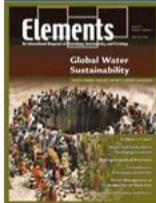


Volume 7

2011





Meteoritical Society

<http://meteoriticalsociety.org>

FROM THE PRESIDENT



Ed Scott, President

This issue of *Elements* shows that meteoritics and cosmochemistry are flourishing and exciting fields of research. Meteorites bring us ground truth for Mars, the Moon, asteroids, comets, and stars and a foundation for cosmochemistry. If you are interested in these subjects but are not yet a member, we cordially invite you to join our society. If you are a member, we are glad to receive your comments and suggestions.

On behalf of the members, I'd like to thank the outgoing officers who served the society with extraordinary distinction. Joe Goldstein served

for six years on Council, including two as president. Alan Rubin was treasurer for four years, and Jeff Grossman completed six years as secretary. Past-President Hiroko Nagahara, who has successfully guided the Council through recent dramatic changes, remains on Council.

Joe Goldstein spearheaded the efforts to bring stability and order to our finances, principally by joining with Wiley-Blackwell to publish *Meteoritics and Planetary Science*. Our tax filings and nonprofit status are now up-to-date, and our accounts are approved annually by the Audit Committee. Membership renewals and applications are handled efficiently for us by the Mineralogical Society of America.

Jeff Grossman, who kept the Council and committees running efficiently for six years, organized the *Meteoritical Bulletin Database*, which provides an invaluable online source of information about meteorites. He also set up an electronic submission form and voting system to help the Meteorite Nomenclature Committee cope with the thousands of new meteorites that are recovered each year.



Greg Herzog, new secretary

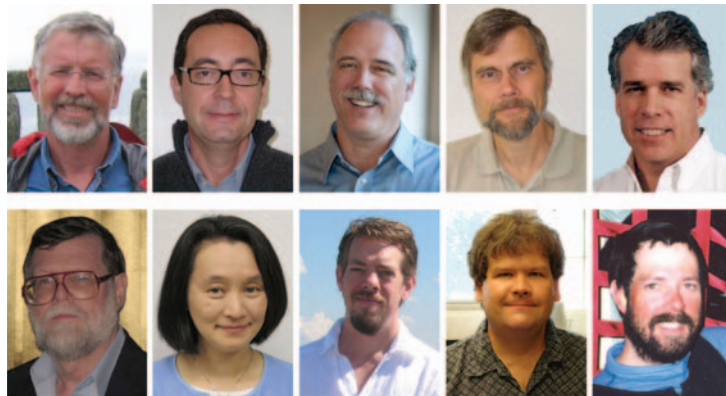


Rhian Jones, new treasurer

Greg Herzog is our new secretary and Rhian Jones is treasurer. The other Council members are vice president Monica Grady and councilors Gretchen Benedix, Nancy Chabot, Hasnaa Chennaoui, Harold Connolly, Alex Deutsch, Luigi Folco, Keiji Misawa, and Kevin Righter. The next two years should not require as many major decisions. We will be working with our supporting committees and editors to continue to improve our journals, meetings, websites, and other services.

Ed Scott, President 2011–2012
University of Hawai'i
escott@hawaii.edu

2010 SOCIETY FELLOWS



LEFT TO RIGHT, FROM TOP ROW: **Dan Britt** (University of Central Florida), **Marc Chaussidon** (CRPG-CRNS, Nancy), **Denton Ebel** (American Museum of Natural History), **Henning Haack** (Natural History Museum of Denmark, University of Copenhagen), **Alan Hildebrand** (University of Calgary), **John Jones** (NASA Johnson Space Center), **Noriko Kita** (University of Wisconsin), **Scott Messenger** (NASA Johnson Space Center), **Larry Nittler** (DTM, Carnegie Institution of Washington), and **Kevin Righter** (NASA Johnson Space Center)

ALMAHATA SITTA – AN AMAZING NEW METEORITE



Cover of October/November issue of *Meteoritics and Planetary Science*. The photo shows Peter Jenniskens in the Nubian Desert and two meteorites in the foreground.

The October/November issue of *Meteoritics & Planetary Science* contains 20 papers by over 100 authors on an extraordinary meteorite, Almahata Sitta, and its parent asteroid, 2008 TC₃, which was studied by astronomers before it entered the atmosphere over the Nubian Desert in Sudan and broke up. This meteorite provided the first material to be recovered from an observed near-Earth asteroid. Over 600 samples with a total weight of 11 kg were recovered by a team led by Peter Jenniskens of the SETI Institute and Prof. Muawia Shaddad of the University of Khartoum.

Many of the samples are ureilites, a rare type of coarse-grained meteorite made of graphite-rich, olivine-pigeonite rock that resembles peridotite from the Earth's mantle. But some are made of enigmatic, fine-grained, pyroxene-rich material, which appears to be a very porous kind of ureilite. Still more puzzling are small samples of diverse types of ordinary and enstatite chondrites, which formed in totally different asteroids yet appear to be part of the same meteorite fall.

This meteorite and its parent asteroid have provided a wonderful puzzle for mineralogists, cosmochemists, physicists, and astronomers. How were carbon-rich rocks formed 4500 My ago in an asteroid perhaps 200 km across that partly melted. How and when were they mixed with samples from numerous other asteroids that never melted? Answering these questions and others will provide scientists with stimulating research possibilities.

Mike Zolensky
NASA Johnson Space Center



Meteoritical Society

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FROM THE PRESIDENT

2011 Annual Meeting Invitation



It is my great pleasure to invite meteoriticists and their guests to attend the 74th Annual Meeting of the society at the University of Greenwich, London, on August 8–12 this year. The local organizing committee, chaired by Gretchen Benedix (Natural History Museum, London), Phil Bland (Imperial College, London), Monica Grady (The Open University), Sara Russell and Caroline Smith (Natural History Museum), has selected a remarkable site for the meeting. The University of Greenwich occupies the Old Royal Naval College on the bank of the River Thames, a short distance from the Royal Observatory, home of Greenwich Mean Time. This will be the first time we have met at a UNESCO World Heritage Site and, with the latest results from the Hayabusa asteroid sample return and the Dawn mission to asteroid Vesta, we can expect a stimulating and exciting meeting.

Annual Meetings

Our society has wonderful annual meetings—mainly because they are organized at attractive locations by small groups of intensely loyal and enthusiastic members around the world who compete to make each meeting better than the last. If you are interested in organizing our annual meeting in 2016, which will probably be held outside North America, please contact me (escott@higp.hawaii.edu). The council should make a decision when we meet at the Lunar and Planetary Science Conference in 2012.

Sponsors of Annual Meetings



Drew Barringer

Our annual meeting organizers rely on the loyal support of two organizations that have sponsored our annual meetings for many years, the Barringer Crater Company and the Lunar and Planetary Institute. Last year, 18 students from seven countries received travel grants from the Barringer Crater Company to attend the New York meeting. Over the years, hundreds of students have been helped by these travel grants. I'd especially like to thank Drew Barringer, the president of the company, for enthusiastically supporting our students and for instituting the

Barringer Lecture at our annual meetings. This year, Martin Rees, the Astronomer Royal, joins an impressive list of speakers, including Dava Sobel, Michael Mayor, and Torrence Johnson, who have provided stimulating and provocative talks for our members and their guests.

For the last 30 years, the staff of the Lunar and Planetary Institute (LPI) in Houston has helped the organizers of our annual meetings in numerous ways—by publicizing the meetings, receiving abstracts, printing programs and distributing them at meetings, arranging logistics for the program committees, and registering participants. Without their help our members could not offer to host meetings. We are very grateful to Mary Cloud, who left the LPI last year, for leading a group of highly efficient staff who help to make our meetings such outstanding successes.

Other Meetings in 2011

Two other meetings this year of interest to members are cosponsored by the society and the LPI: the “Asteroids, Comets, and Meteors” (ACM) meeting on July 18–22, 2011, in Niigata, Japan, and the “Formation of the First Solids in the Solar System” workshop for meteoriticists and astronomers on Kauai, Hawai'i, on November 7–9, 2011. The ACM 2011 meeting is the 11th in a series of international meetings held every three years that focuses on small Solar System bodies. Now that we have samples from several known asteroids and comets, there are even greater incentives for meteoriticists to interact more with other planetary scientists to understand the geological histories of their rocks.

The Kauai workshop in November, which is dedicated to my colleague and mentor, Klaus Keil, in honor of his distinguished career in meteoritics and cosmochemistry, will focus on understanding the meteorite record of the early Solar System—especially the oldest solids, the Ca–Al-rich inclusions, and the information that can be obtained from short-lived isotopes and stable isotope anomalies, including oxygen in CAIs, chondrules, and other meteorite samples. Sasha Krot, who is organizing this workshop, and Sho Sasaki, chair of the ACM 2011 scientific organizing committee, have arranged with the editor of *Meteoritics and Planetary Science*, Tim Jull, for participants at both meetings to submit papers based on their presentations to two special issues of the journal. These two meetings will provide opportunities for our members to interact with scientists from related fields and allow the society to publicize our journal and research activities to a broader audience.

Upcoming Society-Sponsored Meetings Calendar for 2011

Meeting	Location	Dates	Abstract Deadline
74 th Meteoritical Society Annual Meeting	Greenwich, London, England	August 8–12	May 24
Asteroids, Comets, Meteors 2011	Niigata, Japan	July 18–22	April 15
First Solar System Solids Workshop	Kauai, Hawai'i, USA	November 7–9	August 22

For further information, see the society website.

Endowment Fund

Although the Meteoritical Society does not have a specific fund to support meetings, we do have an endowment fund, which is used to finance outreach projects to educate the public, teachers, students, and scientists in other fields. It has recently made small grants to the organizers of meetings (typically \$1500–\$3000) to support these objectives. Recently funded meetings include the first Desert Meteorite Workshop, in Casablanca (2008); the first Arab Impact Cratering and Astrogeology Conference, in Amman (2009); a meeting entitled “The Ries Crater, the Moon and the Future of Human Space Exploration,” in Nördlingen, Germany (2010); and a special session on African meteorites and impact craters in the 23rd Colloquium of African Geology, in Johannesburg (2011). I strongly encourage members to apply for these funds if they participate in projects that meet our criteria. Full details are available on the society website.

Support for Members in Low-Income Countries

Our society offers highly reduced subscription rates to about a dozen members in low-income countries (those on the so-called HINARI lists), but so far we have not had a scheme to help members from these countries, other than students, to travel to our annual meetings. Our council has just approved a plan from the Endowment Committee to provide such support, which will be available for the Greenwich meeting. Our goal is to raise additional funds for the Endowment Fund to provide long-term support for this scheme.

SOCIETY COMMITTEE MEMBERS FOR 2011

Names of chairs are in **bold**.

Names of members who left the committee last year are in *italics*.

Audit Committee

Andrew Davis (University of Chicago)

Mini Wadhwa (Arizona State University)

Paul Warren (University of California, Los Angeles)

Nancy Chabot (Johns Hopkins University Applied Physics Laboratory)

John Jones (NASA Johnson Space Center)

Barringer Medal Committee

Christian Koerber (Natural History Museum, Vienna)

Joanna Morgan (Imperial College, London)

Elisabetta Pierazzo (Planetary Science Institute, Tucson)

Jeff Plescia (Johns Hopkins University Applied Physics Laboratory)

Nadine Barlow (Northern Arizona University)

Endowment Committee

Drew Barringer (Barringer Crater Company)

Marc Caffee (Purdue University)

Joseph Goldstein (University of Massachusetts at Amherst)

Uwe Reimold (Humboldt University, Berlin)

Tim Swindle (University of Arizona)

Candace Kohl (University of California, San Diego)

Joint Publications Committee

Jeff Grossman (NASA Headquarters)

Tim Jull (University of Arizona)

Frank Podosek (Washington University, St. Louis)

Ed Scott (University of Hawai'i)

Brigitte Zanda (Museum National d'Histoire Naturelle, Paris)

Bernard Marty (CRPG, Université de Nancy)

David Mittlefehldt (NASA Johnson Space Center)

Leonard Medal Committee

Conel Alexander (Carnegie Institution of Washington)

Mike Gaffey (University of North Dakota)

Tim McCoy (Smithsonian Institution)

Herbert Palme (Senckenberginstitut, Frankfurt)

François Robert (Museum National d'Histoire Naturelle, CNRS, Paris)

Monica Grady (Open University)

McKay Award Committee

Byeon-Gak Choi (Seoul National University)

Sara Russell (Natural History Museum, London)

Nancy Chabot (Johns Hopkins University Applied Physics Laboratory)

Nicolas Dauphas (University of Chicago)

Christine Floss (Washington University, St. Louis)

Jon Friedrich (Fordham University)

Daniel Glavin (NASA Goddard Space Flight Center)

Dante Lauretta (University of Arizona)

Scott Messenger (NASA Johnson Space Center)

Shogo Tachibana (University of Tokyo)

Membership and Service Award Committee

Phil Bland (Imperial College, London)

Gary Huss (University of Hawai'i)

Takuya Kunihiro (Okayama University)

Andreas Pack (Universität Göttingen)

Alex Ruzicka (Portland State University)

Jutta Zipfel (Senckenberginstitut, Frankfurt)

Hasnaa Chennaoui (Hassan II University, Casablanca)

Akira Yamaguchi (National Institute of Polar Research, Tokyo)

Meteorite Nomenclature Committee

Monica Grady (Open University)

Richard Greenwood (Open University)

Jeff Grossman (NASA Headquarters)

Henning Haack (Natural History Museum, University of Copenhagen)

Chris Herd (University of Alberta)

Weibiao Hsu (Purple Mountain Observatory, China)

Takashi Mikouchi (University of Tokyo)

Smail Mostefaoui (Museum National d'Histoire Naturelle, Paris)

S. V. S. Murty (Physical Research Laboratory, Ahmedabad)

Pierre Rochette (CEREGE CNRS Aix-Marseille University)

Alex Ruzicka (Portland State University)

Caroline Smith (Natural History Museum, London)

Kees Welten (Space Sciences Laboratory, University of California)

Linda Welzenbach (Smithsonian Institution)

Michael Weisberg, editor (Kingsborough College, City University of New York)

Akira Yamaguchi (National Institute of Polar Research, Tokyo)

Hasnaa Chennaoui (Hassan II University, Casablanca)

Pellas-Ryder Award Committee

Christine Floss (Washington University, St. Louis)

Dante Lauretta (University of Arizona)

Mario Trieloff (University of Heidelberg)

Publications Committee (MAPS)

Nicholas Dauphas (University of Chicago)

Cyrena Goodrich (Planetary Science Institute)

Rhian Jones (University of New Mexico)

Dave Mittlefehldt (NASA Johnson Space Center)

Andreas Pack (Universität Göttingen)

Larry Nittler (Carnegie Institution of Washington)

Brigitte Zanda (Museum National d'Histoire Naturelle, Paris)

Dante Lauretta (University of Arizona)

Rainer Wieler (ETH Zurich)

Committees

The Endowment Committee is one of ten committees that advise the council on its publications, awards, finances, and membership issues. Typically one or two new members are appointed each year by the president and serve for 2–4 years. Although the current members are listed on our website (in a rather obscure location), we've listed them here with their affiliations because they do not get the appreciation they deserve. Without their enthusiastic help, the council couldn't function! Names of members who left the committee last year are in *italics*. In addition to these members, the Joint Publications Committee, which oversees *Geochimica et Cosmochimica Acta*, also has members from the Geochemical Society, and the Paul Pellas-Graham Ryder Award Committee has members from the Planetary Geosciences Division of the Geological Society of America. New members will be needed next year for the ten committees. Please let me know if you have an interest in helping your colleagues on a specific committee.

The Nominating Committee, which does not advise the council, is solely responsible for selecting a slate of officers and councilors for the next council. The committee members for this year are Joe Goldstein (University of Massachusetts, Amherst), Candace Kohl (University of California, San Diego at La Jolla), Gordon Osinski (University of Western Ontario), Rainer Wieler (Chair, ETH Zurich), Akira Yamaguchi (National Institute of Polar Research, Tokyo), and Brigitte Zanda (Museum National d'Histoire Naturelle, Paris). If you would like to serve on the 2013-2014 council or recommend someone else, please contact the chair, Rainer Wieler (wieler@erdw.ethz.ch) or another committee member by June 1.

Donations from Members

I'd like to publicly thank all those members who generously made donations to the society when they paid their dues in 2010. Our treasurer, Rhian Jones, gave me these details: 47 members donated a total of \$1891 to support the Gordon McKay Award for the best presentation by a student at our annual meeting, 46 members donated \$2311 to help fund the Nier Award for young scientists, and 142 members gave a total of \$9266 to the Endowment Fund. To all these members—a big *mahalo!* Your generosity helps us to grow our endowment so we can start new projects, like funding scientists from low-income countries, and continue to support young scientists.

Elements

We hope that all our members are enjoying *Elements*, as it plays a vital role in helping us communicate with our members, scientists in related fields, and the taxpayers who support much of our research. Any scientific society that fails to use such a successful means of explaining why their field is exciting and important will not flourish.

The Meteoritical Society will contribute a new feature page to *Elements* called "CosmoElements." This page will highlight new discoveries in the style of the very successful brief reports called "CosmoSparks" on the Planetary Science Research Discoveries website. If you have suggestions for "CosmoElements," the society news page, or a thematic issue for *Elements*, please contact our society news editor, Cari Corrigan (corrigan@si.edu).

Ed Scott (escott@higp.hawaii.edu)
Meteoritical Society President

<http://meteoriticalsociety.org>



ARAB IMPACT CRATERING AND ASTROGEOLOGY CONFERENCE

In November 2009 the Meteoritical Society sponsored the first Arab Impact Cratering and Astrogeology Conference (AICAC), which took place in Amman, Jordan, and brought together scientists and students from a number of Arab countries and from Europe and the Americas. AICAC II is currently scheduled to take place in November 2011 at the Hassan II University in Casablanca, Morocco. Please take note of the dates and the information given on the conference website, www.fsac.ac.ma/aicacii/index.html. Current developments in the Middle East and North Africa will be reviewed in July, with a view to deciding on the final go-ahead for this conference, in good time before the annual meeting of the Meteoritical Society in early August.

METEORITE NOMENCLATURE COMMITTEE

Report from the Chair, Chris Herd



The Meteorite Nomenclature Committee (NomCom), established in 1973 by the Meteoritical Society, governs the naming of meteorites and disseminates information on all new meteorites through the *Meteoritical Bulletin* and the Meteorite Database (www.lpi.usra.edu/meteor/metbull.php). NomCom assesses dense collection areas and develops the formal process for meteorite nomenclature. The Committee reviews names and classifications for several hundred new meteorites

from around the world each year. Since the last report, 603 meteorites (354 of which are non-Antarctic) have been approved for *Meteoritical Bulletin* 99 (forthcoming).



After nearly 4 years of service, Michael Weisberg is retiring as editor of the *Meteoritical Bulletin*. The committee is very thankful for his dedicated service. As of April 1, 2011, we welcome **Laurence Garvie** (lgarvie@asu.edu) as the new editor. Other membership changes were made at the start of the year; a list of current NomCom members and their roles can be found at www.meteoriticalsociety.org/bulletin/TermExpirations2011.htm.

Part of the approval process for new meteorites is the designation of a repository for type specimens. Type specimen repositories play an

important role in preserving material for scientific research and in curation of that material over the long term. In order to keep our contact information up to date and to gather information on best practices for curation, we are in the process of circulating an online survey to curators. We expect that the outcome of this process will benefit repositories and the scientific community alike. On a related note, a small change has been made to the minimum mass in our guidelines (§7.1f): we now recommend (but do not require) that larger type specimens be provided when the total mass of a meteorite is greater than 400 g. The complete, up-to-date guidelines can be found at www.meteoriticalsociety.org/bulletin/nc-guidelines.htm.

Please do not hesitate to contact me (herd@ualberta.ca) with questions or concerns about NomCom and especially with suggestions for improvement. As always, essential information on meteorite nomenclature, instructions, and the template for reporting new meteorites may be found on our home page, http://meteoriticalsociety.org/simple_template.cfm?code=pub_bulletin.

From the Outgoing NomCom Secretary, Michael Weisberg



It has been a pleasure serving as editor of the *Meteoritical Bulletin* for the past three years, but the editorship is also a formidable task. NomCom is one of the most active and important committees serving the meteoritic and planetary science community. The editor, an *ex officio* member of the Meteorite Nomenclature Committee, manages the meteorite review and voting process, edits meteorite submissions, and is the central point of contact for submission of all new non-Antarctic meteorites. The editor is also responsible for publishing the *Meteoritical Bulletin* twice each year. As editor I was lucky to have support from the current chair, Chris Herd, past chairs Jutta Zipfel and Kevin Righter, and database editor Jeff Grossman. The meteorite database developed and managed by Jeff has become an invaluable tool for conducting NomCom business and a major resource for researching meteorite names, classification, and dense collection areas.

GREENWICH EXHIBIT

From now until the end of August, the Royal Observatory's Impact Season is focussing on asteroids, comets, meteorites and the craters they produce throughout the Solar System. A brand new exhibition, "Impact: Collisions and Catastrophes," is accompanied by a programme of public events, including talks and lectures by scientists, meteorite-handling sessions, and specially produced planetarium shows. For more information, see the Impact website: www.nmm.ac.uk/visit/exhibitions/on-display/impact/.



Artist's impression of a large fireball over London



Meteoritical Society

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REPORT FROM THE TREASURER



Rhian Jones

I am happy to report that the Society's finances are on a sound footing, and that both our operating fund and endowments are very healthy. A large portion of the operating budget relates to publication of *Meteoritics and Planetary Science (MAPS)*, our monthly international journal of planetary science, which covers topics including the origin and history of the Solar System, the planets and natural satellites, interplanetary dust and the interstellar medium, lunar samples, meteors, meteorites, asteroids, comets, craters, and

tektites. Last year saw a financial transition because

we transferred publication of *MAPS* to Wiley. The income from Wiley in 2010 closely matched the expenses of the editorial office at the University of Arizona, which is managed by Editor Tim Jull. Thus the Society achieved its major goal of gaining a greater level of financial security for *MAPS*. Society memberships include a subscription to *MAPS*, either electronic only or electronic plus printed version. The electronic-only option, which currently saves members \$30, was selected by about one-third of our members in 2011. Collection of membership dues for 2012 will begin in October. I would like to encourage members to pay their dues in a timely manner, as this helps greatly with financial planning.

Our investment fund, which includes three separate endowed funds, continues to grow steadily. The Nier Fund supports the annual Nier Prize, which recognizes outstanding research by young scientists in meteoritics and closely allied fields. This year's recipient is Dr. Fred Ciesla of the University of Chicago. The Gordon A. McKay Fund supports an award that is given to the student who gives the best oral presentation at the annual meeting of the Society. Last year's award was given to Rachel Smith of the University of California, Los Angeles. The General Endowment Fund supports a variety of outreach projects. For example, earlier this year money from the General Endowment Fund was used to cosponsor a special session entitled "African Meteorites and Impact Craters," held as part of the 23rd Colloquium of African Geology at the University of Johannesburg. The fund will also provide travel support to help scientists from low-income countries attend the Meteoritical Society meeting in London in August, which will help to strengthen and promote our international community. Many members contribute generously to support all of these funds, and your donations are always greatly appreciated.

We always welcome suggestions and ideas for ways in which the General Endowment Fund can be utilized to further the goals of promoting and enriching the Society's activities.

Dr. Rhian H. Jones
Meteoritical Society Treasurer

MEMBERSHIP REPORT

As of May 2011, the Meteoritical Society is made up of 708 regular members, 128 student members, 138 retired members, and 13 life members, for a total of 987. Many thanks to our secretary, Greg Herzog, for coming up with the interesting statistics about members of our Society. We can be proud that we have members in 53 countries, but as Greg notes, the statistics also show that we have a lot of work to do to gain members in India, China, and many other countries. The Society does have a scheme to subsidize the annual dues for members in low-income countries. Prior approval is required from the Membership Committee for this rate; please see our website if you need more information.

Country	Member	Student	Retired	Life	Total
United States	340	51	81	7	479
Japan	85	13	7		105
Germany	79	10	12	2	103
United Kingdom	41	15	4		60
France	34	6	6	1	47
Canada	28	10	4		42
Switzerland	18	5	4		27
Australia	12	1	2		15
Italy	12		3		15
Argentina	1	5	5	1	12
Brazil	4	3	1		8
Denmark	3	2	1	1	7
Austria	6				6
Russian Federation	5		1		6
Sweden	4	2			6
Belgium	3	1	1		5
Netherlands	3	1	1		5
Czech Republic	3		1		4
Finland	2	2			4
Poland	4				4
India	2		1		3
Korea, Republic Of	2	1			3
China	2				2
Ireland	1		1		2
Spain	2				2
Grand Total	708	128	138	13	987

The following countries have one member at the time of this printing: Botswana, Chile, Estonia, Greece, Holy See (Vatican City State), Malaysia, Mexico, New Zealand, Norway, Philippines, Slovakia, South Africa, Thailand, Taiwan, Uruguay.

For those who wish to avoid the hassle of paying dues every year, consider becoming a life member! For more information and details on how to become a member of the Meteoritical Society, please see our web page at www.meteoriticalsociety.org.

2011 PELLAS-RYDER AWARD WINNER

The Pellas-Ryder Award for the best student paper in planetary sciences is jointly sponsored by the Meteoritical Society and the Planetary Geology Division of the Geological Society of America. It is awarded to an undergraduate or graduate student who is the first author of the best planetary science paper published in a peer-reviewed scientific journal during the year prior to the award. The award has been given since 2001 and honors the memories of meteoriticist Paul Pellas and lunar scientist Graham Ryder.



Andrew Beck

This year's winner of the Pellas-Ryder Award is **Andrew Beck** of the University of Tennessee for his paper entitled "Diogenites as Polymict Breccias Composed of Orthopyroxenite and Harzburgite"¹. Andrew studied several diogenite meteorites for their mineralogical and elemental compositions, and based on this study proposed a revised taxonomy for the HED (howardites, eucrites, and diogenites) suite of meteorites. These and additional results have important implications for the bulk composition and petrogenesis of 4 Vesta, an asteroid that will be visited by NASA's Dawn mission in late 2011.

¹ Beck AW, McSween HY Jr (2010) *Meteoritics and Planetary Science* 45: 850-872



Meteoritical Society

<http://meteoriticalsociety.org>

2012 ANNUAL MEETING

The 75th annual meeting of the Meteoritical Society will be held in Cairns, in the far north of Queensland, Australia, at the Cairns Convention Centre in 2012. The organizers invite you to attend the meeting and visit our city. Cairns, located close to the Great Barrier Reef and tropical rainforests, will make a spectacular location for our conference. The meeting will be held on August 12–17, which is in the dry season of the tropics.

We expect to have a wide variety of interesting scientific sessions, and we are also looking at running a field trip to notable craters in Australia. We are still in the planning stages, so please let us know if you are interested in participating. Full details as given in the first announcement are available on the LPI website, www.lpi.usra.edu, and more information is available on the local website, <http://shrimp.anu.edu.au/metsoc2012>. For information not available on the websites, please contact organizer Trevor Ireland at Trevor.Ireland@anu.edu.au.

We look forward to seeing you in Cairns in 2012.



STUDENT TRAVEL AWARDS

Over 40 students attending the annual meeting of the society in Greenwich, UK, in August received travel grants. We are most grateful to the many organizations and society members who contributed generously to the travel grant fund, especially the Barringer Crater Company, NASA (Cosmochemistry Program), the European Space Agency, the Meteoritical Society Endowment Fund, Dr. Lucy McFadden, and an anonymous donor. The awardees are listed below, together with the funding organization.

THE BARRINGER CRATER COMPANY

Alexandra Blinova, UNIVERSITY OF ALBERTA • Chelsea Brunner, UNIVERSITY OF NEW MEXICO • Hana M. Chappell, UNIVERSITY OF NEW MEXICO • Jangmi Han, UNIVERSITY OF NEW MEXICO • Hatsumi Ishida, TOHOKU UNIVERSITY • Nataliya V. Kychan, INSTITUTE OF ENVIRONMENTAL GEOCHEMISTRY, NAS OF UKRAINE • Seann J. McKibbin, AUSTRALIAN NATIONAL UNIVERSITY • Heba Tag Elsir Meadni, UNIVERSITY OF KHARTOUM • Ghada Mohammed Taha Osman, UNIVERSITY OF KHARTOUM • Xuchao Zhao, INSTITUTE OF GEOLOGY AND GEOPHYSICS, CHINESE ACADEMY OF SCIENCES

NASA – COSMOCHEMISTRY

Andrew Beck, UNIVERSITY OF TENNESSEE, KNOXVILLE • Eve Berger, UNIVERSITY OF ARIZONA • Maitrayee Bose, WASHINGTON UNIVERSITY • Gregory A. Brennecke, ARIZONA STATE UNIVERSITY • Melanie B. Channon, CALIFORNIA INSTITUTE OF TECHNOLOGY • Kathryn Gardner-Vandy, UNIVERSITY OF ARIZONA • Evan Groopman, WASHINGTON UNIVERSITY • Ellen Harju, UNIVERSITY OF CALIFORNIA, LOS ANGELES • Katharine Robinson, UNIVERSITY OF HAWAII, MANOA • Matthew Sanborn, ARIZONA STATE UNIVERSITY • Adam Sarafian, UNIVERSITY OF GEORGIA • Xiaoyu Shi, UNIVERSITY OF CALIFORNIA, DAVIS • Rachel L. Smith, UNIVERSITY OF CALIFORNIA, LOS ANGELES • Samantha E. Smith, TEXAS CHRISTIAN UNIVERSITY • Devin Schrader, UNIVERSITY OF ARIZONA • Driss Takir, UNIVERSITY OF TENNESSEE, KNOXVILLE • Myriam Telus, UNIVERSITY OF HAWAII, MANOA • Mark Tyra, UNIVERSITY OF NEW MEXICO • Curtis Williams, ARIZONA STATE UNIVERSITY

EUROPEAN SPACE AGENCY

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INTERNATIONAL METEORITE COLLECTORS ASSOCIATION – BRIAN MASON TRAVEL AWARD

Florian J. Zurfluh, INSTITUT FÜR GEOLOGIE, UNIVERSITY OF BERN

Brian Mason Award

In 1997, Joel Schiff, the first editor of *Meteorite* magazine, created a travel award in honor of Brian Mason. The award is given to a student attending the annual meeting of the society who submits an abstract that presents clearly explained, exciting results of particular interest to readers of *Meteorite* magazine. The recipient is required to write a popular account of his or her work for the magazine. Since 2008, the award has been generously funded by the International Meteorite Collectors Association.



This year the program committee for the Greenwich meeting selected **Florian J. Zurfluh** as the winner of the Brian Mason Award. Florian is a student at the University of Bern in Switzerland. He submitted an abstract entitled "New insight into the strontium contamination of meteorites," authored by F. J. Zurfluh, B. A.

Hofmann, E. Gnos, U. Eggenberger, I. M. Villa, N. D. Greber, and A. J. T. Jull. This paper focuses on understanding the strontium uptake of meteorites found in hot deserts (Oman).

CALL FOR AWARD NOMINATIONS

Please consider nominating a colleague for one of the society's awards. Nominations should be sent to Secretary Greg Herzog (herzog@rutchem.rutgers.edu) by January 15 (January 31 for the Pellas–Ryder Award). For more information and details on how to submit a nomination for any of these awards, please see the latest Newsletter on the society website or e-mail the secretary.

The society presents a number of awards each year. The **Leonard Medal** honors outstanding contributions to the science of meteoritics and closely allied fields. The **Barringer Medal and Award** recognize outstanding work in the field of impact cratering and/or work that has led to a better understanding of impact phenomena. The **Nier Prize** recognizes outstanding research in meteoritics and closely allied fields by young scientists (under 35). The **Service Award** honors members who have advanced the goals of the Meteoritical Society to promote research and education in meteoritics and planetary science, in ways other than by conducting scientific research. The **Paul Pellas–Graham Ryder Award** is given for the best student paper in planetary science and is awarded jointly by the Meteoritical Society and the Planetary Geology Division of the Geological Society of America.



Meteoritical Society

<http://meteoriticalsociety.org>



University of Greenwich, Maritime campus, from the Thames River. PHOTO: ROGER HEWINS

2011 ANNUAL MEETING REPORT

The 74th annual meeting of the Meteoritical Society was held in London, United Kingdom, on 8–12 August, 2011. The meeting took place on the campus of the University of Greenwich, on the grounds of the Old Royal Naval College. Over 520 abstracts were submitted by about 460 different authors, breaking the previous record set in New York for abstract submissions. In an effort to accommodate as many oral presentations as possible, a third parallel session was added for the entire meeting. There were 284 oral and 237 poster presentations assigned. The Tuesday poster session was cancelled due to social unrest in the surrounding areas, but the Thursday session was expanded to accommodate 90% of the posters from Tuesday.

There were 477 participants (members and nonmembers), of which 121 were students, and a further 71 registered guests for a total attendance of 548, making the London meeting the second-largest annual meeting in Society history. Thirty-eight students and seven professionals from low-income countries were awarded travel funds totaling about \$51,000.

The scientific program was rich and stimulating. It covered a wide range of topics, including the formation of the Solar System, space missions, asteroids (Itokawa and Vesta), impacts and shock processes, refractory inclusions, chondrules, carbonaceous chondrites, ordinary and enstatite chondrites, differentiated objects, isotopes, 3-D structures of meteorites, IDPs and micrometeorites, and organic matter. A session dedicated to the memory of Frank Stadermann covered all aspects of micro- to nanoanalysis techniques and results. There was also a session in memory of Betty Pierazzo on modeling and experiments related to impact processes.



The banquet was held in Painted Hall at the University of Greenwich. PHOTO: CARI CORRIGAN

The Barringer Invitational Lecture was held in the main hall of the Natural History Museum in South Kensington and was presented by Professor Martin Rees, Astronomer Royal and former president of the Royal Society. He spoke to a full crowd on the topic "From Big Bang to Biosphere."

The Wednesday afternoon excursion was a guided boat tour of London. The three-hour tour ran from the Thames Barrier to the east to St. Mary's church in Battersea to the west.

The abstract volume and program are available online at www.lpi.usra.edu/meetings/metsoc2011/pdf/program.pdf.



Field Trip to the Scottish Highlands

Fifteen meteoriticists enjoyed a premeeting field trip to see the geology and scenery of the Scottish Highlands. The trip was led by Martin Lee (University of Glasgow) and John Cosgrove (Imperial College London), and included a spectacular visit to Fingal's Cave and the columnar basalts on the island of Staffa and stops on the islands of Iona, Mull, and Skye.

2011 SOCIETY AWARD WINNERS

The Society gives five major awards each year. For more information on individual awards see the the Society webpage. Nominations for the Leonard, Nier, and Barringer awards are due by January 15. The deadline for the Service Award and the Pellas-Ryder Award is January 31.



The LEONARD MEDAL, which is the Society's highest and oldest award, is given to individuals who have made outstanding original contributions to the science of meteoritics or closely allied fields. It is named for Frederick C. Leonard, who was a founder and first president of the Society. The 2010 winner is **François Robert**, of the Museum d'Histoire Naturelle, for his outstanding contributions to the study of meteorites, especially to our

understanding of the D/H ratios of interstellar organic molecules, lunar nitrogen isotope variations, and a host of other isotopic processes. The citation was given by Mark Thiemens.



The BARRINGER MEDAL AND AWARD, sponsored by the Barringer Crater Company and created in memory of D. Moreau Barringer Sr. and his son, D. Moreau Barringer Jr., is given for outstanding work in the field of impact cratering. This year, the Barringer Award is given to **Bruce Bohor** (now retired from the U.S. Geological Survey) for his fundamental contributions to impact crater studies, including his major role in the confirmation that the K-T

boundary layer had an impact origin. Through careful mineralogical and petrological work, Bruce and his colleagues were able to document that the K-T boundary layer is a global feature. The citation was given by Billy Glass.

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This year's winner of the **NIER PRIZE** for young scientists in the field of meteoritics is **Fred Ciesla** of the University of Chicago. Fred receives this award for his excellent work on the origin and evolution of solid material during the early stages of planetary-system development and star formation. His work uses constraints from cosmochemical investigations and considerations from the latest astrophysical observations. The citation was given by Dante Lauretta.



Richard Pugh is the winner of this year's **METEORITICAL SOCIETY SERVICE AWARD**. Dick receives this award for his excellent service toward increasing the education and public awareness of meteorites and the fireballs that produce them. Dick was also instrumental in establishing the Cascadia Meteorite Laboratory at Portland State University and functions as its outreach coordinator. The citation was given by Alex Ruzicka.



The GORDON MCKAY AWARD, given for the best oral presentation by a student at the annual meeting of the Meteoritical Society, is awarded to **Dennis Harries** of the Universität Bayreuth, Germany, for his talk entitled "Nanocrystalline P-Bearing Pentlandite and Chromium Nitrides from CM2 Chondrites Y-791198 and Y-793321." The award comes with a prize of US\$1000 and a certificate.

METEORITICAL SOCIETY ON FACEBOOK

The Meteoritical Society now has a page on Facebook! Please visit to find job announcements, meeting information, and up-to-date Society news. We can be found at www.facebook.com/#!/pages/Meteoritical-Society/132324490172621. Our Facebook page is maintained by Cari Corrigan (corrigan@si.edu). Suggestions and contributions are welcome!

ANNUAL MEETING SCHEDULE

2012 – Cairns, Australia, August 12–17

2013 – Edmonton, Alberta, Canada, July 29–August 2

2014 – Casablanca, Morocco, September 7–14

2015 – Berkeley, California, USA, July 27–31

RENEW YOUR MEMBERSHIP NOW!

Please renew by March 31, 2012; after that date, a \$15 late fee will be assessed. You can renew online at <http://metsoc.meteoriticalsociety.net>.

SFMC STUDENT SPONSORSHIP

Julie Cosmidis and Estelle Couradeau, PhD students at the Institut de Minéralogie et de Physique des Milieux Condensés, Paris, received a grant from the Society to help them attend the international school



Minerals and Biosphere. The school was held in Campiglia Marittima (Italy), on 27–30 September 2011 in a former mining site now covered by pines and olive trees. It gathered about 20 European PhD students and postdocs in microbiology, mineralogy and geochemistry. The aim

was to highlight the diversity of scientific questions concerning both minerals and living organisms/organic matter and how these questions can be addressed. The school featured lectures on techniques for investigating microbe–mineral interfaces and that allow the preservation of living structures and provide micrometre-scale resolution or better. Fundamental topics, such as the selection by organics of the orientation of mineral growth, as well as applied topics, like the remediation of polluted soils by plants and fungi and the impact of mineral dust on human were presented.

MEETING ANNOUNCEMENTS

Atalante 2012: "Nuclear Chemistry for Sustainable Fuel Cycles" – September 2012

The Atalante 2012 conference will take place in Montpellier (Le Corum), France, on 3–7 September 2012.



Previous Atalante conferences were held in Avignon (2000), Nimes (2004) and Montpellier (2008). Organized by the French Alternative Energy and Atomic Energy Commission (CEA), these conferences provide an international forum for discussing advances in fuel cycles and waste management.

Increasingly, nuclear energy has to demonstrate that it can contribute safely and sustainably to growing energy needs. Today, the acceptance of nuclear energy is still closely associated with increased reactor safety, with our capability to reduce the lifetime of nuclear wastes and to manage them safely, and with better use of the natural resources. These goals cannot be achieved only by optimizing industrial processes through engineering studies; we must also increase our basic knowledge in actinide science. In this way, we will be able to build the future of nuclear energy using reliable and scientifically based results.

For its fourth edition, the organizers will focus the Atalante conference on the nuclear chemistry of fuel cycles and waste management. More than 150 oral contributions will be presented by the international nuclear chemistry community. A poster session will also be provided. Information can be obtained at www.atalante2012.org. Abstracts must be submitted before the end of February 2012. Registration is open and early booking rates will be available until the end of June 2012.

Serpentine Days – September 2012

After the success of Serpentine Days in Grenoble in 2007, a new edition, sponsored by the SFMC, will be held in September 2012. The conference will take place in Porquerolles, in the south of France. More details will be given in the next issue of *Elements*. You can also consult the SFMC website, www.sfmc-fr.org/.

ORGANIZING COMMITTEE: **M. Andreani, A. L. Auzende, A. Delacour**