We had a wonderful 125th anniversary of the Geological Society of America annual meeting and are at the end of an exciting year! As the Past Chair of the Planetary Geology Division, I would once again like to thank the PGD membership for their continued support of our division. Your support to our division is greatly appreciated.

During this year of our celebration, I would like to take this chance to reflect on the present state of planetary sciences. Despite the continuing funding uncertainties for planetary science missions and the R & A programs, we have reason to be proud of our successes over the past year. With data arriving daily from all parts of the solar system, this is a time to reflect on how far as a division and an organization we have come. No longer are there large gaps between different disciplines of geology. As more and more information becomes available from our neighbors in space, the more we realize just how much we have in common. This is especially true within the Planetary Geology Division and the Geological Society of America as a whole. With the success of the surface operations of the Opportunity and Curiosity rovers on Mars, a whole new world has been opened up for input from the traditional terrestrial geologist. Data is now available for experts from all disciplines of geoscience to examine. With new surface missions being planned on the horizon, I hope more terrestrial geologists will get involved not only with exploring the other planets in our solar system, but also with designing the
program and the missions. For geologists, one world is really not enough.

For the upcoming year, I hope you will continue to support the Planetary Geology Division and the newly elected officers. Follow along at http://www.geosociety.org/125/ for any up to the minute updates on upcoming activities.

I’d like to close this message by reminding each and every one of you to renew your PGD membership, and to ask you to consider donating to one of our various programs that financially support students in our research community. Although our membership has been steadily increasing over the past couple of years, we would like to challenge our membership to bring in new members as well as having members from other divisions within GSA to cross over and support PGD. For donations, please see the GSA Foundation donation website for a list of PGD programs that you can support (http://www.gsaafweb.org/makeadonation.html). As always, you can find information about the division (including details on applying/nominating for one of our awards) on the PGD website (http://rock.geosociety.org/pgd). The other division officers and I are always happy to hear from you, so contact us for any reason. I’ll conclude by thanking my fellow officers for their continued dedication and hard work in support of the PGD. It is a pleasure working with you. Good luck and thank you for your support!

-Bob Anderson
PGD Past Chair

2013 Annual Meeting

The 2013 meeting in Denver was GSA’s 125th Annual Meeting. The overall theme of this major anniversary meeting was Celebrating Advances in Geosciences. As the Planetary Geology Division represents the definition of advances in geoscience, we proudly sponsored a number of sessions at this year’s conference.

TOPICAL AND DISCIPLINE SESSIONS
PARDEE SESSIONS:

P13. “Water, Water, Everywhere…” in the Solar System Tuesday, 29 October 2013: 8:00 AM-12:00 PM Chairs: Devon M. Burr, Robert C. Anderson
This session provided an overview of ongoing discovery of water throughout the Solar System and its potential for in-situ resource utilization and supporting life.

T1. Curiosity at Gale—Past and Present Environments of Mars Sunday, 27 October 2013: 8:00 AM-12:00 PM, CCC Room 201 Chairs: Kenneth S. Edgett, Juergen S. Schieber, Linda C. Kah
Mars exploration is revealing a wealth of information regarding the early evolution of the terrestrial planets. This session included contributions focused on geology in Gale crater via data collected by the Curiosity Rover and orbiting spacecraft.

T2. From the Sahara to Mars and Beyond: The History and Future of Aeolian Research (Posters) Monday, 28 October 2013: 9:00 AM-6:30 PM, Hall D Chairs: Nicholas Lancaster, Alan F. Halfen
Ralph A. Bagnold explored the deserts of Libya more than 75 years ago and effectively created the field of modern aeolian science, which today extends millions of miles beyond the dunes of the Sahara to Mars. This session explored the history of aeolian research and highlighted current advances and future research avenues within the field through a mixture of presentations by internationally renowned researchers.
career scientists, early-career scientists, and students.

T4. Geologic Mapping of Planetary Bodies across the Solar System Monday, 28 October 2013: 1:00-5:00 PM, CCC Room 201 Chairs: Debra L. Buczkowski and Danielle Y. Wyrick
This session included abstract submissions related to the description of the geologic mapping (and subsequent analysis) of solid solar system bodies, including the terrestrial planets, moons, and asteroids.

T5. Impact Cratering in the Solar System: Fire to Ice—Vacuum to Atmospheres Tuesday, 29 October 2013: 9:00 AM-6:30 PM, Hall D Chairs: Jeffrey B. Plescia, Christian Koeberl, Mark B. Boslough
This session focused on the nature of impacts, with terrestrial craters providing ground-truth for the interpretation of planetary craters. Contributions discussed morphology, shock processes, materials, modeling, impactor evolution, and airburst phenomena. Comparisons of cratering among planets were particularly welcome.

T6. Landscape Evolution on the Terrestrial Planets: The G.K. Gilbert Award Session Tuesday, 29 October 2013: 1:00-5:00 PM, CCC Room 201 Chair: Robert C. Anderson
This section included abstracts on the description and evolution of planetary landscapes related to fluvial geomorphic processes, meteorite bombardment, and sublimation, including modeling and terrestrial analogs. Oral presentations were given by the awardee, colleagues, and former students.

T7. Lunar Water from Surface to the Interior: Origin and Distribution Sunday, 27 October 2013: 1:00-5:00 PM, CCC Room 201 Chairs: Y. Liu, Francis McCubbin, Lawrence A. Taylor
This session brought together diverse aspects of lunar water research and promoted discussion of recent results of lunar water studies from the surface to the interior.

T10. The Surprising Innermost Planet Wednesday, 30 October 2013: 1:00-5:00 PM, CCC Room 201 Chairs: Carolyn M. Ernst, Brett W. Denevi
Orbital observations by the MESSENGER spacecraft have shown that Mercury is unusual among the terrestrial planets in many respects. This session showcased findings from recent geological, geochemical, and geophysical investigations of Mercury's surface and interior.

T11. Topics in Planetary Geology (Posters) Sunday, 27 October 2013: 9:00 AM-12:00 PM, CCC Hall D Chairs: Simon A. Kattenhorn, Robert C. Anderson
The wide diversity of solar system bodies encompasses a broad range of geological processes and histories. This session included poster abstracts on topics of current interest in the field of planetary geology.

T12. Voyager to New Horizons: Exploring Surface and Interior Processes of Icy Worlds Wednesday, 30 October 2013: 8:00 AM-12:00 PM, CCC Room 201 Chairs: Emily S. Martin, D. Alex Patthoff, Simon A. Kattenhorn
Abstracts in this session related to surface processes, structural and tectonic processes, interiors, and thermal evolution of icy satellites, KBOs, and planetary analogs. This included experimental, observational, and theoretical modeling approaches.

T65. Lakes and Lake Deposits on Earth and Mars
Remote sensing and observer data indicate that lake deposits are common on Mars. This session included papers on comparative paleolimnology between Mars and Earth: sediment mineralogy, lake water geochemistry, and modern terrestrial analogs for Mars lakes.

T192. Volcanic/Tectonic Processes and Their Interactions on Rocky Planets and Moons Monday, 28 October 2013: 8:00 AM-12:00 PM, CCC Room 201 Chairs: Simon A. Kattenhorn, Danielle Wyrick This session included abstracts on the mapping or modeling of volcanic and tectonic features on rocky solar system bodies, including terrestrial analogs, emphasizing volcanic/tektic interaction and resultant structural and geomorphological evolution of rocky planets and moons.

2013 Division News

PGD Fellows
We are pleased to announce that several PGD members were selected as GSA Fellows this year.

Rónadh Cox, Williams College. Nominator: Sandra Wyld. Cox has had an exceptional and productive career. Her research spans multiple topics, from sedimentology, geomorphology, and geochronology to planetary geology, and yields results that resonate with both the academic community and the public. Her role as a mentor to students, international and national, is exemplary.

Ralph P. Harvey, Case Western Reserve University. Nominator: Hap McSween. Harvey has ably directed the U.S. Antarctic Search for Meteorites Program for more than two decades, ensuring a resource essential to planetary geosciences. His own research on meteorite petrology, meteorite concentration mechanisms, the history of polar ice sheets, cryogenic weathering, and biologic activity has significantly advanced the discipline.

Michael S. Kelley, NASA Headquarters. Nominator: Mike Gaffey. Kelley has a long list of service to the public and the GSA. His activities as a discipline scientist in NASA’s Planetary Science Division have advanced the research of many investigators. He also made significant contributions to understanding asteroids and the early history of the inner solar system.

Peter H. Schultz, Brown University. 2012 Gilbert Award winner.

Ronald Greeley Award for Distinguished Service

This new annual award was established in 2011 as the PGD Distinguished Service Award to acknowledge distinguished contributions to the PGD and/or GSA over a multi-year period. In 2012, the PGD membership voted to change the name to commemorate Ronald Greeley and his contributions to the Planetary Geology Division.

For 2013, this award will be presented to: James R. Zimbelman, Smithsonian Institution. This presentation will take place at the Lunar and Planetary Science Conference in March 2014.

The Eugene M. Shoemaker Memorial Award for Crater Studies
We are pleased to announce the 2012 recipient of the Shoemaker Award was Cameron Mercer of Arizona State University.

Dr. Carolyn Shoemaker established the Eugene M. Shoemaker Memorial Fund for Crater Studies in memory of her husband in 1998. She established this endowment so that students will have an opportunity to pursue studies of impact craters, which were the focus of her husband's graduate student studies and a large part of his professional career. Friends, scientific colleagues, and companies have contributed to (and continue to contribute to) the fund to ensure its success.

The Eugene M. Shoemaker Memorial Award for Crater Studies is for undergraduate or graduate students, of any nationality, working in any country, in the disciplines of geology, geophysics, geochemistry, astronomy, or biology. The award, which includes $2500, is to be applied for the study of impact craters, either on Earth or on other solid bodies in the solar system. Areas of study may include but shall not necessarily be limited to impact cratering processes, bodies (asteroidal or cometary) that make the impacts, or the geological, chemical or biological results of impact cratering.

The 2013 awardee is Michael Zanetti of Washington University in St. Louis. This was announced at the Planetary Geology Division banquet and business meeting during the annual GSA conference.

For 2014 submission information, please check the PGD website (http://rock.geosociety.org/pgd/awards.html#shoemaker) for the electronic application form. The Planetary Geology Division officers strongly encourage all of our Division members to actively recruit promising students to apply for this prestigious award.

**2013 Dwornik Awards**

The judging panel at the 44th LPSC saw another crop of outstanding entries for the 2013 Dwornik Prize — many thanks to all the students who competed and to the volunteers who assisted with the judging! The 2013 Dwornik winners are:

**Best Graduate Oral:** Elena S. Amador, University of Washington, “The Lost City Hydrothermal Field: A spectroscopic and astrobiological martian analog”

**Honorable Mention, Graduate Oral:** Matthew Chojnacki, University of Tennessee Knoxville, “Local sourcing and Aeolian fractionation as factors for compositional heterogeneity of Martian aeolian bedform sand”

**Best Graduate Poster:** Rita Parai, Harvard University, “Strontium isotopic constraints on early solar system chronology”

**Honorable Mention, Graduate Poster:** Tabb C. Prissel, Brown University, “Mg-suite plutons: implications for mantle-derived primitive magma source depths on the Moon”

**Best Undergraduate Oral:** Katelyn M. Lehman, Texas Christian University, “Composition analysis of the Marius Hills Volcanic Complex using Diviner Lunar Radiometer Experiment and Moon Mineralogy Mapper”

**Honorable Mention, Undergraduate Oral:** Amanda L. Wagner, University of Arkansas, Fayetteville, “Evaporation of ethane-methane mixtures under simulated Titan conditions”

The Dwornik Award was established in 1991 with a generous endowment by Dr. Stephen E. Dwornik, who wished to encourage students who are U.S. citizens to become involved with NASA and planetary science. Beginning in 2012, the award was open to any student currently enrolled at a U.S. institution. The award consists of a plaque and a $500 check (graduate) / $250 check (undergraduate), and is given for those student presentations (poster and oral) at the annual Lunar and Planetary Science Conference (LPSC) hosted by the Lunar and Planetary Institute and NASA Johnson Space Center in Houston, Texas that are judged to be of the highest caliber.

**Special Thanks to Dwornik Judges**

PGD officers would like to thank all of our members who attended the 44th LPSC and assisted in judging for the 2013 Dwornik awards. With the large number of applicants each year, it would not be possible to judge the student awards without the help of our volunteers.

**2013 Pellas-Ryder Award**

The Pellas-Ryder award is given to the Planetary Science Best Student Paper published during the preceding year. The award is jointly given by the Meteoritical Society and the Planetary Geology Division of the Geological Society of America and consists of a check for $500 from the Meteoritical Society and a plaque awarded by the PGD.

For 2013, the Pellas-Ryder award winner was **Christoph Burkhardt of ETH Zurich** (Advisor: Thorsten Kleine) for an outstanding publication in a major peer-reviewed journal on a topic of significant importance, and for the perseverance to see it published.


**Call for Applications & Nominations**

For the past several years the Division has enjoyed a great deal of growth and vibrancy, something we hope will continue well into the future! This is something that reflects positively upon us as a community, and we would like to remind everyone of the opportunities to participate and contribute.

**G.K. Gilbert Award**

All members are strongly encouraged to submit nominations for the G. K. Gilbert Award. This is the Division’s highest award, presented annually for outstanding contributions to the solution of fundamental problems in planetary geology in the broadest sense. Nominations (which include a letter detailing the accomplishments of the nominee) are due by Dec 1, 2013 and should be submitted to Bob Anderson (Robert.c.anderson@jpl.nasa.gov).

**Dwornik Award**: This award is now open to all students enrolled at a U.S. university. Due to the advent of the undergraduate awards, the Dwornik fund is no longer self-sustaining. We hope the fund will continue to grow and provide new opportunities, and thus encourage your donations. You can donate at: [http://www.gsafweb.org/makeadonation.html](http://www.gsafweb.org/makeadonation.html)

In addition, anyone interested in serving as a
judge for the Dwornik competition at next year’s LPSC please note that there is now a place on your LPSC abstract submission form where you can indicate your willingness. Thanks in advance!

**Eugene M. Shoemaker Award:** The Shoemaker fund is currently self-sustaining, but we welcome your donations. For more details and online application forms, go to: [http://rock.geosociety.org/pgd/awards.html#shoemaker](http://rock.geosociety.org/pgd/awards.html#shoemaker)

**Pellas-Ryder Award:** This award, offered jointly with the Meteoritical Society, is an opportunity for student first authors publishing their work in English to receive recognition for outstanding scientific achievement. The deadline for nominations is January 31, 2014. For details, or to nominate papers published for next year, contact Division Past Chair Bob Anderson (Robert.c.anderson@jpl.nasa.gov).

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**2013 Finances and Membership**

The Division's finances remain healthy, and we hope they will continue to improve, as we stay focused on reducing costs and raising funds. In 2008 we instituted a new student travel grant program for students to attend the annual GSA Meeting, in which two students receive a $500 grant (with matching funds from the student’s advisor). The 2013 travel grant awardees were Peter Malinski of Ohio University, Athens and Jessica McBeck of University of Massachusetts, Amherst.

To continue these travel grants (and our fiscal health) we need your support through purchases at our booth at the Annual Meeting! Thank you to all who came to the booth at the 2013 Denver meeting and stocked up on gifts for just a small donation!

In the past, our largest single yearly cost was the Division’s annual business meeting. However, as with last year, we defrayed these costs by offering a ticketed dinner instead of a free lunch. Professional members were asked to pay the actual cost of the dinner but students were offered a discounted dinner rate, with the balance paid by the division.

The financial activity of our Division over the past year is summarized as follows:

**REVENUE 2013 $**
Division Dues Income 4,601.07  
Contributions 2,478.00  
**Total Revenue** 7,079.07

**EXPENSES 2013 $**
AV Services 855.11  
Decorator Services 141.86  
Postage & Shipping 203.48  
Grants & Awards, Cash 2,000.00  
Awards, purchased 154.00  
Catering Annual Meeting 970.85  
Building Rental & Event Fees 150.00  
Cost of Misc. Products-Cost of Goods Sold 1,003.11  
**Total Expenses** 5,328.41

**NET INCOME/LOSS** 1,750.66

**LIABILITIES**
Deferred Dues Income 2,166.77  
Net Assets, Beginning of Year 12,648.61  
Net Income/Loss Current Year 1,750.66

**UNRESTRICTED NET ASSETS 2013 $**
$16,566.04

**Membership:** As of the end of 2013, the Division has 670 members. Please encourage your colleagues to keep their Division memberships active, and remember that GSA accepts new membership applications online at the GSA website: [http://www.geosociety.org](http://www.geosociety.org)
The 2013 G.K. Gilbert awardee is Dr. Alan D. Howard, Professor, University of Virginia.

Dr. Howard is a preeminent landform evolution modeler and hydrologist in Martian studies. He and his students have produced groundbreaking results on the dominant role of precipitation and runoff in the evolution of the ancient Martian surface. In addition, Dr. Howard has made major contributions to the understanding of Martian polar processes, as well as advancing our understanding of the geologic processes that operated on early Mars.

Alan D. Howard received his Ph.D. in Geography and Environmental Engineering at the Johns Hopkins University in 1970. After working as Assistant Professor in the Department of Geography at University of Virginia Charlottesville, he became an Associate Professor in the Department of Environmental Sciences at the University of Virginia Charlottesville in 1973. He was promoted to full Professor in 1984.
**We need your help!** This would be a great time to make a contribution to the Dwornik, Shoemaker, G. K. Gilbert or student travel grant funds! Unlike many other charitable donations, your donation to these funds will produce positive results you can see for yourself as you encourage and support planetary scientists, both current and future. Donations can either be made online ([http://www.gsafrweb.org/makeadonation.html](http://www.gsafrweb.org/makeadonation.html)) or by mail. If by mail, please include a check or money order, made payable to *Planetary Geology Division, GSA*.

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**WHEN MAKING A DONATION, PLEASE PUT THE BALLOT AND CHECK IN AN ENVELOPE AND MAIL IT TO:**

The Geological Society of America, P.O. Box 9140, Boulder, CO 80301-9140.

Need more information about PGD? Check out our website: [http://rock.geosociety.org/pgd/index.htm](http://rock.geosociety.org/pgd/index.htm)

**GSA 2012-2013 Planetary Geology Division Officers**

- **Chair:** Robert C. Anderson, NASA Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109; robert.c.anderson@jpl.nasa.gov
- **First Vice-Chair:** Devon Burr, Department of Earth and Planetary Sciences, University of Tennessee, Knoxville, TN 37996; dburr1@utk.edu
- **Second Vice-Chair:** Debra L. Buczkowski, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723; debra.buczkowski@jhuapl.edu
- **Secretary-Treasurer:** Danielle Y. Wyrick, Southwest Research Institute, San Antonio, TX 20723; danielle.wyrick@swri.org
- **Past Chair:** Simon Kattenhorn, Department of Geological Sciences, University of Idaho, Moscow, ID 83844; simkat@uidaho.edu

**Current Planetary Geology Division Officers’ Biographies**

(Past Chair) Anderson, Robert C., Planetary Geology, Structural Geology, Planetary regoliths, Old Dominion University, B. S. (Geology) 1979, Old Dominion University, M.S. (Geology/Planetary Tectonics) 1985, University of Pittsburgh, PhD. (Geology/Remote Sensing) 1995. Professional

(Chair) Burr, Devon M.,
Planetary Geomorphology, Remote Sensing.
Education: United States Naval Academy, U.S., B.S. in Naval Science (with Honors); St John’s College, Santa Fe, New Mexico, M.A. in Liberal Arts; University of Iowa, M.S. in Geology; University of Arizona, Ph.D. in Geoscience, minor in Planetary Sciences, 2003.


dburr1@utk.edu
Danielle Y., Planetary geology, structural geology, tectonics.
Education: University of Texas at San Antonio, BS (Multidisciplinary Science) 2002; University of Texas at San Antonio, MS (Geology) 2005.

Professional Experience:
Senior Research Scientist, Southwest Research Institute, 2002 - present.

Professional Affiliations: AGU, GSA. Service: NASA panel reviews (PGG, MDAP, DAVPS). Honors/Awards: 2004 Pellas Ryder Best Student Paper. Published 13 research articles, 36 conference presentations and 27 technical reports; External research funding from NASA. Research Interests: structural geology, tectonic/volcanic interaction, analog field investigations of Mars.
danielle.wyrick@swri.org

Debra L., Planetary Geology, Structural Geology, geologic mapping.
Education: Boston University BA (Astronomy) 1992; University of Massachusetts Amherst, MS (Geology) 2002, PhD Geosciences) 2005.

Professional Experience:
JHU/APL professional staff 2008-present; JHU/APL postdoctoral research associate 2005-2008; MRO CRISM team member 2007-present; Dawn mission to Vesta, participating scientist 2010-present.


Debra Buczkowski

Education: Princeton University AB summa cum laude (Astrophysics & Engineering Physics) 2006; Cornell University PhD (Astronomy & Geology) 2010.

Professional Experience: Assistant Professor, Georgia Institute of Technology, School of Earth & Atmospheric Sciences, 2011-present; Postdoctoral Associate, Cornell/JPL, 2010-2011; MRO/CRISM & HiRISE co-investigator 2013-present, collaborator 2006-2013; MSL/SAM collaborator 2008-present; MER collaborator 2006-present; ExoMars TGO/CaSSIS co-investigator 2010-present.


James Wray