

**" Three-dimensional ocean circulation :
Lagrangian measurements and diagnostic analyses "**

MONDAY, May 3th, 1999

9.00 - 10.00 : Registration, Coffee, Display of posters

10.00 - 10.10 : Welcome

Session 1 : Tropical Pacific surface circulation phenomena - Chairman : P.M. POULAIN

10.10 - 10.45 *Processes of heat convergence in the Tropical Pacific*

Niiler P.P., Scripps Institution of Oceanography, La Jolla, USA

10.45 - 11.20 *Observed seasonal cycle of the mixed layer heat budget in the Eastern Tropical Pacific Ocean*

Swenson M.S., Atlantic Oceanographic and Meteorological Laboratory, USA and **Hansen D.V.**, Cooperative Institute for Marine and Atmospheric Studies, USA

11.20 - 11.50 *Vorticity dynamics of a Tropical instability*

Flament P., University of Hawaii at Manoa, Honolulu, Hawaii, USA and **Kennan S.C.**, Scripps Institution of Oceanography, La Jolla, USA

11.50 - 12.20 *Eddies and currents of the Hawaiian Islands*

Lumpkin R. and **Flament P.**, University of Hawaii, Honolulu, USA

MONDAY, May 3th, 1999

Session 2 : Alboran Sea - Chairman : J.T. ALLEN

14.00 - 14.40 *Observations and modelling of eddy scale geostrophic and ageostrophic circulation (OMEGA project)*

Tintoré J., Vélez P., Gomis D., Monserrat S. ¹, **Allen J., Guymer T., Roe H., Smeed D.** ², **Font J., Ruiz O., Chic S.** ³, **Beckers J.M., Rixen M.** ⁴, **Corsini G. Diani M., Baldacci A., Cippolini P.** (5), **Rodriguez J., Blanco F., Jimenez J.M.** (6), **Echevarria F., Corzo A., Ruiz J.** (7), **Gascard J.C.** (8) and **Omega Group Collaborators**,

¹ IMEDEA (CSCI-UIB), Palma, Spain, ² Southampton Oceanography Centre, UK, ³ Institut de Ciències del Mar (CSIC), Spain, ⁴ Université de Liège, Belgium, (5) Università di Pisa, Italia, (6) Universidad de Malaga, Spain, (7) Universidad de Cadiz, Spain, (8) Université Paris VI, France.

14.40 - 15.20 *In situ observations of W from neutrally buoyant rotating floats during the Alboran OMEGA experiment and model intercomparisons*

Gascard J.C., Université Pierre et Marie Curie, Paris, France, **Tintoré J.** and **Vélez P.**, Universitat de les Illes Balears, Palma de Mallorca, Spain, **Haney R.L.**, Naval Postgraduate School, Monterey, USA

15.20 - 15.45 *Observations and diagnostic modelling of three-dimensional fields in an upper ocean front*

Vélez P. ¹, **Tintoré J.** ², **Haney R.L.** ³ and **Allen J.T.** ⁴

¹ Universitat de les Illes Balears, Palma de Mallorca, Spain, ² Institut Mediterrani d'Estudis Avançats, Palma de Mallorca, Spain, ³ Naval Postgraduate School, Monterey, Usa, ⁴ Southampton Oceanographic Centre, Southampton, UK

15.45 - 16.10 : Coffee break and poster display

16.10 - 16.35 : *Diagnostic analysis of the 3D ageostrophic circulation from a multivariate spatial analysis of synoptic CTD and ADCP data*

Gomis D.(1,2), **Ruiz S.** ³, **Pedder M.A.** ⁴

¹ Universitat de les Illes Balears, Palma de Mallorca, Spain, ² Institut Mediterrani d'Estudis Avançats (CSIC-UIB), Palma de Mallorca, Spain, ³ Institut de Ciències del Mar (CSIC), Barcelona, Spain, ⁴ University of Reading, Reading UK

16.35 - 17.00 *Isopycnal potential vorticity diagnostics in the Alboran Sea*

Ruiz S., Gomis D., Pedder M.A., Font J.

¹ Institut de Ciències del Mar (CSIC), Barcelona, Spain, ² Universitat de les Illes Balears, Palma de Mallorca, Spain, ³ Institut Mediterrani d'Estudis Avançats (CSIC-UIB), Palma de Mallorca, Spain, ⁴ University of Reading, Reading, UK

17.00 - 17.25 *The diapycnal movements at the edge of the western Alboran gyre*

Emelianov M.V. (1,2), **Font J.** ¹ and **Allen J.T.** ³

¹ Institut de Ciències del Mar, Barcelona, Spain, ² P.P. Shirshov Institute of Oceanology, Moscow, Russia, ³ Southampton Oceanography Centre, UK

17.25 - 17.50 *Observations of mesoscale subduction at the Almeria-Oran front and its interaction with biological processes*

Fielding S. ¹, **Allen J.T.** ¹, **Roe H.S.** ¹, **Smeed D.A.** ¹, **Tintoré J.** ², **Ruiz S.** ³, **Crisp N.** ¹, **Velez P.** ⁴, **Corzo A.** (5) and **Griffiths G.** ¹

¹ Southampton Oceanography Centre, UK, ² Institut Mediterrani d'Estudis Avançats (CSIC-UIB), Palma de Mallorca, Spain, ³ Institut de Ciències del Mar, Barcelona, Spain, ⁴ Universitat de les Illes Balears, Palma de Mallorca, Spain, (5) Universidad de Cadiz, Spain

17.50 - 18.15 *Surface distribution of chlorophyll, particles and gelbstoff in the Atlantic jet of the Alboran Sea : from submesoscale to subinertial scales of variability*

Ruiz J; ¹, **Echevarria F.** ¹, **Font J.** ², **Garcia E.** ², **Blanco J.M.** ³, **Jimenez-Gomez F.** ³, **Prieto L.** ¹, **Gonzales-Alaminos A.** ¹, **Garcia C.M.** ¹ and **Rodriguez V.** ³

¹ Universidad de Cadiz, Spain, ² Institut de Ciències del Mar, Barcelona, Spain, ³ Universidad de Malaga, Malaga, Spain

Poster and discussion session 1

18.15 - 18.20 *Integration of in situ observations and EOF decomposition of satellite data to gain insight on the Alboran Sea mesoscale system*

Baldacci A. ¹, **Corsini G.** ¹, **Manzella G.** ², **Allen J.T.** ³, **Cipollini P.** ³, **Guymer T.H.** ³, **Snaith H.M.** ³

¹ University of Pisa, Italy, ² ENEA-Centro Ricerche Ambiente Marino, Italy, ³ Southampton Oceanography Centre, UK

18.30 : Reception by the Chairman of the Scientific Organizing Committee

TUESDAY, May 4th, 1999

Session 3: Atlantic and Southern Ocean surface circulation phenomena - Chairman : P.P. NIILER

9.00 - 9.35 *Eulerian, Lagrangian dynamic and mixing of the Azores Current as deduced from surface drifters during the SEMAPHORE-93 experiment*

Reverdin G., LEGOS/CNRS, Toulouse, France and **Hernandez F.**, CLS/DOS, Toulouse, France

9.35 - 9.55 *Comparison of surface velocity deduced from satellite altimetry and Azores current drifters*

Hernandez F., CLS/DOC, Toulouse, France

9.55 - 10.15 *Surface drifters in Icelandic Waters 1995-1998*

Valdimarsson H. and **Malmberg S.-A.**, Marine Research Institute, Reykjavik, Iceland

10.15 - 10.35 *The PICOLO Program : from instability waves to tuna in the Tropical Atlantic*

Menkes C.¹, **Kennan S.**², **Flament P.**³, **Dandonneau Y.**¹, **Lebourges A.**⁴, **Moulin C.** (5), **Morlière A.**⁴, **Biessy B.**⁴, **Champalbert G.**⁴, **Marchal E.**⁴ and **Reverdin G.** (6)

¹ Université Pierre et Marie Curie, Paris, France, ² Scripps Institution of Oceanography, La Jolla, USA, ³ CERSAT/Ifremer, France, ⁴ ORSTOM, France, (5) LSCE/CEA, France, (6) LEGOS, Toulouse, France

10.35 - 10.55 *Interpretation of the Eulerian currents and temperature records at Moorings 155 (35.5°W) and 156 (34.4°W) and Lagrangian flow in the presence of westward moving eddies (storms) near 32.5°N (N. Atlantic)*

Pingree R.D., Plymouth Marine Laboratory, UK

10.55 - 11.20 : Coffee break and poster display

Session 4 :Intermediate/deep circulation of the North Atlantic/Pacific - Chairman : J.C. GASCARD

11.20 - 12.05 *Observations of relative dispersion along isopycnals*

Rosby T., **Hebert D.** and **Zhang H.-M.**, University of Rhode Island, Narragansett, USA

12.05 - 12.30 *Subsurface circulation measurements in the subtropical region of the western North Pacific using ALACE floats*

Shikama N.¹, **Ishikawa K.**² and **Wakaki S.**³

¹ Meteorological Research Institute, Japan Meteorological Agency, ² Climate and Marine Department, Japan Meteorological Agency, ³ Nagasaki Marine Observatory, Japan Meteorological Agency, Japan

14.00 - 14.25 *Lagrangian statistics from the North Atlantic Current RAFOS float observations*

Zhang H.-M., **Rosby T.** and **Prater M.**, University of Rhode Island, Narragansett, USA

14.25 - 14.50 *Isobaric float response to deep convection : comparison of model and experiment*

Lherminier P.¹, **Garwood R.W.**¹, **Gascard J.C.**² and **Harcourt R.**¹

¹ Naval Postgraduate School, Monterey, USA, ² University of Paris VI, France

14.50 - 15.15 *ARCANE : a project to observe the Lagrangian circulation in the mid-latitude North-East Atlantic*

Le Cann B.¹, **Speer B.**¹, **Paillet J.**², **Serpette A.**² and **Colas F.**¹

¹ Laboratoire de Physique des Océans, Brest, France, ² Centre Militaire d'Océanographie, Brest, France

15.15 - 15.40 *Structure, dynamics and Lagrangian evolution of Meddy Ulla near 45N, 12W, during the ARCANE program*

Paillet J.¹, **Le Cann B.**², **Serpette A.**¹ and **Speer K.**²

¹ Centre Militaire d'Océanographie, Brest, France, ² Laboratoire de Physique des Océans, Brest, France

15.40 - 16.00 : Coffee break and poster display

16.00 - 16.25 *First results from KAPEX : The Agulhas Current component*

Boebel O.¹, **Rossby T.**² and **Lutjeharms J.**¹

¹ University of Cape Town, Rondebosch, South Africa, ² University of Rhode Island, Narragansett, USA

16.25 - 16.45 *First Results from KAPEX : The south Atlantic Current component*

Schmid Cl. (1,2), **Boebel O.**³ and **Zenk W.**¹

¹ Institut für Meereskunde an der Universität Kiel, Germany, ² now at : NOAA, Miami, USA, ³ University of Cape Town, Rondebosch, South Africa

16.45 - 17.05 *General circulation at intermediate depth in South Atlantic deduced from floats and its impact on the 3D circulation estimated with an inverse model*

Le Grand P., **Mercier H.** and **Ollitrault M.**, LPO/Ifremer, Plouzané, France

17.05 - 17.25 *Lagrangian measurements of intermediate level flow in the California Current system*

Garfield N. (1,4), **Collins C.**¹, **Paquette R.**¹, **Maltrud M.**², **Rago T.**¹ and **Carter E.**³

¹ Naval Postgraduate School, Monterey, USA, ² Los Alamos National Laboratory, USA, ³ Taygeta Scientific, Monterey, USA, ⁴ San Francisco State University, USA

17.25 - 17.50 *A COastal Ocean Lagrangian (COOL) float*

Hebert D., **Prater M.**, **Fontaine J.** and **Rossby H.T.**, University of Rhode Island, Narragansett, USA

Poster and discussion session 2

17.50 - 17.55 *Impact of vertical dynamics of isobaric floats on their measurements*

Lherminier P. and **Harcourt R.**, Naval Postgraduate School, Monterey, USA

17.55 - 18.00 *Neashore water dynamics in the Eastern English Channel measured by drifters*

Sentchev A., Station Marine de Wimereux, France

18.00 - 18.05 *Surface circulation of the Arctic Ocean deduced from wind and ice motion*

Colony R., University of Alaska, Fairbanks, USA, **Moritz R.E.**, University of Washington, USA

WEDNESDAY, May 5th, 1999

Session 5 : Surface circulation in semi-enclosed seas - Chairman : G. REVERDIN

9.00 - 9.40 - *A Lagrangian study of the Mediterranean surface circulation*

Poulain P.M., Naval Postgraduate School, Monterey, USA

9.40 - 10.05 - *Lagrangian observations of the mesoscale circulation in the Algerian Basin*

Salas J., **Garcia-Ladona E.**, **Font J.**, Instituto de Ciencias del Mar, Spain and **Millot Cl.**, Laboratoire d'Océanographie et de Biogéochimie, La Seyne, France

10.05 - 10.30 - *Adriatic Sea circulation as derived from SeaWiFS, AVHRR and drifter data*

Mauri E., MBARI, Moss Landing, USA, **Poulain P.M.**, Naval Postgraduate School, Monterey, USA

10.30 - 10.55 - *Eddy energy and shelf interactions in the Gulf of Mexico*

Ohlmann C., **Niiler P.P.**, Scripps Institution of Oceanography, La Jolla, USA, **Leben R.**, University of Colorado, Boulder, USA

10.55 - 11.20 : Coffee break and poster display

Session 6 : Pacific surface circulation phenomena (mid/high latitudes) - Chairman : M.S. SWENSON

11.20 - 12.00 - *Sampling tendency of surface drifters investigated with the aid of satellite altimeter data*

Uchida H., Japan Science and Technology Corporation, Japan, **Imawaki S.**, Kyushu University, Kasuga, Japan

12.00 - 12.40 *Wind-driven current by the northwesterly wind in the northern East Sea*

Lee D.-K., Pusan National University, Korea, **Niiler P.P.**, Scripps Institution of Oceanography, La Jolla, USA

14.00 - 14.40 *Bio-optical drifters and moorings in the Southern Ocean – Interactions between phytoplankton abundance, productivity and mesoscale circulation*

Abbott M.R., **Richman J.**, **Mengelt Cl.**, **Bartlett J.** and **Barksdale B.**, Oregon State University, Corvallis, USA

14.40 - 15.05 *Near-surface currents in the North Western Pacific from the WOCE/TOGA drifters*

Maximenko N.A., P.P. Shirshov Institute of Oceanology, Moscow, Russia, **Panteleev G.G.**, Dalhousie University, Halifax, Canada, **Niiler P.P.**, Scripps Institution of Oceanography, La Jolla, USA and **Yamagata T.**, University of Tokyo, Japan

15.05 - 15.30 *Joint analysis of drifters data and satellite imagery for studying surface circulation of the Japan Sea*

Ginzburg A.I., **Kostianoy A.G.**, **Ostrovskii A.G.**, P.P. Shirshov Institute of Oceanology, Moscow, Russia

15.30 - 15.55 *A summary of Meddies tracked with floats in the eastern North Atlantic*

Richardson Ph., **Bower A.**, Woods Hole Oceanographic Institution, USA, and **Zenk W.**, Institut für Meereskunde, Kiel, Germany

Poster and discussion session 3

15.55 - 16.00 *Observation of Kuroshio warm filaments and frontal eddies on the East China Sea outer shelf*

Lie H.-J., Korea Ocean Research and Development Institute, Ansan, Korea, **Niiler P.P.**, Scripps Institution of Oceanography, La Jolla, USA and **Choi Ch.-H.**, Korea Ocean Research and Development Institute, Ansan, Korea

16.00 - 16.05 *Rossby eigenmodes and the Loop Current in the Gulf of Mexico*

Sheremet V.A., Woods Hole Oceanographic Institution, USA

16.05 - 16.10 *Analyses of the Black Sea circulation using satellite altimetry, imagery and drifters*

Korotaev G.K.¹, **Saenko O.A.**¹, **Demyshev S.G.**², **Koblinsky C.J.**³, **Knysh V.V.**¹, **Stanichny V.**¹.
¹ Marine Hydrophysical Institute, Sevastopol, Ukraine, ² Institute of Nuclear Energy and Industry, Sevastopol, Ukraine, ³ Goddard Space Flight Center, Greenbelt, USA

16.10 - 16.15 *The Ebro delta plume : 3D study from numerical modelling and field data*

Durand N., **Ouillon S.** and **Fraunié P.**, Université de Toulon et du Var, France

16.20 - 17.00 : Coffee break and poster display

20.00 Colloquium dinner at the Château de Colonster

THURSDAY, May 6th, 1999

Session 7 : Lagrangian techniques in numerical modelling

Chairman : J.M. BECKERS

9.00 - 9.40 *Lagrangian statistics in a high resolution (1/12°) ocean numerical model*

Chassignet E.P., **Garraffo Z.D.**, **Griffa A.**, University of Miami, USA and **Provenzale A.**, CNR, Torino, Italy

9.40 - 10.05 *Diagnosing water pathways in global ocean simulations with newly-developed Lagrangian techniques*

Blanke B., Laboratoire de Physique des Océans, Brest, France

10.05 - 10.30 *Fitting data with dynamics in the CalCOFI region*

Di Lorenzo A., **Miller A.J.**, **Cornuelle B.D.**, Scripps Institution of Oceanography, La Jolla, USA and **Moisan J.**, Long Island University, USA

10.30 - 11.00 : Coffee break and poster display

11.00 - 11.25 *Predictability of trajectories in the ocean and Lagrangian data assimilation*

Ozgokmen T.M., **Griffa A.**, University of Miami, USA, **Piterberg L.I.**, University of California, Los Angeles, USA, **Mariano A.J.**, University of Miami, USA

11.25 - 11.50 *Lagrangian diagnostics of meridional mass transport*

Lee M.-M., Southampton Oceanography Centre, UK

11.50 - 12.15 *Spreading of water masses formed in the Weddell Sea*

Schodlok M.P. and **Hellmer H.H.**, Alfred-Wegener-Institute for Polar and Marine Research, Bremerhaven, Germany

Session 8 : Diagnosing vertical velocity

Chairman : R.L. HANEY

14.00 - 14.40 *A quantitative look at the errors involved in the estimation of w and vertical fluxes from the solution of the QG omega equation*

Allen J.T.¹, **Rixen M.**², **Smeed D.A.**¹, **Nurser A.G.**¹, **Zhang J.**¹ and **Beckers J.M.**²

¹ Southampton Oceanography Centre, UK, ² Université de Liège, Belgium

14.40 - 15.20 *A description of the kinematics and dynamics of mesoscale motion in the California Current through observation and modelling*

Shearman R.K. and **Barth J.A.**, Oregon State University, Corvallis, USA

15.20 - 16.00 *The use of digital filter initialization to diagnose the mesoscale circulation and vertical motion in the California Coastal Transition Zone*

Haney R.L. and **Hale R.A.**, Naval Postgraduate School, Monterey, USA

16.00 - 16.25 : Coffee break and poster display

16.25 - 16.50 *Three-dimensional circulation at the Antarctic Polar front*

Barth J.A., **Shearman R.K.**, **Cowles T.J.**, **Pierce S.D.** and **Richman J.R.**, Oregon State University, Corvallis, USA

16.50 - 17.15 *Improving vertical velocities computation in weak synoptical samplings*

Rixen M.¹, **Allen J.T.**², **Beckers J.M.**¹

¹ Université de Liège, Belgium, ² Southampton Oceanography Centre, UK

17.15 - 17.40 *Diagnose of ocean unstable baroclinic waves and meanders using quasi-geostrophic equations, Q-vector method, and potential vorticity*

Wang J., University of Alaska, Fairbanks, USA and **Ikeda M.**, Hokkaido University, Japan

17.40 - 18.05 *Vertical velocity and vorticity estimates derived from simulated drifters*

Righi D.D. and **Strub P.T.**, Oregon State University, Corvallis, USA

Poster and discussion session 4

18.05 - 18.10 *Three-dimensional circulation and marine bioresources management*

Igumnova E.M. and **Timchenko I.E.**, Marine Hydrophysical Institute, Sevastopol, Ukraina

18.10 - 18.15 *Lagrangian model simulations of estuarine turbidity maxima*

Rolinski S., Universität Hamburg, Germany

18.15 - 18.20 *Hybrid particle model for forecasting matter transport in coastal waters*

Korotenko K.A., P.P. Shirshov Institute of Oceanology, Moscow, Russia

18.20 - 18.25 *Comparison of the Eulerian and Lagrangian tidal residual in the Bohai Sea*

Wei H., **Feng, S.**, University of Qingdao, China

FRIDAY, May 7th, 1999

Session 9 : Statistical flow properties deduced from Lagrangian data - Chairman : A. GRIFFA

9.00 - 9.40 *Lagrangian transport in flows with recirculations*

Zambianchi E., Istituto Universitario Navale, Napoli, Italy

9.40 - 10.20 *Tracer transport and Lagrangian data*

Griffa A., IOF/CNR, La Spezia, Italy, University of Miami, USA

10.20 - 10.45 *Prediction of particle trajectories in the Adriatic Sea using Lagrangian data assimilation*

Castellari S., **Ozgokmen T.M.**, **Griffa A.**, University of Miami, USA, **Poulain P.M.**, Naval Postgraduate School, Monterey, USA

10.45 - 11.05 : Coffee break and poster display

11.05 - 11.30 *Trajectories of localized vortices near boundaries in the problem of oceanic circulation*

Dawai T., **Pavlov V.**, Laboratoire de Mécanique de Lille, Villeneuve d'Ascq, France

11.30 - 11.55 *Lagrangian dispersion and Eulerian reconstruction*

Mockett C., Scripps Institution of Oceanography, La Jolla, USA, **Provenzale A.**, Istituto di Cosmogeofisica, Torino, Italy

11.55 - 12.20 *Lagrangian velocity pdfs of oceanic subsurface floats*

Bracco A.¹, **La Casce J.**² and **Provenzale A.**¹

¹ Istituto di Cosmogeofisica, Torino, Italy, ² Woods Hole Oceanographic Institution, USA

Session 10 : Lagrangian data assimilation - Chairman : J.A. BARTH

14.00 - 14.40 *Regional assimilation of Lagrangian data*

Bennett A. and **Mead J.**, Oregon State University, Corvallis, USA

14.40 - 15.05 *A dynamically consistent circulation in the North Pacific Ocean derived by combining oceanic and atmospheric climatologies with drifter data*

Yaremchuk M.I., International Pacific Research Center, Honolulu, USA

15.05 - 15.30 *Reconstruction of passive tracers on the outer Scotian shelf using a Lagrangian data assimilation technique*

Panteleev G. (1,3), **Reiss Ch.**², **de Young B.**¹, **Bowen A.**², **Taggart Ch.**²

¹ Memorial University of Newfoundland, Canada, ² Dalhousie University of Nova Scotia, Halifax, Canada, ³ P.P. Shirshov Institute of Oceanology, Moscow, Russia

15.30 - 15.55 *Optimum statistical estimation of the three-dimensional circulation*

Kushnir V.M., Yunev O., Danilova I., Marine Hydrophysical Institute, Sevastopol, Ukraine

15.55 - 16.20 : Coffee break and poster display

16.20 - 16.45 *The concept of age in ocean modeling*

Delhez E.J.M.¹, Campin J.M. and Deleersnijder E.

¹ Université de Liège, Belgium, ² Université Catholique de Louvain, Belgium

16.45 - 17.10 *Inversion of the upper ocean temperature time series for the vertical entrainment velocity and the horizontal diffusivity and advection velocity*

Ostrovskii A., Kyushu University, Kasuga, Japan, **Piterbag L.**, University of Southern California, Los Angeles, USA

17.10 - 17.35 *The evolving subspace of the three-dimensional ocean variability*

Lermusiaux P., Harvard University, Cambridge, USA

Poster and discussion session 5

17.35 - 17.40 *Modelling the three-dimensional circulation from hydrographic data and current observations in the Gulf of Lion*

Auclair F.¹, Durrieu de Madron X.², Estournel C.¹, Marsalaix P.¹ and Vehil R.¹

¹ Observatoire Midi Pyrénées, Toulouse, France, ² Université de Perpignan, France

17.40 - 17.45 *Determination of large-scale ocean currents from hydrographic data*

Fomin L.M., Vinogradova K.G., P.P. Shirshov Institute of Oceanology, Moscow, Russia

17.45 - 17.50 *Climatological data assimilation into a 3D finite element model of the South Atlantic Ocean*

Nechaev D. (1,3), Schröter J.¹ and Yaremchuk M. (2,3)

¹ Alfred-Wegener-Institute for Polar and Marine Research, Bremerhaven, Germany, ² University of Hawaii, Honolulu, USA, ³ Shirshov Institute of Oceanology, Moscow, Russia

17.50 - 17.55 *Data assimilation techniques for diagnosing marine environment*

Timchenko I.E. and Igumnova E.M., Marine Hydrophysical Institute, Sevastopol, Ukraine

17.55 - 18.00 *On factors limiting the reconstruction of three-dimensional oceanographic fields from the Lagrangian or Quasi-Lagrangian data*

Ivanov L.M., Marine Hydrophysical Institute, Sevastopol, Ukraine

18.00 - 18.05 *The SIKM filter and its application to reconstruct the Black Sea chlorophyll field*

Ivanov L.M.¹, Kirwan A.D.², Margolina T.M.¹ and Belousov V.V.¹

¹ Marine Hydrophysical Institute, Sevastopol, Ukraine, ² Old Dominion University, Norfolk, USA

18.05 - 18.10 *Spectral reconstruction of oceanographic fields. Approach, mathematical methods, an application to the FGGE-Lagrangian data field*

Ivanov L.M. and Margolina T.M., Marine Hydrophysical Institute, Sevastopol, Ukraine

18.10 - 18.15 *Inversion of heat advection by Lagrangian and Eulerian methods*

Semovski S.V.¹, Ostrovskii A.G.² and Piterbag L.I.³

¹ Limnological Institute, Irkutsk, Russia, ² Kyushu University, Kasuga, Japan, ³ University of Southern California, Los Angeles, USA

18.15 - 18.20 *Laboratory models of the oceanic mesoscale flows*

Zatsepin A.G., P.P. Shirshov Institute of Oceanology, Moscow, Russia

Open poster session

The investigation of the Black Sea waters pathway in the North Aegean Sea using a numerical model and satellite data

Krestenitis Y.N. and **Barbopoulos K.A.**, Aristotle University of Thessaloniki, Greece

Role of the ocean atmosphere interaction on the self-regulation mechanism of the surface waves generated by wind

Ouashine A. and **Pavlov V.**, Université des Sciences et Technologies de Lille, France

Stimulation of large-scale anticyclonic circulation in the ocean via salt fingers convection

Pereskokov A.I., Russia Research Institute of Hydrometeorological Information, Obninsk, Russia

The study of denser water flows on a sloping bottom

Sheremet N.A.¹, **Sheremet V.A.**² and **Zatsepin A.G.**

¹ P.P. Shirshov Institute of Oceanology, Moscow, Russia

² Woods Hole Oceanographic Institution, USA

Features of seasonal and interannual variability of the water circulation and sea level of the Arctic Ocean

Pavlov V.K., Arctic & Antarctic Research Institute, St. Petersburg, Russia

Global minimization scheme of variational data assimilation method specialized for estimating 2-dimensional mesoscale vortices field

Wakamatsu T., University of Alaska Fairbanks, USA and **Ikeda M.**, Hokkaido University, Sapporo, Japan

The world ocean thermohaline circulation calculated by new adjustment method

Sarkisyan A.S., Institute of Numerical Mathematics, Moscow, Russia, **Ivanov Y.A.**, **Lebedev K.V.**; Shirshov Institute of Oceanology, Moscow, Russia

Assimilation of altimeter data into the Black Sea circulation model

Korotaev G.K.¹, **Saenko O.A.**¹, **Sarkisyan A.S.**², **Knysh V.V.**¹

¹ Marine Hydrophysical Institute, Sevastopol, Ukraine

² Institute of Numerical Mathematics, Moscow, Russia