AGU Chapman Conference on Detachments in Oceanic lithosphere: Deformation, Magmatism, Fluid Flow and Ecosystems

Agros, Cyprus, 8-16 May 2010

Solicited Talks		
Author	**Affiliation**	**Title**
M. Cannat	CNRS-IPGP	Oceanic detachment faults and the exhumation of gabbros and mantle-derived peridotites at mid-ocean ridge
M. Cheadle	University of Wyoming	Fault rheology, footwall deformation and geochronologic constraints on the process of detachment faulting at mid-ocean ridges
G. Früeh-Green	ETH Zurich	Serpentinization of the oceanic lithosphere: consequences for hydrothermal activity and biogeochemical cycles
B. John	University of Wyoming	Oceanic and continental detachment fault systems: how similar are they?
P. Kelemen	Columbia University	Evaluating in situ mineral carbonation in near-seafloor peridotite for CO_2 capture and storage
D. Kelly	University of Washington	Linkages among serpentinization and life in ultramafic-hosted hydrothermal systems: the Lost City hydrothermal field
G. Manatschal	IPGS-EOST	The role of detachment faults during crustal thinning, mantle exhumation and continental break-up at magma-poor rifted margins?
A. McCaig	University of Leeds	Hydrothermal systems and detachment faulting
A. Morris	University of Plymouth	Palaeomagnetic insights into oceanic detachment fault processes at mid-ocean ridges
M. Perner	University of Hamburg	Microbial communities and metabolisms from basalt- and ultramafic-hosted vents
A.-L. Reysenbach	Portland State University	TBA
R. Sohn	Woods Hole Oceanographic Institution	Geophysical constraints on the structure of detachment faults: stone cold facts, red hot topics, and everything in-between

Poster Presentations		
Author	**Affiliation**	**Title**
N. Abe	JAMSTEC	High temperature metamorphism and petrological insights of an abyssal chromitites from Site 1271, ODP Leg 209, MAR 15°20'N
K. Achenbach	Durham University	Lithosphere accretion and the deepest roots of detachment faults: evidence from abyssal peridotites beneath Atlantis Bank, SWIR
M. Andreani	ENS - Université de Lyon	Tectonic structure and internal composition of the rainbow massif, Mid-Atlantic ridge 36°14'N
G. Baines	University of Adelaide	The tectonic setting and evolution of the Atlantis Bank oceanic core-complex
D. Blackman	Scripps Institution of Oceanography	Refraction constraints on 2~5 km subseafloor depths, Atlantis Massif MAR 30°N
C. Boulart	LMTG-CNRS, Tolouse	Emerging technologies for in situ dissolved methane measurements in hydrothermal vents
A. Bronner	University of Strasbourg	Magnetic anomalies in the ocean-continent transition zone from the Iberian-Newfoundland margins: an alternative view.
W. R. Buck	LDEO of Columbia University	Magmatic influences on axial relief and oceanic core complex formation
J. P. Canales	Woods Hole Oceanographic Institution	Advanced seismic imaging of oceanic core complexes
J. Cann	University of Leeds	Oceanic core complexes in the Mid-Atlantic Ridge for 200 km south of the Kane fracture zone
M. Cannat	CNRS-IPGP	Lateral and temporal variations in the degree of mechanical weakening in the footwall of oceanic detachment faults
P. Canovas	Arizona State University	Thermodynamic constraints on biomolecule synthesis and metabolism due to alteration of ultramafic host rock
J. Casey	University of Houston	Evidence for high degrees of mantle melting, yet extensive development of oceanic core complexes and significant evidence of low magmatic production on the Mid-Atlantic ridge between 12°-16°N
T. Castelain	University of Leeds	Hydrothermal fluid flow in oceanic gabbros, IODP Site 1309, Mid-Atlantic ridge: strontium and oxygen isotopic data

E. Choi	LDEO of Columbia University	3D numerical models for the formation of oceanic and continental core complexes
C. Christofferson	University of Wyoming	The igneous architecture of IODP Hole U1309D: ~10's meter scale units suggest accretion by small volume intrusive events
E. Cole	University of Wyoming	Understanding hydrothermal fluid flow along oceanic detachment faults - Kane oceanic core complex, 23°N Mid Atlantic Ridge
A. Dannowski	IFM - GEOMAR	Two end-members of oceanic core complex formation
A. Delacour	OMP-UNIV. PAUL SABATIER	Serpentinization along the Mid-Atlantic Ridge (13°-36°N)
A. Denny	University of Washington	Geologic evolution and structural control of the lost city hydrothermal field
H. Dick	Woods Hole Oceanographic Institution	Tale of two core complexes: contrasting crustal architecture and fault geometries
Y. Ebert	The Hebrew University Of Jerusalem	Ridge-transform intersection: inferences from paleomagnetism and structure of the Troodos ophiolite, Cyprus
A. Efimov	Institute of Geology and Geochemistry of the Russian Academy of Sciences	Strontium in primitive gabbros of deep holes 735B and U1309D: incompatibility with magmatic models of formation of the third seismic layer of ocean
J. Escartin	CNRS - IPGP	Strain localization along detachment faults: mechanical role of serpentinite, talc, tremolite and chlorite
F. Fontaine	CNRS - IPGP	Hydrothermal circulation in and around detachment faults: inferences from three-dimensional numerical modeling
G. Früeh-Green	ETH Zurich	Faults, fluids and alteration during the evolution of an oceanic core complex: constraints from the Atlantic Massif
P. Gaëlle	University of Nantes	New Variscan ^{40}Ar-^{39}Ar ages for the Danubian ophiolite
F. Garzetti	University of Pavia	Timing of exhumation of a MOR-type gabbroic intrusion (Internal Ligurian ophiolites, Italy)
G. German	Woods Hole Oceanographic Institution	Hydrothermal activity along the ultra-slow spreading Mid-Cayman Rise
M. Godard	CNRS – Université Montpellier	Geochemistry of IODP Site U1309 gabbroic series (Atlantis Massif): Evidence for high and cyclic magmatic activity

R. Granot	Institut de Physique du Globe de Paris	Evidence from the Troodos ophiolite for partitioning of vertical-axis rotations ('torsional detachment') across the dike-gabbro boundary
C. Grimes	Mississippi State University	Isotopic insights into length-scales, initiation depths and extent of high-temperature hydrothermal circulation associated with oceanic detachment fault systems
L. Hansen	University of Minnesota	Mylonitic detachment faulting along the Mid-Atlantic Ridge at the Kane fracture zone oceanic core complex
Y. Harigane	Kanazawa University	Microstructural development of the ultramafic rocks from Godzilla Mullion in the Parece Vela Basin
E. Hellebrand	University of Hawaii	Pervasive reactive melt migration before core complex formation: evidence from IODP Hole U1309D, Atlantis Massif
A. Henig	Scripps Institution of Oceanography	Comprehensive shallow coverage of seismic velocity structure at Atlantis Massif oceanic core complex
S. Hurst	University of Illinois	Similarities in structure of uppermost oceanic crust of the Hess Deep Rift and Pito Deep with the sheeted dike complex of the Troodos Ophiolite
B. Ildefonse	CNRS - Université Montpellier 2	The Atlantis Massif: an illustration of the interplay between core complex development and magmatic activity
N. Joens	University of Bremen	Melt-rock interaction and its impact on serpentinization of abyssal peridotites
J. Karson	Syracuse University	Detachment shear zone exposed on the s. wall of the Atlantis Massif core complex, Mid-Atlantic Ridge 30°N
Y. Katzir	University of Wisconsin	Fault-related oceanic serpentinization in the Troodos ophiolite, Cyprus: Implications for a fossil oceanic core complex
F. Klein	Woods Hole Oceanographic Institution	CO2-metasomatism and the formation of talc in oceanic detachment faults
A. Konstantinou	Stanford University	Evolution of magmatism during the development of a continental metamorphic core complex
M. Kurz	Woods Hole Oceanographic Institution	Noble gases as tracers of mantle deformation
F. Lartaud	UPMC Paris 06	Fossil bivalves in the Rainbow area: new insight into the diversity and evolution of chemosynthetic communities

A. Lasseigne	Rice University	Rifting mechanisms, mantle exhumation and the initiation of seafloor spreading: evidence from the deep Galicia Basin
M. Lilley	University of Washington	From mantle to microbes: the cycling of volatiles in ridge environments
M. Loocke	University of Houston	Godzilla Mullion: plagioclase systematics of a back-arc core complex
C. Ma	China University of Geosciences	Petrogenesis of Piemont-Ligurian oceanic plagiogranites (albitites), Western Alps
C. MacLeod	Cardiff University	Detachment faulting and melt transport through the mantle lithosphere: evidence from the lizard ophiolite, SW England
C. MacLeod	Cardiff University	Life cycle of oceanic core complexes, 2: melt emplacement and detachment fault termination mechanisms
C. MacLeod	Cardiff University	Quantitative constraint on tectonic rotations at oceanic core complexes from a structural and palaeomagnetic study of oriented rock cores from the Mid-Atlantic Ridge at 15°45'N
C. Mallows	Durham University	Life cycle of oceanic core complexes, 3: crustal structure and melt supply variability on the Mid-Atlantic Ridge at 13°N
E. Miranda	California State University Northridge	The role of strain partitioning in the development of an oceanic detachment fault system: insights from relict oceanic core complexes in the Western Mirdita Ophiolite, Albania
T. Morishita	Kanazawa University	Direct observations of the 25°S oceanic core complex along the Central Indian Ridge
A. Morris	University of Plymouth	Palaeomagnetic constraints on the evolution of the Atlantis Massif oceanic core complex (Mid-Atlantic Ridge, 30°N)
Y. Ohara	Hydrographic and Oceanographic Department of Japan	Godzilla Mullion developed in a slow-spreading environment: new age and petrologic data constraints
J.-A. Olive	MIT / WHOI Joint Program	Emplacement of plutonic bodies in oceanic core complexes
S. Picazo	CNRS-IPGP	Modes of deformation in ultramafic rocks exhumed in the footwall of detachment faults at slow-spreading ridges and ocean continent transitions

N. Pressling	University of Southampton	A continuous structural characterisation of Atlantis Massif using an integrated analysis of oriented downhole imagery and logging data
T. Reston	University of Birmingham	Detachment faulting and the formation of oceanic core complexes
A.-L. Reysenbach	Portland State University	Host-rock composition shapes the microbial community structure associated with hydrothermal vent deposits
P. Rona	Rutgers University	Detachment faulting chronology in oceanic crust using radiometric dating of associated hydrothermal deposits: TAG hydrothermal field, Mid-Atlantic Ridge 26_N
M. Rough	University of Minnesota	H_2 Production from Ultramafic-Bearing Rock Assemblages: An Experimental Study at 420°C, 500 bars
A. Sanfilippo	Università di Pavia	Interplay between tectonic and magmatic events during the exhumation of a gabbro-peridotite section to the sea-floor (Northern Apennine ophiolites, Italy)
D. Sauter	University of Strasbourg	The magnetic signature of non-volcanic domains on the Southwest Indian Ridge between 61°E and 67°E
D. Sawyer	Rice University	Aspects of mantle exhumation during magma starved rifting at the galicia margin
N. Schoolmeesters	University of Wyoming	Cooling history of the Atlantis Massif and Kane oceanic core complexes at the slow-spreading Mid-Atlantic Ridge
H. Schouten	Woods Hole Oceanographic Institution	Tectonic vs. magmatic extension in the presence of core complexes at slow-spreading ridges from a visualization of faulted seafloor topography
T. Schroeder	Bennington College	Footwall lithology controls on strain localization mechanisms and the geometry of oceanic detachment faults
R. Searle	Durham University	Life cycle of oceanic core complexes, 1: overview
R. Searle	Durham University	Life cycle of oceanic core complexes, 5: internal structures and comparisons
R. Shaar	The Hebrew University	An antithetic tilt of the plutonic and the sheeted dikes sections evidenced by a paleomagnetic study near the village of Agros, Cyprus

M. Tivey	Woods Hole Oceanographic Institution	The magnetism of oceanic core complexes – the Kane OCC
M. Tominaga	Woods Hole Oceanographic Institution	The Origin of the smooth zone in Early Cretaceous North Atlantic magnetic anomalies
B. Tucholke	Woods Hole Oceanographic Institution	Manifestations of hydrothermal venting at Kane Megamullion
S. Unsworth	National Oceanography Centre, Southampton	Life cycle of oceanic core complexes, 4: mantle melting controls on amagmatic crustal accretion
M. Xu	MIT-WHOI Joint Program	Heterogeneous seismic velocity structure of the upper lithosphere at Kane oceanic core complex, Mid-Atlantic Ridge 23°17′N-23°37′N