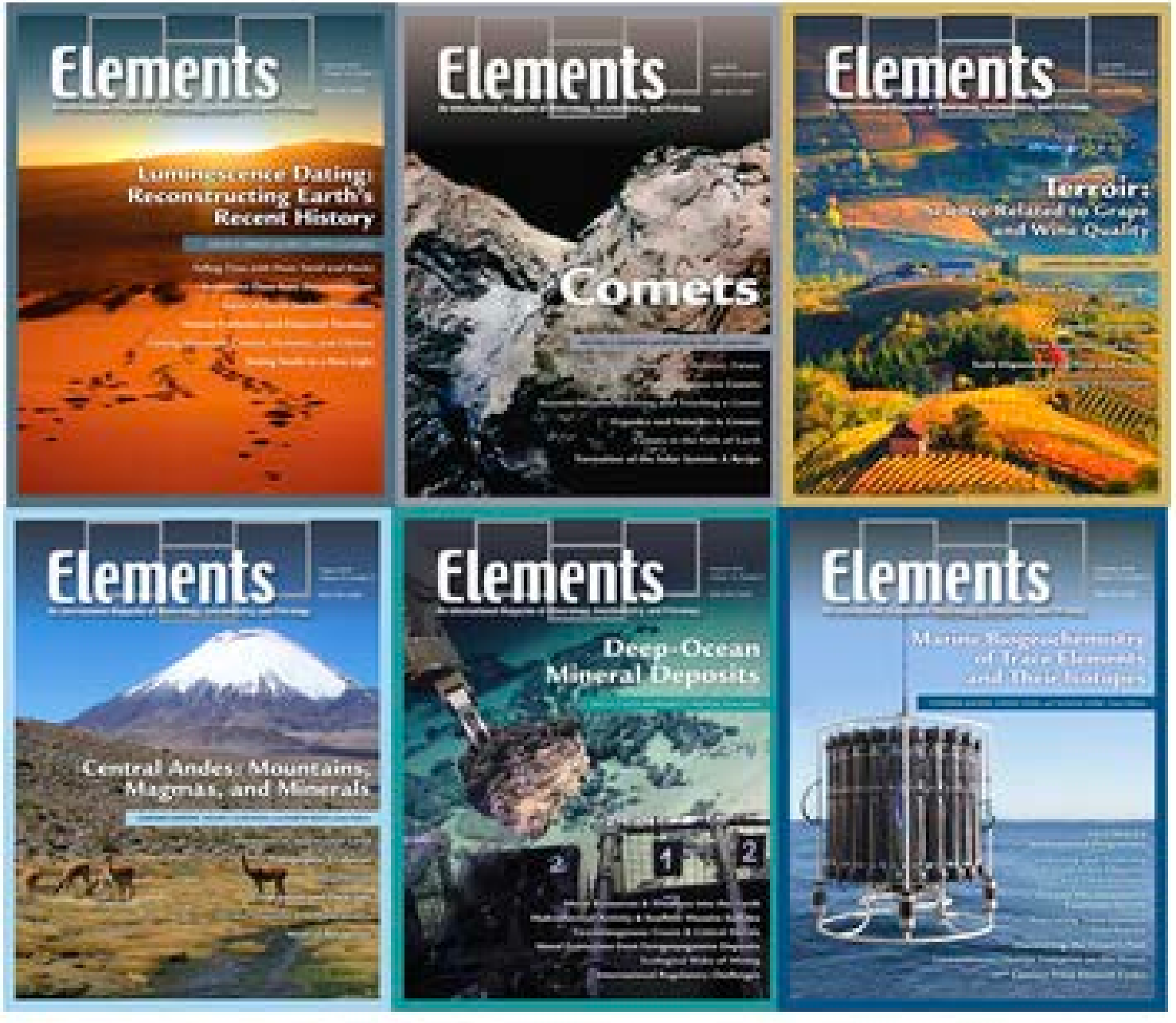
Volume 14

2018



Meteoritical Society

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IN MEMORIAM

LARRY TAYLOR, 1938–2017

Lawrence "Larry" A. Taylor was born 14 September 1938. He grew up in Port Jervis, New York (USA), over a bar owned by his father. His formative years were to set the scene for the way he lived his life. At the beginning of his senior year at high school he was a passenger in a car that was involved in a bad accident that threw Larry from the car and left him to spend 10 months in hospital. Despite having missed most of his last year at high school, Larry insisted on taking his final exams – and passed! Having graduated high school, he started his higher education in night school at Orange County Community College, Middletown, New York.

As he would freely tell anyone, he left New York City in 1958, one step ahead of the law, and began an academic career at Indiana University (USA). In 1961, he graduated with a major in chemistry and a minor in geology and stayed on to achieve a master's degree in geology after discovering a love for the subject. From 1958 to 1965 he also worked on and off as a driller, mucker, powder-monkey, and geologist in mines in Ontario (Canada). In 1965, he was introduced to planetary geology as a NASA Research Fellow at Lehigh University (Pennsylvania, USA). It was during this time that his children, Jeff and Kelly, were born. In 1968, he received a PhD in geological sciences with a minor in material sciences from Lehigh. He then moved to the Geophysical Laboratory of the Carnegie Institution of Washington where he conducted postdoctoral research into experimental petrology. He then undertook Fulbright and Humboldt Fellowships at the prestigious Max-Planck-Institüt für Kernphysik in Heidelberg (Germany), which deepened his knowledge and understanding of sulfides and oxides and their experimental phase equilibria. Such mineralogic studies would be the focus of his early studies on lunar rocks.

Larry was hired as an Assistant Professor at Purdue University (Indiana, USA) in 1971 and moved to the University of Tennessee, Knoxville (USA) in 1973, where he remained until his (partial) retirement in June 2017. Larry achieved tenure after only two years, the most rapid rise of any professor in the department to date. In 1977, he became a full professor. In those early years, the cornerstone of his research was experimental petrology, specifically on sulfides and oxides. It is a tribute to his abilities, keen insight, and most of all hard work, that he has moved so easily into disparate areas of research over the years, from experimental petrology of sulfides, to the study of the kinetics of silicates, to trace-element and isotopic geochemistry.

Larry Taylor was one of the geoscientists based at the Johnson Space Center (Texas, USA) during Apollo 17, NASA's last manned mission to the moon, in December 1972. During that mission, he met astronaut Harrison H. "Jack" Schmitt. Their friendship played a critical role in the growth of University of Tennessee's Department of Earth and Planetary Sciences (see https://news.utk.edu/2017/10/03/decades-growth-discovery-mark-nasa-research-ut/ for more details) in which Larry was based. It was also instrumental in the forming of the Planetary Geosciences Institute (also at the University of Tennessee), which has a long and well-established history of research funding from NASA and the National Science Foundation.

In 1993, a new phase of his life began after marrying his second wife, Dong-Hwa (Dawn) Shin. But his dedication to his work did not falter. In the previous 20 years of his life at the University of Tennessee he would often put in over 100 hours a week in his office, writing papers and hounding graduate students and post-docs. But after his second marriage, he started to spend a "normal" day in his college office and then equally as much of his time working at home.

Over the years, Larry has served on numerous editorial boards, planning committees, working groups, and review panels. These have included a year as NASA discipline scientist and program manager in Washington, D.C. (while keeping up with his academic pursuits and continuing to advise graduate students and post-docs), while taking on numerous associate editorships and working on lunar committees, including those for sample allocation.

Larry was prolific in terms of research production. His peer-reviewed research papers totaled 542, his *h*-index exceeds 50, and his extended (>1 page) abstracts number over 700. Larry has also published in many engineering journals because his interests were so diverse. The high regard that the University of Tennessee has for Larry is seen by the fact that he received the University of Tennessee Chancellor's Award for Research and Creative Achievement on more than one occasion. He is a Fellow of the Meteoritical Society, the Mineralogical Society of America, and the American Geophysical Union. In July 2017, Larry was awarded the NASA SSERVI Wargo Award for his contributions to planetary science and exploration. It was while he was in California to receive this award that his illness became apparent and he was unable to give his acceptance presentation. Once back in Knoxville, the full extent of the brain cancer was uncovered and in less than two months, Lawrence August Taylor left this world peacefully surrounded by his family. For those of us lucky enough to have benefitted from Larry's guidance and tutelage, the world is worse off for his passing. We are all sad that Larry is gone; but we, as his postdocs, students, colleagues, and friends, have a responsibility to continue his legacy. To the Moon, Larry – and this time to stay!

This *In Memoriam* was written by Clive R. Neal, who was an L. A. Taylor post-doc 1986–1990, now Professor of Planetary Science, University of Notre Dame (Indiana, USA). With thanks to Dawn Taylor, Greg Snyder, G. Jeffrey Taylor, Harry "Hap" McSween, and the *Tennessee Today* newsletter, all of whom contributed to this tribute.

GERALD ROWLAND, 1928–2017

Gerald L. Rowland passed away 19 September 2017 at the age of 89. He was born 13 August 1928 in Whittier (California, USA) and attended the University of California at Los Angeles, where he received a BS in mathematics in 1950. In order to meet the requirements of his undergraduate teaching minor he needed an upper division science course, and he took a course in astronomy from Frederick C. Leonard, my father. When another student subsequently dropped out of a field trip to the Barringer Meteorite Crater, Gerald took his place. He became my father's research assistant, co-authoring "A Catalogue of the Leonard Collection of Meteorites", which was published in *Contributions of the Meteoritical Society* in 1951.

After graduation from UCLA, Gerald accepted a teaching position in the Department of Mathematics and Astronomy at the University of New Mexico (UNM) (USA). He worked under the supervision of Lincoln LaPaz, Director of the UNM Institute of Meteoritics. He received his MS in mathematics from UNM, leaving in 1956 to join the faculty of Long Beach City College (California). In that same year, he co-authored "An Index Catalog of the Multiple Meteoritic Falls of the World" and "The Classificational Distribution of the Single and Multiple Meteoritic Falls of the World." Two years later, he was elected Secretary of the Meteoritical Society, a position he held from 1958 to 1966. These were both challenging times and times of transition for the society. Much had changed and much had been accomplished by the time he transferred the society paperwork to the incoming Secretary, Roy Clarke.

When my father died in 1960, Gerald provided support to our family both during the period of my father's illness and after his death. He participated in the creation of the Leonard Medal, and was one of those who presented it to my mother, Rhoda Leonard, in 1963. In that same year, he published the final catalog of the Leonard Collection of Meteorites, which he had previously inventoried and helped transfer to UCLA.

Gerald loved music and sang in choirs most of his adult life. As a school-age child I knew him as the family friend who joined us for our Christmas Eve celebrations. He had a remarkable memory for dates, and he never missed a birthday or anniversary. To the end of his life, I could count on a note from him every year on the anniversary of my father's birth.

Gerald faced a number of serious medical challenges throughout his life. The first, while a graduate student at UNM, almost took his life. About the time of his retirement he was stricken with a rare form of Guillain-Barre syndrome that required months of hospitalization and left him with weakness from which he never fully recovered. Yet he faced these and other obstacles with the grace and good humor that characterized him throughout his life

Gerald also was the person who wrote the remembrance of my father, Fred C. Leonard, that appeared in the first issue of *Meteoritics* when it resumed publication in 1963. It is a privilege and an honor for me now to be able to write this remembrance of Gerald.

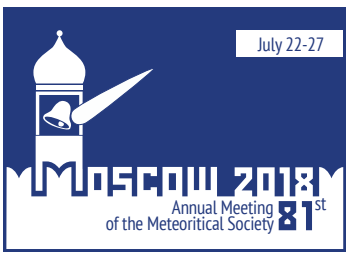
Fred Leonard

THE BARRINGER FAMILY FUND FOR METEORITE IMPACT RESEARCH

The Barringer Crater Company has established a special fund to support field work by eligible students interested in the study of impact cratering processes. The Barringer Family Fund for Meteorite Impact Research will provide a number of competitive grants in the range of $2,500 to $5,000 for 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 laboratory and computer analysis of research samples and findings. Masters, doctoral, and post-doctoral students enrolled in formal university programs are eligible. Application to the fund will be due by 6 April 2018, with notification of grant awards by 8 June 2018. Additional details about the fund and its application process can be found at:

http:/www.lpi.usra.edu/science/kring/Awards/Barringer_Fund

ANNUAL MEETING SCHEDULE



2018 – Moscow (Russia), 22–27 July

2019 – Sapporo (Japan), 8–12 July

2020 – Glasgow (Scotland, UK), 9–14 August

2021 – Chicago (Illinois, USA), dates TBD

RENEW YOUR MEMBERSHIP NOW!

Please renew by 31 March 2018; after that date, a $15 late fee will be assessed. You can easily renew online at http://metsoc.meteoritical-society.net.

Meteoritical Society

http://meteoriticalsociety.org

IN MEMORIAM, BOB CLAYTON (1930–2017)

Robert N. "Bob" Clayton passed away 30 December 2017 after several years of declining health at his home in Michigan City (Indiana, USA) surrounded by family. Bob was the Meteoritical Society's 1982 Leonard Medalist. He was born 20 March 1930 in Hamilton, Ontario (Canada). He received his BS and MS degrees from Queen's University (Ontario) and his PhD from the California Institute of Technology (USA) (1955) where he was mentored by Samuel Epstein. He joined the University of Chicago's Chemistry Department and its Enrico Fermi Institute in 1958, and then joined that university's newly founded Department of Geophysical Sciences in 1961. He was the Enrico Fermi Distinguished Service Professor at the University of Chicago until he retired in 2001, remaining active in emeritus status until about 2014.

Bob joined the cosmochemistry community during the Apollo program during the late 1960s, where he started measuring oxygen isotopes ($\delta^{18}O$) in ordinary chondrites. He is best known for his discovery of oxygen isotope variability in calcium–aluminum-rich inclusions (CAIs) with his now-classic 1973 paper that launched a new stage of his career. Bob's superb three-isotope oxygen isotopic analyses so dominated the field that he established an isotopic classification of solar system materials and analyzed every new meteorite for 25 years with no competition, all with a late-1950s mass spectrometer equipped with a chart recorder, a ruler, and a pocket calculator. He developed O, N and Si isotope studies of lunar samples and meteorites by gas source mass spectrometry with Toshiko Mayeda (his long-term research associate from 1958 to 2004), Richard Becker, Mark Thiemens, and many other students and postdocs. His studies (with Typhoon Lee and Gerry Wasserburg) led to the recognition of fractionated unknown nuclear (FUN) isotopic anomalies in CAIs. In 1977, with Ian Hutcheon, Richard Hinton and Andy Davis, he pioneered secondary ion mass spectrometry (SIMS) techniques applied to in situ Al–Mg systematics of CAIs and chondrules. Bob, with Michael Pellin and Andy Davis, initiated an effort to develop resonance ionization mass spectrometry for cosmochemistry that led to the isotopic analysis of Ba, Sr, Ru, Fe, and other elements within individual pre-solar SiC grains. This launched a new form of laboratory-based nuclear astrophysics. After retirement, Bob's note on self-shielding (2002) marked a major departure from his previous thinking on a variety of topics: he realized that NASA's *Genesis* mission could yield a key piece of the solar system's oxygen puzzle, and initiated the still-ongoing debate on the role of photochemical effects in producing the solar system's oxygen isotope variability.

Bob will be remembered as a generous collaborator who worked selflessly with most of the major teams in meteorite research. He produced over 23 PhD students and 22 postdoctoral fellows in a career that spanned over five decades, the last four of which saw him heavily involved in meteoritics. Clayton's morning coffee group in his Enrico Fermi Institute laboratory was a famous gathering place throughout his long career at the University of Chicago. His contributions are widely recognized, including by his being awarded the Goldschmidt Medal (Geochemical Society, 1981), the Bowie Medal (American Geophysical Union, 1987), the Urey Medal (European Association of Geochemistry, 1995), and the National Medal of Science (2004), not to mention the Meteoritical Society's own Leonard Medal. He was a Fellow of the Royal Society of London, of the Royal Society of Canada, and a Member of the US National Academy of Sciences.

Bob Clayton is survived by his wife, Cathy, his daughter, Elizabeth, and his granddaughter, Leonora.

IN MEMORIAM, ELMAR JESSBERGER (1943–2017)

Elmar K. Jessberger passed away 29 November 2017 at the age of 74. Elmar was a Fellow of the Meteoritical Society since 1994 and Chairman of the Leonard Medal Committee from 2001 to 2002. He was organizer of the society's 66th annual meeting, in 2003, in Münster (Germany). Main belt asteroid 16231 Jessberger, discovered in 2000, was named after him in 2005.

Elmar received his PhD from Heidelberg University (Germany) in 1971 with a thesis on mass spectrometric analysis of trapped gases in lunar material, meteorites, and terrestrial basalts. This study was performed with Josef Zähringer and Till Kirsten at the Max Planck Institute for Nuclear Physics in Heidelberg, where Elmar had started working as an undergraduate in 1968 and where he stayed, ultimately as a senior scientist, until 1996. During that time, he received an NSF (US National Science Foundation) fellowship and worked from 1972 to 1973 with Jerry Wasserburg at the California Institute of Technology (Caltech) (USA). As a guest scientist in 1981, Elmar visited the State University of New York in Stony Brook (USA), and in 1984 he visited the McDonnell Center for the Space Sciences, Washington University in Saint Louis. Between 1991 and 1992, he spent a sabbatical at the University of Vienna and the Natural History Museum in Vienna (Austria).

Most of Elmar's early work related to ^{40}Ar–^{39}Ar dating of lunar rocks, meteorites, and terrestrial impact crater material. Later, he started working on interplanetary dust particles using proton-induced X-ray spectroscopy (PIXE). In 1986, after the flyby of the *Vega 1*, *Vega 2* and *Giotto* space probes at comet 1P/Halley, Elmar got heavily involved in the evaluation and interpretation of the data from the impact-ionization mass spectrometers onboard those missions. During his involvement in further space experiments, which ultimately led to the COSIMA instrument for the European *Rosetta* mission to comet 67P/Churyumov–Gerasimenko, he promoted time-of-flight secondary ion mass spectrometry (TOF-SIMS) as a new technique in cosmochemistry. His credo always was that sample analysis in space has to be complemented by state-of-the-art laboratory analysis here on Earth.

In 1996, Elmar became full Professor of Analytical and Experimental Planetology at the Institute for Planetology at the University of Münster. During his time in Münster, he established a dedicated TOF-SIMS laboratory, which played an important role in the analysis of cometary samples returned by the *Stardust* mission. He was one of the initiators of the Mercury radiometer and thermal infrared spectrometer (MERTIS) for the joint ESA/JAXA *BepiColombo* mission to the planet Mercury, and he promoted GENTNER, a combined laser-induced breakdown spectroscopy (LIBS) and Raman spectroscopy instrument, for the ESA/Roscosmos *ExoMars* mission.

After his retirement in 2008, Elmar stayed involved in science, mainly as an advisor in some of the projects he initiated. He was especially pleased to see his scientific legacy live on in the work of his numerous former students. Elmar constantly promoted the careers of his students and enabled them to become successful scientists.

We, who had the privilege to work closely with Elmar, will miss him as a great mentor and very good friend. We will especially miss the endless discussions, which usually involved a lot of cigarette smoke and a glass of wine (or two), about science, life, and everything.

Towards the end of his fulfilled life, Elmar became a devoted family man, who took the greatest pleasure in spending time with his five grandchildren (Jonathan, Luise, Lotte, Stella, and Jil). Elmar is survived by his wife, Ulrike, their sons Florian and Sebastian, and their families.

THANKS TO OUR SOCIETY COMMITTEE MEMBERS

The Meteoritical Society would like to extend its sincere thanks to all those members who are serving on society committees this year. We have listed their names below, with the names of the committee chairs in **bold**. Without the generous help of these members, the MetSoc could not function. We greatly appreciate their help!

Name	Affiliation	Ends
AUDIT • 3 members; 3-year term		
Beda Hofmann (Chair)	Natural History Museum (Switzerland)	2017*
Harold Connolly	Rowan University (USA)	2019*
Jutta Zipfel	Senckenberg Research Institute, Frankfurt (Germany)	2020
BARRINGER AWARD • 4 members, 4-year term		
John Spray (Chair)	University of New Brunswick (Canada)	2018
Akiko Nakamura	Kobe University (Japan)	2019
Michael Poelchau	University of Freiburg (Germany)	2020
Michael Zanetti	Washington University, St. Louis (USA)	2021
METEORITICAL SOCIETY COUNCIL		
Trevor Ireland (President)	Australian National University	2019
Meenakshi Wadwha (Vice President)	Arizona State University (USA)	2019
Michael Zolensky (Past President)	NASA/JSC (USA)	2019
Michael Weisberg (Secretary)	City University of New York/AMNH (USA)	2019*
Candace Kohl (Treasurer)	Del Mar, California (USA)	2019*
Catherine Corrigan	Smithsonian NMNH (USA)	
Mario Trieloff	Heidelberg University (Germany)	
Maria Eugenia Varela	Instituto de Ciencias Astronomicas de la Tierra y del Espacio (Argentina)	
Pierre Rochette	Aix-Marseille University (France)	
François Robert	Museum national d'histoire naturelle, Paris (France)	*
Caroline Smith	Natural History Museum, London (UK)	*
Keiko Nakamura-Messenger	NASA/JSC (USA)	*
ENDOWMENT • 5 members; 3-year term		
Gary Huss	University of Hawaii (USA)	2018
Uwe Reimold	Leibniz Institute, Humboldt University, Berlin (Germany)	2018
Rhian Jones	University Manchester (UK)	2019
Allan Treiman	Lunar and Planetary Institute (USA)	2019
Drew Barringer (Co-Chair)	The Barringer Crater Company (USA)	
Candace Kohl (ex-officio)	Del Mar, California (USA)	
Trevor Ireland (ex-officio)	ANU College of Science (Australia)	
LEONARD MEDAL AND NIER PRIZE • 5 members; 3-year term		
Sara Russell	Natural History Museum, London (UK)	2018
Richard Binzel (Chair)	Massachusetts Institute of Technology (USA)	2019
Roger Hewins	Rutgers University (USA)	2020
Maria Schönbächler	ETH Zürich (Switzerland)	2021
Hiroshi Hidaka	Hokkaido University (Japan)	2022
MCKAY AWARD • 6-8 members; 1-year term		
Tasha Dunn (Chair)	Colby College (USA)	2018
Marina Ivanova (Vice Chair)	Vernadsky Institute (Russia)	2018

Name	Affiliation	Ends
MEMBERSHIP AND SERVICE AWARD		
Erin Walton (Chair)	Grant MacEwan University (Canada)	2018*
Tomas Kohout	University of Helsinki (Finland)	2018*
Devin Schrader	Arizona State University (USA)	2019
Gretchin Benedix	Curtin University (Australia)	2019
Matthias Meier	ETH Zürich (Switzerland)	2019
Mendy Ouzillou	Meteorite Collector (Skyfall Meteorites)	2020
Ludovic Ferriere	Natural History Museum (Austria)	2020*
NOMENCLATURE • 12 members; 3-year term • 3 ex officio		
Hasnaa Chennaoui-Aoudjehane	Université Hassan II de Casablanca (Morocco)	2017*
Jérôme Gattacceca, Bulletin Editor (ex-officio)	CEREGE (CNRS) (France)	2018
Knut Metzler	Universität Münster (Germany)	2018*
Meenakshi Wadhwa (ex-officio)	Arizona State University (USA)	2018
Tasha Dunn	Colby College (USA)	2019*
Laurence Garvie (Chair)	Arizona State University (USA)	2019
Mutsumi Komatsu	Waseda University (Japan)	2019
Tasha Dunn	Colby College (USA)	2019*
Jeff Grossman, Database Editor (ex-officio)	NASA/HQ (USA)	2019
Francis McCubbin	NASA/JSC (USA)	2019
Emma Bullock	Smithsonian – NMNH (USA)	2020*
Vinciane Debaille	Université Libre de Bruxelles (Belgium)	2020*
PELLAS/RYDER AWARD • 3 MetSoc; 3 GS; 3-year term		
Katherine Joy (MetSoc)	Universität Münster (Germany)	2018
Brad Thomson (GS, Chair)	University of Tennessee (USA)	2018
Emily Martin (GS)	Smithsonian – NASM (USA)	2019
Sharon Wilson Purdy (GS)	Smithsonian – NASM (USA)	2019
Jon Friedrich (MetSoc)	Fordham University (USA)	2019
Lindsay Keller (MetSoc)	NASA/JSC (USA)	2020
PUBLICATIONS • 6 members + Treasurer; 3-year terms		
Alan Rubin	UCLA (USA)	2018
Martin Bizzarro	Natural History Museum (Denmark)	2019
Tomoki Nakamura	Tohoku University (Japan)	2019
Cecile Engrand (Chair)	University of Paris (France)	2020*
Ian Lyon	University of Manchester (UK)	2020*
Qingzhu Yin	University of California at Davis (USA)	2020
PUBLICATIONS (JOINT PUBLICATIONS) • 6 members; 3-year terms		
Steve Shirey (GS) Chair	Carnegie Institution of Washington (USA)	2018
George FLynn (MetSoc)	SUNY Plattsburgh (USA)	2018
Thorsten Kleine (MetSoc)	Universität Münster (Germany)	2019*
Jisun Park (MetSoc)	CUNY, Kingsborough Community College (USA)	2019*
Mark Rehkamper (GS)	Imperial College, London (UK)	2019

* = 2nd term

Meteoritical Society

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2018 REPORT OF THE METEORITE NOMENCLATURE COMMITTEE (NOMCOM)

Laurence Garvie

The purpose of the Meteorological Society's Meteorite Nomenclature Committee (NomCom) is to approve new meteorite names, to establish guidelines, and to make decisions regarding the naming of meteorites. The committee also keeps the community appraised of new meteorites through the *Meteoritical Bulletin* and the *Meteoritical Bulletin Database* (https://www.lpi.usra.edu/meteor/). Although the yearly publication of the *Meteoritical Bulletin* lags behind the database entries, new meteorites are automatically added to the next issue of the bulletin by the database editor. The contents of the bulletin are accessible using the "Publication" dropdown window in the database. *Meteoritical Bulletin* 106 contains data on 1,868 meteorites (1,463 non-Antarctic); *Meteoritical Bulletin* 107 currently contains 454 meteorites.

I would like to thank Audrey Bouvier for her service as Editor of the *Meteoritical Bulletin* from 2014 to 2018 – this is a particularly time-consuming position. Also, I would like to thank Jérôme Gattacceca for accepting the Editor position. Current membership is as follows:

NomCom Committee	Term Ending
Laurence Garvie (Chair)	2018
Mutsumi Komatsu (1st term)	2019
Knut Metzler (2nd term)	2018
Tasha Dunn (2nd term)	2019
Emma Bullock (2nd term)	2019
Vinciane Debaille (2nd term)	2020
Hasnaa Chennaoui (2nd term)	2020
Francis McCubbin (1st term)	2018
Three ex-officio NomCom members	
Jérôme Gattacceca (1st term) (*Meteoritical Bulletin* Editor)	
Jeff Grossman (4th term) (Database Editor)	
Meenakshi Wadhwa (Meteoritical Society Vice President)	

Meteoritical Bulletin *Database (MBDB)*

Meteorites. First and foremost, the database is a record of all recognized and classified meteorites as accepted by the Meteorite Nomenclature Committee (NomCom) of the Meteoritical Society. In addition, the database lists all approved dense collection areas (DCAs), including their keyhole markup language (KML) coordinates for direct viewing in GoogleEarth. The NomCom also keeps a list of all collections and repositories.

The *Meteoritical Bulletin* database (MBDB) continues to see significant growth, with around 1,923 meteorites added over the last calendar year for a total of 57,763 classified meteorites (as of 2 April 2018). Notable entries include twelve confirmed and probable falls (Table 1), four of which are not ordinary chondrites. Though a purely subjective list, other notable entries include **Sericho** (pallasite from Kenya with total mass well over 10 t), **Los Vientos 200** (a fresh CH3), five new irons from Mars (**Aeolis Mons 001** and **002** and **Aeolis Palus 001 to 003**), **Los Vientos 189** (an anomalous IID iron), **Northwest Africa 11610** (CO3 stone with a mass of over 28 kg!), and **Northwest Africa 11575** (ungrouped achondrite). There continues to be strong numbers for new Lunars (45 for total mass over 50 kg) and Martians (13 for total mass near 4 kg).

Table 1 TWELVE CONFIRMED AND PROBABLE METEORITE FALLS

Name	Status	Fall	Year	Place	Type	Mass
Aiquile **	Official	Yc	2016	Cochabamba, Bolivia	H5	50 kg
Broek in Waterland **	Official	Yc	2017	Noord-Holland, Netherlands	L6	530 g
Dishchii'bikoh **	Official	Yc	2016	Arizona, USA	LL7	79.5 g
Hamburg **	Official	Yc	2018	Michigan, USA	H4	1000 g
Hradec Králové **	Official	Yc	2016	Královéhradecký, Czech Republic	LL5	134 g
Kalugalatenna **	Official	Yc	2003	Central, Sri Lanka	L6	5 kg
Kheneg Ljouâd **	Official	YP	2017	Guelmime Es Smara, Morocco	LL5/6	10 kg
Mazichuan **	Official	Yc	2016	Shaanxi, China	Diogenite	3.28 kg
Mukundpura **	Official	Yc	2017	Rajasthan, India	CM2	2 kg
Oudiyat Sbaa **	Official	Yc	2016	Western Sahara/Morocco	EH5	23.85 kg
Serra Pelada **	Official	Yc	2017	Para, Brazil	Eucrite	12 kg
Tres Irmaos **	Official	Yc	2017	Bahia, Brazil	L6	890 g

Most submitters understand the importance of the database as a worldwide source for meteoritical information, and the depth of their submissions reflect this understanding. I continue to encourage submitters to see these submissions as mini-refereed publications - they are reviewed by the NomCom, which consists of 12 of your fellow scientists. Often, the submission will be the only time the meteorite is studied in detail, and, as such, sufficient petrographic and geochemical information should be included so as to be useful for future scientists.

Dense Collection Areas. There are currently 370 named dense collection areas (DCAs) – a list of all DCAs can be found at https://www.lpi.usra.edu/meteor/DenseAreas.php. Two of the DCAs are on Mars, viz. **Aeolis Mons** and **Aeolis Palus**. These DCAs are warranted given the numbers of meteorites observed by the Mars rover *Curiosity*. The names of a DCA derive from the International Astronomical Union–defined geomorphological units. Currently, the Aeolis Mons DCA contains two meteorites; the Aeolis Palus DCA contains three.

Type-Specimen Repositories. The NomCom voted on and approved the following type-specimen repositories: **SIGM** – the V.S. Sobolev Institute of Geology and Mineralogy (SIGM) (Russia); **FMMR** – the Fersman Mineralogical Museum RAS, (Russia); **MLP** – the Museo de La Plata (Argentina); **PRL** – the Physical Research Laboratory, Ahmedabad (India); **UBonn** – the University of Bonn Mineral Museum (Germany); **ETH** – the Eidgenössische Technische Hochschule Zürich (Switzerland); **IUEM** – the Université de Bretagne Occidentale (France). In accordance with §7.1f of the *Guidelines for Meteorite Nomenclature*, type specimens of all new meteorites "must be deposited in institutions that have well-curated meteorite collections and long-standing commitments to such curation." For more on repository information, see https://www.lpi.usra.edu/meteor/MetBullAddresses.php?grp=country.

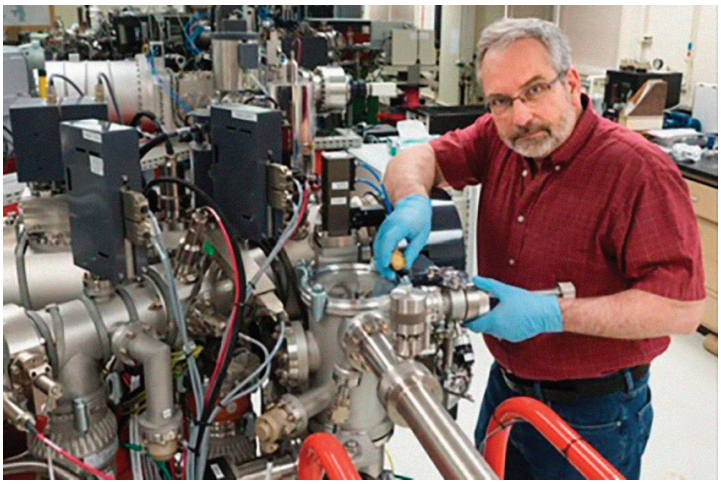
Essential information on meteorite nomenclature, instructions, the template for reporting new meteorites, and NomCom membership can all be found at http://meteoriticalsociety.org/?page_id=106. The template that should be filled out for new submission can be found at http://meteoriticalsociety.org/?page_id=63. This template is in Excel format with instructions both on page one of this file and header for each column (just let your mouse hover over the column header name).

Here is where I would like to make a special plea – please take the time to follow these instructions, especially for special characters such as micron, degrees, etc.

Finally, do not hesitate to contact us with questions or concerns about the NomCom, especially with suggestions for improvement.

Laurence Garvie
Chair of the Nomenclature Committee

2018 J. LAWRENCE SMITH MEDAL AWARDED TO KEVIN McKEEGAN



The 2018 J. Lawrence Smith Medal of the US National Academy of Sciences was awarded to Kevin D. McKeegan (University of California, Los Angeles). "The medal is awarded every three years for investigations of meteoric bodies and includes a $50,000 prize. The award was established as a gift from Sarah Julia Smith in memory of her husband and has been presented since 1888." Kevin received the 2018 medal "for contributions to understanding of the processes and chronology of the early solar system as recorded by primitive meteorites, for innovation in analytical instrumentation, and for showing that the oxygen isotopic compositions of the Earth and rocky planets and meteorites are distinctly different from that of the Sun." Past recipients of the medal include Hiroko Nagahara (2015), Harry Y. (Hap) McSween (2012), Robert (Bob) Clayton (2009), Klaus Keil (2006), and John Wasson (2003).

GIFTS AND GRANTS GUIDELINES CHANGED

The stated mission of the Meteoritical Society is "to promote research and education in planetary science with emphasis on studies of meteorites and other extraterrestrial materials that further our understanding of the origin and history of the solar system." Besides the society's publications, the annual scientific meetings, establishing official names for newly found meteorites, and the awards sponsored by the society, there are other ways by which we work toward furthering our mission. This includes supporting student travel to conferences and workshops, supporting student research, assisting scientists from economically disadvantaged countries, supporting classes or field schools (especially those that bring meteoritics and planetary science to developing countries), compiling oral histories from prominent members of the society, and supporting outreach to the broader public community on meteoritics and planetary science.

To support these activities, the society has created an endowment fund. The majority of the endowment consists of the General Fund which can support one-time activities that are not part of normal society business. The endowment fund also has the named funds within it: the Nier Fund, the McKay Fund, and the Travel for International Members (TIM) Fund. Details about activities supported by all of these funds are given under the Activities Supported section on the society's website.

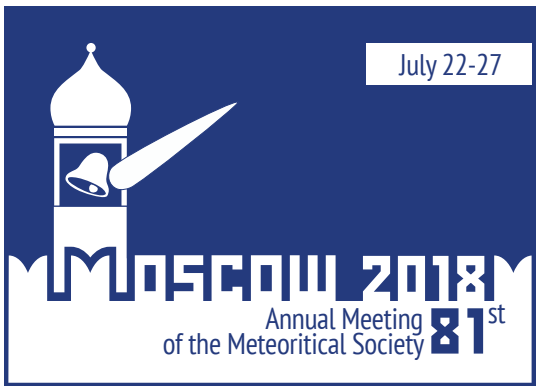
For those who wish to assist in this mission, donations can be made to the General Fund or to any of the specific funds (see Ways to Contribute on the society's website).

CALL FOR NEW MEETING LOCATION PROPOSALS

The society is currently accepting proposals for future annual meeting locations. The next meeting location to be chosen will be for the year 2022. Please submit questions and/or proposals to metsocsec@gmail.com.

ANNUAL MEETING SCHEDULE

2018	Moscow (Russia) 22–27 July
2019	Sapporo (Japan) 8–12 July
2020	Glasgow (Scotland, UK) 9–14 August
2021	Chicago (Illinois, USA) dates TBD



RENEW YOUR MEMBERSHIP NOW!

Please don't forget to renew your membership for 2018. Students, this is particularly important if you are interested in applying for one of our student presentation awards, as you must be a member to be eligible. You can renew online at http://metsoc.meteoriticalsociety.net.

Meteoritical Society

http://meteoriticalsociety.org

2018 METEORITICAL SOCIETY TREASURER'S REPORT

Candace Kohl,
Met Soc Treasurer

The society's finances continue to be on a sound footing, and both the Operating Fund and our Investment Fund 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. The *MAPS* journal 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 (USA), which is managed by Editor Tim Jull.

Society memberships include subscriptions to *MAPS* and *Elements*. Membership with subscription to only the electronic version of *MAPS* has become a popular option, although more than half of our membership still purchases the printed version. Dues were raised this year for those desiring the print copy of the journal. Collection of membership dues for 2019 will begin in October 2018. I would like to 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 memberships.

Our Investment Fund, which includes a number of endowed funds, continues to do as well as we can expect with the current market situation. The Nier Fund supports the annual Nier Prize, which recognizes outstanding research by young scientists in meteoritics and closely allied fields. The 2018 recipient is Dr. Lydia Hallis of the University of Hawaii at Manoa (USA). The Gordon A. McKay Fund supports an award to the student who gives the best oral presentation at the annual meeting of the society. The 2017 award was given to Jennika Greer from the University of Chicago (USA). The Travel for International Members (TIM) Fund to support travel to Meteoritical Society meetings for professional members of the society from low-income countries continues to grow, and, this year, funds donated to it will be used to fund travel to our 2018 meeting in Moscow (Russia). Tim Swindle continues his generous annual donation to this fund.

This year we are delighted to report a new endowed fund. This fund was established to honor the memory of science author and public educator O. Richard Norton (1937–2009) and is generously supported by John H. and Dorothy Norton Kashuba. The money will be used for travel to the annual meeting of the society for the presentation of papers and posters, with preference given to early career scientists. The O. Richard Norton Travel Awards will be given out for the first time this year for the 2018 Moscow meeting and will be an ongoing resource for future meetings.

The General Endowment Fund supports a variety of outreach projects. Over the last year, this fund has been used to provide travel support for students to attend two workshops on meteorites in different parts of China and to support a series of lectures in Brazil. Endowment funds were also used to support travel for students to attend the Meteoritical Society meeting in Santa Fe (New Mexico, USA). This year, General Endowment Funds will be used to fund students and post-doctoral scholars to attend the meeting in Moscow. The Meteoritical Society recognizes Bevan and Mary-Hill French for their generous donation to the General Endowment Fund. 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.

Many society members contribute generously to support all of these funds, and your donations are always greatly appreciated. It is simple to donate to any of our funds at the same time as you renew your membership. Donations by check (cheque) or other means are also welcomed.

In addition to major contributions, a total of over $15,000 was donated to the various funds from our generous members. Over 270 separate donations were received this fiscal year. Your contributions provide direct support that helps to strengthen our international community.

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 has been given since 2001 and honors the memories of meteoriticist Paul Pellas and lunar scientist Graham Ryder.

For 2017, the award for the Best Student Paper in Planetary Sciences has been given to **Emily Worsham**, formerly a PhD student at the University of Maryland (USA), now a postdoc at the University of Münster (Germany). The award is in recognition of the paper "Characterizing Cosmochemical Materials with Genetic Affinities to the Earth: Genetic and Chronological Diversity within the IAB Iron Meteorite Complex", which was published in *Earth and Planetary Science Letters* in 2017.

2017 MEMBERSHIP REPORT

As of May 2018, the Meteoritical Society comprises 630 regular members, 161 students, 101 retired members, 34 life members, 15 members from developing countries and 2 complimentary members. This brings us to a grand total of 943 members. Many thanks to Erin Walton (MacEwan University, Canada) for providing these statistics. This year we can include Colombia and Turkey in the growing list of countries in which the society has membership. We can be proud that we have members in 48 countries; however, the statistics show that we still have a lot to do to gain members in many countries and to increase the number of student members. Student memberships are inexpensive (US$40) and subsidize the registration fee for the Meteoritical Society's annual meeting. Student members also have the opportunity to attend a student reception at this meeting, providing an excellent forum where they can interact with their peers and meet senior scientists in the community. Please encourage your students to join! In addition, the society does have a mechanism in place to subsidize annual dues for members in low-income countries. Prior approval is required from the Membership Committee for this rate – please refer to our website at http://www.meteoriticalsociety.org for more information.

For those wishing to avoid the hassle of paying dues every year, consider a life membership! 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.

MEETING INFO

2019 July 8–12	Sapporo (Japan)
2020 August 9–14	Glasgow (Scotland, UK)
2021 Dates TBD	Chicago (Illinois, USA)

Country	Developing Country	Member	Retired Member	Student	Life Member	Compli-mentary	Total
Algeria	3			1			**4**
Argentina		1					**1**
Australia		17	3	7			**27**
Austria		6	2	1			**9**
Belgium		4	1	1			**6**
Brazil		4	1	1			**6**
Canada		18	7	8	1		**34**
Chile	1	3		1			**5**
China	2	9		1			**12**
Colombia		1					**1**
Croatia				1			**1**
Czech Republic		2	1				**3**
Denmark		3	1		1		**5**
Estonia		1					**1**
Finland		3					**3**
France		25	9	3	2		**39**
Germany		65	18	14	5		**102**
Greece		1					**1**
Holy See (Vatican City State)		2					**2**
Hungary		2					**2**
India	2	5	2				**9**
Ireland			1				**1**
Italy		10	1				**11**
Japan		71	11	8			**90**
Jordan	1						**1**
Korea, Republic of		3	1				**4**
Latvia				1			**1**
Luxembourg			1	1			**2**
Malaysia		1					**1**
Mexico		1					**1**
Morocco	4						**4**
Netherlands		5	1	1			**7**
New Zealand					1		**1**
Norway		2					**2**
Oman	1	1					**2**
Poland		4	1				**5**
Portugal		1					**1**
Romania	1						**1**
Russian Federation		10		4			**14**
Slovak Republic		1					**1**
South Africa		3					**3**
Spain		4	1				**5**
Sweden		3					**3**
Switzerland		18	7	6	1		**32**
Turkey		2		1			**3**
United Kingdom		36	5	19			**60**
USA		281	86	21	23	2	**413**
Uruguay		1					**1**
48 Countries	**15**	**630**	**161**	**101**	**34**	**2**	**943**

IN MEMORIAM

Ursula Marvin (1921–2018)

Ursula Marvin passed away on 12 February 2018 at the age of 96. Discouraged from majoring in geology as an undergraduate, she graduated from Tufts University (Massachusetts, USA) in 1943 with a degree in history, but pursued numerous geology courses despite not majoring in the subject. She applied for, and won, a Folsom Scholarship to study geology at Radcliffe College (Massachusetts, USA). Working mostly at Harvard University (Massachusetts, USA), she earned a Master's Degree in geology in 1946. She intended to immediately pursue a PhD at Northwestern University (Illinois, USA) and published her first papers in 1950. However, the dissolution of her first marriage was followed by a second marriage to Tom Marvin, a mining geologist and fellow PhD candidate at Harvard. In 1952, the two not only decided to marry but to spend two years in Brazil and Angola in search of ore deposits. Ursula joined the research staff of the Smithsonian Astrophysical Observatory (SAO), which had just moved from Washington D.C. to Harvard. She became a civil servant a few years later and lost interest in obtaining a doctorate. She would earn her PhD in 1969 based on work she had completed during her tenure at the SAO.

The 1960s and 1970s were very productive years for Ursula and the SAO group. Ursula published the first paper on the Allende meteorite, co-authored with John Wood, and was a co-author on the seminal paper that described anorthosite from Apollo 11 soil, leading to the idea of an early magma ocean on the Moon. Ursula's interests were wide-ranging. In the early 1970s, she published one of the early popular books on the history of continental drift.

Ursula served as President of the Meteoritical Society between 1975 and 1976. She used her background in both history and geology to their fullest extent in a series of oral histories and papers published in *Meteoritics and Planetary Science*. Her publication of thirteen oral histories of prominent people in the field, as well as papers on the Ensisheim Meteorite, Ernst Chladni (1756-1827), Domenico Troili (1722-1792), and the history of the Meteoritical Society itself should be required reading for anyone entering the field. Ursula became an active participant of the International Commission on the History of Geological Sciences.

Ursula participated in the 1980, 1981 and 1982 U.S. Antarctic meteorite expeditions.

Ursula published over 160 research papers in her career and she received awards from the Geological Society of America (1986), the Geological Society (2005) and received the Meteoritical Society Service Award (2012) for her research on the history of geology. She won the Lifetime Achievement Award of the Women in Science and Engineering from the UK campaign for Women in Science and Engineering (1997). Marvin nunatak in Antarctica and asteroid 4309 Marvin have been named in her honor.

Both for her personality and her contributions to the Meteoritical Society, Ursula will be missed.

Derek W.G. Sears
(full citation can be read on the Met Soc website)

Meteoritical Society

http://meteoriticalsociety.org

INVITATION TO THE 2019 ANNUAL MEETING OF THE METEORITICAL SOCIETY

You are cordially invited to attend the 82nd annual meeting of the Meteoritical Society (MetSoc), which will take place 7–12 July 2019 in Sapporo (Japan). The meeting is being jointly organized by Hokkaido University, National Institute of Polar Research (NIPR), and Japan Aerospace Exploration Agency (JAXA) and will be held on the Sapporo Campus of Hokkaido University. Oral sessions will take place in three meeting rooms in the Hokkaido University Conference Hall. Poster sessions will also take place at the Hokkaido University Conference Hall. Invited lectures, including the Barringer Lecture and the MetSoc Award ceremony, will take place at the conference hall in the Clark Memorial Student Center, which is a four-minute walk from the Hokkaido University Conference Hall. Yet to be finalised are the plans for a variety of special sessions and workshops on the 50th year anniversaries of the falls of Allende and Murchison meteorites, the first discovery of the Yamato Antarctic meteorites, the Apollo 11 mission, and on-going asteroid sample-return missions.

Conference registration begins on the evening of Sunday, 7 July 2019 at the Hokkaido University Conference Hall. A welcome party will be held at the University Museum. On the Wednesday afternoon of the meeting, several excursions will be offered that will allow participants to explore Sapporo and the surrounding area (including a city tour, a bus trip to Otaru harbor, a guided tour to the Kan Yasuda sculpture museum, and more). There will also be several Japanese culture experience programs for guests during the meeting. The Conference Banquet will be held at the Sapporo Park Hotel, which is inside Nakajima Park in the middle of downtown Sapporo.

Hokkaido University itself was established in 1876 as the Sapporo Agricultural College, the first modern academic institute in Japan. The Sapporo Campus of Hokkaido University, one of the largest university campuses in Japan, is located in the center of Sapporo City. Sapporo is the capital city of Hokkaido Prefecture, and the largest city on Hokkaido Island, the northernmost island of Japan. A summer in Sapporo might be described as brisk and comfortable.

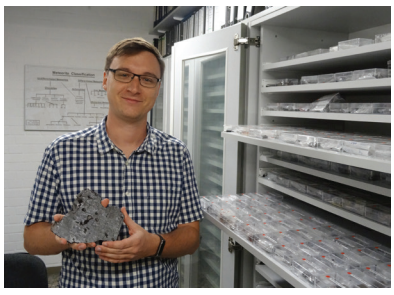
We are looking forward to welcoming you to Sapporo!

Hisayoshi Yurimoto
e-mail: yuri@ep.sci.hokudai.ac.jp

INTERNATIONAL METEORITE COLLECTORS ASSOCIATION: THE 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 and spent the majority of his career as a curator at the Smithsonian Institution (Washington, USA). The award is given to a student attending the annual meeting of the MetSoc who submits an abstract that clearly explains some exciting results of particular interest to readers of *Meteorite* magazine. The recipient is required to write a popular account of their work for the magazine. Since 2008, the award has been generously funded by the International Meteorite Collectors Association.

Morgan Cox



Markus Patzek

This year the Program Committee for the Moscow (Russia) meeting selected **Morgan Cox and Markus Patzek** to win the Brian Mason Award. **Morgan Cox** is an undergraduate student at Curtin University in Perth (Australia). Her abstract was entitled "Characterisation of Shock Deformation at the Spider Impact Structure, Western Australia", and authors were M. Cox, A. Cavosie, K. Miljkovic, P. Bland, T. Kenkmann and Z. Hoskins. **Markus Patzek** is a graduate student at Westfälische Wilhelms-Universität Münster (Germany). His abstract was entitled "O-Isotope Composition of CI- and CM-like Clasts in Ureilites, HEDs, and CR Chondrites" and the authors were M. Patzek, A. Pack, A. Bischoff, R. Visser and T. John.

CALL FOR AWARD NOMINATIONS

Please consider nominating a colleague for one of the society's awards. Nominations should be sent to Secretary Munir Humayun (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 *Meteoritical Society Newsletter* at the society website or e-mail the secretary.

The society gives a number 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 a young scientist. 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.

2018 ANNUAL MEETING STUDENT TRAVEL AWARDS

On behalf of the Meteoritical Society, we would like to thank the organizations whose generous sponsorship has provided student travel grants, postdoc travel grants, and travel grants for scientists from countries with limited financial resources. These sponsoring organizations, and the recipients of the travel awards themselves, are listed below.

This year, 52 travel grants were given to students and researchers who attended the annual meeting of the society in Moscow (Russia). Student travel grants and travel grants for scientists from countries with limited financial resources are generously sponsored by the Barringer Crater Company, the O. Richard Norton Fund, NASA, Elsevier publishers, the Meteoritical Society, the International Meteorite Collectors Association, the Planetary Studies Foundation, and Darryl Pitt and the Macovich Collection (Montana Meteorite Laboratory, USA).

Barringer Crater Company

Nicola Mari, University of Glasgow (UK)
Patrizia Will, ETH Zürich (Switzerland)
Aine O'Brien, University of Glasgow (UK)
Morgan Cox, Curtin University (Australia)
Takashi Yoshizaki, Tohoku University (Japan)
Stefan Farsang, University of Cambridge (UK)
Miriam Rüfenacht, ETH Zürich (Switzerland)
Jens Barosch, University of Cologne (Germany)
Nozomi Matsuda, Hokkaido University (Japan)
Daniela Weimer, ETH Zürich (Switzerland)
Runlian Pang, Friedrich-Schiller-Universität Jena (Germany)
Amanda Stadermann, University of Arizona (USA)
Brendan Haas, Washington University (USA)
Leticia De Marchi, Auburn University (USA)
Neeraja Chinchalkar, Auburn University (USA)

O. Richard Norton Award

Gerhard Schmidt, Heidelberg University (Germany)
Atsushi Takenouchi, University of Tokyo (Japan)
Haruka Ono, University of Tokyo (Japan)
Malgorzata Sliz, University of Bern (Switzerland)
Kana Amano, Tohoku University (Japan)
Wladimir Neumann, German Aerospace Center (Germany)
Runlian Pang, Friedrich-Schiller-Universität Jena (Germany)
Craig Walton, University of St Andrews (UK)
Matthew Huber, University of the Free State (South Africa)
Arindam Dutta, Geological Survey of India (India)
Amanda Stadermann, University of Arizona (USA)
Brendan Haas, Washington University (USA)
Kaitlyn McCain, University of California at Los Angeles (USA)
Evgeniya Khakhalova, University of Minnesota (USA)

Elsevier

Thomas Barrett, The Open University (UK)
Mattias Ek, ETH Zürich (Switzerland)
Atsushi Takenouchi, University of Tokyo (Japan)

International Meteorite Collectors Association, Brian Mason Award

Morgan Cox, Curtin University (Australia)
Markus Patzek, Westfälische Wilhelms-Universität Münster (Germany)

NASA Emerging Worlds

Evgeniya Khakhalova, University of Minnesota (USA)
Josiah Lewis, Washington University in St. Louis (USA)
Orion Cohen, Reed College (USA)
Leticia De Marchi, Auburn University (USA)
Neeraja Chinchalkar, Auburn University (USA)

Planetary Studies Foundation

Amanda Stadermann, University of Arizona (USA)
Kaitlyn McCain, University of California at Los Angeles (USA)

Darryl Pitt/Macovich Collection

Haruka Ono, University of Tokyo (Japan)

The Meteoritical Society Endowment Fund

Yogita Kadlag, Freie Universität Berlin (Germany)
Jane MacArthur, University of Leicester (UK)
Elizaveta Kovaleva, University of the Free State (South Africa)
Atsushi Takenouchi, University of Tokyo (Japan)
Jinia Sikdar, Freie Universität Berlin (Germany)
Wladimir Neumann, German Aerospace Center (Germany)
Josiah Lewis, Washington University in St. Louis (USA)

The Meteoritical Society Travel for International Members Fund

Dwijesh Ray, Physical Research Laboratory (India)
Taha Shisseh, Universiy of Hassan II (Morocco)
Imene Kerraouch, University of Science and Technology—Houari Boumediene (Algeria)

Meteoritical Society

http://meteoriticalsociety.org

2018 ANNUAL MEETING REPORT

The 81st Annual Meeting of the Meteoritical Society (MetSoc) was held 22–27 July 2018 in Moscow (Russia). The conference was hosted in the Presidium of the Russian Academy of Sciences building, also called the "Golden Brains". Some 302 participants from 28 different countries registered for the meeting, including 213 professionals (scientists plus exhibitors), 71 student participants, and 18 guests. A total of 164 registrants were MetSoc members. The MetSoc exhibition area also played host to the booths of publisher Springer, the journal *Nature*, and the analytical manufacturers of CAMECA and Textronica. In total, 358 abstracts were accepted for 204 oral and 154 poster presentations. Oral presentations were scheduled in three parallel sessions from Monday (22 July) to Friday (27 July), and all posters were on display for the entire duration of the conference.

The MetSoc 2018 conference group photo. Photo: 2018 Local Organizing Committee

A total of 38 travel awards were allocated to student members, early career scientists, and scientists from low-income countries through generous sponsorships donated by the Barringer Crater Company, the NASA Cosmochemistry Program, the International Meteorite Collectors Association (IMCA), the Planetary Studies Foundation (PSF), publisher Elsevier, and the Meteoritical Society's Endowment Fund and its Travel for International Members Fund. In addition, Russian sponsors supported 79 Russian participants.

Two pre-congress tours to St Petersburg and Yaroslavl were organized prior to the conference. Seventeen participants visited St Petersburg on 18–21 July 2018, including the main sights and a visit to the A. P. Karpinsky Russian Geological Research Institute (VSEGEI) with its impressive geological museum and a special exhibition dedicated to the Popigai impact structure (a visit led by Dr. Victor L. Masaitis). On 20–22 July, Dr. Natalia Artemieva led a two-day tour to Yaroslavl, the capital of the Russian Golden Ring: the group of 12 participants visited the repository of the Russian superdeep drilling cores, including the 5 km drill core of the Puchezh–Katunki impact crater and the superdeep Kola borehole.

The conference proper kicked off on Sunday (23 July) with a pre-conference workshop entitled NEOs Hazard: Multidisciplinary Approach, which was convened by Drs. Olga Popova, Vladimir Svetsov and Valery Shuvalov. This was followed by participant's registration and Welcome Reception at the V.I. Vernadsky State Geological Museum, just next to the legendary National hotel and in front of Red Square. Several participants and guests went to see the ballet at the Bolshoi Theater on Saturday and Sunday.

The official opening ceremony took place on Monday July 23, with greetings by Erik Galimov (the head of the Meteoritics Committee of Russia), Dr. Yuri Kostitsy (Director of Vernadsky Institute of the Russian Academy of Sciences), and Dr. Danis Nurgaliev (the Vice-Rector of the Kazan Federal University), and a talk by Dr. Dmitry Badyukov, the head of the meteoritics laboratory of the Vernadsky Institute. The opening ceremony was followed by the Award Ceremony and the Special Annual Lecture, which was sponsored by MetSoc and presented by Dr. Artem Oganov (Skolkovo Institute of Science and Technology, Russia), the title of which was, "High-Pressure Chemistry and Geochemistry: New Results and Ideas". Awardees' lectures were given on Monday afternoon, by Dr. Sasha Krot (Leonard Medal) and Dr. Thomas Kenkmann (Barringer Medal), respectively, and were followed by two special sessions: "Evolution of the Solar Nebular: Origin of the Moon and Planets" and a special session dedicated to famous meteorite falls in Russia (notably Tunguska and Chelyabinsk).

The scientific program covered 26 topics: these were organized under the themes of achondrites, carbonaceous chondrites, ordinary chondrites, chondrules, methods and analytical technique, volatiles, solar system chronology, impacts, Mars, geochemistry of lunar meteorites, organic matter, pre-solar grains, interplanetary dust particles, and differentiated bodies. The mid-week workshop entitled Experiment and Modelling in Investigation of Extraterrestrial Material was organized on Thursday (26 July) and convened by Drs. Ruslan Mendybaev and Kevin Righter.

The Annual Barringer Invitational Lecture on Monday evening was entitled, "The Philosophy of Meteoritics: Awe, Faith and Data" and was presented by Brother Guy Consolmagno SJ. This lecture attracted a lot of external listeners and was one of the highlights of the conference.

Regular scientific sessions on Tuesday (July 24) were followed by a 'day off' on Wednesday (July 25), which allowed the meeting participants to explore Moscow via a Moscow city tour, Moscow boat tour, three consecutive guided tours to the Kremlin and the Fersman Mineralogical Museum (FMM). The free FMM excursion was organized for several groups of participants.

The conference gala dinner took place on Wednesday from 5 PM to 11 PM at the gorgeous Korston Club Hotel, close to the conference venue, in the magnificent Place de Paris banquet hall. Participants enjoyed traditional Russian cuisine and Russian folk dancers/singers who got the crowd on their feet.

Both poster sessions on Tuesday and Thursday evenings were very well attended, and many good discussions were had over drinks and posters. The beautiful poster foyer area around the session halls were open the whole working week and certainly promoted useful discussions between scientists young and 'old'.

The conference concluded on Friday afternoon (July 27) with a Farewell party, where participants met each other in the Winter Garden, had a lunch, and discussed again different scientific topics. About 40 participants attended the Planetarium excursion on Friday night to see the Star Hall and to try and observe the lunar eclipse.

Three post-conference excursions were organized:

1. A three-day tour to St. Petersburg, which was attended by 16 participants. The tour program was similar to that of the pre-conference tour.
2. Drs. Danis Nurgaliev and Dilyara Kuzina led a tour to Kazan City on 28–30 July, which was taken by 7 participants who visited the famous historical places of the city and attended a field trip to the Karla crater, one of the biggest craters in Russia.
3. Drs. Viktor Grokhovsky and Evgeniya Petrova led a tour to Ekaterinburg and Chelyabinsk on July 28–31; 6 participants visited interesting sights of these cities, including the main mass of the Chelyabinsk meteorite which had been recovered from Chebarkul Lake in 2013.

The conference program and abstract volume can be accessed on the website of the Lunar and Planetary Institute: https://www.hou.usra.edu/meetings/metsoc2018pdf/program.pdf, and on the dedicated conference website http://metsoc81-moscow.ru/.

We would like to thank the numerous colleagues, students, and volunteers whose tireless efforts made it all possible. We also thank the Trialogue company which helped participants with visa, accommodation, transport, and excursions. We want to emphasize the great support from the members of the Bureau of the Organizing Committee, the Local Organizing Committee, the Scientific Program Committee, and the Travel Award Committee, and from all those who made themselves available as conveners of the sessions, judges of student presentations, student assistants, guides on conference tours and everyone who made this conference possible.

Marina Ivanova and **Natalia Bezaeva**
MetSoc 2018 Chairs of the Local Organizing Committee

METSOC SOCIETY AWARD WINNERS

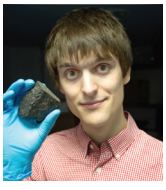
The MetSoc gives four major awards each year. For more information on individual awards see the Call for Nominations and the society's webpage.

The **LEONARD MEDAL** is the society's highest and oldest award. It 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 2018 winner is **Alexander (Sasha) N. Krot** (University of Hawai'i, USA) for his fundamental contributions to understanding the role of oxygen isotopes in early solar system processes and aqueous alteration processes on asteroids. The citation was given by Kevin McKeegan.

The **BARRINGER MEDAL AND AWARD** were created in memory of D. Moreau Barringer Sr. and his son D. Moreau Barringer Jr and is now sponsored by the Barringer Crater Company. The award is given for outstanding work in the field of impact cratering. This year, the Barringer Award is given to **Thomas Kenkmann** (University of Freiburg, Germany) for his fundamental contributions to our understanding of the structure mechanics and tectonics of rock displacement associated with the formation of hypervelocity impact craters. The citation was given by Kai Wünnemann.

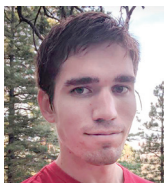
The **NIER PRIZE** is awarded to a young scientist in the field of meteoritics. This year's winner is **Lydia Hallis** (University of Glasgow, Scotland, UK). Lydia receives this award for her significant contributions to our understanding on the origin of volatiles in planets. The citation was given by Martin Lee.

The **SERVICE AWARD**. The 2018 winner is **Linda Martel** (University of Hawai'i, USA). Linda receives this award for her effort in advancing the goals of the society and the far-reaching impact of her work. Her contribution to the society's goals is accomplished through the *Planetary Science Research Discoveries* (PSRD) online magazine. The citation was given by Jeff Taylor.



The **GORDON MCKAY AWARD** honors the memory of Gordon A. McKay and is supported by the McKay Fund, established in 2008 as a part of the Meteoritical Society's endowment. The award is given each year to the student who gives the best oral presentation at the annual meeting of the society. The McKay Award for the 81st Annual Meeting of the Meteoritical Society in Moscow goes to **Timothy Gregory** (University of Bristol, UK) for his talk "Using Refractory Forsterite Grains to Test Models of $^{26}Al/^{27}Al$ Heterogeneity". The award comes with a prize of US$1,000 and a certificate.

The **WILEY-BLACKWELL AWARDS**. Wiley-Blackwell are the publishers of *Meteoritics and Planetary Science* and they sponsored five awards, each of US$500, for outstanding presentations by students at the 81st Annual Meeting of the Society in Moscow. The winners are **Brendan Haas** (Washington University, St. Louis, USA) for his presentation, "FIB–TEM Study of Six Submicron Craters from Stardust Foil C2113N-A"; **Jan Hellmann** (Universität Münster, Germany) for his presentation, "Thermal and Impact History of Ordinary Chondrite Parent Bodies inferred from Hf–W Chronometry"; **Jane MacArthur** (University of Leicester, UK) for her presentation, "Constraining the Thermal History of Martian Breccia Northwest Africa 8114"; **Doreen Schmidt** (Friedrich-Schiller Universität Jena, Germany) for her presentation, "Laser Simulated Hypervelocity Micrometeoroid Impacts: Orientation-Dependent Shock Effects in Enstatite Single Crystals"; and **Malgorzata Sliz** (University of Bern, Switzerland) for her presentation, "Terrestrial Ages of Meteorites using in situ ^{14}C and ^{10}Be Measurements".


Brendan Haas


Jan Hellmann


Jane MacArthur


Doreen Schmidt


Malgorzata Sliz

CALL FOR AWARD NOMINATIONS

Please consider nominating a colleague for one of the society's awards. Nominations should be sent to Secretary Munir Humayun (metsocsec@gmail.com) by 15 January 2019, or 31 January 2019 for the Pellas–Ryder Award and the Service Award. For more information and details on how to submit a nomination for any of these awards, please see the latest newsletter at the society's website; or e-mail the secretary.

ANNUAL MEETING SCHEDULE

2019 (82nd Annual Meeting)	Sapporo (Japan)	8–12 July
2020 (83rd Annual Meeting)	Glasgow (Scotland, UK)	9–14 August
2021 (84th Annual Meeting)	Chicago (Illinois, USA)	dates TBD
2022 (85th Annual Meeting)	Perth (Australia)	dates TBD

RENEW YOUR MEMBERSHIP NOW!

Please renew by 31 March 2019; after that date, a $15 late fee will be assessed. You can renew online at: http://metsoc.meteoriticalsociety.net