

Impacts and their Role in the Evolution of Life

Tällberg, Sweden, 10 - 13 June 2019

Schedule

Sunday, June 9 th 2019	
14:00 - 18:00	Registration of participants at Liblice Hotel
18:30	Buffet dinner
Monday, June 10 th , 2019	
08:00 - 08:45	Registration
09:00 - 09:10	Welcome address and organizational matters <i>Wolf Geppert, Stockholm University, SE</i>
09:10 - 10:45	Session I: "Impacts, the Early History of the Solar System and the Formation of the Moon"
09:10 - 09:50	Onset of giant planet migration at ca 4480 Ma (Invited talk) <i>Stephen Mojzsis, University of Colorado, US</i>
09:50 - 09:55	Discussion
09:55 - 10:15	Evaluating the Effects of Early Impacts in the Earth-Moon System <i>Nicolle Zellner, Albion College, US</i>
10:15 - 10:20	Discussion
10:20 - 10:40	New insight into the timing of magmatic activity on the Moon from Pb-Pb ages of lunar meteorites NWA 773 clan, NWA4734 and Dhofar 287 <i>Renaud Merle, Swedish Museum of Natural History, SE</i>
10:40 - 10:45	Discussion
10:45 - 11:15	Coffee break
11:15 - 12:25	Session II: "Late Accretion and Delivery of Volatiles to the (early) Earth"
11:15 - 11:55	Sources of Terrestrial Volatiles: Comets vs, Asteroids (Invited talk) <i>Bernard Marty, CNRS, FR</i>
11:55 - 12:00	Discussion
12:00 - 12:20	Characterisation of cometary matter as deduced from 67P <i>Martin Hilchenbach, MPI, DE</i>
12:20 - 12:25	Discussion
12:25 - 14:00	Lunch
14:00 - 15:35	Session III: "Physical and Chemical Characterisations of Impactors"
14:00 - 14:40	Organic Compounds in Meteorites and Other Extraterrestrial Materials and Impactors (Invited talk) <i>Jamie Elsila, NASA Goddard Space Flight Center, US</i>
14:40 - 14:45	Discussion
14:45 - 15:05	Mineralogical constraints on the thermal history of Martian regolith breccia Northwest Africa 8114 <i>Jane MacArthur, University of Leicester, UK</i>
15:05 - 15:10	Discussion
15:10 - 15:30	The effect of impact-generated heterogeneities and discontinuities on the subsequent weathering of impactites: insights from laboratory experiments <i>Ankit Verma, Trinity College Dublin, IE</i>
15:30 - 15:35	Discussion
15:35 - 16:15	Coffee break

16:15 - 17:20	Session IV: “Physical and Chemical Characterisations of Impactors”
16:15 - 16:55	Prebiotic matter accreted from micrometeorites to the early Earth (Invited talk) <i>Cecile Engrand, CNRS, FR</i>
16:55 - 17:15	Sampling plumes from ocean worlds: Hypervelocity Impact Craters from Salt Crystals onto Aluminium Foil <i>Calum Fisher, University of Kent, UK</i>
17:15 - 17:20	Discussion
17:20 - 18:15	Presentations by poster authors (4 minutes per poster)
19:00 - 20:30	Dinner
20:30	Poster session with drinks and nibbles
Tuesday, June 11th, 2019	
09:00 - 15:45	Session V: “Identification and Exploration of Impact Features”
09:00 - 09:40	Recognising small impact craters on Earth (Invited talk) <i>Anna Losiak, University of Exeter, UK</i>
09:40 - 09:45	Discussion
09:45 - 10:05	Anatomy of an asymmetric central uplift - probably the result of a highly oblique impact into the Steinheim area (SW Germany) <i>Elmar Buchner, Neu-Ulm University of Applied Sciences, DE</i>
10:05 - 10:10	Discussion
10:10 - 10:30	Reflection seismic pattern of Steinheim impact crater, Baden-Württemberg, Germany, why needed? <i>Kaidi Sarv, University of Tartu, EE</i>
10:30 - 10:35	Discussion
10:35 - 11:15	Coffee break
11:15 - 11:35	⁴⁰Ar/³⁹Ar dating of the Hummeln and Mien impact structures, Sweden <i>Maria Herrmann, Lund University, SE</i>
11:35 - 11:40	Discussion
11:40 - 12:00	Detection of a former reidite phase in granular zircon from the Mien impact structure, Sweden <i>Josefin Martell, Lund University, SE</i>
12:00 - 12:05	Discussion
12:05 - 12:25	Shock metamorphic features in minerals other than quartz in Dala granites from the Siljan impact structure (Sweden) <i>Sanna Holm-Alwmark, University of Copenhagen, DK</i>
12:25 - 12:30	Discussion
12:30 - 14:00	Lunch
14:00 - 14:20	Petrography, shock metamorphism, and geochemistry of the main lithologies from the Chicxulub impact structure peak-ring IODP-ICDP Expedition 364 drill core <i>Jean-Guillaume Feignon, University of Vienna, AT</i>
14:20 - 14:25	Discussion
14:25 - 14:45	Large circular structures(?) below the Greenland Ice Sheet – Proposed but unconfirmed impact structures <i>Ludovic Ferrière, Natural History Museum, Vienna, AT</i>
14:45 - 14:50	Discussion
14:50 - 15:10	Microtubules in glass from the Boltys impact structure <i>Annemarie Pickersgill, University of Glasgow, UK</i>
15:10 - 15:15	Discussion
15:15 - 15:35	A Small Satellite Mission to Observe Lunar Meteoroid Impacts

	<i>Prem Sundaramoorthy, TU Delft, NL</i>
15:35 - 15:40	Discussion
15:40 - 16:15	Coffee Break
16:15 - 17:50	Session VI: Impacts, Impact Craters and Impact Hydrothermal Systems creating Habitats for Life
16:15 - 16:55	The Role of Meteorite Impacts in the Origin of Life (Invited talk) <i>Gordon Osinski, University of Western Ontario, CA</i>
16:55 - 17:00	Discussion
17:00 - 17:20	Clay minerals as paleoenvironmental indicators for impact-generated hydrothermal environments; a case study from the Chicxulub impact peak-ring <i>Sarah Simpson, University of Western Ontario, CA</i>
17:20 - 17:25	Discussion
17:25 - 17:45	Post-Impact Habitability at the Chicxulub Crater <i>Evangelos Christou, University of Glasgow, UK</i>
17:45 - 17:50	Discussion
19:00	Barbeque dinner at Siljan lakeside (weather allowing)
Wednesday, June 12th, 2019	
08:30 – 22:30	Excursion to Siljan area, Falu mine and other destinations in the area
Thursday, June 13th, 2019	
09:00 - 12:30	Session VII: Ecological and Climatic Consequences of Impacts
09:00 - 09:40	Environmental effects of large impacts (Invited talk) <i>Natalia Artemeva, Planetary Science Institute, US</i>
09:40 - 09:45	Discussion
09:45 - 10:05	The Yarrabubba impact structure, Western Australia; an environmental saviour during Paleoproterozoic Snowball Earth? <i>Timmons Erickson, NASA Johnson Space Center, US</i>
10:05 - 10:10	Discussion
10:10 - 10:30	The age of the Siljan impact event and it relation to late Devonian mass extinction events <i>Gavin Kenny, Swedish Museum of Natural History, SE</i>
10:30 - 10:35	Discussion
10:35 - 11:05	Coffee break
11:05 - 11:45	Death by asteroid: The Chicxulub impact and the Cretaceous-Paleogene Mass Extinction Event (Invited talk) <i>Antoine Bercovici, Smithsonian Institution, US</i>
11:45 - 11:50	Discussion
11:50 - 12:10	Colonization of Shocked Basalts from Vargeão Dome and Vista Alegre: Implications for the Search for Life on Mars <i>Nikol Posnov, University of Western Ontario, CA</i>
12:10 - 12:15	Discussion
12:15 - 12:35	Living on the Edge: Searching for Life on Mars in the Jezero Crater Rim <i>Andrew Gangidine, University of Cincinnati, US</i>
12:35 - 12:40	Discussion
12:40 - 13:00	Searching for Biosignatures in Exoplanetary Impact Ejecta <i>Philippe Thebault, Observatoire Paris-Meudon, FR</i>
13:00 - 13:05	Discussion

13:05 - 14:30	Lunch
14:30 - 16:20	Session VIII: Geoconservation of Impact Areas
14:30 - 15:10	Geoconservation and Impact (Invited talk) <i>Uwe Reimold, University of Brasilia, BR</i>
15:10 - 15:15	Discussion
15:15 - 15:35	Combining geoconservation and valorization at the Rochechouart meteoritic impact (France) <i>Philippe Lambert, CIRIR, FR</i>
15:35 - 15:40	Discussion
15:40 - 16:20	The Geopark Ries, Bavaria, Germany (Invited talk) <i>Gisela Pösges, Geopark Ries, DE</i>
16:20 - 16:25	Discussion
16:25 – 16:55	Coffee, thereafter room for informal discussions
18:30	Conference Banquet
Friday, June 14th, 2019	
Breakfast and departure of participants	