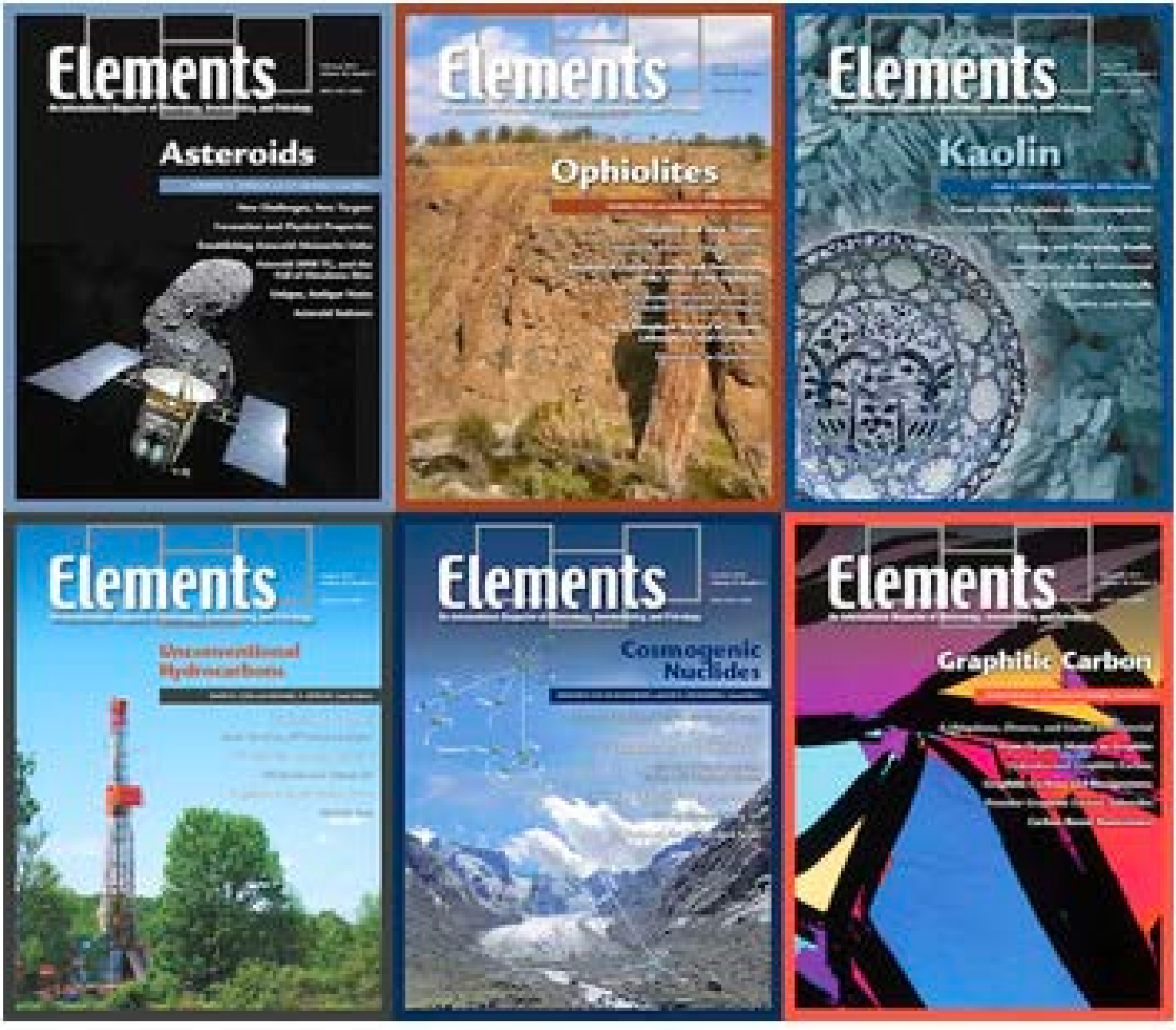
Volume 10

2014



Meteoritical Society

http://meteoriticalsociety.org

NEW METEORITICAL SOCIETY COUNCIL

A new Council will take office in January 2015, with Mike Zolensky as president and Monica Grady as past president. The Nominating Committee (Gretchen Benedix, William Bottke, Denton Ebel, Matthieu Gounelle, David Kring, and Hiroko Nagahara, chair) prepared the slate of candidates listed below. The Council has affirmed that this slate was selected in accordance with the Society's Constitution and Bylaws.

The new vice president of the Society will be Trevor R. Ireland of the Australian National University. Michael K. Weisberg of Kingsborough Community College and the American Museum of Natural History will be the new secretary, and Candace Kohl, of Del Mar, California, will be our new treasurer.

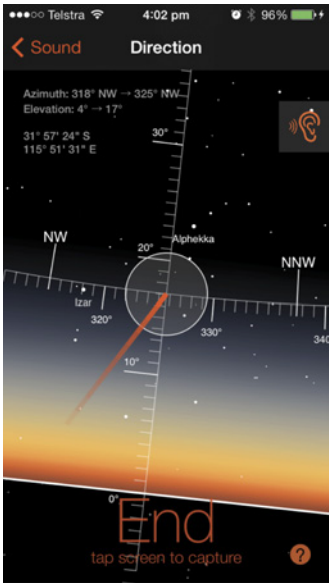


Trevor R. Ireland, Michael K. Weisberg, and Candace Kohl

The following councilors will return for a second term: Jay Melosh (Purdue University), Larry R. Nittler (Carnegie Institution of Washington), Maria Schönbächler (ETH Zürich), and Yoshi Yurimoto (Hokkaido University). In addition, four new councilors will begin their first term: Alexander N. Krot (Hawai'i Institute of Geophysics and Planetology), Keiko Nakamura-Messenger (NASA-Johnson Space Center), François Robert (Muséum National d'Histoire Naturelle, Paris), and Caroline Smith (Natural History Museum, London).

REPORT A FIREBALL FROM YOUR SMARTPHONE!

Phil Bland of Curtin University and colleagues have developed a smartphone app that allows anyone to report a fireball sighting from anywhere in the world. The app was designed to capture data of sufficient quality to create a "crowd source, smartphone, fireball network." It is downloadable for free and intended to be easy and fun to use. The observer simply points the smartphone at the point in the sky where the fireball started, clicks, and then points and clicks again at the point where the fireball ended. The app also allows the input of a variety of other data.



With enough observations, Bland hopes to be able to determine a trajectory for the fireball and send that information back to the observer with a message that the rock that made the fireball came, perhaps, from the outer asteroid belt, or that it was a chunk of a comet.

The app is available for both iOS and Android, and can be found by searching for "fireballs in the sky" on app stores. Bland invites users of the app to let him know if they have any problems or suggestions for improvement.

IN MEMORIAM

Robert Ogilvie

Prof. Robert E. Ogilvie, professor emeritus of metallurgy in the Department of Materials Science and Engineering at MIT, passed away after a brief illness on September 3. Bob was a founder of the Electron Probe Analysis Society of America (EPASA), the forerunner of the Microbeam Analysis Society (MAS). He was president of MAS in 1970 and was elected an honorary member of MAS in 1986. He built one of the first electron probe microanalyzers with students at MIT, and he and graduate student Bill Morris built one of the early scanning electron microscopes. Bob may be best known for the development of the Ziebold and Ogilvie "a" factor in the mid-1960s, which was used extensively for quantitative X-ray microanalysis of geological materials. Bob was born in Wallace, Idaho, in 1923, and after participating in World War II, he attended graduate school at MIT, studying with Dr. John Norton. He became a professor at MIT in 1953 and had research interests in diffusion and X-ray microanalysis. He was a member of the Harvard-Smithsonian Meteorite Discussion Group, and in 2000 he was recognized for his long-time involvement and contributions to meteoritics with a named asteroid, 3973 Ogilvie. He was loved by his students and colleagues, and will be deeply missed.

BARRINGER CRATER COMPANY FUNDING OPPORTUNITY

The Barringer Crater Company (owner of the Barringer Meteorite Crater, also known as Meteor Crater) has established a special grants program to support fieldwork by eligible students interested in the study of impact cratering processes. The Barringer Family Fund for Meteorite Impact Research will provide a small number (5–8) of competitive grants in the range of US$3000–$5000 in support of field research at known or suspected impact sites worldwide. Grant funds may be used to assist with travel and subsistence costs, as well as the laboratory and computer analysis of research samples and findings. Master's, doctoral, and postdoctoral students enrolled in formal university programs are eligible. Applications to the Fund are due by **4 April 2014**, with notification of grant awards by 6 June 2014. Additional details about the Fund and the application process can be found at www.lpi.usra.edu/science/kring/Awards/Barringer Fund.

PHOTOS WANTED FOR SOCIETY WEBSITE

Alex Ruzicka, chair of the Membership Committee, would like to receive interesting pictures for the home page of the website. Eye-catching pictures of interest to the general public are especially welcome. E-mail: Ruzickaa@pdx.edu.

JOIN THE METEORITICAL SOCIETY – RENEW YOUR MEMBERSHIP

You can join the Meteoritical Society or renew your membership online at http://metsoc.meteoriticalsociety.net. Please renew your membership by March 31, 2014; after that date, a $15 late fee will be assessed.

ANNUAL MEETING SCHEDULE

2014 September 8–12, Casablanca, Morocco;
www.metsoc2014casablanca.org
2015 July 27–31, Berkeley, California, USA
2016 August 7–12, Berlin, Germany
2017 Dates to be announced; Albuquerque or Santa Fe, New Mexico, USA

Meteoritical Society

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UCLA METEORITE GALLERY OPENS

The grand opening of the UCLA (University of California, Los Angeles) Meteorite Gallery was marked by a ceremony and reception on 10 January 2014. UCLA Chancellor Gene Block praised the Department of Earth, Planetary, and Space Sciences for creating the gallery and also thanked Arlene and Ted Schlazer for a gift of 65 meteorites and a generous bequest. The gallery has track lighting, carpeted floors, and seven exhibit cases containing about 100 meteorites. Numerous posters show images of meteorite sections and explain cosmochemical processes, such as chondrite metamorphism, mass-independent isotopic fractionation, and asteroidal sources of meteorites. The centerpiece of the gallery is the Clark iron, a beautifully sculpted, 162 kg chunk of the Canyon Diablo meteorite given to UCLA in 1934.

Cosmochemist John Wasson shows UCLA Dean of Physical Sciences Joseph Rudnick the 162 kg Clark Iron, a piece of the Canyon Diablo meteorite.

Cosmochemist Alan Rubin (left) with Arlene Schlazer and Ted Schlazer at the opening of the UCLA Meteorite Gallery

The seven display cases illustrate (1) meteorite classification; (2) ordinary and carbonaceous chondrites; (3) iron meteorites, mesosiderites, and back-lit pallasites; (4) chondritic breccias and impact melts; (5) tektites and Libyan Desert Glass; (6) California meteorites (including the type specimen of the 2012 L6 Novato fall) and meteor-wrongs; and (7) extraterrestrial and terrestrial basalts. The latter case features the type specimen of the Los Angeles Martian meteorite. The gallery is open weekdays from 9:00 am to 4:00 pm and (with docents present) on Saturday or Sunday, as detailed on the website, http://meteorites.ucla.edu. We are grateful for financial help from the Endowment Fund of the Meteoritical Society, the UCLA Dean of Science, and the UCLA Institute for Planets and Extrasolar Planets.

ANNUAL MEETING SCHEDULE

- 2014, September 8–12, Casablanca, Morocco
- 2015, July 27–31, Berkeley, California, USA
- 2016, August 7–12, Berlin, Germany
- 2017, dates to be announced, Albuquerque or Santa Fe, New Mexico, USA

WORKSHOP ON RADAR IMAGERY FOR METEORITE RECOVERY

A 1-day workshop on using radar imagery for meteorite fall detection and recovery

Conveners: Marc Fries and Mike Zolensky (NASA Johnson Space Center)

Date and venue: 7 September 2014, in Casablanca, Morocco (just prior to the 77th Annual Meeting of the Meteoritical Society in Casablanca)

Weather radar imagery is a proven new means of locating fresh meteorite falls. In the United States, weather radars have assisted in the recovery of the Sutter's Mill and Battle Mountain meteorite falls, as well as two more falls in Alabama and California, within the past two years. This presents an important new opportunity, because weather radars are operated by national weather bureaus worldwide, which usually make their radar imagery available to the public. It should be possible for researchers around the world to use their local weather radar networks to locate meteorite falls. This workshop has the goal of teaching researchers how to analyze weather radar imagery in their own country for real-time meteorite fall information, thereby greatly increasing the recovery rate for new large meteorite falls.

For additional, continually updated information on this workshop, please visit www.metsoc2014casablanca.org/workshops.php, or e-mail Marc Fries (marc.d.fries@nasa.gov) or Mike Zolensky (michael.e.zolensky@nasa.gov).

COMMITTEE MEMBERS THANKED

Many thanks to all those members who are serving on the Society's committees this year. We have listed their names below, with names of the committee chairs **in bold**. Without the generous help of all these members, the Society could not function. We greatly appreciate their help.

Leonard Medal and Nier Prize Committee (5 members, 3-year term)		
Phil Bland	Curtin University	2018
Sara Russell	Natural History Museum London	2018
Christine Floss	Washington University	2017
Noriko Kita	University of Wisconsin–Madison	2016
Herbert Palme	Senckenberg Museum Frankfurt	2014
Barringer Award Committee (4 members, 4-year term)		
Alex Deutsch	University of Münster	2017
Mark Burchell	University of Kent	2016
Alvaro Crosta	University of Campinas–UNICAMP	2015
Barbara Cohen	NASA Marshall Space Flight Center	2014
Pellas-Ryder Award (3 Met Soc members, 3 Geological Society of America members, 3-year term)		
Debra Buczkowski (GS)	Johns Hopkins University	2016
Susan Schwenzer	Open University	2016
Phil Bland	Curtin University	2015
Bob Anderson (GS)	Columbia University	2014
Hilary Downes	Birkbeck College	2014
Danielle Wyrick (GS)	University of Tennessee, Knoxville	2014

Nominating Committee		
Gretchen Benedix	Curtin University	2014
Bill Bottke	Southwest Research Institute	2014
Denton Ebel	American Museum of Natural History	2014
Mathieu Gounelle	Museum National d'Histoire Naturelle	2014
Dave Kring	Lunar and Planetary Institute	2014
Hiroko Nagahara	University of Tokyo	2014
Nomenclature Committee (12 members, 3 ex-officio, 3-year term)		
Tasha Dunn	Colby College	2016
Jerome Gattacceca	CEREGE (CNRS)	2016
Chris Herd	University of Alberta	2016
Takashi Mikouchi	University of Tokyo	2016
Caroline Smith	Natural History Museum London	2016
Carl Agee	University of New Mexico	2015
Laurence Garvie	Arizona State University	2016
Jeff Grossman	NASA Headquarters	
Knut Metzler	University of Münster	2015
Alex Ruzicka	Portland State University	2015
Linda Welzenbach	Smithsonian Institution	2015
Henning Haack	University of Copenhagen	2014
Smail Mostafaoui	Museum d'Histoire Naturelle	2014
Kees Welten	University of California, Berkeley	2014
Endowment Committee (5 members, 3-year term)		
Allan Treiman	Lunar and Planetary Institute	2016
Joseph Goldstein	University of Massachusetts	2015
Uwe Reimold	Humboldt-Universität Berlin	2015
Drew Barringer	The Barringer Crater Company	2014
Paul Warren	University of California, Los Angeles	2014

Audit Committee (3 members, 3-year term)		
Harold Connolly	City University of New York	2016
Susan Taylor	CRREL	2016
Bernard Marty	CNRS-Nancy	2014
Publications Committee (6 members plus treasurer, 3-year term)		
Denton Ebel	American Museum of Natural History	2016
Hanna Nekvasil	SUNY–Stony Brook	2015
Steven Desch	Arizona State University	2015
George Flynn	SUNY–Plattsburgh	2014
Takashi Mikouchi	University of Tokyo	2014
Keiko Nakamura-Messenger	NASA Johnson Space Center	2014
Joint Publications Committee (6 members, 3 Met Soc, 3 Geochemical Society, 3-year term)		
Andy Davis (MetSoc)	University of Chicago	2016
Jeremy Fein (GS)	Florida State University	2016
Chris Koeberl (MetSoc)	University of Vienna	2016
Tracy Rushmer (MetSoc)	Macquarie University	2015
Kate Freeman (GS)	Pennsylvania State University	2014
David Hilton (GS)	Scripps Institution of Oceanography	2014
Membership Committee (6 members)		
Katie Dyl	Curtin University	2016
Shoichi Itoh	Kyoto University	2016
Erin Walton	Grant MacEwan University	2015
Larry Lebofsky	Planetary Science Institute	2014
Alex Ruzicka	Portland State University	2014
Melissa Strait	Alma College	2014

Meteoritical Society

http://meteoriticalsociety.org

METEORITE NOMENCLATURE COMMITTEE REPORT

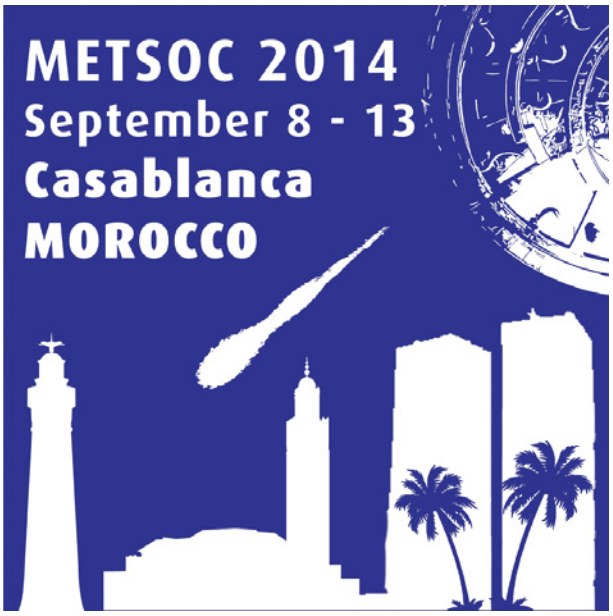
Chris Herd

The purpose of the Nomenclature Committee (NomCom) is to approve new meteorite names, and to establish guidelines and make decisions regarding the naming of meteorites. We are also charged with keeping the community apprised of new meteorites through the *Meteoritical Bulletin* and the Meteoritical Bulletin Database (www.lpi.usra.edu/meteor/metbull.php). The issue of how best to publish the *Meteoritical Bulletin* is close to resolution. In the meantime, you should be aware that all new meteorites are automatically added to the next issue of the *Bulletin* by the database editor, and the issues are now yearly (e.g. MB102 = 2013, MB103 = 2014). The contents of a particular *Bulletin* are accessible using the "Publication" dropdown window in the database. MB102 will contain 3141 meteorites (1433 non-Antarctic), and MB103 currently has 904 meteorites (358 non-Antarctic). The need for a regularly updated database has never been greater!

As of January 1, we welcome Carl Agee as the new editor of the *Bulletin*. Carl is the director of the Institute of Meteoritics at the University of New Mexico. New NomCom members include Tasha Dunn, Jerôme Gattacceca, and Audrey Bouvier. Special thanks to Michael Weisberg, Laurence Garvie, and Pierre Rochette, who have completed their terms on the committee. Laurence was a dedicated editor, and his service was outstanding. Michael also served as editor, and his insights have been invaluable.

Please do not hesitate to contact me (herd@ualberta.ca) with questions or concerns about NomCom and especially with suggestions for improvement. Essential information on meteorite nomenclature, instructions and the template for reporting new meteorites, and NomCom membership may be found on our homepage: http://meteoriticalsociety.org/?page_id=106.

Chris Herd, NomCom Chair



ASTEROIDS, COMETS, METEORS MEETING 2014

JUNE 30–JULY 4, 2014

Helsinki, Finland

The Asteroids, Comets, Meteors meeting focuses on the research of small Solar System bodies. Small bodies are the key to understanding the formation and evolution of the Solar System, as they carry signals from presolar times. Understanding the evolution of the Solar System helps unveil the evolution of extrasolar planetary systems. Societally, small bodies will be important future resources of minerals. The near-Earth population of small bodies continues to pose an impact hazard, whether it is from small pieces of falling meteorites or from larger asteroids or cometary nuclei capable of causing global environmental effects.

Asteroids, Comets, Meteors (ACM) is the leading international conference series in the field of small Solar System bodies. The first three conferences took place in Uppsala, Sweden, in 1983, 1985, and 1989. The conference is now returning to a Nordic country after a quarter of a century. After the Uppsala conferences, meetings took place in Flagstaff, Arizona, USA, in 1991; Belgirate, Italy, in 1993; Paris, France, in 1996; Ithaca, New York, USA, in 1999; Berlin, Germany, in 2002; Rio de Janeiro, Brazil, in 2005; Baltimore, Maryland, USA, in 2008; and Niigata, Japan, in 2012. ACM in Helsinki, Finland, in 2014 will be the 12th conference in the series (www.helsinki.fi/acm2014; e-mail: acm-2014@helsinki.fi).

Looking forward to seeing you in Helsinki!

Karri Muinonen
Chair, ACM2014 Scientific Organizing Committee
Department of Physics, University of Helsinki and
Finnish Geodetic Institute

METSOC ANNUAL MEETING SCHEDULE

2014	September 8–12, Casablanca, Morocco
2015	July 27–31, Berkeley, California, USA
2016	August 7–12, Berlin, Germany
2017	Dates to be announced, Albuquerque or Santa Fe, New Mexico, USA

Meteoritical Society

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2014 TREASURER'S REPORT


Rhian Jones

The Society's finances continue to be on a sound footing, and both the Operating Fund and our Endowments are currently very healthy. A large portion of the operating budget relates to publication of *Meteoritics and Planetary Science* (*MAPS*), our international monthly journal of planetary science, which covers topics including the origin and history of the Solar System, planets and natural satellites, interplanetary dust and the interstellar medium, lunar samples, meteors, meteorites, asteroids, comets, craters, and tektites. *MAPS* has been published by Wiley since 2010, and our income from Wiley closely matches the expenses of the editorial office at the University of Arizona, which is managed by Editor Tim Jull.

Society membership includes subscriptions to *MAPS* and *Elements*. Membership with subscription to only the electronic version of *MAPS* has become a popular option, although about 60% of our membership still purchase the printed version. Collection of membership dues for 2015 will begin in October 2014. I encourage members to pay their dues in a timely manner, as this helps greatly with financial planning. Healthy finances depend on a stable number of members.

Our Investment Fund, which includes three separate endowed funds, continues to grow. Many members contribute generously to support all of these funds, and donations are always greatly appreciated. This year we have been fortunate to receive a generous bequest to the General Endowment Fund from the late Keith Kaler. 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 (2014) is Dr. James Day, Scripps Institution of Oceanography. The Gordon A. McKay Fund supports an award to the student who gives the best oral presentation at the annual meeting of the Society. Last year's award (2013) was given to Nicole Lunning, University of Tennessee. The General Endowment Fund supports a variety of outreach projects. Over the last year, General Endowment funds have been used to help install a new meteorite exhibit at the University of California, Los Angeles, as well as to provide travel support for students to attend the Workshop on Planetesimal Formation in October 2013 and the Asteroids, Comets, Meteors Meeting in July 2014. General Endowment funds were also used to support travel for two professional members from low-income countries to participate in the Meteoritical Society meeting in Edmonton in August 2013. This year we will support travel for scientists from low-income countries to attend the Meteoritical Society meeting in Casablanca. The money will come from two sources – the General Endowment Fund and our initiative to raise money for this purpose directly through contributions made as part of annual membership renewal. Thirty-eight members responded to this request this year. Your contributions provide direct support that helps to strengthen our international community. We always welcome suggestions and ideas for ways in which the General Endowment Fund can be utilized to promote the goals of the Society and enrich its activities.

Rhian Jones, Treasurer

2014 MEMBERSHIP REPORT

As of May 2014, the Meteoritical Society is made up of 672 regular, 89 student, 160 retired, and 28 life members, and 6 members from developing countries, for a total of 955 members. Many thanks to J. Alex Speer and Alex Ruzicka for providing these statistics. We can be proud that we have members in 44 countries, but we still have a lot to do to gain members in many other countries. The Society does have a mechanism to subsidize annual dues for members in low-income countries.

Country	Regular Member	Student Member	Life Member	Retired Member
ARGENTINA	2			
AUSTRALIA	16	10		4
AUSTRIA	6	1		3
BELGIUM	6			2
BRAZIL	3	2		1
CANADA	28	5	2	9
CHILE	2			
CHINA	3			
CZECH REPUBLIC	2			1
DENMARK	3	2	1	2
FINLAND	2	1		1
FRANCE	29	2	1	5
GERMANY	73	7	3	13
VATICAN City State	2			
INDIA	4			1
ITALY	10	1		2
JAPAN	76	7		11
KOREA, Republic of	2			
NETHERLANDS	2			2
NORWAY	2			
POLAND	7	2		
RUSSIAN FEDERATION	5	2		1
SOUTH AFRICA	3			
SPAIN	3			1
SWEDEN	4			
SWITZERLAND	19	2	1	5
UNITED KINGDOM	34	9		4
UNITED STATES	324	36	20	92
Subtotals	**672**	**89**	**28**	**160**

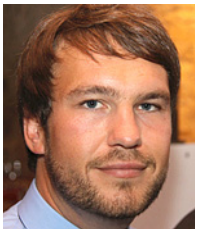
The following countries have one member at this time: Algeria, Estonia, Greece, Hungary, Ireland, Luxembourg, Malaysia, Morocco, New Zealand, Oman, Romania, Slovakia, Taiwan, and Uruguay.

Prior approval from the Membership Committee is required to obtain this rate—please see our website for more information.

For those wishing 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 Society web page at www.meteoriticalsociety.org.

PAUL PELLAS / GRAHAM 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 first author of the best planetary science paper published in a peer-reviewed scientific journal during the year prior to the award. The award honors the memories of meteoriticist Paul Pellas and lunar scientist Graham Ryder.



The winner of the 2014 Pellas-Ryder Award is **Eike Beitz** of Technische Universität Braunschweig, Germany (advisor Jurgen Blum). Dr. Beitz's paper, "Experiments on the consolidation of chondrites and the formation of dense rims around chondrules," published in 2013 in *Icarus*, presents the results of impact experiments into analog materials conducted to understand which materials can be compacted to achieve the porosities found in chondritic meteorites. Eike and coauthors C. Güttler, A. M. Nakamura, A. Tsuchiyama, and J. Blum suggest that CM chondrites are compacted at lower pressures than CV chondrites and are also less shocked. Both carbonaceous types were found to be less shocked than ordinary chondrites. Eike and coauthors also suggest that the high-density rims found around chondrules are not formed by dynamic compaction processes.

Meteoritical Society

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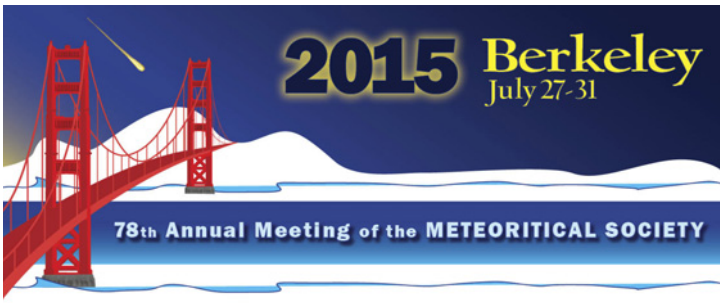
2015 ANNUAL MEETING INVITATION

You are cordially invited to attend the 78th Annual Meeting of the Meteoritical Society, which will take place July 27–31, 2015, in Berkeley, California, across the bay from San Francisco. The meeting will be held on the campus of the University of California, Berkeley, one of the preeminent universities in the world. Oral sessions will be held in state-of-the art auditoria of Stanley and Sibley Halls, plenary sessions in Pimentel Hall, and poster sessions in the historic Hearst Memorial Mining Building. Scheduled events include an icebreaker during the registration on Sunday, a banquet on Wednesday, an awards ceremony, and a choice of several afternoon excursions to San Francisco, a baseball game, NASA Ames, and Lawrence Berkeley National Lab. The meeting will be concluded with a farewell party on Friday afternoon. A post-conference Stardust workshop is being organized.



We have reserved 90 rooms (150 beds) in the Foothill Suites and Stern Residence Hall, 15 rooms in the Faculty Club, and 15 rooms in the Women's Faculty Club. In addition, several local hotels are within walking distance of the meeting location. The campus is within walking distance of many coffee shops, bars, and restaurants, ranging from very affordable to Alice Water's world famous Chez Panisse. The typical weather in July has warm days, no rain, and cool evenings, so bring a sweater but leave the umbrella at home.

The Berkeley campus can be reached by public transport, Bay Area Rapid Transit (BART), and is within 30 minutes of Oakland International Airport and 50–60 minutes of San Francisco International Airport. San Francisco is, of course, a major tourist destination and is only a 20 minute ride away on BART. Day trips to Napa/Sonoma wine country, Muir Woods National Monument, Monterey, Santa Cruz, and Yosemite National Park can be arranged.

Additional details can be found on the meeting website, http://metsoc2015.ssl.berkeley.edu.

For more information please contact the Organizing Committee chair, Kunihiko Nishiizumi, at kuni@ssl.berkeley.edu.

STUDENT TRAVEL AWARDS

This year, 63 students who attended the annual meeting of the Society in Casablanca, Morocco, received travel grants. Student travel grants and travel grants for scientists from countries with limited financial resources are generously sponsored by the Barringer Crater Company, the Planetary Studies Foundation, NASA (Cosmochemistry Program), The Meteoritical Society Endowment Fund, the International Mineral Collectors Association (Brian Mason Award), the Académie Hassan II des Sciences et Techniques ACASITEC Morocco, and Hassan II University Casablanca UH2C, Faculty of Sciences Ain Chock FSAC.

Meteoritical Society Endowment Fund

Amit Basu Sarbadhika, Physical Research Laboratory, Ahmedabad, India
Mouley Charaf Chabou, Ferhat Abbas University, Setif 1, Algeria
Mitali Damle, AGCA, India
Abbasheer Gismelsee, Sultan Qaboos University, Muscat, Oman
Mohamed Tharwat Heikal, Tanta University, Egypt
Maria Khirfan, University of Amman, Jordan
Ratiba Sahoui, USTHB, UMMTO, Algiers, Algeria
Edith Millarca Valenzuela Picon, Universidad Catolica de Chile
Maria Eugenia Varela, ICATE, CONICET, Argentina

Barringer Crater Company Fund

Natasha Vasiliki Almeida, Natural History Museum, London, UK
Thomas Barrett, The Open University, UK
Luke Daly, Curtin University, Perth, Australia
Grace De Olivera, Campinas State University, São Paulo, Brazil
Edivaldo Dos Santos, Centro Brasileiro de Pesquisas Físicas, Rio De Janeiro, Brazil
Matthias Ebert, Museum of Natural History–Berlin, Germany
Razilya Gizzatullina, Ural Federal University, Russian Federation
Christopher Hamann, Museum für Naturkunde Berlin, Germany
Hiraki Hazegawa, University of Tokyo, Japan
Desiree Hoehnel, University of Vienna, Austria
Aurore Hutzler, CEREGE, Université Aix-Marseille, France
Noriyuki Kawasaki, Hokkaido University, Japan
Agata Krzesinska, Polish Academy of Sciences, Poland
Andrew Langendam, Monash University, Australia
Adrienne Macartney, University of Glasgow, UK
Alevtina Maksimova, Ural Federal University, Russian Federation
Dayl Martin, University of Manchester, UK
Nassima Meftah, Université d'El-Oued, Algeria
Mészáros Marianna, University of Bern, Switzerland
Seda Ozdemir, University of Vienna, Austria
Annemarie Pickersgill, University of Western Ontario, Canada / University of Glasgow, UK
Emily Pringle, Institut de Physique du Globe de Paris, France
My Riebe, ETH Zürich, Switzerland
Jay Shah, Imperial College London, UK
Alaura Singleton, University of Western Ontario, Canada
Elisabeth Steer, The Open University, UK
Epifanio Vaccaro, The Natural History Museum, London, UK
Asli Yener, Museum für Naturkunde Berlin, Germany
William Zylberman, CEREGE, Université Aix-Marseille, France

NASA Cosmochemistry Program

John Bigolski, CUNY Graduate Center/AMNH
Carolyn Crow, UCLA, USA
Ingrid Daubar, University of Arizona, USA
Pierre Haenecour, Washington University in St. Louis, USA
Romy Hanna, University of Texas at Austin, USA
Christine Jilly, University of Hawaii at Manoa, USA
Chizu Kato, Washington University in St. Louis, USA
Levke Koop, University of Chicago, USA
Jonathan Lewis, University of New Mexico, USA
Nicole Lunning, University of Tennessee, Knoxville, USA
Prajkta Mane, Arizona State University, USA
Christopher Snead, University of California, Los Angeles, USA
Myriam Telus, University of Hawaii at Manoa, USA
Kera Tucker, Arizona State University, USA
Maria Valdes, Washington University in St. Louis, USA
Michael Zanetti, Washington University in St. Louis, USA

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Italian Society of Mineralogy and Petrology

www.socminpet.it

GABEC-GNM INTERNATIONAL SCHOOL: INNOVATIVE METHODOLOGIES FOR THE CHARACTERISATION, DIAGNOSIS AND CONSERVATION OF CULTURAL HERITAGE

GABeC (Georisorse, Ambiente, Beni Culturali) and GNM (Gruppo Nazionale di Mineralogia), two informal groups that operate under the aegis of SIMP, held an International School on the theme "Innovative Methodologies for the Characterisation, Diagnosis and Conservation of Cultural Heritage, in Catania and Siracusa (Sicily) on July 1–4, 2014. The School emphasized a multidisciplinary approach, presenting the viewpoints of geologists, physicists, chemists and archaeologists, and featured lectures delivered by eleven distinguished experts. The 53 participants were also given the opportunity to present posters about their current research. The School was complemented by visits to the Archaeological Park and the Paolo Orsi Museum in Siracusa. Germana Barone and Paolo Mazzoleni, local contacts of the Organizing committee, did their best to make everything run smoothly and happily. For more details, visit https://sites.google.com/site/school-gabec2014/, where you can download the abstracts of presentations. Selected contributions from the School will be published in a special issue of the *European Journal of Mineralogy*.

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International Meteorite Collectors Association – Brian Mason Award

Agnese Fazio, University of Pisa, Italy

Planetary Studies Foundation

Ellen Crapster-Pregont, Columbia University–AMNH, USA
Sarah Simpson, University of Glasgow, UK

Académie Hassan II des Sciences et Techniques ACASITEC, Morocco

Souad Chaabout, UH2C, FSAC, GAIA Laboratory, Morocco
Nawel Larouci, UH2C, FSAC, GAIA Laboratory, Morocco

Hassan II University Casablanca UH2C, Faculty of Sciences Ain Chock FSAC

Houda El Kerni, UH2C, FSAC, GAIA Laboratory, Morocco
Maria Aboulahris, UH2C, FSAC, GAIA Laboratory, Morocco
Youssef Idomar, UH2C, FSAC, GAIA Laboratory, Morocco
Paul Mongui, UH2C, FSAC, GAIA Laboratory, Morocco

INTERNATIONAL COLLECTORS ASSOCIATION – BRIAN MASON AWARD

In 1997, Joel Schiff, the first editor of the popular *Meteorite* magazine, created a travel award in honor of Brian Mason, who was born in New Zealand. 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/her work for the magazine. Since 2008, the award has been generously funded by the International Meteorite Collectors Association.

Agnese Fazio

This year the program committee for the Casablanca meeting selected Agnese Fazio to win the Brian Mason Award. Agnese is a graduate student at the University of Pisa, Pisa, Italy. She submitted an abstract entitled "Shock metamorphism and impact melting in small impact craters on Earth: Evidence from Kamil Crater, Egypt," authored by A. Fazio, L. Folco, M. D'Orazio, M. Frezzotti, and C. Cordier. This paper discusses the small, relatively recent Kamil Crater and the shock features found in the rocks surrounding the impact structure.

CALL FOR AWARD NOMINATIONS

Please consider nominating a colleague for one of the Society's awards. Nominations should be sent to Secretary Mike Weisberg (metsocsec@gmail.com) by January 15 (January 31 for the Service Award and 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 gives 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 leading 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

2014 ANNUAL MEETING, CASABLANCA

Meeting Report

Group picture of participants

Hasnaa Chennaoui Aoudjehane, chair of the meeting, welcoming participants

The 77th annual meeting of the Meteoritical Society was held in Casablanca, Morocco, on September 8–12, 2014, at the Hyatt Regency Casablanca. The meeting was organized by Hasnaa Chennaoui Aoudjehane (Hassan II University, Casablanca), chair, and Pierre Rochette (CEREGE, Aix-Marseille) and Guy Libourel (OCA, Nice, France), cochairs. The 24-member Program Committee, chaired by Pierre Rochette, used the 447 abstracts submitted to create an exciting program, including new reports on Chelyabinsk and NWA 7034 (and paired) meteorites. Some 265 oral presentations were accommodated in parallel sessions through to Friday afternoon, with 182 posters presented in poster sessions on Tuesday and Thursday evenings. The meeting was attended by 420 people from 36 countries. Sixty-six students and professionals from low-income countries were awarded travel funds, primarily through the support of the Barringer Crater Company, NASA, and the Meteoritical Society Endowment Fund.

The scientific program included 20 sessions that covered a wide range of topics, including space missions, primary and differentiated meteorites, Solar System chronology, and the development of analytical techniques. Three special sessions were held: (1) Carbonaceous chondrites and the 150th anniversary of Orgueil; (2) Meteorites from Morocco and desert areas, followed by a roundtable discussion on the NWA nomenclature; and (3) Impact cratering and mass extinctions (part of the AICAC series, AICACIII).

The Barringer Invitational Lecture was presented by Professor Philippe Taquet, president of the Académie des Sciences in France. His talk, entitled "Meteorites and Dinosaurs," was given on the evening of Monday, September 8, after the Society awards ceremony.

On Wednesday, participants explored the local area, with visits to Rabat and Casablanca. The banquet was a typical Moroccan gala dinner in the historical site of El Mechouar, in the Habous quarter. El Mechouar, or "the Mahkama of the Pasha," built between 1948 and 1952, served as both a court and a reception room for the Pasha of Casablanca. The building includes at least 60 rooms and has many kinds of decorative shapes and motifs belonging to the Spanish-Moroccan architectural style. This monumental building today shelters the City Hall of Méchouar, seat of the Greater Casablanca area.

The meeting was sponsored by NASA, the Barringer Crater Company, the Lunar and Planetary Institute USRA, the Meteoritical Society, the Moroccan Ministry of Culture, the Moroccan Ministry of Higher Education, Hassan II University Casablanca, the Faculty of Sciences Ain Chock, Cameca, the International Meteorite Collectors Association (IMCA), the Planetary Studies Foundation (PSF), Wilaya du Grand Casablanca, and the Académie Hassan II des Sciences et Techniques (ACASITEC).

Photos can be seen on the meeting website**:** http://metsoc2014casablanca.org/gallery.php.

Two premeeting workshops were held, one on using radar imagery to detect and recover meteorites (convened by Mike Zolensky and Marc Fries; see below) and one on the identification and curation of meteorites (convened by Brigitte Zanda and Albert Jambon).

Conference Field Trip

The postconference field trip was an excursion to southern Morocco. This six-day trip was led by Hasnaa Chennaoui. Forty-two participants visited the shatter cone–bearing remnant of an impact structure near Agoudal (Imilchil, High Atlas Mountains) and the area around Erfoud in the Rissani region, the origin of most NWA meteorites. Participants had the opportunity to discover the excellent and highly varied geological exposures and landscapes of Morocco by crossing the Atlas Mountains and visiting the desert of southern Morocco.

Participants in the postconference field trip enjoy the Itto panorama, High Atlas Mountains, near Azou, Morocco.

Workshop on the Use of Weather Radar Imagery for Meteorite Fall Detection and Recovery

The meeting in Casablanca included a workshop on how to use weather radar imagery to find and recover meteorite falls; it was organized by Marc Fries and Mike Zolensky, both of NASA's Johnson Space Center. The main goal of this workshop was to facilitate the increasing use of radar to find new meteorite locations in all countries with Meteoritical Society members. The workshop was well attended and included both lectures and practical work. Attendees learned how to locate meteorites by examining radar data from actual meteorite falls. The topics covered included weather radar fundamentals, meteorite falls seen on radar, the distinguishing characteristics of falls as opposed to weather, and weather radar networks around the world. Presenters also discussed the importance of using different techniques for fall analysis, including all-sky camera networks, eyewitness report aggregation, seismometry, and other topics. Representatives of the FRIPON, the Spanish Meteor and Fireball Network, and the Finnish Fireball Network presented information to the group about their networks and meteorite recovery efforts.

The workshop benefited from fortunate timing, as radar data were presented showing the Kosmos 2495 satellite fall that occurred a few days before the workshop. An impressive bolide also occurred over Catalonia, Spain, on the day of the workshop, providing an opportunity to try out the techniques demonstrated.

2014 SOCIETY AWARD WINNERS

The Society gives out four major awards each year. For more information on individual awards, please see the Society web page.

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 the first president of the Society. The 2014 winner of the Leonard Medal is **Roger Hewins** of the IMPMC, Paris, France, and Rutgers University, USA, for seminal petrologic and experimental studies on the origin of chondrules and, by extension, the mechanisms and environments of formation of these essential building blocks of meteorites and planetary bodies. The citation for this award was given by Harold Connolly.

The Barringer Medal and Award, sponsored by the Barringer Crater Company, were created in memory of D. Moreau Barringer Sr. and his son, D. Moreau Barringer Jr. The award is given for outstanding work in the field of impact cratering. This year, the Barringer Award is given to **Alex Deutsch**, of the Westfälische Wilhelms-Universität, Münster, Germany, for his broad contributions to the understanding of impact cratering, particularly in the areas of radiometric dating of terrestrial and lunar impact events, isotopic geochemistry and petrology of impact rocks from terrestrial impact craters, and experiments in shock metamorphism. The citation for this award was given by Falko Langenhorst.

The Nier Prize recognizes young scientists in the field of meteoritics. This year's winner is **James Day**, of Scripps Institution of Oceanography, University of California, San Diego, USA. James receives his award for significant contributions to an improved understanding of the late accretionary history of the terrestrial planets and smaller planetary bodies of the inner Solar System. The citation for this award was given by Frederic Moynier.

The Meteoritical Society Service Award is given this year to **Roy Clarke Jr.**, emeritus curator at the Smithsonian Institution in Washington, DC, USA. Roy receives this award for his role in helping to build the meteorite collection at the Smithsonian into a national and international resource, for archival and historical work important to the Society, and for his efforts that helped guide the Society at critical moments. The citation for this award was written by Tim McCoy and presented at a special reception in Washington, DC, for Roy, who was unable to travel to the conference, and the citation was presented in Morocco by Ed Scott.

RENEW YOUR MEMBERSHIP NOW!

Please renew your membership by March 31, 2015; after that date, a $15 late fee will be assessed. You can renew online at http://metsoc.meteoriticalsociety.net.

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ANNUAL MEETING SCHEDULE

- **2015 July 27–31, Berkeley, California**
- **2016 August 7–12, Berlin, Germany**
- **2017 Dates to be determined, New Mexico, USA (Albuquerque or Santa Fe)**
- **2018 Dates to be determined, Moscow, Russia**

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ORIGINAL ARTICLES

Petrogenesis and zircon U–Pb ages of the Thien Ke granitic pluton in the Tam Dao region: Implications for early Paleozoic tectonic evolution in NE Vietnam

Thuy Thi Bich NGUYEN, Pham Trung HIEU, Tran Thanh HAI, Bui The ANH, Nguyen Thi XUAN, and Dang My CUNG

Crystal structure of suzukiite from the Mogurazawa mine, Gunma Prefecture, Japan

Miku ITO, Satoshi MATSUBARA, Kazumi YOKOYAMA, Koichi MOMMA, Ritsuro MIYAWAKI, Izumi NAKAI, and Akira KATO

The influence of organic-rich shear zones on pelagic sediment deformation and seismogenesis in a subduction zone

Jun KAMEDA, Yui KOUKETSU, Mayuko SHIMIZU, Asuka YAMAGUCHI, Yohei HAMADA, Mari HAMAHASHI, Hiroaki KOGE, Rina FUKUCHI, Masayuki IKEDA, Toshihiro KOGURE, and Gaku KIMURA