

MARTHA SCOTT GILMORE

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EDUCATION

Ph.D. Geological Sciences, Brown University, September 1997

Sc.M. Geological Sciences, Brown University, May 1995

B.A. Geology (Astronomy minor), Franklin and Marshall College, Dec. 1991

PROFESSIONAL EXPERIENCE

- *Associate Professor 2007 – present, Assistant Professor 2000 - 2007, Dept. of Earth and Environmental Sciences, Wesleyan University.*

- *Wesleyan University Campus Director, Connecticut Space Grant College Consortium, 2006-present.*

- *Postdoctoral Researcher, Earth and Planetary Science Division, Jet Propulsion Laboratory, 1998 - 2000.*

Mars Surveyor Program 2001 lander staff member directly under Project Scientist R. Stephen Saunders on landing site selection for the mission.

Scientist in the Center for In Situ Analyses and Sample Return, contributing to the development of sample return missions to Mars, Venus and other solar system bodies. Science Lead for Venus Surface Sample Return Study. Worked with JPL's Team X to develop prototype aerobot (instrumented, navigable balloon) missions to Venus and Mars.

Advisor for Caltech Summer Undergraduate Research Fellowship (SURF) students in 1999 and 2000.

- *Instructor, Washington and Lee University, 1996 - 1997*

Design and implementation of a summer course in Comparative Planetology as part of the Keck Geology Consortium.

Member of the VASSIS (Venus Aerobot Surface Science Imaging System) Development Effort at JPL.

HONORS, AWARDS AND DISTINGUISHED APPOINTMENTS

- Member, Committee on Planetary and Lunar Exploration (COMPLEX) of the Space Studies Board, an advisory body of the National Research Council (NRC) and National Academy of Sciences on NASA's Solar System Exploration Program 2003-2006.

- Member, Solar System Exploration Panel of the Committee on Priorities in Space Science Enabled by Nuclear Power and Propulsion: A Vision Beyond 2015, Space Studies Board, National Research Council 2004-2006.

- Member, Panel E: Robotic Access and Human Planetary Landing Systems, supporting the NRC review of NASA's Capability Roadmaps, 2005.

- Secretary of the Planetary Sciences Section of the American Geophysical Union, 2002 – 2004.

- Recipient of the Jessie Ball duPont All-But-Degree (ABD) Fellowship for Eminent Black Scholars - Washington and Lee University, 1996-1997.

- Elected Full Member of Sigma Xi, 1997.

- Recipient of the NASA Graduate Researcher's Fellowship, 1993-1996.
- Recipient of the Geology Award (top graduating senior)- Franklin and Marshall College, May 1991.

Invited Talks

- “Autonomous, rapid classifiers for hyperspectral imagers” Spring Meeting of the American Geophysical Union session entitled “Revolutionary Space Exploration Concepts Using Onboard Computing”, May 2006.
- “Venus Express as a step toward the surface of the planet” Fall Meeting of the American Geophysical Union session entitled “A Scientific Case for Venus Exploration: Venus Express and Beyond”, December, 2005.
- “Origin of Tessera Terrain on Venus” Williams College, October, 2005.
- “Venus Sample-Return Mission Concept Study” Committee on the Origin and Evolution of Life, Space Studies Board – Board on Life Sciences (Task: [Assessment of Planetary Protection Requirements for Venus Missions](#)), National Research Council, Woods Hole, MA, June, 2005.
- “Martian Gullies: A record of recent liquid water on Mars” NY Center for Studies on the Origins of Life, Rensselaer Polytechnic Institute, February, 2004.
- “Recent water on Mars and the origin of martian gullies” Five college-university geology lecture series, February, 2004.
- “Doing geology on Mars with rovers” Smith College, February, 2004.
- “The role of impermeable strata in the formation of recent martian gullies”, American Museum of Natural History, March, 2003.
- “Martian Gullies”, University of Connecticut Geology Seminar Series, April, 2002.
- “Liquid water on recent Mars: Climatic excursions exhibited by surface landforms”, Yale University, November 2001.
- “New Technology for Mars Sample Return”, Committee on Planetary and Lunar Exploration Meeting, Woods Hole, MA, October, 2000.
- “Movement and Magnetism of the Martian Crust”, Wheaton College, March 2000.
- “Tectonics on an Earth-like planet: Venus”, Wesleyan University Dept. of Earth and Environmental Sciences Colloquium, February 2000.
- “Venus Sample Return”, Committee on Planetary and Lunar Exploration Meeting, Irvine, CA, November 1999.
- “Strategies for Future Mars Surface Exploration and Site Characterization”, Caltech Planetary Seminar Series, May 1999.
- “The Venus Environment and Sample Return Sites”, NASA Conference on Electronics for Extreme Environments, Pasadena, CA, 1999.

Reviews and Service

- Reviewer of Space Studies Board report by the Committee for the [Review of the Next Decadal Mars Architecture](#), 2006.
- Member, Geologic Mapping Subcommittee of the Planetary Cartography and Geologic Mapping Working Group, NASA's Planetary Geology and Geophysics Program, 2004-2006.
- Reviewer, Mars Exploration Rover Data Archive release, 2004.
- Program Committee Member, Lunar and Planetary Science Conference, 2004; American Geophysical Union Fall Meeting, 2002, 2003.

- Review Panelist (~annually) and external reviewer, NASA Mars Data Analysis Program, NASA Planetary Geology and Geophysics Program, NASA Mars Exploration Rover and Mars Odyssey Participating Scientist Programs, 1998-present.
- Reviewer, Long Island Sound Study Comprehensive Conservation and Management Plan Enhancements Projects grants program.
- Reviewer: *J. Geophysical Research - Planets, Icarus, Geophysical Research Letters, Planetary and Space Science, J. Structural Geology, J. Volcanology and Geothermal Research*, U.S. Geological Survey Planetary Mapping Program (ongoing).

Session Chairs

- American Geophysical Union Meeting, Fall 1995, Fall 2002, Fall 2003, Fall 2005.
- Lunar and Planetary Science Conference, March 2000.
- American Astronomical Union, Division of Planetary Sciences Meeting, October 1999.
- Brown-Vernadsky Microsymposium, Moscow, Russia, 1992.

PROFESSIONAL AFFILIATIONS

Member, American Geophysical Union, Planetary Sciences Section
 Member, Geological Society of America, Planetary Geology Division
 Member, American Society for Photogrammetry & Remote Sensing

AWARDED GRANTS Sums are my portion if Co-I, the full funded amount if PI.

External

- \$6K Connecticut Space Grant College Consortium, “The Ancient Geological History of Venus as Recorded in Tessera Terrain”, 4/08.
- \$20K NASA Interplanetary Network Technology Program, “Automated Target Selection for Orbital Assets” (PI: R. Castaño, JPL), 10/06-9/08.
- \$13K Connecticut Space Grant College Consortium, Wesleyan University Campus Director Subcontract (U. Hartford, Consortium Director), 5/06–4/11.
- \$228K EPA Long Island Sound Study, “Application of Remote Sensing Technologies for the Delineation and Assessment of Coastal Marshes and their Constituent Species” (co-PI, D. Civco, UConn), 4/04-3/06 (extended to 12/06).
- \$400K NASA Applied Information Systems Research, “Autonomous Mineral Detectors for Mars Rovers and Landers” 4/02-3/05 (extended to 9/05).
- \$10K Connecticut NASA Experimental Program to Stimulate Competitive Research (EPSCoR), “Characterization of Mars Gullies” 3/03-11/03.
- \$45K NASA Research in Intelligent Systems, “An On-Board Scientist for Multi-Rover Scientific Exploration” (PI, T. Estlin, JPL), 1/01-12/03.
- \$30K NASA Mars Data Analysis Program, “Mars GIS database on the Web for landing-site studies” (PI, K. Tanaka, USGS), 7/00 – 6/03.

Internal

- \$9K Wesleyan University match for Connecticut Space Grant College Consortium, “The Ancient Geological History of Venus as Recorded in Tessera Terrain”, 4/08.
- \$63K Wesleyan University match for Connecticut Space Grant College Consortium (U. Hartford, Consortium Director, 5/06–4/11.

- \$14K Wesleyan University match for EPA Long Island Sound Study, “Application of Remote Sensing Technologies for the Delineation and Assessment of Coastal Marshes and their Constituent Species” (co-PI, D. Civco, UConn), 4/04-3/06.
- \$10K Wesleyan University match for Connecticut NASA Experimental Program to Stimulate Competitive Research (EPSCoR), “Characterization of Mars Gullies” 3/03-11/03.
- \$10K Wesleyan University Seed Grant, “A new course on the use and application of Geographical Information Systems (GIS)” with S. Bischof and J. Varekamp awarded 3/02.
- \$4K Christian A. Johnson Summer Research Apprenticeship for summer student: "Topographic distribution of recent groundwater features on Mars," 2001.
- \$10K Wesleyan University Seed Grant, "Development of an Interdisciplinary Course in Planetary Science", with Prof. Bill Herbst, Dept. of Astronomy, awarded 3/01.

COURSES TAUGHT

Wesleyan University (2000-present)

- E&ES 471/571 Planetary Geology Seminar
- E&ES 397 & 398 Senior Seminar and Field Course (co-taught with staff)
- E&ES 326 & 328 Remote Sensing and Laboratory
- E&ES 220 & 222 Geomorphology and Laboratory
- E&ES 115 Introduction to Planetary Geology
- E&ES 151/AST 103 The Planets (co-taught with Bill Herbst, Astronomy dept.)

Washington and Lee University (1996-1997)

- GEOL 397 Planetary Volcanology
- GEOL 395 Current Topics in Geology

THESES ADVISED

“Origin and Composition of the Light-Toned Layered Deposits in Iani Chaos, Mars”

Tanya Harrison, M.A., 2008

“Temperature analysis of gullied slopes on Mars: Evidence for a thermal control on gully formation”

Ann Ollila, M.A., 2007

“Mapping and structural analysis of SW Tellus Regio, Venus”

Beck Straley, B.A. (with High Honors), 2007

“Geometry of martian hillside gullies in the northern hemisphere: evidence for an insolation-driven mechanism of formation”

Nina Lanza, M.A., 2006

“Jarosite formation at Sulfur Springs, St. Lucia, WI, as a Mars Analogue”

Maya Gomes, B.A. (with honors), 2006

“Foliar accumulation of mercury and its effects on the reflectance spectra of vegetation in Connecticut”

Sarah Dunagan, M.A., 2005

“Autonomous mineral detectors for future Mars exploration missions”

Matthew Merrill, M.A., 2005

“Assessing soil loss and its impact on agrarian livelihoods: A case study of the village of Kambi ya Simba, Tanzania”

Carl Cervone, B.A. (with Honors), 2004

“Estimating the coverage of *P. australis* in the wetland regions of the Connecticut River using remotely sensed data”

Cheney Shreve, M.A., 2003

“Use of ocean color remote sensing in the study of primary productivity and anoxia in Long Island Sound”
Taras Gapotchenko, M.A., 2002

WESLEYAN UNIVERSITY SERVICE

Committee Service

Committee on International Studies, 2008, Honors Committee, 2008, Library Committee 2001-2006, Computer Committee 2001-, Graduate Council 2001-2002, Advisory Committee of the Academic Council 2002-2003, Search Committees for two Earth & Environmental Sciences Dept. faculty members and one Astronomy department faculty member.

Lectures and Other

- Co-developer and advisor for a course cluster in Planetary Science, 2008.
- Co-founder of Planetary Science Group (<http://planetary.wesleyan.edu>) in 2005; helped organize ~ 8 meetings/year and co-hosted lecturers: Dr. Steve Mojzsis (Univ. Colorado – also delivered the Wesleyan Public Science Lecture), Dr. Heidi Hammell (Space Science Institute), Dr. Darby Dyar (Mt. Holyoke), Dr. Dave Rabinowitz (Yale). Also hosted Dr. Bill Boynton ‘66 (Univ. of Arizona) in 2002.
- Faculty Marshall, Wesleyan University Commencement 2006 - present.
- Cover articles for *Wesleyan University Magazine*: “Valley of Extremes” (2006, Issue #1), “Out of this World”, Winter 2003.
- Presentation to Administrators and Faculty of Color Alliance, December 2005.
- Presentation to Wesleyan Science Advisory Council, August 2005.
- Hosted meeting of the Committee on Planetary and Lunar Exploration at Wesleyan University (parts open to the public), July 2005.
- Fireside Chat to Mellon Mays Fellows, September 2005.
- “The view from the surface of Mars: Recent results from the Mars Exploration Rovers” Public Science Lecture, December 2, 2004.
- “Mars as Seen Through the Eyes of Dual Rovers: The Mars Exploration Rovers Mission” 24th Philip B. Brown ‘44 Memorial Lecture, April 18, 2004, Cosmos Club, Washington, D.C.
- “Mars Night at Wesleyan” public lecture, Sept. 12, 2003.
- “Mars – as you’ve never seen it” WESeminar, Wesleyan Commencement, May 2003.
- “Mars – as you’ve never seen it” Talk to Wesleyan Alumni, Providence, RI, February 2003.
- Panelist for *Conference on increasing the number of scientists of color on college and university faculties*, November 2, 2002.
- “Mars – as you’ve never seen it” WESeminar, Wesleyan Homecoming, October 2002.
- “Moon Rocks (with special guest: a martian meteorite)”, Dept. lecture, March 2002.
- “The new Mars revealed by the Mars Global Surveyor and Mars Odyssey spacecraft” Westport Astronomical Society, February, 2002.
- “No need to be green with ENVI: Remote Sensing at Wesleyan”, Academic Technology Roundtable, October 2001.
- “The Moon and Lunar Thin Sections”, Dept. lecture, October 2000.
- Lead a “Geology of Connecticut” field trip during Freshman Orientation, annually.

PUBLICATIONS (*indicates student author)

Refereed Publications

- GILMORE M. S., WILSON E. H., BARRETT N., CIVCO D. L., PRISLOE S., HURD J. D. AND CHADWICK C. (2008) Integrating multi-temporal spectral and structural information to map wetland vegetation in a lower Connecticut River tidal marsh, *Remote Sensing of Environment*, 112, 4048-4060, doi:10.1016/j.rse.2008.05.020.
- HASHIMOTO G. L., ROOS-SEROTE M., SUGITA S., GILMORE M. S., KAMP L. W., CARLSON R. W. AND BAINES K. H. (2008) Galileo Near Infrared Mapping Spectrometer (NIMS) data suggest felsic highland crust on Venus, *J. Geophys. Res.*, doi:10.1029/2008JE003134, in press.
- GILMORE M. S., BORNSTEIN B., *MERRILL M. D., CASTAÑO R. AND GREENWOOD J. P. (2008) Generation and performance of automated jarosite mineral detectors for visible/near-infrared spectrometers at Mars, *Icarus* **195**, 169-183.
- *DUNAGAN S. C., GILMORE M. S. AND VAREKAMP J. C. (2007) Effects of mercury on visible/near-infrared reflectance spectra of Mustard Spinach plants (*Brassica rapa P.*), *Environmental Pollution*, **148**, 301-311.
- GILMORE, M. S., G. C. COLLINS, L. S. CRUMPLER, J. A. CUTTS, A. V. DECHARON, J. W. HEAD, III, K. T. NOCK, M. PARRY AND R. A. YINGST (2005) Investigation of the Application of Aerobot Technology at Venus, *Acta Astronautica*, **56**, 477-494.
- GILMORE M. S., *MERRILL M. D., CASTAÑO R., BORNSTEIN B. AND GREENWOOD J., (2004) Effect of palagonite dust deposition on the automated detection of calcite in visible/near-infrared spectra, *Icarus* **172**, 641-646.
- TANAKA K. L., CARR M., SKINNER J. A., GILMORE M. S. AND HARE T. M. (2003) Geology of the MER 2003 "Elysium" candidate landing site in southeastern Utopia Planitia, Mars, *J. Geophys. Res.*, **108** (E12), 8079, doi:10.1029/2003JE002054.
- GILMORE M. S. AND *PHILLIPS E. L. (2002) Role of aquicludes in formation of Martian gullies, *Geology*, **30**, 1107-1110.
- JOLLIFF, B., KNOLL A., MORRIS R. V., MOERSCH J., MCSWEEN H., GILMORE M., ARVIDSON R. E., GREELEY R., HERKENHOFF K. AND SQUYRES S. (2002) Remotely sensed geology from lander-based to orbital perspectives: Results of FIDO rover May 2000 field tests, *J. Geophys. Res.*, **107**, 10.1029/2000JE001470.
- MOERSCH J. E., JOLLIFF B. L., MCSWEEN H. Y., MORRIS R. V., GILMORE M., ARVIDSON R. E. AND SQUYRES S. W. (2002) Synthesis of overhead and ground-based infrared spectroscopy at the 2000 FIDO Mars rover field test, *J. Geophys. Res.*, **107**, 10.1029/2001JE001524.
- NIMMO F. AND GILMORE M. S. (2001) Constraints on the depth of magnetized crust on Mars from impact craters, *J. Geophys. Res.*, **106**, 12315-12323.
- GILMORE M. S., CASTAÑO R., MANN T., ANDERSON R. C., MJOLSNESS E., MANDUCHI R. AND SAUNDERS R. S. (2000) Strategies for autonomous rovers at Mars, *J. Geophys. Res.*, **105**, 29223-29237.
- GILMORE M. S. AND HEAD J. W. (2000) Sequential deformation of plains at the margin of Alpha Regio, Venus: Implications for tessera formation. *Meteoritics and Planetary Sci.*, **35**, 667-687.
- MARINANGELI L. AND GILMORE M. S. (2000) Geologic evolution of the Akna Montes-Atropos Tessera region, Venus. *J. Geophys. Res.*, **105**, 12053-12075.
- GILMORE M. S., COLLINS G. C., IVANOV M. A., MARINANGELI L. AND HEAD J. W. (1998) Style and sequence of extensional structures in tessera terrain, Venus. *J. Geophys. Res.*, **103**, 16813-16840.
- GILMORE M. S., IVANOV M. A., HEAD J. W. AND BASILEVSKY A. T. (1997) Duration of tessera deformation on Venus. *J. Geophys. Res.*, **102**, 13357-13368.

Submitted Manuscripts

- CASTAÑO R., GILMORE M. S. AND BORNSTEIN B. (2008) Comparison of classification using synthetic training data and labeled training data with application to autonomous mineral detection in hyperspectral imagery, *Machine Learning Journal*, revised 4/08.

Conference Proceedings

- GILMORE, M., D.L. CIVCO, J.D. HURD, E. WILSON, S. PRISLOE, C. CHADWICK, AND N. BARRETT (2007) Object-oriented classification and mapping of salt marsh vegetation using in situ radiometry and multi-seasonal, high

- resolution satellite remote sensing data. Proceedings MultiTemp 2007, The Fourth International Workshop on the Analysis of Multi-temporal Remote Sensing Images, Leuven, Belgium, 7 p.
- CIVCO, D. L., HURD, J. D., PRISLOE, S. AND **GILMORE, M. S.** (2006) Characterization of coastal wetland systems using multiple remote sensing data types and analytical techniques, *Proc. IEEE International Geoscience and Remote Sensing Symposium*, 3442-3446, DOI:.10.1109/IGARSS.2006.883.
- BORNSTEIN B., CASTAÑO R., **GILMORE M. S.**, *MERRILL M. D., AND GREENWOOD J. (2006) Onboard detection of jarosite minerals with applications to Mars. *Proc. IEEE Aerospace Conference*, Big Sky, MT, March 4-11, 2006, IEEEAC paper #1513, 7 pp.
- HURD J. D., CIVCO D. L., **GILMORE M. S.**, PRISLOE S. AND WILSON E. H. (2006) Tidal wetland classification from Landsat imagery using and integrated pixel-based and object-based classification approach, *Proc. 2006 ASPRS Annual Conference*, Reno, NV, 11 pp.
- PRISLOE, S., WILSON E., CIVCO D. L. HURD J. D. AND **GILMORE M. S.** (2006) Use of LIDAR data to aid in discriminating and mapping plant communities in tidal marshes of the lower Connecticut river: Preliminary results, *Proc. 2006 ASPRS Annual Conference*, Reno, NV, 8 pp.
- HURD J. D., CIVCO D. L., **GILMORE M. S.**, PRISLOE S. AND WILSON E. H. (2005) Coastal Marsh Characterization Using Satellite Remote Sensing and *In Situ* Radiometry Data: Preliminary Results, *Proc. 2005 ASPRS Annual Convention*, Baltimore, MD, 12 pp.
- BORNSTEIN B., CASTAÑO R., **GILMORE M. S.**, *MERRILL M. D., AND GREENWOOD J. (2005) Creation and Testing of an Artificial Neural Network Based Carbonate Detector for Mars Rovers. *Proc. IEEE Aerospace Conference*, Big Sky, MT, March 5-12, 2005, IEEEAC paper #1527, 7 pp.
- RODGERS D., **GILMORE M.**, SWEETSER T., CAMERON J., CHEN G.-S., CUTTS J., GERSHMAN R., HALL J. L., KERZHANOVICH V., MCRONALD A., NILSEN E., PETRICK W., SAUER C., WILCOX B., YAVROUIAN A., ZIMMERMAN W., AND THE JPL ADVANCED PROJECT DESIGN TEAM (2000) Venus sample return: A hot topic. *Proc. IEEE Aerospace Conference*, vol 7, 473-484, doi:10.1109/AERO.2000.879315.
- SWEETSER T., CAMERON J, CHEN G-S., CUTTS J., GERSHMANN R., **GILMORE M. S.**, HALL J., KERZHANOVICH V., MCRONALD A., NILSEN E., PETRICK W., RODGERS D., WILCOX B., YAVROUIAN A., ZIMMERMAN W., AND THE JPL ADVANCED PROJECTS DESIGN TEAM, (2000) Venus surface sample return: A weighty high-pressure challenge. *Proc. AAS/AIAA Astrodynamics Conf.*, Aug. 16-19, 1999, Girdwood, Alaska, *Advances in the Astronautical Sciences*, 103(3), 831-844.
- GILMORE M. S.** AND HEAD J. W. (1992) Sequential deformation of plains on Venus: Evidence from Alpha Regio. *International Colloquium on Venus, Pasadena, California, August 10-12, LPI Contribution 789*, 34-36.

Book Chapter

- KEDDIE S. T., ANTONENKO I., AUBELE J. C., BURT J. D., CRUMPLER, L. S., **GILMORE M. S.** AND GROSFILS E. B. (1995) Volcanoes in: *The Face of Venus: The Magellan Mapping Mission* (L. E. Roth and S. D. Wall, eds.) NASA Special Publication 20, Washington, D. C., p. 55-80.

Book Review

- GILMORE M. S.** (2000) Book review: *Venus Revealed: A New Look Below the Clouds of Our Mysterious Twin Planet*, by D. H. Grinspoon, *Meteoritics and Planetary Science*, **35**, 885.

Reports

- Committee on Priorities for Space Science Enabled by Nuclear Power and Propulsion, National Research Council (2006) *Priorities in Space Science Enabled by Nuclear Power and Propulsion*, National Academies Press, 326 pp, <http://books.nap.edu/catalog/11432.html>.
- Beaty, D.W., McCleese, D.J., Syvertson, M. (eds.) (2003) *Growing and Strengthening the Mars Science Community*. Unpublished white paper, <http://mepag.jpl.nasa.gov/reports/index.html>

Articles

GILMORE M. S. (2003) Beyond Earth: Planetary Geology. *Geotimes* **48**, no 7, 36-37.

GILMORE M. S. (2002) Beyond Earth: Planetary Geology. *Geotimes* **47**, no 7, 31.

Press

Kerr, R. (2001) Of ozone, teapots, and snowballs, *Science* **292**, 2241-2242 (highlights my AGU talk).

Maps in Preparation

GILMORE M. S. AND SAUNDERS R. S. Geologic map of the Hestia Rupes (V22) Quadrangle, Venus 1:5,000,000, *US Geol. Surv. Misc. Inv. Ser. Map*, in prep.

GILMORE M. S. AND SAUNDERS R. S. Geologic map of the Ix Chel Chasma (V34) Quadrangle, Venus 1:5,000,000, *US Geol. Surv. Misc. Inv. Ser. Map*, in prep.

Abstracts (first authorship denotes conference presentation)

2008

CASTAÑO R., GILMORE M. S., BORNSTEIN B., HOJNACKI S. AND GREENWOOD J. (2008) A comparison of two methods for automated mineral detection in visible/near-infrared spectra. *39th Lunar Plan. Sci. Conf.*, Abstract #1933.

*HARRISON T. N., GILMORE M. S. AND GREENWOOD J. P. (2008) Experimental VNIR reflectance spectroscopy of gypsum dehydration: Constraints on sulfate composition at Iani Chaos, Mars. *39th Lunar Plan. Sci. Conf.*, Abstract #1879.

OLLILA A. M., GILMORE M. S. AND NEWSOM H. E. (2008) Temperature analysis of gullied and non-gullied slopes on Mars: Evidence for a thermal control on gully formation. *Workshop on Martian Gullies: Theories and Tests*, Abstract # 8037.

2007

GILMORE M. S., *OLLILA A. M., *LANZA N. L. AND VASAVADA A. R. (2007) Geometric and thermal context of gullied slopes in the northern hemisphere of Mars: Prediction and measurement. *7th International Conference on Mars*, Abstract # 3320.

GILMORE M. S., CASTAÑO R., BORNSTEIN B. AND GREENWOOD J. P. (2007) Autonomous mineral detectors for visible/near-infrared spectrometers at Mars. *7th International Conference on Mars*, Abstract # 3160.

GILMORE M. S., *LANZA N. L. AND VASAVADA A. R. (2007) Comparison of irradiance received on gullied and nongullied slopes in the northern hemisphere of Mars: A three bears scenario? *38th Lunar Plan. Sci. Conf.*, Abstract #2263 (CD-ROM).

GILMORE M. S. AND SAUNDERS R. S. (2007) Geologic mapping of the Hestia Rupes quadrangle (V-22), northern Ovda Regio, Venus, *38th Lunar Plan. Sci. Conf.*, Abstract #1936 (CD-ROM).

LANZA N. L., NEWSOM H., WIENS R. AND GILMORE M. S. (2007) What part of gullies are “special,” implications for MSL landing sites, *38th Lunar Plan. Sci. Conf.*, Abstract #1926 (CD-ROM).

*OLLILA A. M. AND GILMORE M. S. (2007) Thermophysical properties of gullied and nongullied slopes in Acadalia Planitia, Mars, *38th Lunar Plan. Sci. Conf.*, Abstract #1861 (CD-ROM).

*STRALEY B. L. AND GILMORE M. S. (2007) Mapping and structural analysis of SW Tellus Regio, Venus, *38th Lunar Plan. Sci. Conf.*, Abstract #1657 (CD-ROM).

2006

GILMORE M. S., BORNSTEIN B., CASTAÑO R. AND GREENWOOD J. (2006) Autonomous, rapid classifiers for hyperspectral imagers, *Eos Trans. AGU*, 87(36), Jt. Assem. Suppl., Abstract IN43E-05.

GREENWOOD J. P., GILMORE M. S., BLAKE R. E., MARTINI A. M., *GOMES M., TRACY S., DYAR M. D., GILMORE J. A. AND VAREKAMP J. C. (2006) Nascent jarosite mineralization of Sulphur Springs, St. Lucia, W.I.: Implications for Merdiani jarosite formation, *37th Lunar Plan. Sci. Conf.*, Abstract #2230 (CD-ROM).

- *LANZA N. L. AND **GILMORE M. S.** (2006) Depths, orientation and slopes of martian hillside gullies in the northern hemisphere, *37th Lunar Plan. Sci. Conf.*, Abstract #2412 (CD-ROM).
- PRISLOE M.S., CIVCO D. L., HURD J., ARNOLD C. WILSON E AND **GILMORE M.** (2006) Characterization of Coastal Wetland Systems using Multiple Remote Sensing Data Types and Analytical Techniques, *Abstracts of the 2006 IEEE International Geoscience and Remote Sensing Symposium*, July 31 – August 4, 2006, Denver CO.
- WILSON E.H., J.D. HURD, D.L. CIVCO, S. PRISLOE AND **M.S. GILMORE** (2006) Classification of Tidal Wetland Communities Using Multi-temporal, Single Season Quickbird Imagery, 2006 ASPRS Annual Convention, Reno, NV.

2005

- GILMORE M. S.** (2005) Venus Express as a step toward the surface of the planet, *EOS Trans. AGU*, 86(52), *Fall Meeting Suppl.*, Abstract P23E-07.
- GILMORE M. S.**, CASTAÑO R., BORNSTEIN B., *MERRILL M. D. AND GREENWOOD J. P. (2005) Onboard autonomous detectors for Mars rovers, *EOS Trans. AGU*, 86(52), *Fall Meeting Suppl.*, Abstract IN33D-08.
- *DUNAGAN S. C. **GILMORE M. S** AND VAREKAMP J. C. (2005) Remote sensing of mercury-contaminated soils through plant reflection spectra, *EOS Trans. AGU*, 86(52), *Fall Meeting Suppl.*, Abstract B21C-08.
- GILMORE M. S.**, BORNSTEIN B., *MERRILL M. D., CASTAÑO R. AND GREENWOOD J. P. (2005) Generation and performance of automated jarosite mineral detectors for Vis/NIR spectrometers at Mars, *36th Lunar Plan. Sci. Conf.*, Abstract #1155 (CD-ROM).
- GREENWOOD J. P., **GILMORE M. S.**, *MERRILL M. D., BLAKE R. E., MARTINI A. M. AND VAREKAMP J. C. (2005) Jarosite mineralization on St. Lucia, W. I.: Preliminary geochemical, spectral and biological investigations of a martian analogue, *36th Lunar Plan. Sci. Conf.*, Abstract #2348 (CD-ROM).
- HURD J. D., CIVCO D. L. **GILMORE M. S.** PRISLOE S. AND WILSON E. H. (2005) Coastal marsh characterization using satellite remote sensing and in situ radiometry data, *ASPRS 2005 Annual Conference*, Baltimore Maryland.
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