

Thursday April 12th, AM Session

Symposium CC06 Room G2 Holocene Palaeoclimate Records over Europe and the North-Atlantic

Convenors: Kay Emeis & S. Bjoerck

Session chaired by Kay-Christian Emeis

08:30 **KEYNOTE** The Climate of 6000 Years BP in Near-Equilibrium Simulations with a Coupled AOGCM: Mikolajewicz U & Voss R (CC06:THam01:G2).

09:00 Holocene Climate Variability as Evidenced from Lacustrine Sediments from Southern Greenland: Andresen CS, Björck S & Bennike O (CC06:THam03:G2).

09:15 Paleoclimatic and Paleooceanographic Changes in the Norwegian Sea Through the Holocene: Risebrobakken B, Jansen E, Mjelde E, Andersson C & Hevrøy K (CC06:THam04:G2).

09:30 Geochemical Analysis of Terrestrial Carbonates: Do Holocene Tufas Record Reliable Climatic Signals?: Garnett L, Andrews J, Preece R & Dennis P (CC06:THam05:G2).

09:45 Palaeomagnetism and Tephrochronology of Two Holocene Varved Lake Sediment Sequences in West Central Sweden: Zillén L, Snowball I & Wastegård S (CC06:THam06:G2).

10:00 **BREAK**

Session chaired by Kay-Christian Emeis

10:30 Undulation of Sea-Level Rise Recorded in Holocene Coastal Sequences of NW Germany: Watermann F & Gerdes G (CC06:THam09:G2).

10:45 Lake Sediment Signatures of Climate and Human Induced Environmental Changes in the Central Swiss Alps: Ohlendörf C, Sturm M, Hausmann S, Koinig KA & Lotter AF (CC06:THam10:G2).

11:00 Short-Term Climatic Variations in the Holocene (2-10 Kyr) Mediterranean Basin: Data and Models: Sprovieri M, Emeis K, Sprovieri R, Bellanca A, Neri R, Mazzola S, Gargano ME, Bonanno A, Rohling E & Tortorici S (CC06:THam11:G2).

11:15 A Late Holocene Paleoclimatic Record: Speleothem from Aven de la Salamandre, South of France (High Precision U/Th Dating, ¹⁴C Dating and Stable Isotopes): Pons-branchu E, Hamelin B, Genty D & Brulhet J (CC06:THam12:G2).

11:30 Evolution of the North Atlantic Oscillation in the NW Alps as Evidenced by 600 Years of Terrigenous Sedimentation in Lake le Bourget (France): Chapron E, Desmet M, De Putter T, Loutre M, Beck C & Deconinck J (CC06:THam13:G2).

11:45 The Climatic Response of Siberia to Changes of Thermohaline Circulation in the North Atlantic According to High Resolution Record from Lake Baikal during LGM-Holocene Transition: Karabanov E, Prokopenko A, Khursevich G, Williams D, Kuzmin M, Bezrukova E, Soshina N, Fedenia S & Gvozdkov A (CC06:THam14:G2).

(Symposium CC06 Continued in Session TH pm on Page 111)

Symposium CC11 Room G1 Clathrates, Climate, and Carbon Budget (B): Sub-Sea Floor Methane Deposits on the Margins of Europe, Arctic to Caspian: Seafloor Carbon Fluxes via Methane

Convenors: John Woodside & Euan Nisbet

Session chaired by Alina Stadnitskaia

08:45 Clathrates on the Margins of Europe: Is There a Danger of Release in Global Warming?: Woodside J & Nisbet E (CC11:THam02:G1).

09:00 Effects of Gas Hydrate on Oceanic Methane Transport: Rehder G, Brewer PG, Peltzer ET, Friederich G & Paull CK (CC11:THam03:G1).

09:15 Seep Bubble Layer Deposition due to Sharp Bubble Dissolution: Leifer I & Judd A (CC11:THam04:G1).

09:30 Monochromatic Sound Waves Recorded Offshore Ecuador: Possible Evidence of Methane Release: Pontoise B (CC11:THam05:G1).

09:45 **BREAK**

Session chaired by Giovanni Aloisi

10:15 Gas Venting, Fluid Flow and Gas Hydrate Formation in Slope Sediments off Sakhalin, Sea of Okhotsk: Wallmann K, Suess E, Bohrmann G & Obzhirov A (CC11:THam08:G1).

10:30 A Methane Plume in the Water Column at Westspitsbergen Shelf: Of Ancient Origin but Influencing the Modern Carbon Cycle?: Damm E, Mackensen A & Cramer B (CC11:THam09:G1).

10:45 Gas-Saturated Sediment Accumulations in the Black Sea and their Sonar Investigations: Ergün M, Cifci G & Dondurur D (CC11:THam10:G1).

11:00 Marine Gas Seeps and their Indicators- MAGIC: Judd A & Jukes V (CC11:THam11:G1).

11:15 Hydrocarbon Seeps on Deep Portuguese Margin: Ivanov M, Pinheiro L, Stadnitskaia A & Blinova V (CC11:THam12:G1).

11:30 Composition of Gas Hydrate-Forming Fluids in the Gulf of Cadiz: Mazurenko L, Soloviev V, Ivanov M, Pinheiro L & Gardner J (CC11:THam13:G1).

11:45 Hydrocarbon Gas Composition and its Distribution in Sediments Related to Cold-Seeps. Summary of Data Obtained during Training Through Research (TTR) Cruises (1995-2000): Stadnitskaia A & Ivanov M (CC11:THam14:G1).

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Symposium EVO3 Room F5 Modern and Ancient Surface- and Groundwater- Cemented Geochemical Sediments: Processes and Product

Convenors: David Nash & Susan J. McLaren

Session chaired by Ana Alonso-Zarza

08:30 **KEYNOTE** Characteristics, Evolution and Distribution of Quaternary Channel Calcretes, Southern Jordan: McLaren S, Gilbertson D, Grattan J & Hunt C (EVO3:THam01:F5).

09:00 **KEYNOTE** Properties and Development of Late Quaternary Channel Calcretes in the Tabernas Basin, Southeast Spain: Nash DJ, Smith RF & McLaren SJ (EVO3:THam03:F5).

09:30 **KEYNOTE** Complex Calcrete Profiles from the Sorbas Basin, SE Spain: The Significance of Pedogenic, Surface Process and Climate Interactions: Candy I, Black S & Sellwood B (EVO3:THam05:F5).

10:00 **BREAK**

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Session chaired by Sue McLaren & David Nash

10:30 *KEYNOTE* Mechanisms of Salt Enrichment in Dry Lake Basins: **Mees F** (EVO3:THam09:F5).

11:00 *KEYNOTE* Near-Surface Diagenesis of Anhydrite Nodules in Argillaceous Terrestrial Deposits (Triassic, Central Spain): **Alonso-Zarza AM, Sánchez-Moya Y, Bustillo MA, Sope-A A & Delgado A** (EVO3:THam11:F5).

11:30 *KEYNOTE* Mineralogical and Stable Isotope Results (C, O and H) of the Miocene Series from the Forez Graben (French Massif Central): Geodynamic and Stratigraphic Interpretation: **Renac C, Gonord H, Gerbe M, Berthon V & Gonon T** (EVO3:THam13:F5).

Symposium FMF5 Room F4

The Timing and Location of Major Ore Deposits in an Evolving Orogen

Convenors: Derek Blundell, A. von Quadt & F Neubauer

Session chaired by Franz Neubauer

08:30 Tectonics, Geodynamics, and Metallogeny of the Eastern Margin of the North Asia Craton: **Fridovsky V & Prokoviev A** (FMF5:THam01:F4).

08:45 Archean Orogenic Gold Mineralization in India (Hutti, Ajjanahalli): Implications for Ancient Tectonics: **Kolb J, Meyer F, Rogers A & Hellmann A** (FMF5:THam02:F4).

09:00 Tectonic Controls on Gold Mineralisation in Southeast Asian Magmatic Arcs: **Barley M & Rak P** (FMF5:THam03:F4).

09:15 Resolving Miocene Magmatic and Mineralizing Events in the Pb-Zn-Ag-Cu Domo de Yauli District (Peru) by High-Precision Geochronology: **Beuchat S, Schaltegger U, Moritz R & Chiaradia M** (FMF5:THam04:F4).

09:30 Paleomagnetic Signatures of Orogenic Events and Mn/Fe Mineralizations in the Northern Cape Province, South Africa: **Evans DA, Beukes NJ, Gutzmer J & Kirschvink JL** (FMF5:THam05:F4).

09:45 BREAK

Session chaired by Albrecht Von Quadt

10:15 Do Palaeozoic Altaids-Tethysides Reveal Metallogenic Zoning Similar to Mesozoic-Cenozoic Circum-Pacific and Neo-Tethys Belts?: **Yakubchuk A** (FMF5:THam08:F4).

10:30 Re-Os Dating and a Possible Metamorphic Origin for the Langvatn Cu-Mo Sulfide Deposits, Setesdalsheiene, Southern Norway: **Stein H, Vokes FM, Cook N, Bingen B & Ciobanu C** (FMF5:THam09:F4).

10:45 Modelling of Heat and Fluid Flow in the Iberian Pyrite Belt: Implications for Ore Genesis: **Stroetmann-Heinen V & Meyer MF** (FMF5:THam10:F4).

11:00 Multiple Fluid-Flow Events and Mineralizations in SW Sardinia: From Variscan Onwards: **Boni M, Iannace A & Villa IM** (FMF5:THam11:F4).

11:15 Two-stage Exhumation during the Mid- to Late-Variscan Evolution of the Western French Massif Central and Implications for W-Sn and Rare Metal Deposits: **Alexandrov P, Le Carlier de Veslud C, Cheilletz A, Cuney M, Ruffet G & Feraud G** (FMF5:THam12:F4).

11:30 Relationships between Granitoids and Mineral Deposits: 3-D Modelling of the Variscan Limousin Province (NW French Massif Central): **Le Carlier de Veslud C, Cuney M, Royer J, Alexandrov P, Cheilletz A, Chevremont P & Itard Y** (FMF5:THam13:F4).

11:45 The Q-Au Lodes of Western Europe: Fluid Mixing and Gold Deposition during the Late Carboniferous Uplift of the Variscan Belt: **Boiron M, Cathelineau M, Essarraj S, Fourcade S, Marignac C, Souhassou M & Vallance J** (FMF5:THam14:F4).

Symposium LS03 Room F2

Integrated Tectonic Studies of the Evolution of the Tethyan Orogenic Belt in the Eastern Mediterranean Region

Convenors: Antony Morris, Timur Ustaomer, Despina Kondopoulou, Alastair Robertson & Costas Xenophonos

Session chaired by Anthony Morris

08:30 Palaeozoic and Early Mesozoic Magmatism and Metamorphism in the Serbo-Macedonian Massif, Central Macedonia, Northern Greece: **Kostopoulos D, Reischmann T & Sklavounos S** (LS03:THam01:F2).

08:45 The Basement beneath Mt. Olympus, Greece: Remnants of a Permo-Carboniferous Magmatic Arc: **Reischmann T, Kostopoulos D, Loos S, Anders B, Avgerinas A & Sklavounos S** (LS03:THam02:F2).

09:00 Upper Carboniferous Magmatism in the Central Aegean Region: Evidence from Basement Gneisses of the Cyclades: **Engel M & Reischmann T** (LS03:THam03:F2).

09:15 *KEYNOTE* Collisional History of the Southern Neotethys Ocean in the Easternmost Mediterranean Region: **Robertson A & Unlugenc U** (LS03:THam04:F2).

09:45 First Structural Data Related to the Low-Grade High-Pressure Metamorphism in the Metasediments of the Lycian Nappes, SW Turkey: **Rimmelé G, Oberhänsli R, Jolivet L & Goffé B** (LS03:THam06:F2).

10:00 The Beysehir-Hoyran-Hadim (B-H-H) Nappes: Mesozoic Marginal and Oceanic Units of the Northern Neotethys in Southern Turkey: **Andrew T & Robertson A** (LS03:THam07:F2).

10:15 BREAK

Session chaired by Alastair Robertson

10:45 The Granitic Rocks of the Southern Menderes Massif and their Tectonic Significance: **Bozkurt E** (LS03:THam10:F2).

11:00 Tectonic Implications of Sedimentation and Volcanism in the Lower Tertiary Ulukisla Basin, South Central Turkey: **Clark M & Robertson A** (LS03:THam11:F2).

11:15 Mesozoic Crustal Extension and Basin Inversion Events at Circum-Black Sea Region: **Nikishin A, Ustaomer T, Seghedi A, Robertson A & Ziegler PA** (LS03:THam12:F2).

11:30 Geodynamic Evolution of the Biga Peninsula (N-W Turkey): **Beccaletto L & Stampfli GM** (LS03:THam13:F2).

11:45 New ⁴⁰Ar/³⁹Ar and U/Pb Radiometric age Data from the Western Pontides, N Turkey: Implications for Tectonic Evolution: **Ustaomer PA, Renne PR & Mundil R** (LS03:THam14:F2).

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Thursday April 12th, AM Session

Symposium LS06 Room G0 Blueschist to UHP Metamorphism and Back Again

Convenors: John Schumacher, Simon Cuthbert & Tony Carswell

Session chaired by Simon Cuthbert

08:30 The Garnet Isograd in the Blueschist-Facies Metapelites of the Ile de Groix (Armorican Massif, France): A Record of Ductile Thrusting during Exhumation: **Ballevre M, Bosse V & Vidal O** (LS06:THam01:G0).

08:45 Closure Mechanism of the Ar-Ar System in Blueschists Constrained by P-T Paths and Rb-Sr Systematics (Ile de Groix, Variscan Belt, France): **Bosse V, Feraud G, Ballevre M & Peucat J** (LS06:THam02:G0).

09:00 The Entrelor Melange: A key to Understand the Relations between Blueschists and Eclogites in the Piemontese Zone of the Western Alps: **Bousquet R & Schmid SM** (LS06:THam03:G0).

09:15 Blueschists and Eclogites from the Western Alps: A Record of Two Wedges in the Development of a Subduction Zone: **Schwartz S, Lardeaux JM, Guillot S, Allemand P & Tricart P** (LS06:THam04:G0).

09:30 Magmatic, Metamorphic, and Exhumation History of Syros, Greece: **Ballhaus C, Tomaschek F, Keiter M, Lagos M, Bode M, Piepjohn K & Münker C** (LS06:THam05:G0).

09:45 Evolution of Glaucophane Marbles and associated High-Pressure Rocks on the Island of Syros, Cyclades, Greece: **Schumacher J, Tonnsen R, Cheney J & Brady J** (LS06:THam06:G0).

10:00 Element Partitioning in Natural and Synthetic Carbonate Eclogites: **Molina JF, Crottini A, Erambert M, Poli S & Austrheim H** (LS06:THam07:G0).

10:15 *BREAK*

Session chaired by Tony Carswell

10:45 Modelling Equilibrium Phase Diagrams for White Schists: New Insights on Metamorphic Evolution in the Western Penninic Alps: **Le Bayon R, de Capitani C, Chopin C & Frey M** (LS06:THam10:G0).

11:00 Biotite Stability Conditions and the Formation of Eclogitic Assemblages in Subducted Continental Crust: An Experimental Approach: **Auzanneau E, Vielzeuf D & Schmidt MW** (LS06:THam11:G0).

11:15 Rb/Sr Geochronological Record of Fluid-Mediated Reactions in High-Pressure Rocks: **Glodny J** (LS06:THam12:G0).

11:30 The Role of Micro-Inclusions in Garnet and Sm-Nd Disequilibrium of Low-Temperature Eclogites: **Luais B, Duchene S & de Sigoyer J** (LS06:THam13:G0).

11:45 The Origin of Excess Argon in Ultrahigh-P Rocks from Qinglongshan (Sulu Terrain, China): A Combined Argon and Oxygen Isotope Investigation: **Giorgis D, Cosca M, Rumble D & Liou JG** (LS06:THam14:G0).

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Symposium MS06 Room F6 Oceanic Large Igneous Provinces

Convenors: Nicholas Arndt & Malcolm Pringle

Session chaired by Nicholas Arndt

08:30 The Cache Creek Terrane (Canadian Cordillera): Oceanic Remnants of the Permian-Triassic Superplume Event: **Lapierre H, Bosch D, Tardy M & Struik L** (MS06:THam01:F6).

08:45 The Formation of Oceanic Igneous Provinces: The Caribbean Plate: **d'Acremont E, Leroy S, Burov E, Mauffret A & Petit C** (MS06:THam02:F6).

09:00 The Duration and Timing of the Deccan CFBP: **Widdowson M & Kelley S** (MS06:THam03:F6).

09:15 Age and Duration of the North Atlantic Igneous Province: **Chambers LM & Pringle MS** (MS06:THam04:F6).

09:30 New Isotopic and Geochronological Constraints on the Origin of an Island Arc Sequence Associated with the Cretaceous Caribbean Oceanic Plateau: **Thompson PM, Kempton PD, Tarney J, Saunders AD, White RV & Kerr AC** (MS06:THam05:F6).

09:45 The Volcanology and Facies Architecture of Flood Basalts: **Jerram DA** (MS06:THam06:F6).

10:00 *BREAK*

Session chaired by Malcolm Pringle

10:30 Basement Ages from the Southern and Central Kerguelen Plateau: Initial Products of the Kerguelen Large Igneous Province: **Pringle MS & Duncan RA** (MS06:THam09:F6).

10:45 Involvement of Continental Crust in Formation of the Kerguelen Plateau: New Trace Element and Sr-Nd-Pb Data for ODP Leg 120 Basalts (Sites 747, 749 and 750): **Weis D, Frey FA & Borisova AY** (MS06:THam10:F6).

11:00 Age and Provenance of Conglomerate Clasts Recovered from Elan Bank, Kerguelen Plateau, Southern Indian Ocean: **Pringle MS, Schildgen TF, Lee MR, Nicolaysen K, Parsons I & The ODP Scientific Staff** (MS06:THam11:F6).

11:15 The Incipient Kerguelen Large Igneous Province: Evidence from Elan Bank, ODP Leg 183, Site 1137: **Ingle S, Weis D, Nicolaysen K, Frey F & Coffin M** (MS06:THam12:F6).

11:30 A Petrological and Geochemical Study of Mafic and Felsic Volcanic Rocks from Skiff Bank, Site 1139, ODP Leg 183, Kerguelen Plateau: **Arndt N, Kieffer B, Weis D, Bosch D, Lapierre H & Chauvel C** (MS06:THam13:F6).

11:45 Age, Composition, and Eruptive Environment of the Ontong Java Plateau, Western Pacific Ocean: Initial Results of Ocean Drilling Program Leg 192: **Coffin M, Fitton G, Mahoney J, Wallace P & Leg 192 Shipboard Scientific Party** (MS06:THam14:F6).

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Symposium OS10 Room G5 Structural Geology and Tectonics

Convenor: **Graham Potts**

08:30 Structural and Metamorphic Evolution of the Timan-Kanin Region: **Pystin A** (OS10:THam01:G5).

08:45 Transregional Ore-Concentrating Activation Megazones of Ukraine: **Galetsky L & Shevchenko T** (OS10:THam02:G5).

09:00 Embryonic Basins in a Border Fault Relay Zone, Significance for the Tectonic Evolution of Lake Baikal: **Hus R, Matton C, Klerkx J & De Batist M** (OS10:THam03:G5).

09:15 Numerical Modelling of the Subsidence Mechanisms Controlling the Evolution of the Black and Caspian Seas: **Meredith DJ & Egan S** (OS10:THam04:G5).

09:30 A Variscan Suture Zone along Sheared SW Boundary of the Orlica-Snieznik Massif (The Sudetes, NE Bohemian Massif?): **Mazur S & Aleksandrowski P** (OS10:THam05:G5).

09:45 Plate Tectonic Nomenclature for Pre-Variscan Units in Central Europe: A Discussion: **von Raumer JE, Stampfli GM & Borel G** (OS10:THam06:G5).

10:00 BREAK

10:30 Pull-Apart Formation during Post-Orogenic Faulting in the Norwegian Caledonides, Leka Ophiolite Complex, Norway: **Titus S, Fossen H & Tikoff B** (OS10:THam09:G5).

10:45 Structural Analysis of the Husavik-Flatey Transform Fault (Northern Iceland) and its Relation to the Rift System: An Approach Using Remote Sensing and Field Data: **Garcia S, Dhont D & Bergerat F** (OS10:THam10:G5).

11:00 Tectonic and Thermodynamic Development in the Permo-Triassic Cover on the Southern Rim of the Argentera Massif (Southern Alps, France): **Attal M, Delteil J & Stephan J** (OS10:THam11:G5).

11:15 Post-Nappe Folding Versus Backthrusting in the Western Alps: **Bucher S, Schmid SM, Bousquet R & Fügenschuh B** (OS10:THam12:G5).

11:30 Development of Folds with Vergence Opposite to the Sense of Shear during the Exhumation of Metamorphic Rocks: The Montagnola Senese Case (Inner Northern Apennines, Italy): **Liotta D** (OS10:THam13:G5).

11:45 The Pre-Orogenic Architecture of the Lagonegro Basin (Southern Apennines, Italy): **Mattioni L, Cello G, Mazzoli S & Tondi E** (OS10:THam14:G5).

(Symposium OS10 Continued in Session TH pm on Page 114)

Symposium PCM5 Room G3 High Spatial Resolution Microanalysis in the Transmission Electron Microscope and Related Techniques: Applications for the Geosciences

Convenors: **Rik Brydson, Geoff Lloyd
& Clair Clavert**

Session chaired by Rik Brydson

08:30 *KEYNOTE* Quantitative Compositional Imaging with Energy-Filtering TEM: **Hofer E, Kothleitner G, Warbichler P & Rom I** (PCM5:THam01:G3).

09:00 *KEYNOTE* Investigation of Exsolution in Minerals by Valence State Mapping, Electron Spectroscopic Imaging, Electron Loss Spectroscopy and EDX: **Golla U & Putnis A** (PCM5:THam03:G3).

09:30 Element Distribution in and between Minerals: Detection via Drift-Compensated EDX-STEM Mapping: **Langenhorst F** (PCM5:THam05:G3).

09:45 Precision TEM Sample Preparation using Focused Ion Beam Thinning (FIB): **Wirth R** (PCM5:THam06:G3).

10:00 Chemistry and Structure of Leached Layers Formed on Labradorite Feldspar: **Hellmann R, Penisson J & Thomassin J** (PCM5:THam07:G3).

10:15 BREAK

Session chaired by Rik Brydson

10:45 *KEYNOTE* Comparison of Different Quantification Methods of Fe³⁺/ΣFe-Ratios using Electron Energy-Loss Spectroscopy: **van Aken PA, Liebscher B, Brey GP & Müller WF** (PCM5:THam10:G3).

11:15 EELS Study of Iron Valency at Nanometer Scale in Perovskite-Structured Materials: **Gloter A, Guyot F, Ingrin J, Martinez I, Scrivener K, Stephan O & Colliex C** (PCM5:THam12:G3).

11:30 Geochemical Applications of EELS: Quantification of Fe-Oxidation State in Mixed Valency Minerals: **Calvert CC, Brydson R, Lloyd GE & Banks DA** (PCM5:THam13:G3).

11:45 EELS Analysis of Micas: **Livi KT, Abad I, Veblen D & Nieto F** (PCM5:THam14:G3).

Symposium PCM6 Room G6 Physicochemical Behaviour of Accessory Minerals: Crystallisation, Transformation, and Technological Applications

Convenors: **Franck Poitrasson, Urs Schaltegger
& John M. Hanchar**

Session chaired by Urs Schaltegger

08:30 Chemical Variation and Alteration of Some Actinide and Rare Earth-Bearing Accessory Minerals: Implications for the Long-Term Storage of High-Level Radioactive Waste: **Williams CT, Lumpkin G, Gieré R & Wall F** (PCM6:THam01:G6).

08:45 Monazite, Rhabdophane and Florencite in the Metamorphic Complex of Sopron Hills, Eastern Alps: **Nagy G** (PCM6:THam02:G6).

09:00 Uranium-Rich Microlite: Growth and Alteration in a Lithium Pegmatite in Mozambique: **Giere R, Buck E, Williams T, Reusser E, Marques J, Guggenheim R & Mathys D** (PCM6:THam03:G6).

09:15 Apatite-Monazite Relations in the Kiirunavaara Apatite Iron Ore, Northern Sweden: **Harlov D, Andersson U & Nyström JO** (PCM6:THam04:G6).

09:30 Does Metamictization Control the Weathering of Zircon?: **Balan E, Trocellier P, Neuville D, Fritsch E, Muller J & Calas G** (PCM6:THam05:G6).

09:45 BREAK

Session chaired by John Hanchar

10:15 Alteration of Zircon Under Experimental Hydrothermal Conditions: **Geisler T, Pidgeon RT & van Bronswijk W** (PCM6:THam08:G6).

10:30 Experimental Resetting of the U-Th-Pb System in Monazite: **Seydoux-Guillaume A, Paquette J, Montel J & Heinrich W** (PCM6:THam09:G6).

10:45 Microgeochemistry, Microgeochemistry and Microstructure of Altered Zircon from the Acasta Gneiss Complex, Slave Province, Canada: **Sanborn N, Stern R, Carr S & Botton G** (PCM6:THam10:G6).

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11:00 Near Complete Erasure of the U-Th-Pb System in Zircon by Hydrous Metamorphism- Potential Fractionation of Radiogenic Pb Isotopes: **Hansmann W, Müntener O, Hermann J & Pettke T** (PCM6:THam11:G6).

11:15 Insights into the Nature and Behaviour of Metamorphic Monazite; A Chemical and Isotopic Study by EMP, SIMS and LA-PIMMS: **Foster G, Parrish R, Whitehouse M & Horstwood M** (PCM6:THam12:G6).

11:30 Micro-Dating of Monazite by New XRF-Microprobe Technology Applied to Polymetamorphic Rocks of the Monte Rosa Nappe: **Scherrer NCS, Parrish RR, Berger A, Cheburkin A & Engi M** (PCM6:THam13:G6).

11:45 U and Pb Isotopes of Uraninite and Galena Measured on Ion Microprobe: **Zetterström L, Sunde T, Schöberg H & Fayek M** (PCM6:THam14:G6).

Symposium RCM1 Room F3 The Causes and Consequences of Uplift at Continental Margins

**Convenors: Kerry Gallagher, Nicky White,
Peter van der Beek & Jaume Vergès**

Session chaired by Kerry Gallagher

08:30 **KEYNOTE** Causes of Large-Scale Continental Uplift: **Gurnis M & Conrad C** (RCM1:THam01:F3).

09:00 Disentangling Transient and Permanent Uplift Caused by Mantle Plumes: **White NJ** (RCM1:THam03:F3).

09:15 Tectonic Structure of the Norwegian Margin (Vøring and Møre Basins): The Role of the Jan Mayen Fracture Zone: **Gomez M, Vergès J, Gil JA & Wheeler W** (RCM1:THam04:F3).

09:30 Compressional Reactivation of the Atlantic Margin, SE Brazil, and its Effects on Uplift, Exhumation and Sediment Transport: **Cobbold P, Meisling K & Mount V** (RCM1:THam05:F3).

09:45 Erosion as the Main Cause of Uplift along Transform Continental Margins: The Côte d'Ivoire-Ghana Example: **Basile C** (RCM1:THam06:F3).

10:00 **BREAK**

Session chaired by Peter van der Beek

10:30 **KEYNOTE** Deriving Surface Uplift Histories on Passive Continental Margins: **Summerfield MA** (RCM1:THam09:F3).

11:00 Late Neogene Passive Margin Denudation History- Cosmogenic Isotope Measurements from the Central Namib Desert: **van der Wateren FM & Dunai TJ** (RCM1:THam11:F3).

11:15 Post-Breakup Evolution of High Elevation Passive Margins using Apatite (U-Th)/He Ages: **Persano C, Barfod D, Bishop P & Stuart F** (RCM1:THam12:F3).

11:30 First Apatite Fission Track Study on Pan-African Basement in Ethiopia: Preliminary Results: **Mock C, Gallagher K & Carter A** (RCM1:THam13:F3).

11:45 Exhumation and Uplift of Rocks in Extensional Regime: Results from Geotechnical Analyses and Comparison with Radiometric and Stratigraphic Data in Southern Tuscany: **Disperati L & Liotta D** (RCM1:THam14:F3).

Symposium SS02 Room G8 Origin and Evolution of Precambrian Anorogenic Plutonism

**Convenors: Jacqueline Vander Auwera,
Hervé Martin & Tapani Rämö**

Session chaired by Hervé Martin & Tapani Rämö

08:30 Tectonic Settings of 1.65-1.4 Ga AMCG Magmatism in the Western East European Craton (Western Baltica): **Bogdanova S** (SS02:THam01:G8).

08:45 Two Distinct Post-Collisional Magmatic Suites in the Sveconorwegian of Southern Norway: Consequences for the Evolution of the Proterozoic Continental Lithosphere: **Vander Auwera J, Liégeois J, Demaiffe D, Bolle O, Bogaerts M & Duchesne JC** (SS02:THam02:G8).

09:00 Experimental Determination of Phase Equilibria of the Lyngdal Granodiorite (Southern Norway): **Bogaerts M, Scaillet B & Vander Auwera J** (SS02:THam03:G8).

09:15 Water Contents and Differentiation of A-Type Granitic Magmas: **Klimm K, Elliot BA, Holtz F, Johannes W, King PL & Chappell BW** (SS02:THam04:G8).

09:30 Formation of Ilmenite-Rich Cumulates by Magma Mixing: Comparisons of Mineral Chemistry in the Layered Series of the Bjerkreim-Sokndal Intrusion and the Tellnes Ilmenite Norite, Norway: **Robinson P, Robins B, Kullerud K, Tegner C & McEnroe SA** (SS02:THam05:G8).

09:45 Geochronology of the Bandak Group and Related Rocks, S Norway, and Relationships to A-Type Magmatism and Orogenic Events in the Sveconorwegian Orogen: **Bingen B, Mansfeld J, Nordgulen Ø & Sigmund EMO** (SS02:THam06:G8).

10:00 **BREAK**

Session chaired by Hervé Martin & Jacqueline Vander Auwera.

10:30 2.4 Ga A-Type Granites of the Kainuu Region, Eastern Finland: Characterization and Tectonic Significance: **Rämö OT & Luukkonen EJ** (SS02:THam09:G8).

10:45 Mineralogical Peculiarities and Thermobarometrical Assessment of Intermediate Magma Chamber beneath a Post-Orogenic Granite-Lamprophyre Ring Complex: Implications for Fractionation of Shoshonitic Magmas at Mid-Crustal Level: **Shebanov A & Eklund O** (SS02:THam10:G8).

11:00 Petrogenesis of Norite Dike, Isua, West Greenland: **Nielsen SG, Krogstad EJ, Frei R & Baker J** (SS02:THam11:G8).

11:15 Afro-Australasian Precambrian Anorogenic Magmatism as Indicators of Supercontinental Fragmentation: **Bowden P, Evans DAD, Li ZX & Powell CM** (SS02:THam12:G8).

11:30 Petrogenesis of Neoproterozoic Granitoids and Related Rocks from the Seychelles: Anorogenic vs. Andean-Arc Origin: **Ashwal LD, Demaiffe D & Torsvik TH** (SS02:THam13:G8).

11:45 Post-Collisional, Post-Orogenic, Anorogenic, Transtensional Alkaline Magmatism: The Tuareg Shield Contribution: **Liégeois J & Bonin B** (SS02:THam14:G8).

(Symposium SS02 Continued in Session TH pm on Page 115)

Thursday April 12th, AM Session

Symposium VPP2 Room G7 Non-Linear and Chaotic Dynamics in Igneous Petrology

Convenor: Giampiero Poli & Diego Perugini

Session chaired by Frank Dickson

08:30 *KEYNOTE* Self-Organizing Complex Phenomena in Petrology: Turcotte D (VPP2:THam01:G7).

09:00 Illegitimate Pyroxenes or Chaotic Dynamics? The Role of Flow Fields in the Petrogenesis of Igneous Rocks: Perugini D, Busà T, Poli G, Nazzareni S & Cristofolini R (VPP2:THam03:G7).

09:15 Power-Law Olivine Size Distributions in Refractory Mantle: Armienti P & Tarquini S (VPP2:THam04:G7).

09:30 Fractals, Chaotic Dynamics and Chemical Diffusion during Magmatic Interaction Processes: Fast Engines for Fast Hybridisation of Magmas: Perugini D & Poli G (VPP2:THam05:G7).

09:45 *KEYNOTE* Chaos, Disequilibria, Fractals, and Replacement in Earth: Dickson F (VPP2:THam06:G7).

10:15 *BREAK*

Session chaired by Donald Turcotte

10:45 The Mechanism Concentration of Impurities Melts at Formation of Reefs Intrusions: Karzhavin V (VPP2:THam10:G7).

11:00 Fractal Analysis of Mingled-Mixed Calcalkaline Magmas: Donato P, De Rosa R, Crisci GM & Ventura G (VPP2:THam11:G7).

11:15 Reconstruction of Magma Mixing Structures in 3D by Serial Slices: Visualizing Chaotic Dynamics during Magmas Interaction: Perugini D & Gatta D (VPP2:THam12:G7).

11:30 Magma Interaction in the Elba Island Pluton, Tuscan Archipelago, Italy: A Fluid-Dynamic Approach using Numerical Modeling: Sintoni MF, Buccianti A, Tommasini S, Manetti P & Gheri P (VPP2:THam13:G7).

Symposium VPP4 Room G4 What Is a Magma Chamber?

Convenors: David Pyle, Rob Hughes,
John Maclennan & Lucy MacGregor

Session chaired by Rob Hughes

08:30 Glimpses into the Crystallization History of Carbonatitic Melts- An Isotopic Approach: Bell K (VPP4:THam01:G4).

08:45 Magmatic Structures in the Lower Proterozoic Orogenic Mäntsälä Mafic-Ultramafic Intrusions, Southern Finland: Eerola T & Kärkkäinen N (VPP4:THam02:G4).

09:00 The Workings of a Magma Chamber: The Fongen-Hyllingen Layered Intrusion: Wilson JR (VPP4:THam03:G4).

09:15 New Insights into the Crystallization History of the Skaergaard Intrusion from Zoning in Plagioclase Overgrowths and Occurrence of Quartz: Brown W (VPP4:THam04:G4).

09:30 Trace Element Evidence for In-Situ Crystallization of Poikilitic Clinopyroxene from the Skaergaard Intrusion: Toplis MJ & Brown WL (VPP4:THam05:G4).

09:45 *BREAK*

Session chaired by Mike Toplis

10:15 The Contrast between Oman Ophiolite and Skaergaard Stratiform Intrusion: Nicolas A (VPP4:THam08:G4).

10:30 Differentiation and Contamination Processes in the Grachou Paleo Lava Lake, Cézallier, French Massif Central: Richter N, Platevoet B & Bardintzeff J (VPP4:THam09:G4).

10:45 Crystallizing a Rhyolitic Magma- Insights from the Permocarboiferous Halle Volcanic Complex, Germany: Mock A & Breitzkreuz C (VPP4:THam10:G4).

11:00 A Numerical Model for the Thermal Evolution of the Vesuvius Magma Chamber: Longo A, Macedonio G & Santacrose R (VPP4:THam11:G4).

11:15 A Model for the Collapse of Piston Calderas during Ignimbrite Eruptions: Roche O & Druitt TH (VPP4:THam12:G4).

11:30 Garnet as a Marker of the Dynamics of Deep Crustal Magma Chambers: Vielzeuf D, Veschambre M, Chazot G, Hammouda T, Paquette J & Brunet F (VPP4:THam13:G4).

11:45 Cognate Xenoliths and the Crystallising Boundary Layer: Pyle D & Baker K (VPP4:THam14:G4).

Thursday April 12th, PM Session

Symposium BG03 Room G3

Advances in the Study of Human Evolution and Dispersal

Convenors: **Mark Collard, Nicholas Conard, Michael Bolus & Leslie Aiello**

13:00 Ancient DNA Research in Palaeoanthropology: **Bachmann L** (BG03:THpm21:G3).

13:15 The Pattern and Timing of the Colonization of Europe by Modern Humans: **Conard NJ & Bolus M** (BG03:THpm22:G3).

13:30 Biogeographic and Cultural Change in Europe from the Last Glacial Maximum to the Early Holocene: **Floss H** (BG03:THpm23:G3).

13:45 Inferences about Raw Material Selection and Hominid Behavior Based on Sourcing of Basaltic Artifacts from the Gesher Benot Ya'aqov Archaeological Site, Israel: **Light JP, Verosub KL & Goren-Inbar N** (BG03:THpm24:G3).

14:00 Humans in the Russian Arctic Nearly 40,000 Years Ago: **Svendsen JL, Pavlov P, Indrelid S & Mangerud J** (BG03:THpm25:G3).

Symposium CC06 Room G2

Holocene Palaeoclimate Records over Europe and the North-Atlantic

Convenors: **Kay Emeis & S. Bjoerck**

Session chaired by Ian Snowball

13:00 Carbon-13 Tracing of Organic Matter Dynamics and Fluctuations of the Sea Level during the Last 7,000 Years in Southern Benin (West Africa): **Agassounon L, Leveque J, Lang J & Andreux F** (CC06:THpm21:G2).

13:15 Late Holocene Climate and the Evolution of the Baltic Sea Environment: **Emeis K, Blanz T & Struck U** (CC06:THpm22:G2).

13:30 Climatic Significance of the ¹⁸O/¹⁶O Variations in Organic Matter: Calibration in Modern Plants and Application to the Paleoclimate Analysis of the Last 3000 Years in Europe: **Ménot-Combes G & Burns SJ** (CC06:THpm23:G2).

13:45 Elemental, Sr and U Isotopic Compositions as Records of Sedimentation Variations in the Caspian Sea: A Climatic or a Tectonic Monitoring?: **Pierret M, Clauer N, Chabaux F & Causse C** (CC06:THpm24:G2).

14:00 The Terrestrial Biosphere as a Net CO₂ Source during Abrupt Climate Change Events: **Scholze M, Knorr W & Heimann M** (CC06:THpm25:G2).

14:15 High Resolution Palaeoproductivity Fluctuations Since the Last Glacial Maximum as Indicated by Benthic Foraminifera in the Marginal Arctic Ocean: **Wollenburg J, Pirrung M, Mackensen A & Kuhnt W** (CC06:THpm26:G2).

Symposium CC11 Room G1

Clathrates, Climate, and Carbon Budget (B): Sub-Sea Floor Methane Deposits on the Margins of Europe, Arctic to Caspian: Seafloor Carbon Fluxes via Methane

Convenors: **John Woodside & Euan Nisbet**

Session chaired by Alan Judd

13:00 Methane-Related Authigenic Carbonates of Eastern Mediterranean Mud Volcanoes: Sources of Diagenetic Fluids and Role of Micro-Organisms: **Aloisi G, Pierre C, Bouloubassi I, Pancost RD, Heijs SK, Rouchy J, Sinninghe Damsté JS, Gottschal J & The Medinaut Shipboard Scientific Party** (CC11:THpm21:G1).

13:15 Spatial Variability in the Anaerobic Methane-Oxidizing Microbial Community in Mediterranean Mud Volcanoes: Evidence from Lipid Biomarkers and Carbon Isotopic Compositions: **Werne JP, Pancost RD, Hopmans EC & Sinninghe Damsté JS** (CC11:THpm22:G1).

13:30 Anaerobic Oxidation of Methane Mediated by a Microbial Consortium above Gas Hydrate: **Boetius A, Ravensschlag K, Schubert C, Rickert D, Widdel F, Gieseke A, Amann R, Joergensen BB, Witte U & Pfannkuche O** (CC11:THpm23:G1).

13:45 The Small Sized Benthic Biota in Surficial Marine Gashydrate Sediments: **Sommer S & Pfannkuche O** (CC11:THpm24:G1).

14:00 Anaerobic Methane Oxidation in Euxinic Waters of the Black Sea is Mediated by Archaea: **Sinninghe Damsté JS, Schouten S & Wakeham S** (CC11:THpm25:G1).

14:15 Gas-Hydrate Sediment Properties in Improved Ground Models for Slope Instability Evaluations: **Gunn D, Christopher R, Keith B, Peter J, Michael L & John R** (CC11:THpm26:G1).

Thursday April 12th, PM Session

Symposium LS03 Room F2

Integrated Tectonic Studies of the Evolution of the Tethyan Orogenic Belt in the Eastern Mediterranean Region

Convenors: Antony Morris, Timur Ustaomer, Despina Kondopoulou, Alastair Robertson & Costas Xenophonos

Session chaired by Despina Kondopoulou

13:00 The Impact of Cretaceous Pillow Basaltic Lavas from North Anatolian Ophiolitic Melange (Central Anatolia, Turkey) in the Geodynamic Evolution of Neo-Tethys along Izmir-Ankara-Erzincan Suture Belt: **Rojay B, Altiner D, Özkan Altiner S, Önen P, Thirlwall MF, Hall R & Yaliniz K** (LS03:THpm21:F2).

13:15 Metamorphic Evolution of Mafic Granulites from the Metamorphic Sole of Central Dinaric Ophiolites (Bosnia-Herzegovina): **Olker B, Altherr R & Lugovic B** (LS03:THpm22:F2).

13:30 Structure, Petrology & Geochronology of the Albanian Ophiolites and their Tectonic Evolution within the Neotethyan Orogenic Belt: **Dilek Y, Furnes H, Shallo M & Mortensen JK** (LS03:THpm23:F2).

13:45 From Chalkidiki to Samothraki (Greece): Ultra-Rhodopian Origin of the Vardar Ophiolites: **Michard A, Montigny R, Feinberg H, Kondopoulou D & Goffé B** (LS03:THpm24:F2).

14:00 Reconstructing the Puzzle of the Ophiolitic Imbricates Surrounding the Meso-Hellenic Trough: Implications for the Sea-Floor Model: **Rassios A** (LS03:THpm25:F2).

14:15 Net Tectonic Rotation Analysis of Extreme Rotations in the Ba'r Bassit Ophiolite of N. Syria: **Morris A, Anderson M, Al-Riyami K, Robertson A & Dixon J** (LS03:THpm26:F2).

14:30 Large Scale Constraints on the Tectonic Evolution of the Anatolian-Eurasian Plate Boundary from Palaeomagnetic and Geochronological Analysis: **PLatzman E** (LS03:THpm27:F2).

14:45 *BREAK*

Session chaired by Timur Ustaomer

15:15 Differential Neotectonic Rotations in Anatolia and the Tauride Arc: Palaeomagnetic Investigation of the Erenlerdag Complex and Isparta Volcanic District, South-Central Turkey: **Tatar O, Gürsoy H & Piper JD** (LS03:THpm30:F2).

15:30 Anatolian Lateral Escape Tectonics: Influence of Paleogene Thickening and Neogene Gravitational Collapse: **Dhont D & Chorowicz J** (LS03:THpm31:F2).

15:45 Active Faulting Under the Sea of Marmara: Preliminary Results from High-Resolution Multibeam Bathymetry, Seismic and Sonar Soundings: **Meyer B, Armijo R & Suroit Cruise Party** (LS03:THpm32:F2).

16:00 Syn-Orogenic Exhumation of the Ductile Crust in the Alpine Tectonic Evolution of the Aegean Region; The Misidentification of Causes and Consequences: **Lips A** (LS03:THpm33:F2).

16:15 New Insights on Tectonic Evolution of Eastern Mediterranean Ridge: A Multi-Disciplinary Approach: **Costa E, Camerlenghi A, Polonia A, Cooper C, Fabretti P, Mosconi A, Murelli P, Romanelli M, Sormani L & Wardell N** (LS03:THpm34:F2).

Symposium LS06 Room G0

Blueschist to UHP Metamorphism and Back Again

Convenors: John Schumacher, Simon Cuthbert & Tony Carswell

Session chaired by John C. Schumacher

13:00 The Kumdy-Kol Diamandiferous Rocks of Kokchetav (North Kazakhstan): Containers of Ultrahigh-Pressure Stage Deformation?: **Theunissen K, Korsakov A, Smirnova L, Shatsky V & Andre L** (LS06:THpm21:G0).

13:15 Mineral Inclusions in Kokchetav Diamonds: Direct Thermometry of Diamond Formation: **De Corte K, Izraeli ES, Shatsky VS, De Paepe P & Navon O** (LS06:THpm22:G0).

13:30 A Continental Rift in UHP-Facies: The Dabie Shan: **Schmid R, Franz L, Oberhänsli R, Romer R, Martinotti G, Liu X & Dong S** (LS06:THpm23:G0).

13:45 Eclogite Evolution and the Timing of Ultra-High Pressure Metamorphism in Western Norway: **Carswell T, Cuthbert S, O'Brien P & Tucker R** (LS06:THpm24:G0).

14:00 Kinematics of HP and UHP Metamorphism in the Western Gneiss Region, Møreog Romsdal, Norway: **Robinson P & Terry MP** (LS06:THpm25:G0).

14:15 A HP-UHP Transition in the Western Gneiss Region, Norwegian Caledonides: **Cuthbert S, Carswell D & O'Brien P** (LS06:THpm26:G0).

14:30 Local Origin of High Pressure Vein Material in Eclogite Facies Rocks of the Zermatt-Saas Zone: **Thompson AB & Widmer T** (LS06:THpm27:G0).

14:45 *BREAK*

Session chaired by Chris Ballhaus

15:15 The Metamorphic Field Gradient in the Eclogite Type Locality: **Tenczer V & Stüwe K** (LS06:THpm30:G0).

15:30 Comparison of Kinematic Forward-Modelling and Field Evidence of Exhuming High Pressure Rocks (Schobergruppe, Austria): **Fusseis F & Grasemann B** (LS06:THpm31:G0).

15:45 Origin and P,T,t Path from Eclogites of the Escambray Massif (Cuba) Exhumed in a Subduction Context: **Schneider J, Bosch D, Monié P & Guillot S** (LS06:THpm32:G0).

16:00 P-T Paths of the Mesozoic Raspas Eclogites, Andean Belt (Ecuador): Possible Constraints on Exhumation: **Gabriele P, Ballèvre M, Martinotti G, Jaillard E & Hernandez J** (LS06:THpm33:G0).

16:15 Himalayan Subduction of the Indian Plate in NW Pakistan: Good, Bad and Indifferent Eye-Witnesses: **O'Brien P & Treloar P** (LS06:THpm34:G0).

Thursday April 12th, PM Session

Symposium MS07

Room F6

Sub-Continental Mantle Plumes: Origin, Evolution, Surface Expression and Fate; What Do We Really Know?

Convenors: Marjorie Wilson & Ulrich Achauer

Session chaired by Marjorie Wilson

13:00 **KEYNOTE** The Role of Mantle Plumes in the Break-Up of Gondwana: Hawkesworth C, Kelley S, Turner S & Gallagher K (MS07:THpm21:F6).

13:30 The Transition from Flood to Shield Volcanism in the Ethiopian Volcanic Province: Kieffer B, Arndt N, Bosch D, Weis D, Ayalew D, Yirgu G, Coulié E & Quidelleur X (MS07:THpm23:F6).

13:45 More about Rare Gases in Kola Devonian Plume: The Most Degassed Giant Alkaline Complexes Khibiny and Lovozero: Ikorsky S, Nivin V, Balaganskaya E, Kamensky I, Tolstikhin I & Gannibal M (MS07:THpm24:F6).

14:00 Light Noble Gas Systematics of Ultramafic Rocks of the Northern Red Sea: Tracing a Mantle Plume: Hopp J, Mario T & Rainer A (MS07:THpm25:F6).

14:15 The Northernmost CAMP: $^{40}\text{Ar}/^{39}\text{Ar}$ Age, Petrology and Sr-Nd-Pb Geochemistry of the Kerforne Dyke: (Brittany, France): Jourdan F, Marzoli A, Bertrand H, Cosca M & Fontgnie D (MS07:THpm26:F6).

14:30

BREAK

Session chaired by Uli Achauer

15:00 Evidence for a Mantle Plume beneath Kasachstan: Steinberger B, Spakman W & Bijwaard H (MS07:THpm29:F6).

15:15 Characteristics of a Thermal Boundary Layer at the Core-Mantle Boundary Inferred from Numerical Models of Convection: Deschamps F & Sotin C (MS07:THpm30:F6).

15:30 New Evidence for Baby-Plumes beneath Central Europe: Comparing the Massif Central and the Eifel Plume Tomographic Images: Achauer U, Granet M, Ritter J & Jordan M (MS07:THpm31:F6).

15:45 Constraints from the Geochemistry and Thermometry of Coarse-Grained Peridotite Xenoliths on Plume-Subcontinental Lithospheric Mantle Interaction beneath French Massif Central: Garrido CJ, Xavier L, Bodinier J & Dautria J (MS07:THpm32:F6).

16:00 Spatial and Temporal Variations in Lithospheric Mantle above the East African Mantle Plume- Geochemical Evidence from the Mt. Meru/Mt. Kilimanjaro Region, N. Tanzania: Roberts MA & Gibson SA (MS07:THpm33:F6).

16:15 Rifting and Mantle Plumes in the Circum-Carpathian Area: Golonka J & Slaczka A (MS07:THpm34:F6).

Symposium OS02

Room F1

Environmental Geology and Geohazards

Convenors: Jean Carignan & Toni Eerola

Session chaired by Jean Carignan

13:00 EuroGeoSurveys in the Public Arena: Schönlaub HP (OS02:THpm21:F1).

13:15 Extraordinary Geology Plus Touristic Infrastructure Equals GeoTourism: A New and Economic Direction for Geologists in Greece: Rassios A & Zouras N (OS02:THpm22:F1).

13:30 Sources, Provenance, and Pathways of Lead in Antarctica: Implications for Global Atmospheric Circulation: Gasparon M (OS02:THpm23:F1).

13:45 Pb Isotopic Composition of Flue Gas Residues from Municipal Solid Waste Incinerators in France: Identification of a Homogeneous Industrial Source of Atmospheric Pb Pollution: Carignan J, Libourel G, Raoul C & Le Forestier L (OS02:THpm24:F1).

14:00 Influence of Anthropogenic Activities on Heavy Metal Concentrations and Lead Isotope Ratios in Urban Shallow Lake Sediments: Aries S & Polvé M (OS02:THpm25:F1).

14:15

BREAK

Session chaired by Hans Schönlaub

14:45 Catalyst Emitted Platinum-Group-Elements- A New Contamination of the Environment?: Eckhardt J & Schaefer J (OS02:THpm28:F1).

15:00 Platinum Contamination of Natural Water Due to Automobile Emissions: Its Impact on Human Health and Need for Improved Analytical Methods: Neelam SS (OS02:THpm29:F1).

15:15 A Cellular Automata Model for Different Complexity Landslides: Avolio MV, D'Ambrosio D, Di Gregorio S, Iovine G, Lupiano V, Rongo R & Spataro W (OS02:THpm30:F1).

15:30 Large Scale Liquefaction Damage Estimation Analysis in Greater Seattle Area: Nasri V, Gain J & Luithardt H (OS02:THpm31:F1).

15:45 Geohazard on Coastal Chalk Cliffs: The Example of Puy's Collapse on the 17th May 2000 (Upper Normandy, France): Duperret A, Genter A, Mortimore RN & Watremez P (OS02:THpm32:F1).

16:00 Evidences for an Historical Tsunami along the North Anatolian Fault between Yalova and Karamursel, NW Anatolia, Turkey: Genc SC & Tuysuz O (OS02:THpm33:F1).

16:15 3-D Stochastic Modelling of Fault Zones and P-Wave Velocities in a Granitic Massif: The Albala Pluton, SW Iberian Variscan Belt: Escuder-Viruet J, Mart' D, Jurado MJ, Pérez-Estaún A & Carbonell R (OS02:THpm34:F1).

Thursday April 12th, PM Session

Symposium OS10

Room G5

Structural Geology and Tectonics

Convenor:

Graham Potts

13:00 Computer-Aided 3D Retro-Deformation of the Northern Calcareous Alps around the TRANSALP Reflection Seismic Profile: **Tanner DC, Behrmann J & Dresmann H** (OS10:THpm21:G5).

13:15 Continental Collision History between Arabian Platform and Central Iran: **Mohajjel M** (OS10:THpm22:G5).

13:30 Asymmetrical Fabrics in the Mesozoic Accretionary Complexes of North-East Asia as Possible Indicators of Plates Kinematics (Results from the INTAS Project 96-1880): **Khudoley A, Bondarenko G & Sokolov S** (OS10:THpm23:G5).

13:45 Himalayan High-Grade Core as a Large Orogenic Channel: Insight from the Kingdom of Bhutan: **Grujic D, Hollister LS, Parrish RR & Daniel CG** (OS10:THpm24:G5).

14:00 Gravity Constraints on Palaeoproterozoic Thin-Skinned Tectonics at the Southern Margin of the Pilbara Craton, Western Australia: **Hackney RI** (OS10:THpm25:G5).

14:15 Are all 1000-1100 Ma old Rocks Related to Formation of the Supercontinent Rodina? The View from Sri Lanka, Madagascar and Southeastern Africa: **Kröner A, Kehelpannala W, Collins AS & Muhongo S** (OS10:THpm26:G5).

14:30

BREAK

15:00 A Modern Structural Regime in the Paleoproterozoic (~3.65-3.62 Ga); Isua Greenstone Belt, Southern West Greenland: **Hanmer S, Greene DC, Hamilton M & Crowley JL** (OS10:THpm29:G5).

15:15 Geometric Conditions Affecting the Shear-Sense Derivation at Stretched Lithotectonic Boundaries: **Schwerdtner WM, Riller U, Crews MJ, Cote M & Borowik A** (OS10:THpm30:G5).

15:30 Internal Patterns in Lava Domes Emplacement Analogical and Numerical Modelling: **Buisson C** (OS10:THpm31:G5).

15:45 Displacements, Stresses, and Arrest of Hydrofractures: **Gudmundsson A** (OS10:THpm32:G5).

16:00 Progressive Strain Localisation during a Normal-Fault System Evolution: **Meyer V, Nicol A, Childs C, Walsh JJ & Watterson J** (OS10:THpm33:G5).

16:15 Stress Permutations: 3-D Distinct Element Analysis Accounts for a Common Phenomenon in Brittle Tectonics: **Hu J & Angelier J** (OS10:THpm34:G5).

Symposium PCM3

Room G6

Glasses in Geosciences and in Environmental Sciences

Convenors: Laurence Galois & B. Champagnon

Session chaired by Bernard Champagnon

13:00 **KEYNOTE** Neutron and X-Ray Diffraction Studies of the Structure of Glasses and Liquids: **Laurent C** (PCM3:THpm21:G6).

13:30 Raman Spectroscopic Investigations of High Temperature Configurational Changes in Silicate Melts: **Reynard B, Daniel I & Gillet P** (PCM3:THpm23:G6).

13:45 Titanosilicate Glasses Studied by Solid-State NMR Spectroscopy: **Larsen FH, Rossano S & Farnan I** (PCM3:THpm24:G6).

14:00 Hydrofluoric Acid Solution Calorimetric Data for Sodium Silicate Glasses: Support for Configurational Entropies from Adam-Gibbs Theory: **Hovis G, Jarry P, Toplis M & Richet P** (PCM3:THpm25:G6).

14:15

BREAK

Session chaired by Laurence Galois

14:45 Assessing Ancient Glass-Technology by Microanalyses: **Messiga B & Riccardi MP** (PCM3:THpm28:G6).

15:00 Measuring the Ratios of Ferric to Ferrous Iron in Glasses with the Electron Microprobe: **Fialin M, Bézos A & Humler E** (PCM3:THpm29:G6).

15:15 The Thermal History of a Pantelleritic Lava Flow: The 8-ka Fountain-Fed Obsidian Flow on Mayor Island, New Zealand: **Gottsmann J & Dingwell DB** (PCM3:THpm30:G6).

15:30 New Insights into the Structural Environment of Fe in Synthetic and Natural Glasses, using an Improved Analysis of ⁵⁷Fe Mössbauer Spectra: **Rossano S, Wilke M, Gautron L, Bézos A & Farges F** (PCM3:THpm31:G6).

15:45 Effect of Leaching on Nuclear Glasses: A Spectroscopic Study: **Ollier N, Champagnon B, Panczer G & Jollivet P** (PCM3:THpm32:G6).

16:00 The Effect of P₂O₅ on the Ferric-Ferrous Ratio in Basaltic Liquids at Atmospheric Pressure: **Partzsch GM** (PCM3:THpm33:G6).

16:15 Are the Natural Analogues Really Useful?: **Crovisier JL & Advocat T** (PCM3:THpm34:G6).

Thursday April 12th, PM Session

Symposium RCM7 Room F3 Tectonics and Sedimentation Associated with Arctic Margins

Convenors: **Vicky Pease, R. Scott
& Jan Backman**

Session chaired by Vicky Pease

13:00 **KEYNOTE** Fresh View on the Seismic Structure of Lomonosov Ridge: **Jokat W** (RCM7:THpm21:F3).

13:30 Crustal Structure and Evolution of the Laptev Sea Rift, N-E Siberia, Revealed by Seismic Data: **Franke D, Hinz K, Neben S, Block M & Roeser HA** (RCM7:THpm23:F3).

13:45 The Laptev Sea: A Natural Laboratory for Addressing the Processes of Rupture of Continental Lithosphere and their Impact on Natural Environment: **Drachev S, Bauch H, Kassens H, Kaul N, Chizhov D & Roudoy A** (RCM7:THpm24:F3).

14:00 **KEYNOTE** Tectonic Structure and Evolution of Sedimentary Basins on the Continental Margin of Northern Eurasia: **Gramberg I, Griukurov G, Ivanov V & Pogrebitsky Y** (RCM7:THpm25:F3).

14:30 Features of Inheritance in the Tectonic Structure of the Arctic Continental Margin of North East Eurasia: **Kos'ko M** (RCM7:THpm27:F3).

14:45 **BREAK**

Session chaired by Robert Scott

15:15 Early Triassic A-Granites of Taimyr: A Result of the Northern Asia Superplume: **Vernikovskiy V, Pease V, Vernikovskaya A, Romanov A, Gee D & Travin A** (RCM7:THpm30:F3).

15:30 Early Paleozoic Kinematic Model of Severnaya Zemlya (SZ) Terrain: **Metelkin D, Vernikovskiy V, Kazansky A, Gee D & Torsvik T** (RCM7:THpm31:F3).

15:45 Is Franz Josef Land Affected by Caledonian Deformation?: **Pease V, Gee D & Lopatin B** (RCM7:THpm32:F3).

16:00 The Structure of the Northern Svalbard Continental Margin: **Geissler W & Jokat W** (RCM7:THpm33:F3).

16:15 Northwestern Svalbard and its Adjacent Oceanic Province- New Seismic Refraction Lines for a Better Understanding of the Crustal Nature: **Ritzmann O, Jokat W, Guterch A & Mjelde R** (RCM7:THpm34:F3).

Symposium SS02 Room G8 Origin and Evolution of Precambrian Anorogenic Plutonism

Convenors: **Jacqueline Vander Auwera,
Hervé Martin & Tapani Rämö**

13:00 U-Pb and Argon-Geochronology of the Proterozoic Mazury Complex, NE Poland: **Doerr W, Marheine D, Schastok J, Valverde-Vaquero P & Wiszniewska J** (SS02:THpm21:G8).

13:15 Anorogenic Magmatism in the Western Part of the East European Craton: Northern Poland, Southern Lithuania and NW Belarus: **Skridlaite G, Wiszniewska J, Taran L & Duchesne J** (SS02:THpm22:G8).

13:30 2.4-2.5 Ga K-Rich Granites of the Central Aldan Shield (Eastern Siberia)- Evidence of Anorogenic Plutonism or Post-Collision Setting?: **Salnikova E, Kotov A, Larin A, Kovach V, Yakovleva S & Savatenkov V** (SS02:THpm23:G8).

13:45 Precambrian Anorogenic Complexes of Southern Margin of the Siberian Craton: **Sklyarov E, Donskaya T, Gladkochub D & Mazukabzov A** (SS02:THpm24:G8).

14:00 Geochemical Constraints on the Petrogenesis of the O'okiep Intrusive Rocks (Namaqualand, S. Africa): A Lower Crustal Mafic Source: **Duchesne J, Vander Auwera J & Clifford T** (SS02:THpm25:G8).

14:15 The Paleoproterozoic, Anorogenic Wangtu Granite from NW Himalaya, Suttei Valley, India: **Barley M & Singh S** (SS02:THpm26:G8).

Symposium SS03 Room F4 Applications of Computerised X-Ray Tomography in Geology and Related Domains

Convenors: **Patric Jacobs, Rudy Swennen
& Maarten Van Geet**

Session chaired by Patric Jacobs & William Carlson

13:00 Simulation of 3-D Chemical Transport in Heterogeneous Soil Cores using X-Ray CT: **Anderson SH, Wang H, Peyton RL & Gantzer CJ** (SS03:THpm21:F4).

13:15 Study of the Microgeometry of Porous Materials using Synchrotron Computed Microtomography: **Jones KW, Feng H, Tchouparova E, Lindquist WB, Adler PM, Thovert J, Vekemans B, Vincze L, Szaloki I & Riekel C** (SS03:THpm22:F4).

13:30 Using Various Scales and Systems for X-Ray Tomographic Imaging of Multi-Phase Flow Processes: **Wildenschild D, Vaz CM, Hoppmans JW, Rivers ML, Rikard D & Ruddle DG** (SS03:THpm23:F4).

13:45 Heavy Oil Solution Gas Drive Reservoirs: An Experimental Study: **Akin S & Kovsky AR** (SS03:THpm24:F4).

14:00 An X-Ray CT Study for the Assessment of Basic Rock Properties in Deforming Samples: **Karacan CO, Halleck PM & Grader AS** (SS03:THpm25:F4).

14:15 **BREAK**

Session chaired by Rudy Swennen & Bénédicte Menez

14:45 X-Ray Fluorescence Micro-Tomography of Geological Samples: **Menez B, Simionovici A, Bohic S, Philippot P & Chukalina M** (SS03:THpm28:F4).

15:00 Numerical Simulation of Random Walks and Magnetic Relaxation of Protons in Complex 3D Pore Space of Rocks: **Ryu S, Song Y, Sen P, Schwartz L & Dunsmuir J** (SS03:THpm29:F4).

15:15 Analogue Models Analyzed by Single- and Multi-Slice Spiral X-Ray Computerized Tomography: **Schreurs G, Panien M & Vock P** (SS03:THpm30:F4).

15:30 The Use of Computerised Tomography (CT) in the Investigation of the Settlement Behaviour of Soils: **O'Neill M, Goodwin A & Anderson W** (SS03:THpm31:F4).

15:45 A Sampling of Applications of X-Ray Computed Tomography using a Scanner Optimized for Geological Imaging: **Carlson W** (SS03:THpm32:F4).

16:00 Porosity Measurements by Means of Microfocus X-Ray Computer Tomography (MCT): **Van Geet M & Swennen R** (SS03:THpm33:F4).

16:15 Characterisation of Petrophysical Rock Properties Through Monitoring with Computerised X-Ray Tomography: Core Flood Experiments of Boom Clay Backfill Material: **Jacobs PJ** (SS03:THpm34:F4).

