai, China.
- Kite, E.S.**, “Crater count constraints on radiolysis of complex organic matter at 2020 candidate sites,” talk, *2nd Landing Site Selection Workshop for the Mars 2020 Rover Mission*, Pasadena, CA
- Kite, E.S.**, 2015, “Unscrambling Noachian crater erosion on Mars,” talk, *Workshop on Issues in Crater Studies and the Dating of Planetary Surfaces*, Laurel, MD.
- Kite, E.S.**, 2015, “Extending the reach of Mars rover drills by targeting high-erosion-rate sites identified using orbiter imagery and wind-erosion models,” talk, *Astrobiology Science Conference 2015*, Chicago, IL.
- Kite, E.S.**, Armstrong, J.C., Wordsworth, R., & Forget, F., 2015, “Late bursts of habitability on Mars-like planets,” talk, *46th Lunar and Planetary Science Conference*, abstract #2674.
- Kite, E.S.**, Rubin, A., 2015, “Sustained eruptions on Enceladus explained by turbulent dissipation in tiger stripes,” talk, *46th Lunar and Planetary Science Conference*, abstract #1247.
- Kite, E.S.**, Lucas, A., Howard, A.D., Armstrong, J.C., & Lamb, M.P., 2014, “Characterizing and modeling late episodes of surface liquid water on Mars,” *Binghamton Workshop on Planetary Geomorphology*.
- Kite, E.S.**, Lucas, A., Armstrong, J.C., Aharonson, O., & Lamb, M.P., 2014, “Resolving the era of river-forming climates on Mars,” talk, *8th International Conference on Mars*, abstract no. 1148.
- Kite, E.S.**, Lucas, A., Armstrong, J.C., Aharonson, O., & Lamb, M.P., 2014, “Resolving the great drying of Mars: paleo-climate versus time from river deposits in Aeolis Dorsa,” talk, *45th Lunar and Planetary Science Conference*.
- Kite, E.S.**, Lucas, A., Armstrong, J., & Aharonson, O., 2013, “Resolving the great drying of Mars: sequence stratigraphy of the Aeolis-Zephyria trough,” talk, *Annual Meeting of the American Astronomical Society Division for Planetary Sciences*.
- Kite, E.S.**, Lewis, K.W., Lamb, M.P., Newman, C.E., & Richardson, M.I., 2013, “Possible role for slope winds in forming Gale Crater’s mound (and other sediment mounds on Mars): the Slope Wind Enhanced Erosion and Transport hypothesis,” Mars, talk, *44th Lunar and Planetary Science Conference*.
- Kite, E.S.**, 2013, “Mass balance constraints on the sustainability of Mars’ Recurrent Slope Lineae: should RSL be an astrobiology priority?,” talk, *Conference on the Present-Day Habitability of Mars*.

Kite, E.S., and Manga, M., 2012, “Seasonal snowmelt versus impact-triggered runoff in Mars’ geologic record of surface liquid water,” talk, *Third International Conference on Early Mars*.

Kite, E.S., 2012, “Evidence for melt-fed meandering rivers in the Gale-Aeolis-Zephyria region,” Mars, talk, *43rd Lunar and Planetary Science Conference*.

Kite, E.S., Gaidos, E., Manga, M., and Halevy, I., 2012, “(1) Climate instability on planets with large day-night temperature contrasts. (2) Magma planets,” talk, *Exoclimes 2*.

Kite, E.S., Gaidos, E., & Manga, M., 2011, “Climate destabilization on tidally locked exoplanets,” talk, *AGU Fall Meeting*, P23F-03

Kite, E.S., Manga, M., Halevy, I., & Kahre, M.A., 2012, “Gale as a preferred site for snowmelt-limited induration of atmospherically transported sediment,” talk, *5th MSL Landing Site Selection Workshop*.

Kite, E.S., 2012, “Net assessment of the impact hypothesis for fluvial activity at Eberswalde and tests with MSL,” talk, *5th MSL Landing Site Selection Workshop*.

Kite, E. S., Manga, M., & Halevy, I., 2011. “Snowmelt model of formation and distribution of sedimentary rocks on Mars: Thick atmosphere not required?,” talk, *42nd Lunar and Planetary Science Conference*.

Kite, E. S., Manga, M., & Halevy, I., 2010. “Inevitability of melting at low latitudes on Mars: implications for the sedimentary rock record,” *AGU Fall Meeting*, EP43C-0762

Kite, E. S., 2010. “Two new approaches to the Early Mars climate problem,” *Jet Propulsion Laboratory*, seminar.

Kite, E.S., Rafkin, S.C.R., Michaels, T.I., Manga, M., & Dietrich, W.E., 2010. “Localized precipitation and channel formation on Mars: Under what conditions can one landing site be a proxy for global environments?” *4th MSL Landing Site Selection Workshop*.

Kite, E.S., Rafkin, S.C.R., Michaels, T.I., & M. Manga, 2010. “Mesoscale simulation of atmospheric response to chaos formation,” talk, 41st Lunar and Planetary Science Conference, abstract #1171.

Kite, E.S., Manga, M., & Gaidos, E., 2009. “Magmatic activity on Super-Earths: What do we expect to see?,” invited talk, *AGU Fall Meeting*, V21H-07.

Kite, E.S., Rafkin, S.C.R., Michaels, T.I., & M. Manga, 2010. “The snows of Juventae: Mesoscale simulation of atmospheric response to chaos formation,” *AGU Fall Meeting*, EP53F-02.

Kite, E.S., 2009, “True Polar Wander and Climate on Late Hesperian/Amazonian Mars”, SETI Institute Colloquium. Youtube: <http://bit.ly/bHwoZv>

Kite, E.S., Manga, M. & J.T. Perron, 2009, ‘Evidence for past kilometer-scale overturn(s) in deformed, layered terrain near the deepest point on Mars’, 40th Lunar and Planetary Science Conference, abstract #1248.

Kite, E.S., Manga, M., & E. Gaidos, 2008, “Geodynamics and rate of volcanism on massive Earth-like planets”, *AGU Fall Meeting*, P13C-1327

Kite, E.S., Hovius, N., Hillier, J.K., & J. Besserer, 2007, "Candidate mud volcanoes in the northern plains of Mars", *AGU Fall Meeting*, P13C-1327

Kite, E.S., Hovius, N., Hillier, J.K., & J. Besserer, 2007, "Candidate mud volcanoes in the northern plains of Mars", *European Mars Science and Exploration Conference*, Noordwijk, The Netherlands.

Kite, E.S., 2006, "Palaeo-ice streams in the Equatorial Transition Zone, Mars," 19th UCL Astronomy Colloquium, Windsor.

Kite, E.S., "Competing hypotheses for the Northwestern Slope Valleys, Mars," in Proceedings of the Third European Workshop on Exo-Astrobiology, 18 - 20 November 2003, Madrid, Spain. Ed.: R. A. Harris & L. Ouweland. ESA SP-545, Noordwijk, Netherlands: ESA Publications Division, ISBN 92-9092-856-5, 2004, p. 219 - 220

Selected coauthored presentations: (* = person supervised by Kite)

Holo, S.*, **Kite, E.S.** & Robbins, S.J., "Mars obliquity constrained by elliptical crater orientations," *for presentation at 48th Lunar and Planetary Science Conference*.

Mansfield, M.*, & **Kite, E.S.**, "The role of obliquity in post-Noachian Martian surface conditions," *for presentation at 48th Lunar and Planetary Science Conference*.

Ehlmann, B., & 18 others including **Kite, E.S.**, 2016, "Mars exploration science in 2050," *NASA Planetary Science Vision 2050 workshop*.

Melwani Daswani, M.*, & **Kite, E.S.**, 2016, "Were chloride-bearing lakes on Mars fed by groundwater?," *for presentation at AGU Fall Meeting*.

Sneed, J.*, **Kite, E.S.**, Mayer, D.P.*, Wilson, S., 2016, "Constraints on the Stability of Martian Fluvial Activity from Embedded-Crater Density in Alluvial Fans," *AGU Fall Meeting*.

Mayer, D.P.*, & **Kite, E.S.**, 2016, "Using Crater Counts to Constrain Erosion Rates on Mars: Implications for the Global Dust Cycle, Sedimentary Rocks and Organic Matter Preservation," *for presentation at AGU Fall Meeting*.

Melwani Daswani, M.*, & **Kite, E.S.**, 2016, "Chlorine deposits on Mars: chlorine from the sky, or chlorine from the rocks?," talk, *for presentation at Geological Society of America Annual Meeting*.

Sneed, J.*, Mayer, D.P.*, Lewis, K.W., & **Kite, E.S.**, 2016, "Origin of sedimentary-rock mountains on Mars constrained by layer-orientation data," talk, *47th Lunar and Planetary Science Conference*.

Gabasova, L.* & **Kite, E.S.**, 2016, "Sediment compaction on Mars and its effect on layer orientation," talk, *47th Lunar and Planetary Science Conference*.

Mayer, D.P.* & **Kite, E.S.**, 2016, "Pacing Wind-induced Saltation Abrasion on Mars: Using Crater Counts to Constrain Aeolian Exhumation," *47th Lunar and Planetary Science Conference*.

Mayer, D.P.* & **Kite, E.S.**, 2016, "An Integrated Workflow for Producing Digital Terrain Models of Mars from CTX and HiRISE Stereo Data Using the NASA Ames Stereo Pipeline," *47th Lunar and Planetary Science Conference*.

Melwani Daswani, M.*, & **Kite, E.S.**, 2016, "Late-stage weathering and chlorapatite dissolution as a possible source for chloride on the Martian surface," *47th Lunar and Planetary Science Conference*.

Melwani Daswani, M.,* & **Kite, E.S.**, 2016, "Constraints on H₂O and H₂ Proportions in the Volatile Envelopes of Young, H₂ Producing, Small-Radius Exoplanets," *47th Lunar and Planetary Science Conference*.

Mayer, D.P.,* and **Kite, E.S.**, "The Planetary GIS/Data Lab at the University of Chicago," 2015, *46th Lunar and Planetary Science Conference*.

Irwin, R., Bell, J. , Dietrich, W.E., Grant, J., Grotzinger, J., Gupta, S., Howard, A., Kite, E., Mangold, N., Moore, J., Vaniman, D., and Whipple, K., 2012, "Report of the MSL Fluvial Processes Tiger Team," *5th MSL Landing Site Selection Workshop*.

Rhoden, A. and **Kite, E.S.**, "Tidally-controlled volcanism at Loki Patera, Io?", *DPS/EPSC 2011*.

Manga, M., Patel, A., Dufek, J., & **Kite, E. S.**, "Wet Surface and Dense Atmosphere on Early Mars Suggested by the Bomb Sag at Home Plate," 2012, *43rd Lunar and Planetary Science Conference*, abstract #1241.

Niles, P.B., and 51 coauthors including **Kite, E.S.**, "Multiple Smaller Missions as a Direct Pathway to Mars Sample Return," 2012, *Concepts and approaches for Mars exploration*, Houston, Texas, abstract # 4234.

Knutson, H., Agol, E., Burrows, A., Charbonneau, D., Cowan, N., Deming, D., Desert, D., Fortney, J., **Kite, E.**, Langton, J., Laughlin, G. , Lewis, N., and Showman, A., 2011, "A Warm Spitzer Survey of Atmospheric Circulation Patterns", *Extreme Solar Systems II*, Jackson Hole, Wyoming

Zok, A., Karlstrom, L., Hood, E. W., Manga, M., Wenzel, R., & **Kite, E.S.**, 2010, "Field Observations of Supraglacial Streams on the Juneau Icefield," *AGU Fall Meeting*, San Francisco, C21B-0530

Kalas, P, Fitzgerald, M. P., Clampin, M., Graham, J. R., Chiang, E., **Kite, E.S.**, Stapelfeldt, K.,& Krist, J., 2009, "Fomalhaut b: Direct Detection of a Jupiter-mass Object Orbiting Fomalhaut," American Astronomical Society, AAS Meeting 21x3, #351.02; Bulletin of the American Astronomical Society 41, p.491

Graham, J.R., Kalas, P., Chiang, E., Fitzgerald, M. P., Clampin, M., **Kite, E.S.**, Krist, J., Stapelfeldt, K., 2009, "Analysis of the Photometry of Fomalhaut b," American Astronomical Society, AAS Meeting 213, #351.03; Bulletin of the American Astronomical Society 41, p.491

Chiang, E., **Kite, E.S.**, Kalas, P., Graham, J. R., & M. Clampin, 2009, "Fomalhaut's Disk And Planet: Constraining The Mass And Orbit Of Fomalhaut-b Using Disk Morphology," American Astronomical Society, AAS Meeting #213, #351.04; Bulletin of the American Astronomical Society, Vol. 41, p.491