

EGU General Assembly 2011
Programme Group Programme
EMRP – Earth Magnetism & Rock Physics

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Monday, 04 April

TS2.2/EMRP13 – Long and short term fault zone weakening processes (co-organized) – Orals

Convener: Nicola De Paola | Co-Conveners: Cristiano Collettini, Tom Mitchell, Giulio Di Toro

Room: 28

Chairperson: Nicola De Paola, Thomas Mitchell

15:30–15:45 EGU2011-9901

John Suppe and En-Chao Yeh

Limits to large-scale fault strength: going directly from geometry to strength using wedge mechanics

15:45–16:00 EGU2011-4125

Giulio Di Toro, Raehee Han, Takehiro Hirose, Nicola De Paola, Stefan Nielsen, Kazuo Mizoguchi, Fabio Ferri, Massimo Cocco, and Toshihiko Shimamoto

Fault lubrication during earthquakes

16:00–16:15 EGU2011-2797

Yehuda Ben-Zion and Ilya Zaliapin

Observational tests of dynamic bimaterial effects on natural faults with along-strike symmetry properties of aftershocks

16:15–16:30 EGU2011-12122

John D. Platt, James R. Rice, and John W. Rudnicki

Strain localization within a fluid saturated fault gouge layer during seismic shear

16:30–16:45 EGU2011-5906

Philip Meredith, Michael Heap, Patrick Baud, Sergio Vinciguerra, Andrew Bell, and Ian Main

Brittle creep in rocks: from laboratory to crustal time scales.

16:45–17:00 EGU2011-12634

Jean-Philippe Avouac, Sylvain Barbot, Nadaya Cubas, and Nadia Lapusta

Spatial variations of fault friction: observations and implication for fault dynamics

TS2.2/EMRP13 – Long and short term fault zone weakening processes (co-organized) – Posters

Convener: Nicola De Paola | Co-Conveners: Cristiano Collettini, Tom Mitchell, Giulio Di Toro

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Giulio Di Toro, Cristiano Collettini

XL300 EGU2011-711

Amy Clare Ellis, Ernest Rutter, Katharine Brodie, and Julian Mecklenburgh

Influence of Hydrothermally Generated Talc Upon Fault Behaviour

XL301 EGU2011-7128

Nicolas Brantut, **Jean Sulem**, and Alexandre Schubnel

Effect of dehydration reactions on the stability of creeping faults

XL302 EGU2011-7402

Cecilia Viti and Cristiano Collettini

Fault rocks evolution and deformation processes along carbonate-bearing thrust faults

XL303 EGU2011-7676

Giovanni Chiodini, **Carlo Cardellini**, Stefano Caliro, Francesco Frondini, Salvatore Inguaggiato, and Fausto Matteucci

Geochemical evidences for and characterization of CO₂ rich gas sources in the epicentral area of the Abruzzo 2009 earthquakes.

XL304 EGU2011-8261

Nicola De Paola, Giovanni Chiodini, Takehiro Hirose, Carlo Cardellini, Stefano Caliro, and Toshihiko Shimamoto

The geochemical signature of carbonate-hosted seismogenic faults

XL305 EGU2011-8335

Nicola De Paola and Jeroen van Hunen

The Fluid Flow Evolution During the Seismic Cycle Within Overpressured Fault Zones

XL306 EGU2011-9049

W. Ashley Griffith, **Tom M. Mitchell**, and Giulio Di Toro

In situ coseismic stiffness of fault rocks calculated using pseudotachylite injection veins

XL307 EGU2011-9996

Brice Lacroix, Henri Leclère, François Souquière, Martine Bautier, and Pierre Labaume

Weakening processes in thrust faults: example of the Monte Perdido thrust fault (South Pyrenean orogenic prism, Spain).

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| XL308 | EGU2011-10483 Steven Smith , Andrea Billi, Giulio Di Toro, Andre Niemeijer, and Elena Spagnuolo Fossil Earthquakes in Limestone? Natural Clast-Cortex Grains and Constraints from Low- to High-Velocity Friction Experiments |
| XL309 | EGU2011-11523 Cristiano Collettini , Brett Carpenter, Marco M Scuderi, and Chris Marone Heterogeneous frictional properties of natural carbonate-bearing normal faults |
| XL310 | EGU2011-12070 Marc Andre Strutz , Tom Mitchell, and Jörg Renner Experimental Measurements of Fault Wear and Permeability Evolution along Faults during Progressive Slip |
| XL311 | EGU2011-12639 Nadaya Cubas , Jean-Philippe Avouac, Yves Leroy, and Pauline Souloumiac Evidence for locally lower friction within the high slip area of the 2010 Maule earthquake: dynamic weakening as an explanation of low apparent fault friction. |
| XL312 | EGU2011-12748 Elena Spagnuolo , Steven Smith, André Niemeijer, Stefan Nielsen, and Giulio Di Toro Sliding behavior of calcite and dolomite marbles at seismic deformation conditions |

TS2.3/EMRP14 – Fracturing, sealing and fluid flow in reservoirs and fault zones (co-organized) – Orals

Convener: Daniel Koehn | Co-Conveners: Aisling Soden, Laurent Geoffroy, Thomas Wagner, Einat Aharonov, Klaus Gessner, Francois Renard, Heather Moir, Heijn van Gent, Gianreto Manatschal, Ullrich Glasmacher

Room: 28

Chairperson: Daniel Koehn

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| 08:30–08:45 | EGU2011-7773 Yves Gueguen , Jérôme Fortin, and Audrey Ougier-Simonin Permeability of cracked rocks |
| 08:45–09:00 | EGU2011-6654 Stephen Miller and Boris Galvan Modeling the dynamical interaction between fracture development, stress transfer, fluid flow, and chemical precipitation |
| 09:00–09:15 | EGU2011-5672 Filiz Af?ar , Sonja Leonie Philipp, and Hildegard Westphal Fracture propagation and reservoir permeability in limestone-marl alternations of the Jurassic Blue Lias Formation (Bristol Channel Basin, UK)- a multidisciplinary approach |
| 09:15–09:30 | EGU2011-2417 Heather Moir , Rebecca Lunn, and Zoe Shipton Modelling Fault Damage Zone Evolution: Effect of heterogeneity. |
| 09:30–09:45 | EGU2011-889 Nicolas Beaudoin , Nicolas Bellahsen, Laurent Emmanuel, and Olivier Lacombe Paleofluid flow and basement-cored folding: Combined geochemical and microstructural studies at Sheep Mountain Anticline (Wyoming, USA) |
| 09:45–10:00 | EGU2011-3603 Janos L. Urai , Werner Kraus, Steffen Abe, Max Arndt, Simon Virgo, Marc Holland, Rainer Telle, and Thorsten Tonnesen How good is the glue? An experimental and numerical investigation of the mechanics of crack seal processes in vein networks. |

COFFEE BREAK

Chairperson: Thomas Wagner

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| 10:30–10:45 | EGU2011-12970 Renaud Toussaint , Marcus Ebner, Daniel Koehn, Einat Aharonov, Maor Kaduri, Alexandra Rolland, Michael Heap, Philip Meredith, Jean Schmittbuhl, and Patrick Baud Stylolites in carbonate rocks: morphologies and their effect on rock permeability. |
| 10:45–11:00 | EGU2011-4236 Leehee Laronne Ben-Itzhak , Amir Sagy, and Einat Aharonov Large scale field measurements of stylolites: stylolite lateral extent and roughness |
| 11:00–11:15 | EGU2011-4558 Einat Aharonov , Renaud Toussaint, and Leehee Laronne Ben-Itzhak Upper bound on stylolite roughness as indicator for the duration and amount of dissolution |

- 11:15–11:30 EGU2011-13519
 Michael Kettermann, Sohrab Noorsalehi-Garakani, **Heijn van Gent**, Stefen Abe, and Janos Urai
 Modeling of dilatant fractures in homogenous, cohesive material and in the presence of preexisting fractures
- 11:30–11:45 EGU2011-10102
Olivier Lengliné, Jean Schmittbuhl, Jean Elkhouri, Jean-Paul Ampuero, Renaud Toussaint, and Knut Jorgen Maloy
 Up-scaling of the fracture energy in heterogeneous media during brittle creep experiments
- 11:45–12:00 EGU2011-8637
Andrea Rustichelli, Emanuele Tondi, Fabrizio Agosta, Chiara Invernizzi, and Maurizio Giorgioni
 Depositional and diagenetic factors affecting the development of bed-parallel structures in Oligo-Miocene ramp carbonates (Maiella Mountain, central Italy)

LUNCH BREAK

Chairperson: Heijn van Gent

- 13:30–13:45 EGU2011-3615
francois cornet
 Forced Fluid flow in extensional domains
- 13:45–14:00 EGU2011-7995
Suzanne Picazo, Gianreto Manatschal, and Mathilde Cannat
 Exhumed mantle along an Ocean Continent Transition : the exemple of the Totalp ophiolite in SE Switzerland.
- 14:00–14:15 EGU2011-1813
Fabrizio Balsamo, Hilario Bezerra, Fabrizio Storti, and Marcela Veira
 Influence of faulting on iron oxide concretion and Liesegang band patterns in poorly lithified sandstones of the Barreiras formation, NE Brazil: inferences for fluid flow in clastic reservoirs
- 14:15–14:30 EGU2011-3655
Max Arndt, Simon Virgo, Zoé Sobisch, Marc Holland, and Janos L. Urai
 Field observations and interpretation of remote sensing data from an exhumed high pressure carbonate reservoir, Jebel Shams, Oman Mountains
- 14:30–14:45 EGU2011-11729
Aisling Soden and Zoe Shipton
 Subsurface fault zone architecture controlled by host rock heterogeneity
- 14:45–15:00 EGU2011-8572
Enrique Gomez-Rivas, Paul D. Bons, Philipp Blum, Daniel Koehn, and Thomas Wagner
 Numerical simulation of dynamic crustal-scale fluid flow

TS2.3/EMRP14 – Fracturing, sealing and fluid flow in reservoirs and fault zones (co-organized) – Posters

Convener: Daniel Koehn | Co-Conveners: Aisling Soden, Laurent Geoffroy, Thomas Wagner, Einat Aharonov, Klaus Gessner, Francois Renard, Heather Moir, Heijn van Gent, Gianreto Manatschal, Ullrich Glasmacher

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Daniel Koehn

- XL313 EGU2011-1285
Inna Balanyuk, Anatoly Dmitrievsky, Sergey Shapovalov, Olga Chaikina, and Tatiana Akivis
 Role of Fluids in Spreading Zones of Sakhalin Island and Formation of Hydrocarbons
- XL314 EGU2011-4273
Zoltán Komoróczki, Heijn van Gent, and Janos L. Urai
 Distribution of sub-seismic deformation near faults - Implications for Tight Gas production
- XL315 EGU2011-1286
Inna Balanyuk, Anatoly Dmitrievsky, Sergey Shapovalov, Olga Chaikina, and Tatiana Akivis2
 Fluid Dynamics Model of the Formation of Giant Gas and Gas Condensate Deposits
- XL316 EGU2011-1915
Lespinasse Marc, Petrov Vladislav, Cuney Michel, and Shukin Serguei
 Microfissuring, host rock heterogeneities and SNF storage potential at the Krasnokamensk area, NE Transbaikalia
- XL317 EGU2011-3573
Simon Virgo, Max Arndt, Paul Stenhouse, Stephen F. Cox, Christoph Hilgers, and Janos L. Urai
 Evolution of a crack-seal calcite vein network in limestone : a high resolution structural, microstructural and geochemical study from the Jebel Akhdar high pressure cell, Oman Mountains

- XL318 EGU2011-3612
Ben Laurich, Max Arndt, Simon Virgo, Alexander Raith, Patrick Wüstefeld, Sebastian Thronberens, and Janos L. Urai
 Insights in dynamics of high-pressure cells based on high-resolution outcrop panoramas: A geometry database for calcite vein networks in the Oman Mountains.
- XL319 EGU2011-3617
Christine Souque, Rob J. Knipe, Philip Jones, and John Lorenz
 Fracture corridors and fault interaction in a context of polyphase deformation - Example from the Chalks of the Isle of Thanet Anticline, Kent, England
- XL320 EGU2011-4663
Masakazu Niwa, Hideki Kurosawa, and Tsuneari Ishimaru
 Spatial distribution and characteristics of fracture zones in heterogeneous lithologies and long-term, multiple, fault re-activations
- XL321 EGU2011-5083
Caroline Mehl and Isabelle Cojan
 Geometrical 3D characterisation of sand injections in a fracture network and onset dynamics, Bevons South East France
- XL322 EGU2011-5626
Jens-Oliver Schwarz and Frieder Enzmann
 Impact of fracture geometry on fluid flow
- XL323 EGU2011-5699
Jens-Oliver Schwarz and Daniel Koehn
 Geometry of and fluid flow in bedding parallel crack-seal veins
- XL324 EGU2011-5813
Achille Marsala and Thomas Wagner
 Fluid chemistry of metamorphic quartz vein systems, Rhenish Massif (Germany)
- XL325 EGU2011-6207
Conny Zeeb, Paul D. Bons, Enrique Gomez-Rivas, Lena Stark, David Grabowski, and Philipp Blum
 Uncertainty analysis for the characterisation of the discontinuity networks
- XL326 EGU2011-6473
Daniel Koehn, Jens-Oliver Schwarz, and Renaud Toussaint
 Compaction history, burial depth and tectonics derived from stylolites in the Oman mountains
- XL327 EGU2011-6820
Irfan Ghani and Daniel Koehn
 Hydrofracture Formation
- XL328 EGU2011-7030
Herbert Wallner and Harro Schmeling
 Progress in Melt Induced Weakening Concept Driving Rift Induced Delamination
- XL329 EGU2011-7241
Aurore Franco, Catherine Dorbath, Laurent Geoffroy, Kristjan Agustsson, Cecile Doubre, and Olafur Florenz
 Local earthquake tomography of a geothermal area in Reykjanes Peninsula (Iceland): Influence of nature, location and migration of crustal fluids on the seismicity.
- XL330 EGU2011-7930
Zvi Karcz, Ovunc Mutlu, Rich Albert, and Jim DeGraff
 The Formation and Propagation of Stylo-Fractures
- XL331 EGU2011-8406
Yves Missenard, Muriel Rocher, Lisa Casteleyn, Philippe Robion, Alexis Grare, Audrey Bertrand, Pierre Vergely, Antonio Benedicto, Marc Edward Cushing, and Isabelle Techer
 Sealing capacity of clays in multilayer systems: a field study of fracture-fluid flow relationships (Blue Clay formation, Maltese Islands)
- XL332 EGU2011-8926
Jean-Marc Daniel, Mickael Barbier, Khalid Amrouch, Jean-Paul Callot, Youri Hamon, and Olivier Lacombe
 Impact of fracturing stratigraphy on paleo-hydrodynamics, the Madison Formation case study (Bighorn Basin, Wyoming, USA).
- XL333 EGU2011-10095
Christoph Titz, Ulrike Exner, Bernhard Grasemann, and Alexander Preh
 Fault related cracking of pebbles in unconsolidated sediments (SE Vienna Basin, Austria)
- XL334 EGU2011-10208
Vincent Roche, Catherine Homberg, and Muriel Rocher
 Control of sub-horizontal faults on normal fault growth and architecture
- XL335 EGU2011-11977
Cynthia Garibaldi and Laurent Geoffroy
 Fluid circulation within a volcanotectonic system inferred from numerical hydrothermal modelling: application to the Gouffet-Asal Rift (Djibouti, East Africa).

- XL336 EGU2011-12193
Kumar Ankit, Denis Pilipenko, Julia Kundin, and Heike Emmerich
Modelling Mineral Vein Dynamics - A Phase Field Approach
- XL337 EGU2011-12429
Resi Veeningen, Bernhard Grasemann, Kurt Decker, A. Hugh N. Rice, and Ralf Bischoff
Fracture formation in a crystalline basement hydrocarbon reservoir in Yemen

GMPV17 – Alteration, very-low grade metamorphism and late fluid and porosity evolution of volcanic rocks (co-listed) – Posters

Convener: Hans-Joachim Massonne | Co-Conveners: Leo A. Hartmann

Halls X/Y | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: L.A. Hartmann

- XY297 EGU2011-387
Juan Cruz Martínez, Jorge A. Dristas, and Hans-J. Massonne
Hydrothermal fluid flow evidenced by mineral alteration assemblages and chemistry of metamorphic rocks, sediments and volcanics on top of the southernmost Río de la Plata craton, eastern Argentina
- XY298 EGU2011-605
Emel Abdio?lu, Mehmet Arslan, and Cem Yücel
Mineralogy and Chemistry of Zeolite Minerals in Tertiary Alkaline Volcanics around Trabzon Area, NE Turkey
- XY299 EGU2011-1719
olivier vidal, armelle baldeyrou, bertrand fritz, daniel beaufort, and bruno lanson
Experimental study of the mineral evolution and associated mass transport under thermal gradient. Application to the thermal stability of low-temperature phyllosilicates
- XY300 EGU2011-3049
Hans-Joachim Massonne
Alteration of a subvolcanic rock from the Rhenish Massif - complete or partial equilibration at very-low grade metamorphism?
- XY301 EGU2011-3236
Leonardo Manara Rosenstengel and Léo Afraneo Hartmann
Low-temperature alteration of basalts leading to world-class deposits of amethyst geodes in the Ametista do Sul mining district, southernmost Brazil
- XY302 EGU2011-3249
Juliana Silva and Léo Afraneo Hartmann
Discovery and description of gossans above amethyst deposits in altered volcanic rocks of the Paraná province, South America
- XY303 EGU2011-3253
Sandro Duarte, Léo Hartmann, Juliana Pertille, and Karine Arena
Alteration, very-low grade metamorphism and geochemical modification of basaltic rocks in the Quaraí amethyst district, Paraná volcanic province, Brazil
- XY304 EGU2011-3783
Marcus V. D. Remus, Léo A. Hartmann, and **João A. Toniolo**
Low-temperature, hydrothermal base and precious metal deposits hosted by volcanic-sedimentary sequences of the Camaquã basin, southernmost Brazil
- XY305 EGU2011-3883
Viter Pinto and Léo Hartmann
Epigenetic hydrothermal origin for the copper mineralization in the Vista Alegre district, Paraná volcanic province, southernmost Brazil
- XY306 EGU2011-4245
Leo A. Hartmann and Hans-Joachim Massonne
Silicate to silica alteration in basalts and rhyodacites of the Paraná volcanic province and formation of giant amethyst geodes
- XY307 EGU2011-4375
Farhad Ahmadnejad and Batoul taghipour
Geology and petrographic studies of the hydrothermal altered rocks in the Qolqoleh gold deposit, Kurdistan province, Iran
- XY308 EGU2011-8810
Joacir Thadeu Nascimento Medeiros, Leo Afraneo Hartmann, and Larissa Teixeira Petruzzellis
Cavity opening and amethyst geode formation in altered basaltic rocks of the Paraná province, South America, evaluated with the finite element method
- XY309 EGU2011-8866
Arne Willner, Hans-Joachim Massonne, Sandra M. Barr, and Chris E. White
Very-low- to low-grade metamorphism of mafic and felsic volcanic rocks in Avalonia of SE Cape Breton Island (Nova Scotia; Canada) as a result of collision

XY310 EGU2011-9283

Polona Kralj and Peter Kralj

Hydrothermal zeolites and related authigenic minerals in the Upper Oligocene to Lower Miocene Smrekovec Volcanic Complex

XY311 EGU2011-11815

Caetano Juliani, Carlos Marcello Dias Fernandes, Lena Virgínia Soares Monteiro, Bruno Lager, and Carlos Mario Echeverri-Misas

Very low-grade metamorphism and very well preserved epithermal mineralization in the Paleoproterozoic Uatumã LIP, southern Amazonian craton, Brazil

Tuesday, 05 April

EMRP1 – Open session on Geomagnetism and Paleomagnetism – Orals

Convener: Georgios Balasis | Co-Conveners: Leonardo Sagnotti

Room: 42

Chairperson: Karl Fabian, Vincent Lesur

15:30–16:00 EGU2011-11860

Rune Floberghagen, Roger Haagmans, Yvon Menard, and Gernot Plank

Swarm: ESA's Magnetic Field Mission

16:00–16:15 EGU2011-7877

Evdokia Tema and Despoina Kondopoulou

8000 years of geomagnetic field Secular Variation in the Balkan Peninsula based on archaeomagnetic data

16:15–16:30 EGU2011-1546

Leonardo Sagnotti, Patrizia Macrì, Renata Lucchi, Michele Rebesco, and Angelo Camerlenghi

A Holocene paleosecular variation record from the southern Svalbard continental margin

16:30–16:45 EGU2011-9705

Mirka Trajanova

Different view to the paleomagnetic results from the Pohorje Mountains, northern Slovenia

16:45–17:00 EGU2011-2848

Mualla Cinku, Mumtaz Hisarli, Naci Orbay, Timur Ustaömer, Oleg Rusakov, Ann Hirt, and Nurdan Say?n

A paleomagnetic study from Mesozoic rocks in the Crimean Peninsula; Evidence of Albian/Aptian remagnetization

EMRP1 – Open session on Geomagnetism and Paleomagnetism – Posters

Convener: Georgios Balasis | Co-Conveners: Leonardo Sagnotti

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Leonardo Sagnotti

A1 EGU2011-790

Enkelejda Qamili, Angelo De Santis, and Gianfranco Cianchini

Shannon information of the geomagnetic field for the past seven millennia and implications on the present field understanding

A2 EGU2011-12453

Tania Stanton, Ian Snowball, Raimund Muscheler, Peter Riisager, Mads Faurschou Knudsen, Andreas Nilsson, Thorvaldur Thordarson, and Peter Reid

Identifying real and reliable features of the geomagnetic field - a Nordic study.

A3 EGU2011-6008

Annika Ferk, Roman Leonhardt, Joanna Denton, Hugh Tuffen, Kai-Uwe Hess, and Donald B. Dingwell

Paleointensities of silicic volcanic glass: Influence of emplacement rotations and devitrification

A4 EGU2011-5692

Evdokia Tema, Fulvio Fantino, Enzo Ferrara, Alessandro Lo Giudice, Federico Barella, and Moira Bertasa
Combined archaeomagnetic and thermoluminescence dating of a kiln excavated at Fontanetto Po (Northern Italy)

A5 EGU2011-3328

Souad Ech-Chakrouni, Jozef Hus, Simo Spassov, and Raoul Geeraerts

Limestone as an archaeomagnetic geomagnetic field recorder.

A6 EGU2011-5248

Naoto Ishikawa, Akira Hayashida, Yoshihiko Tanigawa, and Keiji Takemura

Magnetic behaviors of sediment samples including maghemitized magnetite during progressive thermal demagnetization experiments of artificial remanences

A7 EGU2011-1701

Lutz Kubler, Thomas Lundqvist, and Jan-Olof Svedlund

The Särna ring, a circular magnetic anomaly in the county of Dalarna, Sweden

A8 EGU2011-1542

Anatoly Mashukov and Alla Mashukova

The magnetic properties of Norilsk type ores

A9 EGU2011-10239

Suzanne McEnroe, Karl Fabian, Peter Robinson, Noboyushi Miyajima, Phillip Schmidt, and Dave Clark

Reduction-exsolution of magnetite in ilmenite: Phase interfaces and exchange coupling

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| A10 | EGU2011-12987 Dennis Harries, Karl Fabian , Kilian Pollok, and Suzanne A. McEnroe Correlation of microstructures and exsolution lamellae in natural pyrrhotites and magnetic properties |
| A11 | EGU2011-12818 Karl Fabian , Valera P. Shcherbakov, Peter Robinson, and Suzanne A. McEnroe Geometric mean-field models for ilmenite-hematite solid solutions |
| A12 | EGU2011-13542 Marta Neres , Eric Font, Pedro Terrinha, and Jorge Miranda Kinematics of Iberia during Cretaceous: Reconciling Paleomagnetic and Marine Magnetic Anomalies |
| A13 | EGU2011-2572 Mohamed El-M. Derder , Bernard Henry, Mohamed Amenna, Boualem Bayou, Said Maouche, Jean Besse, and Mohamed Ayache Block rotation tectonics recorded in the miocene magmatic rocks of "Beni Haoua" area (northern Algeria): preliminary paleomagnetic results. |
| A14 | EGU2011-797 Ahmed Saleh Paleomagnetic study of crystalline rocks to better understand the geologic evolution of Sinai Peninsula, Egypt. |
| A15 | EGU2011-812 Ahmed Saleh Neoproterozoic Tectonics and Magmatism in the central Eastern Desert of Egypt: Age dating and AMS constrains. |
| A16 | EGU2011-3827 Ulrich Blaha , Basavaiah Nathani, Deenadayalan Kannan, Dnyandev Vaman Borole, and Ramesh Dadu Mohite Reconstruction of the pollution history of Mumbai mudflat sediments using magnetic, chemical, and 210Pb dating methods |
| A17 | EGU2011-10298 Juan C. Larrasoña, Miriam Gómez-Paccard , Santiago Giralt, and Andrew P. Roberts Rapid locking of tectonic magnetic fabrics in weakly deformed mudrocks |

EMRP7 – Paleointensity of the Earth's magnetic field: Methods and results – Orals

Convener: Roman Leonhardt | Co-Conveners: Adrian Muxwworthy

Room: 42

Chairperson: Muxwworthy/Leonhardt

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| 13:30–13:45 | EGU2011-5293 Keith Aldridge and David McMillan Recovery of Geomagnetic Reversals from Relative Paleointensity Data |
| 13:45–14:00 | EGU2011-4907 Carlo Laj , Catherine Kissel, Christopher Davies, and David Gubbins Geomagnetic field intensity and inclination records from Hawaii and the Réunion Island: geomagnetic implications. |
| 14:00–14:15 | EGU2011-6016 Andy Biggin Are systematic differences between thermal and microwave Thellier-type palaeointensity estimates a consequence of multidomain bias in the thermal results? |
| 14:15–14:30 | EGU2011-8815 Lennart de Groot , Mark Dekkers, and Tom Mullender Detecting subtle changes in magnetic state due to heating: implications for paleointensity methods |
| 14:30–14:45 | EGU2011-3158 Marilyn Monter , Lennart de Groot, Andrew Biggin, and Mark Dekkers Comparison between the domain-state-corrected multispecimen and microwave methods using historical lavas from La Palma, Spain |
| 14:45–15:00 | EGU2011-12223 Mimi Hill , Florian Stark, Neil Suttie, Megan Thomas, Amy Haynes, and Andy Biggin Microwave palaeointensity methods for burnt archaeological material |

EMRP7 – Paleointensity of the Earth's magnetic field: Methods and results – Posters

Convener: Roman Leonhardt | Co-Conveners: Adrian Muxwworthy

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Leonhardt/Muxwworthy

- A18 EGU2011-8869
Thomas Fredericks, Lucia Korff, and Tilo von Dobeneck
 Relative paleointensity records of upper Pleistocene marine sediments from the sub-polar North Pacific and the Bering Sea
- A19 EGU2011-12002
Roman Leonhardt
 Absolute paleointensity determination: An improved phenomenological model
- A20 EGU2011-4568
Greig Paterson
 Toward a theoretical basis for paleointensity data selection
- A21 EGU2011-9164
Adrian Muxworthy and Sam Taylor
 Evaluation of the domain-state corrected multiple-specimen absolute palaeointensity protocol: a test of historical lavas from Iceland.
- A22 EGU2011-12056
Elisabeth Tauber, Franz Josef Türk, and Roman Leonhardt
 Multispecimen and Thellier type paleointensity determinations from postglacial lavas of Snaefell volcano, Iceland
- A23 EGU2011-8050
Miriam Gómez-Paccard, Annick Chauvin, Elisabet Beamud, Sonia Gutierrez-Lloret, Victor Cañavate, Mimi Hill, and Philippe Lanos
 Improving our knowledge of the rapid geomagnetic field intensity variation observed in Europe around 800 AD: new archeointensity data from Visigothic Spanish potteries
- A24 EGU2011-10807
Stephan Koch, Jean Pohl, and Stuart Gilder
 Geomagnetic field intensity recorded after impact in the Ries (Germany) meteorite crater
- A25 EGU2011-12915
Karl Fabian and Valera P. Shcherbakov
 Random walk statistics provides a comprehensive view on geomagnetic polarity interval lengths and field intensity

ML18 – Louis Néel Medal Lecture by Ernest Henry Rutter (co-listed) – Orals

Convener: Mioara Mandea

Room: 36

Chairperson: Mioara Mandea

19:00–20:00 EGU2011-14179

Ernest H. Rutter

Rock deformation in the continental crust (Louis Néel Medallist Lecture)

Wednesday, 06 April

EMRP9/TS2.9 – Micro-mechanics of brittle faulting (co-organized) – Orals

Convener: Patrick Baud | Co-Conveners: Alexandre Schubnel, Fabrizio Balsamo

Room: 42

Chairperson: Alexandre Schubnel

08:30–08:45 EGU2011-6377

Roger Soliva, Richard Schultz, Gregory Ballas, Alfredo Taboada, Elodie Sallet, Christopher Wibberley, and Antonio Benedicto

The relationship between deformation band properties, tectonic regime and burial in porous sandstone

08:45–09:00 EGU2011-6691

Fabio Trippetta, Cristiano Collettini, Sergio Vinciguerra, and Philip G. Meredith

Evolution of mechanical properties under cyclic stress experiments: results and microstructures of Triassic Evaporites

09:00–09:15 EGU2011-6072

Mat?j Pe?, Holger Stünitz, and Renée Heilbronner

Brittle deformation in shear experiments at elevated pressures and temperatures

09:15–09:30 EGU2011-3300

Marie Violay, Benoit Gibert, David Mainprice, Brian Evans, Philippe Adrien Pezard, and Jean-Marie Dautria

An experimental study of the brittle-ductile transition of basalt under oceanic crust conditions

09:30–09:45 EGU2011-1964

Mathilde Adelinet, Jérôme Fortin, Alexandre Schubnel, and Yves Guéguen

Micro-mechanical characterization of a basaltic geothermal reservoir from laboratory geophysical tools

09:45–10:00 EGU2011-9476

Dion Weatherley

Investigations on the role of microstructure in brittle failure using discrete element simulations

10:00–10:15 EGU2011-3545

David Amitrano

The role of friction and heterogeneity in damage localization.

EMRP9/TS2.9 – Micro-mechanics of brittle faulting (co-organized) – Posters

Convener: Patrick Baud | Co-Conveners: Alexandre Schubnel, Fabrizio Balsamo

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Patrick Baud

A1 EGU2011-4736

Alexandre Chemenda

Theory and numerical models of compaction banding

A2 EGU2011-1921

Patrick Baud, Wei Zhu, and Teng-fong Wong

Micromechanical basis for the Coulomb failure parameters

A3 EGU2011-3286

Florent Gimbert, Gael Combe, David Amitrano, and Jérôme Weiss

Multi-scale analysis of strain localization within granular materials.

A4 EGU2011-4872

Christian Klimczak, Roger Soliva, **Richard Schultz**, and Jean Chéry

Growth of deformation bands in a multi-layer sequence: Orange quarry, southern France

A5 EGU2011-9285

Heather Short and Alain Tremblay

Evidence for shear band initiation approximately parallel to the acute and obtuse bisectors of the irrotational lines of flow in a general shear zone

A6 EGU2011-10377

Antonino Cilona, Fabrizio Agosta, and Emanuele Tondi

Preliminary results of the microstructural and textural characterization of compaction bands affecting four porous carbonate formations

A7 EGU2011-816

Ahmed Saleh

The effect of uniaxial compression in the behavior of remanent and induced magnetizations for basaltic rocks from Wadi Abou Terifya, Egypt

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| A8 | EGU2011-10823 Nicolas Brantut , Alexandre Schubnel, and Yves Guéguen Damage and Rupture Dynamics at the Brittle/Ductile Transition: the Case of Gypsum |
| A9 | EGU2011-10984 Torbjorn Bjork , Alexandre Schubnel, Karen Mair, and Sergio Vinciguerra Acoustic emission rate stress sensitivity caused by stress perturbations during brittle creep deformation of Fontainebleau sandstone |
| A10 | EGU2011-10134 Ludovit Kubicar Investigation of water diffusion in porous materials by thermal conductivity sensor. |
| A11 | EGU2011-9326 Pavel Pokatashkin , Andrey Karakin, Pyotr Kuharenko, and Yuri Kuharenko Dilatancy and compaction of saturated granular media |
| A12 | EGU2011-5605 Filiz Af?ar , Hildegard Westphal, and Sonja Leonie Philipp Influence of sedimentary facies on rock hardness in limestone-marl alternations of the Jurassic Blue Lias Formation (Bristol Channel Basin, UK) |
| A13 | EGU2011-11134 Mandy Duda and Jörg Renner Dilatancy hardening and water weakening in sandstones |

EMRP10/TS2.10 – The transport properties of geomaterials: Theory, modelling, measurement, application and integration (co-organized) – Orals

Convener: Matthew Jackson | Co-Conveners: Harald Milsch, Jérôme Fortin

Room: 42

Chairperson: Matthew Jackson and Jerome Fortin

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| 13:30–13:45 | EGU2011-4557 Alexis Maineult , Fernand Lopes, Jean-Jacques Sibilla, Lucille Trevez, and Maria Zamora Laboratory measurements of self-potential signals induced by displacements of saline fronts |
| 13:45–14:00 | EGU2011-8907 Emmanuel David , Jerome Fortin, Alexandre Schubnel, Yves Gueguen, and Robert W. Zimmerman Frequency, pressure, and pore fluid dependence of elastic wavespeeds: new laboratory measurements on Fontainebleau sandstone |
| 14:00–14:15 | EGU2011-3263 Marie Violay , Benoit Gibert, Pierre Azais, Philippe Adrien Pezard, Gérard Lods, and Olafur Florenz Laboratory measurements of basalt electrical conductivity on saturated samples at upper crust conditions: a new electrical HT, HP cell. |
| 14:15–14:30 | EGU2011-1958 Aliaksei Pazniakou and Pierre Adler Multiphase flow, deformation and wave propagation in porous media |
| 14:30–14:45 | EGU2011-2608 Guido Blöcher , Thomas Reinsch, and Harald Milsch Evaluation of poro-elastic responses of porous media by the use of fibre optic sensors. |
| 14:45–15:00 | EGU2011-13168 Marieke Rempe , Thomas Mitchell, Joerg Renner, Stuart Nippes, Yehuda Ben-Zion, Thomas Rockwell, Steven Smith, and Giulio Di Toro Investigating the Damage Pattern of Fault Zone Rocks by In-Situ Seismic Field Measurements and Laboratory Experiments |
| Chairperson: Harald Milsch and Matthew Jackson | |
| 15:30–15:45 | EGU2011-2191 Brian Berkowitz On the use of effective parameters to describe transport phenomena in geomaterials |
| 15:45–16:00 | EGU2011-8516 Siavash Ghabezloo and Ahmad Pouya Numerical evaluation of the equivalent permeability of randomly cracked porous media |
| 16:00–16:15 | EGU2011-1454 Adeline Pons , David Christian, Jérôme Fortin, Sergei Stanchits, and Jean-Marie Mengus X-ray imaging during capillary imbibition: a study on how compaction bands impact fluid flow in Bentheim sandstone |

- 16:15–16:30 EGU2011-1733
Susanne Hemes, Guillaume Desbois, Janos L. Urai, Mieke de Craen, Miroslav Honty, and Stéphane Brassinnes
 New technique for pore-space investigations of clay materials: A case study on Boom Clay - reference host formation for geological disposal of radioactive waste in Belgium.
- 16:30–16:45 EGU2011-6083
Manav Tyagi, Thomas Gimmi, and Sergey Churakov
 Modeling clay micro-structures and computation of their effective diffusion coefficients
- 16:45–17:00 EGU2011-9052
Julia Schneider, Peter Flemings, Ruarri Day-Stirrat, and John Germaine
 Insights into pore-scale controls on mudstone permeability and compressibility through resedimentation experiments

EMRP10/TS2.10 – The transport properties of geomaterials: Theory, modelling, measurement, application and integration (co-organized) – Posters

Convener: Matthew Jackson | Co-Conveners: Harald Milsch, Jérôme Fortin

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Jerome Fortin, Harald Milsch and Matthew Jackson

- A14 EGU2011-1963
Mathilde Adelinet, Mickael Le Ravalec, Catherine Dorbath, Jérôme Fortin, and Yves Guéguen
 Microstructure and fluid state in an Icelandic geothermal reservoir from inversion of tomography data
- A15 EGU2011-10316
Maria Kuteynikova and Beatriz Quintal
 Numerical modeling of wave-induced fluid flow in 3D patchy saturated media
- A16 EGU2011-2875
 Wen-Jie Wu and **Jia-Jyun Dong**
 Estimating the porosity-depth relation of sedimentary rocks from an effective stress/ stress history-dependent porosity model
- A17 EGU2011-6035
Thomas Reinsch, Guido Blöcher, Harald Milsch, Kort Bremer, Elfed Lewis, Gabriel Leen, and Steffen Lochmann
 In-situ pore pressure determination - application of a fibre optic sensor for the determination of rock physical properties
- A19 EGU2011-2485
Harald Milsch, Mike Priegnitz, and Guido Blöcher
 Changes in rock physical properties of gypsum samples dehydrated in air
- A20 EGU2011-5460
Florian Fusseis, Christoph Schrank, Ali Karrech, Ghassen Moalla, Stefan Revets, and Klaus Regenauer-Lieb
 Gypsum dehydration as a pore pressure diffusion process - insights from time-series Synchrotron X-ray microtomography, thermodynamic analysis and finite element modelling
- A21 EGU2011-5435
Ju-Won Oh, Hyun-Key Jung, and Dong-Joo Min
 Negative apparent resistivity based on physical modeling
- A22 EGU2011-12316
 Jan Volkmann, **Norbert Klitzsch**, and Oliver Mohnke
 Impedance Spectroscopy for assessing the wetting conditions of reservoir rocks
- A23 EGU2011-3970
Jan Vinogradov, Matthew Jackson, and Adrian Butler
 Measurements of spontaneous potential in chalk with application to aquifer characterization in the southern UK
- A24 EGU2011-11753
Eli Leinov and Matthew Jackson
 Experimental measurements of electrochemical coupling potentials in NaCl-brine saturated sandstone cores
- A25 EGU2011-4765
Jon Saunders and Matthew Jackson
 Inversion of downhole streaming potentials to determine water front position
- A26 EGU2011-5924
Matthew Jackson, Eli Leinov, Murtaza Gulamali, and Jan Vinogradov
 Water saturation dependence of streaming potential coupling coefficient and excess charge density in sandstones during drainage and imbibition

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| A27 | EGU2011-247 Sofia Lopes and Maxim Lebedev Reservoir rock fluid imbibition experiments: complex study using X-ray computer tomography and ultrasonic techniques |
| A28 | EGU2011-8327 Alban Souche and Marcin Dabrowski Rayleigh-Bénard convection in porous media: benchmark of FEM models |
| A29 | EGU2011-10393 Danica Fidríková Application of Hot-ball sensor for investigation of water diffusion in sandstone and marble |
| A30 | EGU2011-12480 Hauke Marquardt , Katharina Marquardt, and Sergio Speziale Ion Cutting of Large Samples for Brillouin Scattering: Elastic Anisotropy of Antigorite at High-Pressures |
| A31 | EGU2011-12603 Vladimir Greif , Martin Brcek, Jan Vlcko, Tatiana Durmekova, and Ivana Simkova Model of the thermo-mechanical behavior of the Pravcicka brana sandstone rock arch (Czech Republic) and Perun's rock at Spis Castle (Slovakia). |

EMRP11/GMPV30/NH10.5/TS2.8 – Rock Physics and Natural Hazards (co-organized) – Orals

Convener: Sergio Vinciguerra | Co-Conveners: Philip Benson, Daniel Faulkner, Giulio Di Toro

Room: 42

Chairperson: S. Vinciguerra; P. Benson

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|-------------|---|
| 10:30–10:45 | EGU2011-1907 Patrick Baud , Wei Zhu, Sergio Vinciguerra, and Teng-fong Wong Brittle faulting and inelastic compaction in Alban Hills tuff: microstructural observations and micromechanical modeling |
| 10:45–11:00 | EGU2011-4812 Michael Heap , Andreas Laumann, Kai-Uwe Hess, Yan Lavallée, Patrick Baud, Philip Meredith, and Donald Dingwell Chemical, physical and mechanical properties of tuffs from Campi Flegrei (Italy) |
| 11:00–11:15 | EGU2011-6510 Sergio Vinciguerra , Silvio Mollo, Paola Tuccimei, Michael Heap, Michele Soligo, Mauro Castelluccio, Piergiorgio Scarlato, and Donald Dingwell Radon and thoron emission from high and low porosity rocks under increasing deformation: An experimental study |
| 11:15–11:30 | EGU2011-9526 William Hancock and Dion Weatherley On the influence of Particle Shape in fault gouge simulations using the Discrete Element Method |
| 11:30–11:45 | EGU2011-9638 Tadashi Takano , Ken-ichiro Maki, Eriko Soma, Katsumi Hattori, and Takashi Maeda Fundamentals of Microwave Detection in Association with Rock Fracture and Experimental Data for Various Rocks |
| 11:45–12:00 | EGU2011-13191 Thomas Mitchell , Michael Heap, Yan Lavallee, Takehiro Hirose, Donald Dingwell, Sergio Vinciguerra, Jörg Renner, and Andrea Cavallo Frictional Melt Generated from Similar & Dissimilar Volcanic and Sedimentary Rocks. |

EMRP11/GMPV30/NH10.5/TS2.8 – Rock Physics and Natural Hazards (co-organized) – Posters

Convener: Sergio Vinciguerra | Co-Conveners: Philip Benson, Daniel Faulkner, Giulio Di Toro

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: D. Faulkner; G. Di Toro

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|-----|---|
| A32 | EGU2011-4285 Philip Benson , Michael Heap, Yan Lavallee, Patrick Selvadurai, Asher Flaws, Kai Hess, Burkhard Schillinger, and Donald Dingwell Fracturing of volcanic edifices and dyking during magma ascent |
| A33 | EGU2011-4825 Linda Petrakova , Michael Heap, Yan Lavallée, Patrick Baud, and Donald Dingwell Investigating the stability of the volcanic edifice at Volcán de Colima, Mexico |
| A34 | EGU2011-6749 Andrew Bell , Ian Main, Michael Heap, Patrick Baud, and Philip Meredith Application of a mean-field model for brittle creep strain rates under finite loading conditions |

- A35 EGU2011-7145
Pierre Gavrilenko and Chandrani Singh
 Modelling the hydromechanical response in the neighbourhood of Koyna reservoir (India): Results of the initial filling period
- A36 EGU2011-7203
Sergio Vinciguerra, Michael Heap, Silvio Mollo, Yan Lavallée, Kai Hess, Donald Dingwell, Gianluca Iezzi, and Patrick Baud
 Volcanic edifice weakening via thermal reactions
- A37 EGU2011-10139
Olivier Lengliné, Jean Schmittbuhl, Jean Elkhouri, Jean-Paul Ampuero, Renaud Toussaint, and Knut Jorgen Maloy
 Interplay of seismic and aseismic deformation during brittle creep crack propagation
- A38 EGU2011-10209
Elizabeth Gaunt, Peter Sammonds, Rosanna Smith, Philip Meredith, and Christopher Kilburn
 Volcanic dome stability; Permeability and fluid pressurisation of the Mount St Helens 2004-2008 lava dome complex
- A39 EGU2011-10450
Gianluca Gola, Vincenzo Pasquale, Paolo Chiozzi, and Massimo Verdoya
 Appropriate mixing models to estimate thermal properties of clastic and chemical/biochemical rocks
- A40 EGU2011-14195
Charlotte Feneis, Bettina Scheu, Yan Lavallee, and Donald B. Dingwell
 Effect of water saturation on the fragmentation threshold and tensile strength of rocks in volcanic environments
- A41 EGU2011-7831
Jean Sulem, Ioannis Stefanou, and Emmanuel Veveakis
 Strain localization during rapid shearing of a saturated rock layer: Preferred instability wave length and shear band thickness

Thursday, 07 April

GD7.1/EMR12/GMPV18/SM4.6 – Structure, Composition and Dynamics of the Deep Earth (co-organized) – Posters

Convener: Jon Mound | Co-Conveners: Arwen Deuss, Michael Ammann, Hauke Marquardt

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Jon Mound and Hauke Marquardt

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|-----|---|
| A69 | EGU2011-692 Stefanie Hempel , Christine Thomas, and Razvan Caracas The lowermost mantle beneath Bering Sea - P wave study and inversion for mineralogy of D |
| A70 | EGU2011-9238 Dmitry Krasnoshchekov and Vladimir Ovtchinnikov PKiKP/PcP amplitude ratios interpreted in terms of core-mantle boundary reflecting properties |
| A71 | EGU2011-12930 Daniele Antonangeli , Julien Siebert, Chantel M. Aracne, Daniel L. Farber, Alexey Bosak, Moritz Hoesch, Michael Krisch, Frederick J. Ryerson, Guillaume Fiquet, and James Badro Spin Crossover in Ferropericlase at High Pressure: A Seismologically Transparent Transition? |
| A72 | EGU2011-12508 Hauke Marquardt , Arianna Gleason, Katharina Marquardt, Sergio Speziale, Lowell Miyagi, Gregor Neusser, Hans-Rudolf Wenk, and Raymond Jeanloz Elastic Properties of Nano-crystalline MgO Powder to High Pressures by Brillouin Light Scattering |
| A73 | EGU2011-2925 Junkee Rhie , Tae-Gyu Yee, and Seongryong Kim The velocity structure of the core constrained by joint analysis of differential travel times and differential ray parameters of PKP(BC)-PKP(DF) |
| A74 | EGU2011-6715 Jon Mound Inter-Annual Torsional Oscillations and Angular Momentum Exchange |
| A75 | EGU2011-8847 Luis Silva Core flow estimates and inner-core growth patterns |
| A76 | EGU2011-11517 Tobias Trümper , Martin Breuer, and Ulrich Hansen Numerical simulations of thermo-chemically driven convection and geodynamics |
| A77 | EGU2011-12565 Julien Roch , Eric Clévétré, Geneviève Roult, Jean Paul Montagner, and Philippe Lognonné Deep structure of the Earth : from the lower mantle to the inner core |

EMRP2 – Rapid Secular Variation, observation and core processes – Orals

Convener: Vincent Lesur | Co-Conveners: Chris Finlay

Room: 41

Chairperson: V. Lesur

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|-------------|--|
| 13:30–13:45 | EGU2011-5048 Jürgen Matzka Observing geomagnetic secular variation |
| 13:45–14:00 | EGU2011-2528 Jeremy Bloxham and Veronika Soukhovitskaya The Limits of Magnetic Field Resolution at the Core-Mantle Boundary |
| 14:00–14:15 | EGU2011-12952 Arnaud Chulliat Observation of magnetic diffusive processes and secular acceleration pulses at the core surface |
| 14:15–14:30 | EGU2011-8604 Luis Silva The zonal flow acceleration signature of geomagnetic jerks |
| 14:30–14:45 | EGU2011-618 Florian Lhuillier , Alexandre Fournier, Gauthier Hulot, and Julien Aubert The geomagnetic secular-variation timescale in observations and numerical dynamo models |
| 14:45–15:00 | EGU2011-6965 Nathanael Schaeffer Quasi-Geostrophic Flows in the Earth Core as a Source for the Secular Variation. |

EMRP2 – Rapid Secular Variation, observation and core processes – Posters

Convener: Vincent Lesur | Co-Conveners: Chris Finlay

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: C. Finlay

A8 EGU2011-2440

Denys Schmitt

Properties of the Quasi-Free-Decay Magnetic Modes: Application to the Earth's outer core

A9 EGU2011-9472

Maria Alexandra Pais and Nathanael Schaeffer

Symmetry, Zonation and Scales in the Earth-core flow and their effect on the Length-of-Day variation predictions.

A10 EGU2011-6988

Ingo Wardinski

Inferences about small scale core surface flow and secular variation from scaling laws

A11 EGU2011-6154

Vincent Lesur, Praveen Kunagu, Ingo Wardinski, and Mohamed Hamoudi

Third version of the GFZ Reference Internal Magnetic Model: GRIMM-3

A12 EGU2011-7019

Ludwig Ballani, Jan M. Hagedoorn, Dietrich Stroemeyer, and Hans Greiner-Mai

Magnetic energy fluctuations on the core-mantle boundary

A13 EGU2011-6363

Crisan Demetrescu and Venera Dobrica

On the rapid core field evolution. Case study: The European network of geomagnetic observatories

A14 EGU2011-4732

Hyung Rae Kim and Ralph von Frese

Localized analysis of geomagnetic jerk in the polar regions and South America

EMRP3/PS10.3 – Planetary Magnetism, PlanetMag (co-organized) – Orals

Convener: Matthias Holschneider | Co-Conveners: Mioara Mandea, Hermann Lühr, Johannes Wicht, Doris Breuer,

Stuart Gilder

Room: 41

Chairperson: n.n.

15:30–15:45 EGU2011-7730

Andre Giesecke, Frank Stefani, and Gunter Gerbeth

Experimental realisation of homogeneous dynamo action

15:45–16:00 EGU2011-3051

Wieland Dietrich, Johannes Wicht, and Ulrich Christensen

The convective origin of hemispherical dynamos

16:00–16:15 EGU2011-5408

Christian Gerhards

Modeling the Earth's magnetic field by local multiscale methods

16:15–16:30 EGU2011-3530

Emmanuel Chané, Joachim Saur, and Stefaan Poedts

Modelling Jupiter's magnetosphere: Influence of the internal sources

16:30–16:45 EGU2011-9261

Jaime Urrutia-Fucugauchi, Daniel Flores-Gutierrez, Ligia Perez-Cruz, Raquel Diaz-Hernandez, and

Carlos Linares-Lopez

Micromagnetic and Microstructural Analyses of Individual Chondrules From the Allende Carbonaceous Chondrite

16:45–17:00 EGU2011-5081

Nico De Koker, Gerd Steinle-Neumann, and Vojt?ch VI?ek

Thermal Conductivity of Earth's Liquid Outer Core from First-Principles Calculations

17:00–17:15 EGU2011-3223

Jan Dostal, Zdenek Martinec, and Maik Thomas

Simulation of the ocean induced poloidal magnetic field variations by considering the conductivity contrast between ocean and continent

EMRP3/PS10.3 – Planetary Magnetism, PlanetMag (co-organized) – Posters

Convener: Matthias Holschneider | Co-Conveners: Mioara Mandea, Hermann Lühr, Johannes Wicht, Doris Breuer,

Stuart Gilder

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Johannes Wicht

- A15 EGU2011-13344
Kevin Lewis and Frederik Simons
Structure and Heterogeneity of the Martian Crustal Magnetic Field
- A16 EGU2011-9986
Christoph Egbers and Nicoleta Scurtu
Magnetorotational-type instability in Couette-Taylor flows of viscoelastic polymer liquids
- A17 EGU2011-3387
Mario Seufert, Joachim Saur, and Fritz M. Neubauer
Electromagnetic induction at Ganymede
- A18 EGU2011-3888
Glenn Sterenborg and John Crowley
Thermal Evolution of Early Solar System Planetesimals and the Possibility of Sustained Dynamos
- A19 EGU2011-6502
Iudovic Petitdemange and **Hubert Klahr**
Wave generation in rotating and non-rotating MHD Spherical Couette Flow with an applied vertical magnetic field
- A20 EGU2011-7562
Julia Ernst-Hullermann, Helmut Harder, and Ulrich Hansen
Finite Volume simulations of dynamos in ellipsoidal planets
- A21 EGU2011-8519
Rob Shore, Kathy Whaler, Susan Macmillan, and Ciaran Beggan
Methods for Processing Satellite Constellation Measurements of Earth-External Magnetic Field Sources
- A22 EGU2011-3054
Johannes Wicht
Flow and magnetic instabilities in the spherical Couette system
- A23 EGU2011-3945
Xing Wei
Kinematic dynamo in spherical Couette flow
- A24 EGU2011-6172
Iudovic Petitdemange and Emmanuel Dormy
Axisymmetric and non-axisymmetric MagnetoStrophic MRI modes
- A25 EGU2011-8518
Céline Guervilly, Philippe Cardin, and **Nathanael Schaeffer**
A dynamo driven by zonal jets at the upper surface in the giant planets

EMRP8 – The magnetic environment, palaeomagnetic excursions and dipole lows, and reliability of the signal in sediments – Orals

Convener: Joseph Liddicoat | Co-Conveners: Ramon Egli, Simo Spassov, Nicolas Thouveny

Room: 41

Chairperson: Joseph Liddicoat / Nicolas Thouveny

- 08:30–08:45 EGU2011-4657
Leo Kristjansson
Geomagnetic variations recorded in Neogene lava flows in Iceland
- 08:45–09:00 EGU2011-9118
Ulrich Hambach, Christian Rolf, Zeeden Christian, Markovic Slobodan, Jovanovic Mladjen, and Nowaczyk Norbert
Geomagnetic excursions recorded in loess: case studies from the Danubian loess province
- 09:00–09:15 EGU2011-13127
Emily Spokowski, **Joseph Liddicoat**, Robert Coe, Roxanne Smith, Brian Mailloux, Timothy Kenna, and Marina Iorio
Origin of the remanence recording the Mono Lake Excursion in the Mono Basin, CA
- 09:15–09:30 EGU2011-6274
Reidar Løvlie, Ronghua Wang, and Xisheng Wang
In situ re-magnetization experiments of loess on the Chinese loess plateau; evidence for localized pDRM
- 09:30–09:45 EGU2011-4118
Dario Bilardello, Josef Jezek, and Stuart Gilder
Understanding magnetic remanence acquisition through combined synthetic sediment deposition experiments and numerical simulations

09:45–10:00 EGU2011-8780

Ramon Egli and Michael Winklhofer

Some thoughts about the NRM of magnetofossil-rich sediments

COFFEE BREAK

Chairperson: Ramon Egli / Simo Spassov

10:30–10:45 EGU2011-8996

Edoardo Dallanave, Claudia Agnini, Giovanni Muttoni, and Domenico RioMagneto-biostratigraphy and rock-magnetism of the late Cretaceous-late Paleocene Ardo section
(Belluno Basin, NE Italy).

10:45–11:00 EGU2011-3728

Vadim Kravchinsky, Karol Rohraff, and Mauricio SacchiLake Baikal's magnetic record of the climate response to orbital forcing: advancing toward the continental
climate reference curve for the last 1.1 million years

11:00–11:15 EGU2011-100

Firoz Kadar Badesab, Hendrik Müller, Tilo von Dobeneck, Karin Bryan, Roger Briggs, and Thomas
Frederichs

Sediment sorting and magnetic properties of barrier beach sediments, Northeastern New Zealand

11:15–11:30 EGU2011-4598

Jinhua Li and Yongxin PanHow shape anisotropy affects bulk magnetic properties: Observation of magnetosome chains in
magnetotactic bacteria

11:30–11:45 EGU2011-2975

Tadeusz Magiera and Zygmunt Strzyszcz

Morphological and mineralogical forms of technogenic magnetic particles in industrial dusts

11:45–12:00 EGU2011-13976

Simo Spassov, Jozef Hus, and Souad Ech-ChakrouniA sampling technique for signals of fractal nature: Application to top soil magnetic susceptibility
measurements.

**EMRP8 – The magnetic environment, palaeomagnetic excursions and dipole lows, and reliability of the signal in
sediments – Posters**

Convener: Joseph Liddicoat | Co-Conveners: Ramon Egli, Simo Spassov, Nicolas Thouveny

Hall A | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Simo Spassov / Nicolas Thouveny

A26 EGU2011-11201

Karl Fabian and Thomas Frederichs

Quantifying gyroremanent magnetization in greigite-bearing sediments

A27 EGU2011-7523

Andreas U. Gehring, Jessica Kind, Michalis Charilaou, and Inés García-Rubio

Anisotropy as a key to detect magnetotactic bacteria and magnetofossils

A28 EGU2011-9748

Kathrin Lisa Kapper, Fabio Donadini, and Ann HirtRock- and archeomagnetic characterizations of burnt sediments to investigate the geomagnetic field evolution
during the mid-Holocene

A29 EGU2011-1497

Mikhail Bazhenov, Rob Van der Voo, Natalia Levashova, and Ada DominguezLate Devonian paleomagnetism of the North Tien Shan, Kyrgyzia: Does secular variation vary at a short time
scale ?

A30 EGU2011-12937

Joseph Liddicoat

Relative palaeomagnetic field intensity during the Mono Lake Excursion

A31 EGU2011-8174

Miriam Gómez-Paccard, Juan Cruz Larrasoña, and Santiago Giralt

A new Late Holocene paleosecular variation sedimentary record from central Asia (Lake Issyk-Kul, Kirgystan)

A32 EGU2011-1131

Tomoko Asami, Naoto Ishikawa, and Kanako IshikawaRock magnetic study on magnetic properties of the topmost sediments from the deepest area of Lake Biwa,
Japan

- A33 EGU2011-7101
Lucia Korff, Thomas Frederichs, and Tilo von Dobeneck
 Cyclic patterns in rock magnetic records of Pleistocene deep-sea sediments from the NW-Pacific near Shatsky Rise - indication of decreased bottom water ventilation?
- A34 EGU2011-2391
Youliang Su, Xing Gao, Qingsong Liu, Junbo Wang, Jinhua Li, and Zongqi Duan
 Mineral magnetic study of lacustrine sediments from Pumoyum Co Lake, southern Tibet, over the last 19 ka and paleoenvironmental significance
- A35 EGU2011-8533
Özlem Makarо?lu, Naci Orbay, Nam?k Ca?atay, Lauri J. Pesonen, Sena Akçer Ön, Umut B. Ülgen, and Mümtaz Hisarl?
 Holocene paleoenvironmental records of Lake Van (eastern Turkey) from mineral magnetic analysis
- A36 EGU2011-3147
Maja Reinholtsson, Ian Snowball, Lovisa Zillén, and Daniel Conley
 On the origin of fine-grained magnetic mineral (magnetite?) in laminated Baltic Sea sediments and implications for past environmental variability
- A37 EGU2011-9068
Ulrich Hambach and Guido Wiesenberg
 Neo-formation of a ferrimagnetic phase during thermal degradation of plant tissues: implications for the magnetic properties of top soils
- A38 EGU2011-1580
Aldo Winkler and Leonardo Sagnotti
 Low temperature hysteresis properties of traffic-related PM in Rome: a clue to estimate the content of superparamagnetic particles
- A39 EGU2011-14029
Francois Humbled, Jean Rasson, Jozef Hus, Simo Spassov, Alexandre Gonsette, and Olivier Hendrickx
 Magnetic Valley : a research valorization project

ML19 – Petrus Peregrinus Medal Lecture by Peter L. Olson (co-listed) – Orals

Convener: Mioara Mandea

Room: 36

Chairperson: Mioara Mandea

19:00–20:00 EGU2011-14177

Peter Olson

Magnetic reversals and the geodynamo: a whole-Earth perspective (Petrus Peregrinus Medal Lecture)

TS2.6 – Stress and strain patterns and mechanisms of micro-meso deformation in folded rocks (co-listed) – Orals

Convener: Olivier Lacombe | Co-Conveners: Stefano Tavani, Ruth Soto

Room: 27

Chairperson: EVANS/LACOMBE

08:30–08:45 EGU2011-1947

Marcel Frehner

The neutral lines in buckle folds

08:45–09:00 EGU2011-10561

Marta Adamuszek, Marcin Dabrowski, and Daniel W. Schmid

Folding of Nodular Layers - Insights from Field Observations and Numerical Modeling

09:00–09:15 EGU2011-2800

Mark Evans and Mark Fischer

Changing fluid conditions during folding: Implications for deformation mechanisms

09:15–09:30 EGU2011-10074

Nicolas Beaudoin, Nicolas Bellahsen, Olivier Lacombe, and Laurent Emmanuel

Fold-fracture relationships in a Laramide basement-cored fold, Rattlesnake Mountain Anticline, Wyoming

09:30–09:45 EGU2011-3667

Khalid Amrouch, Nicolas Beaudoin, **Olivier Lacombe**, Nicolas Bellahsen, and Jean-Marc Daniel

Evolution of paleostress magnitudes and pore fluid pressure during folding above a basement thrust: an integrated mechanical study at Sheep Mountain anticline (Wyoming, USA).

09:45–10:00 EGU2011-4766

Jean-Paul Callot, William Sassi, Khalid Amrouch, Mickael Barbier, Philippe Robion, Jean-Marc Daniel,

Olivier Lacombe, Martin Guiton, Nicolas Bellahsen, and Jean-Luc Faure

Constraints on deformation mechanisms during folding provided by rock physical properties: Case studies from Laramide uplifts (Wyoming, USA)

TS2.6 – Stress and strain patterns and mechanisms of micro-meso deformation in folded rocks (co-listed) – Posters

Convener: Olivier Lacombe | Co-Conveners: Stefano Tavani, Ruth Soto

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: TAVANI

XL265 EGU2011-13669

Stefano Tavani, Jordi Bausa, Joana Mencos, and Josep Anton Muñoz

The fracture pattern of the Sant Corneli oblique inversion anticline (Spanish Pyrenees).

XL266 EGU2011-437

Eloi Carola, Anna Quintà, Stefano Tavani, and Josep Anton Muñoz

Role of mesostructural inheritances in inversion-related fracturing. Example from the Mataporquera Anticline, Western Pyrenees (Spain).

XL267 EGU2011-496

Cristina García-Lasanta, Belén Oliva-Urcia, Teresa Román-Berdiel, and Antonio Casas-Sainz

When does AMS develop and register strain in extensional sedimentary basins?

XL268 EGU2011-774

Esther Izquierdo-Llavall, Antonio Casas-Sainz, and Inmaculada Gil-Peña

Fold geometry and foliation development in the western area of the Central Pyrenees

XL269 EGU2011-5614

Mickael Barbier, **Jean-Paul Callot**, Jean-Marc Daniel, and Youri Hamon

The sedimento-diagenetic control on the multiscale fracturing of a carbonate reservoir, the Madison Formation (Sheep Mountain, Wyoming, USA)

XL270 EGU2011-8237

Marco Snidero, Stefano Tavani, and J. Anton Muñoz

Sin-folding extensional deformation in the Anaran Anticline (Zagros, Iran).

XL271 EGU2011-9274

Philippe Robion, Fabien Humbert, Dominique Frizon de Lamotte, Jean-Claude Ringenbach, and Stéphanie Leghay

Evolution of deformation through the Sub Pyrenean Zone in the Corbières fold-thrust belt inferred from structural analyses and from magnetic and acoustic fabrics investigations : implications on the pretrophysical properties of the Eocene deposits.

XL272 EGU2011-10809

William Sassi, Martin Guiton, Yves Leroy, Narjes Kallel, **Jean-Paul Callot**, Jean-Marc Daniel, Olivier Lerat, and Jean-Luc Faure

Constraints on mechanical modelling of folding provided by matrix deformation and fracture network analysis: The case of Split Mountain (Utah, USA)

XL273 EGU2011-10836

Maria Gema Llorens, Paul D. Bons, Albert Griera, and Enrique Gomez-Rivas

Numerical simulation of layer folding in simple shear

XL274 EGU2011-11107

Lionel Sonnette, Jérôme Gattaccea, Christophe Larroque, and Jean-François Stéphan

Paleomagnetism as a marker of synfolding rotation. Example of the dome de Barrôt (subalpine massif, SE France)

XL275 EGU2011-11226

Nicolas Bellahsen, **Nicolas Beaudoin**, Olivier Lacombe, and Laurent Emmanuel

Kinematics of the arcuate pericinal termination of a basement-cored anticline: Structural and microstructural studies at Rattlesnake Mountain Anticline (Wyoming, USA)

XL276 EGU2011-13254

Marta Adamuszek, Daniel W. Schmid, and Marcin Dabrowski

Fold Geometry Toolbox: Automated determination of fold shapes, strain, and material properties

XL277 EGU2011-13778

Ruth Soto, Antonio M. Casas-Sainz, Cristina García-Lasanta, and Esther Izquierdo-Llavall

Flexural-slip mechanism in plunging folds. Example from N-S folds in the South Pyrenean thrust front, Central Pyrenees (Spain)

XL278 EGU2011-13838

Frédéric Mouthereau and Philippe Yamato

Rheology of large-scale Zagros folding

TS3.1 – Deformation and strain localization from micro- to lithospheric scales: patterns, processes, microstructures and the role of fluids in nature and experiment (co-listed) – Orals

Convener: Florian Fusseis | Co-Conveners: Luca Menegon, Sergio Llana-Funez, Claudia Trepmann, Sandy Cruden, Ulrich Riller, Christoph Schrank

Room: 27

Chairperson: n.n.

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| 10:30–10:45 | EGU2011-522 Phil Skemer Microstructural evolution of peridotite during high temperature deformation |
| 10:45–11:00 | EGU2011-12141 Albert Grieria , Mark W. Jessell, Ricardo Lebensohn, Lynn Evans, and Paul D. Bons Lattice Preferred Orientation (LPO) evolution in dynamically recrystallizing olivine polycrystals: a numerical approach |
| 11:00–11:15 | EGU2011-6571 Rolf Bruijn , David Mainprice, Philip Benson, and Luigi Burlini Fabric development during high temperature and pressure compaction of hot-pressed Rochester Shale |
| 11:15–11:30 | EGU2011-1773 Hugues Raimbourg , Toshihiro Kogure, and Tsuyoshi Toyoshima Crystal folding and recrystallization in naturally deformed orthopyroxene: insights from TEM imaging of subgrain/grain boundary development |
| 11:30–11:45 | EGU2011-2611 Mathieu Bourcier , Alexandre Dimanov, Eva Héripé, Michel Bornert, Wolfgang Ludwig, and Jean Raphanel Viscoplastic behavior of synthetic salt : In-situ SEM full field measurement, a micromechanical approach. |
| 11:45–12:00 | EGU2011-8305 Laurent Montesi Fabric development as the key to forming ductile shear zones and enabling plate tectonics |

LUNCH BREAK

Chairperson: n.n.

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| 13:30–13:45 | EGU2011-13759 Andrew Putnis , Håkon Austrheim, Christine V. Putnis, and Janneke Brouwer Mineral-fluid interaction and possible mechanisms of reaction-induced weakening |
| 13:45–14:00 | EGU2011-4922 Holger Stünitz , Luca Menegon, Pritam Nasipuri, Petr Jerabek, Florian Fusseis, Erling Ravna, Kåre Kullerud, and Steffen Bergh Strength evolution of the lower crust - examples from Northern Norway |
| 14:00–14:15 | EGU2011-1092 Santanu Misra and Jean-Pierre Burg Large strain rheology of syn-tectonic melting and crystallizing metapelites |
| 14:15–14:30 | EGU2011-4096 Rüdiger Kilian , Renée Heilbronner, and Holger Stünitz Deformation of dry quartz in shear zones |
| 14:30–14:45 | EGU2011-1943 Guillaume Desbois , Janos L. Urai, Peter A. Kukla, Uwe Wollenberg, Fabián Pérez-Willard, Zsolt Radí, and Sandor Riholm Distribution of brine in grain boundaries during static recrystallization in wet, synthetic halite: insight from Broad Ion Beam sectioning and SEM observation at cryogenic temperature |
| 14:45–15:00 | EGU2011-6133 Antoine Quilichini , Luc Siebenaller, Christian Teyssier, and Torsten Vennemann Plumbing system at the brittle-ductile transition of a shear zone - insights from the Bitterroot detachment, MT, USA |

Chairperson: Ulrich Riller, Florian Fusseis

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| 15:30–15:45 | EGU2011-5814 Aude Gébelin , Andreas Mulch, Christian Teyssier, Matthew Heizler, Torsten Vennemann, and Nicholas C.A. Seaton Quartz recrystallization and fluid flow during exhuming footwall rocks of the Northern Snake Range detachment, Nevada |
| 15:45–16:00 | EGU2011-4315 Alison Ord and Bruce Hobbs Localised Folding and Axial Plane Structures |
| 16:00–16:15 | EGU2011-5478 Christoph Schrank , Florian Fusseis, Ali Karrech, and Klaus Regenauer-Lieb Thermal elasticity promotes failure in the brittle-ductile crust |
| 16:15–16:30 | EGU2011-8979 Bernhard Grasemann , Cornelius Tschech, and Marcin Dabrowski How boudinage triggers the localization of low-angle normal faults |

- 16:30–16:45 EGU2011-5013
Iris Lenauer and Ulrich Riller
 Strain localization in mafic rocks: evidence from the Sudbury Igneous Complex, Canada
- 16:45–17:00 EGU2011-1499
Jean Braun, Frédéric Herman, and Geoffrey Batt
 Is there strain softening in the Earth's crust?

TS3.1 – Deformation and strain localization from micro- to lithospheric scales: patterns, processes, microstructures and the role of fluids in nature and experiment (co-listed) – Posters

Convener: Florian Fusseis | Co-Conveners: Luca Menegon, Sergio Llana-Funez, Claudia Trepmann, Sandy Cruden, Ulrich Riller, Christoph Schrank

Hall XL | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Sandy Cruden

- XL279 EGU2011-836
 Marco Antonio López-Sánchez, Alberto Marcos, Francisco José Martínez, and **Sergio Llana-Funez**
 Strain gradient recorded in the Penedo Gordo granite during extensional movement of crustal-scale Vivero Fault (NW Spain)
- XL280 EGU2011-924
Ayca Yurdakul and Bradford Hager
 Delineation of Deformation Using Finite Element Modeling: A Case From Western Turkey
- XL281 EGU2011-1093
Santanu Misra and Jean-Pierre Burg
 Evolution of kink-band microstructures and rheology during torsion deformation of muscovite
- XL282 EGU2011-1702
Ulrich Riller, Alexander Cruden, David Boutelier, and Christoph Schrank
 Origin of sinuous deformation patterns in hot, wide orogens
- XL283 EGU2011-1705
Ulrich Riller, David Boutelier, Christoph Schrank, and Alexander Cruden
 Role of kilometer-scale weak circular heterogeneities on upper crustal deformation patterns: evidence from scaled analogue modeling and the Sudbury Basin, Canada
- XL284 EGU2011-1731
Maartje Houben, Guillaume Desbois, and Janos Urai
 A comparative study of fabrics and porosity in shaly and sandy facies of Opalinus Clay by BIB-SEM methods
- XL285 EGU2011-2301
Alexander Simakin
 Different ways to portrait anisotropic mantle rheology.
- XL286 EGU2011-2317
Luca Menegon, Holger Stünitz, Pritam Nasipuri, Livia Nardini, and Renee Heilbronner
 Strain localization in lower crustal shear zones due to granular flow of syndeformational reaction products
- XL287 EGU2011-2722
Johanna Nevitt, David Pollard, and Peter Lovely
 Evolution of fault geometry and ductile fabrics under brittle-ductile conditions: an example from the Mount Abbot Quadrangle, Sierra Nevada, CA
- XL288 EGU2011-5028
Philippe Agard, Romain Augier, and Patrick Monié
 Shear band formation and strain localization on a regional scale: evidence from anisotropic rocks below a major detachment (Betic Cordilleras, Spain)
- XL289 EGU2011-6269
Pinar Ozfirat, Mark James Caddick, and Alan Bruce Thompson
 The influence of textural inheritance and general kinetics in the development of porphyroblasts during metamorphism
- XL290 EGU2011-6309
Marianne Negrini, Holger Stünitz, and Luca Menegon
 Experimental deformation, partial melting, and compositional changes in perthitic K-feldspar at high pressure and temperature
- XL291 EGU2011-6518
Rolf Bruijn, Bjarne Almqvist, Philip Benson, and Ann Hirt
 Magnetic susceptibility in experimentally compacted Rochester Shale powder
- XL292 EGU2011-7408
Chiara Prete, Richard Spiess, and Annalisa Tunisi
 Reaction softening of the deeper crust: an example from Baja California (Mexico)

- XL293 EGU2011-7441
Wentian Liang, Guowei Zhang, Yong Bai, and Kurt Stüwe
Emplacement mechanism of Mishuling Pluton: Implications for the Late Indosinian Tectonic Evolution of Qinling Orogen
- XL294 EGU2011-8110
Nicolas Brantut, Emmanuel David, Eva Heripre, Alexandre Schubnel, and Robert W Zimmerman
Elastic wave velocity and acoustic emission monitoring during Gypsum dehydration under triaxial stress conditions
- XL295 EGU2011-8961
Bernhard Grasemann and Marcin Dabrowski
Pinch and swell boudins during high-strain simple shear
- XL296 EGU2011-9213
Sabrina Diebold, Hans De Bresser, William B. Durham, and Laura Stern
Flow of pure water ice: Grain growth and deformation
- XL297 EGU2011-9396
Alexander Cruden, John Grocott, and Carlos Arevalo
Interplay between slab dynamics and upper plate structure for localizing magmatism in continental arcs
- XL298 EGU2011-9430
Renee Heilbronner, Anja Thust, and Holger Stunitz
Mapping water and misorientations in experimentally deformed quartz
- XL299 EGU2011-9487
Jacek Szczepanski, Marcin Dabrowski, Olav Gundersen, and Robert Anczkiewicz
A fabric study of the Jeg?owa date-quartzite (quartz metaconglomerate)
- XL300 EGU2011-9686
Marcel Thielmann and Boris J. P. Kaus
Shear heating and subduction initiation
- XL301 EGU2011-9972
Julia Bial and **Claudia Trepmann**
From brittle and crystal-plastic deformation to dissolution-precipitation creep - the microfabric development in HP-metamorphic serpentinized mantle peridotites
- XL302 EGU2011-10763
Giorgio Pennacchioni, Eleonora Zucchi, Silvia Favaro, Bernd Leiss, and Jens Walter
Development of crystallographic preferred orientation in natural quartz veins during post-magmatic cooling and deformation of granitoid plutons: comparison between Adamello (Avio intrusion; Southern Alps, Italy) and Sierra Nevada (Lake Edison intrusion; C
- XL303 EGU2011-10886
Vaneeda Allken, Ritske Huismans, and **Cedric Thieulot**
Three-dimensional numerical modelling of crustal extension
- XL304 EGU2011-11095
Marcin Dabrowski and Bernhard Grasemann
Numerical modelling of domino boudinage under high simple shear strain
- XL305 EGU2011-11887
Joyce Schmatz and Janos L. Urai
The interaction of migrating grain boundaries and fluid inclusions in naturally deformed quartz
- XL306 EGU2011-12281
Laurent Ciancaleoni
Late Oligocene and Neogene kinematics of convergence at plate boundaries in the Eastern Central Alps : insights from shear zone patterns in metagranites from the European and Adriatic plates in the vicinity of the Insubric Line
- XL307 EGU2011-12771
Katharina Methner, Andreas Mulch, Aude Gébelin, Christian Teyssier, Micheal Wells, and Mike Cosca
Eocene extension and meteoric fluid flow in quartzite mylonite of the Raft River metamorphic core complex (USA)
- XL308 EGU2011-13153
Flora Andres-Araujo, **Angel Rodríguez-Santana**, Anaqua Gonzalez, Claudio Moreno, Francisco J. Pérez-Torrado, Francisco Santana, and Tim A. Minshull
Sensitivity analysis of a model of lithospheric flexure: A case study of the flexure effect of Tenerife island on Gran Canaria island in the last 4 ma.
- XL309 EGU2011-13351
Jens Walter, Bernd Leiss, Giorgio Pennacchioni, and Christian Randau
Quantitative Neutron and X-ray texture analysis of Quartz mylonites - a comparative study
- XL310 EGU2011-13403
Jens Walter, Andreas Houben, Werner Schweika, Michael Stipp, Klaus Ullemeyer, Helmut Klein, Bernd Leiss, Bent T. Hansen, and Werner F. Kuhs
POWTEX Diffractometer at FRM II - New Perspectives in Geoscientific Neutron Diffraction

Friday, 08 April

GD7.1/EMR12/GMPV18/SM4.6 – Structure, Composition and Dynamics of the Deep Earth (co-organized) – Orals

Convener: Jon Mound | Co-Conveners: Arwen Deuss, Michael Ammann, Hauke Marquardt

Room: 22

Chairperson: Jon Mound and Hauke Marquardt

13:30–13:45 EGU2011-3592

Renaud Deguen, Thierry Alboussière, Philippe Cardin, and Mickael Melzani
Convection, melting and the structure of the inner core and lowermost outer core

13:45–14:00 EGU2011-11177

Chris Finlay
A geomagnetic perspective on core structure and dynamics

14:00–14:15 EGU2011-2631

Seiki Asari and Vincent Lesur
Radial vorticity constraint in the core flow modeling

14:15–14:30 EGU2011-3068

Pavel Hejda and Alexander P. Anufriev
Compressibility effects in the Earth's core convection

14:30–14:45 EGU2011-7944

Phil Livermore and Rainer Hollerbach
An excitation mechanism for torsional oscillations on the tangent cylinder

14:45–15:00 EGU2011-7159

Alexandre Fournier, Julien Aubert, and Erwan Thébault
A proposal for the selection of numerical dynamo models for data assimilation practice

Chairperson: Hauke Marquardt and Jon Mound

15:30–15:45 EGU2011-11437

George Helffrich and Satoshi Kaneshima
Outer core compositional stratification

15:45–16:00 EGU2011-5442

Dmitry Krasnoshchekov, Vladimir Ovtchinnikov, and Petr Kaazik
Observational evidence for cylindrical anomaly of seismic velocity in the Earth's outer core

16:00–16:15 EGU2011-1480

Andrew Walker, Andrew Nowacki, Alessandro Forte, James Wookey, and J-Michael Kendall
Can seismic anisotropy in D" be used to constrain flow patterns in the lowermost mantle?

16:15–16:30 EGU2011-5066

Nico De Koker
Thermal Conductivity of the Lowermost Mantle

16:30–16:45 EGU2011-5380

Gabriele Morra, **Dave Yuen**, and Fabio Cammarano
Necking of Plume Conduits and Severing of Plumeheads due to Non-Monotonic Plume Structure and Density Structure

16:45–17:00 EGU2011-11666

Nicola Tosi and **David Yuen**
Branching of plumes at 660 km discontinuity and bounds on lateral viscosity contrast in the lower mantle

G1.2/EMRP4 – Mathematical methods in the analysis and interpretation of potential field data and other geodetic time series (co-organized) – Orals

Convener: Volker Michel | Co-Conveners: Aude Chambodut, Mohamed HAMOUDI, Wieslaw Kosek, Jürgen Kusche, Michael Schmidt, Frederik J. Simons

Room: 17

Chairperson: V. Michel

10:30–10:45 EGU2011-12405

André Horbach and Hans-Peter Bunge
An efficient analytic method to derive geoids from geodynamic models

10:45–11:00 EGU2011-2106

Oliver Baur and Nico Sneeuew
Assessing Greenland ice mass loss by means of point-mass modelling: a viable methodology

- 11:00–11:15 EGU2011-7246
Ehsan Forootan and Jürgen Kusche
A non-Gaussian decomposition of GRACE-derived climate signals, using Independent Component Analysis (ICA)
- 11:15–11:30 EGU2011-10013
Enrico Kurtenbach, Torsten Mayer-Gürr, and Annette Eicker
The ITG-Grace2010 Kalman filter approach - Some insights
- 11:30–11:45 EGU2011-8796
Katrin Bentel, Gabriel Goebel, Michael Schmidt, and Christian Gerlach
Artificial effects in regional gravity field representation caused by point grids of input data and localizing base functions
- 11:45–12:00 EGU2011-210
Hakan Alp, A. Muhittin Albora, and Huseyin Tur
Determining of lineaments of Iskenderun Basin (Southern Turkey) using Wavelet Transformation
- 12:00–12:15 EGU2011-5120
Fotini Vervelidou and Erwan Thébault
A robust estimate of the lithospheric magnetic field over South Africa using statistical and bayesian-like approaches

G1.2/EMRP4 – Mathematical methods in the analysis and interpretation of potential field data and other geodetic time series (co-organized) – Posters

Convener: Volker Michel | Co-Conveners: Aude Chambodut, Mohamed HAMOUDI, Wieslaw Kosek, Jürgen Kusche, Michael Schmidt, Frederik J. Simons

Halls X/Y | Display Time 08:00–17:00

Author in Attendance: 13:30–15:00

Chairperson: V. Michel

- XY144 EGU2011-3299
Ondrej Soucek, Zdenek Martinec, and Jakub Velimsky
Quasi-static electromagnetic induction in spherical Earth: Vector potential formulation.
- XY145 EGU2011-1820
Tao Xing
The disquisition on magnetic basement and magmatic activity in the South Yellow Sea
- XY146 EGU2011-11553
Isabel Blanco-Montenegro, Fuensanta G. Montesinos, Iacopo Nicolosi, Alessandro Pignatelli, José Arnoso, and Massimo Chiappini
Potential field anomalies as a tool for imaging the inner structure of volcanic islands: the case of La Gomera (Canary Islands)
- XY147 EGU2011-1061
Volker Michel and Doreen Fischer
Locally adapted resolutions for potential field modelling and inversion
- XY148 EGU2011-1207
Doreen Fischer and Volker Michel
The Amazon Watershed - Sparse Regularization of Inverse Gravimetry
- XY149 EGU2011-2581
Lucia Seoane, **Guillaume Ramillien**, Frédéric Frappart, Richard Biancale, Serge Gratton, and Xavier Vasseur
Validation of constrained regional solutions of water mass change derived from GRACE KBRR data
- XY150 EGU2011-13154
Sandra Preaux, Theresa Diehl, Chris Huang, and Carly Weil
A Comparison of Filtering Techniques for Airborne Gravity Data
- XY151 EGU2011-5147
Robert Tenzer and Vladislav Gladkikh
Analysis of the atmospheric pressure loading in New Zealand
- XY152 EGU2011-5151
Robert Tenzer and Vladislav Gladkikh
Comparison of the global ocean tide models TPXO7.2, GOT00.2, NAO.99b, FES2004, and EOT10a in New Zealand
- XY153 EGU2011-355
Erdinc Oksum and Z.Mumtaz Hisarli
Estimation of the avarage crustal density and its contrast to the mantle in the Eastern Anatolia, Turkey
- XY154 EGU2011-1909
Janusz Bogusz and Anna Klos
Wavelet analysis for investigation of precise GNSS solutions' credibility

- XY155 EGU2011-6613
Matthias Hackl, Rocco Malservis, and Urs Hugentobler
 Time correlated noise vs. transient in GPS time series
- XY156 EGU2011-2034
Wieslaw Kosek, Waldemar Popi?ski, and Tomasz Niedzielski
 An investigation into oscillations polarization in the geodetic and fluid excitation functions of polar motion
- XY157 EGU2011-3567
Brian Luzum, Wieslaw Kosek, Nathan Shumate, and Maciej Kalarus
 The IERS Earth Orientation Parameters Combination of Prediction Pilot Project (EOPCPPP)

EMRP5 – Modeling of global and crustal scale magnetic anomalies – Posters

Convener: Juha V. Korhonen | Co-Conveners: Tamara Litvinova, Patrick T. Taylor

Hall A | Display Time 08:00–17:00

Author in Attendance: 10:30–12:00

Chairperson: n.n.

- A7 EGU2011-14065
Alevtina Petrova and Maxim Petrishchev
 Study of the magnetic anomalies from WDMAM 2007 in the geothermal area of alpine folding (Italy and Tyrrhenian Sea)
- A8 EGU2011-14070
Tamara Litvinova and Alevtina Petrova
 Geological interpretation of the magnetic anomalies from WDMAM 2007 and from observation in the Barents Sea region
- A9 EGU2011-14062
Tamara Litvinova and Alevtina Petrova
 The analysis of magnetic anomalies from WDMAM 2007 and the anomalous magnetic field in the south of eastern Siberia
- A10 EGU2011-11109
Mohamed Hamoudil, Vincent Lesur, Jerome Dymant, and Erwan Thebault
 GAMMA-2: a revision of the candidate for the World Digital Magnetic Anomaly Map
- A11 EGU2011-12756
Juha V. Korhonen and the GTK WDMAM Team
 A Candidate Model for Second Edition of WDMAM by Team GTK
- A12 EGU2011-14084
Juha V Korhonen, Sven Aaro, Sören Byström, and Gerhard Schwarz
 Observed regional magnetic anomaly drift in Sweden between 1965 and 1998
- A13 EGU2011-11070
Karl Fabian, Marco Brönnér, Odleiv Olesen, and Suzanne A. McEnroe
 Separation of induced and remanent anomalies through analyses of multiple aeromagnetic surveys
- A14 EGU2011-6938
Gerald Gabriel, Abhey Ram Bansal, Ingo Dressel, Vijay Prasad Dimri, and Charlotte Krawczyk
 Curie depths estimation in Germany: methodological studies for derivation of geothermal proxies using new magnetic anomaly data
- A15 EGU2011-12181
Jorge Miranda, Luis Joaquim, Lourenço Nuno, Fernandes Rui, and Neves Conceição
 Evolution of the Segmentation Pattern of the Mid-Atlantic Ridge between 20N and 41N, in the last 25 Ma

EMRP6 – Integrated rock physics, geological and geophysical studies for the characterization, protection and valorization of archaeological and historical sites – Posters

Convener: Yoann Quesnel | Co-Conveners: Salvatore Piro, Emiliano Di Luzio

Hall A | Display Time 08:00–17:00

Author in Attendance: 10:30–12:00

Chairperson: PIRO, Salvatore

- A16 EGU2011-6148
Claudine Malfilatre, Philippe Boulvais, Annick Chauvin, Erwan Hallot, Marc Poujol, and Denis Gapais
 Characterization of natural building granitic stones
- A17 EGU2011-4386
 Claudia Principe, **Jonas Malfatti**, Debora Brocchini, and Silvia Guideri
 Archaeomagnetic dating of Rocca San Silvestro limekiln
- A18 EGU2011-10486
 Jean-Claude Parisot, Corinne Landuré, **Claude Vella**, Daniel Hermitte, and Philippe Dussouillez
 Occurrence of Roman occupation in the Rhône delta during late antiquity: an outer harbor of Arles?

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| A19 | EGU2011-3003 Georg Kaufmann, Burkart Ullrich , Ronald Freibothe, and Ines Beilke-Voigt A multi-geophysical approach reveals information at an Early Iron Age Cult Site near Frankfurt/Oder, Germany |
| A20 | EGU2011-12227 Emiliano Di Luzio , Nello Imposa, Franco Fazio, and Giuseppe Rannisi Geological factors controlling the site response in the historical centre of Rome: insights from updated modelling of the subsoil and seismic noise measurements |
| A21 | EGU2011-10395 Emiliano Di Luzio , Gianluca Bianchi Fasani, and Bretschneider Alberto Multi-methodological stability analysis of the slope beneath the "Magna Mater" temple in the Palatino archaeological area (Rome, Italy) |
| A22 | EGU2011-7953 Salvatore Piro , Daniela Zamuner, and Melda Kucukdemirci High-resolution GPR surveys for the study and characterisation of the archaeological site in urban area. The case of Palatino Hill (Rome, Italy) |
| A23 | EGU2011-7886 Salvatore Piro , Daniela Zamuner, and Melda Kucukdemirci Integration of Ground Remote Sensing Methods for Archaeological Prospections. |

SSS2.2/EMRP15/GM10.2/PS7.0 – Modeling the Experiment, Experimenting the Models (co-organized) – Orals

Convener: Manuel Seeger | Co-Conveners: Luigi Colangeli, Javier Martin-Torres, Nikolaus J. Kuhn, Karsten Seiferlin, Markus Casper, Derek W. G. Sears, Ulrike Scherer, Ruth Ziethe, Tobias Heckmann, Sandra Schumacher

Room: 9

Chairperson: Manuel Seeger

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| 08:30–08:45 | EGU2011-2476 Mike Kirkby Modelling overland flow generation on a rough hillslope |
| 08:45–09:00 | EGU2011-2012 Afshin Ghahramani and Yoshiharu Ishikawa Rain splash transport over steep hillslope; modeling of transport |
| 09:00–09:15 | EGU2011-629 Stefan Wirtz , Manuel Seeger, and Johannes B. Ries Experimental validation of basic model assumptions |
| 09:15–09:30 | EGU2011-5410 Zhengyao Nie, Gavan McGrath, and Christoph Hinz Rock particle fragmentation, as an alternative to fluvial transport, explains size sorting on arid hillslopes |
| 09:30–09:45 | EGU2011-10118 Olivier Dewitte , Claudio Bosco, Miet Van Den Eeckhaut, and Mohamed Daoudi A statistical approach to predict gully initiation susceptibility with common spatial data |
| 09:45–10:00 | EGU2011-1025 Aleksey Sidorchuk Stochastic theory of soil erosion: the novel approach to modelling and experimentation |

COFFEE BREAK

Chairperson: Ulrike Scherer, Luigi Colangeli

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| 10:30–10:45 | EGU2011-1311 Michael Dietze and Arno Kleber Orientation patterns of stone pavements: from field experiments to a physically-based model and towards laboratory experiments |
| 10:45–11:00 | EGU2011-7977 An Van den Putte , Gerard Govers, Jan Diels, Annemie Leys, Christoph Langhans, and Wim Clymans Can rainfall simulation data be used to parameterize a dynamic infiltration model? |
| 11:00–11:15 | EGU2011-2287 Willem Maetens , Jean Poesen, and Matthias Vanmaercke Confrontation of the PESERA map with measured soil loss rates at plot scale |
| 11:15–11:30 | EGU2011-2938 Jonathan Merrison , Haraldur Gunnlaugsson, Christina Holstein-Rathlou, Svend Knak Jensen, Per Nørnberg, and Keld Rasmussen Granular Electrification, Sand Transport and Mineralogy. |

- 11:30–11:45 EGU2011-6606
 Gregor Golabek, Tobias Keller, **Taras Gerya**, Paul Tackley, Guizhi Zhu, and James Connolly
 Core and early crust formation on Mars
- 11:45–12:00 EGU2011-8070
Rafael Escribano, Oscar Gálvez, Belén Maté, Miguel A. Moreno, Víctor J. Herrero, and F. Javier Martín-Torres
 Anomalies in the spectra of planetary ice particles

LUNCH BREAK

Chairperson: Javier Martin Torres

- 13:30–13:45 EGU2011-10584
Ha Tran, Jean-Michel Hartmann, and Geoffrey Toon
 Line-mixing effects on spectral shape and consequences for laboratory and atmospheric spectra analyses
- 13:45–14:00 EGU2011-8929
Ludmilla Kolokolova
 Remote Sensing of Aggregated Aerosols Using Photopolarimetry
- 14:00–14:15 EGU2011-13452
Enric Palle
 Earthshine measurements and extrasolar planet spectral retrieval
- 14:15–14:30 EGU2011-10233
Séverine Robert, Arnaud Mahieux, Valérie Wilquet, Rachel Drummond, Ann Carine Vandaele, Jean Vander Auwera, Yuri Borkov, Valery I. Perevalov, Sergei A. Tashkun, and Jean-Loup Bertaux
 Analysis of new Absorption Bands of the Carbon Dioxide Isotopologues in Venus Spectra
- 14:30–14:45 EGU2011-2366
David Jacquemart
 Recent progress in acetylene laboratory measurements for astrophysical applications
- 14:45–15:00 EGU2011-12177
Wladimir Neumann, Doris Breuer, and Tilman Spohn
 The efficiency of magma heat transport in accreting planetesimals

SSS2.2/EMRP15/GM10.2/PS7.0 – Modeling the Experiment, Experimenting the Models (co-organized) – Posters

Convener: Manuel Seeger | Co-Conveners: Luigi Colangeli, Javier Martin-Torres, Nikolaus J. Kuhn, Karsten Seiferlin, Markus Casper, Derek W. G. Sears, Ulrike Scherer, Ruth Ziehe, Tobias Heckmann, Sandra Schumacher

Hall Z | Display Time 08:00–17:00

Author in Attendance: 15:30–17:00

Chairperson: Nikolaus Kuhn

- Z58 EGU2011-8109
Pelin Aklik and Wei Wu
 Centrifuge modeling of geotextile reinforced slopes
- Z59 EGU2011-13632
Constance Bornkampf and Jürgen Schmidt
 Experimental research and modelling macropore flow in soils
- Z60 EGU2011-870
Tom Coulthard, Greg Hancock, and John Lowry
 Modelling soil erosion with a downscaled landscape evolution model
- Z61 EGU2011-1433
Stefan Strohmeier and Andreas Klik
 Erosion Plot Monitoring: Impact of different Tillage Systems on average annual Soil Erosion and the Significance of Extreme Rainfall Events
- Z62 EGU2011-1625
Nikolaus J. Kuhn and Elizabeth K. Armstrong
 Organic Matter erosion from sandy soils: solving the mass balance
- Z63 EGU2011-4123
Ulrike Scherer, Erwin Zehe, Klaus Traebing, and Kai Gerlinger
 Parameterisation of a soil detachment model using rainfall simulation experiments
- Z64 EGU2011-5740
Claude Mügler, Olivier Planchon, Jérémie Patin, Sylvain Weill, Norbert Silvera, Patricia Richard, and Emmanuel Mouche
 Modelling of overland flow and tracer transport experiments under simulated rainfall at plot scale

- Z65 EGU2011-7541
Verena Butzen, Manuel Seeger, Markus Casper, and Johannes B. Ries
 Parameterization of the process-based soil erosion model LISEM by means of experimental measurements
- Z66 EGU2011-7857
Mazhar Ali, Geert Sterk, and Piet Peters
 Influence of hydraulic parameters on sediment transport in shallow flows
- Z67 EGU2011-888
Mazhar Ali, Geert Sterk, Manuel Seeger, and Leo Stroosnijder
 Experimental Estimation of Mean Flow Velocity under Overland Flow
- Z68 EGU2011-12811
Lucy Clarke, Timothy Quine, and Andrew Nicholas
 Experimental study of flow width dynamics on alluvial fans
- Z69 EGU2011-12945
Marc Biancheri - Astier, Valérie Ciarletti, and Alain Reineix
 3D characterization of the deep sub-surface by a bistatic HF GPR operating from the surface
- Z70 EGU2011-4665
 María J. García-Algaba, **Encarnación V. Taguas**, Luciano Mateos, and José A. Gómez
 Describing and modelling the rainfall-runoff pattern of an olive orchard large catchment in Southern Spain
- Z71 EGU2011-875
Mary Elise Rumpf, Sarah Fagents, Christopher Hamilton, and Ian Crawford
 The Search for a Solar Record in Lunar Paleoregoliths through Numerical Modeling and Analogous Experiments
- Z72 EGU2011-2006
Hiroko Nagahara and Kazuhito Ozawa
 Phyllosilicate and its role on the evolution of organic materials in the early solar nebula
- Z73 EGU2011-2378
Attila Császár, Csaba Fábris, and Edit Mátyus
 Toward a Line List for Methane
- Z74 EGU2011-2728
Jiri Pavlu, Martin Beranek, Jakub Vaverka, Ivana Richterova, Zdenek Nemecek, and Jana Safrankova
 Lunar dust simulants (LHT, JSC, MLS) compared in the frame of secondary emission
- Z75 EGU2011-3601
Juris Freimanis
 Polarized radiative transfer equation in some special curvilinear coordinate systems
- Z76 EGU2011-13174
Erwan Tréguier, Albrecht Schmidt, Frédéric Schmidt, Alejandro Cardesín, Stéphane Erard, Patrick Martin, Patrick Pinet, Saïd Moussaoui, and Nicolas Dobigeon
 Analysis of a collection of planetary hyperspectral images through non-negative source separation
- Z77 EGU2011-4899
Marie-Claire Gazeau, Yves Benilan, Et-Touhami Es-Sebbar, Antoine Jolly, Emmanuel Arzoumanian, Nicolas Fray, and Hervé Cottin
 Characterization of continuous vacuum ultraviolet lamps - Implication on the study of methane photolysis at Lyman alpha (121.6 nm)
- Z78 EGU2011-7729
Jeremy Guignard, Misha Bystricky, and Mickael Toplis
 Grain Growth in Experimental Forsterite ± Metal ± Silicate Melt Systems: Analogues of Chondritic and Achondritic Parent Bodies.
- Z79 EGU2011-9862
Alexander Steigler and Günter Kargl
 A broadband frequency characterisation of Martian analogue dielectric behaviour
- Z80 EGU2011-11540
 Olivia Golle, **Caroline Dumoulin**, Ondrej Cadek, and Gael Choblet
 A method to compute topography and geoid from viscous convection overlaid by an elastic lithosphere
- Z81 EGU2011-12375
Javier Martin-Torres, Alejandro Soto, Mark Richardson, Ian McEwan, and Javier Gómez-Elvira
 Radiative Transfer Calculations for the REMS/Mars Science Laboratory Ground Temperature Sensors
- Z82 EGU2011-12284
Javier Martin-Torres
 Calculation of Refraction Indices of Mars and Terrestrial Atmospheres Using Spectroscopic Databases
- Z83 EGU2011-2972
Jonathan Merrison, Line Drube, Haraldur Gunnlaugsson, Christina Holstein-Rathlou, Svend Knak Jensen, Jon Mason, Morten Bo Madsen, Per Nørnberg, and Manish Patel
 Research Using the European Mars Simulation Wind Tunnel Facility
- Z84 EGU2011-2727
Jakub Vaverka, Jiri Pavlu, Martin Beranek, Ivana Richterova, Jana Safrankova, and Zdenek Nemecek
 Secondary emission from Martian soil simulant

