Symposium AI02 Room G3

Studies in Underground Research Laboratories for Radioactive Waste Disposal and Predicting the Behaviour of Engineered and Natural Barriers for the Geological Isolation of Wastes

Convenors: David Savage, Scott Altmann, Ross McCartney, Lucy Philip & Vala Ragnarsdottir

Session chaired by David Savage

14:00 Low-Temperature Diagenesis in Callovo-Oxfordian Shales of Haute-Marne (France): Effect on Natural Confinment Properties: **Rousset D, Clauer N, Lavastre V, Javoy M & Decarreau A** (AI02:SUpm25:G3).

14:15 Mineralogical and Geochemical Evolution in a Fractured Zone in Shales at the Tournemire Site (Aveyron, France): **Peyaud J & Pagel M** (AI02:SUpm26:G3).

14:30 Fluid-Granite Interactions along Fault Surfaces: Geochemical Modelling of Meteoric Alteration (Albala Granite, SW Variscan Iberian Massif): **Escuder-Viruete J, Marti D, Jurado MJ, Peréz-Estaún A & Carbonell R** (AI02:SUpm27:G3).

14:45 Role of the Alteration Gel in Remobilization of Contaminants from Ultimate Glassy Wastes: **Motelica M, Gauthier A & Le Coustumer P** (AI02:SUpm28:G3).

15:00 Mobility of REE in Hydrothermal Uranium Deposits as Natural Analogue of HLWR: **René M** (AI02:SUpm29:G3).

15:15 Fracture Systems in Deep Underground Granitic Sites: **Genter A, Bourgine B, Chilès J & Delpont G** (AI02:SUpm30:G3).

15:30 The Mobility of Depleted Uranium in the Balkan Wars Zone of 1999: **Ragnarsdottir KV & Heasman D** (AI02:SUpm31:G3).

15:45 *BREAK*

Session chaired by Scott Altmann & Ross McCartney

16:15 Migration of Fissiogenic REE within the Groundwater Table of Bangombe (Gabun): **Bracke G, Stille P & Gauthier-Lafaye F** (AI02:SUpm34:G3).

16:30 Detection and Quantification of Groundwater Flow: Geothermal Scanning of the Sub-Surface for Temperature Residuals of Advective Origin: **Clauser C, Hartmann A, Rath V, Ruehaak W, Schellschmidt R & Zschocke A** (AI02:SUpm35:G3).

16:45 Behavior of Si and O during Hydrothermal Alteration of Nuclear Waste Glass, using ^{29}Si and ^{18}O Isotope Tracing and Ion Probe Depth Profiling: **Valle N, Libourel G & Deloule E** (AI02:SUpm36:G3).

17:00 Leaching of Concrete by Waters Little Mineral-Bearing and Sulphated Waters: **Albert B, Bilal E & Guy B** (AI02:SUpm37:G3).

17:15 Coupled ESEM and Digital Image Analysis for Qualitative and Quantitative Study of Bentonite Swelling: **Montes-hernandez G, Duplay J & Martinez L** (AI02:SUpm38:G3).

(Symposium AI02 Continued in Session SU po on Page 29)

Symposium BG02 Room G1

Oxygen and Evolution

Convenor: Martin Brasier

Session chaired by John Lindsay

14:00 *KEYNOTE* New Insights into the History of Oxygen Growth: **Runnegar B** (BG02:SUpm25:G1).

14:30 Origin of Organisms That Evolve Oxygen: **Nisbet EG** (BG02:SUpm27:G1).

14:45 Pb-Isotopic Evidence for Pre-3700 Ma Oxygenic Photosynthesis: **Rosing M & Frei R** (BG02:SUpm28:G1).

15:00 Archaean Cyanobacterial Diversity: More Questions Than Answers: **Brasier M** (BG02:SUpm29:G1).

15:15 *BREAK*

Session chaired by John Lindsay

15:45 What can the Fossil Biota from the Early Archaean Rock Record Tell us About Atmospheric Oxygen?: **Westall F, Walsh M, de Vries S & Nijman W** (BG02:SUpm32:G1).

16:00 Photosynthesis and Early Evolution of the Earth's Atmosphere: Constraints from the Geological Record: **Schidlowski M** (BG02:SUpm33:G1).

16:15 Biogenic Methane as the Unified Explanation for Archaean Greenhouse Warming, the Rise of Oxygen, and Palaeoproterozoic Glaciation: **Catling D, McKay C & Kevin Z** (BG02:SUpm34:G1).

16:30 Fixed Nitrogen Availability: The key to Understanding the Rise of Atmospheric O_2: **Siefert J & Kasting J** (BG02:SUpm35:G1).

16:45 Oxygen and Evolution of the Precambrian Iron Banded Formations: **Yegorov D** (BG02:SUpm36:G1).

17:00 Planetary Evolution and the Early Carbon Isotope Record; Evidence from Western Australian Basins: **Lindsay J & Brasier M** (BG02:SUpm37:G1).

17:15 Tropical Laterites, Atmospheric O_2 and CO_2 Levels, and Life on Land in the Early Proterozoic: **Beukes N, Gutzmer J & Dorland H** (BG02:SUpm38:G1).

(Symposium BG02 Continued in Session MO am on Page 41)

Symposium CC05 Room G2

Glacial-Interglacial Cycles - Records, Models, and Mechanisms

Convenor: Gideon Henderson

Session chaired by Keith Rodgers

14:00 Alternation of Glacial-Interglacial Periods between 187 and 74 ka Recorded in a Speleothem from Clamouse Cave (South of France): **Plagnes V, Causse C, Genty D & Blamart D** (CC05:SUpm25:G2).

14:15 Glacial-Interglacial Paleo-Rainfall Record in the Eastern Mediterranean Region: Evidence from the Speleothems Calcite $\delta^{18}O$ and Fluid Inclusion δD Data: **Bar-Matthews M, Ayalon A & Matthews A** (CC05:SUpm26:G2).

14:30 Milankovitch-Scale Multi-Proxy Records for the Fluvial Sediments of the Last 2.6 Ma from the Pannonian Basin, Hungary: **Nádor A, Lantos M, Müller P, Tham-Bozs E, Kercsmár Z, T-Th-Makk Á & Farkas-Bulla J** (CC05:SUpm27:G2).

14:45 Glacier Advance in Southernmost South America Coinciding with the Antarctic Cold Reversal: Millennial-Scale Asynchrony: **Sugden D, McCulloch R, Hulton N, Purves R & Bentley M** (CC05:SUpm28:G2).

15:00 Do Glacial Episodes Produce Pluvial Conditions in the Great Basin of North America?: **Delusina I & Verosub KL** (CC05:SUpm29:G2).

15:15 *BREAK*

Session chaired by Gideon Henderson

15:45 Climatic Forcing during the Past 800,000 Years and the Response of Continental Asia: New Results from the Baikal Paleoclimate Record: **Prokopenko A, Karabanov E, Williams D, Khursevich G & Kuzmin M** (CC05:SUpm32:G2).

16:00 Changes of the Mineral Dust Cycle by Glacial Climate Conditions: **Werner M, Tegen I, Roelandt C, Harrison SP & Rodhe H** (CC05:SUpm33:G2).

16:15 The Impact of Insolation Change and Vegetation Modification during the Eemien: A Modelling Study: **Loutre M, Crucifix M, Cortijo E & Turon J** (CC05:SUpm34:G2).

16:30 The Deuterium Excess over the Last 420 000 Years in the Vostok Cores: Information on the Hydrological Cycle in the Southern Hemisphere: **Vimeux F, Masson V, Jouzel J, Petit J & Stievenard M** (CC05:SUpm35:G2).

16:45 Towards the Coupling between a Climate Model of Intermediate Complexity and a 3D Thermomechanical Ice-Sheet Model: **Charbit S, Ritz C & Ramstein G** (CC05:SUpm36:G2).

17:00 The Flux of ^{10}Be into Deep Sea Sediments: A Record of the Intensity of the Earth´s Magnetic Field?: **Christl M, Strobl C, Siegle S & Mangini A** (CC05:SUpm37:G2).

17:15 Is There a Link between Galactic Cosmic Ray Fluxes and Earth´s Climate?: **Mangini A, Christl M, Strobl C & Frank N** (CC05:SUpm38:G2).

(Symposium CC05 Continued in Session SU po on Page 30)

Symposium EVO5 Room F5

Rapid Changes in Mesozoic Palaeoceanography: Micropalaeontological, Sedimentological and Geochemical Proxies

Convenors: Joerg Mutterlose, Elisabetta Erba & Helmi Weissert

Session chaired by Helmi Weissert

14:00 Calcareous Nannofossils and Milankovitch Cycles in the Lower Jurassic Belemnite Marls (Pliensbachian, UK): **Walsworth-Bell B, Bown PR & Weedon GP** (EVO5:SUpm25:F5).

14:15 The Carbonate Signal and Calcareous Nannoplankton Distribution in Jurassic Marl-Limestone Alternations of the Tethyan Realm: **Mattioli E & Pittet B** (EVO5:SUpm26:F5).

14:30 Geochemistry of Mesozoic Organic-Carbon-Rich Sediments from the Norwegian Shelf and Barents Sea: **Lipinski M & Brumsack H** (EVO5:SUpm27:F5).

14:45 Icehouse-Greenhouse Fluctuations in the Early Cretaceous Induced by Methane Release Events and/or Changes in Oceanic Circulation: **Gröcke DR** (EVO5:SUpm28:F5).

15:00 Phosphate Accumulation Rates for the Valanginian-Hauterivian: Paleoceanographic Implications: **van de Schootbrugge B & Föllmi K** (EVO5:SUpm29:F5).

15:15 Calcareous Nannofossils: Palaeoecological Proxies for Deciphering Environmental Changes in the Cretaceous: **Mutterlose J & Erba E** (EVO5:SUpm30:F5).

15:30 *BREAK*

Session chaired by Elisabetta Erba

16:00 Interregional Correlation of Aptian OAE (Selli) Deposits between Slovak Western Carpathians and Swiss Pre Alps: **Lintnerova O, Michalik J, Strasser A & Wissler L** (EVO5:SUpm33:F5).

16:15 The Impact of Rising Atmospheric pCO_2 on Early Aptian Carbonate Platforms: **Wissler L, Funk H & Weissert H** (EVO5:SUpm34:F5).

16:30 Extreme Isotopic Variation in the Early Cretaceous: An Assessment of Possible Methane Release or Volcanic Influences: **Price G** (EVO5:SUpm35:F5).

16:45 Island-Arc Carbonates of Guerrero Terranes (Cretaceous) in Mexico, Pacific Coast: Preliminary Data: **Beltramo J, Martinez-Reyes J, Arnaud-Vanneau A, Föllmi K & Adatte T** (EVO5:SUpm36:F5).

17:00 Biotic Response to the Upper Aptian δ^{13}C Excursion in the Central Atlantic Ocean (DSDP 545) and Western Tethys (Vocontian Basin): **Herrle J & Hemleben C** (EVO5:SUpm37:F5).

17:15 Planktonic Foraminiferal Distribution Cyclic Patterns; Proxy from the Upper Aptian Piobbico Core, Central Italy: **Premoli Silva I & Sala P** (EVO5:SUpm38:F5).

(Symposium EVO5 Continued in Session SU po on Page 31)

Symposium FMF1 Room F4

Diagenesis and Low-grade Metamorphism: In Memoriam of Martin Frey and Bernhard Kübler

Convenors: Susanne Th. Schmidt & Laurence Warr

Session chaired by Susanne Th. Schmidt

14:00 KEYNOTE Bituminite Reflectance in Very Low Grade Metamorphic Studies: **Ferreiro Mählmann R, Belmar M & Ciulavu M** (FMF1:SUpm25:F4).

14:30 The Influence of Geotectonic Setting on Clay Mineral Assemblages in British Lower Palaeozoic Slate Belts: **Merriman RJ** (FMF1:SUpm27:F4).

14:45 Low-Grade Metamorphism in Northern New Caledonia: Evolution of Metapelites Under HP-LT Conditions: **Potel S, Ferreiro-Mählmann R & Frey M** (FMF1:SUpm28:F4).

15:00 Very Low Grade Metamorphism in the Danubian Window, South Carpathians (Romania): **Ciulavu M, Ferreiro Mählmann R, Seghedi A & Frey M** (FMF1:SUpm29:F4).

15:15 *BREAK*

Session chaired by Richard Merriman

15:45 Mineralogic and Organic Responses to the Stratigraphic Irregularities: An Example from the Lower Paleozoic Units in the Eastern Taurus Autochthon, Turkey: **Bozkaya Ö, Yalçin H & Göncüoglu M** (FMF1:SUpm32:F4).

16:00 Temperature Determination through Fluid Inclusion Microthermometry and Vitrinite Reflectance Values in the Diagenetic- and Anchi-Zones: **Mullis J, Wolf M & Ferreiro Mählmann R** (FMF1:SUpm33:F4).

16:15 Tobelite in Low-Grade Metamorphic Organic-Rich Shales from Douro-Beira, Portugal: **Nieto Garcia F, Abad I & Livi KJ** (FMF1:SUpm34:F4).

16:30 Chloritoid Composition and Formation in the Eastern Central Alps: HP or LP Formation?: **Rahn MK, Steinmann M & Frey M** (FMF1:SUpm35:F4).

16:45 Textural and Chemical Changes in Slate-Forming Phyllosilicates of a Foreland-Hinterland Transition of the Low-Grade Metamorphic Belt in the NW Iberian Variscan Chain: **Abad I, Fernando N & Gabriel G** (FMF1:SUpm36:F4).

17:00 Inter Laboratory “Illite Crystallinity” Calibration: Theoretical and Practical Approach: **Jaboyedoff M, Adatte T, Goy-Eggenberger D, Kübler (deceased) B, Maignan M & Thelin P** (FMF1:SUpm37:F4).

17:15 Can X-Ray Scattering Domain-Size Really Provide Information About Crystal Growth Mechanisms of Clay Minerals?: **Warr L & Peacor D** (FMF1:SUpm38:F4).

(Symposium FMF1 Continued in Session SU po on Page 31)

Symposium LS05 Room F2

The Dynamics of Basin Inversion: Observations and Numerical Modelling

Convenors: Soren B. Nielsen & Ulf Bayer

Session chaired by Ulf Bayer

14:00 Modelling the Process of Basin Inversion: **Hansen DL & Nielsen SB** (LS05:SUpm25:F2).

14:15 3-D Thermo-Mechanical Modelling of Inversion Tectonics: **Gemmer L, Nielsen SB & Lykke-Andersen H** (LS05:SUpm26:F2).

14:30 Analysis of Vertical and Horizontal Lithospheric Movements in Northern Europe, from the North Sea to Germany: Results from Dynamic Modelling: **Marotta AM, Thybo H, Bayer U, Sabadini R & Scheck M** (LS05:SUpm27:F2).

14:45 Salt Redistribution during Extension and Inversion Inferred from Observations and Modelling: **Scheck M, Bayer U & Lewerenz B** (LS05:SUpm28:F2).

15:00 Post Mortem Simulation Study of Hydrocarbon Generation and Migration on the Inverted South-Western Rim of the North German Basin- A 2D Basin Modelling Study: **Kus J, Bueker C, Cramer B, Gerling P & Kockel F** (LS05:SUpm29:F2).

15:15 The Tectonic Evolution of the Southern Dutch North Sea during the Paleogene: **de Lugt IR, van Wees JDA & Wong TE** (LS05:SUpm30:F2).

15:30 Mid-Paleocene Evolution of the Eastern North Sea Basin: Does Quantitative Basin Modelling Improve Geological Models?: **Clausen OR, Gemmer L & Mads H** (LS05:SUpm31:F2).

15:45 *BREAK*

Session chaired by Søren B. Nielsen

16:15 Inversion Tectonics in Central Alborz Range; Evidences from Geometry and Kinematics of Thrust Sheets: **Yassaghi A** (LS05:SUpm34:F2).

16:30 Inversion Related Features along the Southern Margin of the Northeast German Basin: **Otto V & Bayer U** (LS05:SUpm35:F2).

16:45 A Major Stage of Convergence in the Issyk-Kul Basin (Northern Tien-Shan) at the end of the Neogene: **Buslov M, Abrakhmatov K, De Batist M, Delvaux D, Dehandschutter B & Klerkx J** (LS05:SUpm36:F2).

17:00 Lower Lithosphere Reflectors and Inhomogeneities of the Lithospheric Structure beneath the Central and Northern Europe: **Grad M** (LS05:SUpm37:F2).

17:15 CELEBRATION 2000: An International Seismic Experiment Crossing the Main Geoelogical Units in Central Europe: **Guterch A, Grad M, Keller GR, Posgay K, Vozar J, Spicak A, Brueckl E, Hajnal Z, Thybo H, Selvi O & Working Group** (LS05:SUpm38:F2).

(Symposium LS05 Continued in Session SU po on Page 33)

Symposium LS09 Room G0

The Subduction Factory

Convenors: Catherine Chauvel & Tim Elliot

Session chaired by Matthew Thirwall

14:00 Role of Subduction Factory in the Evolution of the Solid Earth: **Tatsumi Y** (LS09:SUpm25:G0).

14:15 Subduction Cycling of U, Th and Pb: Perspectives from Altered Oceanic Crust: **Kelly K, Plank T, Farr L, Ludden J, Staudigel H & Alt J** (LS09:SUpm26:G0).

14:30 The Behaviour of HFSE in Subduction Zones: New Insights from Hf Isotopes and High Precision Measurements of Nb/Ta, Zr/Hf and Lu/Hf in Arc Rocks from Kamchatka: **Münker C, Weyer S, Wörner G & Mezger K** (LS09:SUpm27:G0).

14:45 Hf Isotopes in Arc Lavas Point to Sediment Melting in the Mantle Wedge: **Marini J, Chauvel C & Maury R** (LS09:SUpm28:G0).

15:00 Petrogenetic Significance of Hf Isotope Variations in Island Arcs: **Pearce JA & Kempton PD** (LS09:SUpm29:G0).

15:15 The Trace of Wedge Melts in Mantle Rocks: **Wiechert U, Hofmann AW, Mazzucchelli M & Rumble III D** (LS09:SUpm30:G0).

15:30 Slab Melt-Mantle Wedge Interaction and Adakitic (Na) Metasomatim beneath the Lesser Antilles Arc: **Tiepolo M, Kepezhinskas P, Vannucci R & Defant M** (LS09:SUpm31:G0).

15:45 *BREAK*

Session chaired by Tim Elliot

16:15 Experimental Evidence for Mantle Metasomatism by Hydrous Silicic Melts Derived from Subducted Oceanic Crust: **Prouteau G, Scaillet B, Pichavant M & Maury R** (LS09:SUpm34:G0).

16:30 Upper Mantle and Crustal Seismic Anisotropy across the Taupo Back-Arc Region, New Zealand: **Audoine E, Savage M & Gledhill K** (LS09:SUpm35:G0).

16:45 Mantle Dynamics and Element Recycling at the Tonga-Kermadec Subduction Zone: Geochemical Evidence from Lavas of the Kermadec Island Arc and Havre Trough: **Haase KM, Stoffers P, Garbe-Schönberg D & Wright I** (LS09:SUpm36:G0).

17:00 Lead Sources in the Lesser Antilles Arc: Constraints from Double-Spike Pb Isotope Data: **Thirlwall M** (LS09:SUpm37:G0).

17:15 Spatial and Temporal Variation of Magmatism of the Izu-Bonin Arc Based on Trace Element Chemistry and Isotope Systematics: **Ishizuka O, Taylor RN, Milton JA, Nesbitt RW, Uto K, Yuasa M & Hochstaedter AG** (LS09:SUpm38:G0).

(Symposium LS09 Continued in Session SU po on Page 33)

Symposium MS04 Room F6

Deciphering the Chemical Signal of Oceanic Basalts

Convenors: Kevin W. Burton & Pierre Schiano

Session chaired by Pierre Schiano

14:00 *KEYNOTE* MORB Petrogenesis- Confused Signals from the Mantle: **O'Hara M & Herzberg C** (MS04:SUpm25:F6).

14:30 Experimental Determination of Melting Reactions and Liquid Compositions Produced by Small Degree Melting of Depleted Mantle: **Seyler M, Toplis MJ, Laporte D & Ratteron P** (MS04:SUpm27:F6).

14:45 Vesiculation and Vesicle Loss in Normal MORB: Pressure Influence on He, Ne, Ar Elemental Fractionation: **Sarda P & Manuel M** (MS04:SUpm28:F6).

15:00 The Two-Stage Melting Hypothesis for the Relationship between the OIB and MORB Sources also Provides a Nice Resolution to the "He-Paradox" (Ne^+ Ar^+): **Phipps Morgan J & Morgan WJ** (MS04:SUpm29:F6).

15:15 Nb, Zr and Y Systematics in the Kerguelen Large Igneous Province and Indian MORB: **Doucet S, Scoates JS, Weis D, Damasceno D, Ingle SP & Frey FA** (MS04:SUpm30:F6).

15:30 *BREAK*

Session chaired by Kevin W. Burton

16:00 Hf Isotope Evidence for Garnet Depletion in the Source of some Barberton Komatiites: Real or Artifact?: **Blichert-Toft J, Arndt NT & Gruau G** (MS04:SUpm33:F6).

16:15 Plume-Ridge Interaction Inferred by Osmium Isotopes in MORB from the Southern Mid-Atlantic Ridge: **Escrig S, Bourdon B, Jean-Guy S & Claude A** (MS04:SUpm34:F6).

16:30 Extreme Os Isotopic Heterogeneity in Magmatic Sulfides of Oceanic Peridotites: **Alard O, Luguet A, Lorand J, Pearson NJ, Griffin WL & O'Reilly SY** (MS04:SUpm35:F6).

16:45 Os-Isotopic Composition of Basalts and Picrites from the Galapagos Hotspot: **Brügmann G, Hofmann A & White W** (MS04:SUpm36:F6).

17:00 Plume Sources and Processes: A Combined Os, U-Series, Sr, Nd and Pb Isotopic Study of the Azores: **Schaefer B, Turner S, Parkinson I & Rogers N** (MS04:SUpm37:F6).

17:15 Os Isotope and Source Characteristics of the Iceland Plume: **Smit Y, Parkinson IJ, Peate DW, Cohen A & Hawkesworth C** (MS04:SUpm38:F6).

(Symposium MS04 Continued in Session SU po on Page 35)

Symposium OS04 — Room G8

Tectonics and Sedimentation

Convenors: Tom McCann & A. Saintot

Session chaired by Tom McCann

14:00 Evolution of the Southern Margin of the Donbass (Ukraine) from Devonian to Early Carboniferous Times: **McCann T, Saintot A, Alekseev A, Brem A, Chalot-Prat F, Fokin P, John T, Kitchka A, Sachsenhofer R & EUROPROBE-INTAS Team** (OS04:SUpm25:G8).

14:15 Alluvial Fan, Fan Delta, and Turbidite Facies Associations in a Tectonically Active Basin: The Miocene Köprü Basin (Isparta Angle, Southern Turkey): **Deynoux M, Monod O, Karabyikoglu M, Ciner A, Manatschal G, Tuzcu S & Kuzucuoglu C** (OS04:SUpm26:G8).

14:30 Neogene Morphotectonics in the Köprü Basin (Isparta Angle, Southern Turkey): **Monod O, Manatschal G, Deynoux M, Çiner A, Karabiykoglu M, Tuzcu S & Kuzucuoglu C** (OS04:SUpm27:G8).

14:45 'The History of the Hudson Bay- Constraints from 2D Subsidence Modelling': **Hanne D, White N & Jones S** (OS04:SUpm28:G8).

15:00 Growth Faulting and Hydrothermal Activity in Earth's Earliest Sedimentary Basins: **De Vries ST & Nijman W** (OS04:SUpm29:G8).

15:15 Relay Ramps and Fault Linkage along the Early Coffee Soil Fault System, Danish Central Graben: **Hjelm L, Clausen OR, Hunsdale R, Korstgård JA & Vagle KR** (OS04:SUpm30:G8).

15:30 — *BREAK*

Session chaired by Aline Saintot

16:00 Structural and Sedimentological Evolution of the Ruhr Basin (NW-Germany)- Modelling and Simulation of a Palaeozoic Foreland Basin: **Suess MP, Fischer K, Drozdzewski G, Jahr T, Jentzsch G & Schaefer A** (OS04:SUpm33:G8).

16:15 A Neoproterozoic Orogen at the Present-Day SW Margin of the East European Craton: **Zelazniewicz A, Seghedi A, Jachowicz M, Bobinski W, Bula Z & Cwojdzinski S** (OS04:SUpm34:G8).

16:30 Tectonics and Sedimentation in the Tertiary Piemonte Basin (Alpine Domain, Northwest Italy): **Carrapa B, Bertotti G, Wijbrans J & Krijgsman W** (OS04:SUpm35:G8).

16:45 The Québec Promontory Nappe: From Syntectonic Flexural Extension to Taconian Overthrusting: **Gayot T, Kirkwood D & Malo M** (OS04:SUpm36:G8).

17:00 Geometry and Timing of Cretaceous to Eocene Compresional Structures on the Northern Flank of the Eastern Pyrenées: **Chistophoul F, Soula JC, Elibana B, Stéphane B & Déramond J** (OS04:SUpm37:G8).

17:15 Can Diapirism Explain Salt Anticlines?: **Kaus B & Podladchikov Y** (OS04:SUpm38:G8).

(Symposium OS04 Continued in Session SU po on Page 35)

Symposium OS08 — Room G7

Geochronology and Stable Isotopes

Convenor: Bob Cliff

Session chaired by Bob Cliff & Klaus Mezger

14:00 New Advances in Lu-Hf Geochronology: **Scherer E, Muenker C & Mezger K** (OS08:SUpm25:G7).

14:15 New Garnet Lu-Hf and Zircon SHRIMP U-Pb Data Confirm a Late Cretaceous Age and Fast Exhumation Rate for the Type-Locality Eclogites in SE Austria (Saualpe, Eastern Alps): **Thöni M, Blichert-Toft J, Armstrong R & Miller C** (OS08:SUpm26:G7).

14:30 Rb-Sr Geochronology by MC-ICPMS: **Waight T & Baker J** (OS08:SUpm27:G7).

14:45 NEPTUNE: A New MC-ICPMS For High Resolution Isotope Ratio Measurements: **Schwieters J, Hamester M, Jung G, Pesch R & Rottmann L** (OS08:SUpm28:G7).

15:00 Diffusion of Rb, Sr and Ar in Synthetic Micas: **Hammouda T, Cherniak DJ & Arnaud NO** (OS08:SUpm29:G7).

15:15 The Influence of Topography on Low-T Geochronology: **Stuewe K** (OS08:SUpm30:G7).

15:30 Alpha-Recoil Track Dating (ART-D)- Method and Application: **Glasmacher UA & Wagner GA** (OS08:SUpm31:G7).

15:45 — *BREAK*

Session chaired by Klaus Mezger & Bob Cliff

16:15 ^{13}C and ^{18}O Determinations from Carbonates and DIC using Continuous Flow Techniques: **Fourel F, Phillips A, Morrison J & Merren T** (OS08:SUpm34:G7).

16:30 Evidence for Archean Seawater Interaction in Komatiites from Kambalda, Western Australia Based on the Use of Hydrogen and Oxygen Isotopes: **Jane M, Cartwright I & Stone B** (OS08:SUpm35:G7).

16:45 The Oxygen Isotopic Composition of Eclogitic Rocks from the Umba-Kolvitsa Suture Zone (Kola Peninsula): A Key for Tracing the Evolutionary History from Mantle Source to Mid-Crustal Levels: **Krylov D, Hoernes S & Raith MM** (OS08:SUpm36:G7).

17:00 High Temperature Geospeedometry Based on $^{18}O/^{16}O$ Exchange between Minerals. Application to Adirondack Uplift Rate: **Jaoul O & Béjina F** (OS08:SUpm37:G7).

17:15 A Stable Isotope Study of Smithsonite with Application to Pb-Zn Deposits of SW Sardinia, Italy: **Gilg HA, Aversa G & Boni M** (OS08:SUpm38:G7).

(Symposium OS08 Continued in Session SU po on Page 36)

Symposium PCM1 — Room G6

Environmental Mineralogy and Geochemistry - The 'Molecular Environmental Science' Perspective

Convenors: David Vaughan, S. Clarke, G. Calas & J.V. Smith

Session chaired by David Vaughan

14:00 KEYNOTE Molecular Environmental Science: Shedding New Light on Heavy Metal Pollutants in the Environment using Synchrotron Radiation: **Brown, Jr. GE** (PCM1:SUpm25:G6).

14:30 An X-Ray Absorption Fine Structure Spectroscopy Study of Iron(III)-Silica and Gallium-Silica Complexes in Aqueous Solution. Implications for the Hydrolysis and the Formation of Iron and Aluminum Oxy-Hydroxides and Silicates: **Pokrovski GS, Schott J, Hazemann J, Martin F, Farges F & Pokrovsky OS** (PCM1:SUpm27:G6).

14:45 Influence of Mn and Cd Ions on Solution on the Aragonite-Calcite Transformation: **Cubillas P, Prieto M & Fernández-González A** (PCM1:SUpm28:G6).

15:15 *BREAK*

Session chaired by G Calas

15:45 Variable Temperature XAS Studies on Uranyl(VI) Speciation in Nitrate-, Chloride-, Citrate- and Acetate-Bearing Solutions: **Mosselmans JF, Bailey E & Schofield P** (PCM1:SUpm32:G6).

16:00 Structural Development of Amorphous Transition Metal Sulfides: **Moyes L, Pattrick R, Vaughan D, Livens F & Charnock J** (PCM1:SUpm33:G6).

16:15 *In Situ* Atomic Force Microscopy Investigation of Mica Dissolution Mechanisms: Preliminary Investigation: **Pachana K & Zuddas P** (PCM1:SUpm34:G6).

16:30 Redox Conditions in a Hydrothermal System: An EPR Study: **Gehring AU & Weidler PG** (PCM1:SUpm35:G6).

16:45 Biofilm Effects on Hydraulic Conductivity: Experiments from the Microscopic to the Macroscopic Scale: **Brydie J, Roy W, David V, Caesar M & Steve B** (PCM1:SUpm36:G6).

17:00 *KEYNOTE In Situ* Synchrotron Studies of Hydrothermal Reactions in the CaO-SiO_2-H_2 System: Kinetics, Thermodynamics and Reaction Mechanisms of Gyrolite Formation: **Henderson C, Shaw S & Clark S** (PCM1:SUpm37:G6).

(Symposium PCM1 Continued in Session SU po on Page 38)

Symposium PCM7 — Room G5

Frontiers in Stable Isotope Geochemistry: Beyond the Light Elements

Convenors: Ariel Anbar & Francis Albarede

Session chaired by Chloe Marechal

14:00 Fe Isotope Variations in Natural Systems: An Effective "Biosignature"?: **Bullen T, McMahon P, Wiederhold J, Childs C, Mandernack K & Amundsen R** (PCM7:SUpm25:G5).

14:15 Iron Isotope Fractionation in Soils: **von Blanckenburg F** (PCM7:SUpm26:G5).

14:30 Cu, Zn (and Pb) Isotopes in Aerosols and Loesses: **Ben Othman D, Luck J, Grousset F, Rousseau DD & Albarede F** (PCM7:SUpm27:G5).

14:45 Cu and Zn Isotopes in Meteorites: **Luck J, Ben Othman D, Barrat JA & Albarede F** (PCM7:SUpm28:G5).

15:00 High-Resolution Mo Isotope Fractionation Measurements by MC-ICP-MS: **Siebert C, Nägler TF & Kramers JD** (PCM7:SUpm29:G5).

15:15 Thallium Isotope Variations in Ferromanganese Crusts: **Rehkamper M, Frank M, Halliday A & Hein J** (PCM7:SUpm30:G5).

15:30 *BREAK*

Session chaired by Tom Bullen

16:00 Copper, Selenium and Sulphur Isotope Systematics of Seafloor Hydrothermal Systems: **Rouxel O, Fouquet Y & Ludden J** (PCM7:SUpm33:G5).

16:15 Mass-Dependent Cadmium Isotope Fractionation in Meteorites and Experiments: **Wombacher F, Rehkämper M, Mezger K, Münker C & Bischoff A** (PCM7:SUpm34:G5).

16:30 Fractionation of Copper and Zinc Isotopes on Anion-Exchange Resin: **Maréchal CN & Albarède F** (PCM7:SUpm35:G5).

16:45 Mechanism of Nonbiological Fractionation of Fe Isotopes: **Roe JE, Anbar AD & Barling J** (PCM7:SUpm36:G5).

17:00 Effects of Organic Ligands on Iron Isotope Fractionation: **Guynn R, Brantley S, Liermann L, Bullen T, Anbar A, Barling J & Bau M** (PCM7:SUpm37:G5).

17:15 Analysis of Ca, Fe and Se by MC-ICP-MS: Three Solutions: **Guilfoyle S, Miller P & Nelms S** (PCM7:SUpm38:G5).

(Symposium PCM7 Continued in Session SU po on Page 38)

Symposium RCM5 — Room F3

Sediment Supply, Transport and Deposition: The Link from Land to Ocean Margin

Convenor: Maria Mutti

Session chaired by Maria Mutti

14:00 Unravelling the Significance of Sand Compositional Changes across Boundary Surfaces of Stratigraphic Units: **Amorosi A & Zuffa GG** (RCM5:SUpm25:F3).

14:15 Quantifying Timescales of Sediment Recycling at the Continental Margin: **Sherlock S & Kelley S** (RCM5:SUpm26:F3).

14:30 3.6 Ga Zircon Deposited in a Near-Shore to Upper-Slope Environment in the Svecofennian Västervik Basin: **Elvin L, Björklund L, Claesson S & Plink-Björklund P** (RCM5:SUpm27:F3).

14:45 Indus Fan and River Initiation Following Latest Paleocene India-Asia Collision and Uplift of Southern Tibet: **Clift P, Shimizu N, Blusztajn J, Layne G, Gaedicke C & Schlüter H** (RCM5:SUpm28:F3).

15:00 Morphology and Seismic Structure of the Present Zaire Channel-Levee (ZaïAngo Project): **Babonneau N, Savoye B & Cremer M** (RCM5:SUpm29:F3).

15:15 Holocene Sediment Accumulation Rates on the Zaire Deep-Sea Fan: **Dennielou B, Jouanneau J, Lopez M, Suc J, Danelian T, Volat J, Babonneau N, Migeon S & Savoye B** (RCM5:SUpm30:F3).

15:30 Morphology, Seismic Structure and Deposits of a Distal Lobe complex: The Zaire Case Study (ZaïAngo Project): **Savoye B, Cremer M, Lopez M & Babonneau N** (RCM5:SUpm31:F3).

15:45 *BREAK*

Session chaired by Maria Mutti

16:15 Temporal Variability of Turbiditic Facies on a Levee of the Rhone Neofan (Western Mediterranean Sea): Autocyclicity vs Allocyclicity. A Case Study from the IMAGES Core MD99-2344: **Dennielou B, Huchon A, Migeon S & Berne S** (RCM5:SUpm34:F3).

16:30 End Miocene Tectonism and Growth Faults Associated with Messinian Salt- The Role in Creating Space for Sediments of the Plio-Quaternary Megasequence in the Gulf of Lions (Shelf Pro Deltas and Deep Basin Turbidites): **Gorini C, Reis T, Lofi J, Mauffret A & Berné S** (RCM5:SUpm35:F3).

16:45 Great Australian Bight Sediments: Linking a Mid-Latitude Cool-Water Carbonate Margin with Southern Ocean Paleoceanography: **Andres MS & McKenzie JA** (RCM5:SUpm36:F3).

17:00 High-Resolution Cyclostratigraphy and Architecture of a Carbonate Platform Interior- The Latemar, Middle Triassic, Southern Alps: **Zühlke R & Bechstädt T** (RCM5:SUpm37:F3).

17:15 Termination of Middle Triassic Carbonate Production: A Key to Reconstruct Different Palaeoclimatic Regions within the Tethys: **Sattler U, Schlaf J, Krystyn L & Lein R** (RCM5:SUpm38:F3).

(Symposium RCM5 Continued in Session SU po on Page 39)

Symposium SS01 Room F1

Correlation and Synchronisation of High Resolution Terrestrial Sediment Profiles (An ELDP-Initiated Symposium)

Convenors: Achim Brauer & Jörg F.W. Negendank

Session chaired by Achim Brauer

14:00 Highly Laminated Sediments of Lac Pavin, A Maar Lake in the Auvergne/France- Results of Sedimentology and Microstratigraphy: **Kulbe T, Brüchmann C, Stebich M & Negendank JF** (SS01:SUpm25:F1).

14:15 Weichselian Late Glacial Lake-Level and Stable Isotope Records from the French Jura: **Aalbersberg G & Magny M** (SS01:SUpm26:F1).

14:30 Surface Scanning Magnetic Susceptibility and Multiproxy Data for Characterisation of Late Glacial Environmental Changes in the Lautrey Lake (Jura, France): **Vannière B, Bossuet G, Aalbersberg G, Magny M, Ruffaldi P, Bégeot C & Walter-Simonnet A** (SS01:SUpm27:F1).

14:45 Comparison of Lake Van and Greenland Ice Core Records: The Late Pleistocene/Holocene Transition: **Landmann G & Kempe S** (SS01:SUpm28:F1).

15:00 Late Pleistocene and Holocene Palaeoclimate Record from the Dead Sea, Israel: **Migowski C, Prasad S, Negendank JF & Stein M** (SS01:SUpm29:F1).

15:15 *BREAK*

Session chaired by Jörg F.W. Negendank

15:45 Linking Mediterranean Terrestrial and Marine Paleorecords using the High-Resolution Tephrochronological Record of the Last 100 ka from Lago Grande di Monticchio (Southern Italy): **Wulf S, Brauer A, Frank U, Mingram J, Negendank JF & Zolitschka B** (SS01:SUpm32:F1).

16:00 Volcanological Features of the Piànico Tephra: A New Stratigraphical Marker of the Early Middle Pleistocene in Italy: **Pinti DL, Quidelleur X, Chiesa S, Ravazzi C & Gillot P** (SS01:SUpm33:F1).

16:15 High and Low Resolution Geochemical Records of the Kalya Platform and Ridge in Central Lake Tanganyika: Weathering, Biological and Redox Processes: **Cardinal D, André L, Plisnier P, Lezzar K, Cohen A, Eagle M, Zilifi D & Michelo V** (SS01:SUpm34:F1).

16:30 The Huguang Maar Lake (Huguangyan)- A Long, Continuous and High Resolution Archive of Palaeoenvironmental and Palaeoclimatic Changes from the South China Sea Coast: **Mingram J, Schettler G, Nowaczyk N, Luo X, Lu H, Yancheva G, Liu J & Negendank JF** (SS01:SUpm35:F1).

16:45 The Lake Baikal Drilling Project: A Decade's Effort to Extract the Paleoclimatic and Tectonic History of Asia from the World's Deepest Lake: **Williams D, Kuzmin M, Karabanov E, Prokopenko A & Khursevich G** (SS01:SUpm36:F1).

17:00 First Glaciation of Siberia at 2.8-2.5 Ma: Evidence from Lake Baikal Sediments: **Karabanov E, Prokopenko A, Khursevich G, Williams D, Kuzmin M, Bezrukova E, Sochina N, Fedenia S & Gvozdkov A** (SS01:SUpm37:F1).

17:15 Evidence for Sub-Milankovitch Events in Lake Baikal Sediments (Siberia): **Oberhaensli H, Schettler G, Vorobieva L & Fagel N** (SS01:SUpm38:F1).

(Symposium SS01 Continued in Session SU po on Page 39)

Symposium VPP1 Room G4

Thermodynamic, Structural and Physical Properties of Melts and Element Fractionation in Fluid-Magmatic Systems

Convenors: Matthias Gottschalk, Igor D. Ryabchikov & Hans Keppler

Session chaired by Hans Keppler

14:00 KEYNOTE The Composition of Brine Trapped in Diamonds: **Izraeli ES & Navon O** (VPP1:SUpm25:G4).

14:30 High Pressure Element Partitioning between Coexisting Supercritical Fluid and Crystalline Phases in a S-Type Granitic System: **Burchard M & Schreyer W** (VPP1:SUpm27:G4).

14:45 Fluids in the System Forsterite-Phlogopite-H_2O: Experimental Results at 6 GPa: **Stalder R, Ulmer P & Günther D** (VPP1:SUpm28:G4).

15:00 Element Fractionation during Fluid and Carbonate Melt Metasomatism in Suboceanic (S. Atlantic) and Subcontinental (Antarctica) Mantle: **Kogarko L** (VPP1:SUpm29:G4).

15:15 *BREAK*

Session chaired by Oded Navon

15:45 Bromine Behaviour in Synthetic and Natural Silicic Melts: **Bureau H & Métrich N** (VPP1:SUpm32:G4).

16:00 Boron and Carbon in Highly Evolved Magmatic Systems: Accumulation in Residues and Fractionation between Immiscible Melts and Fluids: **Veksler IV, Thomas R & Nielsen TF** (VPP1:SUpm33:G4).

16:15 Neodymium and Strontium Decoupling in the Infiltration Process: Implication for Sr-Nd Isotope Systematic of Metasomatism Related Rocks: **Savatenkov V & Levsky L** (VPP1:SUpm34:G4).

16:30 Orthomagmatic Copper Origin in Zaldivar Cu-Porphyry Deposit, Chile: **Campos E, NIkogosian I & Touret JRL** (VPP1:SUpm35:G4).

16:45 Exsolution of Salt-Rich Melts: Observations in Highly Fractionated Melts from Hornblendite Cumulates: **Renno AD, Franz L & Herzig PM** (VPP1:SUpm36:G4).

17:00 Diamond Formation during Source Carbonation- Unusual Inclusion Parageneses in Diamonds from Namibia: **Léost I, Stachel T, Ryabchikov ID, Brey GP & Harris JW** (VPP1:SUpm37:G4).

17:15 Trace Element Distribution in Melilite-Bearing and Melilite-Free Series- Derivatives from Ca-Rich and Ca-Poor Mantle Alkaline-Ultrabasic Melts: **Rass IT, Kravchenko SM & Laputina IP** (VPP1:SUpm38:G4).

(Symposium VPP1 Continued in Session SU po on Page 39)

Symposium AI01 Room PO

Contributions of Industrial Geosciences to Fundamental Understanding and Vice Versa: Building Materials

Convenor: Bruno Messiga

1 Systematic Investigation on Thermal Degradation of Marble by Thermal Dilatation Measurements: **Zeisig A, Siegesmund S & Tschegg EK** (AI01:SUpo01:PO).

2 Degradation of Marble: Diagnosis of Deterioration by Ultrasonic Velocitiy Measurements: **Weiss T, Siegesmund S & Rasolofosaon P** (AI01:SUpo02:PO).

3 Microstructural Features and the Durability of Building Stones: White Apuan Marbles: **Cantisani E, Canova R, Fratini F, Manganelli Del Fà C, Mazzuoli R & Molli G** (AI01:SUpo03:PO).

4 Survey on Historic Building Materials: Contributions to a Regional Conservation Concept: **Franzen C** (AI01:SUpo04:PO).

5 Raw Materials of the Neolithic/Aeneolithic Polished Stone Artefacts: Their Migration Paths in Europe (IGCP/UNESCO Project No. 442): **Méres S, Hovorka D & Spisiak J** (AI01:SUpo05:PO).

6 High-Pressure Metabasites: Peculiar Raw Materials of Neolithic/Aeneolithic Populations of Central Europe: **Hovorka D, Spi_iak J & Méres _** (AI01:SUpo06:PO).

7 Experimental Investigation of Kaolinite and Illite-Bearing Clays: Microtextures and Reaction Progress: **Basso E, Bovio P & Riccardi MP** (AI01:SUpo07:PO).

8 Utilization of Zircon Sands in Ceramic Industry: **Baldi G, Bernardini GP, Danti C, Di Benedetto F & Spinelli M** (AI01:SUpo08:PO).

9 Synthesis of Na-A Zeolite from Halloysite 10 Å: **Novembre D, Di Sabatino B, Piluso E & Baliva A** (AI01:SUpo09:PO).

10 Synthesis of Na-A and Na-X Zeolites from Tripolacoeus Deposits: **Novembre D, Di Sabatino B, Piluso E & Baliva A** (AI01:SUpo10:PO).

11 Replacement in Concrete of Cement for Slurry from the Processing of Aggregates from Basaltic Rocks: Assessment of Replacement Feasibility through Concrete Rupture Modulus Determination: **Silva J, Gomes C, Naudin JN & Bobos I** (AI01:SUpo11:PO).

12 Investigations of the Mineralogic/Chemical Reactions in Roadways of Salt Mines Based on Crushed Salt Rock and Water: **Engelhardt H & Bäuerle G** (AI01:SUpo12:PO).

13 The Interrelationship of the Mining-Induced Earthquake and Rock Burst Energies and the Consequences of these Events in the Mines: **Lovchikov A** (AI01:SUpo13:PO).

(Symposium AI01 Continued in Session MO am on Page 41)

Symposium AI02 Room PO

Studies in Underground Research Laboratories for Radioactive Waste Disposal and Predicting the Behaviour of Engineered and Natural Barriers for the Geological Isolation of Wastes

Convenors: David Savage, Scott Altmann, Ross McCartney, Lucy Philip & Vala Ragnarsdottir

1 Space-Time Features of Changes in the Condition of the Rock Massif: **Tatarinov V** (AI02:SUpo01:PO).

2 Geochemical Monitoring of the Unsaturated Zone at the Sur-Frêtes Tunnel: A Tool for the Understanding of the Seismic Cycle and the Hydrogeochemistry of Waste Disposal Sites: **Pili E, Martin-Garin A, Aupiais J, Trique M & Perrier F** (AI02:SUpo02:PO).

3 Diagenetic and Post-Diagenetic Exchanges between Minerals and Fluids in the Clayey/Silty/Carbonated Callovo-Oxfordian Rock from East of Paris Basin: **Lavastre V, Godon A & Javoy M** (AI02:SUpo03:PO).

4 Borehole Geophysical Logs in the Characterization of Petrophysical Properties, Fracture Patterns and Stress Indicators of Granites in an Old Mining Area: **Jurado Rodriguez MJ** (AI02:SUpo04:PO).

5 Characterization of Cs Sorption Mechanisms onto an Organic Soil: **Froideval A, Del Nero M, Gauthier-lafaye F, Pourcelot L & Stille P** (AI02:SUpo05:PO).

6 Characterization and Migration of Atmospheric REE in Soil Profiles: **Aubert D, Stille P, Gauthier Lafaye F, Pourcelot L, Probst A & Del Nero M** (AI02:SUpo06:PO).

7 The Orciatico Natural Analogue Site for the Study of the Thermal Response of Clay Barriers: **Lombardi S & Voltattorni N** (AI02:SUpo07:PO).

Symposium AI03 Room PO

Waste Solutions: Environmental Questions, Environmental Answers

Convenor: Jeremy Joseph & Katrin Wendt-Potthoff

1 Low-Rank Coals for Disposal of the Surfactant Waste Waters: **Burkut Y, Esenli V & Budakoglu M** (AI03:SUpo01:PO).

2 The Effect of Additive on the Long Term Stability of Boiler Ashes and Gas Cleaning Residues of Municipal Solid Waste Incinerator: **Heuss-Aßbichler S, Schmidl HW & Spiegel W** (AI03:SUpo02:PO).

3 Daily Dissolved Cadmium Fluxes in the Lot-Garonne Fluvial System (France): **Audry S, Blanc G, Lapaquellerie Y & Maillet N** (AI03:SUpo03:PO).

4 Metal Mobilization in the Fluid Mud of the Gironde Estuary (France) in Low Discharge Regime: **Robert S, Blanc G, Abril G & Lavaux G** (AI03:SUpo04:PO).

5 Observation of the Fluvial Input of Suspended Solids, Particulate Organic Carbon and Cadmium into the Gironde Estuary (1990-1999): **Schäfer J, Blanc G, Lapaquellerie Y, Maillet N, Maneux E & Etcheber H** (AI03:SUpo05:PO).

6 Influence of Natural and Anthropogenic Sources on Heavy Metal Distribution in Urban Soils- A Case Study from Palermo (Sicily), Southern Italy: **Salvagio Manta D, Angelone M, Bellanca A & Neri R** (AI03:SUpo06:PO).

7 Assessment of Stability of Rock Massif for Disposal of Radioactive Waste: **Tatarinov V & Tatarinov M** (AI03:SUpo07:PO).

(Symposium AI03 Continued in Session MO am on Page 41)

Symposium CC01 Room PO

Neogene Environments: Case Studies for Potential Future Greenhouse Climates

Convenor: Peter Smolka

1 Contribution of Carbonate Continental Geochemistry to the Climatic and Palaeoenvironmental Reconstitution of the Namib Desert: **Segalen L, Le Callonnec L, Pickford M, Renard M, Rognon P & Senut B** (CC01:SUpo01:PO).

2 The Influence of the Degree of the Continentality of the Climate on Climatic Characteristics of most Warm Late Pleistocene $^{16}O/^{18}O$ Substage 5 Year (Latitude Profile: Carpathians-Caucasus-Altai): **Levkovskaya G** (CC01:SUpo02:PO).

3 Miocene Lateritization in Western France Rb-Sr Geochronology and $\delta^{18}O$-δD Paleothermometry: **Innocent C, Wyns R & Girard J** (CC01:SUpo03:PO).

4 Late Neogene Eolian Deposition in Southern Tarim Basin and its Palaeoenvironmental Significance: **Zheng H, Powell C, An Z & Butcher K** (CC01:SUpo04:PO).

(Symposium CC01 Continued in Session MO pm on Page 47)

Symposium CC05 Room PO

Glacial-Interglacial Cycles – Records, Models, and Mechanisms

Convenor: Gideon Henderson

1 Changes in Mineralogy and Geochemistry in the South China Sea (ODP Site 1143) during the Last 150,000 Years: Relations between the East Asian Monsoon, Continental Weathering and Productivity: **Tamburini F, Adatte T, Föllmi KB & Steinmann P** (CC05:SUpo01:PO).

2 The Sea of Okhotsk-Stratigraphy and General Pattern of Sediment Deposition: **Biebow N, Tiedemann R, Nürnberg D, Gorbarenko S, Kaiser A & Ulla P** (CC05:SUpo02:PO).

3 Comparative Analysis of the Last Glacial Benthic Foraminiferal Communities in the Southeastern Sea of Okhotsk: Paleoceanographic Inferences: **Basov IA & Khusid TA** (CC05:SUpo03:PO).

4 Deep Water Mg/Ca Record of the Stadial-Interstadial Variability from Western Mediterranean Sea: **Cacho I, Shackleton N, Elderfield H & Grimalt J** (CC05:SUpo04:PO).

5 Near Coastal Palaeoceanographic Changes off the Western Iberian Margin during the Last 190 ka. A Comparison with Off Shore High-Resolution Records: **de Abreu L, Schönfeld J, Shackleton NJ & Hall MA** (CC05:SUpo05:PO).

6 Climatically Controlled Sedimentation on the Iberian Margin over the Past ~32cal ka: **Skinner L, McCave IN & Shackleton N** (CC05:SUpo06:PO).

7 Rainfall-Recharge Relationships in a Karstic Terrain in the Eastern Mediterranean Semi-Arid and Arid Regions during Glacial and Interglacial Transitions: **Vaks A, Ayalon A, Gilmour M, Kaufman A & Bar-Matthews M** (CC05:SUpo07:PO).

8 Adsorbed Cation Fluxes from the Rh(tm)ne and Oberaar Glaciers, Switzerland: **Hosein R, Arn K, Föllmi KB & Steinmann P** (CC05:SUpo08:PO).

9 Subglacial vs Secondary Weathering in two Glaciated Areas in the Swiss Alps: **Arn K, Hosein R, Adatte T, Föllmi KB & Steinmann P** (CC05:SUpo09:PO).

10 Geochemical Insights into the Last Glacial-Interglacial Transition: New Evidence of Abrupt Change from the Spey Valley, Northeast Scotland: **Firth JA, Collins PE & Reasoner MA** (CC05:SUpo10:PO).

11 Glacial-Interglacial Cycles in the North-East of Europe **Andreicheva L** (CC05:SUpo11:PO).

12 Glacial-Interglacial Cycles – Record from Clay Minerals in Lake Baïkal (Academician Ridge, Siberia): **Fagel N, Thorez J, Oberhaensli H, André L, Boski T & Likhoshway L** (CC05:SUpo12:PO).

13 No Linear Addition of Glacial-Interglacial pCO_2 Changes from Different Processes Affecting the Ocean Carbon Cycle: **Wolf-Gladrow D & Völker C** (CC05:SUpo13:PO).

14 The Role of Carbon Dioxide in the Ice Age Cycles: **Shackleton N** (CC05:SUpo14:PO).

15 Vostok Chronology: How to Concile the Orbital Tuning and the Glaciological Approaches: **Parrenin F, Waelbroeck C, Jouzel J & Ritz C** (CC05:SUpo15:PO).

16 Driving an Ice Sheet Model with AGCM Snapshots during the the Last Deglaciation: **Ritz C, Charbit S & Ramstein G** (CC05:SUpo16:PO).

17 Paleoceanography Versus Insolation Changes during Marine Isotopic Stages 7 and 6: **Cortijo E, Ternois Y, Sicre M & Labeyrie L** (CC05:SUpo17:PO).

18 The Marine Isotopic Stage 11 as Simulated by the LLN 2D NH Climate Model: **Loutre M & Raynaud D** (CC05:SUpo18:PO).

19 Hemispheric Roles of Climate Forcings during Glacial-Interglacial Transitions: **Pépin L, Loutre M, Raynaud D & Barnola J** (CC05:SUpo19:PO).

(Symposium CC05 Continued in Session MO am on Page 42)

Symposium CC12 Room PO

Quantitative Palaeoclimate and Environmental Reconstructions: Data – Model Comparisons

Convenors: Toni Rosell-Mele, Masa Kageyama & Joel Guiot

1 The Climate and Vegetation of Europe at 6000 BP: New Datasets and Quantitative Methods: **Cheddadi R, Guiot J, Gachet S & Brewer S** (CC12:SUpo01:PO).

2 The Last Glacial Maximum Climate over Europe: A PMIP Comparison between Models and Data: **Kageyama M, Peyron O, Pinot S, Tarasov P, Guiot J, Joussaume S, Ramstein G & PMIP Participants** (CC12:SUpo02:PO).

3 Impact of Precipitation Seasonality on Isotopic Signals in Ice Cores: An Analysis of Several Atmospheric General Circulation Model Simulations: **Krinner G, Genthon C & Werner M** (CC12:SUpo03:PO).

4 Bi-Plot Analysis for Compositional Data in Multidisciplinary Research. Case Study for the Late Pleistocene – Holocene of Tyrrhenian Sea: **Buccianti A** (CC12:SUpo04:PO).

5 Paleoceanographic Impact of Heinrich Events Based on Marine Sediments off Portugal: **Bard E, Sonzogni C & Rostek F** (CC12:SUpo05:PO).

6 The Past Climate Reconstruction from Pollen Data by Inversion of a Coupled Vegetation/Pollen Transport Model: **Cassignat C, Guiot C, Jolly d, Elenga h, Peyron o & Torre f** (CC12:SUpo06:PO).

7 Environmental Modelling and Quantitative Palaeoenvironmental Reconstructions of Holocene Sea-Level Data: **Horton B & Edwards R** (CC12:SUpo07:PO).

8 Comparison of the Glacial TEMPUS UK37'-SSTs with PMIP Modelling Results: **Rosell-Mele A, Bard E, Emeis KC, Grimalt J, Muller P, Schneider R & Grieger B** (CC12:SUpo08:PO).

9 Quantitative Reconstruction of Younger Dryas to Mid-Holocene Paleoclimates at Le Locle, Swiss Jura, using Pollen and Lake-Level Data: **Magny M & Guiot J** (CC12:SUpo09:PO).

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Symposium EVO5 Room PO

Rapid Changes in Mesozoic Palaeoceanography: Micropalaeontological, Sedimentological and Geochemical Proxies

Convenors: Joerg Mutterlose, Elisabetta Erba & Helmi Weissert

1 Recent Anoxic Kyllaren Laminae: A Modern Analogue to Jurassic (Toarcian) Black Shale Formation?: **Paetzel M, Moldeklev R, Ravnås HH, Stakland R, Willis AM, Øversveen J, Schrader H & Sinninghe Damste JS** (EVO5:SUpo01:PO).

2 Organic Matter Preservation and Palaeoenvironmental Implications for Lower Cretaceous Marine Sapropels from Norway and Barents Sea Shelf: **Langrock U & Stein R** (EVO5:SUpo02:PO).

3 Rapid Changes in Calpionellid and Calcareous Dinoflagellate Associations Recorded in Upper Jurassic – Lower Cretaceous Pelagic Environments (Western Carpathians, Slovakia): **Reháková D** (EVO5:SUpo03:PO).

4 Drowning of the Lower Cretaceous Carbonate Platform along the Northern Tethyan Margin; Evidence from the Rawil Area (Helvetic Alps, Central Switzerland): **Gainon F & Föllmi K** (EVO5:SUpo04:PO).

5 Lower Aptian OAE-1 Deposits in the Pieniny Klippen Belt, Western Carpathians, Slovakia: **Michalik J, Lintnerova O, Rehakova D, Halasova E, Gregorova D, Bak M & Skupien P** (EVO5:SUpo05:PO).

6 C-Isotope Geochemistry and Sedimentary Development of Shallow Water Environments of the Lusitanian and Algarve Basin (Portugal) during Times of Global Oceanic Perturbations: **Burla S, Heimhofer U, Weissert H, Hochuli P & Andersen N** (EVO5:SUpo06:PO).

7 A Terrestrial Record from the Mid-Cretaceous Algarve Basin: Carbon-Isotope Geochemistry and Palynofacies: **Heimhofer U, Burla S, Hochuli PA, Andersen N & Weissert H** (EVO5:SUpo07:PO).

8 Changes in the Marine Sulphur Budget during the Deposition of the "Livello Selli" (OASE 1a, Aptian): Evidence from the Sulphur Isotope Record: **Brunner B, Bernasconi S, Weissert H & D'Argenio B** (EVO5:SUpo08:PO).

9 High-Resolution Biostratigraphy and Isotope Stratigraphy in an Albian Pelagic Succession of Southern Italy: **Luciani V, Cobianchi M & Jenkyns HC** (EVO5:SUpo09:PO).

10 Cenomanian-Turonian Anoxic Event in South-Western Crimea (Lithological, Palaeontological and Palaeoenvironmental Aspects): **Kuzmicheva T** (EVO5:SUpo10:PO).

11 Sea-Level and Climate Fluctuations at the Cenomanian-Turonian Boundary of the Anglo-Paris Basin, Comparison with the European Tethyan Margin: **Pauline R, Thierry A & Gerta K** (EVO5:SUpo11:PO).

12 Contrasting Chemostratigraphic Models for two Latest Cenomanian Bonarelli Levels from Sicily, Italy: **Scopelliti G, Bellanca A, Neri R, Sprovieri M, Coccioni R & Baudin F** (EVO5:SUpo12:PO).

13 Multidisciplinary Study of the Cenomanian/Turonian Oceanic Anoxic Event 2: Preliminary Results from the Gubbio Core (Central Italy): **Erba E, Premoli-Silva I, Sinninghe Damste J, Jenkyns H, Farrimond P, Boettcher M, Brumsack H & Kuhnt W** (EVO5:SUpo13:PO).

14 Timing and Pattern of Biotic Changes across the Bonarelli Level of the Southern Alps (Italy): **Coccioni R, Luciani V & Cobianchi M** (EVO5:SUpo14:PO).

15 Development of Photic Zone Anoxia and Associated Black Shale Formation across the Cenomanian/Turonian Boundary: New Biomarker Evidence from the Tafraya Basin (Southern Morocco): **Kolonic S, Wagner T, Sinninghe-Damsté J, Kuhnt W, Wand U & Wehner H** (EVO5:SUpo15:PO).

16 Orbital Forcing of Tropical Atlantic Black Shale Formation: High Resolution Records of the Coniacian-Santonian OAE 3 (ODP Site 959, Ivory Coast/Ghana): **Wagner T, Hofmann P, Beckmann B, Pletsch T, Wand U & Wehner H** (EVO5:SUpo16:PO).

17 Calcareous Nannoflora Bio-Geochemistry as a Potential Tool for Reconstructing the Trophic and Thermic Structure of the Past Ocean: Application to the Maastrichtian/Danian Transition: **Minoletti F, Gardin S & Renard M** (EVO5:SUpo17:PO).

18 4D History of the Black Sea Methane Hydrates from the Last 18,000 Years: **Vassilev A & Dimitrov L** (EVO5:SUpo18:PO).

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Symposium EVO7 Room PO

Geological History of Sea-Water

Convenors: Heide Zimmermann & Tadeusz Peryt

1 Hauterivian-Barremian Sea Level Fluctuations in Central Part of Northern Caucasus-Scythian Platform Area: **Khryashchevskaya O & Baraboshkin E** (EVO7:SUpo01:PO).

2 Lithological Cycles- Sedimentological Proxy for Researching of Late Cretaceous Paleogeography: **Gabdullin R** (EVO7:SUpo02:PO).

3 Mn/Fe-Concretions Record the Last 4300 Years of Pb-Isotope Variations in Baltic Seawater: **Liebetrau V, Frei R, Eisenhauer A & Hansen BT** (EVO7:SUpo03:PO).

4 The Effects of Declining Ocean Salinity on Climate during the Phanerozoic: **Hay W, Wold C & Floegel S** (EVO7:SUpo04:PO).

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Symposium FMF1 Room PO

Diagenesis and Low-grade Metamorphism: In Memoriam of Martin Frey and Bernhard Kübler

Convenors: Susanne Th. Schmidt & Laurence Warr

1 Recognizing Illitization Processes in Very Low-Grade Rocks: **Brime C, Valin ML & Castro M** (FMF1:SUpo01:PO).

2 Thermal Evolution in the Townsville Hinterland of Northeastern Australia: **Brime C, Talent JA & Mawson R** (FMF1:SUpo02:PO).

3 Illite as a Maturation Indicator in Irish Upper Palaeozoic Rocks and its Pitfalls: **Connolly J & Hetfeld K** (FMF1:SUpo03:PO).

4 The Late Orogenic History of the Southeastern Cantabrian Mountains: Illite-Crystallinity and K-Ar Data: **Weh A, Krumm S, Clauer N & Keller M** (FMF1:SUpo04:PO).

5 Episodic Neocrystallization of Phases in the Smectite-I/S-Illite-Mica Sequence in Hydrothermally Altered Rhyolitic Hyaloclastite (Ponza, Italy): **Bauluz B, Peacor D & Ylagan R** (FMF1:SUpo05:PO).

6 Low Grade Metamorphism in the Montagne Noire (S-France): Conodont Alteration Index (CAI) in Palaeozoic Carbonates and Tectonic Implications: **Wiederer U, Königshof P & Franke W** (FMF1:SUpo06:PO).

7 Fabric Rearrangement in Mudstones Assessed using High Resolution X-Ray Texture Goniometry (HRXTG): Towards a Quantification of Non-Mechanical Compaction?: **Matenaar IF, Yang Y & Aplin AC** (FMF1:SUpo07:PO).

8 Hydrograndites from Low-grade Altered Granitoids: A Mineral Chemistry Study using Electron Microprobe and Raman Spectroscopy: **Freiberger R, Pironon J, Hecht L & Cuney M** (FMF1:SUpo08:PO).

9 Hydrothermal Pyrophyllite in Diagenetic Grade Mudstones and Shales from the Cinera-Matallana Coal Basin of Northern Spain: **Frings K & Warr LN** (FMF1:SUpo09:PO).

10 Composition of Pumpellyite and Chlorite from New Caledonia- How Important is Metamorphic Grade and Whole Rock Composition?: **Potel S, Frey M & Schmidt ST** (FMF1:SUpo10:PO).

11 Tectonic Structure of the S Flank of the Montagne Noire (S-France): **Doublier MP & Franke W** (FMF1:SUpo11:PO).

12 Exhumation of LP Gneisses in the Montagne Noire (S-France): Isotopic Constraints: **Klama KO, Dörr W & Franke W** (FMF1:SUpo12:PO).

13 Exhumation of LP Gneisses in the Montagne Noire (S-France): The Collapse has Collapsed: **Franke W** (FMF1:SUpo13:PO).

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Symposium FMF6 Room PO

Mechanisms of Fluid Flow in Metamorphic and Igneous Environments

Convenor: Marian Holness

1 Mass Balancing in Shear Zones Cutting Granitic Rocks: Quantitative Studies of Accessory Zircon vs Geochemical Calculation Methods: **Sturm R & Steyrer HP** (FMF6:SUpo01:PO).

2 Stress-Shear Metamorphic Differentiation as the Paradigm for Origin of the Kola Banded Iron Formation: **Yegorov D** (FMF6:SUpo02:PO).

3 Fluid Flow Pathways along the Glarus Overthrust Deduced from Stable and Sr-Isotope Patterns: **Badertscher NP, Burkhard M & Abart R** (FMF6:SUpo03:PO).

4 Isotopic Evidence for Large-Scale Fluid Flow during Collision in the External Crystalline Massifs and Penninic Nappes (Swiss Alpes): **Marquer D, Challandes N & Villa IM** (FMF6:SUpo04:PO).

5 Hydrothermal Alteration, Fluid Flow and Volume Change in Shear Zones: The Layered Mafic-Ultramafic Kettara Intrusion (Jebilet Massif, Variscan Belt, Morocco): **Essaifi A, Ballèvre M, Capdevila R, Fourcade S & Lagarde J** (FMF6:SUpo05:PO).

6 Age of Hydrothermal Alteration Leading to Garnetite and Kyanite Pseudo-Quartzite Formation in the Khizovaara Segment of the Late Archaean Keret Greenstone Belt, Russian Karelia: **Bibikova EV, Ihlen PM & Marker M** (FMF6:SUpo06:PO).

7 The Geology & Genesis of the 'Kandemwa' Emerald Deposit in Zimbabwe, Africa: **Schmid S** (FMF6:SUpo07:PO).

8 Geostatistical and Hydraulic Characterization of a Mineralized Stockwerk: Application to the Rosia Poieni Porphyry Copper (Apuseni Mts, Romania): **André A, Sausse J, Lespinasse M, Udubasa S, Milu V, Grancea L & Leroy J** (FMF6:SUpo08:PO).

9 Trace Element Mobility in Contact Metamorphic Rocks: Baddeleyite-Zirconolite-(Zircon) Veins in Olivine-Bearing Marbles from the Stubenberg Granite Contact Aureole (Styria, Austria): **Tropper P, Bernhard F & Konzett J** (FMF6:SUpo09:PO).

10 Occurrence and Origin of Cl-Rich Amphibole and Marialitic Scapolite in the Central High Atlas (Morocco): **Zayane R, Honnorez J, Essaifi A & Bouabdelli M** (FMF6:SUpo10:PO).

11 Mechanism of the Fluid Flow through the Feldspar- A CL-EMS Study: **Zachovalova K, Leichmann J & Broska I** (FMF6:SUpo11:PO).

12 High-Temperature Fluid Circulation as a Cause for the North Pyrenean Metamorphism?: **Boulvais P & de Parseval P** (FMF6:SUpo12:PO).

13 Fluid Regime and Metamorphism during Continental Collision: An Example from the Micaschist-Marble Complex, Eastern Alps, Austria: **Bojar A, Fritz H, Sharp ZD, Bojar H & Loizenbauer J** (FMF6:SUpo13:PO).

14 Hydration and Fluid-Induced Recrystallization of Alpine Type Peridotites (Almklovdalen, Western Norway): **Kostenko O, Jamtveit B & Austrheim H** (FMF6:SUpo14:PO).

15 Application of 3D Streamline Methodology to Model Geothermal Circulations in the Soultz Fractured Reservoir: **Voillemont J, Audigane P & Royer J** (FMF6:SUpo15:PO).

16 Deep Percolating Meteoric Waters in the Central Alps: **Mullis J, Vennemann T & O'Neil J** (FMF6:SUpo16:PO).

17 Disequilibrium Fluid Migration Pathways in a Contact Aureole: **Holness M & Watt G** (FMF6:SUpo17:PO).

18 3-D Finite Element Modelling of Free Surface Komatiite Lava Flows: **Rice A & van Wyk S** (FMF6:SUpo18:PO).

19 Heterogeneous Permeability Deduced from Microseismicity: Application to the Soultz Geothermal Reservoir: **Royer J, Voillemont J & Audigane P** (FMF6:SUpo19:PO).

20 Partial Melts: Self-Organised Critical Systems?: **Bons P, Elburg M, Soesoo A & van Milligen B** (FMF6:SUpo20:PO).

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Symposium LS01 Room PO

Earthquake Deformation and Related Surface Processes

Convenors: M. Meghraoui & G. Michel

1 Fluid-Driven Seismicity in a Stable Tectonic Context: The Remiremont-Epinal Fault Zone, Vosges, France: **Audin L & Avouac JP** (LS01:SUpo01:PO).

2 Palaeosecular Variation Recorded in a Recent Travertine Fissure Fill from Central Turkey: Implications to Rate of Growth and Earthquake Frequency: **Gürsoy H, Tatar O, Piper JD & Alyaroubi M** (LS01:SUpo02:PO).

3 Seismic-Induced Conjugated Deformation Bands in the Early Devonian Muth Formation (Spiti, NW Himalayas): **Draganits E & Grasemann B** (LS01:SUpo03:PO).

4 Drainage Development and Cumulative Offset on the Gowk Strike-Slip Fault, Kerman, Eastern Iran: **Walker RT & Jackson JA** (LS01:SUpo04:PO).

5 Fast Extrusion of the Tibet Plateau: A 3 cm/yr, 100 Kyr Slip-Rate on the Altyn Tagh Fault: **Meriaux AS, Ryerson FJ, Tapponnier P, Vanderwoerd J, Finkel R, Caffee M, Lasserre C, Xiwei X, Haibing L & Zhiqin X** (LS01:SUpo05:PO).

6 A 3-D Fault Interaction Model to Investigate the Topographical Process Associated with Active Tectonics: **Fitzenz D & Miller SA** (LS01:SUpo06:PO).

7 The Thickness of the Elastic-Brittle Layer of the Lithosphere and Experience of the Prediction of the Earthquakes in the Caspian Sea Region: **Levin L & Solodilov L** (LS01:SUpo07:PO).

8 Geomorphometry and Seismotectonics: Intraplate and Strike-Slip Zone Case Studies: **Font M, Amorese D, Lagarde J & Delcaillau B** (LS01:SUpo08:PO).

9 Post Messinian Movement along Nimes Fault: Implications for the Sismotectonic of Provence (France): **Schlupp A, Clauzon G & Avouac J** (LS01:SUpo09:PO).

10 Active Faults at the Boundary between Central and Southern Apennines (Isernia, Italy): **Di Bucci D, Naso G & Corrado S** (LS01:SUpo10:PO).

11 The Seismogenic Faults in the Umbria Region (Central Italy): An Integrated Geological and Geophysical Approach: **Ciaccio MG, Mirabella F, Amato A, Barchi M & Merlini S** (LS01:SUpo11:PO).

12 Semi-Permanent GPS Network for Active Faults Survey and for Seismic Hazard Assessment in France. Technical Aspects, Objectives and First Installation in Jura: **Baize S, Mathieu F, Calais E, Scotti O, Jouanne F, Cushing EM & Peyridieu G** (LS01:SUpo12:PO).

13 Horizontal Surface Displacements Induced by the Chi-Chi Earthquake, 1999 (Central Taiwan) Insight from SPOT Images Analyses: **Dominguez S, Michel R & Avouac J** (LS01:SUpo13:PO).

14 The Azambuja Fault (Portugal): An Example of Active Tectonics at a Seismic Intrapalte Region: **Cabral J, Ribeiro P, Pimentel N & Martins A** (LS01:SUpo14:PO).

15 The 1999 Chichi Earthquake, Taiwan: Balanced Cross-Sections Highlight the Role of Structural Inheritance: **Mouthereau F, Angelier J & Lee J** (LS01:SUpo15:PO).

16 Typology of the Earthquake Related Surface Traces of the 17 and 21 June 2000 Icelandic Earthquakes: **Bergerat F & Angelier J** (LS01:SUpo16:PO).

17 What is the Source of the 1909 Provence Earthquake? Historical and Morphotectonic Evidences: **Lacassin R, Tapponnier P, Meyer B & Armijo R** (LS01:SUpo17:PO).

18 The Seismogenic Structure of the 1857 Lucania Earthquake (Southern Apennines, Italy): **Tondi E, Cello G, Mattioni L & Micarelli L** (LS01:SUpo18:PO).

19 Surface Rupture for the Study of Earthquake Deformation: The October 1, 1995 (MW=6.2) Dinar Earthquake, SW Turkey: **Koral H** (LS01:SUpo19:PO).

20 The Quaternary Stratigraphy and Tectonic Analyses of the Izmit Bay Basin, the Easternmost Part of the Sea of Marmara Basin System (NW Anatolia, Kocaeli-Turkey): **Do_an B** (LS01:SUpo20:PO).

21 Active Faults and Earthquakes in the Eastern Marmara Sea: A High-Resolution Marine Geophysical and Geological Survey: **Polonia A, Cormier M, Cagatay N, Bonatti E, Seeber L, Emre O, Bortoluzzi G, Gasperini L & Gorur N** (LS01:SUpo21:PO).

22 17 August 1999 Kocaeli and 12 November 1999 Düzce Earthquakes in NW Anatolia (Turkey): **Ozden S, Kavak K, Tatar O, Mesci B, Koçbulut F, Tutkun S & Dogan B** (LS01:SUpo22:PO).

23 Results of Paleoseismic Studies after the 1999 Izmit Earthquake: Implications for Seismic Hazard to Istanbul: **Rockwell TK, G. Ucarkus EA, Barka A, D. Dier DR, Ferry M, Klinger Y, Langridge R, Meghaoroui M, Meltzner A & Seitz G** (LS01:SUpo23:PO).

24 Geomorphology, Paleoseismology and Effects of the M=7.4 August 17, 1999 Izmit Earthquake on Auxiliary Strands of the Yalova Fault: **Walls C, Sieh K, Klinger Y, Barka A, Akyuz S & Altunel E** (LS01:SUpo24:PO).

25 The Lower Tagus Fault, Portugal: Investigating Active Transpressional Deformation in a Major River Valley: **Bosi V, Vilanova S, Meghraoui M & Fonseca JFBD** (LS01:SUpo25:PO).

26 Ground-Penetrating Radar (GPR) in Paleoseismological Investigations- Examples from Active Fault Zones of the Betic Cordilleras: **Reicherter K, Reiss S & Reuther C** (LS01:SUpo26:PO).

27 Slump Deposits as a Paleoseismological Tool: Reconstructing Holocene Earthquake History of Central Switzerland: **Schnellmann M, Monecke K, Anselmetti F, Becker A & Giardini D** (LS01:SUpo27:PO).

28 Sedimentary Patterns in Lake Lungern, Central Switzerland: A Potential Archive of the Regional Holocene Earthquake History: **Monecke K, Schnellmann M, Anselmetti F, Becker A & Giardini D** (LS01:SUpo28:PO).

29 Updating of Neotectonic and Paleoseismological Catalogue in France and Adjacent Area. Application to Seismic Hazard Assessment: **Baize S, Cushing EM, Lemeille F, Hibsch C & Grellet B** (LS01:SUpo29:PO).

30 Petrology and Kinetics of a Pseudotachylyte from the High Tatras (Western Carpathians, Slovakia): **Petrik I** (LS01:SUpo30:PO).

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Symposium LS05 Room PO

The Dynamics of Basin Inversion: Observations and Numerical Modelling

Convenors: Soren B. Nielsen & Ulf Bayer

1 The Inverted Donbas Basin (Ukraine)- First Results from *DOBREflection* in 2000: **DOBREflection Working Group** (LS05:SUpo01:PO).

2 Dynamic Modelling of Faults in Geological Environments: **Hansen DL & Nielsen SB** (LS05:SUpo02:PO).

3 The Folded Antiatlas of Morocco- An Inverted Paleozoic Basin rather than a Foreland Fold-Thrust Belt?: **Helg U, Burkhard M & Caritg S** (LS05:SUpo03:PO).

4 Heterogeneous Tectonic Inversion of the Mid-Polish Basin Related to Crustal Architecture, Sedimentary Patterns and Structural Inheritance: **Lamarche J, Scheck M, Lewerenz B & Bayer U** (LS05:SUpo04:PO).

5 Structural Development of the Inverted Northeast German Basin: **Kossow D, Krawczyk C, McCann T, Negendank J & Strecker M** (LS05:SUpo05:PO).

6 Bangasil Anticlinorium and NW-SE Trends within the Hinge Zone Near Ogcheon-Up, South Korea: **Lee B & Lee H** (LS05:SUpo06:PO).

7 Models of Intra-Plate Compressional Structures of the Pechora Basin: **Malyshev N** (LS05:SUpo07:PO).

Symposium LS09 Room PO

The Subduction Factory

Convenors: Catherine Chauvel & Tim Elliot

1 No Significant Element Transfer from the Oceanic Plate to the Mantle Wedge during the Subduction Process, Even at Great Depth: *Evidence from the Tethysian Oceanic Lithosphere Involved in the Alpine Orogeny*: **Chalot-prat F & Ganne J** (LS09:SUpo01:PO).

2 Cretaceous Eclogite-Facies Metamorphism in the Eastern Alps: New Insights, Data and Correlations from an Interdisciplinary Study: **Exner U, Fusseis F, Grasemann B, Habler G, Linner M, Sölva H, Thiede R & Thöni M** (LS09:SUpo02:PO).

3 A Preliminary Study of Nitrogen in Phengites from HP-UHP Metapelites: Petrological Controls and IR-Calibration: **Busigny V, Cartigny P, Philippot P & Javoy M** (LS09:SUpo03:PO).

4 Subduction-Accretion History of the Central Asian Orogenic Belt; Constraints from Mongolia: **Badarch G, Kröner A, Windley B, Cunningham W, Buchan A, Tomurtogoo O & Salnikova E** (LS09:SUpo04:PO).

5 Precise U-Pb Ages from the Kohistan Complex (Northern Pakistan) Illustrate Rapid Formation of Arc-Type Crust: **Zeilinger G, Schaltegger U, Burg J, Chaudhry N, Dawood H & Hussain S** (LS09:SUpo05:PO).

6 The Tastil Batholith (NW Argentina): A Case of Polyorogenic, Suduction-Related Magmatism in the Andean Basement: **Hongn F, Tub'a JM, Aranguren A, Mon R & Dunning G** (LS09:SUpo06:PO).

7 Mud Volcanism as a Powerful Tool in Dewatering Accretionary Prisms: **Kopf A, Klaeschen D & Mascle J** (LS09:SUpo07:PO).

8 Physical Properties of Dehydrating Serpentinite: **Bruhn D, Schilling F, Spangenberg E, Seipold U, Raab S & Wunder B** (LS09:SUpo08:PO).

9 S, Cl and F in Olivine Melt Inclusions from Mafic Arc Rocks in Kamchtka: **Churikova T, Wörner G, Kronz A & Pletchov P** (LS09:SUpo09:PO).

10 Trace Element and Isotopic Trends as Indicators for Fluid-Versus Melt-Dominated Sediment-Wedge Transport in the East Sunda Arc (Indonesia): **Elburg M, van Bergen M, Hoogewerff J, Foden J & Zulkarnain I** (LS09:SUpo10:PO).

11 The Origin of Rhyolite in Oceanic Island Arc Crust: Evidence from the Izu-Bonin Volcanic Arc: **Tamura Y & Tatsumi Y** (LS09:SUpo11:PO).

12 Thrust Sheet and Decollement Zone in the Ancient Accretionary Complex; An Example from the Miocene Hota Group in the Boso Peninsula, Central Japan: **Chiba J & Ogawa Y** (LS09:SUpo12:PO).

13 Petrogenesis of East Scotia Ridge Lavas- South Sandwich Back-Arc, Southern Ocean: **Fretzdorff S, Livermore RA, Devey CW, Leat PT & Stoffers P** (LS09:SUpo13:PO).

14 Petrogenetic Evolution of Cayambe Volcanic Complex: Evidences for Slab Melts-Mantle Wedge Interaction: **Samaniego P, Martin H, Robin C & Monzier M** (LS09:SUpo14:PO).

15 The Role of Fluid Release in Subduction Dynamics: A Chemo-Thermo-Mechanical Model: **Ruepke L & Morgan JP** (LS09:SUpo15:PO).

16 Chlorine Isotopic Constraints on Expelled Fluids in Subduction Zones: Implications to Recycling?: **Godon A, Jendrzejewski N, Castrec-rouelle M, Dia A, Pineau F, Boulègue J & Javoy M** (LS09:SUpo16:PO).

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Symposium MS01 Room PO

Geochemistry, Structure, Defects and Dynamics of the Earth's Mantle and Core

Convenors: Chris Ballentine, John Brodholt, Mark Rehkämper & David Price

1 Constraints on the Evolution of the Hawaiian Plume from Trace Elements in Core Samples from the Hawaii Scientific Drilling Project: **Jochum KP, Hofmann AW & Stoll B** (MS01:SUpo01:PO).

2 Noble Gas Studies of Mauna Kea Olivine Phenocrysts from the HSDP Core: Implications for the Long-Term Behaviour of a Mantle Plume: **Althaus T, Niedermann S & Erzinger J** (MS01:SUpo02:PO).

3 Mantle Source Heterogeneity and Magma Mixing beneath the Society Islands (French Polynesia): The Case of Moorea Island: **Hemond C, Cardon L & Maury R** (MS01:SUpo03:PO).

4 Seamount Provinces and Oceanic Islands along the Passive Margin off West Africa- Are they Genetically Linked?: **Abratis M, Hansteen TH, Sachs PM & Schmincke H** (MS01:SUpo04:PO).

5 Tracing the Mantle Boundary at the Australian-Antarctic Discordance Off-Axis into 30 Ma Oceanic Crust: Results from ODP Leg 187: **Pedersen R, Christie D, Pyle D, Hanan B & Shipboard Scientific Party** (MS01:SUpo05:PO).

6 Geochemical and Mineralogical Significances of Ultrapotassic Rocks from Northern Vietnam: **Tran TA, Richter W & Koller F** (MS01:SUpo06:PO).

7 Eglazines Revisited: Mantle Chemistry and Conduit-Propagation Deformation: **Ross JV & Mercier JC** (MS01:SUpo07:PO).

8 Sulfide Minerals from the Upper-Mantle Section of Troodos Massif, Cyprus: **Batanova VG & Sobolev AV** (MS01:SUpo08:PO).

9 Mantle Source Heterogeneity of the Bayankhongor Ophiolite, Central Mongolia: **Buchan C, Brewer T & Pfänder J** (MS01:SUpo09:PO).

10 The Mantle Column beneath Assab (Afar, Ethiopia): A LAM-ICP-MS Study of Peridotite and Pyroxenite Xenoliths: **Zanetti A, Raffone N, Piccardo GB & Vannucci R** (MS01:SUpo10:PO).

11 Textural and Geochemical Discrimination between Magmatic and Metamorphic Mantle Components in Puy Beaunit Ultramafic Xenoliths (French Massif Central): **Demaiffe D, Femenias O & Mercier J** (MS01:SUpo11:PO).

12 Evidence for a Single Metasomatic Event in the Lithosphere beneath the French Massif Central: Mineralogical, Geochemical and Isotopic Constraints from Mantle Hydrous Xenoliths from the Deves Province: **Bouhedja M, Wagner C, Reisberg L & Deloule E** (MS01:SUpo12:PO).

13 The Back-Arc Mantle Lithosphere of the Andean Volcanic Front: A New Xenolith Occurrence from Cerro Cuadrado (Southern Patagonia, Argentina): **Laurora A, Rivalenti G, Mazzucchelli M, Vannucci R & Cingolani CA** (MS01:SUpo13:PO).

14 The Back-Arc Mantle Litosphere of the Andean Volcanic Front: Xenoliths from Tres Lagos and Cerro Desconecido (Patagonia, Argentina): **Ciuffi SIA, Zanetti A, Mazzucchelli M, Rivalenti G & Cingolani C** (MS01:SUpo14:PO).

15 Erosion of the Lithospheric Mantle beneath Pali Aike (South Patagonia, Argentina): **Vannucci R, Zanetti A, Kempton PD, Ciuffi S, Mazzucchelli M & Cingolani CC** (MS01:SUpo15:PO).

16 Thermal and Geochemical Evolution of Metasomatized Mantle above a Subduction Zone in the Bismarck Archipelago (Papua New Guinea): **Franz L, Kramer W, Becker K & Herzig P** (MS01:SUpo16:PO).

17 The Lesotho Peridotites Revisited: Clinopyroxene Geochemistry and P-T Reappraisal: **Coussaert N, Mercier J, André L & Demaiffe D** (MS01:SUpo17:PO).

18 Ferric-Ferrous Iron in Mantle Minerals from South African and Lesotho Xenoliths: Changing Oxygen Fugacity with Depth: **Woodland A** (MS01:SUpo18:PO).

19 P-T Conditions of Generation and Eruption of Precambrian Komatiitic and Picritic Magma, Eastern Fennoscandian Shield: **Smolkin V & Svetov S** (MS01:SUpo19:PO).

20 Chemical Equilibrium between Garnet and Clinopyroxene in Eclogitic Rocks from Kimberlites: **Jacob D & Jagoutz E** (MS01:SUpo20:PO).

21 The Regularities of the Temperature Conditions in Lithospheric Mantle beneath Continents: The Revision According to the OPX Thermobarometry: **Ashchepkov I & Vladykin N** (MS01:SUpo21:PO).

22 Two-Layer Convection of the Mantle. How is it Possible? When did it Change? What are its Geochemical and Plate Tectonic Implications?: **Osmaston MF** (MS01:SUpo22:PO).

23 Did Mantle Dynamics Cause the Drying up of the Mediterranean Sea in the Messinian?: **Duggen S, Hoernle K & van den Bogaard P** (MS01:SUpo23:PO).

24 Migrating Seismic Images of D": **Thomas C & Kendall J** (MS01:SUpo24:PO).

25 Elasticity of Minerals at High P and T: Implications for Mineralogy of Earth's Transition Zone: **Sinogeikin S & Bass J** (MS01:SUpo25:PO).

26 Thermodynamic Database for Mantle Minerals: **Jacobs MH, de Jong BH & Oonk HA** (MS01:SUpo26:PO).

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Symposium MS04 Room PO

Deciphering the Chemical Signal of Oceanic Basalts

Convenors: Kevin W. Burton & Pierre Schiano

1 Characterization of Primary Mantle Melts Preserved as Inclusions in Peridotite and Pyroxenite Minerals, Beni Bousera, Morocco: **Chambefort I & Schiano P** (MS04:SUpo01:PO).

2 Enriched Tholeiites Formation in the Region of The Bouvet Triple Junction: **Migdisova N, Sushevskaya N & Beliatsky B** (MS04:SUpo02:PO).

3 Remnants of Gondwana Continental Lithosphere in Oceanic Upper Mantle: Evidence from the South Atlantic Ridge: **Kamenetsky V, Maas R, Sushchevskaya N, Norman M, Cartwright I & Peyve A** (MS04:SUpo03:PO).

4 Constraints on the Geochemical Identity and Evolution of an Enriched Mantle Signature: Precise Pb Isotope Analyses from the Pitcairn Hotspot: **Eisele J, Hofmann AW, Devey CW & Stoffers P** (MS04:SUpo04:PO).

5 Geochemical Stratigraphy of Basalts from the Hawaii Scientific Drilling Project: Evidence for Fluctuating Magma Production Rates: **Rhodes J** (MS04:SUpo05:PO).

6 Geochemical Variations in Hawaiian Magmatism since 85 Ma: **Regelous M, Hofmann AW, Abouchami W & Galer SJG** (MS04:SUpo06:PO).

7 Comparison of Gaseous Species in Submarine and Subaerial Basalt: **Heide K & Burkhard DJ** (MS04:SUpo07:PO).

8 Development of a New Melt Extraction Technique to Separate Basalt from Peridotite in Partial Melting Experiments: **Laporte D, Toplis M & Seyler M** (MS04:SUpo08:PO).

9 Sulfur Anomaly in Mid Ocean Ridge Basalts from the Indian Ocean: **Bézos A & Humler E** (MS04:SUpo09:PO).

10 Equilibration Conditions of High-Ca Primitive Liquids: An Experimental Approach using Multiple Saturation: **Médard E, Schmidt MW & Schiano P** (MS04:SUpo10:PO).

Symposium MS10 Room PO

The Role of Mantle Carbon in the Global Carbon Cycle (A Session of the EuroCarb ESF Network)

Convenors: Adrian Jones, Frances Wall, Joerg Keller & Iain Gilmour

1 Some Geochemical Observations from the Carbonatites of the Proterozoic Tiksheozero Massif (North Karelia, Russia): **Belyatsky BV, Savva HV, Putintseva HV, Smith M & Wall F** (MS10:SUpo01:PO).

2 Evidence for Plume-Lithosphere Interaction from Nd-Sr Systematics of Carbonatites and Kimberlite-Hosted Peridotite Xenoliths, Southwestern Greenland: **Bizzarro M, Simonetti A, Stevenson R & Kurszlaukis S** (MS10:SUpo02:PO).

3 The Carbon Geochemistry of Terrestrial Impact Craters: **Gilmour I** (MS10:SUpo03:PO).

4 Phoscorites of the Vuoriyarvi, Turiy Mys and Seblyavr Alkaline Complexes (Kola Peninsula, Russia): A Review: **Karchevsky P & Bulakh A** (MS10:SUpo04:PO).

5 Experimentally Determined Trace Element Partitioning between Baddeleyite and Carbonatite Melts: **Klemme S** (MS10:SUpo05:PO).

6 Nomenclature of Phoscorites Exemplified by the Kovdor Massif, Kola Alkaline Province (Russia): **Krasnova N & Balaganskaya E** (MS10:SUpo06:PO).

7 Hydrocarbons in Nepheline-Syenite Complexes of the Kola Alkaline Province (Russia): Direct Samples or Crustal Derivative of Mantle Carbon?: **Nivin V, Ikorsky S & Pripachkin V** (MS10:SUpo07:PO).

8 Ultramafic Xenoliths and Xenocrysts at Mt. Vulture (Basilicata, Southern Italy): Petrological Evidence for Mantle Metasomatism and its Significance: **Rosatelli G, Stoppa F & Lloyd FE** (MS10:SUpo08:PO).

9 Carbonatites in the Ayopaya Alkaline Province, Eastern Cordillera, Bolivia: **Schultz F, Lehmann B, Tawackoli S, Rössling R, Lima E, Matos-Salinas R & Belyatsky B** (MS10:SUpo09:PO).

10 New Mechanism of Diamond Crystallization: **Shumilova T & Kudriavtsev Y** (MS10:SUpo10:PO).

11 Ba-Sr-REE Mineralisation in the Sallanlatvi Carbonatites, Kola Peninsula, Russia as a key to Understanding the Evolution of Late Stage Carbonatites: **Sitnikova M, Zaitsev A, Chakhmouradian A, Pakhomovsky Y & Wall F** (MS10:SUpo11:PO).

12 New Extrusive Carbonatite Occurrence in Central Italy: The Volcanic Field of Oricola- Camerata Nuova, Abruzzo, Central Italy: **Stoppa F, Barbieri M, Barbieri M, Castorina F, D'Orefice M, Graciotti R & Rozzi B** (MS10:SUpo12:PO).

13 Extrusive Carbonatite-Melilitite and Tuffisite at Ruri Volcano (West Kenya): The High Explosive Counterpart of Carbonatite- Mafic Alkaline Ring Complex: **Stoppa F, Rosatelli G & Wall F** (MS10:SUpo13:PO).

14 A New Kamafugite Occurrence from Abruzzi, Italy-The Kalsilite Melafoidite from Grotta Del Cervo: **Stoppa F, Woolley A & Cundari A** (MS10:SUpo14:PO).

15 Economic Deposits Associated with Carbonatites: Their Formation and Use in Understanding Mantle Carbon: **Wall F** (MS10:SUpo15:PO).

(Symposium MS10 Continued in Session MO pm on Page 50)

Symposium OS04 Room PO

Tectonics and Sedimentation

Convenors: Tom McCann & A. Saintot

1 New Geological Aspects of the Base of the Naukluft-Nappe-Complex, Central Namibia: **Meinhardt-Degen J, von der Heyde R, Schmid S, Schwenke J & Borg G** (OS04:SUpo01:PO).

2 The Tectonic and Sedimentation in the Eastern External Zone of Betic Cordilleras Influence of the Opening of the North Atlantic Ocean?: **Fernandez-Fernandez E, Jabaloy A & Gonzalez-Lodeiro F** (OS04:SUpo02:PO).

3 The Evolution of the Oriental Margin of the Moltrasio Limestone Basin from the Late Norian to the Early Lias: **Pasquini C & Vercesi P** (OS04:SUpo03:PO).

4 Denizli Episodic Graben: Its Evolution, Age, Slip and Seismicity: **Kocyigit A** (OS04:SUpo04:PO).

5 Dynamic Implications of Minor Cenozoic Faults at the Brage Horst, Northern Norwegian North Sea: **Clausen OR, Kristensen L & Korstgård JA** (OS04:SUpo05:PO).

6 Basement Structure in the Danish North Sea: **Scheck M, Thybo H, Abramovitz T & Lassen A** (OS04:SUpo06:PO).

7 Geometry and Development of Cenozoic Small Scale Faults in the Northern Danish Central Graben: **Jacobsen TE, Clausen OR, Korstgård JA & Larsen P** (OS04:SUpo07:PO).

8 Alluvial-Tectonic Relationships in a Foreland Setting: The Example of the Montagne Sainte Victoire (Provence): **Leleu S, Ghienne JF & Manatschal G** (OS04:SUpo08:PO).

9 Tectonic-Sedimentation Relationships within a Variscan Wedge-Top Depozone: Example of the Western Meseta (Massif Central, Morocco): **Ben Abbou M, Soula J, Brusset S, Martin R, Didier B, Joachim D, Ahmed N & Youssef D** (OS04:SUpo09:PO).

10 Origin of the Upper Cretaceous-Tertiary Sedimentary Basins within the Tauride-Anatolide Platform in Turkey: **Gürer F & Aldanmaz E** (OS04:SUpo10:PO).

11 Variscan Molasse and its Metamorphic Basement: Swiebodzice Basin, Polish Sudetes: **Kryza R & Kulczynski M** (OS04:SUpo11:PO).

12 The Role of Syntectonic Decollement Level in Front of Thrust System: **Nalpas T, Verges J, Le Roux G, Gapais D, Rouby D & Barrier L** (OS04:SUpo12:PO).

13 Simulating the Stratigraphic Architecture of the Lower to Middle Miocene Central Vienna Basin (Austria): **Schmid HP & Wagreich M** (OS04:SUpo13:PO).

14 Exhumation and Sedimentation- The Example of the Central Alps: II. Sandstone Composition: **von Eynatten H** (OS04:SUpo14:PO).

15 Provenance Analysis of Silurian to Carboniferous Siliciclastic Formations, Pisuerga-Carrion Nappe, Cantabrian Mountains, Spain: **Bahlburg H, Bäumer M, Kappel J & Teichert B** (OS04:SUpo15:PO).

16 U-Pb Detrital Zircons Ages and Nd-Isotope Systematics as Provenance Indicators in Lower Palaeozoic Sediments from the Avalonia/Baltica Borderland: **Gerdes A, Vecoli M, Giese U, Timmermann H, Horstwood M & Parrish RR** (OS04:SUpo16:PO).

17 Donbas Siltstone Sandstone as Indicators of Specific Tectonic Regime: **Vishnevskaya V, Fokin P, Sedaeva K, Bojko N, Khardikov A, Vertjukh A & McCann T** (OS04:SUpo17:PO).

18 Lithological and Mineralogical Aspects of Placer Accumulations Forming on the Northwestern Black Sea Shelf: **Fedoronchuk N** (OS04:SUpo18:PO).

19 The Deimlinger Mühle Outcrop: A Keylocality for the Oberrotliegend and Buntsandstein in the Trier-Bitburg Basin (Southwest Eifel, Germany): **Lichtenscheidt EA** (OS04:SUpo19:PO).

20 Chronology and Geodynamic Evolution of the Late Miocene Basins of the Eastern Betics (Spain): **Van Assen E, Krijgsman W, Garcés M & Sierro F** (OS04:SUpo20:PO).

21 Sequence Stratigraphy and Tectonic Control of the Baltic Silurian Foreland Basin: **Lazauskiene J, Sliaupa S, Musteikis P & Brazauskas A** (OS04:SUpo21:PO).

22 The Comparative Analysis of Linear and Exponential Change Density with Depth in Sedimentary Basins (An Example of the Black Sea Basin): **Legostaeva O, Makarenko I, Starostenko V & Stovba S** (OS04:SUpo22:PO).

23 Origin of Rapid Changes of Sea Depth in Sedimentary Basins: Eustasy or Tectonics: **Artyushkov EV & Chekhovich PA** (OS04:SUpo23:PO).

24 The Gert Ridge: Architecture of an Inversion Zone in the Northern Danish Central Graben, North Sea: **Ghysels K, Hansen JPV, Clausen OR, Korstgård JA & Larsen P** (OS04:SUpo24:PO).

25 Fold Growth Mechanism and Geometries of Associated Syntectonic Sediments. An Example from Altomira Range (Iberian Chain, Central Spain): **Gil-Pe-a I** (OS04:SUpo25:PO).

26 Disharmonic Folding of the Stylian Suite Versus its Lithology, the SW Donbas, Ukraine: **Kitchka A, Topolyuk V & INTAS Team** (OS04:SUpo26:PO).

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Symposium OS08 Room PO

Geochronology and Stable Isotopes

Convenor: Bob Cliff

1 Atmospheric Lead 210 Flux Variations for North-Eastern China during the Last 200 Years: **Schettler G, Mingram J, Negendank JFW & Jiaqi L** (OS08:SUpo01:PO).

2 Environmental Conditions Reflected on Shells *Mytilus gallo-provincialis* from Eastern Coastal Area of Adriatic Sea: **Kanduc T, Dolenec T, Davorin M & Sonja L** (OS08:SUpo02:PO).

3 Isotopic Carbon and Oxygen Composition of Siderites as Indicator of Conditions of their Phosphatization: **Vetoshkina O** (OS08:SUpo03:PO).

4 Recognising Heterogeneous Distribution of Platinum Group Elements (PGE) in Geological Materials by Means of the Re-Os Isotope System: **Meisel T, Moser J & Wegscheider W** (OS08:SUpo04:PO).

5 Combined Lu-Hf, Sm-Nd and REE Analytics to Demagnify the Effect of Heterogeneously Distributed Accessories: **Kleinhanns IC, Kreissig K, Naegler TF, Kamber BS, Meisel T & Kramers JD** (OS08:SUpo05:PO).

6 U-Pb Dating of Detrital Zircons for Sediment Provenance Studies- A Comparison of Laser Ablation ICPMS and SIMS Techniques: **Fonneland HC, Kosler J & Pedersen RB** (OS08:SUpo06:PO).

7 Dating of Serpentinization: Combined Fluid Inclusion Data and U-Pb Age of Zircon from Rodingite Blackwall (Sudetic Ophiolite, SW Poland): **Dubinska E, Doerr W, Kozlowski A, Bylina P, Schastok J, Zelazniewicz A & Kulicki C** (OS08:SUpo07:PO).

8 Early Palaeozoic Rifting, Devonian Crustal Thickening and Carboniferous Exhumation of the Variscan Orogenic Root System: Evidence from U-Pb Zircon Dating: **Wendt JI, Hegner E & Schulmann K** (OS08:SUpo08:PO).

9 Episodes of Palaeozoic Sedimentation Constrained by SHRIMP Dating of Single Zircons from Paragneisses of the Schwarzwald (Germany): **Hanel M, Kober B, Kalt A & Pidgeon RT** (OS08:SUpo09:PO).

10 Ion Probe Dating of Complex Zircons from the 0.85 Ga Old Allochthonous Vistas Granite, Swedish Caledonides: A Study Aimed at Reconstructing Ancient Continental Margins: **Paulsson O & Andreasson P** (OS08:SUpo10:PO).

11 U-Pb SHRIMP Geochronology of Eclogites and Orthogneisses from the Furgg Zone (Western Alps): **Liati A, Gebauer D & Froitzheim N** (OS08:SUpo11:PO).

12 $^{40}Ar/^{39}Ar$ Dating of White Mica from Eclogites of the Tauern Window (Eastern Alps, Austria) and the Problem of Excess Argon in Phengites: **Handler R, Kurz W & Bertoldi C** (OS08:SUpo12:PO).

13 Rb-Sr and K-Ar Dating of Fault Gouges from the Ulsan Fault Zone, Southeastern Korea: **Cheong C, Lee SH, Kim J, Im CB, Chang B, Jeong GY & Chang H** (OS08:SUpo13:PO).

14 Post-Hercynian Thermal History of the Easternmost Pyrenees: K-Ar Constraints and Some Methodological Consequences: **Solé J, Enrique P, Pi T & Delaloye M** (OS08:SUpo14:PO).

15 Petrological Evolution of the Cryptomelane Rich Deposit at Serra do Navio, Brazil: **Mouele F, Henocque O, Feraud G, Grandin G & Colin F** (OS08:SUpo15:PO).

16 Time Constraints for Cameroon Line Magmatism from Single Crystal Laser $^{40}Ar/^{39}Ar$ Dating of the Hossere Nigo Anorogenic Plutonic Complex: **Kraml M, Kamdem JB, Keller J & Henjes-Kunst F** (OS08:SUpo16:PO).

17 Permian Granite Magmatism in the Western Carpathians: New U-Pb Single Zircon Grain Results on S-Type Granites and Orthogneisses from the Velka Fatra Mountains: **Poller U, Kohút M, Todt W & Janák M** (OS08:SUpo17:PO).

18 Rb-Sr Age of Kimberlites of the Kola Peninsula: **Gavrilenko B, Gogol O & Delenitsyn A** (OS08:SUpo18:PO).

19 Albian Magmatism in the Karakorum Arc (Hunza Valley, Pakistan): New Bracketing Ages for the Karakorum-Kohistan Accretion: **Sergeev S, Burg J & Chaudhry N** (OS08:SUpo19:PO).

20 U-Pb Zircon SHRIMP Geochronology of Orogenic Cycles and Supercontinents in the Southern Brazilian Shield: **Hartmann LA** (OS08:SUpo20:PO).

21 First Isotopic Age Determination of Mid-Proterozoic Granulite Facies Metamorphism in the Epupa Complex, NW Namibia: **Seth B, Brandt SS & Kramers JD** (OS08:SUpo21:PO).

22 Geochronologiacl Evidence for Late Proterozoic Magmatic and Metamorphic Events in the Eastern Ghats Belt, India: Implications for the India-East Antarctica Correlation: **Kovach V, Raith MM, Salnikova EB, Simmat R, Rickers K, Berezhnaya NG, Yakovleva SZ & Kotov AB** (OS08:SUpo22:PO).

23 Age of the Marunkeu Metamorphic Complex in the Polar Urals: Neoproterozoic or Palaeozoic?: **Andreichev V** (OS08:SUpo23:PO).

24 Isotopic and Chemical Indications on the Origin of the Mixtequita and the Chiapas Batholiths in SE Mexico: Evidences for Inherited Grenville and Panafrican Basement?: **Weber B, Lopez R & Köhler H** (OS08:SUpo24:PO).

25 Crustal Evolution of IndoChinese Region: A Perspective from Northern Vietnam: **Lan C, Chung S, Lo C, Lee T, Wang P, Li H & Toan DV** (OS08:SUpo25:PO).

26 The Kontum Massif (Central Vietnam): A Composite Indosinian and Older Basement: **Maluski H, Lepvrier C, Leyreloup A, Vu Van T & Phan Truong T** (OS08:SUpo26:PO).

27 Thermal Evolution of a Late Archean Terrane: Sm/Nd, Rb/Sr, $^{40}Ar/^{39}Ar$ and U-Th/total Pb Geochronology of the Isorssua Complex (West Greenland): **Giorgis D, Cosca M, Mezger K, Masson H & Bussy F** (OS08:SUpo27:PO).

(Symposium OS08 Continued in Session MO am on Page 45)

Symposium OS09 Room PO

Geochemistry

Convenors: Rex Taylor & Valerie Chavagnac

1 Uranium and Strontium Isotopes in Surface and Ground Waters from the Upper Rhine Hydrosystem: **Durand S, Schmitt A, Chabaux F & Elsass P** (OS09:SUpo01:PO).

2 Quaternary Tholeiitic and Alkaline Volcanism in the Karasu Valley (Hatay, SE Turkey): Sr-Nd-Pb-O Isotopic Compositions and Trace Element Geochemistry: **Alici P, Gourgaud A, Temel A, Vidal P & Gundogdu MN** (OS09:SUpo02:PO).

3 Investigation of Microwave Acid Digestion Procedures for ICP-MS Silicate Rock Analysis: **Mareels J & Hertogen J** (OS09:SUpo03:PO).

4 High-Precision Trace Element and Isotopic Data for the New USGS Reference Materials BCR-2, BHVO-2, AGV-2, GSP-2, DTS-2: **Stoll B, Raczek I, Hofmann AW & Jochum KP** (OS09:SUpo04:PO).

5 Mineralogical Alteration Processes Determined by Sr- Pb-Isotopes and U/Th-Radionuclides along a Faulted Rhyolite-Granite Contact, Eastern Rhine Graben Shoulder, SW-Germany: **Marbach T, Schleicher A, Kober B, Mangini A & Warr L** (OS09:SUpo05:PO).

6 Weathering Processes at the Natural Nuclear Reactor of Bangombé (Gabon): **Salah S, Del Nero M & Gauthier-Lafaye F** (OS09:SUpo06:PO).

7 Geochemistry of Uranium-Bearing Minerals at Vale da Abrutiga Uranium Mine, Central Portugal: **Marques da Silva Cabral-Pinto M** (OS09:SUpo07:PO).

8 Sleza Ophiolite: Internal Geochemistry and Relationship to Meta-Basite Sequences in the Bohemian Massif: **Floyd P, Crowley Q, Kryza R, Winchester J & Wahed A** (OS09:SUpo08:PO).

9 The Lower Cretaceous Porphyritic Ocoite Formation of North Chile- Geotectonic Position, Petrological and Geochemical Characteristics: **Nova-Mu-Oz A, Cisternas ME, Hofmann P & Miller H** (OS09:SUpo09:PO).

10 Geochemistry of Serpentinites and their Minerals from Bragança, Northeastern Portugal: **Teixeira R, Neiva A & Gomes E** (OS09:SUpo10:PO).

11 The Quirino Complex: A Transamazonian Magmatic Arc of the Central Segment of the Brasiliano/Pan-African Ribeira Belt, SE Brazil: **Valladares C, Ragatky D & Souza S** (OS09:SUpo11:PO).

12 New Evidences for Ocean Island Accretion in Western Panamá: **Lissinna B, Hoernle K, van den Bogaard P & Werner R** (OS09:SUpo12:PO).

13 Ultramafic and Mafic Magmatic Rocks within the South Iberian Shear Zone (SISZ), Southern Spain: Products of Mantle Magmatism and Crustal Contamination: **Hoymann K & Kramm U** (OS09:SUpo13:PO).

14 Pb Isotopic Composition of Feldspars in Granitoids of the Eastern Variscan Orogenic Belt and its Implication for Terrane Correlation: **Kurth M, Reischmann T, Oncken O & Franke W** (OS09:SUpo14:PO).

15 Geochemical Signature of Variscan Granitoids from the Western Sector of the Ossa-Morena Zone (Portugal): **Santos JF, Azevedo M, Acciaioli MH, Andrade A, Cordani U, Sato K & Serrano Pinto M** (OS09:SUpo15:PO).

16 Geochemistry of Tin-Bearing Granites and their Minerals from Ervedosa, Northern Portugal: **Gomes E & Neiva A** (OS09:SUpo16:PO).

17 Geologic-Geochemical Features of Metamorphic Rocks in the Kola Superdeep Borehole Drill-Site Area in the Context of Searching for Deep Homologues: **Nikolai K, Yeugeni M, Natalya K & Andrei I** (OS09:SUpo17:PO).

18 Barium Anomalies in the Berisal Complex, Simplon Area, Switzerland: **Hetherington CJ, Gieré R & Graeser S** (OS09:SUpo18:PO).

19 Distribution of PGE, Au, Ag in Intrusive Complexes of NE Fennoscandia: **Gavrilenko B & Skiba V** (OS09:SUpo19:PO).

20 Hydrofacies and Metal Contents in Carbonate Groundwater from Southern Apennines, Italy: **Pirretti F, Facciolongo M, Dinelli E, Mongelli G & Paternoster M** (OS09:SUpo20:PO).

21 Geochemistry of the Early Devonian Rift-Related Dykes in the Izera-Karkonosze Block, West Sudetes: **Nowak I** (OS09:SUpo21:PO).

22 Geochemistry and Geothermometry of Thermal Waters in Sedimentary Environment: The Bagnères-de-Bigorre Case (Pyrénées, France): **Levet S, Toutain J, Munoz M, Berger G, Negrel P, Jendrzjewski N, Agrinier P & Sortino F** (OS09:SUpo22:PO).

23 Geochemical and Isotopic (Sm-Nd, U-Pb) Study on the Diagorou-Darbani Birimian Crust (Liptako, Niger, West Africa): Oceanic Plateau Versus Arc Magmatism: **Soumaila A, Henry P, Rossy M & Affaton P** (OS09:SUpo23:PO).

24 Weathering Durability of Slovenian Limestones Used as a Building Stone: **Jarc S & Mirtic B** (OS09:SUpo24:PO).

25 Links between Zircon Luminescence, Age and Composition- A Combined CL and Ion Microprobe Study: **Poller U, Huth J, Hoppe P & Williams IS** (OS09:SUpo25:PO).

26 Phase Analysis of the Silica-Undersaturated Part of Normative Kalsilite-Forsterite-Larnite Quarz-H_20 Tetrahedron at a Pressure 2 kb: **Krigman LD, Veksler IV, Ishbulatov RA & Nielson TD** (OS09:SUpo26:PO).

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Symposium PCM1 Room PO

Environmental Mineralogy and Geochemistry – The 'Molecular Environmental Science' Perspective

Convenors: David Vaughan, S. Clarke, G. Calas & J.V. Smith

1 Experimental Study and Modelling Approach of Weathering Processes of Basaltic Rocks: **Hoareau J & Nicolini E** (PCM1:SUpo01:PO).

2 Development of the Application of Magnetic Micro-Sorbents for the Elimination of Hazardous Inorganic Contaminants from Natural Waters: **Naguib N, Weidler PG & Nueesch R** (PCM1:SUpo02:PO).

3 Production and Characterization of Microporous Aggregates Made from Nano-Particles and the Attachment of Magnetic Minerals: **Vogt C, Weidler PG & Nueesch R** (PCM1:SUpo03:PO).

4 Characterization of Kaolinite Polymorph Mixtures in Lateritic Weathering Profiles using *In Situ* Infrared Microspectroscopy on Polished Thin Sections: **Beauvais A & Bertaux J** (PCM1:SUpo04:PO).

5 Structure and Crystallisation Behaviour of (Sr,Ba)$HaSO_4 \cdot H_2O$ Solid Solutions: **Jimenez A, Salvado MA, Prieto M & Garcia-Granda S** (PCM1:SUpo05:PO).

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Symposium PCM4 Room PO

Quantitative Modelling of Diagenetic, Metamorphic, Deformational and Igneous Microstructures

Convenors: Paul Bons, Lukas Baumgartner & John Wheeler

1 Automated Fabric Analyser System for Quartz and Ice: **Wilson CJ & Russell-Head DS** (PCM4:SUpo01:PO).

2 Transport Property Predictions of Reservoir Rock by Quantitative Image Analysis: From the Pore-Scale Properties to Plug-Scale Properties: **Cerepi A, Burlot R, Fallot L, Humbert L & Loisy C** (PCM4:SUpo02:PO).

3 Displacement Textures (Cleavage Domes) and Sector-Zoning as Hydrostatic Stress Indicators in Contact and Regional Metamorphic Terranes: **Rice AHN** (PCM4:SUpo03:PO).

4 A Front-Tracking Program to Model Fibrous Microstructures in Strain Fringes: **Koehn D, Bons P & Passchier C** (PCM4:SUpo04:PO).

5 Interaction between Lava Flows: Crystallization Induced by Cooling and Re-Heating of Pahoehoe from Kilauea, Hawaii: **Burkhard DJ** (PCM4:SUpo05:PO).

6 The Metamorphism in the Eastern Part of Montagne Noire (Massif Central, France): P-T-t Path. Geothermobarometry: **Régnier J & Leyreloup AF** (PCM4:SUpo06:PO).

(Symposium PCM4 Continued in Session MO pm on Page 52)

Symposium PCM7 Room PO

Frontiers in Stable Isotope Geochemistry: Beyond the Light Elements

Convenors: Ariel Anbar & Francis Albarede

1 Hafnium Isotope Analysis on MC-ICP-MS (IsoProbe): **Chu N, Nesbitt RW, Boella RM, Taylor RN & German CR** (PCM7:SUpo01:PO).

2 Accuracy of Isotope Ratio Measurements using ICP Multi-Collector Mass Spectrometry (ICP-MC-MS), Getting to the Truth!: **Palacz Z, Meffan-Main S & Turner P** (PCM7:SUpo02:PO).

3 213nm Laser Ablation ICP-MS- Revolution or Gimmick?: **Shaw P & Jeffries T** (PCM7:SUpo03:PO).

Symposium RCM4 Room PO

Continental Slope Stability (COSTA) of Ocean Margins - Achievements and Challenges

Convenors: Juergen Mienert, Jacques Locat, Pierre Cochonat & Phil Weaver

1 Sediment and Rheological Character of Submarine Slides, Bear Island Fan: **Bowles FA, Faas RW, Vogt PR, Sawyer WB, Sundvor E & Crane K** (RCM4:SUpo01:PO).

2 Seafloor Classification of the Storegga Slide, Norwegian Sea, using Video and Photographs Acquired on US Navy Submarine NR-1: **Parsons B, Vogt P, Haflidason H & Jung W** (RCM4:SUpo02:PO).

3 US Navy Submarine NR-1 Dives in the Upper Storegga Slide Area, Norwegian Margin: **Jung W, Vogt P, Haflidason H & Parsons B** (RCM4:SUpo03:PO).

4 3D Seismic Data Indicate Long-Term Instability Offshore Norway: **Bünz S, Mienert J, Andreassen K & Kuilman LW** (RCM4:SUpo04:PO).

5 Giant Erosional Scours in Deep-Water Channel-Lobe Transition Zones: **Wynn R, Masson D, Weaver P, Kenyon N & Stow D** (RCM4:SUpo05:PO).

6 Transport Dynamics and Sediment Dispersal in the BIG-95 Debris Flow from Backscatter Imagery, Ebro Continental Margin, NW Mediterranean Sea: **Lastras G, Canals M, Vergara JC & Hughes Clarke JE** (RCM4:SUpo06:PO).

7 Slope Failures on the Flanks of the Western Canary Islands: **Masson D, Watts T, Gee M, Urgeles R, Neil M, Le Bas T & Canals M** (RCM4:SUpo07:PO).

8 Slope Failure Caused by Seamount Subduction on the Continental Margin of Costa Rica- Evidence from High-Resolution Sidescan Sonar Data: **Hühnerbach V, Masson DG, Bohrmann G & Weinrebe W** (RCM4:SUpo08:PO).

9 The COSTA Submarine Landslide Database: **Hühnerbach V & Masson DG** (RCM4:SUpo09:PO).

10 The Geotechnical Characterisation of Mass Movements as a Component of Submarine Landslides Risk Assessment: An Application to the New Jersey Margin: **Locat J, Desgagnés P, Leroueil S, Lee H & Héroux M** (RCM4:SUpo10:PO).

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Symposium RCM5 Room PO

Sediment Supply, Transport and Deposition: The Link from Land to Ocean Margin

Convenor: Maria Mutti

1 Controls on Depositional Facies and Sequence Architecture of Cretaceous Sediments of Southern Jordan: **Baaske U & Krawinkel H** (RCM5:SUpo01:PO).

2 Present day Sedimentation Processes in the Nazaré Canyon, Western Iberian Margin: **de Stigter H, Weber O, Schmidt S, Jouanneau J & van Weering T** (RCM5:SUpo02:PO).

3 Particle Dynamics over the North-Western Iberian Margin on Seasonal Time scale: **Schmidt S** (RCM5:SUpo03:PO).

4 An Upper Burdigalian (Karpatian) Short Warm Spell in the Paratethys Area, Austria: **Hofmann C & Zetter R** (RCM5:SUpo04:PO).

5 A High-Resolution Stratigraphical Framework of Neogene Marine Deposits from the Southern North Sea: A Link between Oceanic and Continental Environments: **Kuhlmann G, Langereis C, van Leeuwen R, Munstermann D, Verreussel R & Wong T** (RCM5:SUpo05:PO).

6 A Continental Margin with a Condensed Succession: The Lower Cretaceous Glaucony-Rich Deposits of the Nice Area: **Pasquini C, Lualdi A, PierLuigi V & Federica B** (RCM5:SUpo06:PO).

7 Architecture of a Channel-Levee Complex of the Middle Bengal Fan- Results from a Very High Resolution Seismic Survey: **Schwenk T, Spiess V, Hübscher C & Breitzke M** (RCM5:SUpo07:PO).

8 Changes in the Seine Estuarine Sediments (France): Consequences of Estuary Management: **Walter-Simonnet A, Lesourd S, Lesueur P, Poupinet N & Brun-Cottan J** (RCM5:SUpo08:PO).

9 Indications for the Development of the Cenozoic Sedimentation Enviroment in the Southern Cape Basin: **Weigelt E, Uenzelmann-Neben G & Spiess V** (RCM5:SUpo09:PO).

Symposium RCM6 Room PO

Carbonate Mounds, Fluids and Margin Architecture

Convenors: George Wolff, C. Dullo, J.-P. Henriet & T. van Weering

1 Giant Carbonate Mounds and Current Swept Seafloors on the Slopes of the Southern Rockall Trough: **Akhmetzhanov AM, Kenyon NH, Ivanov M, Wheeler A, Shashkin PV & van Weering TC** (RCM6:SUpo01:PO).

2 Planktonic O Record and Sedimentological Characteristics near the Belgica Carbonate Mounds (Porcupine Seabight, SW off Ireland): **Blamart D, Van Rooij D, Labeyrie L, Kozachenko M, Wheeler A & Henriet J** (RCM6:SUpo02:PO).

3 Sediment Distribution on a Carbonate Mound in the Porcupine Seabight: **Dorschel B, Rueggeberg A, Hebbeln D, Freiwald A & Dullo C** (RCM6:SUpo03:PO).

4 Coral Habitat Mapping and Groundtruthing on the Sula Ridge, Norwegian Shelf: **Hühnerbach V & Freiwald A** (RCM6:SUpo04:PO).

5 3D Spatial and Morphological Analysis of a Buried Mound Province: **Huvenne V & Henriet J** (RCM6:SUpo05:PO).

6 X-Ray Computer Tomographic Analysis of Sediment Cores from the Propeller Mound (Porcupine Seabight): **Rüggeberg A, Dorschel B, Hebbeln D, Dullo C & Freiwald A** (RCM6:SUpo06:PO).

7 High Resolution Side-Scan Sonar Mapping of Deep-Water Coral Mounds: Surface Morphology and Processes Affecting Growth: **Wheeler AJ, Bett BJ, Billet DS & Masson DG** (RCM6:SUpo07:PO).

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Symposium SS01 Room PO

Correlation and Synchronisation of High Resolution Terrestrial Sediment Profiles (An ELDP-Initiated Symposium)

Convenors: Achim Brauer & Jörg F.W. Negendank

1 The High Resolution Multi-Proxy-Parameter Network and Synthetic Timescale in KIHZ (Natural Climate Variations in the Holocene): **Schwab MJ, Negendank JFW & KIHZ consortium** (SS01:SUpo01:PO).

2 Rapid Climate Oscillations during the Early Holocene Recorded in the Varved Sediments of Lake Holzmaar (Germany): **Brathauer U, Negendank JFW & Zolitschka B** (SS01:SUpo02:PO).

3 Late Quaternary Diatom Stratigraphy and Palaeolimnology of Lake Holzmaar, Germany: **Baier J, Lücke A, Negendank JFW & Zolitschka B** (SS01:SUpo03:PO).

4 200 Years Lake History Recorded in the Laminated Sediments of Lake Woserin, Mecklenburg-Vorpommern, Germany: **Brüchmann C, Dreibrodt S & Negendank JF** (SS01:SUpo04:PO).

5 Potential for Studies of Laminated Lake Sediments in Russia: **Kremenetski K** (SS01:SUpo05:PO).

6 Millennial-Scale Events during the Past 130 Ka in Lake Baikal Record Indicate the Long-Range Climatic Teleconnections of Continental Interior Asia: **Prokopenko A, Karabanov E, Williams D, Khursevich G & Kuzmin M** (SS01:SUpo06:PO).

Symposium VPP1 Room PO

Thermodynamic, Structural and Physical Properties of Melts and Element Fractionation in Fluid-Magmatic Systems

Convenors: Matthias Gottschalk, Igor D. Ryabchikov & Hans Keppler

1 Volcanites of the Ichetju Diamind Area (Middle Timan, Russia): **Stephanskaya L** (VPP1:SUpo01:PO).

2 Pre-Eruptive Storage Conditions of the Highly Differentiated Phonolitic Laacher See Magma (East Eifel, Germany): **Harms E, Gardner JE & Schmincke H** (VPP1:SUpo02:PO).

3 Diffusion of Cations in Hydrous Melts of Rhyolitic to Andesitic Compositions: **Tegge-Schuering A, Behrens H, Koepke J & Zhang Y** (VPP1:SUpo03:PO).

4 Diffusion of CO_2 in Silicate Melts: The Influence of Bulk Composition: **Sierralta M, Nowak M & Keppler H** (VPP1:SUpo04:PO).

5 Raman and Microthermometric Studies of Fluid and Melt Inclusions in Magmatic Xenoliths from the Sabatini Volcanic District (Roman Comagmatic Province, Italy): Evidence for Sulphate-Rich Melts: **Frezzotti M, Tecce F & Cavarretta G** (VPP1:SUpo05:PO).

6 In-Situ XAS Study of the Effect of Water on Local Structure Around Nickel in Silicate Melts: **Munoz M, Farges F & Malavergne V** (VPP1:SUpo06:PO).

7 H_2O and CO_2 Solubilities in Rhyolitic to Basaltic Melts- An IR Spectroscopic Study: **Ohlhorst S, Behrens H & Holtz F** (VPP1:SUpo07:PO).

8 Partial Melting of Mafics Rocks from Electrical Impedance Spectroscopy Measurements: **Maumus J, Bagdassarov N & Schmeling H** (VPP1:SUpo08:PO).

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Symposium VPP6 Room PO

Volcanic Hazards: Monitoring, Prediction and Mitigation

Convenor: Hazel Rymer & Glyn Williams-Jones

1 Volcanic CO_2 Fluxes from the Lofos Dome Area, Nisyros (Greece): **Cardellini C, Chiodini G, Frondini F, Granieri D, Peruzzi L & Ponziani F** (VPP6:SUpo01:PO).

2 A New Index for Evaluating the Gas Injection into the Stratosphere Caused by Explosive Volcanic Eruptions: VGIS (Volcanic Gas Input into the Stratosphere): **Halmer MM & Schmincke H** (VPP6:SUpo02:PO).

3 Geochemical Surveillance of Fluid and Gas Discharges at Yasur Volcanic Complex, Tanna Island, Vanuatu: **Gauthier P, Goff F, Love S & Counce D** (VPP6:SUpo03:PO).

4 Ground Deformation Monitoring of Volcanic Areas in Sicily (Italy): **Amore M, Gambino S, Mattia M, Velardita R & Villari L** (VPP6:SUpo04:PO).

5 Numerical Modelling of Ground Deformation Revealed at Mount Etna by ERS: **Ranvier F, Cayol V & Froger J** (VPP6:SUpo05:PO).

6 Perspectives for the Use of Multi-View, Multi-position Digital Photographic 3-D Morphology Reconstruction in Volcano Monitoring: **Cecchi E, Lavest J & van Wyk de Vries B** (VPP6:SUpo06:PO).

7 Determination of Volcanic Risk Areas in Mt Etna (Sicily) using a Statistical Method Based on Cellular Automata Simulations: **Crisci GM, Rongo R, Di Gregorio S & Spataro W** (VPP6:SUpo07:PO).

8 Geochemical Characterisation of the Fluid Phases at Kilauea Volcano, East Rift Zone (Big Island, Hawaii, USA): **Garofalo K, Vaselli O, Tassi F, Montegrossi G, Buccianti A & Minissale A** (VPP6:SUpo08:PO).

9 Chlorine in Volcanic Systems: **Jendrzejewski N, Toutain J, Sortino F, Hammouya G, Godon A, Komorowski J & Javoy M** (VPP6:SUpo09:PO).

10 Temporal Variations in Magma Composition at Merapi Volcano, Central Java: Magmatic Cycles during the Last 2,000 Years of Explosive Activity: **Gertisser R & Keller J** (VPP6:SUpo10:PO).

11 15 Days of Continuous Observation of Stromboli Volcano (Italy) in Late September 2000: Magma Replenishment and Weather Dependence of Eruptive Style: **Urbanski N, Vöge M, Seyfried R, Rüpke L, Petersen T, Hanebuth T & Hort M** (VPP6:SUpo11:PO).

12 Effects of the 79 AD Vesuvius Plinian Eruption in the Buried Sites of Herculaneum, Oplontis and Stabiae from an Integrated Volcanological, Anthropological and Archaeological Study: **Mastrolorenzo G, Petrone PP, Incoronato A, Pagano M & Fergola L** (VPP6:SUpo12:PO).

13 A Newly Discovered Debris Avalanche Deposit: Rivière des Pluies Breccia, Northern Reunion Island: **Fèvre Y, Bret L, Robineau B & Join J** (VPP6:SUpo13:PO).

14 Formation of Levées in Pyroclastic Flow Deposits: **Felix G & Thomas N** (VPP6:SUpo14:PO).

15 The Possible Method of Migitation of Plinian Volcanic Eruption Hazards: **Kutolin VA & Shirokikh VA** (VPP6:SUpo15:PO).

16 The Evaluation of Volcanic Risk of Campi Flegrei (Italy): **Alberico I, Petrosino P, Scandone R & Lirer L** (VPP6:SUpo16:PO).

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