

LIEGE

International Liège Colloquium on Ocean Hydrodynamics



Prof. Jacques C.J. NIHOUL, *Modelenvironment*
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32nd INTERNATIONAL LIEGE COLLOQUIUM ON OCEAN HYDRODYNAMICS
Liège, Belgium, May 8-12 2000

Exchange Processes at the Ocean Margins

Preliminary Programme (updated 21th April 2000)

Sponsorship

The members of the Organizing Committees wish to express their gratitude to the :

- European Commission
- Fonds National de la Recherche Scientifique (FNRS, Belgium)
- Intergovernmental Oceanographic Commission (IOC)
- International Association for the Physical Sciences of the Ocean (IAPSO)
- Ministère de l'Enseignement Supérieur et de la Recherche Scientifique de la Communauté Française de Belgique
- National Science Foundation (NSF, USA)
- Office of Naval Research (ONR, USA)
- Scientific Council on Oceanic Research (SCOR, ICSU)
- Ministère du Budget, Finances, Emploi et Formation du Gouvernement Wallon
- Services Fédéraux des Affaires Scientifiques Techniques et Culturelles (SSTC, Belgium)
- Université de Liège

Monday May 8th a.m.

- 09h00-10h00: Registration – Coffe
- Chairperson BOISSONNAS J.
European Commission, Brussels, EU
- 10h00-10h05: **Introduction**
NIHOUL, J. C. J. and BOISSONNAS, J.
- 10h05-10h55: **Between the Shelf and the Deep: an Overview of the Loos Shelf Edge Study**
SIMPSON J.H.
School of Ocean Sciences, University of Wales, Bangor, UK
- 10h55-11h45: **Biogeochemical Processes at the Northern Shelf Break of the Gulf of Biscay: An Overview of the Ocean Margin Exchange (OMEX I) Project**
WOLLAST R.
Université Libre de Bruxelles, Belgium
- 11h45-12h35: **Solibores, Tidal Beams, Hurricanes, and Density Currents: Processes Enhancing Diapycnal Mixing Above the Outer Shelf and Slope**
GREGG M.C.¹, LIEN R.C., OZSOY E.² AND MACKINNON P.¹
1 University of Washington, Seattle, USA
2 Middle East Technical University, Erdemli, Turkey

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Monday May 8th p.m

- Chairperson: TSELEPIDES A.
Institute of Marine Biology of Crete, EU
- 14h30-15h00: ***Dynamics of inorganic carbon in surface waters off the Galician coast***
BORGES A.V.¹, KEIR R.², LARSEN S.E.³,
JORGENSEN H.E.³, FRANKIGNOULLE M.¹
1 Université de Liège, Belgium
2 Geomar Research Center for Marine Geosciences, Germany
3 RISØ National Laboratory, Denmark
- 15h00-15h30: ***The response of phytoplankton production to periodic upwelling and relaxation events at the Iberian shelf break***
JOINT I.¹, FIGUEIRAS F.², CHOU L.³, WOLLAST R.³, ELSKENS M.⁴,
FERNANDEZ E.⁵, ALVAREZ-SALGADO X.², GROOM S.¹
1 Plymouth Marine Laboratory, UK
2 Instituto de Investigaciones Marinas, Vigo, Spain
3 Université Libre de Bruxelles, Belgium
4 Vrije Universiteit Brussel, Belgium
5 Universidad de Vigo, Spain
- 15h30-16h00: ***Secondary production and biogeochemical cycling at the ocean margin: lessons learnt from zooplankton and bacterial studies in OMEX***
BURKILL P.H.¹, BATTEN S.², TANDE K.³, LAMPITT R.⁴, GALVAO H.⁵,
MILLER A.¹, ANADON R.⁶, FILEMAN E.S.¹, and other OMEX scientists
1 Plymouth Marine Laboratory
2 Sir Alister Hardy Foundation for Ocean Science, Plymouth, UK
3 University of Tromsø, Norway
4 Southampton Oceanography Center, UK
5 Universidade do Algarve, Portugal
6 Universidad de Oviedo, Spain
- 16h00-16h30: ***Particle flux at the OMEX sites in relation to pelagic processes and lateral transport***
PEINERT R.¹, ANTIA A.N., WASSMANN P.² and other OMEX scientists
1 Institut für Meereskunde, Kiel, Germany
2 University of Tromsø, Norway
- 16h30-17h00 : Coffee, Poster Session
- 17h00: **Official opening and reception by the chairman of the Scientific Organizing Committee**

Tuesday May 9th a.m.

- Chairperson: MANTOURA F.
Plymouth Marine Laboratory, EU
- 09h00-09h50: ***Aspects of sediment transport on the northern Iberian Margin***
McCAYE I.N. and OMEX-II partners
Department of Earth Sciences, University of Cambridge, UK
- 09h50-10h30: ***Recent Sediment Transport, Accumulation and Organic Carbon Burial Fluxes at the NW European Margin; Results of the OMEX I and II Programs***
VAN WEERING T.C.E.¹, JOUANNEAU J-M.²,
DE STIGTER H.C.¹, THOMSEN L.³, WEBER O.² and OMEX partners
1 Netherlands Institute for Sea Research, Texel, The Netherlands
2 Université de Bordeaux, France
3 GEOMAR, Kiel, Germany
- 10h30-11h00: Coffee, Poster session
- 11h00-11h30: ***A comparative Study of Benthic Biology and Carbon Mineralisation in transects along the continental slope of the N.E. Atlantic***
HEIP C.¹, DE STIGTER H., DUINEVELD. G., FLACH E.¹, HELDER W.²,
LAVALEYE M., VALE C.³
1 Netherlands Institute of Ecology, Yerseke, The Netherlands
2 Netherlands Institute for Sea Research, Texel, The Netherlands
3 Instituto de Investigação das Pescas e do Mar, Lisboa, Portugal
- 11h30-12h00: ***Comparison of an ecosystem model with field observations from a Lagrangian experiment off the Iberian coast***
SOETAERT K., HERMAN P.M.J., LAMY F., MIDDELBURG J.J.
Netherlands Institute of Ecology, Yerseke, The Netherlands
- 12h00-12h30: ***Remote Sensing of the North-West Iberian Continental Shelf***
GROOM S., LAVENDER S., SMYTH T., WOODS K.,
MILLER P., JOINT I. etc.
Plymouth Marine Laboratory, UK

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Tuesday May 9th p.m. (parallel OMEX thematic session, theme 2)

- Chairperson: NIHOUL, J. C. J.
University of Liège, EU
- 14H00-14H50: ***The mesoscale dynamics processes and its influence on the Black Sea ecosystem***
ZATSEPIN A.G.¹, ARASHKEVICH E.G.¹, DIKAREV S.N.¹,
EMELIANOV M.V.¹, GINZBURG A.I.¹, KOSTIANOY A.G.¹,
KRIVOSHEYA V.G.³, MIKAELIAN A.S.¹, MOTYZHOV S.V.²,
NEZLIN N.P.¹, POULAIN P.M.⁴, POYARKOV S.G.¹, SHEREMET N.A.¹,
SOLOVIEV D.M.², STANICHNY S.V.², YAKUBENKO V.G.³
1 P.P. Shirshov Institute of Oceanology, Nakhimovsky, Moscow, Russia
2 Marine Hydrophysical Institute, Sevastopol, Ukraine
3 Southern Branch of P.P. Shirshov Institute of Oceanology, Gelendzhik, Russia
4 Naval Postgraduate School, Monterey, USA
- 14h50-15h20: ***Black Sea mesoscale processes from satellite observations***
STANICHNY S.V., SOLOVIEV D.M., KIHAI Y.V.
Marine Hydrophysical Institute of National Academy of Science of Ukraine, Sevastopol
- 15h20-15h50: ***Mesoscale dynamics and related spatial distribution of chlorophyll in the Northeastern Black Sea in autumn 1997***
GINZBURG A.I.¹, KOSTIANOY A.G.², KRIVOSHEYA V.G.²,
NEZLIN N.P.¹, SOLOVIEV D.M.³, STANICHNY S.V.³,
YAKUBENKO V.G.²
1 P.P. Shirshov Institute of Oceanology, Moscow, Russia
2 Southern Branch of the P.P. Shirshov Institute of Oceanology, Gelendzhik, Russia
3 Marine Hydrophysical Institute, Sevastopol, Ukraine
- 15h50-16h20: Coffee, Poster session
- 16h20-16h40: ***Environmental Impacts of Large Scale Irrigation. Examples from the Aral Sea***
ABDULLAEV, I
Tashkent Institute of Engineers for Irrigation and Agricultural Mechanization, Uzbekistan

Continued....

- 16h40-17h00: ***Remotely sensed seasonal dynamics of chlorophyll "a" in the Ligurian Sea in 1997-1999***
NEZLIN N.P.¹, DJENIDI S.², LACROIX G.², KOSTIANOY A.G.¹
1 P.P. Shirshov Institute of Oceanology, Moscow, Russia
2 GHER, Liège, Belgium
- 17h00-17h20: ***Exchange of momentum across the ebro shelf edge and its control on the low-frequency shelf circulation***
GARCIA M.A., ESPINO M., SANCHEZ-ARCILLA A., HERRERA M.D.,
MAIDANA M.A.
Universitat Politècnica de Catalunya, Barcelona, Spain

Wednesday May 10th a.m.

- Chairperson: HUTHNANCE, J.
Proudman Oceanographic Laboratory, EU
- 09H00-09H50: ***Eulerian and Lagrangian observations on the Northwest Iberian Peninsula slope and in the nearby ocean during the ARCANE project***
LE CANN B.¹, SERPETTE A.², DANIAULT N.¹, ABEL K.¹, MAZ R.¹,
CARTON X.¹⁻², COLAS F.¹,
1 Laboratoire de Physique des Océans, Brest, France
2 Service Hydrologique et Océanographique de la Marine, Brest, France
- 09h50-10h20: ***Ecological-Physical Modelling for Warm-Core Ring 93A of Kuroshio Extension Focused on a Blooming Event Inside WCR***
KAWAMIYA M.¹ and KISHI M.J.²
1 University of Tokyo, Japan
2 Hokkaido University, Japan
- 10h20-10h50: Coffee, Poster session
- 10h50-11h20: ***A circulation Model for the Northwestern Coast of Iberian Peninsula***
NEVES R.J.J., COELHO H.S., SANTOS A.J.P., MARTINS H.
Instituto Superior Técnico, Lisboa, Portugal
- 11H20-11H50: ***Upwelling Filaments, Transport and Re-circulation in the Galician Region***
BARTON E.D.¹, TORRES ALMARZA R.¹, MILLER P.I.²
1 University of Wales, Anglesey, UK
2 Plymouth Marine Laboratory, Devon, UK
- 11h50-12h20: ***The Seasonal and Spatial Variability of Small Scale Turbulence at the Iberian Margin***
SHERWIN T.J.¹, INALL M.E.², TORRES R.J.³
1 UCES, UWB, Marine Science Labs, Anglesey, UK
2 UHIP, Dunstaffnage Marine Lab, Argyll, UK
3 University of Wales, Bangor, UK

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Wednesday May 10th p.m.

- Chairperson: WOLLAST R.
Free University of Brussels, EU

- 14h00-14h30: ***OMEX – Water Flux Estimates***
HUTHNANCE J.M.¹, VAN AKEN H.M.², WHITE M.³
1 Proudman Oceanographic Laboratory, Birkenhead, UK
2 Netherlands Institute for Sea Research, Texel, The Netherlands
3 University College Galway, Ireland

- 14h30-15h00: ***Exchange processes at the edge of the Agulhas Current***
LUTJEHARMS J.R.E. and MEYER A.A.
University of Cape Town, South Africa

- 15h00-15h30: ***Simulated ecosystem response due to upwelling events off the Galician coast using a nested 3D model***
SLAGSTAD D.
Norwegian Hydrotechnical Laboratory.(SINTEF), Trondheim, Norway

- 15h30-16h00: ***Carbon and nitrogen fluxes across the Hebridean shelf break, estimated by a 2D model***
CHEN F.¹, TETT P.², PROCTOR R.¹
1 Bidston Observatory, Birkenhead, UK
2 Napier University, Edinburgh, UK

- 16h00-16h30: Coffee, Poster session

- 16h30-18h00: Presentation of posters and general discussion

- 20h00: **Colloquium Dinner at the Château de Colonster**

Thursday May 11th a.m. (parallel OMEX thematic session, theme 3A)

- Chairperson: STANEV E.
University of Sofia, Bulgaria

- 09h00-09h50: ***Inco - Copernicus project: Ventilation of the Black Sea's anoxic waters***
GREGOIRE M.¹ and OZSOY E.²
1 Université de Liège, Belgium
2 Middle East Technical University, Turkey

- 09h50-10h20: ***The role of lateral fluxes in ventilation of the Black Sea pycnocline on seasonal and interannual time scales***
IVANOV L.I., KONOVALOV S.K., SAMODUROV A.S.
Ukrainian Academy of Sciences, Sevastopol, Ukraine

- 10h20-10h50: ***The role of macroplankton in the exchange of substances and energy in the marine ecosystems***
IGNATYEV S.M.
Institute of Biology of Southern Seas, Sevastopol, Ukraine

- 10h50-11h20: Coffee, Poster session

- 11h20-11h50: ***Three-dimensional numerical ecosystem model of the Black Sea. Euphotic zone seasonal evolution***
LYUBARTSEVA S.P., MIKHAILOVA E.N., SHAPIRO N.B.
Marine Hydrophysical Institute, Sevastopol, Ukraine

- 11h50-12h20: ***Modeling the Black Sea shelf ecosystem in Danube's mouth zone***
IVANOV V.A., MIKHAILOVA E.N., LYUBARTSEVA S.P., SHAPIRO N.B.
Marine Hydrophysical Institute, Sevastopol, Ukraine

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Thursday May 11th p.m. (parallel OMEX thematic session, theme3B & 4A)

- Chairperson: GOODMAN, L.
Office of Naval Research, USA
- 14h00-14h50: *Current and ocean margin exchange off Iberian continental slopes*
PINGREE R.D., SINHA B.
Plymouth Marine Laboratory, UK
- 14h50-15h20: *Dynamics of slope currents jointly driven by tides and density gradients*
BLAAS M.¹, DE SWART H.E.¹, GERPEMA T.²
1 Inst. for Marine & Atmospheric Research Utrecht, The Netherlands
2 Netherlands Institute for Sea Research, Texel, The Netherlands
- 15h20-15h50: *Mesoscale variability of the Mediterranean water undercurrents southwest of Portugal*
CARTON X.¹, SERPETTE A.², CHERUBIN L., LECANN B.¹
1 Laboratoire de Physique des Océans, Brest, France
2 Service Hydrologique et Océanographique, Brest, France
- 15h50-16h20: Coffee, Poster session
- 16h20-16h50: *Peculiarities of the long-term variability of the thermohaline structure and water circulation over the Siberian continental slope*
PAVLOV V.K.¹, STANOVVOY V.V.²
1 Norwegian Polar Institute, Tromsø, Norway
2 Arctic and Antarctic Research Institute, St-Petersburg, Russia
- 16h50-17h20: *Modelling processes influencing along shelf transport and cross shelf exchange in the region of the N.W. European Shelf*
HALL P., KWONG S.C.M., DAVIES A.M.
Proudman Oceanographic Laboratory, Birkenhead, UK

Thursday May 11th evening

“Science Meets the Public”

Special session at the Liège Colloquium on Ocean Hydrodynamics: Exchange Processes at the Ocean Margins

University of Liège, Sart Tilman Campus
Bâtiment des Nouveaux Amphithéâtres
Salle 202

- Chairperson: PATERMANN, C.
European Commission, Directorate *Preserving the Ecosystem I*
- 18h00-19h00 (lecture hall 202) Christian PATERMANN, Director DG Research D.1
Introduction
- Philippe BUSQUIN, EU Research Commissioner
Towards a European Research Area (ERA)
- Roland WOLLAST, Université Libre de Bruxelles, OMEX
Coordinator
The Ocean Margin Exchange (OMEX) Project – Objectives of Research
- Tjeerd VAN WEERING, OMEX Steering Committee
The OMEX project – Results, Examples of application, and perspectives with respect to ERA
- 19h00-19h15 Roland WOLLAST: Presentation of the OMEX poster exhibition
(outside lecture hall 202)

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Friday May 12th a.m. (parallel OMEX thematic session, theme 4B)

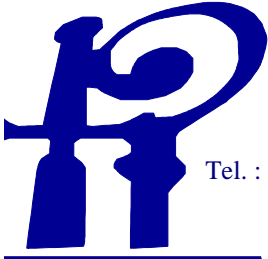
- Chairperson: MARTIN J.-M.
Joint Research Center Ispra, EU
- 09h00-09h30: ***Inco-Copernicus Project : Desertification of the Aral Sea Region. A study on the Natural and Anthropogenic Impacts (ARAL-KUM)***
KOSTIANOY A.G.¹ and GREGOIRE M.²
1 P.P. Shirshov Institute of Oceanology, Moscow, Russia
2 Université de Liège, Belgium
- 09h30-10h00: ***Numerical simulation of deep convective plume in Lake Baikal underwater canyon***
SEMOVSKI S.V.¹, SEIN D.Y.²
1 Limnological Institute SB RAS, Irkutsk, Russia
2 Max-Planck Institute of Meteorology, Hamburg, Germany
- 10h00-10h30: ***Interaction of the deep and coastal waters of the Caspian Sea: results of a three-dimensional circulation and sea-ice model***
IBRAYEV R.A.¹, OZSOY E.², SCHRUM C.³,
SARKISYAN A.S.¹
1 Russian Academy of Sciences, Moscow, Russia
2 Middle East Technical University, Erdemli, Turkey
3 University of Humburg, Germany
- 10h30-11h00: Coffee, Poster session
- 11h00-11h30: ***Prediction of Redtide Ecosystem in the Coastal Sea***
CHOI H. and YUAN Y.
Kangnung National University, Korea
- 11h30-12h00: ***Hydrodynamic-biogeochemical 3d coupled model in a coastal area: application for a carbon budget in the gulf of lions (nw Mediterranean sea)***
DIAZ, F.¹, MARSALEIX, P.², ESTOURNEL, C.², RAIMBAULT, P.¹,
NORRO, A
1 LOB, France
2 LA, France
3 MUMM, Belgium
- 12h00-12h30: ***Ocean Margin Exchange Processes in the Black Sea***
BOWMAN¹, M.J., DIETRICH², D.E., STANEY³, E.V., STANEVA³, J.V.
1 Marine Sciences research Center, USA
2 AcuSea Inc, USA
3 University of Sofia, Bulgaria

Friday May 12th p.m. (parallel OMEX thematic session, theme 1)

- Chairperson: LUTJEHARMS, J
University of Cape Town, South Africa
- 14h00-14h30: CANCELLED – Time available
- 14h30-15h00: ***Preliminary Carbon Mass Balance in the Gulf of Papua, Papua New Guinea, Project TROPICS, 1991-1999***
BRUNSKILL G.J., BURNS K.A., ALONGI D., ZAGORSKIS I.,
PFITZNER J.
Australian Institute of Marine Science, Townsville, Australia
- 15h00-15h30: ***Simulating the seasonal cycle of dissolved organic matter in the coastal northern Baltic Sea using a one-dimensional physical-biological model***
RYABCHENKO V.A.¹, HEISKANEN A.S.²,
GALTSOVA V.V.³
1 St. Petersburg Branch, Institute of Oceanology, Russia
2 Finnish Environment Institute, Finland
3 Zoological Institute, Russia
- 15h30-16h00: Coffee, Poster session
- 16h00-18h00: ***Special session Inco-Copernicus (open to other participants)***
Ventilation of the Black Sea's anoxic waters
Additional presentations by
KONTAR E., VOLKOV I., KOSYAN R., STANEV E., KONOVALOV S.,
BACKHAUS J., LE TRAON P.
General discussion

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TIMETABLE for the ORAL PRESENTATIONS in the OMEX PARALLEL THEMATIC SESSIONS

Theme 2 - primary production; microbial loop - Tuesday p.m.

I. Joint G. Tilstone

14:00 Mantoura R.F.C., S. Gibb, D. Cummings, C. Llewellyn - CCMS/PML - Chlorophyll and carotenoid distribution, chemotaxonomy and novel biogeochemical fluxes at the coastal and upwelling regions of the NW Iberian Margin (OMEX)

14:20 Tilstone Gavin, Francisco Figueiras, Luisa Lorenzo, Belen Arbones - IIM - Photosynthesis and primary production during different hydrographic conditions at the NW Iberian upwelling system

14:40 Wollast R., L. Chou, M. Loijens and B. Bastin - ULB - 14C and 32P uptake experiments in the upwelling area of the Iberian Margin

15:00 Teira Eva, Pablo Serret, Carlos Cariño, Emilio Fernández - UVigo - Phytoplankton size-structure, particulate and dissolved organic carbon production and oxygen fluxes through microbial communities in the NW Iberian coastal transition zone

15:20 Break

16:00 Rees Andrew and Ian Joint - CCMS/PML - Phytoplankton Nitrogen Utilisation at the Iberian Peninsular

16:20 Brion N., Elskens M. and Baeyens W. - VUB - Interactions between nitrate, ammonium and urea uptake rates at the Iberian Margin Zone

16:40 Spyres G., Miller A.E.J., Nimmo M. - CCMS/PML - Seasonal and spatial distribution of DOM at the Iberian Margin

17:00 Galvão Helena M. and Ana Barbosa - UAIG - Bacterioplankton dynamics off the Galician Shelf

17:20 Poster Session and Discussion

18:30 Free Evening

Theme 3 - zooplankton trophodynamics; particle export - Part A - Thursday a.m.

R. Lampitt S. Batten

09:30 Batten Sonia D. and D. Johns - SAHFOS - Copepod abundance and biomass distributions, and derived grazing pressure along the Iberian margin, determined from Continuous Plankton Recorder tows

09:50 Lampitt R.S., A.H. Hirst and P. Guyard - SOC - Temporal and Spatial Patterns of Mesozooplankton Distributions

10:10 Fileman Elaine and Peter Burkill - CCMS/PML - Microzooplankton herbivory and community structure in the Iberian Upwelling Margin during summer, 1998

10:30 Break

11:00 Halvorsen E., E.S. Fileman, S. Batten, D. Slagstad, K. Tande and O.P. Pedersen - UiTø - Microzooplankton-mesozooplankton in an upwelling filament off Galicia: modelling and sensitivity analysis of the linkages and their impact on the carbon dynamics

11:20 Wexels Riser Christian, Paul Wassmann and Kalle Olli - UiTø - Production, retention and export of zooplankton faecal pellets on and off the Iberian shelf, north-west Spain

11:40 Olli Kalle, Christian Wexels Riser, Paul Wassmann, Tatjana Ratkova and Aljona Arashkevitch - UiTø - Short-term dynamics of vertical flux of organic matter during upwelling and relaxation on and off the Iberian shelf, north-west Spain

12:00 Lunch

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Theme 3 - zooplankton trophodynamics; particle export - Part B - Thursday early p.m.

R. Lampitt A. Antia

14:30 Antia A.N., J. Maaßen and M. Voß - IfM-Kiel - Linking particle export with surface processes at the Continental Margin

14:50 Fagel Nathalie, Frank Dehairs, Rolf Peinert, Avan Antia and Luc André - ULg - Reconstruction of the vertical export flux of POC at continental margin: How far can we go with the use of Ba proxy?

15:10 Chou L., R. Wollast, N. Roevros and O. Dufour - ULB - Geochemical characteristics of the particulate matter along the Iberian Margin

15:30 Discussion

15:50 Break

Theme 4 - pelagic-benthic coupling; benthic cycling and burial - Part A - Thursday late p.m.

E. Epping L. Thomsen

16:20 Flach Els, Agnes Muthumbi and Carlo Heip - NIOO - Meiofauna and macrofauna community structure in relation to sediment composition at the Iberian Margin compared to the Goban Spur (NE Atlantic)

16:40 Madureira M.J., Falcão M., Vale C. and Drago T. - IPIMAR - The Effect of Sediment Bioturbation on the Phosphorus Distribution in the Northern Portuguese Shelf

17:00 Epping Eric H.G. and Willem Helder - NIOZ - Early diagenesis in Iberian Margin sediments: A comparison with the Goban Spur and the role of canyons

17:20 Boski T., P. Pedro, J.C. Pessoa, J. Thorez - UAlg - Influence of the source of OM and sediment mineralogy on the diagenesis of amino-acids in the sediments from NW Iberian Margin

17:40 Discussion

18:00 Special Evening Session - "Science meets the Public"

19:30 End - Free Evening

Theme 4 - pelagic-benthic coupling; benthic cycling and burial - Part B - Friday - a.m.

E. Epping L. Thomsen

09:30 Dias J.A., Garcia C., Jouanneau J.M., Martins V., Mendes I., Carapito C., Gonzales R. - UAlg - Variability of the continent-ocean interaction in the continental margin of Minho-Galicia

09:50 Dias J.A., Garcia C., Gonzales R., Mendes I. - UAlg -

Interrelationship between geomorphology, sedimentary cover and recent evolution of the Galician-Minho shelf (Western Iberia)

10:10 Araújo M.F., J.M. Jouanneau, P. Valério, T. Barbosa, A. Gouveia, O. Weber, A. Oliveira, A. Rodrigues and J.M.A. Dias - ITN/UAlg - Geochemical Tracers of Northern Portuguese Estuarine Sediments on the Shelf

10:30 Break

11:00 Thomsen Laurenz, Tjeerd van Weering and Giselher Gust - GEOMAR - Benthic boundary layer characteristics at the Iberian Continental Margin

11:20 Stigter H.C. de, S. Schmidt and T.C.E. van Weering - NIOZ - Fast sedimentation and sediment transport in the Nazaré Canyon

11:40 Discussion

12:00 Lunch

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**Theme 1 - remote sensing; air-sea exchange; water budget and circulation;
integrated margin exchange model - Friday p.m.**

H. van Aken M. White (°) + K. Soetaert (*)

14:30 Miller Peter - CCMS/RSDAS - Distribution and dynamics of upwelling, filaments and eddies off NW Spain 1993-1999 derived from satellite thermal front maps (°)

14:50 Smyth T.J. and S.B. Groom - CCMS/RSDAS - Comparison of SeaWiFS and in situ radiances and the validation of bio-optical chlorophyll-a algorithms within the context of OMEX II-II (*)

15:10 Keir Robin, G. Rehder and H. Erlenkeuser - GEOMAR - Effects of the natural carbon system and anthropogenic CO₂ on the distribution of stable carbon isotopes near the northeast Atlantic margin (*)

15:30 Break

16:00 Xing Jiuxing and A. Davies - CCMS/POL - Bottom boundary layer processes and sediment transport at continental shelf edges (°)

16:20 Coelho H. S., P.C. Leitão and R. Neves - IST - Fluxes across OMEX box from a coupled hydrodynamic/ecosystem model (*)

16:40 Discussion

17:00 End - Free Evening

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Poster sessions

Observations on the Northwest Iberian Peninsula slope and in the nearby ocean during the ARCANE project: Part 3: ADCP processing and measurements

ABEL K., LE CANN B., SERPETTE A., GAILLARD F.

The water mass structure of the European Ocean Margin

AKEN HENDRIK M.

Thermohaline, Chemical and Biological Characterisation of the poleward flowing slope current off the NW Iberian Upwelling System

ALVAREZ-SALGADO X.A., PEREZ F.G., CASTRO C.G., BORGES A., MONCOIFFE G., Miller A.E.J., FRANKIGNOULLE M., SAVIDGE G.

Fluxes of particles at the continental margin at the Celtic Sea and Iberian Margin

ANTIA A.N. and R. PEINERT

The contribution of microzooplankton to the mesozooplankton diet in an upwelling filament off Galicia

BATTEN S.D., E.S. FILEMAN and E. HALVORSEN

Regeneration of ammonium and organic nitrogen by microplankton in the OMEX II-II box

BODE A., GONZALEZ N., VARELA M., BARQUERO S., VARELA M.M. and X.A. ALVAREZ-SALGADO

Surface partial pressure of CO₂ off the Galician coast: Overview of data obtained during the OMEX project

BORGES ALBERTO and MICHEL FRANKIGNOULLE

Hydrolysable Amino Acids in Sediments from the NW Iberian Margin

BOSKI T., PEDRO P., PESSOA J.C., THOREZ J., DIAS J.M.A.

Role of zooplankton in the carbon flow during upwelling events in Galician coast (NW Spain)

CEBALLOS S., A. ISLA, J.A. CABAL, A. LOPEZ-URRUTIA, F. ALVAREZ-MARQUES and R. ANADON

The variability of phytoplankton abundance between years and zones of the Black Sea in relation to nutrient supply into the mixed layer during the winter

CHURILOVA T.I., BERSENEVA G.P., GEORGIEVA L.V., STANICHNY S.V.

Structure-forming factors of near-shore systems of western Kamchatka

CHUJAN G.N. and BYKASOV V.E.

Present Day Sedimentary Processes on the Northern Iberian Shelf

DIAS J.A., JOUANNEAU J.M., ARAUJO M.F., DRAGO T., GARCIA C., OLIVEIRA A., RODRIGUES A., VITORINO J., WEBER O.

Domains of intensive mixing in the coastal zone

DULOV V., PUSTOVOYTENKO V., ZAPEVALOV A., KUDRYAVTSEV V., SHERBAK O., BOL'SHAKOV A., SMOLOV V.

Seasonal variability of the Northwest African Upwelling Zone

ELMOUSSAOUI A., BECKERS J.-M., KOSTIANOY A., DJENIDI S.

Significance and validity limits of N-flux rates over short and long incubation periods: a dilemma

ELSKENS M., BRION N., JOINT I. and REES A.

Shelf Surface Waters of the OMEX-II Study Area (NW Spain): Upwelling on the Shelf versus Outwelling of Upwelled Waters from the Rias Baixas

GAGO J., ALVAREZ-SALGADO X.A., MIGUEZ B., GIL-COTO M., PEREZ F.F.

Variability of bacterioplankton processes on and off the Galician shelf

GALVAO H., BARBOSA A., MENDES P.

Anticyclonic eddies on the northwestern continental slope as a mechanism of chlorophyll-rich shelf water transport to the open Black Sea

GINZBURG A.I., KOSTIANOY A.G., NEZLIN N.P., SOLOVIEV D.M., STANICHNY S.V.

Seasonal and interannual sea surface temperature variability of the Black Sea (satellite data)

GINZBURG A.I., KOSTIANOY A.G., NEZLIN N.P., SHERMET N.A.

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Palaeocurrent reconstruction, sediment and thorium focussing on the Iberian margin over the last 140 ka

HALL IAN R. and I. NICHOLAS MCCAIVE

Near-bed turbulence measurements, stress estimates and sediment mobility at the continental shelf edge

HUTHNANCE JOHN, JOHN HUMPHERY, PHILIP KNIGHT, LAURENZ THOMSEN and MARTIN WHITE

Dissipation and Mixing Rates at the Iberian Margin

INALL M.E., SHERWIN T.J. and TORRES R.J.

Zooplankton transport and effects on zooplankton carbon flow due to Navidad current

ISLA A., A. LOPEZ-URRUTIA, S. CEBALLOS, M.J. ELICES, J.A. CABAL, F. ALVAREZ-MARQUES and R. ANADON

Fresh Water Balance for the Northwestern Black Sea

IVANOV L.I.

Estimates of the CO₂ flux across air-water interface off the Iberian Coast

JØRGENSEN H.E., BORGES A.V., KEIR R., FRANKIGNOULLE M and LARSEN S.E.

The distribution of dissolved methane off the Iberian margin

KEIR ROBIN and G. REHDER

On the Shelf-Deep-Sea Interaction in the Black Sea: Pathways of Riverine Nutrients

KONOVALOV S.K.

3-D flow/particle model for prediction matter transport in the sea: modelling oil pollution

KOROTENKO K.A.

Megafauna, phytopigments, SCOC and bottom features off NW Spain

LAVALEYE M.S.S. and G.C.A. DUINEVELD

OMEX II-II Data Management

LOWRY ROY, ZELJKO LONCAR, ALISON FAIRCLOUGH, RICHARD DOWNER and MEIRION JONES

Trace Metal Distribution in the Benthic Layer of Sediments from the Northern Portuguese Shelf

MADUREIRA MARIA-JOÃO, CARLOS VALE and NUNO FONSECA

The influence of quaternary climatic changes in paleocarbon fluxes to the continental margin of Minho-Galicia

MARTINS V., CARAPITO C., DIAS J.A.

Estuary and shelf-break fronts and their role in bioproductivity of marginal seas

NAVROTSKY V.V. and ZADONSKAYA T.A.

Seasonal dynamics of remotely sensed sea surface temperature and chlorophyll in the region of Newfoundland Bank in 1997-1999

NEZLIN N.P., AFANASSIEV Y.D., KOSTIANOY A.G.

Clay minerals from the sedimentary cover of the North Iberian Shelf

OLIVEIRA A., F. ROCHA, A. RODRIGUES, J. JOUANNEAU, A. DIAS, O. WEBER, C. GOMES

Nepheloid layer dynamics in the northern Portuguese shelf

OLIVEIRA A., J. VITORINO, A. RODRIGUES, J. JOUANNEAU, A. DIAS, O. WEBER

Recent deposition and reworking at the sea-water interface over the Iberian Margin: seasonal and spatial trends

SCHMIDT S., VAN WEERING T., STIGTER H., REYSS J-L, VAN BEEK P.

Particle residence times in surface waters over the NW Iberian Margin: comparison of pre-upwelling and winter periods

SCHMIDT S., CHOU L. and HALL I.R.

230Thxs and 231Paxs as tracers of scavenging intensity over the NW Iberian Margin

SCHMIDT S., FLEISHER M.Q. and ANDERSON R.F.

The study of denser water flows on a sloping bottom

SHEREMET N.A., SHEREMET V.A., ZATSEPIN A.G.

A beta-effect controlled inertial gyre in coastal waters driven by a jet

SHEREMET V.A.

Lake Baikal as natural laboratory to study exchange between shelf and deep layers

SHIMARAEV M.N., SEMOVSKI S.V., DOMYSHEVA V.N.

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Shelf-slope exchanges associated with a steep submarine canyon off Calvi (Corsica, NW Mediterranean Sea).

SKLIRIS N., DJENIDI S., GOFFART A., HECQ J.-H.

Internal tide transformation across a continental slope. Part 1: Malin slope, UK

SMALL J. and INALL M.

Internal tide transformation across a continental slope. Part 2: Off Cape Sines, Portugal

SMALL J.

Subsequent satellite images for sea upper layer dynamics study in the Black Sea and East Mediterranean

SOLOVIEV D.M., STANICHNY S.V., BURDUGOV V.M.

Flow structure and seasonality in the hebridean slope

SOUZA A.J., SIMPSON J.H., HARIKRISHNAN M.

Intermediate water mass formation in the Black Sea. Comparisons between simulations, survey and satellite data

STANEV E.V., PENEVA E.L., STANEVA J.V.

Upwelling in the Black Sea from satellite observation

STANICHNAYA R.R., STANICHNY S.V., SOLOVIEV D.M.

Exchange Processes at the Ocean Margins and Marine Resources Management

TIMCHENKO I.E. and IGUMNOVA E.M.

Shipborne ADCP in the OMEX II-II region, 1997-1999

TORRES R. and E.D. BARTON

Statistical description of Near Surface Flow in the OMEX II-II region as shown by Mixed Layer Drifters

TORRES R. and E.D. BARTON

Quantitative distribution of myctophidae of the northwest part of the Indian Ocean in connection with seasonal processes superficial layers of water

TSARIN S.A.

Winter dynamics over the northern portuguese shelf: its impact on fine sediment transport

VITORINO J., A. SIMÕES, J.M. JOUANNEAU and T. DRAGO

Present day sedimentation and Sedimentary budgets on the Northern Iberian shelf

WEBER O., JOUANNEAU J.M., DRAGO T., RODRIGUES A., OLIVEIRA A., DIAS J.A., GARCIA C., SCHMIDT S. and REYSS J.L.

Bacterial communities in different water bodies along the Iberian Margin

WITZEL, K.P., RITZRAU, W. and GUST, G.

The Northeastern Continental Margins: The Ocean Margin EXchange (OMEX) Project"

WOLLAST, R., CHOU, L. and AVRIL, B.

Off-Shelf Fluxes of Labile Materials by the Upwelling Filament off the Rias Baixas (NW Iberian Peninsula)

WOODWARD and F.G. FIGUEIRAS

Bottom Boundary Layer Processes and Suspended Sediment Transport at Continental Shelf Edges

XING J. and DAVIES A.M.

Exchange Processes along the Shelf Edge of the East China Sea

YANAGI T.

Ship / Helicopter CTD Survey Patos-Mirim Lagoon Plume

ZAVIALOV P. and MOLLER Jr. O.O.