Monday A.M.

Biological Oceanography

BO11A D137  Monday  0800h
Biological Oceanography General Contributions I

Presiding: G K Saba, Virginia Institute of Marine Science; M Wood, University of Oregon

0800h  BO11A-01 Comparative genomics of two Crocosphaera watsonii strains shows unexpected genetic divergence: S R Bench, I Ilkhyan, H Tripp, J P Zehr
0815h  BO11A-02 Nanochloropsis oceanica Growth Optimization Study: Nitrogen Source and Concentration: S Johnson
0830h  BO11A-03 The Effect of Light on Phosphorus and Amino Acid Uptake in Prochlorococcus spp., in the North Pacific Subtropical Gyre Using Cell-sorting Flow Cytometry: K M Bjorkman, M J Church, K Doggett, D M Karl
0845h  BO11A-04 Distribution and ecology of Prochlorococcus and Synechococcus ecotypes: Z Thomson, G Rocap
0900h  BO11A-05 Space-time variability of picophytoplankton community in South Australian shelf waters: V Van Dongen-Vogels, J Paterson, J R Seymour, S Leterme, L Seuront
0915h  BO11A-06 Spatial dynamics of viral and bacterial populations within two dissimilar wind-driven coastal upwelling systems: J Paterson, V Van Dongen-Vogels, S Leterme, L Seuront
0930h  BO11A-07 WITHDRAWN
0945h  BO11A-08 Contrasting Coccolithophore Dynamics from the Iceland Basin (North Atlantic) and Patagonian Shelf (South Atlantic): A J Poulton, A Charalampopoulos, W M Balch, S Painter

BO11B D135  Monday  0800h
From Match to Mismatch: Climate Change and the Phenology of Marine Trophic Interactions I (joint with PO)

Presiding: S J Sydeman, NOAA/SWFSC, W J Sydeman, Farallon Institute

0800h  BO11B-01 Separating interannual variability in phenology from underlying trends in chlorophyll time series in the northern California Current: A C Thomas, R Weatherbee, P T Strub, R Mendelsohn
0815h  BO11B-02 Phenology changes across four trophic levels in a marine ecosystem: evidence of trophic mismatch in the North Sea: S Burthe, M Frederiksen, M Edwards, D Elston, S Thackeray, S Wanless
0830h  BO11B-03 Consequences of dormancy timing and duration on the distribution of Calanus finmarchicus in the North Atlantic and potential trophic implications: F Maps, J A Runge, A J Pershing, A Leising, D G Kimmel, J J Pierson
0845h  BO11B-04 Model predicted phenology of the biological spring bloom within the California Current from 1967-2009: A Leising, S J Bograd, D G Foley
0900h  BO11B-05 Modeled spatial and temporal distribution of Euphausia pacifica in the California Current from a coupled ocean circulation and individual-based model: J Dorman, T M Powell, W Sydeman, S J Bograd, J Santora
0915h  BO11B-06 Climate Change, Competition, and Habitat Usage: Earlier and Stronger Warming May Alter Ecosystem Roles of the Key Arctic Species Boreogadus saida: P E Renaud, J Berge, O Lønne, ØYSTEIN Varpe, J Nahrgang, C Ottesen

0930h  BO11B-07 OCEANOGRAPHIC CONDITIONS ALONG THE NORTHERN GULF OF ALASKA'S SEWARD LINE, 1997-2009: R R Hopcroft, K O Coyle, T Weingartner, T E Whitledge
0945h  BO11B-08 Seasonal Abundance of Humboldt Squid in Monterey Bay in Relation to Upwelling: J Stewart

Chemical Oceanography

CO11A D139  Monday  0800h
Gases as Tracers of Oceanic Processes I (joint with BO, PO)

Presiding: D T Ho, University of Hawaii; R C Hamme, University of Victoria

0800h  CO11A-01 A method for calculating sea-air gas exchange rates and its evaluation using upper ocean radon distributions: M L Bender, S Kinter, N Cassar, R H Wanninkhof
0815h  CO11A-02 The Dissolved Gas Toolbox for Quantifying Rates of Biological Production (Invited): R H Stanley, R Ferrari
0830h  CO11A-03 Sulfur Hexafluoride in the Eastern North Pacific Ocean: R Sonnerup, S Meecking, J L Bullister, C L Sabine
0845h  CO11A-04 Distribution of ‘He in the Pacific Ocean: Implications for Deep and Intermediate Water Ventilation and Turbulent Vertical Exchange Coefficients: P Schlosser, R Newton, G Winckler
0900h  CO11A-05 Surprisingly low Diapycnal Mixing in the tropical ocean’s Thermocline revealed by a Tracer Release Experiment (GUTRE): M Visbeck, T S Tanhua, M Dengler, T Fischer, R Hummels, D Wallace
0915h CO11A-06 Noble Gas Supersaturations as tracers of Diapycnal Mixing in the Ventilated Thermocline of the North Pacific Ocean (Invited): S R Emerson, R C Hamme, T Ito
0930h CO11A-07 Modeling Spatial and Temporal Variability of Noble Gas Tracers in the North Pacific: T Ito, R C Hamme, P Covert, S R Emerson

Education and Outreach

ED11A E141 Monday 0800h
ASLO Student Symposium I

Presiding: C W. Wilkerson, Hampton University; C Rodriguez, College of William & Mary, Virginia Institute of Marine Sciences

0800h ED11A-01 Feeding and activity patterns of the purple marsh crab Sesarma reticulatum: K Lowman
0815h ED11A-02 The Cumulative Impacts of Shellfish Aquaculture: M Davis
0830h ED11A-03 Enhanced N2O Fluxes in Coastal Wetlands Due to Nitrogen Enrichment: R Gonzalez, S Moseman-Valtierra, K D Kroeger
0845h ED11A-04 Spatial and temporal distribution of marine picophytoplankton within the Patagonian Large Marine Ecosystem: H A Wright, L R Moore
0900h ED11A-05 Fecal coliform bacteria concentrations in the waters surrounding Port Aransas, TX, USA: J Rubio, E Buskey
0915h ED11A-06 Influence of Central Pacific oceanographic conditions on the equatorial habitats of four tuna species: A L Deary, S Moret, M Engels, E Zettler, G E Jaroslow, G Sancho
0930h ED11A-07 Recovery of bacterial DNA from animal tissue for culture independent analysis of potential bacterial pathogens of the bottlenose dolphin (Tursiops truncatus): T Hamilton

Interdisciplinary

IT11A PB252 Monday 0800h
Nitrogen Cycling Near Oxygen Minima Zones: Linking Observations to Global Models of Nitrogen Fixation in the Anthropocene I (joint with BO, PA, GO, CO)

Presiding: B N Popp, University of Hawaii; A E White, Oregon State University

0800h IT11A-01 Fixed nitrogen loss from the major oxygen deficient zones of the ocean determined from measurements of N2:Ar (Invited): B X Chang, A Devol, S R Emerson
0815h IT11A-02 COMPARING NITROGEN-LOSS AND THE TIGHTLY COUPLED NITROGEN CYCLE ACROSS THREE OXYGEN MINIMUM ZONES (Invited): P Lam, M M Jensen, G Lavik, M Guenter, M M Kuypers
0830h IT11A-03 Nitrogen Isotope Simulations Reveal the Importance of Aeolian Iron Deposition on the Pattern of Nitrogen Fixation Across the Pacific Ocean: C J Somes, A Schmittner
0845h IT11A-04 A Survey of the Tropical Pacific Nitrogen Isotopic Composition of Nitrate–New Measurements Show Surprising Isotopic Highs and Lows: P A Rafter, C D Charles, D M Sigman
0900h IT11A-05 The isotopic signature of denitrification and the global marine nitrogen balance: C A Deutsch, K Kritee, D M Sigman, S Khatiwalla, J Granger
0915h IT11A-06 Dependence of the Nitrogen Isotope Effect of Denitrification on the Cell Specific Nitrate Reduction Rate and its Implications for Denitrification in the Ocean: K Kritee, D M Sigman, J Granger
0945h IT11A-08 The role of community structure and nitrogen fixation on particle export in the Gulf of California and the eastern tropical North Pacific Ocean: E Verdeny, C R Benitez-Nelson, P Masque, V Viena Puigguró, A White, F G Prah, B N Popp, R A Foster, K Arthur

IT11B PB254 Monday 0800h
Ocean-Aerosol Interactions I (joint with BO, PO, MT, GO, CO)

Presiding: N Meskhidze, North Carolina State university; N B Nelson, UCSB; S Gassó, GEST/UMBC

0802h IT11B-01 Imaging the Interactions of Earth’s Radiative Properties and Ocean Biogeochemistry (Invited): H Maring, P S Bontempi
0817h IT11B-02 Ocean Photobiogeochemical Cycling and the Global Modeling of Sources of Important Trace Gases to the Atmosphere (Invited): D A Siegel, N B Nelson, C M Swan, D B Millet
0832h IT11B-03 Diagnostic Source Minerals of Eolian Transport in Bermuda Dust: T M Church, C Fontaine, P N Sedwick, B Veld
0844h IT11B-04 DMS and other aerosol precursors from the ocean: a global view (Invited): R Simo, A Lana
0859h IT11B-05 Long Range Transport, Subsidence, Entrainment and Cloud Interactions in Remote Marine Regions: A D Clarke, C S McNaughton, S G Howell, V N Kapustin, S Freitag, L Shank
0911h IT11B-06 What is the Size- and Composition-Dependent Fluxion of Sea Spray Aerosol and Why do we Care? (Invited): S E Schwartz
0926h IT11B-07 Sources for reactive halogen species and oxygenated VOC over biologically active upwelling regions of the tropical Pacific Ocean: R Volkamer, S Coburn, B Dix, R Sinreich
0938h IT11B-08 The Association of Water Soluble Organic Matter with African Dust and Pollution Aerosols: Implications for Nutrient Deposition and Dust Nucleation Characteristics: L M Zamora, D A Hansell, J M Prospero
0950h IT11B-09 Satellite observation of marine productivity and marine aerosol using a combination of OMI and MODIS products: S Gassó, Z Ahmad, C R McClain, O Torres

IT11C E143 Monday 0800h
Physical Forcing and Consequences of Fluid and Particle Exchange in Permeable Sediments I (joint with BO, PO, GO, CO)

Presiding: F Sansone, University of Hawaii; C E Reimers, Oregon State University

0800h IT11C-01 EDDY CORRELATION MEASUREMENTS OF BENTHIC OXYGEN FLUXES FOR PERMEABLE SEDIMENTS (Invited): P Berg, M H Long, K Foreman, A Giblin, R Howarth, M Huettel, R Marino, K McGlathery, J Rheuban
### IT11C-02
0815h  IT11C-02 The coupled hydrodynamics and biogeochemistry of wave-influenced marine sediment under steady and unsteady forcing: lessons from numerical models (Invited): B Cardenas, P L Cook, H Jang, P Traykovski

### IT11C-03

### IT11C-04
0845h  IT11C-04 Denitrification in Shallow, Sublittoral Gulf of Mexico Permeable Sediments (Invited): T M Ghihring, A Canion, A Riggs, M H Huettel, J E Kostka

### IT11D-05
0900h  IT11D-05 Dissolved Organic Carbon Degradation in Coastal Sands: M H Huettel, L Chipman, M Laschet

### IT11D-06
0915h  IT11D-06 Advection of labile dissolved organic carbon (DOC) through permeable sands induces the release of sorbed DOC to the overlying water: C Magen, M H Huettel, D C Podgorski, W T Cooper

### IT11D-07
0930h  IT11D-07 Advecitve flow over permeable sandy sediments enhances extracellular enzyme activities in overlying waters: K Ziervogel, A Steen, S Ghobrial, C Arnosti

### IT11E-01
0800h  IT11E-01 The Radiation in a Dynamic Ocean Santa Barbara Channel Field Experiment: T D Dickey

### IT11E-02
0815h  IT11E-02 Breaking Waves and their Influence on Subsurface Light Fluctuations: M L Banner, C J Zappa, J Gemmrich, P Bhandari, K J Voss, M Lewis

### IT11E-03
0830h  IT11E-03 Variability of Irradiance in the Wave Boundary Layer: H W Wijesekera, S Pegau, T Boyd

### IT11E-04
0845h  IT11E-04 Statistical properties of wave-induced fluctuations in underwater downwelling irradiance: Results from the RaDyO experiment in the Santa Barbara Channel: D Stramski, M Durecki

### IT11E-05
0900h  IT11E-05 The underwater irradiance distribution: M Lewis, J Wei, R Van Dommelen

### IT11E-06
0915h  IT11E-06 Polarized radiance distribution in the near surface region: K J Voss, P Bhandari, L Logan

### IT11E-07
0930h  IT11E-07 The optical scattering effect of acoustically-measured bubble populations: H Czerski, M M Slivkoff, D Farmer

### IT11E-08
0945h  IT11E-08 Surface Wave Processes Affecting Light Transmission and Imaging Through the Ocean Surface: P J Sutherland, L Lenain, W K Melville

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### MT11A-01

### MT11A-02
0815h  MT11A-02 Gridded data integration: year one focus of NOAA’s Global Earth Observation Integrated Data Environment: S C Hankin

### MT11A-03
0830h  MT11A-03 Integrating TAO Data With Other IOOS Datasets in Java OceanAtlas 5.0: J Osborne, W S Kessler

### MT11A-04
0845h  MT11A-04 The Evolution of an Ocean Data System for Deployment into GEOSS: S Browdy

### MT11A-05
0900h  MT11A-05 Regional to local IOOS Data Management and Interoperability: Perspective from the Trenches (NANOOS, US Pacific NW): E Mayorga, D Jones, R Blair

### MT11A-06
0915h  MT11A-06 End-to-End Discovery and Access experiences in GEOSS: Implications for GEOSS-ready Providers of Ocean Data: J E Lieberman

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### Marine Technology

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<td>Biogeochemistry of the North Atlantic in a Global Context: Bringing Together Recent Advances in Modeling and Observations I (joint with BO, PO, CO)</td>
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<th>MT11A PB253</th>
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<td>Frontiers in Ocean Data Management and Interoperability: The Future is Now I (joint with PO, IT, GO)</td>
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<td>Presiding: S C Diggs, Scripps Inst. of Oceanography; J E Lieberman, Traverse Technologies Inc.</td>
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Physical Oceanography

PO11A E146 Monday 0800h
Dynamics and Impact of the Meridional Overturning Circulation I

Presiding: A Schmittner, Oregon State University; W Weijer, Los Alamos National Laboratory; J Hirschi, National Oceanography Centre

0800h PO11A-01 Variability of the circulation and heat transport from four occupations of the A25 Greenland-Portugal Oviedo section between 1997 and 2006: H Mercier, P Lherminier
0815h PO11A-02 Observability of meridional transports of volume and heat: G Forget, P Heimbach, R Ponte
0830h PO11A-03 Continuous observations of the variability of the Atlantic meridional overturning circulation at 26.5°N: Major results and present challenges: T Kanzow, W Johns, J Marotzke, J Hirschi, H L Bryden, M O Baringer, C Maria Paz, H L Johnson, D P Marshall, C S Meinen, L M Beal, S A Cunningham
0900h PO11A-05 Deconstructing the Conveyor Belt (Invited): S Lozier
0915h PO11A-06 Can Labrador Sea Water Formation be detected from space?: I Swagemakers, C A Katsman, R Gelderloos
0930h PO11A-07 The “Day after Tomorrow” Scenario: Can In-Situ Floats and Satellite Altimeters Detect the Impact of Global Warming on Atlantic Ocean Overturning?: J K Willis
0945h PO11A-08 Linking The Atlantic Gyres: Warm, Saline Intrusions From Subtropical Atlantic To The Nordic Seas: S M Hakkinen, P B Rhines

PO11B D136 Monday 0800h
Near-Inertial Motions: Their Ubiquity, Obliquity, Propensity, and Propinquity I

Presiding: R Lumpkin, NOAA/AOML; C N Mooers, Portland State University

0800h PO11B-01 Inertial Oscillations modification by mesoscale vorticity (Invited): S Eliot, R Lumpkin, G Prieto, J M Lilly
0815h PO11B-02 Three dimensional propagation of inertial waves in a fully turbulent mesoscale eddy field: E Danidou, P Klein
0830h PO11B-03 Are near-inertial waves important in mixing the deep ocean? (Invited): M H Alford
0845h PO11B-04 Near-inertial enhancement around the critical diurnal latitude (Invited): H van Haren
0900h PO11B-05 Inertial Internal Wave Energy Redistribution via Interaction with the Semi-Diurnal Internal Tide: M D Guiles, D S Luther
0915h PO11B-06 Observations of Near Inertial Motions in the Antarctic Circumpolar Current: B Kilbourne, J B Girton
0930h PO11B-07 Observation and simulation of typhoon-induced near-inertial waves interacting with large- and meso-scale currents in the Kuroshio Extension: J Park, S Lee, K A Donohue, D R Watts, L Rainville, I Ginis, S Kang, H Lee
0945h PO11B-08 Mixing induced by atmospheric synoptic waves in the northeast tropical Pacific and the role of near inertial oscillations: S M Soares, K J Richards

Interdisciplinary

IT12A Oregon Ballroom Monday 1030h
Interdisciplinary Plenary Session: Combining Data and Models - Steps Toward Biogeochemical State Estimation

Presiding: G A Cutter, Dept Ocean Earth & Atmosph Sci; G A Cutter, Dept Ocean Earth & Atmosph Sci

1030h IT12A-01 Combining data and models. Steps towards biogeochemical state estimation: R Schlitzer
Biological Oceanography

BO13A D137 Monday 1300h
Biological Oceanography General Contributions I (joint with CO)

Presiding: F M Van Dolah, NOAA; L Procie, Old Dominion University

1300h BO13A-01 First results from the MARine Ecosystem Model Inter-comparison Project (MAREMIP) (Invited): M Vogt, C Le Quere, S Alvin, L Bopp, E T Buitenhuis, S C Doney, T Hashioka, I Lima, M N Aita, Y Yamanaka
1315h BO13A-02 PHYTOPLANKTON GROUPS OBSERVATIONS AVAILABLE FROM SPACE BASED ON THE PHYSAT METHOD (Invited): S Alvin, D Dessailly, C Moulin, H Loisel
1330h BO13A-03 Particulate nutrient flux on coral reefs: insights from field and laboratory studies using natural and enriched stable isotopes: A S Wyatt, S Humphries, A M Waite
1345h BO13A-04 Different Microworlds? Fecal Pellets of Copepods and Tunicates: M Koester, G Paffenhöfer, R Sietsmann
1400h BO13A-05 Bacterial production of humic-like fluorescent dissolved organic matter and variation of fluorescent properties among bacterial groups: K Shimotori, K Watanabe, T Hama
1415h BO13A-06 Export production and its regulating factors in the Western Antarctic Peninsula region of the Southern Ocean: K Huang, H Ducklow, M Vernet, M R Hiscock, N Cassar, M L Bender
1430h BO13A-07 Measuring Primary Production Rates in the Ocean: differences between incubation, non-incubation and satellite methods at Stn ALOHA: P Quay, C Peacock, K M Bjorkman, D M Karl
1445h BO13A-08 Sapphirinid copepods as a predator of doliolids: their contribution to doliolids mortality and sinking flux: K Takahashi, H Saito, S Kakehi, K Hidaka

BO13B PB255 Monday 1300h
Influence of Microbial Interactions on the Ecology and Biogeochemistry of Aquatic Systems I

Presiding: T D Peterson, Oregon Health & Science University; R A Foster, University of California

1300h BO13B-01 Diversity and Roles of Fungus-Like Osmoheterotrophic Protists (Labyrinthulomyces) in Marine Ecosystems (Invited): J L Collier, E Collado Mercado, J C Radwany, G Lopez, A Boltax
1315h BO13B-02 Temporal Variations in the Attachment of Marine Bacterial Taxa to Phytoplankton: X Mayali, P J Franks, F Azam, R S Burton
1330h BO13B-03 Quorum sensing by particle-associated bacteria affects attenuation of particulate organic carbon flux in the oceans: L Hmelo, B Van Mooy, T J Minner
1345h BO13B-04 Impact of a Myriocheta rubra red tide on the Columbia River estuary: L Herfort, T D Peterson, R Warnick, L McCue, B C Crump, F G Prahl, A M Baptista, V Campbell, M Selby, G C Roegner, P Zuber
1400h BO13B-05 Coupling of pelagic crenarchaeal abundances with primary export productivity and terrestrial organic matter input: S Fietz, A Martinez Garcia, M Escala, A Rosell Mele

BO13C D135 Monday 1300h
Using Satellite and in Situ Data Archives for Ocean Biology Research I

Presiding: M C Gregg, NOAA; B C Monger, Cornell University

1315h BO13C-02 Are the World's Oceans Optically Different?: M Szeto, J W Campbell, T Moore, J Werdell, R Morrison
1345h BO13C-04 Changes in phytoplankton groups composition in the Equatorial Pacific during ENSO cycles: I Masotti, C Moulin, S Alvin, L Bopp, A Tagliabue, D ANTOINE
1400h BO13C-05 Understanding the impact of physical forcing on Southern Ocean primary production: J Peloquin, Z Lachkar, N Gruber
1415h BO13C-06 The Dynamics of Organic Carbon in the South Pacific Subtropical Gyre: B F Jonsson, M L Bender
1430h BO13C-07 Role of water column stability in regulating phytoplankton blooms in the Mid-Atlantic Bight: Y Xu, B E Cahill, R Chant, O Schofield
1445h BO13C-08 Combining satellite and in situ data with models to support climate data records in ocean biology: W W Gregg

Chemical Oceanography

CO13A D139 Monday 1300h
GEOTRACES in the International Polar Year I

Presiding: R Middag, Royal NIOZ; M Rutgers van der Loeff

1300h CO13A-01 Different biogeochemical processes drive seasonal iron supply in the subantarctic and polar Southern Ocean south of Australia (Invited): A R Bowie, D Lannuzel, T A Remenyi, P van der Merwe, T Wagenig, P J Lam, A Tagliabue
1315h CO13A-02 PROTACTIONUM AND THORIUM SCAVENGING AND ADVECTION IN THE SOUTHERN OCEAN, ATLANTIC SECTOR: C Venchiarutti, I Stimac, M Rutgers van der Loeff
1345h CO13A-04 Partitioning, speciation, and isotopic composition of riverine iron fluxes to the Gulf of Alaska: A W Schroth, J Crusius, O Rouxel, E R Sholkovitz, B C Bostick
1400h CO13A-05 Dissolved and Particulate Metals Distribution in Antarctic Sea Ice and their Role in Tracing Iron Sources: D Lannuzel, V Schoemann, P Van Der Merwe, T A Townsend, R A Bowie
1415h  CO13A-06 High Resolution Data for Selected Trace Elements from the CLIVAR/Repeat Hydrography P16S cruise: South Pacific to the Southern Ocean: A Milne, W M Landing, C I Measures
1430h  CO13A-07 The distribution and speciation of dissolved Zinc in the Southern Ocean: O Baars, P Streu, P L Crook
1445h  CO13A-08 Low export flux of particulate organic carbon in the central Arctic Ocean as revealed by 234Th:238U disequilibrium (Invited): P Cai, M Rutgers van der Loeff, I Stima, E Noethig, K Lepore, B Moran

Education and Outreach

ED13A  E14I  Monday  1300h
ASLO Student Symposium II

Presiding: C Willkerson, Hampton University; C Rodriguez, College of William & Mary, Virginia Institute of Marine Sciences

1300h  ED13A-01 Microbial Community Diversity in a Pulp Mill Effluent Impacted River: S Morgan, H N Williams
1315h  ED13A-02 Prevalence of indicator bacteria and Bdellovibrio and like organisms (BALOs) in a polluted Florida municipal stream: S Young, H N Williams
1330h  ED13A-03 “Toxicity” of the fish-killing alga, Heterosigma akashiwo, to larval herring and sea urchins: T Yess, P Dinne1
1345h  ED13A-04 Genetic Identification of Larval/Juvenile Sebastes Samples for Stock Assessment: C Vanegas, M Johansson, T Britt, M Litz, R Brodeur, M Banks, J R Hyde
1400h  ED13A-05 Morphological and genetic variation in the Caribbean species of the hydrocoral genus Millepora: D Ruiz, N Schizas
1415h  ED13A-06 The Response of Echinopluteus Larvae of Dendraster excentricus to Haloclines varies with Larval Age and Maternal Effects: V R James, A Warneke, C Kiel, W Miller, B T Hentschel
1430h  ED13A-07 Geochemical Analysis for Indications of Methane Hydrate Presence at the Bush Hill Basin, Gulf of Mexico: C Ackley, L Schultz, C Reardon, Z Li, P A Cleary
1445h  ED13A-08 DIVERSITY IN PICOPLANKTON COMMUNITIES WITHIN A SUBTROPICAL ESTUARINE SYSTEM: R Hartnett, D Erdner

Interdisciplinary

IT13A  PB252  Monday  1300h
Interactions Between Biogeochemistry and Ecosystems in Low-P Oligotrophic Areas I

Presiding: T Moutin, Laboratoire d’Océanographie Physique et Biogéochimique; B Van Mooy, Woods Hole Oceanographic Inst; F T Thingstad, Bergen University; M W Lomas, BIOS

1300h  IT13A-01 Understanding marine phosphorus composition and the potential impact on particle export in oligotrophic regions (Invited): C R Benitez-Nelson
1315h  IT13A-02 How is nitrogen fixation sustained in the eastern tropical North Atlantic? (Invited): C Mahaffey, R G Williams
1330h  IT13A-03 The Mediterranean sea as a typical low-P low chlorophyll oligotrophic system : overview and preliminary results of the BOUM experiment: T Moutin, L M Prieur

1345h  IT13A-04 NEAR-INERTIAL WAVE GENERATION WITHIN AN ANTICYCLONIC EDDY AND TURBULENCE IN THE MEDITERRANEAN SEA DURING BOUM EXPERIMENT: P Bouruet-Aubertot, Y Cuypers, J Fuda, C Marec

1400h  IT13A-05 The impact of anticyclonic mesoscale features on the Mediterranean Sea’s microbial food web: U Christaki, D Lefevre, F Van Wambeke, A Lagaria, J Grattapane, S Psarra, J Colombet, T Sime-Ngando, M Weinbauer, T Moutin

1415h  IT13A-06 Impacts of mesoscale eddies and phytoplankton dynamics on the biogeochemical cycling of dissolved cobalt and iron in the oligotrophic Sargasso Sea: R U Shelley, P N Sedwick, T S Bibby, A I Macey, P J Worsfold, M C Lohan
1430h  IT13A-07 Assessing Metabolic Balance In Oligotrophic Gyres: D Lefevre, C Tamburini, A Robert, P Payre, M Billaut, S Beurtheuy, K Arnaud, L M Prieur

IT13B  E143  Monday  1300h
Marine Habitat Mapping:Where Physical Oceanographers, Marine Ecologists, GIS Experts, and Habitat Suitability Modelers Meet I (joint with BO, PO)

Presiding: S Degraer, Royal Belgian Institute of Natural Sciences; V Van Lancker, RBINS

1305h  IT13B-01 Thoughts on Algorithmic Approaches to Reveal Marine Geomorphology as a Proxy for Habitat (Invited): D Wright, W D Heyman
1330h  IT13B-02 Integration of bathymetric LiDAR-derived morphological information and high-resolution multispectral image-derived spectral information for improved benthic habitat classification (Invited): H Su, H Liu, L Liu, W D Heyman, A M Filippi
1345h  IT13B-03 A Naturalist Method to Map Intertidal Benthic Habitats. (Invited): L Godet

1400h  IT13B-04 Novel and unexplored coral reef types of the Red Sea - A synoptic mapping approach: G P Rowlands, S J Purkis, B M Riegl, A Bruckner, P G Renaud
1415h  IT13B-05 Automated Benthic Habitat Classification from Optical Imagery: O Pizarro, J Colquhoun, C Moore, B Radford, S Williams, M Jakuba, A Heyward
1430h  IT13B-06 Mapping Patchy Hard-Bottom Habitats with Multiple Technologies from Ship, ROV and Autonomous Underwater Vehicles in Delaware Bay: D C Miller, A C Trembanis
1445h  IT13B-07 Process-Driven Characterization and Mapping of Seabed Habitats within the Basque continental shelf (Bay of Biscay): J Galparsoro, ANGEI Borja, V Kostylev, I Legorburru, G Rodriguez, I Muxika, L Pedro, M Pascual, B J Todd

IT13C  PB254  Monday  1300h
Novel Sensors, Platforms, and Analytical Approaches in Biogeochemistry I (joint with BO, PO, MT, CO)

Presiding: Z Chase, Oregon State University; J A Needoba, OHSU

1300h  IT13C-01 BOXER: An eddy correlation lander for studies of Benthic O2Xgen Exchange Rates on continental shelves (Invited): C E Reimers, K McCann-Grosvenor, R Sanders, J Simpkin
1315h  IT13C-02 In SITU REDOX CHEMISTRY AT A CABLED COASTAL OBSERVATORY: PREPARING FOR LONGER-TERM VOLTAMMETRIC DEPLOYMENTS: B T Glazer, I Chen
1330h  IT13C-03 In situ measurement of nitrate in deep-sea sediments with a microscale biosensor: U Marzocchi, N P Revsbech, R Glud

1345h  IT13C-04 Autonomous electrochemical sensor for in situ nutrient detection in sea water: L Lesven, D Thouron, M Comtat, P Gros, V Garcon


1415h  IT13C-06 A new analytical tool to look at phosphate limitation in mixed assemblages of phytoplankton: M Blakely, R M Kudela

1430h  IT13C-07 Characterizing nitrogen and carbon cycling gene dynamics in situ using the Environmental Sample Processor: J Robidart, C M Preston, K Turk, R Pael, T Cote, A Mosier, C A Francis, C Scholin, J Zehr

1445h  IT13C-08 Impedimetric Label-Free Sensing of DNA Hybridization in Real Time for Rapid, PCR-Based Detection of Microorganisms in the Environment: H M Simon, A Baptista, M W Smit

IT13D E145  Monday  1300h
Sea Ice, Atmosphere-Ocean Interactions, and Ecosystem Dynamics in Arctic and Subarctic Systems I (joint with BO, PO, CO)

Presiding: J Wang, NOAA Great Lakes Environmental Research Laboratory; C Deal, University of Alaska Fairbanks; D E Varela, University of Victoria; W J Williams, Institute of Ocean Sciences

1300h  IT13D-01 Sea ice cover anomaly and geochemical tracers in the Arctic Basin associated with the dipole mode of sea level pressure (Invited): M Ikeda

1315h  IT13D-02 A tracer study of the Arctic fresh water export variability (Invited): B Tremblay, A Jahn, R Newton, M M Holland, L A Myask, I Dmitrenko

1330h  IT13D-03 The Responses of Arctic Landfast Ice to Storm Activity (Invited): Y Yu, J A Maslanik, E Cassano, H Eicken, C Petrich, J Wang

1345h  IT13D-04 Impact of 2007 and 2008 Arctic ice anomalies on the atmospheric circulation: Implications for long-range predictions: F Molteni, M Balmaseda, L Ferranti, T Palmer

1400h  IT13D-05 Arctic Climate Forcing of North Atlantic Ecosystems (Invited): C H Green

1415h  IT13D-06 High Latitude Ocean Ecosystems: How Does Physics Control Their Behaviour and How Much Can They Adapt to Changing Conditions? (Invited): K Denman, D Lavoie, N S Steiner, J R Christian

1430h  IT13D-07 How can Arctic and Sub-Arctic ecosystems be affected by changing climate on the Atlantic side? (Invited): M Reigstad

1445h  IT13D-08 Contribution of siliceous plankton to autotrophic biomass and primary productivity in arctic and subarctic surface waters: D E Varela, I A Wrohan, S Wyatt

IT13E E147  Monday  1300h
Synergistic Interactions Between Stressors to Coral Reefs I

Presiding: C D Storlazzi, U.S. Geological Survey; D K Gledhill, NOAA AOML

1300h  IT13E-01 Space-For-Time: Elucidating the Thermal and Chemical Ramifications of Climate Change Upon Coral Reefs with Real-World Examples (Invited): D Manzello

1320h  IT13E-02 Multiple Stressors on Coral Reefs: Smoking Guns and Returning Fire (Invited): R H Richmond, E Wolsanski, J Martinez

1340h  IT13E-03 Coral resistance to climate change: “What doesn’t kill us makes us stronger” (F. Nietzsche) (Invited): C Birkeland

1400h  IT13E-04 Local Stress Reduces Coral Resistance and Resilience to Bleaching: J Carilli, R D Norris, B A Black, S M Walsh, M McField

1415h  IT13E-05 Synergies, stress and acclimatization on Western Indian Ocean coral reefs: are interactions between multiple stressors moderated by disturbance history?: E Darling, T McClanahan, I M Cote

1430h  IT13E-06 Increased storminess - protection for corals from thermal bleaching in a warming world?: M L Puotinen, A D Carrigan, R Borah

1445h  IT13E-07 The influence of sea level rise on fringing reef sediment dynamics: Field observations, theoretical calculations, and numerical modeling: M E Field, C D Storlazzi, A S Ogston, E Elias

Marine Technology

MT13A PB253  Monday  1300h
Frontiers in Ocean Data Management and Interoperability: The Future is Now II (joint with CO, ED, IT, PO, BO)

Presiding: S C Diggs, Scripps Inst. of Oceanography; J E Lieberman, Traverse Technologies Inc.

1305h  MT13A-01 Improvements to a Methodology for the Derivation of Shallow-water Bathymetry from High Resolution Multispectral Imagery (Invited): K R Hogrefe, D J Wright, J E Miller, T A Battista

1335h  MT13A-02 Seagrass species discrimination using AIS hyperspectral imagery in Redfish Bay, Texas (Invited): J S Wood

1400h  MT13A-03 Automatic Extraction of Shorelines and Blufflines using Remote Sensing Technology: I Lee, Y Choung, D Li, L Cheng, R Li

1415h  MT13A-04 Uncertainty Estimation of Historical Bathymetric Data from Bayesian Networks: P A Elmore, D Fabre, R Sawyer, R W Ladner


1445h  MT13A-06 Effective Data Versioning: Do I have the best available data?: S C Diggs, J C Fields, M Shen
Physical Oceanography

PO13A E146 Monday 1300h
Dynamics and Impact of the Meridional Overturning Circulation II

Presiding: G Danabasoglu, NCAR; W Weijer, Los Alamos National Laboratory

1300h PO13A-01 What Sets the Mid-Depth Stratification in Eddying Ocean Models?: C L Wolfe, P Cessi
1315h PO13A-02 Eddy-balanced buoyancy gradients on boundaries and their role in the thermocline and the meridional overturning circulation: P Cessi, B C Ludka, C L Wolfe
1330h PO13A-03 A time-dependent model of the warm-water branch of mid-depth meridional overturning: R M Samelson
1345h PO13A-04 Influence of sea surface freshwater flux on multiple equilibria in the global ocean circulation: S E Huisman, H A Dijkstra, A S von der Heydt, W de Ruiter
1400h PO23A-07 Evaluation of global models of circulation and biogeochemistry by bivariate T/S analysis: Y Plancherel, K B Rodgers, J L Sarmiento
1415h PO13A-06 The role of available potential energy in the ocean overturning circulation: G O Hughes, A Hogg, R W Griffiths
1430h PO13A-07 Propagation of meridional circulation anomalies along western and eastern boundaries: D P Marshall, H L Johnson
1445h PO13A-08 Optimal Surface Perturbations of North Atlantic Ocean Circulation: L Zanna, E Tziperman, P Heimbach, A M Moore

PO13B PB256 Monday 1300h
Nearshore Processes II (joint with GO)

Presiding: T T Janssen, San Francisco State University; K A Haas, Georgia Institute of Technology

1330h PO13B-02 Applications of Regional Ocean Modeling System (ROMS) for surf zone environment: G Voulgaris, N Kumar, J C Warner, K A Haas, Y Uchiyama, J C McWilliams
1345h PO13B-03 Sediment transport processes at Ocean Beach, San Francisco, CA: J E Hansen, E Elias, L H Erikson, J H List, P L Barnard
1400h PO13B-04 Sediment motion and scour due to transient long-wave forcing (tsunamis): H H Yeh
1415h PO13B-05 Equilibrium Shoreline Change at Ocean Beach, CA: M L Yates, J E Hansen, B O'Reilly, P L Barnard, R T Guza
1430h PO13B-06 Nearshore Tsunami Modeling: Tsunamis as Transient Swash Zones: A A Apostos, B E Jaffe, G R Gelfenbaum
1445h PO13B-07 Wave Dissipation Across a Wide Shallow Arctic River Delta: R P Mulligan, W Perrie, S M Solomon

PO13C PB251 Monday 1300h
Theory, Modeling, and Observations of Westward Propagating Rossby Waves and Eddies II

Presiding: R Tailleux, University of Reading; S Bulusu, University of South Carolina

1300h PO13C-01 A mechanism for the latitudinal dependence of peak-spectrum sea surface height variability: X Lin, J Yang, Y Yin
1315h PO13C-02 Reconciling Rossby Wave Theories with Observations of Multiple Westward Propagating Signals (Invited): A M Maharaj
1330h PO13C-03 On the dispersion relation of westward propagating signals in the oceans: R Tailleux, A M Maharaj
1345h PO13C-04 Mid-latitude Baroclinic Rossby waves in a high-resolution OGCM Simulation: K Aoki, A Kubokawa, H Sasaki, Y Sasai
1400h PO13C-05 The interaction between Rossby waves and turbulence and in the ocean (Invited): J Marshall, R Tulloch
1415h PO13C-06 Dipoles and the Propagation of Agulhas Eddies: the Effects of Laterally and Vertically Coupled Vortices: S Baker-Yeo, D R Watts, G Flierl
1430h PO13C-07 On the formation, propagation and decay of North Brazil Current rings: K Kirchner, M Rhein, S Huettl-Kabus
1445h PO13C-08 Non-harmonic Rossby waves in a zonal channel on a sphere: N Paldor, Y De-Leon

PO13D D136 Monday 1300h
Typhoon-Ocean Interactions in the Western North Pacific Ocean and Neighboring Seas I

Presiding: S S Chen, University of Miami; I I Lin, National Taiwan University

1300h PO13D-01 Opportunities and challenges in mission planning support for ITOP2010 (Invited): R Elsberry, P Harr
1315h PO13D-02 Typhoon-ocean interactions: Comparison of TCS08 air-deployed and Typhoon95 ship-based observations with a view toward ITOP2010 planning (Invited): P G Black
1330h PO13D-03 Kuroshio Extension Observatory (KEO) Measurements of the Upper-Ocean Response to Typhoon Choi-Wan: N A Bond, M F Cronin, Y Kawai, H Ichikawa, K Ronnholm
1345h PO13D-04 Typhoon-induced variability of surface mixed layer observed by Argo floats in Northwestern Pacific: Q Wu
1400h PO13D-05 A Real-Time Ocean Nowcast/Forecast System for Typhoon-Ocean Interaction Study: D S Ko, S Chao, Y Chang, S F Lin
1415h PO13D-06 Effect of Wind Stress Asymmetry in Typhoon Intensity Changes: W Tang, W Liu
1430h PO13D-07 Interaction between Typhoon and Sea Surface Temperature: B Tsuang, Y Tseng, N S Keenlyside, Y Lan, C Tu
1445h PO13D-08 Influence of Tropical Cyclones on Seasonal Ocean Circulation in the South China Sea: G Wang, Z Ling, C Wang

Biological Oceanography

BO14A D137 Monday 1530h
Biological Oceanography General Contributions III

Presiding: C Orrico, WET Labs, Inc.; A H Barnard

1545h BO14A-02 A Darwinian mechanism for biogenic ocean mixing: K Katija, J O Dabiri


1645h BO14A-06 Modeling species' potential distributions in 3D: B Bentlage, P Cartwright

1700h BO14A-07 Temporal and Spatial Variability of ADCP Backscatter and its Implication for Cetacean Predation in Southeast Alaska: P B Burke, C L Paternostro, S Bassett

1715h BO14A-08 Experimental and modeling evidence of appendicularian–ciliate interactions: L Steimmann, L Fabien, D Eloire, A Gobet, J R Dolan, G Gorsky, A Sciandra

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BO14B PB255 Monday 1530h

Influence of Microbial Interactions on the Ecology and Biogeochemistry of Aquatic Systems II

Presiding: T D Peterson, Oregon Health & Science University; R A Foster, University of California

1530h BO14B-01 Microbial interactions and the marine biogeochemistry of iron in the Trichodesmium colony microenvironment: K Barbeau, K Roe, E Mann

1545h BO14B-02 Abundance of the Biosynthetic Genes of the Photoactive Siderophore Vibrioferin and its Impact on Algal Iron Acquisition in the North Atlantic: S A Amin, D H Green, C J Carrano

1600h BO14B-03 Environmental Factors that Control Nitrogen Release from Nitrogen-fixing Endosymbionts of Shipworms: R E Horak, S Weber, J P Montoya

1615h BO14B-04 Dynamic Interactions among Coral-Associated Bacteria in Response to Fish Farm Effluent Exposure over Short Time Scales: M Garren, L Raymundo, J Guest, C Harvell, F Azam

1630h BO14B-05 Using a Trait-Based Model to Investigate Phytoplankton Competition and Species Selection in the Global Ocean: A E Hickman, S Dutkiewicz, R G Williams, M Follows

1645h BO14B-06 Niche Differentiation In Marine Cyanobacteria With Potential to Assimilate Nitrate: B D Jenkins, T L Haddock, T Robinson, S Menden-Deuer, M W Lomas

1700h BO14B-07 Phytoplankton Dynamics In The Deep Chlorophyll Maximum (DCM) At The Mid-Lake Reef Complex (MLRC) In Lake Michigan: C Aguilar, R L Cubel, H Fujimaki

1715h BO14B-08 Analysis of extracellular polysaccharide (EPS) production in cultures of Crocosphaera watsonii: J A Sohm, B R Edwards, B G Wilson, E Webb

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BO14C D139 Monday 1530h

Using Satellite and In Situ Data Archives for Ocean Biology Research II

Presiding: W D Gardner, Texas A&M University; W W Gregg, NASA

1530h BO14C-01 Assimilation of Ocean Color Satellite-Derived Distributions and In Situ Data into a Marine Biogeochemical Model of the Northeastern U.S. Continental Shelf (Invited): M A Friedrichs

1545h BO14C-02 GNATS (The Gulf of Maine North Atlantic Time Series)—combining synoptic in situ and space-based observations to evaluate long-term change in coastal waters (Invited): W M Balch, D Drapeau, B Bowler, E Booth, E Lyczkowski, D Alley

1600h BO14C-03 Decadal changes (1980’s to 2000’s) of upper ocean carbon fluxes in the Mediterranean Sea: D ANTOINE, V Taillandier, F D’Ortenzio

1615h BO14C-04 Satellite derived Net Primary Productivity in the East Australian Current and Climate Variability: A D Belo do Couto, A M Maharaj, N J Holbrook

1630h BO14C-05 Decadal Trends in Phytoplankton concentrations in the Australian region and their relationship to SST and the major modes of climate variability: R J Matear

1645h BO14C-06 Are Ocean Deserts Getting Larger?: A J Irwin, M J Oliver

1700h BO14C-07 The challenges of modeling depth-integrated marine primary productivity over multiple decades: A case study at BATS and HOT: V S Saba, M A Friedrichs, M Carr

1715h BO14C-08 Easier environmental Data Integration and Delivery – some free shortcuts for ArcGIS, Matlab & R: R Mendelsohn, C Wilson, D G Foley, E Howlett

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Chemical Oceanography

CO14A D139 Monday 1530h

GEOTRACES in the International Polar Year II

Presiding: C Jeandel, CNRS; C Venchiairutti, Alfred-Wegener Institute


1545h CO14A-02 The influence of Weddell Sea water on the Nd and Hf isotopic composition of Atlantic deep and intermediate waters: T Stichel, M Frank

1600h CO14A-03 Trends in the speciation of iron in the Arctic Ocean: C Thuroczy, M Klunder, L Gerrina, H J De Baar, P Laan

1615h CO14A-04 On the importance of hydrothermalism to the oceanic dissolved iron inventory: A Tagliaube, L Bopp, J Dutay, A R Bowie, F Chever, P Jean-Baptiste, E Bucciarelli, D Lannuzel, T A Remenyi, G Sarthou, O Aumont, M Gehlen, C Jeandel

1630h CO14A-05 Dissolved Manganese in the Arctic and Antarctic Oceans: R Middag, M B Klunder, H J De Baar, P Laan

1645h CO14A-06 The distribution of dissolved iron and aluminium in the Beaufort Sea: T G Giesbrecht, N E Sutherland, W K Johnson, J T Cullen

1700h CO14A-07 210Po, 210Pb and 234Th binding to Organic Particles in Antarctic seawaters: J Tolzmann, M Robert, J Friedrich, UPassow

1715h CO14A-08 The Cobalt cycle in the Southern Ocean during the IPY GEOTRACES Bonus-Goodhope expedition: J Bown, M Boye, D Nelson, A R Baker

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Education and Outreach

ED14A E141 Monday 1530h

ASLO Student Symposium III

Presiding: C Rodriguez, College of William & Mary, Virginia Institute of Marine Sciences

1530h ED14A-01 BACTERIAL COMMUNITY CHANGES IN TUNICATE DECOMPOSITION: M Leandre

1545h ED14A-02 Quantification of begging behavior in bottlenose dolphins (Tursiops truncatus) from waters around Savannah, GA, USA: S Todd

1600h BO25I-15 Observations of the egg cases from the holopelagic polychaete family: Tomopteridae: K Simmons
**Interdisciplinary**

**IT14A PB252 Monday 1530h**

Interactions Between Biogeochemistry and Ecosystems in Low-P Oligotrophic Areas II

*Presiding:* T Moutin, Laboratoire d’Océanographie Physique et Biogéochimie; B Van Mooy, Woods Hole Oceanographic Inst; F T Thingstad, Bergen University; M W Lomas, BIOS

1530h

**IT14A-01** Nutrient Pathways Through the Microbial Food Web: Confirming the Results of a Lagrangian Experiment in the Eastern Mediterranean Using a Mesocosm Approach. (*Invited*): T F Thingstad, P Pitta, J Nejstgaard

1545h

**IT14A-02** N-limited or N and P co-limited indications in the Mediterranean surface waters: BOUM microcosm experiments: T Tanaka, T F Thingstad, U Christaki, V Cornet-Barthaux, C Courties, J Grattepanche, A Lagaria, L Oriol, S Psarra, M Pujo-Pay, F Van Wambeke, T Moutin

1600h

**IT14A-03** Abundance and culturable diversity of aerobic anoxygenic phototrophs in the Mediterranean Sea: D Lamy, A Lehours, Mcottrell, F Van Wambeke, J Ras, D L Kirman, P Lebaron, C Jeanthon

1615h

**IT14A-04** Contribution of Aerobic Anoxygenic Phototrophs in the organic carbon cycling in the Mediterranean and the Sargasso Sea: M Koblizek, E Hajorova, J Gasol

1630h

**IT14A-05** Sargasso Sea phosphorus biogeochemistry: An important role for dissolved organic phosphorus (DOP): D A Lomas, D W Bell, A L Burke, C Shen, M W Lomas, S Dyhrman, J W Ammerman

1645h

**IT14A-06** Microbial production of phosphate in marine systems: S Dyhrman, E Verdeny, E Orchard, S Haley, P Pellechia

1700h


1715h

**IT14A-08** ALKALINE PHOSPHATASE ACTIVITY AND REGULATION IN THE NORTH PACIFIC SUBTROPICAL GYRE: S Duhamel, S Dyhrman, K M Bjorkman, D M Karl

**IT14B PB254 Monday 1530h**

Novel Sensors, Platforms, and Analytical Approaches in Biogeochemistry II

*Presiding:* Z Chase, Oregon State University; J A Needoba, OHSU

1530h

**IT14B-01** New Bio-Available Iron Proxies for the Trace-Metal Challenge (*Invited*): R M Kudela, A Rubin

1545h

**IT14B-02** Optical discrimination of bloom forming phytoplankton using an in-situ ultraviolet light sensor: S L Palacios, T D Peterson, G J Smith, R M Kudela

1600h

**IT14B-03** Autonomous Birefringence Detection of Particulate Inorganic Carbon Concentration in the Ocean: J K Bishop

1615h

**IT14B-04** Development of Analytical Methodology for Quantifying the Air-Sea Gas Fluxes of Organic Carbon: R Dickhut, R Falconer, E A Jayne, M Cochran, E E Keesee, J E Bauer

1630h

**IT14B-05** Development of an Autonomous In Situ Sensor for Long-term Measurements of Seawater Alkalinity: M D DeGrandpre, R Hart, C Beatty, R S Spaulding, B R Hales

1645h

**IT14B-06** The Boston Environmental Area Coastal Observation Network (BEACON) - a nearshore testbed for monitoring an urban estuary: F Peri, R Chen, G B Gardner, J Arriola

1700h

**IT14B-07** Remote Sensing of Salinity Intrusions in a Marine Estuary: N E Lauffenburger, T B Sanford

1715h

**IT14B-08** Measurement of free metal ion activity using a passive-equilibrium sonic-assisted probe (SAFIR): L Li, G T Wallace, F Pala

**IT14C E145 Monday 1530h**

Sea Ice Extremes, Upper Ocean Warming, and Ecosystem Response in the Pacific Arctic in Relation to the Pan-Arctic System I (*joint with BO, PO, CO*)

*Presiding:* W Maslowski, Naval Postgraduate School; J M Grebmeier, Univ MD Center Enviro Science; S E Moore, NOAA; J Zhao, Ocean University of China

1530h

**IT14C-01** Oceanic forcing of ice melt in the western Arctic Ocean: W Maslowski, J Clement Kinney

1545h

**IT14C-02** On the flow through Bering Strait and its potential impact on sea ice in the Chukchi Sea (*Invited*): J Clement Kinney, W Maslowski, R Osinski, M Steele, J Zhang, R A Woodgate

1600h

**IT14C-03** Impacts of Recent Sea Ice Variability on Ocean Biological Productivity in the Pacific Arctic Sector (*Invited*): K E Frey, L W Cooper, J M Grebmeier, P K Panday

1615h

**IT14C-04** Using Alkalinity to Separate the Inputs of Ice-melting and River in the Western Arctic Ocean: B Chen, W Cai

1630h

**IT14C-05** Rapid and Detectable Responses of Arctic Marine Mammals to Climate Change (*Invited*): C Jay, S E Moore

1645h

**IT14C-06** Year-to-year variability of ocean biology across Barrow Canyon and the western Beaufort shelf: 2005-2009: C J Ashjian, R G Campbell, S R Okkonen, B F Sherr, E Sherr

1700h

**IT14C-07** Upwelling in the Alaskan Beaufort Sea: Forcing, Dynamics, Cross-stream fluxes, and Biological Implications (*Invited*): R S Pickart, M A Spall, D J Torres, K Moore, J T Mathis, S E Moore

1715h

**IT14C-08** The subsurface warm water in the Canadian Basin: J Zhao, Y Cao

**IT14D E143 Monday 1530h**

Sediment Processes: Geochemical and Ecological Effects of Sediment Resuspension I (*joint with GO, MT, PO, BO, CO*)

*Presiding:* G R Fones, University of Portsmouth; R A Wildman, Florida State University; L H Kalneijars, University of New Hampshire

1530h

**IT14D-01** Effects of resuspension on sediment-water exchange of oxygen, nutrients, metals and inorganic carbon in different coastal/shelf systems (*Invited*): P O Hall, E Almroth, A Tengberg

1545h

**IT14D-02** Effects of carbon and oxygen on nutrient fluxes across the sediment-water interface during resuspension events: F Couceiro, G R Fones, C E Thompson, P J Statham, D Siyer, A S Hamilton, C C Wood, R Parker, N Greenwood, B A Kelly-Georgeyn, C L Amos

1600h

**IT14D-03** Spatial variability and organic matter source effects on elemental ratios of nutrient fluxes during photolysis of resuspended sediments: M Southwell, G B Avery, R J Kieber, R N Mead, S A Skrabal

1615h

**IT14D-04** Towards modeling phosphorus cycle in Florida Bay: linking sediment composition to sorption behavior (*Invited*): J Zhang

1630h

**IT14D-05** Water pH and sediment resuspension regulating internal phosphorus loading in a shallow lake - field experiment on diurnal and seasonal variation (*Invited*): J Niemistö, H Holmoors, J Horppila
1145h  **IT14D-06** The Ecological Implications of a San Diego Beach Nourishment: Nutrients, Phytoplankton, and Fecal Indicator Bacteria: M A Rippy, J A Warrick, R T Guza, P J Franks

1700h  **IT14D-07** Resuspension and the Mobilization of Metals from Coastal Sediments: L H Kalnejeais, W R Martin, J Lennartz

1715h  **IT14D-08** The impact of resuspension on the biogeochemistry and fate of mercury, methylmercury and other metals (Invited): R P Mason

**PO14B PB256** Monday  1530h

**Nearshore Processes III**

**Presiding:** T T Janssen, San Francisco State University; K A Haas, Georgia Institute of Technology

1530h  **PO14B-01** Wave-sediment interaction on the muddy Atchafalaya Shelf, Louisiana, USA (Invited): A Shermek, M A Allison, I Safak, S Su

1600h  **PO14B-02** Experimental Study of Fluid-Mud Interactions under Waves: E Maxeiner, Y Nouri, K Melick, R A Dalrymple

1615h  **PO14B-03** Nonlinear wave propagation across a muddy seafloor: I Safak, A Shermek, S Elgar, B Rauhenheimer

1630h  **PO14B-04** Wave transformation on muddy seabeds: A Torres-Freyermuth, T Hsu

1645h  **PO14B-05** Long-wave-induced flows in a yield-stress-fluid mud: P Liu, Y Park

1700h  **PO14B-06** Nearbed sediment concentration profile measurements in the swash zone: T Lanckriet, J A Pulhe, J W Faries

**PO14C PB251** Monday  1530h

**Probabilistic Models in Ocean Sciences: Applications in Data Assimilation, Coupled Ecosystem Models, and Air-Sea Interaction Studies I (joint with IT, BO)**

**Presiding:** R F Milliff, NWRA; C Wileke, University of Missouri

1530h  **PO14C-01** Combining Models and Data: The Bayesian Approach to Modeling and Prediction (Invited): M Berliner

1545h  **PO14C-02** State Space Models and Data Assimilation for Ocean Biogeochemical Models (Invited): M Dowd, J Mattern, K Fencl

1600h  **PO14C-03** Array and model testing in the coastal ocean by ensemble methods (Invited): P J De Mey, M Le Henaff

1615h  **PO14C-04** A new method for Ocean Ensemble Forecasting with quantification of wind uncertainties (Invited): N Pinardi, R F Milliff, C K Wileke, A Bonazzi, S Dobricic, L Berliner

1630h  **PO14C-05** Estimating Ecosystem Model Uncertainties and Climate Change Impacts in the North Pacific Ocean: C Wileke, R F Milliff, A M Moore, J J Fiechter, T M Powell, M Hooten, J Brown

1645h  **PO14C-06** Estimating risk from a climate model: the chance of the collapse of the Atlantic overturning circulation: D McNeall, P G Challenger

1700h  **PO14C-07** Conditional Simulation of Plankton Ecosystem Fields: A Tool for Testing Models: P Wallhead, K W Smith, D J McGillicuddy, A Solow

1715h  **PO14C-08** Ensemble prediction of non-stationary mid-scale spatial variability in historic northern hemisphere Atlantic sea surface temperatures: A R Karspeck, A Kaplan, S R Sain
1530h \textbf{PO15H-19} Interaction of TC with ocean and its induced ocean cold wake - A two-way coupled air-ocean COAMPS® -TC study: S Chen, J M Schmidt, P Flatau, P G Black, M Peng, M T Montgomery, P Harr

1545h \textbf{PO14D-02} When Ocean Matters: Genesis and Intensity Change in Typhoons (Invited): S S Chen

1600h \textbf{PO14D-03} Optimal Initialization of 3D Upper Ocean in High-resolution Fully Coupled Models for Tropical Cyclone Prediction: B W Kerns, S S Chen

1615h \textbf{PO14D-04} Upper Ocean Thermal Structure of the East China Sea and Its Impact on Typhoon Intensity: N Chi, I I Lin

1630h \textbf{PO14D-05} Satellite observations of upwelling induced by typhoons at different intensities in the southern East China Sea: M Lee, Y Chang, K Lan, J Chan

1645h \textbf{PO14D-06} Ocean temperature responses to Typhoon MASTA in the East China Sea: G Wang, F Qiao, C Xia

1700h \textbf{PO14D-07} Application of Ocean Heat Content to Tropical Cyclone Intensity Forecasting in the Western North Pacific: C R Sampson, J A Cummings, M Demaria, G J Goni, J A Knaff

1715h \textbf{PO14D-08} Surface wind observations in tropical cyclones from drifting ocean buoys: a low-level inflow in the wake of the cold SST trail: J Morzel, P Nüller

1730h \textbf{PO14E-01} New Observations of the Equatorial Undercurrent in the Eastern Atlantic: W E Johns

1530h \textbf{PO14E-02} Inferring Equatorial Upwelling Rates Using a Novel Tracer Approach: D C Kadko, W Johns

1600h \textbf{PO14E-03} Equatorial Undercurrent (EUC) Variability from Moored and Shipboard Observations in the Atlantic and Associated Cold Tongue Variability: A Funk, P Brandt, B Bourles

1615h \textbf{PO14E-04} On the impact of intra-seasonal variability for the development of the equatorial cold tongue in the Atlantic Ocean (Invited): F Marin, G Athié

1630h \textbf{PO14E-05} WITHDRAWN

1645h \textbf{PO14E-06} Upwind meridional surface currents in the eastern equatorial Pacific (Invited): C Jiang, L Thompson, M F Cronin, K A Kelly

1700h \textbf{PO14E-07} Oudson of Equatorial 13C Water and its impact on sea surface temperature in the eastern tropical Pacific identified by a simulated passive tracer: T Qu, S Gao, I Fukumori, R A Fine, E J Lindstrom

1715h \textbf{PO14E-08} The impact of ocean mixing on the Pacific cold tongue: K J Richards, W Sasaki
1730h BO15B-17 POSTER Microbial community and trace gas dynamics in coastal surface waters of the Eastern North Pacific: O Shevchuk, J Wright, K Mitchell, D Walsh, S J Hallam
1730h BO15B-18 POSTER Latitudinal gradients in distribution and diversity of calanoid copepods in the Atlantic: S B Schiel, C Richter
1730h BO15B-19 POSTER Genetic connectivity of the cold-water coral-dependent deep-sea polychaete Gorgomagnapoleon caecilae among North Atlantic seamounts: E K Bors, T M Shank
1730h BO15B-20 POSTER Deep vs. Shallow: Coral Feeding Behavior in Reefs off the Coast of the Florida Keys: B A Estes, M Teree, D Lirman
1730h BO15B-21 POSTER Coral Feeding Strategies and Plasticity in the Florida Keys as a Function of Shore Proximity: W Wurzel, M Teree, D Lirman
1730h BO15B-22 WITHDRAWN
1730h BO15B-23 POSTER The impact from cold wave in 2008 on the coral reef community at Pescadores, Taiwan - an evaluation after one year observation: T Tu, S Lin, M Jeng
1730h BO15B-24 POSTER Determining Phagocytic Activity in Chiono Salmon (Onchorhynchus tshawytscha): A R Van Brink, M Arkoosh, D Boyle
1730h BO15B-25 POSTER Settlement, Growth and Survival of Eastern Oysters Set Upon “Oyster Castles” and Other Reef Substrates in the York River, Virginia: S J Theuerkauf, R Burke
1730h BO15B-26 POSTER Responses of Echinopluteus Larvae of Dendraster excentricus to Haloclines and the Presence of Kairomones of Potential Predators: L M Sala, B T Hentschel
1730h BO15B-27 POSTER MORPHOLOGICAL AND FUNCTIONAL STUDIES ON CORAL’S GASTRIC CAVITY REVEAL SEGMENTATION AND THE EXPRESSION OF VERTEBRATES’ RELATED ENZYMES: R Michal, J Douek, A Rosner, E Moseeiva, Y Hakim, B Rinkevich
1730h BO15B-28 POSTER The Density and Structure of Antarctic Krill Schools: D Murphy, D Webster, S Kawaguchi, R King, J Yen
1730h BO15B-29 POSTER Patterns of zooplankton distribution in North Norwegian fjords and sounds; results from surveys and seasonal studies using an autonomous Video Plankton Recorder: M Norrbin, H Jacobsen, S A Kristiansen
1730h BO15B-30 POSTER Mesoscale features of the Calanus finmarchicus winter distribution off the coast of northern Norway: New knowledge obtained from Laser Optical Plankton Counter data: F Gaardsted, M Zhou, K S Tande, S L Basedow
1730h BO15B-31 POSTER Modeling prey selection of larval haddock on copepods with species-specific behavior: C M Petrlik, T Kristiansen, R Lough, C Davis
1730h BO15B-32 POSTER Are offshore humpback whale aggregations different than their coastal counterparts in the Gulf of Alaska? Weighing the evidence through movement, mtDNA and stable isotopes: B Witteveen, J Straley
1730h BO15B-33 WITHDRAWN

1730h BO15C-01 POSTER Primary productivity and size-fractionated chlorophyll patterns across the Gulf of Alaska shelf: Seasonality and inter-annual variability: D A Stockwell
1730h BO15C-02 POSTER PHYTOPLANKTON RESPONSES TO MASS CORAL SPAWNING IN THE FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY, USA: C L Horne, G T Rowe
1730h **BO15C-03 POSTER** Transport of foreign phytoplankton into the port of Houston and Galveston bay via ballast water: J J Steichen, E Neyland, R Brinkmeyer, A Quigg

1730h **BO15C-04 POSTER** Deepwater biophysical investigations in a sub-arctic environment with an Autonomous Underwater Vehicle: O Pedersen, F Gaardsted, K S Tande

1730h **BO15C-05 POSTER** Patterns of Ocean Frontal Formation over the Northern California Shelf: R E Fontana, J L Largier, J Jahncke

1730h **BO15C-06 POSTER** Characterization and Quantification of Prasinococcales from the ocean: M Intermaggio, E Webb

1730h **BO15C-07 POSTER** Seasonal Variation in Total Dietary Fiber Content of Delmarva Seaweeds: K Jackson, M Madden, D Mitra

1730h **BO15C-08 POSTER** Trophic conditions off the southwest coast of Mexico during Winter: J Färber-Lord, M F Lavin

1730h **BO15C-09 POSTER** Quantitative evaluation of nursery habitat: S Beharry, C M Jones

1730h **BO15C-10 POSTER** Application of Isotopically-Labeled Substrates in the Study of Estuarine Food Web Processes: T Baskerville, A Chauhan, K Farris

1730h **BO15C-11 POSTER** External soluble residual phosphate concentration and how it relates to phytoplankton cells up-regulating alkaline phosphatase enzyme activity: S L Meseck, J Alix, G H Wilkerson

1730h **BO15C-12 POSTER** Detecting shifts in size-at-age of Black Sea Bass across a decade and by area within the US South Atlantic Recreational Fisheries: E M Goodman, J Potts

1730h **BO15C-13 POSTER** Phytoplankton dynamics across the Santa Barbara Channel nearshore shelf system: J A Goodman, M A Brzezinski, E Halewood, C A Carlson

1730h **BO15C-14 POSTER** Dissolved Organic Nitrogen in South Florida: Results from Biological, Photochemical, and Salinity Release Assays: Q N Roberts, L Killberg-Thoresen, R E Sipler, A Loh, L Tomasello, R Rether, D Campbell, D A Bronk

1730h **BO15C-15 POSTER** The Influence of Nutrient Loading on Seasonal Phytoplankton Community Variability in a Temperate Estuary: Case Study of the Ashepoo-Combahee-Edisto (ACE) Basin, South Carolina, USA: D Greenfield, D Bergquist, L Brock, J Felber, C Keppler

1730h **BO15C-16 POSTER** El Niño Southern Oscillation Related Phytoplankton Variability in the Galápagos Marine Reserve: A A McCulloch, D Kamykowski, J M Morrison, W Sweet, B A Schaeffer, S Banks

1730h **BO15C-17 POSTER** Physical and environmental conditions during the 2008 Patagonian Shelf coccolithophore bloom: S Painter, A J Poulton, J Allen

1730h **BO15C-18 POSTER** Effects of temperature and light intensity on the oxygen production of microphytobenthos observed using oxygen microsensor, Korean tidal flat: C Koh, C Koh, M Kim, J Khim


1730h **BO15C-20 POSTER** Phytoplankton Community Dynamics and Competitive Interactions between *Alexandrium* spp. and Diatoms on Georges Bank: R Gettings, D W Townsend, L Karp-Boss, M Thomas

1730h **BO15C-21 POSTER** Investigation of Bacterial Nitrate uptake on the West Florida Shelf by Means of DNA based Stable Isotope Probing: W B Boling, B Wawrik

1730h **BO15C-22 POSTER** Phytoplankton assemblages in the Southern Ocean during International Polar Year: B Beker, M Boyé

1730h **BO15C-23 POSTER** The DISTRIBUTION OF BENTHIC FORAMINIFERAL ASSEMBLAGES DURING WINTER AND SUMMER AT BUSAN NORTH PORT IN KOREA: J Choi, H Woo, S Park, J Choi, S An

1730h **BO15C-24 POSTER** Pigment distribution along the subarctic Pacific and Arctic Ocean: F Zhang, L Lin, M Cai, H Li, J He

1730h **BO15C-25 POSTER** Near bottom dinoflagellate populations on the northwest Florida Shelf during July 2009: K Grabowski, D Kamykowski, J M Morrison, A A McCulloch, G A Sinclair, G Janowtiz

1730h **BO15C-26 POSTER** Distribution and diversity of Aerobic Anoxogenic Phototrophic in the Mediterranean Sea: E Hojeroa, C Brunet, J Gasol, M Koblik

1730h **BO15C-27 POSTER** VARIABILITY OF BACTERIOPLANKTON AND PHYTOPLANKTON IN THE WESTERN WEDDELL SEA AS A FUNCTION OF PROXIMITY TO ICEBERGS: A E Murray, M Vernet, V Peng, C Tyler, P Wagh, A Cefarelli

1730h **BO15C-28 POSTER** Bacterioplankton and Phytoplankton Community Structure Dynamics at the Bermuda Atlantic Time-Series Study Site: A Treusch, K Vergin, R O’Malley, E Demir, A Z Worden, M J Behrenfeld, C A Carlson, S Giovannoni

**BO15D** **Poster Hall E** **Monday** 1730h **From Match to Mismatch: Climate Change and the Phenology of Marine Trophic Interactions II Posters (joint with PO)**

Presiding: S J Bograd, NOAA/SWFSC; W J Sydeman, Farallon Institute

1730h **BO15D-01 POSTER** Diel vertical migration of zooplankton in the high Arctic – new insights into the patterns and processes: J Berge, F Cottier, M Wallace, G’ Tarling, A Brierley, ØYSTEIN Varpe, P E Renaud

1730h **BO15D-02 POSTER** Seasonal timing of zooplankton and forage fish in the Columbia River plume and effects on marine juvenile salmon survival: A M Kaltenberg, K J Benoit-Bird, R Emmett

1730h **BO15D-03 WITHDRAWN**


1730h **BO15D-05 POSTER** Winter pre-conditioning of seabird phenology and rockfish growth in the California Current: T D Schroeder, W J Sydeman, S J Bograd, B A Black

**BO15E** **Poster Hall E** **Monday** 1730h **Influence of Microbial Interactions on the Ecology and Biogeochemistry of Aquatic Systems III Posters**

Presiding: T D Peterson, Oregon Health & Science University; R A Foster, University of California

1730h **BO15E-01 POSTER** Grazing and Direct Inorganic Nitrogen Uptake in a Mixotrophic Ciliate: D M Schoener, G B McManus, J Tomaras, J K York

1730h **BO15E-02 POSTER** Microzooplankton and Quagga Mussel Grazing During the Initial Stage of Microcystis Bloom in Saginaw Bay, Lake Huron: D H Chacin, P J Lavrentyev, H A Vanderploeg, J Dye Bressie, J F Cavaletto
1730h **BO15E-03 POSTER** Microbial processes and their impact on vertical flux of biogenic matter in ice-covered Arctic waters during early spring: *L. Seuthe*, B Töpper, M Reigstad, C Weels Riser

1730h **BO15E-04 POSTER** MICROBIAL COMMUNITY RESPIRATION IN AMUNDSEN GULF OF THE ARCTIC OCEAN: *D Nguyen*, R Maranger

1730h **BO15E-05 POSTER** Investigation of the Ecology and Biogeochemistry of N₂-Producing Microbial Communities in Arctic Sediments: *A Canion*, O Prakash, S J Green, J E Kostka

1730h **BO15E-06 POSTER** Abundance and single-cell activity of bacterial groups in Antarctic waters: *T R. Straza*, H Ducklow, A E Murray, D K Kirchman

1730h **BO15E-07 POSTER** Intact hopanoids as microbial tracers in polar seas: *K A Taylor*, H R Harvey


1730h **BO15E-09 POSTER** Metabolic exchanges in diatom-cyanobacteria symbioses: *R A Foster*, M M Kuypers, T Vagner, N Musat, J P Zehr

1730h **BO15E-10 POSTER** Light Intensity Affects the Timing and Magnitude of N2 Fixation by Trichodesmium: *L Jennings*, J Groesse, J P Montoya

1730h **BO15E-11 POSTER** Seasonal Nitrogen Uptake Dynamics in the York River, Virginia: *L Killberg-Thoreson*, D A Bronk, W G Reay, Q N Roberts

1730h **BO15E-12 POSTER** Microbial Cycling of Marine Dissolved Organic Matter: Linking marine microbial production and consumption: *J W Becker*, D Repeta, M Rappe, M Nieto Cid, J B Waterbury, E F DeLong

1730h **BO15E-13 POSTER** Cultivation-based analyses of methylo trophic bacteria isolated from sinking marine aggregates in Clayoquot Sound, British Columbia: *M Miller*, R Kantor, L Hmelo, B Van Mooy, T J Miner

1730h **BO15E-14 POSTER** Mesoscale microbial activity hotspots associated with water mass frontal zones in the California Current Ecosystem: *T J Samo*, B Pedler, R Goericke, M D Ohman, F Azam

1730h **BO15E-15 POSTER** Viral Connections in a Diverse Microbial Community: *C Chow*, J A Steele, R Sachdeva, J Cram, J Fuhrman

1730h **BO15E-16 POSTER** Shifts in Microbial Community Composition Following Physical and Geochemical Disturbances: *J Dale*, Y Furukawa, K B Briggs

**BO15G Poster Hall E Monday 1730h**

**Influence of Microbial Interactions on the Ecology and Biogeochemistry of Aquatic Systems IV Posters**

**Presiding:** T D Peterson, Oregon Health & Science University; R A Foster, University of California

1730h **BO15G-01 POSTER** Surface ocean iron fertilization: The role of airborne volcanic ash from subduction zone and hotspot volcanoes and associated iron-fluxes into the Pacific Ocean: *N Olgun*, S Duggen, P L Croct, P Delmelle, H Dietze, U Schacht, N Oskarsson, C Siebe, A Auer

1730h **BO15G-02 POSTER** IRON-LIGHT CO-LIMITATION OF PICOPHYTOPLANKTON WITHIN THE DEEP CHLOROPHYLL MAXIMUM: *E Mann*, K Barbeau, Z Johnson, K Biller, C Wakeham, J Fox

1730h **BO15G-03 POSTER** A spectrum of iron and light limitation effects on pelagic phytoplankton communities at the subsurface chlorophyll maximum: *R M Bundy*, K Barbeau, E Mann, Z Johnson

1730h **BO15G-04 POSTER** Co-limitation of nitrate and light in the Beaufort Sea: *R L Taylor*, D Semeniuk, C D Payne, M T Maldonado

1730h **BO15G-05 POSTER** Regional impacts of iron-light colimitation in a global biogeochemical model: *E Dalbraith*, A Gnanadesikan, J P Dunne, M R Hiscock

1730h **BO15G-06 POSTER** What controls Fe availability at the mechanistic level? A comparison of modelling approaches: *A Rose*, A Gibeourou Godrart, D Waite


1730h **BO15G-08 POSTER** Limitation of phytoplankton productivity in the Amundsen Sea by nitrogen: *M M Mills*, A Alkerdamp, G Van Dijken, P Laan, C Thurocyz, L Gerringa, H J de Baar, C D Payne, P Torell, K R Arrigo
1730h BO15G-09 POSTER Global Transcriptomic and Proteomic Analyses of the Marine Centric Diatom Thalassiosira pseudonana Under Phosphorus Limitation: M Mercier, A Drzewiakowski, L Whitney, V Bulgyzin, B D Jenkins, S Dyhrman, M A Saito, T Rynearson

1730h BO15G-10 POSTER Dissolved nitrogen uptake in the inner bay of Cadiz (Spain): T Van Engeland, T J Bouma, E P Morris, G Peralta, F G Brun, F M Lara Rallo, I E Hendriks, K Soetaert, J J Middelburg

1730h BO15G-11 POSTER Natural iron fertilisation in the Scotia Sea – a seasonal study of the impact of iron and light manipulations on natural phytoplankton assemblages: M C Nielsdottir, T S Bibby, M Moore, D J Hinz, R Sanders, M Whitehouse, R Korb, E P Achterberg

1730h BO15G-12 POSTER The role of superoxide in iron acquisition by Trichodesmium: A Giboureau Godrant, A Rose, G Sarthou, D Waite

1730h BO15G-13 POSTER Ecological Significance of Cyanate Utilization by Marine Cyanobacteria: N Kamennaya, A F Post

1730h BO15G-14 POSTER Thiol Facilitated Copper Uptake by a Marine Alga: M J Walsh, B A Ahner

1730h BO15G-15 POSTER Heme b - the forgotten microbial pigment: M Gledhill, M Rijkenburg, M C Nielsdottir, D Honey, E P Achterberg

1730h BO15G-16 POSTER Morphological character responses of aberrant Distephanus speculum (silicoflagellata) on nutrients in the Southern Ocean: H Tsutsui, K Takahashi, Y Kawabata

1730h BO15G-17 POSTER A Changing Nutrient Regime in the Gulf of Maine: D W Townsend, N D Reubuck, M Thomas, L Karp-Boss, R Gettings

1730h BO15G-18 POSTER Spatial and Temporal Patterns Described by a Dissolved Nutrient Climatology for the Gulf of Maine: N D Reubuck, D W Townsend, M Thomas

1730h BO15G-19 POSTER NUTRIENT REGULATION OF BACTERIAL GROWTH AND COMMUNITY STRUCTURE IN THE EASTERN CANADIAN ARCTIC OCEAN: K F Keats, M S Hale, R B Rivkin

BO15H Poster Hall E Monday 1730h Using Satellite and in Situ Data Archives for Ocean Biology Research III Posters

Presiding: R Matear, CSIRO

1730h BO15H-01 POSTER Spatial and temporal characteristics of light attenuation in the northern Gulf of Mexico hypoxic zone: B A Schaeffer, G A Sinclair, J C Lehrter, M C Murrell, J C Kurzt, R W Gould

1730h BO15H-02 POSTER How to interpret satellite chlorophyll observations: The case of the Mozambique Channel: J Llido, A Omra, V Garson, S Kooijman, H A Dijkstra

1730h BO15H-03 POSTER Multi-decadal analysis of phytoplankton biomass and production in the northeast U.S. continental shelf Large Marine Ecosystem: K J Hyde, J O’Reilly, W W Gregg, J A Hare, K Friedland

1730h BO15H-04 POSTER Parameter optimisation of a Southern Ocean marine ecosystem model: M Kidston, R Matear, M E Baird

1730h BO15H-05 POSTER Annual and seasonal variability in Chlorophyll concentration in the Gulf of Mexico, western Caribbean, and Bahamas using NASA color maps: A R Condal, P L Ardisson

1730h BO15H-06 POSTER Environmental Forcing of American Lobster (Homarus americanus) Settlement: M Jaini, A C Thomas, R Wahl
1730h BO15I-09 POSTER Production and transport of particulate matter in a regional current system adjacent to a fringing coral reef: C S Rousseaux, A M Waite, R Lowe, P Thompson


1730h BO15I-11 POSTER An in situ data archive on fauna activity in marine sediments: Potentials and limits for biogeochemical modeling: F Boekelmann, F Meysman, O Maire

1730h BO15I-12 POSTER How important is phytoplankton speciation in the control of dimethylsulfide (DMS) concentrations in the equatorial Pacific and Atlantic oceans?: S Belviso, I Masotti, C Moulin, S Alvain, J E Johnson, T S Bates

1730h BO15I-13 POSTER THE DIFFUSIVE COMPONENT OF PARTICULATE ORGANIC CARBON EXPORT IN THE NORTH ATLANTIC ESTIMATED FROM SEAWIFS OCEAN COLOR: M Stramska

1730h BO15I-14 POSTER Aqua-MODIS satellite derived measurements of chlorophyll-a in the Scotia Sea: spatial and interannual variability of phytoplankton blooms: I Borrione, R Schlitzer

1730h BO15I-15 POSTER Surface Ocean Temporal and Spatial Variability of the South Atlantic Bight: Revisiting with Cloud-free Reconstructions of MODIS Concurrent SST and Chl-a Imagery: T Miles, R He

**Chemical Oceanography**

**CO15A Poster Hall E**

**Monday 1730h**

**Biogeochemical Sulfur Cycling Posters (joint with BO, PA, GO)**

**Presiding:** A Kamysnshy, University of Maryland


1730h CO15A-02 POSTER Comparison of sulfide oxidation in stratified systems and at diffuse flow hydrothermal vent waters (Invited): G W Luther, A Madison, M Yucel, A Gartman, C Janzen

1730h CO15A-03 POSTER Sulfur cycling at the CARIACO redox interface: conundrums and surprises (Invited): M I Scratton, Y Astor, G T Taylor, X Li

1730h CO15A-04 POSTER The principles and applications of the four sulfur isotopes to understanding sulfur metabolic pathways and their extension to natural systems: J Farquhar

1730h CO15A-05 POSTER Sulfur cycling in stratified lakes as seen through in situ Au-amalgam voltammetry: G DruscheI, E Greiner

1730h CO15A-06 POSTER Insight from Sulfur Isotope Fractionation to Assess the Formation and Cycling of Environmental VOSCs and Related Sulfonium Compounds Role in Global Warming: H D Oduro

1730h CO15A-07 POSTER Experimental measurements of sulfate reduction activity in the deeply buried sediments of the sub-seafloor ocean (Invited): T G Ferdelman, B Brunner, L Holmkvist, B B Joergensen, J Kallmeyer, L Wehram

1730h CO15A-08 POSTER Sulfur isotope systematics of meromictic Mahone Lake: W P Gilhooly, C Reinhard, T W Lyons

**CO15B Poster Hall E**

**Monday 1730h**

**Gases as Tracers of Oceanic Processes II Posters (joint with BO, PA, GO)**

**Presiding:** D T Ho, University of Hawaii; R C Hamme, University of Victoria

1730h CO15B-01 POSTER Deliberate multi-tracer release study of transport and transformations of bottom boundary layer waters in a coastal upwelling system: S Ferrón, D T Ho, B R Hales, M C Reid, F Kai, P J Schmieder, D Hubbard

1730h CO15B-02 POSTER Mixing rates in the deep Baltic Sea revealed by a tracer release experiment: T S Tanhua, G J Rehder, P Holtermann, J J Wanick, L Umlauf, O Schmale, V Mohrholz

1730h CO15B-03 POSTER Where and how long ago was water in the western North Atlantic ventilated? Maximum-entropy inversions of bottle data from WOCE line A20: M B Holzer, F W Primeau, W M Smethie, S Khatiwala

1730h CO15B-04 POSTER The Use of Dissolved CFCs and Sulfur Hexafluoride to Study Circulation and Anthropogenic CO2 Uptake in the Indian Ocean: J L Bullister, R Sonnerup, W M Smethie

1730h CO15B-05 POSTER Influence of diapycnal mixing around the Kuril Islands and brine rejection on the distribution of CFCs in the Sea of Okhotsk: K Uchimoto, T Nakamura, J Nishioka, H Mitsudera, M Yamamoto-Kawai, K Misumi, D Tsumune

1730h CO15B-06 POSTER Mass flux observations using the eddy covariance method on a moored platform: D Vandemark, J D Irish, A M Plagge, S Hellilot

1730h CO15B-07 POSTER Driving Factors in the Temporal Variability in Productivity and Ocean-Atmosphere CO2 Exchange in Hawaiian Coastal Waters: A M Plagge, S Shellito

1730h CO15B-08 POSTER Toward geochemical budgeting of dissolved gases in the hypoxic western Long Island Sound: L A Bristow, M A Altabet, J O’Donnell

1730h CO15B-09 POSTER Nitrous oxide concentrations and isotopic signatures trace mechanisms of its production in a South Atlantic transect: C H Frame, K L Casciotti

1730h CO15B-10 POSTER A high-resolution DMS time-series in the Subarctic NE Pacific: Spatial / temporal variability and biophysical driving forces: E Asher, A Merzouk, P Tortell

**CO15C Poster Hall E**

**Monday 1730h**

**GEOTRACES in the International Polar Year III Posters**

**Presiding:** R Midag, Royal NIOZ; D Lannuzel, University of Tasmania; C Vencehluartti, Alfred-Wegener Institute

1730h CO15C-01 POSTER IPY-GEOTRACES: Distribution and sources of dissolved iron in the Arctic Ocean: M Klunder, P Laan, H J de Baar

1730h CO15C-02 POSTER IPY-GEOTRACES: Sources and distribution of dissolved iron in the Southern Ocean: P Laan, M Klunder, H J de Baar

1730h CO15C-03 POSTER Dissolved Aluminium in the Arctic and Antarctic Oceans: H J de Baar, R Midag, P Laan

1730h CO15C-04 POSTER Organic complexation of dissolved iron in the Atlantic sector of the Southern Ocean: L Gerrings, C Thuroczy, M Klunder, H J de Baar, P Laan

1730h CO15C-05 POSTER Radium and Thorium isotopes in Arctic surface waters, Summer 2007: M Rutgers van der Loeff, P Cai
1730h CO15C-06 POSTER The influence of Copper and Iron speciation on Superoxide (O$_2^-$) decay rates in the Southern Ocean (Drake Passage): M I Heller, P L Crook

1730h CO15C-07 POSTER Iron partitioning in pack and fast ice in East Antarctica: potential for temporal decoupling between the release of dissolved and particulate iron during spring melt: P Van Der Merwe, D Lannuzel, C Mancuso Nichols, K Meiners, A R Bowie


1730h CO15C-09 POSTER Cadmium isotopic composition in the seawater of the South China Sea: S Yang, D Lee, T Ho

1730h CO15C-10 POSTER Trace element concentrations of the suspended particles in the Southern Ocean (BONUS/GoodHope transect): C Jeandel, F Lacan, M Labatut

1730h CO15C-11 POSTER Impact of free-drifting icebergs on the concentration and speciation of iron in surrounding waters of the Southern Ocean: H Lin, B Twinning

1730h CO15C-12 POSTER Cadmium Isotope Fractionation in the Southern Ocean: Z Xue, M Rehkmper, T van de Flierdt, R Middag, H J de Baar

1730h CO15C-14 POSTER Reconstruction of dust fluxes to the Atlantic using water-column $^{232}$Th and $^{230}$Th measurements: Y Hsieh, G M Henderson, A L Thomas

1730h CO15C-15 POSTER Atmospheric transport to Kerguelen and the South Indian Ocean - one year of measurements: R Losno, S Triquet, S Lafon, A Heimburger, F Dulac, F Montoya, A Demaret

1730h CO15C-16 POSTER Iron(II) in seawater of the Arctic Ocean: Observations from the GEOTRACES IPY Expedition in the Beaufort Sea: E Ramirez, J T Cullen

Education and Outreach

ED15A POSTER Hall E Monday 1730h

ASLO Student Symposium IV Posters

Presiding: B Cuker, Hampton University

1730h ED15A-01 POSTER Taking Back Wetlands: C McGeachy, W Priest

1730h ED15A-02 POSTER Elizabeth City State University Students' Perspective on the Diversity in Research Environmental and Marine Sciences (DREAMS) Program: K Jiles, P Williams, R Winder, E Freeman

1730h ED15A-03 POSTER Reproductive provisioning of silverside fishes in two Rhode Island estuaries as an indicator of ecosystem health: B Volson

1730h ED15A-04 POSTER Informal Education for an Aquarium Audience: D Townes, K Burns, C Curran

1730h ED15A-05 POSTER The Impact of Wind on Non-Photochemical Quenching in the Mid-Atlantic Coastal Ocean: L M Treible, E F Geiger, M D Grossi, M J Oliver

1730h ED15A-06 POSTER Variability in the Radula Structure of the Caribbean Periwinkles (Gastropoda: Littorinidae): N M Perez, C Garcia

1730h ED15A-07 POSTER The effect of prey availability on reproductive effort of the sea star Leptasterias hexactis: S Ibarra, B Bingham, A Gehrman

1730h ED14A-03 POSTER PREDATOR, PREY AND PROTEIN INTERACTIONS: The Importance of Cell Surface Proteins in Facilitating Grazing Resistance in the Marine Cyanobacteria Synechococcus: N Siu

ED15B Poster Hall E Monday 1730h

Education and Outreach General Contributions | Posters

Presiding: H M Benway, Woods Hole Oceanographic Institution; J Ritchie, Northern Gulf Institute

1730h ED15B-01 POSTER Progresses Toward an Asian Marine Core Research Center in the Taiwan Ocean Research Institute (TORI): M Chen, C Chou, C Liao, Y Huang, P Yu, S Liu, C Liu

1730h ED15B-02 POSTER Diversity in Research in Environmental and Marine Sciences (DREAMS II) Program: Enhancing Participation in the Marine Sciences: M Crawford, D Gibson, K Tang

1730h ED15B-03 POSTER APECS: Bringing together young polar scientists and educators to increase polar literacy: L Jullion, K Jochum, D Haase Liigget, N V Koldunov, J L Baeseman

1730h ED15B-04 POSTER GIS/GPS Mapping of the Hampton River: A Thomas

1730h ED15B-05 POSTER Web-based Resources for Continental Margin Biogeochemical Research and Education: K K Liu, N Dittert, K Lei, H Kremer, L Maddison

1730h ED15B-06 POSTER 2009 Microbial Oceanography: Genomes to Biomes; A transect study of the North Pacific Subtropical Gyre and Front: J Wright, A Antunes, P H Calil, C Chow, A Gaerdes, A Regaudie de Gloux, C Ruiz Gonzalez, C Jones, N Kashtan, K Meyer, E Olson, B Pedler, C Pham, T Samo, J Young, R Leon Zyazas

1730h ED15B-07 POSTER Innovative interactive learning – the plankton b(a)loom experience: L Adornato, H L Souder

1730h ED15B-08 POSTER 2009 Microbial Oceanography: Genomes to Biomes; Nutrient influences on plankton community structure and production in oligotrophic regions of the North Pacific Subtropical Gyre: K A Meyer, A Antunes, P H Calil, C Chow, A Gaerdes, A Regaudie de Gloux, C Ruiz Gonzalez, C Jones, N Kashtan, E Olson, B Pedler, C Pham, T Samo, J Wright, J Young, R Leon Zyazas

1730h ED15B-09 WITHDRAWN

1730h ED15B-10 POSTER An Analysis of Middle and High School Students’ Perception of Scientists: Does Exposure Influence Students Cultural Perception of Science?: L M Kraatz, E L Holloman, H N Geisz

1730h ED15B-11 POSTER The University of Texas Institute for Geophysics Field Marine Geology and Geophysics Course: M B Davis, S P Gulick, M A Allison, J A Goff, D D Duncan, S Sautrups

1730h ED15B-12 POSTER DEVELOPING AND EVALUATING ONLINE REMOTE SENSING LEARNING ACTIVITIES FOR EARTH SCIENCE EDUCATION WITH REUSABLE CONTENT OBJECTS: A Whitmer, T Jasmin, M S Demarest, B Caron, L Hammond, T Whittaker, S Ackerman

18 2010 Ocean Sciences Meeting
ED15C  Poster Hall E  Monday  1730h
Using the Internet in Real-Time Ocean Research for Education and Outreach I Posters (joint with IT)

Presiding: S K Cooper, Consortium for Ocean Leadership

1730h ED15C-01 POSTER Bringing the Open and Coastal Oceans into Texas A&M Community Middle Schools: R L Mullins, S F Dimarco

1730h ED15C-02 POSTER The University of Texas Institute for Geophysics Teachers in the Field Project: Digital Liaison Between Science Educators and Teacher Field Research Programs: M B Davis, K K Ellis

1730h ED15C-03 POSTER Fish ‘n’ Kids: Exposing children to the deep-sea via a real-time research cruise blog: M Kay

1730h ED15C-04 POSTER Community Outreach of Coastal Modeling Projects: C J Hearn

Interdisciplinary

IT15A  Poster Hall E  Monday  1730h
Climate Data Records From Ocean Observations I Posters (joint with BO, PO, CO)

Presiding: E J Kearns, NCDC; K S Casey, NOAA National Oceanographic Data Center; H Zhang, NOAA/NCDC

1730h IT15A-01 POSTER Trends in Microwave-Based Climate Data Records from Satellites: K A Hibburn

1730h IT15A-02 POSTER A Construction of Pseudo Salinity Profiles for the Global Ocean: Y Chang, A J Rosati, S Zhang

1730h IT15A-03 POSTER A Historic Outlook of Rainfall and its Effect on the Raritan River Estuary: C Wilkerson, J Viester, S M Glenn, R Chant

1730h IT15A-04 POSTER Tropical and North Pacific Thermocline Variations, 1950-2008: P C Fiedler

1730h IT15A-05 POSTER A new approach to assessing biases in the climate record of ocean subsurface temperature due to problems with expendable bathythermographs (XBTs): S Good

1730h IT15A-06 POSTER Uncertainties in the bias adjustment of historical sea-surface temperature records: J Kennedy, R O Smith, N A Rayner

1730h IT15A-07 POSTER The Extended Reconstruction Sea Surface Temperature (ERSST) analysis: Towards an operational climate product: P F Banzon, R W Reynolds, T Smith, C Liu, D Wunder

1730h IT15A-08 POSTER The Voluntary Observing Ship Climate Project (VOSClim): A D Haller

1730h IT15A-09 POSTER Intercomparison of Surface Turbulent Fluxes in GSSTF2 and GSSTF2b: Trends and Variations: L Chiu, S Gao, C Shie, R F Adler, E J Nelkin, P P Xie, R Choknanwong

1730h IT15A-10 POSTER Significant loss of chlorophyll a occurs when using a common extraction method; protocol comparisons from a long-term monitoring program and implications for assessing change in marine ecosystems: J Graff, T Rynearson


IT15B  Poster Hall E  Monday  1730h
Interactions Between Biogeochemistry and Ecosystems in Low-P Oligotrophic Areas III Posters

Presiding: T Moutin, Laboratoire d’Océanographie Physique et Biogéochimie; B Van Mooy, Woods Hole Oceanographic Inst; F T Thingstad, Bergen University; M W Lomas, BIOS

1730h IT15B-01 POSTER Modeling the coupling of carbon and nutrients in the upper Mediterranean Sea: preliminary results from the BOUM cruise: R Mauriac, M Baklouti, T Moutin

1730h IT15B-02 POSTER 3D physical-biogeochemical coupled model of the NW Mediterranean Sea (MARS-3D/Eco3M): V Raybaud, R Mauriac, N Bousseraz, F Carlotti, P Garreau, M Baklouti

1730h IT15B-03 POSTER SPECIES-SPECIFIC SILIFICATION RATES IN A LONGITUDINAL NUTRITIONAL GRADIENT IN THE MEDITERRANEAN SEA DURING THE BOUM CRUISE: K Leblanc, Y Crombert

1730h IT15B-04 POSTER Bacteria and phytoplankton abundance and viability across the Mediterranean Sea: S Lasternas, S Agusti, C M Duarte

1730h IT15B-05 POSTER Is Nitrogen Fixation a Major Biogeochemical Process in the Mediterranean Sea during the stratification Period?: S Bonnet, O Grosso, P Rainbaul, T Moutin

1730h IT15B-06 POSTER Dissolved Organic Phosphorus: Isolation and Chemical Characterization: T B Meadore, D Repeta, C Johnson, S Dyhrman

1730h IT15B-07 POSTER Phospholipid production and turnover in a nutrient addition microcosm experiment in the Mediterranean: K Popendorf, T Tanaka, F Van Wambekke, M Pujo-Pay, C Courties, T Moutin, B Van Mooy

1730h IT15B-08 POSTER Diazotrophic unicellular cyanobacteria (UCYN2-Fix) across an oligotrophic gradient in the Mediterranean Sea: preliminary results from the BOUM cruise: M Le Moal, H Collin, C Ridame, S Bonnet, I C Biegala

1730h IT15B-09 POSTER Zooplankton abundance, biomass and metabolic rates along an eastern and western basin transect in the Mediterranean Sea: A Nowaczyk, F Carlotti, D Botha

1730h IT15B-10 POSTER Temporal changes on the vertical distribution of dissolved oxygen and nutrients in the oligotrophic Levantine Basin of the Eastern Mediterranean: N Kress, I Gertman, B Herut

1730h IT15B-11 POSTER Mesozooplankton biomass and taxonomic distribution across the Mediterranean sea during the PROSOPE survey (PROSOPE): F Carlotti

1730h IT15B-12 POSTER Microbial community responses and trophic shifts (autotrophy vs. heterotrophy) upon addition of limiting nutrients -N. vs. P. - in oligotrophic Mediterranean surface waters: the BOUM microcosm experiments: S Psarra, A Lagaria, D Lefevre, F Van Wambekke, U Christaki, C Courties, M Pujo-Pay, L Oriol, T Tanaka, T Moutin

IT15C  Poster Hall E  Monday  1730h
Marine Habitat Mapping: Where Physical Oceanographers, Marine Ecologists, GIS Experts, and Habitat Suitability Modelers Meet II Posters (joint with BO, PO)

Presiding: S Degraer, Royal Belgian Institute of Natural Sciences; V Van Lancker, RBINS

1730h  IT15C-01 POSTER On the development of a 3-tier nested estuarine classification for Southeast Alaska: D M Albert, G C Schoch, C S Shanley

1730h  IT15C-02 POSTER A protocol for classifying ecologically relevant marine zones, a statistical approach: E Verfaillie, S Degraer, K Schelfaut, W Willems, V Van Lancker

1730h  IT15C-03 POSTER Underwater Landscape Mosaics: A unique tool for linking reef ecology and reef mapping: B Gintert, A C Gleason, N Gracias, D Lirman, M Dick, T Szylk, M Ciminello, P R Reid

1730h  IT15C-04 POSTER Nearshore Habitat Mapping and Change Detection using Acoustic and Video Techniques: B Bornholdt, S Gillanders, S Cook, J Harper, M Morris, T Nelson

1730h  IT15C-05 POSTER Spatial Distribution of Epifaunal Species in association with Tidal Scour Rates at Elkhorn Slough, CA: A Hall, K Gomez, R Kvitik

1730h  IT15C-06 POSTER Multibeam sonar investigation of physical and biological characteristics of the lakebed along a submerged section of the Niagara Escarpment within the Fathom Five National Marine Park, Lake Huron, Canada: L A Tutty

IT15D  Poster Hall E  Monday  1730h
Nitrogen Cycling Near Oxygen Minima Zones: Linking Observations to Global Models of Nitrogen Fixation in the Anthropocene II Posters (joint with BO, GO, CO)

Presiding: R A Foster, University of California; C R Benitez-Nelson, University of South Carolina

1730h  IT15D-01 POSTER Nitrification in the Arabian Sea: S E Bulow, B B Ward

1730h  IT15D-02 POSTER ABUNDANCE DISTRIBUTION OF KEY GENES INVOLVED IN NITROGEN REMOVAL IN OMZS: A Jayakumar, B Ward

1730h  IT15D-03 POSTER Sediments underlying the Peruvian oxygen minimum zone – source or sink for reactive nitrogen species?: L Bohlen, S Sommer, A Dale, C Hensen, K J Wallmann

1730h  IT15D-04 POSTER Nitrous Oxide Production and Consumption in an Anoxic, Brackish Coastal Pond: C C Manning, K L Casiotti, C H Frame, R C Hamme

1730h  IT15D-05 POSTER Benthic Nitrogen Loss in the Arabian Sea off Pakistan: S Sokoll, M Holtappels, P Lam, G Collins, G Lavik, M M Kuypers

1730h  IT15D-06 POSTER Quantum Dot (Qdot) Antibody Conjugates: A Powerful New Tool to Detect Proteins in Highly Autofluorescent Cells: K Gundersen, S Ren, K M Orcutt

1730h  IT15D-07 POSTER NITROGEN FIXATION IN THE BLACK SEA – WHO, WHEN, AND WHY?: J B Kirkpatrick, C A Fuchsmann, J Staley, J W Murray

1730h  IT15D-08 POSTER Detection of Transient Denitrification During a High Organic Matter Event in the Black Sea: C A Fuchsmann, B Paul, J W Murray

1730h  IT15D-09 POSTER Abundance and Distribution of nifH phytopotypes in the Arabian Sea Oxygen Minimum Zone: M M Al-Rshaidat, M R Mulholland, A Jayakumar, B B Ward

1730h  IT15D-10 POSTER High resolution in situ profiling of nitrification rates in the eastern tropical North Pacific Ocean: J Beman, B N Popp


IT15E  Poster Hall E  Monday  1730h
Oceans and Human Health: Reducing Risks Through Prediction Posters (joint with BO, PO, CO)

Presiding: C Anderson, University of California, Santa Cruz; University of South Carolina

1730h  IT15E-01 POSTER Forecasting Beach Closings and Conditions in the Great Lakes: C E Sellinger, S B Brandt, T Hunter

1730h  IT15E-02 WITHDRAWN

1730h  IT15E-03 POSTER Towards a 48 Hour Beach Health Forecast Model for the Great Lakes: D J Schwab, D C Rockwell, R Wagenmaker

1730h  IT15E-04 POSTER The Enigma of Vibrio parahaemolyticus Illnesses in the Pacific Northwest: R Paranjpye, W Nilsson, B Sandford, M Strom


1730h  IT15E-06 POSTER Physical and Microbiological Analyses of a Shallow Wastewater Treatment Outfall Effluent Plume in a Lagrangian Frame: P A Holden, C Ohlmann, L Washburn, L V De Werfhorst, B Serceu, C Wu, G Anderson

1730h  IT15E-07 POSTER Enhancing the predictive capabilities of a water quality model that assesses the fecal impairment of recreational waters by incorporating stratified random sampling design into the model development: R M Litton, J C Monroe, S B Grant

1730h  IT15E-08 POSTER Dynamics of the Saco River Plume: Preliminary Observations and Modeling: S I Zeeman, C E Tilburg, J Eickhorst, A Carlson, P O Yund, T Arienti, S M Gill

IT15F  Poster Hall E  Monday  1730h
Physical Forcing and Consequences of Fluid and Particle Exchange in Permeable Sediments II Posters (joint with BO, GO, CO)

Presiding: M H Huettel, Florida State University; F Sansome, University of Hawaii

1730h  IT15F-01 POSTER CaCO3 dynamics in biogenic carbonate sands: A M Rao

1730h  IT15F-02 POSTER Acoustic Detection of Gas Bubbles in Permeable Sand at Small Spatial and Temporal Scales: R A Wildman, M Huettel

1730h  IT15F-03 POSTER Benthic oxygen fluxes measured in the Northeastern Gulf of Mexico using the Eddy correlation technique: L Chipman, P Berg, M H Huettel


1730h  IT15F-05 POSTER Time Series Measurements of Benthic Oxygen Exchange Rates (BOXER) on the Oregon Shelf Using an Eddy Correlation Method: K McCann-Grosvenor, R Sanders, C E Reimers

1730h  IT15F-06 POSTER In-situ measurements of internal phosphate loading in the Gulf of Finland, Baltic Sea: L Viktorsson, E Almroth, A Tengberg, P O Hall
1730h  IT15F-07 WITHDRAWN
1730h  IT15F-08 POSTER Temporal Dynamics of Dissolved Oxygen of the Benthic Boundary Layer in the West Florida Shelf: M L Santema, M Huettel, S White

IT15G  Poster Hall E  Monday  1730h
Sea Ice Extremes, Upper Ocean Warming, and Ecosystem Response in the Arctic and in Relation to the Pan-Arctic System II Posters (joint with BO, PO, PA, GO, CO)

Presiding: J Wang, NOAA Great Lakes Environmental Research Laboratory; J M Grebmeier, Univ MD Center Enviro Science; S E Moore, NOAA; D E Varela, University of Victoria

1730h  IT15G-01 POSTER The Influence of Pacific Inflow to Arctic Sea Ice: J Su, X Li, J Shi, X Hu
1730h  IT15G-02 POSTER Sea level change and its contributors in the Arctic Ocean in the 20th century: L Du, J Wang, J Zuo
1730h  IT15G-03 POSTER Year-to-year variability of late summer hydrography across Barrow Canyon and the western Beaufort shelf: 2005-2009: S R Okkonen, C J Ashjian, R G Campbell
1730h  IT15G-04 POSTER The effect of retreating summer ice on shelf-break exchange in the Arctic Ocean: W J Williams, E Carmack
1730h  IT15G-05 POSTER Nutrient and Chlorophyll distributions in U.S. and Russian waters of the Chukchi Sea in 2009: M Kong, T E Whitledge
1730h  IT15G-06 POSTER Modeling studies of the coupled ice-ocean-ecosystem in the Polar Regions: M Jin, C Deal, S M Elliott, E C Hanke, M E Maltrud, N Jeffery
1730h  IT15G-07 POSTER Inter-annual variability of the planktonic communities in the Northeastern Chukchi Sea: J M Questel, R R Hopcroft, C Clarke
1730h  IT15G-08 POSTER The Chukchi Sea Shelf Benthic Food Web: Has It Changed in Response to a Warming Arctic?: N McIntigue, S Schonberg, K H Dunton
1730h  IT15G-09 POSTER Arctic Ocean Primary Productivity, Regeneration Rates and Propagation: Results from the 2005 Trans-Arctic Cruise: R Newton, P Schlosser, R Friedrich, J H Swift, L G Anderson
1730h  IT15G-10 POSTER Colonisation of newly forming sea ice by meiofauna in the Central Arctic: M Kramer, R Kiko, S Kern, H Mütze

IT15H  Poster Hall E  Monday  1730h
Sea Ice, Atmosphere-Ocean Interactions, and Ecosystem Dynamics in Arctic and Subarctic Systems II Posters (joint with BO, PO, CO)

Presiding: J Wang, NOAA Great Lakes Environmental Research Laboratory; C Deal, University of Alaska Fairbanks; D E Varela, University of Victoria; W J Williams, Institute of Ocean Sciences

1730h  IT15H-01 POSTER Simulated decadal variations of fresh water content and sea surface height in Beaufort: C C Tang, Z Long, W A Perrie, E Dunlap, J Wang
1730h  IT15H-02 POSTER Has the 2007 Sea Ice minimum impacted on the Arctic and Subarctic freshwater balance?: C LIQUE, G Garric, A Treguier, B Barnier, N Ferry, C Testut
1730h  IT15H-03 POSTER Large-Scale Atmospheric Circulation Changes are associated with the Recent Loss of Arctic Sea Ice: J E Overland, M Wang
1730h  IT15H-04 POSTER Sea ice melting process in the Arctic Ocean: results of in situ observation from ice breakers in 2007: M Itoh, J Inoue, K Shimada, S Zimmermann, J K Hutchings, F A McLaughlin, E C Carmack, T Kikuchi
1730h  IT15H-05 POSTER Atmospheric Forcing on the Fram Strait sea ice export in recent decades: M Tsuchernik
1730h  IT15H-06 POSTER Why ice minima occurred in 2007, 08 and 09?: J Wang, X Bai
1730h  IT15H-07 POSTER Severe Great Lakes Ice Cover in Winter 2008/09: Contribution of AO and ENSO: X Bai, J Wang
1730h  IT15H-08 POSTER Numerical Study and Data Analysis of the Bering Sea Ice and Polynya in 1999: H Hu, J Wang, S L Danielson
1730h  IT15H-09 POSTER Canada’s Three Oceans (C3O): A Canadian IPY Study on the Interconnectivity of Arctic and Subarctic Processes: S Vagle, E C Carmack, F A McLaughlin, W J Williams, H Melling
1730h  IT15H-10 POSTER Controls on phytoplankton production and biomass in arctic and subarctic oceans during the summers of 2007 and 2008: L A Wrohan, D E Varela
1730h  IT15H-11 POSTER Processes controlling the biogeographic boundary of Calanus copepods in the Arctic Ocean: R Ji, C J Ashjian, R C Beardsley, R G Campbell, C Chen, G W Cowles, C S Davis, G Gao
1730h  IT15H-12 POSTER Paleoreconstruction of Terrestrial Carbon Inputs to the Simpson Lagoon and Beaufort Shelf, Alaska: K M Schreiner, T S Bianchi, M A Allison, R B Coffin
1730h  IT15H-13 POSTER Oceanographic Observations Pertinent to the Petermann Glacier, Greenland: K K Falkner, H L Johnson, H Melling, A Muenchow

IT15I  Poster Hall E  Monday  1730h
Sediment Processes: Geochemical and Ecological Effects of Sediment Resuspension II Posters (joint with CO, MT; GO, PO, BO)

Presiding: G R Fones, University of Portsmouth; L H Kalneijais, University of New Hampshire

1730h  IT15I-01 POSTER Resuspension events and their effects on nutrient fluxes across the sediment-water interface in the central North Sea: G R Fones, F Couceiro, K Black, R Helby, C E Thompson, R Parker, D Siyver, N Greenwood, A S Hamilton, C C Wood, P J Statham, C L Amos, B A Kelly-Gerrey
1730h  IT15I-02 POSTER Modelling Macro-Nutrient Release and Fate Resulting from Sediment Resuspension in Shelf Seas: C C Wood, B A Kelly-Gerrey, P J Statham, J Aldridge
1730h  IT15I-03 POSTER Characterization of sedimentary organic matter upon exposure of resuspended sediments to simulated sunlight: A bulk and molecular marker approach: R N Mead, C M Luquire, A Barbera, G B Avery, R J Kieber, S A Skrabal, M Southwell
1730h  IT15I-04 POSTER BEHAVIOR OF METALS AFTER SUNLIGHT PHOTOLYSIS OF RESUSPENDED ESTUARINE SEDIMENTS: S A Skrabal, L Larson, M Southwell, G B Avery, R J Kieber, R N Mead
1730h  IT15I-05 POSTER Trace metal accumulation in Zebra Mussels from re-suspended Hudson River sediment: G M Stewart, B Quach, K E Kohfeld
1730h  IT15I-06 POSTER OFF-Shelf Export of Particulate Organic Matter and Sediment Driven by Shelf Dense Water Cascading: T Tesi, P Puig, A Palanques, M A Goni, S Miseroschi, L Langone
1730h  IT15I-07 POSTER Novel In-Situ Flume Techniques for Measuring Chemical and Physical Responses to Resuspension Events in the North Sea: C E Thompson, F Couceiro, G R Fones, R Helby, K Black, R Parker, N Greenwood, P J Statham, B A Kelly-Gerrey, C L Amos, C C Wood
1730h  IT15I-08 POSTER Characterization of resuspension fluxes of biomediated sediments in Baynes Sound, British Columbia: Preliminary results: T F Sutherland, C L Amos
IT15J Poster Hall E Monday 1730h
Small-Scale Low-Salinity Plumes in Coastal Zones Posters
(joint with PO, CO, BO)

Presiding: J L Largier, Bodega Marine Laboratory; M Foley, University of California Santa Cruz; L E Garske, UC Davis

1730h IT15J-01 POSTER Plume Patterns: Assessing the Role of Land Runoff in Nearshore Ocean Environments: J L Largier, J A Warrick

1730h IT15J-02 POSTER A buoyant plume adjacent to a headland - Observations of the Elwha River plume (Invited): J A Warrick, A W Stevens

1730h IT15J-03 POSTER Dynamics and transport of Southern California stormwater plumes: E Y Idica, K D Stolzenbach, C Dong, J C McWilliams

1730h IT15J-04 POSTER The Effects of Stormwater Plumes on Phytoplankton in the Coastal Ocean (Invited): K M Reifel, A Corcoran, B H Jones

1730h IT15J-05 POSTER Stream inputs to coastal waters of the Santa Barbara Channel (Invited): J M Melack, B Goodridge, S Maclntyre

1730h IT15J-06 POSTER The effects of subsidies from stream input and upwelling circulation on nearshore kelp forest communities: M Foley

1730h IT15J-07 POSTER An Interdisciplinary Approach to Understanding Runoff and Nearshore ‘Zones of Impact’: Example of the San Lorenzo River (Santa Cruz, CA): L E Garske, J L Largier, P G Green

1730h IT15J-08 POSTER Tracking fecal contaminants in the Motuwea River plume, Tasman Bay, New Zealand: C D Cornelisen, P Gillespie, M Kirs, P Barter, R Forrest, R Young, A Quarterman, V J Harwood

1730h IT15J-09 POSTER Delineation of a New Zealand river outwelling plume: implications for improved management of coastal shellfish resources: P A Gillespie, C D Cornelisen, L Bashers

1730h IT15J-10 POSTER The Florida Outfalls and Coastal Inlet Experiment (FOCITE-1), a dual tracer study of the Boynton Inlet and South Central treated-wastewater outfall plume: T P Carsey, J Stamates, K Sullivin, S Cummings, P Damman, D Pierrot, J Prni, C Featherstone, R H Wanninkhof, J Bishop, J Craynock

IT15K Poster Hall E Monday 1730h
Synergistic Interactions Between Stressors to Coral Reefs III Posters

Presiding: C D Storlazzi, U.S. Geological Survey; D K Gledhill, NOAA AOML; K Yates, USGS; G A Piniak, NOAA

1730h IT15K-01 POSTER Tropical Cyclone Induced Cooling Zones: A Thermal Stress Relief for Corals in Warming Seas?: A D Carrigan, M L Puotinen, R Borah

1730h IT15K-02 POSTER A New Experimental Satellite Monitoring Product Combining Light and Temperature Stresses for Detecting and Predicting Mass Thermal Coral Bleaching: G Liu, W J Skirving, R Iglesias, J Hedley, T Burgess, S Enriquez, T Christensen, S Dove, A E Strong, O Hoegh-Guldberg, C Eakin, P Mumby, J Morgan, S F Heron, B A Parker

1730h IT15K-03 POSTER In situ and remote monitoring for conditions conducive to coral bleaching in American Samoa: L J Gramer, C L Gentemann, D Fenner, O Vetter, J C Hendee

1730h IT15K-04 POSTER Mapping environmental controls on coral reef distribution patterns: J Sicoli Seano, R M Arantes, C B Castro, C F Barbosa, E C Tedesco, D O Pires

1730h IT15K-05 POSTER Changes in coral communities and reef environments over the past few centuries in Caribbean Panama: K Cramer

1730h IT15K-06 POSTER Photo-formation of hydroxyl radicals in the tissue extracts of the coral Galaxea fascicularis: T Higuchi, H Fujimura, Y Hitomi, T Arakaki, T Oomori, Y Suzuki

1730h IT15K-07 POSTER Eddy Correlation measurements of benthic oxygen fluxes for coral reefs: M H Long, P Berg, J Rheuban, J C Zieman

1730h IT15K-08 POSTER Are there synergistic effects between predation and thermal stress in Aiptasia?: S Hamlin, B G Miner

1730h IT15K-09 POSTER Lipid Biomarkers of Thermal and Disease Stress in Coral Zoanthellae: J M Kneeland, K A Hughen, J Cervino, B Van Mooy, H Fredricks

1730h IT15K-10 POSTER Gene expression of Aiptasia palладia exposed to sunscreens: N Harrison, T Shearer, S E Edge

1730h IT15K-11 POSTER Understanding Nitrogen Cycling in the Coral-Algal Symbiosis: Response to Variable Nutrient Environments: Q B Devlin, P K Swart, T Capo, C Langdon

1730h IT15K-12 POSTER The effect of temperature and light on the photobiology of three different clones of Symbiodinium B1: M Aschaffenburg, M Warner

1730h IT15K-13 POSTER Transcriptional response of core photosystem genes (psbA and psaA) in cultured Symbiodinium during periods of thermal stress: M McGinley, M Warner

1730h IT15K-14 POSTER Energy reserves, growth, and carbon allocation of bleached Porites lobata: S J Levas, A G Grottoli, A Hughes, T K Pease

1730h IT15K-15 POSTER PROJECTED EFFECTS OF GLOBAL WARMING ON CORALS IN SEAS CLOSE TO JAPAN: Y Yara, M Fujii, Y Yamanaka, N Okada, H Yamano, K Oshima

1730h IT15K-16 POSTER Coral growth declines as temperatures rise in the central Red Sea: N E Cantin, A L Cohen, K B Karnauskas, A Tarrant, G P Lohmann, C P Saenger, D C McCorkle

1730h IT15K-17 POSTER Effects of degraded water quality and availability of food resources on the health of Scleractinian corals in the Florida Keys, U.S.A: M Tceee, D Itman

1730h IT15K-18 POSTER Can sea fans monitor land-based sources of run-off in Bermuda?: J J Rodrigues

1730h IT15K-19 POSTER Maritime threats to Saba Bank, a large submerged Caribbean platform: S A McKenna, P J Etnoyer, R W Thacker

IT15L Poster Hall E Monday 1730h
Biogeochemistry of the North Atlantic in a Global Context: Bringing Together Recent Advances in Modeling and Observations II Posters (joint with BO, PO, CO)

Presiding: R Najjar, The Pennsylvania State University; S Neuer, Arizona State University

1730h IT15L-01 WITHDRAWN

1730h IT15L-02 POSTER Using In-situ pCO2 Observations to Evaluate Ocean Biogeochemical Carbon Models: A North Atlantic Case Study: A Fay, G A McKinley, V Bennington

1730h IT15L-03 POSTER Seasonal and inter-annual biogeochemical variations in the North East Atlantic at the PAP site (49°N, 16.5°W) associated with winter mixing and surface circulation: S Hartman, K Larkin, R Lampitt, M Lankhorst, D Hydes

1730h IT15L-04 POSTER North Atlantic interannual variability in coccolithophorid distribution from satellites and a model: Physical drivers and biogeochemical response: V J Coles, R R Hood, C Brown
IT15L-05 POSTER Diatom-driven carbon export during the North Atlantic Spring Bloom: coupled physical-biological modelling and variational data assimilation: W J Bagniewski, K Fennel, M Perry, E A D’Asaro, N Briggs, E Rehm

IT15L-06 POSTER Uptake of nutrients and carbon in the North Atlantic Subtropical Mode Water on a decadal time-scale: A Kremer, C Moulin, L Bopp, C Etchebrev

IT15L-07 POSTER Biogeochemical Cycling Rates in the Atlantic Ocean: M Mecking, A M Macdonald, D S Trossman


IT15L-10 POSTER The influence of low frequency climate modes on chlorophyll dynamics at two North Atlantic subtropical ocean sites: A Cianca-Aguilar, S Neuer, J Godoy, J Perez-Marrero, M Rueda, O Llinas

IT15L-11 POSTER CLASSIFICATION OF PHYTOPLANKTON IN CENTRAL EAST ATLANTIC (ESTOC): GROUP VARIABILITY IN WINTER AND AT SPRING MAXIMUM: D Vega-Moreno, C Llerandi, A Cianca-Aguilar, J Perez-Marrero, M Rueda, O Llinas

IT15L-12 POSTER Coupling flow cytometry with natural abundance nitrogen isotope analysis in the Sargasso Sea: S Fawcett, M W Lomas, D M Sigman, B B Ward

IT15L-13 POSTER Bio-geography of Nitrogen Fixation Rates in the Equatorial Atlantic Ocean: A Subramaniam, C Mahaffey

IT15L-14 POSTER An Optical Bio-geographical Description of the Equatorial Atlantic Ocean: A A Andrew, R Del Vecchio, N V Blough, A Subramaniam

IT15M Poster Hall E Monday 1730h

The Time-Dependent Near-Surface Light Field: Optics and Surface Wave Effects II Posters (joint with PO)

Presiding: W K Melville, Scripps Institution of Oceanography; T D Dickey, Univ of California Santa Barbara

1730h IT15M-01 POSTER Optical Variability and the Prediction of Underwater Visibility: G Chang, M S Twardowski, S Freeman, Y You, M Moline, C Jones, D Hansen, P Zhai, A H Barnard, G W Kattawar

1730h IT15M-02 POSTER Modeling of Wave-Induced Irradiance Fluctuations at Near-Surface Depths in the Ocean: A Comparison with Measurements: Y You, D Stramski, M Darecki, G W Kattawar

1730h IT15M-03 POSTER Estimate Imaging Limitations in Clean Natural Waters: W Hou, A Weidemann

1730h IT15M-04 POSTER Angular shape of the volume scattering function in the backward direction: J M Sullivan, M S Twardowski

1730h IT15M-05 POSTER Recovering high spatial-temporal resolution topography of capillary-gravity waves in an open ocean environment: H J Schulz, C J Zappa, M L Banner, R P Morison, J L Pezzaniti

1730h IT15M-06 POSTER Multangular hyperspectral polarimetry in coastal waters: A Tonizzo, J Zhou, A Ibrahim, A Gilerson, J Chowdhary, B Gross, F Moshary, S A Ahmed

1730h IT15M-07 POSTER Variability in Near-Surface Lidar Returns: J H Churnside

1730h IT15M-08 POSTER The Temporal and Spatial Variations of the Underwater Radiance Distribution: J Wei, M Lewis, R Van Dommelen, S Pegau, H W Wijesekera

1730h IT15M-09 POSTER Simulation of underwater radiative transfer with varying refractive index and IOP’s in the presence of ocean turbulence: Z Xu, X Guo, D Yang, L Shen, Y Liu, D Yue

1730h IT15M-10 POSTER Underwater light polarization distribution and short-term fluctuation induced by nonlinear ocean surface waves: M Shen, Z Xu, Y Liu, L Shen, D Yue

Marine Technology

MT15A Poster Hall E Monday 1730h

Frontiers in Ocean Data Management and Interoperability: The Future is Now III Posters (joint with PO, BO, IT)

Presiding: S C Diggs, Scripps Inst. of Oceanography; J E Lieberman, Traverse Technologies Inc.

1730h MT15A-01 POSTER Ocean-Acoustic Models for Coastal Applications: P C Etter


1730h MT15A-03 POSTER HabitatSpace: A tool for analysis and visualization of species habitats in multiple dimensions: D A Reusser, C J Beegle-Krause, S L Cross, S Messick, D Steube, T C Vance

1730h MT15A-04 POSTER A remote-sensing/GIS application for analysis of sea surface temperature off the western coast of North America: C A Brown, M C Payne, D A Reusser, H Lee II

1730h MT15A-05 WITHDRAWN

1730h MT15A-06 POSTER Use of Altimetry Data for the Evaluation of a Hydrodynamic Model in Lake Erie: V Velissariou, K W Bedford, R Li


1730h MT15A-08 POSTER Incorporation of Semantically-enabled features into an Existing Oceanographic Data Management System: P West, C L Chandler, M D Allison, P Fox, R C Groman, A R Maffei


1730h MT15A-10 POSTER Mapping the Spatial Variability and Distribution of Phytoplankton in the Eastern Bering Sea using Advanced Laser Fluorometry (ALF) and Geographic Information System (GIS): M C McKay

1730h MT15A-11 POSTER Virtual Ocean: Leveraging Web Services for Discovery, Visualization and Analysis of Marine Data: W B Ryan, J O Coplan, S M Carbotte, R A Arko, V Ferrini


1730h MT15A-15 POSTER Extending autonomy for exploration, discovery, and characterization of deep sea extreme environments: R Camilli, D Yoerger, M Jakuba, O Pizarro, S Williams, D L Valentine

2010 Ocean Sciences Meeting 23
1730h **MT15A-16** POSTER MMI and R2R: Applying a Device Ontology to Research Vessels in the Academic Fleet: **RA Arko**, J Graybeal, C Rueda, L E Bermudez, S R Smith

1730h **MT15A-17** POSTER Improving Coverage and Accuracy of Coastal Current Maps Using SeaSonde Multi-Static® HF RADAR Operation: **C W Whelan**, B Lipa, D Barrick, L Pederson

1730h **MT15A-18** POSTER An Intercomparison of Acoustic Current Meters deployed on the Scotian Shelf: **A Drozdowski**, B J Greenan, M Scotney, J W Loder

**Physical Oceanography**

**PO15A** Poster Hall E Monday 1730h **Coastal Oceanography II Posters**

*Presiding:* **M Park**, Chungnam National University; **E D Barton**, Consejo Superior de Investigaciones Cientificas; **S J Lentz**, Woods Hole Oceanographic Institution; **D K Savidge**, Skidaway Inst Oceanography

1730h **PO15A-01** POSTER Shelf-ocean exchanges in the Canaries-Iberian Marine Ecosystems (CAIBEX): **E D Barton**, J Aristegui, X A Alvarez Salgado, F Perez, A Gonzalez Gonzalez, G Roson, P Miller

1730h **PO15A-02** POSTER Eddy-induced upwelling off Cape São Tomé (22 S, Brazil): A numerical modeling study: **L Calado**, I C Silveira, A Gangopadhyay

1730h **PO15A-03** POSTER Normal Mode Analysis of Corpus Christi Bay, TX: **R Arena**, P Tarazaga, A M Mestas-Nunez, D Denny

1730h **PO15A-04** POSTER Analysis of Near-Coastal Surface Current Divergence and Vorticity Patterns Using HF-Radar: **M K gough**, C Halle, N Garfield, J L Largier

1730h **PO15A-05** POSTER Seasonal surface circulation changes off Baja California: **HJ Vazquez-Peralta**, J Gomez-Valdes

1730h **PO15A-06** POSTER Decadal Variations in the Northern Ionian Sea surface structure and relationships with the Eastern Mediterranean Transient: **A Catucci**, A Ioannone, M Grasso, G Eusebi Borzelli


1730h **PO15A-08** POSTER Secondary Circulation Associated with Strong Tidal Flow in the Western Gulf of Maine: **G M Marques**, W S Brown

1730h **PO15A-09** POSTER Summer/Fall Circulation Variability in the Western Gulf of Maine’s Wilkinson Basin: **W S Brown**, Z Yu

1730h **PO15A-10** POSTER Forecasting in the Adriatic Sea: model skills and assessments: A Guarnieri, N Pinardi, P Oddo, M Pastore

1730h **PO15A-11** POSTER Temporal variability in absorption properties of suspended particles and dissolved organic matter in Baltic coastal waters: **J M Jeler**, B Lednicka, B Wozniak

1730h **PO15A-12** POSTER Classification of Gaoping River Plume Using Formosat-2 High-spatiotemporal Imagery: **Y Chiu**, C Liu, C Chang

1730h **PO15A-13** POSTER Satellite multi-sensor studies of fine spatial structure of the Peal River plume in the Hong Kong Coastal Sea: **J Pan**, H Lin


1730h **PO15A-15** POSTER THE INFLUENCE OF LATERAL ADVECTION ON ESTUARINE EXCHANGE AT A CHESAPEAKE BAY TRIBUTARY: **N B Basdura**, A Valle-Levinson


1730h **PO15A-17** POSTER Determining the Tidal or Non-Tidal Nature of Florida Keys Water Level Stations: **P Tissot**, L Busch, D Martin

1730h **PO15A-18** POSTER Tidal Characteristics in a Convergent Estuary in Korea: **M Park**

1730h **PO15A-19** POSTER Tidal Propagation Characteristics in the Gyung-Gi Bay Estuary, South Korea: **S Woo**, B Yoon
1730h  **PO15B-14 POSTER**  Cooling or warming atmosphere due to a slowing Atlantic Meridional Cell (AMOC)?  **M Behl**, D Nof, S van Gorder

1730h  **PO15B-15 POSTER**  Impact of Large-scale Tropical Precipitation Anomalies on the Ov...atermass Structure of a Coupled Climate Model:  **M J Harrison**, R Hallberg, A Adcroft

1730h  **PO15B-16 POSTER**  Predicting the Atlantic Meridional Ov...Circulation (AMOC) Variability Using Subsurface and Surface Fingerprints:  **S Mahajan**, R Zhang, T L Delworth, S Zhang, A Rosati, Y Chang

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**PO15C Poster Hall E  Monday  1730h**

**Dynamics and Impact of the Meridional Ov...Circulation IV Posters**

*Presiding: A Schmittner,* Oregon State University; *W Weijer,* Los Alamos National Laboratory; *J Hirschi,* National Oceanography Centre

1730h  **PO15C-01 POSTER**  Role of mixing in subduction of South Pacific waters identified by a simulated passive tracer and its adjoint:  **S Gao**, T Qu, I Fukumori

1730h  **PO15C-02 POSTER**  Deep-circulation current through the Main Gap of the Emperor Seamounts Chain in the North Pacific:  **K Komaki**, M Kawabe

1730h  **PO15C-03 POSTER**  Role of locally enhanced vertical mixing around the Kuril Straits in the Pacific thermohaline circulation:  **T Kawasaki**

1730h  **PO15C-04 POSTER**  Ventilation: subduction and obduction. Part I: Inferring subduction/obduction from multi-year monthly mean dataset:  **L Liu**, R X Huang, F Wang

1730h  **PO15C-05 POSTER**  AAIW Formation and its Relation to Front Locations in a High-Resolution OGCM:  **A H Fetter**, V Zlotnicki

1730h  **PO15C-06 POSTER**  Spreading Pathways of Labrador Sea Water From the Subpolar North Atlantic: A Lagrangian Data – Model Comparison:  **A S Bower**, M Lozier, S F Gary, C W Boening

1730h  **PO15C-07 POSTER**  Variability in the Labrador Sea Water within the Deep Western Boundary Current Southeast of Cape Cod:  **B Pena-Molino**, T M Joyce, J M Toole

1730h  **PO15C-08 POSTER**  Monitoring deep convection combining altimetry and modelling: Application to the Labrador Sea:  **J Bouffard**, M Herrmann, A Pascual, K Beranger

1730h  **PO15C-09 POSTER**  Observing the Ocean’s Interior from the Space-the Observability of the MOC&DOC:  **X Yan**, Y Jo

1730h  **PO15C-10 POSTER**  INTERDECADAL VARIABILITY ALONG 38N IN THE NORTH ATLANTIC:  **J Lei**, P G Myers

1730h  **PO15C-11 POSTER**  Magnitude of and Mechanisms Causing Interannual Variability in the Atlantic Interior Geostrophic Transport at 36°N:  **J A Breatley**, E McDonagh, B King, H L Bryden

1730h  **PO15C-12 POSTER**  The Atlantic meridional overturning circulation and heat flux at 26.5°N: Results from the first four years of the RAPID-WATCH/MOCHA array:  **S A Cunningham**, W E John, J Hirschi, M O Baringer, C S Meinen, C Maria Paz, L M Beal, H L Bryden, J Marotzke, H L Johnson, D P Marshall, T Kanzow

1730h  **PO15C-13 POSTER**  The UK RAPID programme:  **M A Srokosz**, V Byfield

1730h  **PO15C-14 POSTER**  Variability of the Atlantic Meridional Ov...Circulation Observed at 16 N:  **M Lankhorst**, U Send, T Kanzow

1730h  **PO15C-15 POSTER**  Changes in the ventilation of the oxygen minimum zone of the tropical North Atlantic:  **P Brandt**, V Hormann, A Koertzinger, M Visbeck, G Krahmann, L Stramma, R Lumpkin, C Schmid

1730h  **PO15C-16 POSTER**  Partitioning the deep limb of the Atlantic Meridional Ov...ulation into the Deep Western Boundary Current and an interior pathway:  **S F Gary**, S Lozier, C W Boening, A Biastoch

1730h  **PO15C-17 POSTER**  Annual cycle, structure, and meridional coherence of the North Atlantic meridional overturning circulation:  **B Shaw**, W E Johns

1730h  **PO15C-18 POSTER**  Modelling the structure and stability of the Atlantic overturning circulation during the last deglaciation:  **P Courtin**, R Marsh, R Myerscough, E J Rohling

1730h  **PO15C-19 POSTER**  Decadal Climate Predictability associated with the Atlantic Meridional Ov...Circulation in different Coupled Climate Models:  **A Persechino**, B Sinha, R Marsh, A Megann, A Blaker

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**PO15D Poster Hall E  Monday  1730h**

**Near-Inertial Motions: Their Ubiquity, Obliquity, Propensity, and Propinquity II Posters**

*Presiding: R Lumpkin,* NOAA/AOML

1730h  **PO15D-01 POSTER**  Model-predicted distribution of wind-induced near-inertial energy in the world’s oceans:  **N Furuiuchi**, T Hibiya, Y Niwa

1730h  **PO15D-02 POSTER**  Observations of near-inertial waves during the Internal Waves Across the Pacific Experiment:  **A I Pickering**, M H Alford

1730h  **PO15D-03 POSTER**  Inertial Oscillations as Deep Ocean Response to Hurricanes (Invited):  **E G Morozov**

1730h  **PO15D-04 POSTER**  On Hurricane induced Near Inertial Oscillations (NINs):  **CJ Lozano**

1730h  **PO15D-05 POSTER**  Observation of near-inertial wave reflections and amplifications in an anticyclonic mesoscale eddy in the southwestern East Sea:  **S Byun**, J Park, J Park, K Chang

1730h  **PO15D-06 POSTER**  Motions Induced by a Non-Stationary River Plume:  **P O Zavialov**, V M Zhurbas


1730h  **PO15D-08 POSTER**  Wind driven dynamics inside a semi-enclosed coastal basin, Bahia Conception, Baja Mexico:  **A L Ponte**, C Winant, K B Winters, A Valle-Levinson, G Gutierrez de Velasco

1730h  **PO15D-09 POSTER**  Observations of near- and super-inertial internal waves in coastal Lake Michigan:  **S Ahmed**, C D Troy, N Hawley

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**PO15E Poster Hall E  Monday  1730h**

**Nearshore Processes IV Posters (joint with GO)**

*Presiding: T T Janssen,* San Francisco State University

1730h  **PO15E-01 POSTER**  Pressure Gradients in the Swash Zone:  **A Kidwell**, J A Puleo, A Torres-Freyermuth

1730h  **PO15E-02 POSTER**  FORMULATION OF THE UNDERTOW IN THE SURF ZONE USING LINEAR WAVE THEORY:  **G E Guannel**, H T Ozkan-Haller

1730h  **PO15E-03 POSTER**  Wave Energy Transformation Measurements from a Cross-shore Array of Acoustic Doppler Profilers and Wave Buoys:  **K K Hathaway**, J L Hanson
1730h PO15E-04 POSTER Dispersion-based Bathymetry Estimation: the Performance of BeachWizard Lite: R A Holman, S Spansel, T Holland, N G Plant
1730h PO15E-05 POSTER Forecasting large-scale coastline change using a genetic algorithm: C Hopkins, D McNamara, G Coco
1730h PO15E-06 POSTER Coastal Vulnerability to Erosion and Flooding Along Dune-Backed Beaches in the U.S. Pacific Northwest: J Mull
1730h PO15E-07 POSTER The Capabilities of a Commercially Available Model to Predict Laboratory Beach and Dune Erosion Under Extreme Conditions: K Splinter, G Stuart, P Ruggiero, T B Maddux, R Tomlinson
1730h PO15E-08 POSTER Large-scale laboratory observations of wave breaking turbulence and sediment suspension over a mobile beach: H Yoon, D T Cox
1730h PO15E-09 POSTER Better data through modeling? New understanding of a runup parameterization: D M Thompson, H F Stockdon, N G Plant
1730h PO15E-10 POSTER BEACH MONITORING OF KANGWON COAST AND BEACH PROCESS ANALYSIS: J Kim, J Cho, J Lee
1730h PO15E-11 POSTER The role of 3D circulation in complex coastal environments: J W Long, N G Plant, J C Warner, J H List
1730h PO15E-12 POSTER Using coupled wave current models to simulate and predict rip currents: N Kumar, G Voulgaris, J C Warner
1730h PO15E-13 POSTER A numerical study of wave-current interaction using Finite Volume Coastal Ocean Model (FVCOM): an application to Grand Haven of Lake Michigan: M Xia, J J Schwab
1730h PO15E-14 POSTER On the development of MARS-WW3: a new coupled wave-current model: A Bennis, T Odaka, F Ardhuin, F Dumas, R Magne, C Gandon
1730h PO15E-15 POSTER Hydrodynamic response to pulsing river diversion in Breton Sound Estuary, Louisiana: H Huang
1730h PO15E-16 POSTER Tidal Circulation Modeling in Morro Bay, California: L F Hibler, M Moline, A R Maxwell, J Weston, D E Wendt
1730h PO15E-17 WITHDRAWN
1730h PO15E-18 POSTER Three-Dimensional Modeling of Ocean Currents during the Passage of Winterfronts: K A Haas, J C Warner
1730h PO15E-19 POSTER A numerical study of island wave generated by an elliptical tidal flow: P Estrade, J H Middleton
1730h PO15E-20 POSTER Evaluation of Water Level Predictions Under the Action of the 3D Surface Waves in Coastal Environments: P Velissariou, K W Bedford
1730h PO15E-21 POSTER Sandbar and sandspit dynamics of a meso-tidal inlet system: C P Barroso, E Siegle, C Schettini, L Miranda
1730h PO15E-22 POSTER Numerical experiments of storm-induced exchange and transport between inner shelf and coastal sounds during low and high intensity storms in southeast Louisiana: A Grzegorzewski, I Y Georgiou, M A Cialone, T V Wamsley
1730h PO15E-23 POSTER Multi-Dimensional Error Analysis of Nearshore Wave Modeling Tools, with Application Toward Data-Driven Boundary Correction: B Jiang, J M Kaimal
1730h PO15E-24 POSTER Implementation of a three-dimensional coupled wave/current model on a nearshore region of the Mediterranean Sea (France): the Gulf of Aigues-Mortes: H Michaud, Y Leredde, P Marsaleix, C Estournel
1730h PO15E-25 POSTER WAVE CURRENT INTERACTION IN WILLAPA INLET: M Olabarrieta, J C Warner
1730h PO15E-26 POSTER Statistical properties of long waves nearshore: I Didenkulova, E N Pelinovsky, A Sergeeva
1730h PO15E-27 POSTER A comparison of the different wave-current interactions theories and an experimental study of the stokes drift using an original lagrangian tracking: C Gandon, F Ardhuin, A J Reniers
1730h PO15E-28 WITHDRAWN
1730h PO15E-29 POSTER Upper-ocean internal waves, tides and mixing at Santa Catalina Island in the Southern California Bight: C Gelpi
1730h PO15E-30 POSTER Numerical simulation of combined wave-current flows over dynamic sand ripples: Y Chou, O B Fringer

PO15F Poster Hall E Monday 1730h Probabilistic Models in Ocean Sciences: Applications in Data Assimilation, Coupled Ecosystem Models, and Air-Sea Interaction Studies II Posters (joint with BO, IT)

Presiding: M E Fiadeiro, Office Naval Research
1730h PO15F-01 POSTER Process Model Considerations for a Surface Wind Bayesian Hierarchical Model: R F Milliff, N Pinardi, C Wike, M Berliner, A Bonazzi
1730h PO15F-02 POSTER A Designed Experiment Leading to Understanding Climate Uncertainty, Early Results: R T Tokmakian, P G Challenger
1730h PO15F-03 POSTER Assimilation of synthetic aperture radar wind information in a high resolution 3D-Var analysis system: H Ritchie, R E Danielson, L Fillion, M Dowd
1730h PO15F-04 POSTER Using Tracer Observations to Reduce the Uncertainty of Diapycnal Mixing and Climate-Carbon Cycle Projections: A Schmittner, K Keller, N Urban, D Matthews, M P Goes
1730h PO15F-05 WITHDRAWN
1730h PO15F-06 POSTER Transit Time Distribution Estimation in the North Atlantic and Southern Oceans: D S Trossman, L Thompson, M Warner, S Mecking

PO15G Poster Hall E Monday 1730h Theory, Modeling, and Observations of Westward Propagating Rossby Waves and Eddies III Posters

Presiding: R Talley, University of Reading; S Bulusu, University of South Carolina
1730h PO15G-01 POSTER ON EDDIES PULSATIONS AT THE CANARY EDDY CORRIDOR: D Grisoli, P Sangrà
1730h PO15G-02 POSTER A Fine-Resolution Eddy Challenge Suite for Evaluation of Eddy Parameterizations: S Bachman, F O Bryan, J M Dennis, B Fox-Kemper
1730h PO15G-03 POSTER Investigating Bay of Biscay mesoscale eddy dynamics with satellite altimetry: R Dussurget, F Birol, R Morrow
1730h PO15G-04 POSTER Characterization of Westward Propagating Signals in the Southern Atlantic: F S Oliveira, P S Polito
1730h PO15G-05 POSTER Meso-scale eddies north of Hawaii associated with subduction of North Pacific Eastern Subtropical Mode Water: P J Lethaby, F E Santiago-Mandujano, J Smith, R Lukas
1730h PO15G-06 POSTER An Irminger Ring Mooring in the Labrador Sea, Preliminary Results: H H Furey, A S Bower, T McKee
1730h PO15G-07 POSTER Nutrient pumping induced by first mode baroclinic Rossby waves in the Sargasso Sea: S Krieger, J P Aucan
1730h  **PO15G-08 Poster** Equatorial Pacific 13°C Water Eddies in the Eastern Subtropical South Pacific Ocean: **G C Johnson**, K McTaggart

1730h  **PO15G-09 Poster** Slope/shelf circulation and cross-slope/shelf transport out of a bay driven by eddies from an open ocean current: **Y Zhang**, G Flierl, J Pedlosky

1730h  **PO15G-10 Poster** Rossby deformation radius effects on vortex propagation through gaps: **R S Nilawar**, E R Johnson, N R McDonald

1730h  **PO15G-11 Poster** Blocking and Westward Passage of Eddies in the Luzon Strait: **C Wu**, L Oey

1730h  **PO15G-12 Poster** Phase speed of Rossby waves based on the CMIP3 multi-model dataset: **M Sueyoshi**, T Yasuda

1730h  **PO15G-13 Poster** New approach to extra-tropical Rossby waves: **Y Ashkenazy**, N Paldor, Y Zarmi

1730h  **PO15G-14 Poster** Poleward flows and westward propagation in the southern California Current System: **R E Todd**, D L Rudnick, M R Mazloff, R E Davis, B D Cornuelle

1730h  **PO15G-15 Poster** Spatial and temporal variability of the remotely sensed chlorophyll-a signal associated with Rossby waves in the South Atlantic Ocean: **I Dadou**, E Gutknecht, G Charria, P Cipollini, V Garcon

1730h  **PO15G-16 Poster** North Pacific Oceanic Eddy Heat Transport estimated by a high resolution Ocean GCM simulation and Satellite data: **Y Tanimoto**, K Aoki, S Minobe, M Haniu, Y Sasai

1730h  **PO15G-17 Poster** EFFECTS of MERIDIONAL WINDS AND MESO-SCALE EDDIES ON A GAP-LEAPING WBC: **Z Wang**, D Yuan

1730h  **PO15G-18 Poster** Interactions between Mesoscale SSH Features in the Western Tropical Pacific: **F Wang**

1730h  **PO15G-19 Poster** A 3-Dimensional Spectral Description of Westward Propagating Features Seen in Satellite Altimetry and Comparison With Numerical Models: **C J Wortham**, C I Wunsch

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**PO15H Poster Hall E  Monday 1730h**

**Typhoon-Ocean Interactions in the Western North Pacific Ocean and Neighboring Seas III Posters**

*Presiding: B Tsuang,* Chung Hsing Univ; **Y Tsen**, National Taiwan University; **W Liu**, Jet Propulsion Laboratory; **I I Lin**, National Taiwan University

1730h  **PO15H-01 Poster** Satellite-borne SST validation based on in-situ data during summer in the East China Sea and south of Ryukyu Islands: **E Kim**, S Kang, S Jang, Y Kim

1730h  **PO15H-02 Poster** Numerical study of wind wave on the effects of current and sea level variation: **S You**

1730h  **PO15H-03 Poster** Modeled Oceanic Response and Sea Surface Cooling to Typhoon Kai-Tak: **Y Tseng**, S Jan, D E Dietrich, I I Lin, Y Chang, T D Tang

1730h  **PO15H-04 Poster** Observation and simulation of topographic Rossby waves generated by the passage of super typhoon Songda in the East China Sea: **S Lee**, J Park, I Ginis, M Wimbush, B Lim, K Chang, S Kang

1730h  **PO15H-05 Poster** Ocean initialization for the typhoon forecast with 3-dimensional variational technique: **Y Kim**, H Kang, S Kang, J So, E Kim, I Ginis

1730h  **PO15H-06 Poster** Intensification of tropical cyclones in the Eastern Pacific and its relationship with ocean eddies: **F Oropesa**, G B Raga

1730h  **PO15H-07 Poster** Understanding the Effects of Air-Sea Coupling on Typhoon Structure and Intensity: **C Lee**, S S Chen

1730h  **PO15H-08 Poster** A case study of tropical cyclone Nargis (2008): Rapid intensification and rainfall after landfall: **W Li**, W Wang

1730h  **PO15H-09 Poster** Eddy variations in the Western North Pacific South Eddy Zone by Satellite Altimetry Observation for Typhoon Intensification Research: **I Pun**, I I Lin

1730h  **PO15H-10 Poster** The mechanism of the intense surface cooling by Typhoon Kai-Tak (2000): **T Chiang**, C Wu

1730h  **PO15H-11 Poster** Estimation of Air-sea Fluxes by Remote Sensing: Improvements and Application on Typhoon Intensity Change: **F Wang**, I I Lin

1730h  **PO15H-12 Poster** Latent heat flux variations during the passage of tropical cyclones in the South China Sea: A comparison between MM5 and other products: **L Yang**, W Wang

1730h  **PO15H-13 Poster** The typhoon-Induced Biogeochemical Response in the Western North Pacific Ocean: **C Lien**, I I Lin

1730h  **PO15H-14 Poster** Rapid Intensification of the Western North Pacific Supertyphoons: **C Yang**, I I Lin, S S Chen, C Wu, S Hui

1730h  **PO15H-15 Poster** Surface latent heat flux associated with rapidly intensifying tropical cyclones and its application in tropical cyclone intensity prediction over western North Pacific: **S Gao**, R Chokngamwong, L Chiu

1730h  **PO15H-16 Poster** Wave impact of Krosa (2007) near Taiwan: **Y Chang**, S Chao, D S Ko, S Lin

1730h  **PO15H-17 Poster** Identifying air-sea exchange coefficients using an adjoint data assimilation method: **K ITO**, Y Ishikawa, T Awaji

1730h  **PO15H-18 Poster** WITHDRAWN

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**Tuesday A.M.**

**Biological Oceanography**

**BO21A PB255**

**Microscale Biophysical Interactions in the Life of Marine Microbes I (joint with IT)**

*Presiding: T Kiorboe,* Technical University of Denmark; **R Stocker,** MIT

0800h  **BO21A-01** The significance of refractory organic matter for bacterial microniche architecture and behavior in the ocean: **F Azam**, F Malfatti

0815h  **BO21A-02** Patchy prey and stealthy predators: enhanced protist grazing pressure within phytoplankton patches (*Invited*): **S Menden-Deuer**, E Harvey, K Fredrickson, W Day

0830h  **BO21A-03** Collecting and colliding at moderate Reynolds numbers (*Invited*): **S Humphries**

0845h  **BO21A-04** Synchronization of Eukaryotic Flagella (*Invited*): **R E Goldstein**
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<th>Time</th>
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<tr>
<td>0800h</td>
<td>BO21A-05 Physical and Biological Controls of Vertical Gradients in Phytoplankton: J C Prairie, P J Franks, J S Jaffe, M Doubell, H Yamazaki</td>
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<td>0915h</td>
<td>BO21A-06 Searching and feeding mechanisms of unicellular vs. colonial choanoflagellates: M A Koehl, R Stocker, D Fletcher, N King</td>
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<td>0930h</td>
<td>BO21A-07 A mixotrophic dinoflagellate utilizes toxins as a means of stunning prey prior to ingestion: J Sheng, J Adolf, J Katz, A R Place</td>
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<td>0945h</td>
<td>BO21A-08 Nutrient sequestration drives succession in phytoplankton blooms: J Mitchell, L Seuront, M Doubell, D Losic, N H Voelcker, J Seymour, M Schapira, N Patten, S Leterme, C Chapperon, R Lal</td>
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<td><strong>BO21B D137</strong> Oxygen Minimum Zones and Climate Change: Observations and Prediction I</td>
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<td><strong>Presiding:</strong> K L Daly, University of South Florida; K F Wishner, University of Rhode Island</td>
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<td>0800h</td>
<td>BO21B-01 GLOBAL OCEAN OXYGEN MINIMUM ZONE VARIATIONS AND THEIR BIOLOGICAL IMPACTS: L Stramma, L A Levin, S Schmidtko, G C Johnson</td>
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<td>0815h</td>
<td>BO21B-02 ARE THE OPEN-OCEAN OXYGEN MINIMUM ZONES INTENSIFYING AND EXPANDING?: S A Naqvi, K Banse, P V Narvekar, J R Postel</td>
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<td>0830h</td>
<td>BO21B-03 Ocean interior diffusivity impact on Oxygen Minimum Zones: O Duteil, A Oschlies</td>
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<td>0845h</td>
<td>BO21B-04 Temporal Variations in the Biogeochemistry of the Permanently Anoxic Cariaco Basin: G T Taylor, M Lopez-Gasca, A Podlaska, X Li, L Lorenzoni, D Rueda, F E Muller-Karger, R Thunell, K Fanning, R Varela, Y Astor, M I Scarratt</td>
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<td>0900h</td>
<td>BO21B-05 Numerical studies of physical exchange and biogeochemical transformations in theoxic/anoxic Cariaco Basin: S Konovalov, M I Scarratt, A Samodurov, V Belokopytov, L Ivanov, Y Astor</td>
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<td>0915h</td>
<td>BO21B-06 Spatial and Temporal Variability in Near-Bottom Hypoxia over the Pacific Northwest Continental Shelf: J A Barth, S D Pierce, F Chan, B A Menge, W T Peterson, J O Peterson, C A Morgan, R K Shearman, A Erofeev, M D Levine, B C Crump, L Herfort, R A Feely, B R Hales, S Rumrill, M Brancato</td>
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<td>0930h</td>
<td>BO21B-07 Coupled climate-ecosystem dynamics and hypoxia variability on the Oregon continental shelf: F Chan, J A Barth, B A Menge, R Milstone-Clements, K Page-Albins</td>
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<td>0945h</td>
<td>BO21B-08 Cadavers in Support of Forensic and Hypoxia Research: V Tunnicliffe, G Anderson, M Nikolich, R K Dewey</td>
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<td><strong>BO21C D135</strong> Unveiling the Secrets of Phytoplankton Life Cycles I (joint with IT)</td>
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<td><strong>Presiding:</strong> M Ellegaard, University of Copenhagen; M Montresor, Stazione Zoologica Anton Dohrn</td>
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<tr>
<td>0800h</td>
<td>BO21C-01 IDENTIFICATION OF SEXUAL GENES IN A TOXIC MICROALGAE: R Figueroa, K Rengeforz, S Bensch, D Ahrén, E Garcé</td>
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<tr>
<td>0815h</td>
<td>BO21C-02 Diatoms Favor Their Younger Daughters: S R Laney, H M Sosik, R J Olson</td>
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**Chemical Oceanography**

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<tr>
<th>Time</th>
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<tr>
<td>0800h</td>
<td>CO21A D139 Getting the Right Number I (joint with BO, PA, MT)</td>
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<td><strong>Presiding:</strong> G A Cutter, Dept Ocean Earth &amp; Atmosph Sci; R M Sherrell, IMCS, Rutgers University</td>
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<tr>
<td>0800h</td>
<td>CO21A-01 Measurement uncertainty and metrological traceability of oceanic CO2 measurements: the good, the bad, and the ugly! (Invited): A G Dickson</td>
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<tr>
<td>0815h</td>
<td>CO21A-02 A Synopsis of the GEOTRACES Interlaboration: Equipment, Methods, and Hydrography: G A Cutter, B Gipson, C Barnes, L Zimmer</td>
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<tr>
<td>0830h</td>
<td>CO21A-03 Dissolved trace element data from the US GEOTRACES Atlantic and Pacific intercalibration cruises: W M Landing, A Milne, K J Gosnell, C I Measures, M Hatta, M M Grand</td>
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<td>0900h</td>
<td>CO21A-05 Pb and other Trace Element Isotopes in the GEOTRACES CP-TEI Interlaboration, and an Update on the Evolution of Anthropogenic Lead in the Western North Atlantic: E A Boyle, Y Eschgoyan-Sanz, J Zhang, W Abouchami, S John, J F Adkins, M Rehkmapper, Z Xiu, O Rouxel, D Vance</td>
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<tr>
<td>0915h</td>
<td>CO21A-06 Intercomparison of Collection, Handling and Analysis Methods for Mercury Species in Open Ocean Waters: M Woodward, M Aoyama, A G Dickson, D Hydes, A Murata, J Oh, P Roose</td>
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<td>**BO21C-04 ASEX AT THE MARGINS?: L V Oppliger, P von Dassow, S Bouchemousses, M Robuchon, M Valero, J A Correa, C Desmote</td>
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<td>0900h</td>
<td>BO21C-05 Transcriptomic analysis of three different coccolithophorid species reveals functional differentiation of 1N and 2N cells: P von Dassow, H Ogata, U John, I Probert, P Wincker, C Da Silva, S Audic, J Claverie, C de Vargas</td>
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<td>0915h</td>
<td>BO21C-06 Cryptic sex in the smallest eukaryotic marine green algae: N H Grimsley, B Péquin, C Bachy, H Moreau, G Pipan, L V Oppliger</td>
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<tr>
<td>0930h</td>
<td>BO21C-07 Reproductive barriers in Alexandrium tamarense species and their implications for global biogeography and toxic bloom mitigation: M Brosnahan, D M Kulis, A Solow, D Erdner, L Percy, J Lewis, D M Anderson</td>
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<td>0945h</td>
<td>BO21C-08 Interplay between the marine parasite Amoebophrya (Syndiniales) survival and the sexuality of its host (Scripsilla trochoidea, Dinoflagellate) (Invited): L Guillou, A Chambouvet</td>
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Education and Outreach

**ED21A E141 Tuesday 0800h**

**Education and Outreach General Contributions II**

**Presiding:** J M Harding, Mississippi State University; A M Macdonald, Woods Hole Oceanographic Institution

- 0800h **ED21A-01** FASEAS: Falmouth Academy Science Fair Experiments at Sea: A M Macdonald, J Waller, A Fudala, I Stearns, M Opie
- 0815h **ED21A-02** Education and Outreach Activities at the Northern Gulf Institute: J Ritchie, T Miller-Way, M Dannreuther, M J Carron, J M Harding, J Lartigue
- 0830h **ED21A-03** Oceanography in the classroom based on hydrodynamic modeling using open-source software: J Kaempf
- 0845h **ED21A-04** Ocean Acidification: bring research into classrooms: F Bradassi, F Cumani, G Bressan
- 0900h **ED21A-05** MAKING WAVES: engaging coastal communities of place and of interest in wave energy development: F D Conway, K Hildenbrand
- 0915h **ED21A-06** Eco-DAS (Ecological Dissertations in the Aquatic Sciences): Young Scientists Shaping the Future of Aquatic Research: K Achilles, P F Kemp
- 0930h **ED21A-07** Project WetKids: Eco-Education Along the Gulf of Mexico: J Cwikla, C Barry
- 0945h **ED21A-08** The Ocean Carbon and Biogeochemistry Program (OCB): Lessons in Outreach and Community Building: H M Benway, S C Doney

Geological Oceanography

**GO21A E143 Tuesday 0800h**

**Sediment Processes: Transport and Deposition in Lakes, Estuaries, Coastal Bays, and Continental Shelves I (joint with BO, PO, CO)**

**Presiding:** M A Allison, University of Texas; C K Harris, Virginia Institute of Marine Sciences

- 0800h **GO21A-01** Sedimentary History and Biogenic Mixing at Sites Affected by Seasonal Hypoxia in the Gulf of Mexico: K B Briggs, K M Yeager, V Hartmann, S Shivاردrapra
- 0815h **GO21A-02** Observations of mechanisms of dissipation of wave energy over a muddy seabed (Invited): P Traykovski
- 0830h **GO21A-03** WITHDRAWN
- 0845h **GO21A-04** EVALUATION OF IN SITU AND REMOTE SENSING SAMPLING METHODS OF SPM CONCENTRATION: M Fettweis, B Nechad, V Van Lancker, D Van den Eynede
- 0900h **GO21A-05** The Structure of Headland Eddies and their Role in Sandbank Formation: an In Situ and Modeling Study: S P Neill
- 0915h **GO21A-06** Sediment Transport in the Laurentian Great Lakes: the Effects of Internal Waves and Invasive Species (Invited): N Hawley
- 0930h **GO21A-07** Spatial and Temporal Variations in Nearshore Chesapeake Bay Sedimentation and Potential Impacts to SAV: C M Palinkas, E W Koch
- 0945h **GO21A-08** Sediment resuspension by groundfish facilitates the transport and redistribution of sediments in deep coastal basins: T Katz, V Tunnicliffe, G Yahel, M A Reidenbach, B Herut, J Crusius, F Whitney, B Lazar

Interdisciplinary

**IT21A PB252 Tuesday 0800h**

**Limnology and Oceanography: Fluids and Environments - Celebrating Interdisciplinary Research in Aquatic Science Driven by Fluid Dynamic Interactions I**

**Presiding:** J D Ackerman, University of Guelph; C Duarte, CSIC

- 0815h **IT21A-01** Nutrients and mechanical energy: overview of interactions with phytoplankton from cellular to global scales (Invited): F Peters
- 0830h **IT21A-02** Multiple thin layer structures and mixing in a thermally stratified water column of Lake Biwa (Invited): H Yamazaki, H Honma, T Nagai, M Doubell, K Amakasu, M Kumagai
- 0845h **IT21A-03** Typical Dissipative Vortex Structures and their Implications for Biological-Physical Interactions: P A Jumars
- 0900h **IT21A-04** Microbes in motion: the movement ecology of aquatic microorganisms (Invited): R Stocker
- 0915h **IT21A-05** Copepod power: kinematics, energetics and scaling of copepod escape jumps: T Kiorboe, A Andersen, V Langlois, H H Jakobsen, H Jiang
- 0930h **IT21A-06** The search for alpha: Flow effects on benthic exchanges (Invited): S G Monismith
- 0945h **IT21A-07** Hydrodynamics of Intertidal Oyster Reefs: The Influence of Boundary Layer Flow Processes on Sediment and Oxygen Uptake: M A Reidenbach, P Berg, E Whitman, J C Romanowich, A Hume

**IT21B E147 Tuesday 0800h**

**Ocean Exploration I**

**Presiding:** R A Beach, NOAA; N Alvarado, NOAA

- 0800h **IT21B-01** Bioluminescence 2009: Living Light on the Deep-Sea Floor: T Frank, S Johnsen, E A Widder, C G Messing, S Haddock
- 0815h **IT21B-02** Comprehensive Detection of Methane Bubble Plumes Along a Transform Fault and a Series of Shelf-Edge Giant Pockmarks: H E Johnson, M Cormier
- 0830h **IT21B-03** A Comparison of Methods for Image-Based Exploration of Deep Soft Bottom Habitats: R S Carney
- 0900h **IT21B-05** Ocean Exploration: Consequences of lionfish invasion to stability of Mesophotic Coral Reefs: M P Lesser, M Slattery
- 0930h **IT21B-07** Volcanic and Hydrothermal Activity along the Northwest Lau Backarc Spreading Center, South Pacific Ocean: J E Lupton, R Arculus, R Greene, N Dyriv
- 0945h **IT21B-08** Global ocean exploration on a shoestring: E T Baker, S L Walker
Science in Support of Operational Oceanography: Observing System Design, Implementation, and Informatics I (joint with BO, PO, MT, GO, CO)

Presiding: J Newton, Univ Washington; L E Bermudez, Southeastern Universities Research Association; K D Alverson, IOC of UNESCO

0800h IT21C-01 Implementation of Model Data Interoperability for IOOS: Successes and Lessons Learned (Invited): R P Signell

0815h IT21C-02 The impact of new information infrastructures in understanding and forecasting the coastal ocean: some examples from the Balearic Islands (Invited): J Tintore

0830h IT21C-03 Lessons learned from the cyber infrastructure of the SATURN coastal margin "collaboratory" (Invited): C Seaton, A M Baptista, P Turner, A Jaramillo, D Hansen, D Maier, E Van Matre, A Johnson, J Oltmann


0900h IT21C-05 WTHDRAWN

0915h IT21C-06 Refreshing the Tropical Atmosphere Ocean (TAO) Array: R L Crout, L Leblanc, C Teng, S McArthur, J Boyd


0945h IT21C-08 Moored data from Cordell Bank and other data products from a Northern California ocean observing system-BOON: R Marin III, S Jensen, J M Birch, J Dzenitis, J P Ryan, A Harris, M L Wells, C Tripp

0900h MT21A-01 The NSF National Nanotechnology Infrastructure Network – a resource for ocean sciences (Invited): F Baneyx

0915h MT21A-02 Bio-Inspired Chemical Sensor Arrays: Fluid Dynamics and Odorant Uptake: R Schuech, M T Stacey, M Barad, M A Koehl

0930h MT21A-03 In situ, molecular monitoring of marine bacterioplankton populations and functional genes by the Environmental Sample Processor (ESP): C M Prestoon, B Roman, R Marin III, S Jensen, J M Birch, J Dzenitis, J P Ryan, A Harris, C Everlove, K Turk, J Robodart, E Ottesen, J Zehr, E F DeLong, M Parker, C Scholin

0945h MT21A-04 Cyanobacterial bioreporters as sensors of nutrient availability: R M McKay, M J Rozmarnownycz, R Boyanapalli, G S Bullerjahn

0900h MT21A-05 Ice-Ocean Nutrient fluxes – adaptation of a nutrient sensor system for deep ocean and sub ice shelf studies: S W Vogel, M Rawlinson, R D Powell


0930h MT21A-07 Development and Use of a Reactive Biomimetic Film to Measure Trace Iron Concentrations in Natural Seawater: E Roy, M L Wells, C Tripp

0945h MT21A-08 The Detection of Superoxide and Hydrogen Peroxide Using the Chemiluminescent Reagent Acridinium Ester: B DiMento, W King, D Massey

Paleoceanography

PA21A E145 Tuesday 0800h

From Bench to Top Core Top: Calibration of Novel Oceanic Proxies Through Experiment, Theory, and Study of Modern Analog Environments I (joint with CO, GO, BO)

Presiding: S Severmann, Rutgers University; W P Gilhooly, University of California, Riverside; H D Scher, University of South Carolina

0800h PA21A-01 Mapping Silicon Isotopes in the Southern Ocean (Invited): C L De La Rocha, P Besconet, A Croguennoc, E Ponzevera

0815h PA21A-02 Fractionation of Silicon Isotopes during the Dissolution of Diatom Silica: M S Demarest, M A Brzezinski, C Beucher

0830h PA21A-03 Toward a paleoproxy for opal flux to the sediments: Dissolved silver distribution in the subarctic northeast Pacific Ocean: J T Cullen, D I Kramer, W K Johnson, J R Christian, T F Pedersen

0845h PA21A-04 An evaluation of diatom-bound N isotopes using culture, modern water column, and fossil measurements (Invited): R S Robinson, M G Horn, J Flieger

0900h PA21A-05 The carbon conundrum: unraveling the puzzle of Southern Ocean δ 13 C C e: E J Sweet, U Passow, C L De La Rocha, D Wolf-Gladrow

0915h PA21A-06 A Quantitative Sea-Ice Proxy Based on Diatom Assemblages and Morphological Changes in the Bering Sea: B Caisse, J Brigham-Grette

0930h PA21A-07 Fidelity of eNd as a water mass proxy in foraminifera and authigenic oxides: Y Rosenthal, A M Franzese, M Feigenson

0945h PA21A-08 Isotopic Evidence for the Source of Lead in the North Pacific Abyssal Water: J Wu, M Jin, E A Boyle, R A Flegal

Physical Oceanography

PO21A E146 Tuesday 0800h

Dynamics and Impact of the Meridional Overturning Circulation V

Presiding: J F Shriver, Naval Research Laboratory; J Hirsch, National Oceanography Centre

0800h PO21A-01 Does the Representation of the Ocean Matter in Climate Projections?: Comparison of GFDL’s CM2G and CM2M Coupled Climate Models: R Hallberg, A Adcroft, S M Griffies, M J Harrison, A Granadesikan

0815h PO21A-02 Assessing the potential predictability of decadal fluctuations of the Atlantic Meridional Overturning Circulation (AMOC) in the GFDL coupled model: R Msadek, T L Delworth, K W Dixon, A Rosati

0830h PO21A-03 The Atlantic Meridional Overturning Circulation and its Variability in the Community Climate System Model version 4 (CCSM4): G Danabasoglu, S G Yeager, J J Tribbia

0900h  PO21A-05 Multidecadal Meridional Overturning Circulation 
Variability and Predictability (Invited): M Latif

0915h  PO21A-06 Low-frequency variations of the large-scale ocean 
circulation and heat transport in the North Atlantic from 1955-2008 
in situ temperature and salinity data: T F Huck

0930h  PO21A-07 WITHDRAWN

0945h  PO21A-08 Oscillatory modes and interdecadal climate 
variability in the North Atlantic in an ocean general circulation 
model: F Sevellec, A V Fedorov

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**PO21B PB256  Tuesday  0800h**

*Nearshore Processes V*

**Presiding:** T Janssen, San Francisco State University; K A Haas, 
Georgia Institute of Technology

0800h  PO21B-01 Waves, Currents, Mixing, Chlorophyll and 
Bacteria in the Nearshore: overview of IB09 observations: R T Guza, 
D B Clark, F Feddersen, P J Franks, J H MacMahan, M M Omand, 
W C O’Reilly, M A Rippy, M S Spydell

0815h  PO21B-02 Surfzone Circulation at Imperial Beach from 
GPS-tracked Drifters: M S Spydell, J H MacMahan, F Feddersen, 
R T Guza

0830h  PO21B-03 Height of Sediment Resuspension on a Seasonally 
Stratified Inner Shelf: R Horwitz, S J Lentz

0845h  PO21B-04 Observations of Turbulent Stress Above Evolving 

0900h  PO21B-05 Characterization of the Wave Bottom Boundary 
Layer over Movable Rippled Beds: S Rodriguez-Abudo, D L Foster

0915h  PO21B-06 A polydisperse two-fluid model for surfzone 
bubble simulation: G Ma, F Shi, J T Kirby

0930h  PO21B-07 An Infiltration Model for Dune Erosion: 
M L Palmsten, R A Holman

0945h  PO21B-08 Observations of storm response and sediment 
transport on the Middle Atlantic Bight continental shelf: S M Glenn, 
H J Roarty, J T Kohut, W S Brown, L P Atkinson, W C Boicourt, 
T Miles, J Kerfoot, O Schofield

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**PO21C D136  Tuesday  0800h**

*Ocean-Atmosphere Interaction From Mesoscale to Basin 
Scale: High-Resolution Satellite Observations, Data Analysis, 
and Numerical Modeling I*

**Presiding:** M A Bourassa, Florida State University; W Liu, Jet 
Propulsion Laboratory

0800h  PO21C-01 Seasonal and Geographical Variability of the 
Coupling Between Surface Wind Stress and Sea Surface Temperature 
over Major Mid-Latitude Ocean Currents (Invited): L W O'Neill, 
D B Chelton, S K Esbensen, J Doyle, S Wang

0815h  PO21C-02 Unique capability of measuring stress: W Liu, 
X Xie

0830h  PO21C-03 HIGH RESOLUTION INVESTIGATIONS OF 
THE DEPENDENCE OF SURFACE ROUGHNESS ON TROPICAL 
CYCLONE RAIN-RATES AND SURFACE WIND SPEED USING 
RADAR CROSS-SECTIONS AND SCATTEROMETER WINDS: 
D E Weissman, H R Winterbottom, M A Bourassa

0845h  PO21C-04 Wave-Related Changes in Surface Turbulent Heat 
Fluxes: M A Bourassa

0900h  PO21C-05 Improving Satellite Retrievals of High Winds: 
A New Geophysical Model Function for QSCAT: L Ricciardulli, 
F J Wentz

0915h  PO21C-06 A Recently Revived Global Air-sea Surface 
Turbulent Fluxes Dataset – the Newly Produced GSSTF2b: 
Validations and Findings: C Shie, L Chiu, S Gao, R Chokngamwong, 
R F Adler, I I Lin, E J Nelkin, J V Ardizzone, P P Xie, F Wang

0930h  PO21C-07 WITHDRAWN

0945h  PO21C-08 Use of a Coastal Ocean - Atmospheric Modeling 
and Observing System to Examine the Variability of Transport 
across the Northern West Florida Shelf: E Chassignet, S L Morey, 
D S Dukhovskoy, M A Bourassa

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**PO21D PB251  Tuesday  0800h**

*The Role of Boundaries in Ocean Mixing I*

**Presiding:** E E McPhee-Shaw, Moss Landing Marine Laboratories; 
J B Girton, University of Washington

0800h  PO21D-01 Boundary mixing and lateral advection: The 
dynamic duo responsible for vertical mixing in the deep ocean 
(Invited): L Armi

0830h  PO21D-02 Boundary Mixing from Local and Remote 
Sources. (Invited): J D Nash, M H Alford, H L Simmons

0845h  PO21D-03 A multiscale approach to boundary layer mixing. 
(Invited): A D Scotti, S Sarkar

0900h  PO21D-04 The Deep Western Boundary Current: boundary 
mixing and exchange with the ocean’s interior (Invited): M Rhein

0915h  PO21D-05 Transport of Fluid Mixed at the Boundaries of 
Lakes: C R Rehmann, D J Wain, M Kohn, J Scanlon

0930h  PO21D-06 Internal Waves and Turbulence Generation on a 
Sloping Boundary in a Lake: D J Wain, C R Rehmann

0945h  PO21D-07 Form drag in a tidal channel near headlands and 
ridges: What does the work?: S J Warner, P MacCready

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**Biological Oceanography**

**BO22A Oregon Ballroom  Tuesday  1030h**

*Biological Oceanography Plenary Session: The Pacific Arctic 
Sector: Biological and Ecosystem Response to Climate 
Warming*

**Presiding:** R R Hood, University of Maryland Center for 
Environmental Science; L A Codispoti, UMCES

1030h  BO22A-01 The Pacific Arctic Sector: Biological and 
Ecosystem Response to Climate Warming: J M Grebmeier, 
S E Moore, K E Frey, J Nelson, L W Cooper

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**Biological Oceanography**

**BO23A D135  Tuesday  1300h**

*Development, Validation, and Uncertainty Analysis of Optical 
Remote Sensing Algorithms for the Coastal Ocean I (joint with IT)*

**Presiding:** S J Lavender, ARGANS Ltd; R A Arnone, NRL

1300h  BO23A-01 Optical complexity of the coastal waters of the 
Great Barrier Reef: Strategies to incorporate regional and seasonal 
knowledge of optical properties. (Invited): V E Brando, A G Dekker, 
T Schroeder, D Blondeau-Patissier, Y Park, L A Clementson, 
R cherukuru, P Daniel
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<td>1315h</td>
<td>BO23A-02</td>
<td>Characterizing optical complexity to facilitate coastal ocean color remote sensing algorithm development: D Aurin, H M Dierissen, M S Twardowski, C Roeuler</td>
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<tr>
<td>1330h</td>
<td>BO23A-03</td>
<td>Progress in the development and application of remote sensing algorithms in European coastal regions (Invited): G Zibordi, D D’Alimonte, J Berthon, F Melin</td>
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<tr>
<td>1400h</td>
<td>BO23A-05</td>
<td>Ocean color atmospheric correction for operational remote sensing of Chesapeake Bay (Invited): J Werdell</td>
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<td>1415h</td>
<td>BO23A-06</td>
<td>Validation of Global Observations of Intense Surface Plankton Blooms and Floating Vegetation using MERIS: J F Gower, S A King</td>
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<td>1445h</td>
<td>BO23A-08</td>
<td>Characterizing the Spatial and Temporal Uncertainty in Coastal Ocean Color Products: R A Arnone, S D Ladner, A Lawson, Z Lee, R W Gould, C O Davis</td>
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<td>BO23B PB255</td>
<td>Exploring the Ecological Variability of the Biological Pump I (joint with CO)</td>
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<td>1300h</td>
<td>CO23A D139</td>
<td>Getting the Right Number II (joint with BO, PA, MT)</td>
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<td>1315h</td>
<td>BO23C-02</td>
<td>Microbial Community Structure And Chemoaotrophic Activity In The Oxygen Minimum Of The Eastern Tropical North Pacific: A Podlaska, S G Wakeham, K Fanning, G T Taylor</td>
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<td>Microzooplankton dynamics across oxygen gradients in the eastern tropical north Pacific: M Olson, K L Daly, A Podlaska, G T Taylor</td>
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<td>1345h</td>
<td>BO23C-04</td>
<td>Effects of the Oxygen Minimum Zone on Zooplankton Biomass, Distributions, Diel Vertical Migration, and Community Structure in the Eastern Tropical North Pacific: K F Wishner, D Outram, K L Daly, C N Flagg, S Frazier, A Maas, B Seibel, G T Taylor, S G Wakeham, R L Williams</td>
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<td>1400h</td>
<td>BO23C-05</td>
<td>Vertical distributions of plankton and detrital particles in the eastern tropical Pacific oxygen minimum zone: Observations from the SIPPER imaging system: A W Remsen, K L Daly, K F Wishner, K Kramer</td>
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<td>1415h</td>
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<td>Using Lipid Biomarkers to Assess Diet for Three Species of Copepods in the Eastern Tropical Pacific: C Cass, K L Daly, S G Wakeham, E S Van Vleet</td>
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<td>1430h</td>
<td>BO23C-07</td>
<td>Pteropod Physiology and Distribution in the Oxygen Minimum Zone of the Eastern Tropical Pacific: A Maas, K F Wishner, B Seibel</td>
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<td>Defining hypoxia and critical oxygen levels for marine animals: B Seibel</td>
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### Exploring the Ecological Variability of the Biological Pump I (joint with CO)

**Presiding:** U Passow, University of California Santa Barbara; C L De La Rocha, IUERM

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>1300h</td>
<td>BO23B-01</td>
<td>Ecological Variability of the Biological Pump: vertical flux regulation in the upper twilight zone (Invited): P F Wassmann</td>
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<tr>
<td>1315h</td>
<td>BO23B-02</td>
<td>Sinking Velocity Spectra from Simultaneous Measurements of Particle Flux and Concentration: A M McDonnell, K Buesseler</td>
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<tr>
<td>1330h</td>
<td>BO23B-03</td>
<td>Seasonal and Interannual Variation in Zooplankton Fecal Pellet Composition and Contribution to Carbon Flux in the Deep Sea: S E Wilson, K Smith</td>
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<td>1345h</td>
<td>BO23B-04</td>
<td>Degradation of copepod faecal pellets: the role of small-sized, &lt; 180 μm, plankton and Calanus finmarchicus: C Svensen, C Wexels Riser, M Reigstad, L Seuthe, T Tamelander</td>
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<tr>
<td>1400h</td>
<td>BO23B-05</td>
<td>On the spatial variability of the remineralization depth of organic carbon: E Kwon, J L Sarmiento, F W Primeau</td>
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<tr>
<td>1415h</td>
<td>BO23B-06</td>
<td>The Effect of Different Remineralisation Length Scales On The Representation of Tracers in Large-scale Models of Marine Biogeochemistry: I Kriest, A Oschlies, S Khatiwala</td>
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<tr>
<td>1430h</td>
<td>BO23B-07</td>
<td>Explicit modeling of zooplankton diel vertical migration and its impact on the biological pump: D Bianchi, J L Sarmiento, E D Gaibraith, C A Stock, K Kearney</td>
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<tr>
<td>1445h</td>
<td>BO23B-08</td>
<td>Active Transport of Carbon by Mesopelagic Fishes in the California Current: P Davison, J A Koslow, D M Checkley, J Barlow</td>
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### Getting the Right Number II (joint with BO, PA, MT)

**Presiding:** G A Cutter, Dept Ocean Earth & Atmosph Sci; R M Sherrill, IMCS, Rutgers University

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<th>Time</th>
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<tr>
<td>1300h</td>
<td>CO23A-01</td>
<td>Large and Small Particle Collection by in-situ Filtration during GEOTRACES Inter Calibration Expeditions: T J Wood, J K Bishop, P J Lam</td>
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<tr>
<td>1330h</td>
<td>CO23A-03</td>
<td>Trace Metals in Suspended Oceanic Particles: Optimization of Sampling Methods and Analysis and Feasibility of Multi-element Determinations on 10 Liter Samples: E Anagnostou, R M Sherrill, M P Field</td>
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<tr>
<td>1345h</td>
<td>CO23A-04</td>
<td>GEOTRACES: Intercomparison and calibration tests of neodymium isotopes and rare earth elements in seawater and suspended particles: K Pahnke, T van de Flierdt, K M Jones</td>
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<tr>
<td>1400h</td>
<td>CO23A-05</td>
<td>GEOTRACES Intercomparison II: Dissolved Fe and Cu speciation: K N Buck, J W Moffett, R M Bundy, Y Kondo, J Wu, K Barbeau</td>
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<tr>
<td>1415h</td>
<td>CO23A-06</td>
<td>Preliminary results from the GEOTRACES aerosol and rainwater intercalibration: P L Morton, W M Landing, A Milne</td>
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<td>1430h</td>
<td>CO23A-07</td>
<td>Intercalibration of dissolved and particulate 210Po and 208Pb and effects of filter composition and flow rates on the particulate 210Po and 208Pb activities: M M Baskaran, T M Church, G H Hong, Q Ma, A Kumar, K Maiti, K Buesseler</td>
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<tr>
<td>1445h</td>
<td>CO23A-08</td>
<td>WITHDRAWN</td>
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Education and Outreach

ED23A  E141  Tuesday  1300h
Using the Internet in Real-Time Ocean Research for Education and Outreach II (joint with IT)

Presiding: S K Cooper, Consortium for Ocean Leadership; L Peart

1300h  ED23A-01 Online and Ship-to-Shore: Value-added Programming Live from the JOIDES Resolution: S K Cooper, L Peart
1315h  ED23A-02 Using Social Networking Tools For Low Cost, High Impact Outreach: The Scripps Environmental Accumulation of Plastic Expedition (SEAPLEX): M C Goldstein, A M Cawood, M C Aguilera, A Reisewitz, L Dickens
1330h  ED23A-03 Hot off the tag: How you turn your research into a media sensation using free online social media tools: N M Teutschel, J E Stevens, V Krist, D P Costa
1415h  ED23A-06 SEA-IT-LIVE (Sea Education by Accessing Integrated Technologies: Learning Involving a Virtual Experience): E M Grabowski, M C Hill, D M Karl
1430h  ED23A-07 Educational and Outreach Opportunities with a Web-Enabled Coastal Ocean Observatory: R K Dewey, N Korniyuk, V Tunnicliffe
1445h  ED23A-08 Real Time Research: A Comparison of the Experiences of Two Teachers at Sea using On-line Tools to Communicate Ocean Sciences DuringIODP Expeditions 317 and 323: D R LaVigne, J Pollard

Geological Oceanography

GO23A  E143  Tuesday  1300h
Sediment Processes: Transport and Deposition in Lakes, Estuaries, Coastal Bays, and Continental Shelves II

Presiding: N Hawley, Great Lake Environmental Research Laboratory; C K Harris, Virginia Institute of Marine Sciences

1300h  GO23A-01 Sediment Focusing In Estuarine And Laustrine Environments: Development of Chesapeake Bay And Lake Champlain Sediment and Biogeochemical Budgets Using 210Pb: J Cornwell, M S Owens
1315h  GO23A-02 Sediment Accumulation and Marsh Accretion in Tidal Wetlands of a Coastal Plain Estuary (Invited): C K Sommerfield, D Velinsky
1330h  GO23A-03 Sediment transport pathways in a macrotidal estuary: J Malarky, R Bolanos, A G Davies, A J Souza
1400h  GO23A-05 SEDIMENT FLUX IN THE SOUTHERN REACH OF SAN FRANCISCO BAY AND IMPLICATIONS FOR HABITAT RESTORATION: G Shellenbarger, S A Wright, D H Schoellhamer
1415h  GO23A-06 WITHDRAWN
1430h  GO23A-07 Wind-induced formation of turbidity gradients along the shoal channel transition in south San Francisco Bay and potential implications for sediment transport: A Brand, J R Lacy, K Hsu, D Hoover, S M Gladding, M T Stacey
1445h  GO23A-08 Annual cycles of circulation, run-off, and sedimentation in San Francisco Bay, California: P J Martin, T R Keen, J D Dykes

Interdisciplinary

IT23A  PB254  Tuesday  1300h
Climate Data Records From Ocean Observations II (joint with BO, PO, CO)

Presiding: E J Kearns, NCDC; K S Casey, NOAA National Oceanographic Data Center; H Zhang, NOAA/NCDC

1300h  IT23A-01 Global Sea-Surface Temperature Measurements from the ATSR Sensors for the Indication of Global Change: D T Llewellyn-Jones, G K Corlett, K L Veal, J J Remedios
1315h  IT23A-02 Developing A Time Series Of Global And Regional Average SST Using The ATSR Version 2.0 Data Set: K L Veal, G K Corlett, J J Remedios, D T Llewellyn-Jones
1330h  IT23A-03 AVHRR Pathfinder Version 5 – Current State of the SST Climate Data Record: K S Casey, R H Evans, P C Cornillon, T B Brandon
1345h  IT23A-04 Transition of AVHRR SST Pathfinder to Version 6, continued evolution of a CDR: R H Evans, K S Casey, P C Cornillon
1400h  IT23A-05 Examining the Long Term Stability of Sea Surface Temperature Measurements made by Drifting Buoy: R O Smith, J Kennedy, N A Rayner
1415h  IT23A-06 The GCOS SST Intercomparison Framework for Global SST Analyses: T B Brandon, K S Casey
1430h  IT23A-07 The current status of NOAA’s Climate Data Record program: E J Kearns, J L Privette, J J Bates, O B Brown
1445h  IT23A-08 The Ocean Components of the European Space Agency (ESA) Climate Change Initiative (CCI): C J Donlton, J J Benveniste, P Regner, O Grabak, O Arino, M Doherty

IT23B  PB252  Tuesday  1300h
Limnology and Oceanography: Fluids and Environments - Celebrating Interdisciplinary Research in Aquatic Science Driven by Fluid Dynamic Interactions II

Presiding: J D Ackerman, University of Guelph; C Duarte, CSIC

1300h  IT23B-01 Clam Excurrence Siphon Velocity Patterns According to External Environmental Cues: S K Delavan, D Webster
1315h  IT23B-02 STRUCTURED MIXING IN OBSTACLE WAKES: IMPLICATIONS FOR BROADCAST SPAWNING: J Crimaldi
1330h  IT23B-03 WITHDRAWN
1345h  IT23B-04 Estimating turbulent diffusivity in the benthic boundary layer – the relevance of boundary layer mixing for the mass transfer across the sediment water interface: M Holtappels, A Lorke
1400h  IT23B-05 Estimating sediment oxygen uptake using temperature eddy correlation: C Lorrai, D F McGinnis, A Wüest
1415h  IT23B-06 Macrophyte photosynthesis is not limited by diffusion of CO2 through the boundary layer: J D Ackerman, G N Nishihara
1430h  IT23B-07 Geochemical Mobility and Across-media Flux at Adjoining Aquatic Sediment Boundary Layers: Beware of Tender Traps. (Invited): L J Thibodeaux
1445h  IT23B-08 The Mechanics of Bubbles in Muddy Sediments (Invited): B P Boudreau, C K Algar, M A Barry, B Johnson

2010 Ocean Sciences Meeting 33
The Carbon Cycle in the North Pacific: Biological, Chemical, and Physical Processes I (joint with BO, PO, GO, CO)

Presiding: T Saino, JAMSTEC; S R Emerson, University of Washington

IT23C E147 Tuesday 1300h

1300h IT23C-01 Natural volcanic iron fertilization of the Subarctic North Pacific (Invited): R C Hamme, S Batten, L A Coogan, W R Crawford, K B Dohan, S R Emerson, C C Erikson, K E Giesbrecht, J F Gower, M T Kavannaugh, D Lockwood, C L Sabine, P Webley, F Whitney

1315h IT23C-02 Fate of Carbon Production in SEEDS II experiment, exported or respired?: I Kudo, Y Noiri, W P Cochlan, K Suzuki, T Aramaki, T Ono, Y Nojiri


1400h IT23C-05 Biological responses to submesoscale variations in the Kuroshio Extension frontal region: C Sukigara, T Suga, E Oka, T Saino

1415h IT23C-06 What controls the temporal variability of oxygen in the North Pacific?: Y Takano, T Ito, C Deutsch

1430h IT23C-07 Basin-scale oscillation of dissolved oxygen concentration in intermediate layers along WHP-P01 line in the North Pacific between 1985 and 2007: Y Kumamoto, A Murata, S Kouketsu, S Watanabe, M Fukasawa

1445h IT23C-08 Decadal Changes in FCO, Variability and Sea-air CO2 Fluxes from the Equatorial Pacific Ocean: R A Feely, T Takahashi, R H Wanninkhof, C E Cosca, M J McPhaden, S C Sutherland

Marine Technology

MT23A PB253 Tuesday 1300h

Ocean Technology and Infrastructure Needs for the Next 20 Years I (joint with IT)

Presiding: D Glickson, National Research Council; E J Barron, NCAR; S Roberts, National Research Council; C Mengelt, the National Academies

1300h MT23A-01 A Rational and Approach for Next-Generation Ocean Science (Invited): J R Delaney, D S Kelley, K L Daly, D S Luther

1315h MT23A-02 Development of “Ecogenomic Sensors” For Use With Coastal and Global Ocean Observatories (Invited): C Scholin

1330h MT23A-03 Bringing Informatics to the Forefront of an Ocean Infrastructure Strategy for U.S. Research by 2030: P Fox, S Lawrence, A R Maffei


1400h MT23A-05 Integrated optical /acoustic communications system for deep sea data transfer and vehicle control: N Farr, M Tivey, J Ware, C T Pontbriand, D E Frye

1415h MT23A-06 The Role of Artificial Intelligence Techniques for Adaptive Robotic Observations: K Rajan, F Py, J P Ryan

1430h MT23A-07 Tools and Methods for Integrating Data: Combining Disparate Datasets to Visualize the North Atlantic Spring Bloom: B S Sackmann, M Perry, E A D’Asaro, C M Lee

Physical Oceanography

PO23A E146 Tuesday 1300h

Dynamics and Impact of the Meridional Overturning Circulation VI

Presiding: A Schmittner, Oregon State University

1300h PO23A-01 A Parameterization of Nordic Sea Overflows and Effects on Atlantic Meridional Overturning Circulation (AMOC) and Climate: W G Large, G Danabasoglu, B P Briegleb

1315h PO23A-02 The Impact of Changes in Horizontal Resolution on Simulations of the Indo-Pacific Meridional Overturning Circulation: J F Shrver, H E Hurlburt

1330h PO23A-03 The role of the hydrological cycle in coupled atmosphere-ocean heat transport: D Ferreira, J Marshall

1345h PO23A-04 On the establishment of large-scale mass convergence in a meridional overturning circulation: F Schloesser, J P McCreary, R Furue, A Timmermann

Paleoceanography

PA23A E145 Tuesday 1300h

From Bench Top to Core Top: Calibration of Novel Oceanic Proxies Through Experiment, Theory, and Study of Modern Analog Environments II (joint with BO, PO, CO)

Presiding: S Severmann, Rutgers University; W P Gilhooly, University of California, Riverside; H D Scher, University of South Carolina

1300h PA23A-01 The continental shelf benthic iron flux and its isotopic composition: S Severmann, J McManus, W Berelson, D E Hammond

1315h PA23A-02 Tracing continental shelf fluxes of iron to the open ocean using Fe isotopes (Invited): S John, J Mendez, J W Moffett, J F Adkins

1330h PA23A-03 Importance of organic matter in Mo(VI) speciation in sulfidic waters: An experimental approach: A Chappaz, A Dhenain, N Thiagarajan, R H Wanninkhof, C S Sukigara, T Suga, E Oka, T Saino

1345h PA23A-04 Molybdenum Isotope Fractionation Associated with Sulfide Interactions: J McManus, R L Poulson Brucker, S W Poulton

1400h PA23A-05 Combined stable isotopic and cellular ultrastructural studies of individual foraminifera to assess hydrocarbon-seep foraminiferal disequilibrium with pore water DIC: J M Bernhard, J B Martin, J H Curtis, A E Rathburn

1415h PA23A-06 Extracting Ocean Temperatures from Deep Sea Coral Skeletons Using a New Rayleigh-Based, Multi-Element Thermometer: G A Gaetani, A L Cohen

1430h PA23A-07 The physical meaning of negligible ‘vital effects’ in carbonate clumped isotope thermometry (Invited): W Guo, J M Eiler

1445h PA23A-08 Equilibrium 18O Isotope Signatures and ‘Clumped Isotope’ Thermometry in Foraminifera and Coccoliths: A K Tripati, N Thiaagarajan, R Eagle, A C Gagnon, H A Bauch, J M Eiler
1400h  PO23A-05  The role of deep ocean circulation in Glacial-Interglacial climate change.  (Invited): J F Adkins
1415h  PO23A-06  Nutrient return pathways from the deep ocean to the low-latitude euphotic zone and their dependence on the Meridional Overturning Circulation: J L Sarmiento, J B Palter, A Gnanadesikan, J Simeon, R D Slater
1430h  PO13A-05  Meridional Overturning Circulation and the General Circulation of the Ocean  (Invited): C I Wunsch
1445h  PO23A-07  The Surface-Forced Meridional Overturning Circulation: R Marsh, J P Grist, S A Josey

PO23B  D136  Tuesday  1300h
Ocean-Atmosphere Interaction From Mesoscale to Basin Scale: High-Resolution Satellite Observations, Data Analysis, and Numerical Modeling II

Presiding: S P deSzoeke, Oregon State University; W Liu

1300h  PO23B-01  Upper Ocean Thermal Structure, Rapid Intensification, and Supercyclones (Invited): I I Lin, I Pun, W Liu, D S Ko, C Wu
1315h  PO23B-02  Tropical cyclones as thieves or puppets of winter?  (Invited): R E Hart
1330h  PO23B-03  Extratropical Cyclones of Hurricane Force Intensity As Detected Using Winds from the NASA QuikSCAT Scatterometer: J M Sienkiewicz, P Chang, K Ahmad, G McFadden, Z Jelenak, J M Von Ahn
1345h  PO23B-04  The neighbor enclosed area tracking algorithm and its application to cyclone merger above the Kuroshio: M Inatsu
1400h  PO23B-05  Satellite Observations of SST-Induced Wind Stress Perturbations Over Mesoscale Oceanic Eddies: P Gaube, D B Chelton
1415h  PO23B-06  Influence of the Kuroshio in the East China Sea on the troposphere and relating disastrous heavy rainfall event: T Asai, S Minobe, M Inatsu
1430h  PO23B-07  Application of eddy-resolving OGCM data assimilation to atmosphere-ocean interaction over the Japan Sea: Meteorological impact of oceanic mesoscale eddies: M Yamamoto, N Hirose
1445h  PO23B-08  Air-Sea Interaction over the Kuroshio Extension Region: T G Jensen, T J Campbell, T Smith, J Small, R A Allard

PO23C  PB256  Tuesday  1300h
Physical Oceanography of Archipelagos I (joint with IT)

Presiding: J D Pullen, Stevens Institute of Technology; A L Gordon, Lamont-Doherty Earth Obs

1310h  PO23C-01  Flow Around Planetary Islands:Effects of Topography and Baroclinicity (Invited): J Pedlosky
1330h  PO23C-02  Flows through archipelagos in 1/12° and 1/25° global HYCOM: Indonesia, the Philippines, and the Caribbean/Bahamas (Invited): H E Hurlburt, E J Metzger, J P Shriver, A Wallcraft, X Xu, L Zamudio
1345h  PO23C-03  MIXING IN THE AEGEAN ARCHIPELAGO: M C Gregg, M H Alford, H Kontoyiannis, V A Zervakis
1400h  PO23C-04  Makassar Strait throughflow 1996/97; 2004/2009: A L Gordon, R D Susanto, B A Huber, B Sulistyo, A Supangat
1415h  PO23C-05  Observations of Galápagos Archipelago-EUC Interaction: The Current State-of-our Knowledge: K B Karnauska, R Murtugudde, A J Busalacchi
1430h  PO23C-06  Evolution of a Mindoro Strait Flow Reversal: J D Pullen, A L Gordon, J Sprinthall, J Doyle, C M Lee, M H Alford
1445h  PO23C-07  Chaotic Advection in an Archipelago: I I Rypina, L J Pratt, J D Pullen, J Levin, A L Gordon

PO23D  PB251  Tuesday  1300h
The Role of Boundaries in Ocean Mixing II

Presiding: E E McPhee-Shaw, Moss Landing Marine Laboratories; J B Girton, University of Washington

1315h  PO23D-02  Numerical modeling of turbulence in a stratified tidal boundary layer on a slope: S Sarkar, B Gayen
1330h  PO23D-03  Upwelling at a shelfbreak caused by buoyancy shutdown: J A Benthuysen, L N Thomas
1345h  PO23D-04  Submesoscale Generation of Mesoscale Anticyclones in the California Undercurrent: M J Molemaker, J C McWilliams, W K Dewar
1400h  PO23D-05  Non-linear tidal processes on the flanks of the Mid-Atlantic Ridge: A C Dale, M E Inall, C Griffiths, I G Priede, K Nicola
1415h  PO23D-06  WITHDRAWN
1430h  PO23D-07  Overflow and Entrainment Along the Iceland-Faroe Ridge Observed in Seaglider Repeat Surveys: N L Beaird, C C Eriksen, P B Rhines
1445h  PO23D-08  Effects of Marginal Seas on Global Ocean Density Structure: K D Stewart, R W Griffiths, G O Hughes

Biological Oceanography

BO24A  D135  Tuesday  1530h
Development, Validation, and Uncertainty Analysis of Optical Remote Sensing Algorithms for the Coastal Ocean II (joint with CO)

Presiding: S J Lavender, ARGANS Ltd; R A Arnone, NRL

1530h  BO24A-01  Detection of Trichodesmium spp. surface aggregations within the Great Barrier Reef using MODIS imagery: I I McKinna, M J Furnas, P V Ridd
1545h  BO24A-02  Characterization of Global Ocean Turbidity from MODIS Ocean Color Observations: W Shi, M Wang
1615h  BO24A-04  Characterizing the uncertainties of ocean color satellite-derived products in coastal environments based on an optical classification scheme: T Moore, J W Campbell, M Dowell
1630h  BO24A-05  The challenge of determining uncertainties for optical remote sensing products; Sentinel-3 Optical Level 2 Prototype Processor: S J Lavender, O Hemhise Fanton d’Andon, S Emsley, E Vincent, L Bourg, T Nightingale, P R North, N Fomferra, R Quast, R Nasir-Habeeb, P Goryl
1645h  BO24A-06  Validation of Ocean Color Products for a Complex Archipelago Strait with In-Situ Quasi-Synoptic Optical Measurements: G Toro-Farmer, R A Arnone, R W Gould, M Ragan, S D Ladner, E Boss, C M Lee, B J Jones
1700h  BO24A-07  Satellite remote sensing of the spring bloom in coastal waters of British Columbia: S A King, J F Gower
1715h  GO24A-08 High-Resolution Records of Coastal Sediment input in the US Virgin Islands over the past century: Advances and Limitations: G Brooks, R A Larson, B Devine

Interdisciplinary

IT24A  PB254  Tuesday  1530h  
Climate Data Records From Ocean Observations III (joint with BO, PO, CO)

Presiding: E J Kearns, NCDC; K S Casey, NOAA National Oceanographic Data Center; H Zhang, NOAA/NCDC

1545h  IT24A-02 Satellite Ocean Biogeochemistry Climate Data Records (Invited): C R McClain

1600h  IT24A-03 Climate Data Records from Ocean Observatories: U Send

1615h  IT24A-04 World Ocean Database: S Levitus
1630h  IT24A-05 RADS: Towards an altimetric climate data record: R Scharroo, E W Leuliette, L Miller, J L Lillibridge, J M Kuhn, E Doornbos, M Naeije, E J Schrama
1645h  IT24A-06 Long-term monthly sea level, tide level, and extreme level measurements at U.S. coastal stations: C Zervas, S Gill, L E Fenstermacher, W Sweet

1700h  IT24A-07 A new climatological air-sea flux satellite-derived data set: C A Clayson, J B Roberts

1715h  IT24A-08 Statistical Analyses of Historical Monthly Precipitation Anomalies Beginning 1900: P A Arkin, T Smith, M R Sapiano, C Chang

IT24B  PB252  Tuesday  1530h  
Marine Ecosystem Regime Shifts: Observations and Predictions I (joint with BO)

Presiding: A Conversi, CNR; C H Greene, Cornell

1530h  IT24B-01 Ecosystem Variability in the California Current System: State Changes or Continuum? (Invited): M D Ohman, E Di Lorenzo
1545h  IT24B-02 Impact of climate variability on northern hemisphere marine ecosystems: regime shifts and teleconnection patterns (Invited): J Alheit

1600h  IT24B-03 WITHDRAWN


1630h  IT24B-05 The Mediterranean Sea regime shift at the end of the 1980s, and its links to other European basins: A Conversi, T Peluso, S Fonda-Umani, J Molinero, A Santojanni, M Edwards

1645h  IT24B-06 Is the Northeast Atlantic a cradle for regime shifts in the Northern Hemisphere?: P C Reid, J Alheit, G Beaugrand, M Edwards

1700h  IT24B-07 Long-term changes (1958-2004) in the hydro-climatic environment of the southern North Sea and consequences for the interpretation of observations on the island Helgoland (German Bight): M Scharfe, U Callies

1715h  IT24B-08 Climate change and bioinvasions – multiple, interacting effects on mesozooplankton long-term dynamics: M Pollupuu, C Moelmann, M Simm, R Dickmann, H Ojaveer

IT24C  D139  Tuesday  1530h  
Sverdrup Lecture: Wind-Driven Upwelling in the Southern Ocean, Atmospheric CO2, and the End of the Last Ice Age

Presiding: J W Farrington, WHOI

1530h  IT24C-01 Wind-driven upwelling in the Southern Ocean, atmospheric CO2, and the end of the last ice age (Invited): R F Anderson

IT24D  E147  Tuesday  1530h  
The Carbon Cycle in the North Pacific: Biological, Chemical, and Physical Processes II (joint with BO, PO, GO, CO)

Presiding: T Saino, JAMSTEC; S R Emerson, University of Washington

1530h  IT24D-01 The Role of Physical Processes in the North Pacific Carbon Sink (Invited): J Ayers, M Lozier
1545h  IT24D-02 Carbon Export Rates and Air-sea CO2 Flux Across the North Pacific Transition Zone: D Lockwood, P Quay, S R Emerson, R A Feely, M T Kavara, R M Letelier
1600h  IT24D-03 Biological Production and Export Rates Across the Subtropical and Subarctic North Pacific Determined by Oxygen Isotopes (¹⁸O) and the O2/Ar ratio: L W Juranek, P Quay, D Lockwood, F Janny
1615h  IT24D-04 Ecophysiological constraints on gross and net primary productivity across the NE Pacific subarctic-subtropical boundary: M T Kavara, R M Letelier, D Lockwood, S R Emerson, P Quay
1630h  IT24D-05 A conceptual explanation for the western North Pacific CO2 sink: water cooling and nutrient dynamics (Invited): T Ono

1645h  IT24D-06 Ongoing Ocean Station P Time Series: M F Cronin, C L Sabine, S R Emerson, M Robert, M H Alford, J A Nystuen, E A D’Asaro, J M Thomson, R R Harcourt, C C Erikson
1700h  IT24D-07 Upper Ocean Property Budgets at Ocean Station P from Seaglider Repeat Surveys: C C Erikson, S R Emerson
1715h  IT24D-08 Determining Organic and Inorganic Carbon Fluxes from the upper ocean using in situ measurements of O2, N2, pH and pCO2: C Stump, S R Emerson, C L Sabine, M F Cronin, M D DeGrandpre, S E Cullison

IT24E  E145  Tuesday  1530h  
Use of Oceanographic Data in Ecosystem-Based Management Decision Making I

Presiding: M A Roffer, Roffer’s Ocean Fishing Forecasting Service, Inc.; M J Dowglassio, NOAA

1530h  IT24E-01 Climate Change, Coral Bleaching, and the Application of Climate Forecasts: C Eakin, G Liu, J Morgan, T Christensen, L Matrosova, M C Penland, R S Webb, W J Skirving, S F Heron, A Strong, B A Parker, T Burgess
1545h  IT24E-02 Ecosystem Research Informing Management Decisions: M J Dowglassio, F Martinez, L Pugh, K Puglise, E J Turner
1600h  IT24E-03 Using Nonlinear Forecasting to Identify Environmental Corivates of Returns of Fraser River Sockeye Salmon (Oncorhynchus nerka): H Ye, G Sugihara, S Gilmaster, R Richards
1615h  IT24E-04 WITHDRAWN
1630h  IT24E-05 Building A Classification Model To Predict The Occurrence Of Bluefin Tuna (Thunnus Thynnus) Larvae In The Northern Gulf Of Mexico: B Muhlung, J T Lamkin, M A Roffer
Marine Technology

MT24A PB253 Tuesday 1530h
Renewable Hydrokinetic Energy Development in Coastal and Estuarine Environments I (joint with BO, PO)

Presiding: A E Copping, Pacific Northwest National Lab;
B L Polagye, University of Washington; G W Boehlert, Oregon State University; T Ozkan-Haller, Oregon State University

1530h MT24A-01 Assessing the environmental effects of marine renewable energy development – the Wave Hub example (Invited): E V Sheehan, M Witt, B Godley, M Attrill, J Grecian, S Votier, R Inger, S Bearhop, A Broderick


1600h MT24A-03 Sound Propagation Off the Oregon Coast: A Modeling Approach to Evaluate Possible Effects of Man-made Sound on the Marine Environment: E T Küsel, H Klinko, D K Mellinger

1615h MT24A-04 Ocean Space, Ocean Place: the human dimensions of marine renewable energy in the PNW (Invited): F D Conway, B Tilt, H Campbell, Z Covell, D Hunter, M Stefanovich, J Stevenson, Y Yin

1630h MT24A-05 Almost Coastal: Base-load Power from the Florida Current: H P Hanson, S H Skemp, G M Alsenas, C E Coley

1645h MT24A-06 Tidal power development scenarios in Puget Sound, Washington: B L Polagye, M Kawase, P C Malte

1700h MT24A-07 Calibration of a Tidal Current Array Planning Tool: T Roc, D C Conley, D Greaves


Physical Oceanography

PO24A E146 Tuesday 1530h
Advances in Coastal Ocean Prediction: Ecosystem Modeling I

Presiding: Y Chao, Jet Propulsion Laboratory; I Shulman, Naval Research Laboratory; R He, North Carolina State Univ.; O Schofield, Rutgers University


1545h PO24A-02 Toward data assimilative, physical-biological models on the West Florida Shelf (Invited): R H Weisberg

1600h PO24A-03 Data-assimilative models for coastal ocean ecosystems: Challenges and opportunities (Invited): K Fennell

1615h PO24A-04 Towards an Improved Estimate of Ecosystem Dynamics in the Middle Atlantic Bight: B E Cahill, J Levin, J Zavala-Garay, J Wilkin, K J Hyde, O Schofield


1645h PO24A-06 WITHDRAWN

1700h PO24A-07 A real-time nowcast-forecast system for the Prince William Sound (PWS) based on the Regional Ocean Modeling System (ROMS): J Farrara, Y Chao, X Wang, Z Li, P Li, X Jin

1715h PO24A-08 Physical-Biological Modeling for the Prince William Sound, Alaska: L Shi, F Chai, Y Chao, J Farrara, R W Campbell

PO24B D136 Tuesday 1530h
Ocean-Atmosphere Interaction From Mesoscale to Basin Scale: High-Resolution Satellite Observations, Data Analysis, and Numerical Modeling III

Presiding: S Minobe, Graduate School of Science, Hokkaido University; W Liu, JPL

1530h PO24B-01 Mode water ventilation and its role in ocean-atmosphere interaction over the subtropical gyre (Invited): S Xie, F Kobashi, L Xu, Q Liu

1545h PO24B-02 The Source of Anomalies in Eighteen Degree Water Formation and Dissipation: K A Kelly, S Dong

1600h PO24B-03 ENSO’s Impact on Air-Sea Interaction in the Gap Wind Regions of the Eastern Tropical Pacific Ocean: M A Alexander, J D Scott, S Xie

1615h PO24B-04 Intraseasonal variability in the Gulf of Guinea during boreal spring and summer: G de Coëtlogon, S Janicot, A Lazar

1630h PO24B-05 A Dynamical Ocean Feedback Mechanism for the Madden-Julian Oscillation: B Webber, A J Matthews, K Heywood

1645h PO24B-06 Role of Cellular Structures of Divergence and Convergence Derived from QuickSCAT in the West Pacific Warm Pool Region: Y Jo, X Yan, W Liu

1700h PO24B-07 A Multi-Decadal Ultra-High Resolution CCSM Simulation: Preliminary Results: J McClean, D Bader, F O Bryan, J M Dennis, P W Jones, A A Mirin, M Vertenstein, D P Ivanova, J S Boyle, M E Maltrud, T Craig, Y Kim


PO24C PB251 Tuesday 1530h
Operational Global Ocean Forecasting: Promise, Progress, and Numerical Modeling I

Presiding: J G Richman, Naval Research Laboratory; G B Brassington, Bureau of Meteorology

1530h PO24C-01 An Overview of Real-Time Global and Regional Ocean Forecast Systems Developed at the Naval Research Laboratory (Invited): P J Hogan, C N Barron, O M Smidstad, E J Metzger, C D Rowley, J A Cummings, H E Hurlburt

1600h PO24C-02 Validation of the 1/12° Global HYCOM/NCODA Ocean Nowcast/Forecast System: E Metzger, O M Smidstad, H E Hurlburt, A Wallcraft, P G Thoppip, J F Shriver, T L Townsend, D Franklin
Biological Oceanography

BO25A Poster Hall E Tuesday 1730h
Can Nitrogen Fixation in Aquatic Systems Reverse Nitrogen Limitation? I Posters (joint with CO)

Presiding: M J McCarthy, Université du Québec à Montréal; R Maranger, Université de Montréal; R Fulweiler, Boston University

1730h BO25A-01 POSTER The nitrogen fixation and N* anomaly patterns in the Atlantic Ocean: C Yoshikawa, VJ Coles, R R Hood, N Yoshida

1730h BO25A-02 POSTER Nitrogen fixation rates and diazotroph abundances in the north Western Pacific: J Noh, D Choi, E J Carpenter, J Drake, C M Lee

1730h BO25A-03 POSTER Elucidating Controls on Nitrogen Fixation and Denitrification in Estuarine Sediments by Coupling Gene Activity and Biogeochemical Flux Measurements: S M Brown, R W Fulweiler, S W Nixon, A Talmassian, C Fogarty, B D Jenkins

1730h BO25A-04 POSTER Sediment-water interface nitrogen transformations in Missisquoi Bay, Lake Champlain (Québec): is sediment nitrogen fixation important?: M J McCarthy, A Guindon, P A Del Giorgio, W S Gardner, D F Bird

1730h BO25A-05 POSTER Landscape and temporal regulation of the importance of fixed nitrogen to phytoplankton nitrogen demand: A Patoine, P Leavitt

1730h BO25A-06 POSTER Evidence of nitrogen limitation of microbial activity in subsurface waters and sediments of the northern Gulf of Mexico hypoxic region: W S Gardner, M J McCarthy, S A Carini, L Hou, X Lin

1730h BO25A-07 POSTER Enzymatic Responses to In-situ Nutrient Enrichment: Support for Two Alternative Measures of Biofilm Nutrient Status in a Limestone Stream: M May, H J Carrick

1730h BO25A-08 POSTER Nickel limitation of nitrogen fixation by Trichodesmium: T Ho

1730h BO25A-10 POSTER EFFECTS OF N AND P ENRICHMENT ON NUTRIENT CYCLING IN STREAMS: H J Carrick, K J Price

1730h BO25A-11 POSTER Sources and sinks of nitrogen at the sediment-water interface in Arctic fjords (Svalbard, Norway): J E Kostka, T M Ghring, G Lavik, M M Kuyper

1730h BO25A-12 POSTER Effect of Iron on Nitrogen-Phosphorus Ratios and Algal Communities in Freshwater Lakes: D Orihel, D W Schindler, R Vinebrooke

BO25B Poster Hall E Tuesday 1730h
Characterizing the Effects of Climate on Living Marine Resources I Posters

Presiding: J Phinney, NOAA Fisheries

1730h BO25B-01 POSTER Differential effects of hypoxic conditions on survival of planktonic rocky intertidal invertebrate larvae: D Eerkes-Medrano, C Siisla, C Langdon, B A Menge

1730h BO25B-02 POSTER Going with the flow: Nudibranch gastropods track large-scale fluctuations in climate: S T Schultz, J H Goddard, T M Gosliner, D E Mason, W E Pence, G R McDonald, V B Pearse, J S Pearse

1730h BO25B-03 POSTER Spatial Patterns in the Distribution and Abundance of Benthic Intertidal Species in Glacier Bay National Park and Preserve, Alaska, and their Relationship to Glacial Chronology: G V Irvine

1730h BO25B-04 POSTER Predicting Coral Bleaching Events: Considerations of Adaptation Rates, Natural Variability and Ocean Acidification: J A Kleypas, L Bianucci, J C Currie, M Karnauskas, C A Logan, L Teneva

1730h BO25B-05 POSTER Trends of a satellite-derived vegetation index (NDVI) for mangrove areas in northwestern México: M Manzano, M Kahru, L Flores-Campaña

BO25C Poster Hall E Tuesday 1730h
Climate Change and Ocean Biology: Integrating Conceptual Frameworks and Experimental Approaches to Predicting Planktonic Responses I Posters

Presiding: P W Boyd, Univ Otago; D A Hutchins, Univ. of Southern California

1730h BO25C-01 POSTER Salinity Tolerance of Pyrodinium bahamense var. bahamense: C Valentin Del Rio, S Vélez, M Sastre

1730h BO25C-02 POSTER Hydrography and phytoplankton distribution in the Amundsen and Eastern Ross Seas: G M Fragoso, W Smith, A Leverentz

1730h BO25C-03 POSTER Effects of UV radiation on the net metabolism of pelagic communities: S Agusti, A Regaudie de Gloux, J M Arrieta, C M Duarte
1730h  **BO25C-04 POSTER** Enhanced overall stability with biodiversity under stochastic perturbation of solar radiation:
S Vallina, C Le Quere

1730h  **BO25C-05 POSTER** Temperature dependence of planktonic metabolism in the oceans: A Regaudie de Gloux, C M Duarte

1730h  **BO25C-06 POSTER** Coupling of ocean stratification, turbulent vertical mixing and plankton distributions in the Northeast Atlantic during the STRATIPHYT-I cruise: E Jurado, H A Dijkstra, H van der Woerd, C Brussaard

1730h  **BO25C-07 POSTER** The effect of CO2 and iron limitation on the physiology of a polar Pseudo-nitzschia delicatissima: C L Breene, F Fu, E Yu, C Baranyk, A Tatters, Y Lou, E Seubert, D A Caron, N Garcia, S Ho, D A Hutchins

1730h  **BO25C-08 POSTER** Effects of temperature, body size and reproductive strategies on planktonic larval duration in marine decapods: J Bueno, ÁNGEL López-Urrutia

1730h  **BO25C-09 POSTER** Seasonal changes in plankton in coastal waters in Boston harbor: J Urban-Rich

1730h  **BO25C-10 POSTER** Biological responses in the Philippine Archipelagoes and the South China Sea to the Pacific Ocean anomaly: I Otsuka, I Asanuma

1730h  **BO25C-11 POSTER** Spatial and Temporal Trends in Forcing Factors Controlling Primary Productivity in the Northern Gulf of Mexico: A S Quigg, F Alvarez, J W Ammerman, P Chapman, S F Dimarco, J C Kurzt, G T Rowe, P H Santschi, J B Sylvan

1730h  **BO25C-12 POSTER** Understanding the Linked Response of Phytoplankton Community Structure and Biogeochemical Cycles in a Future Ocean: S Dutkiewicz, J Scott, M follows

1730h  **BO25C-13 POSTER** Alkaline Phosphatase in the Coccolithophore Emiliania huxleyi: Characterization and Effects of Ocean Acidification: Y Xu, P M Morel

1730h  **BO25C-14 POSTER** Interactive Effects of Irradiance and CO2 Concentration on Oceanic N2 and CO2 Fixation in the Diazotrophic Cyanoebacterium Trichodesmium erythraeum: N S Garcia, F Fu, C L Breene, P W Bernhardt, M R Mulholland, J A Sohn, D A Hutchins

1730h  **BO25C-15 POSTER** Analysis of the Lhcf gene family in Emiliania huxleyi reveals differential responses to light and carbon dioxide levels: S C Lefebvre, C A Raines, R Geider, G N Harris, R Webster, N Leonards, B A Read, J L Garrido

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**BO25D Poster Hall E**

**Tuesday 1730h**

**Comparative Proteogenomics I Posters**

**Presiding:** J T Hollibaugh, University of Georgia; G Rocap, University of Washington

1730h  **BO25D-01 POSTER** The effect of iron availability on the molecular capacity of microbial communities of the North Atlantic: A I Macey, M Moore, S Richier, P N Sedwick, A M Cockshutt, D A Campbell, T S Bibby

1730h  **BO25D-02 POSTER** Developing Genomic and Proteomic Infrastructure to Study the Diatom Genus Thalassiosira in the Laboratory and the Field: P D Chappell, J J Lins, J Ventura, B D Jenkins


1730h  **BO25D-05 POSTER** Absence of key photosystem II genes does not alter oxygen evolution in Prochlorococcus marinus MED4 and SS120: D Mella, E Kotobava, C Six, R Kana, K Felczanowá, J Setlik, L Garczarek, F Partensky, O Brasil

1730h  **BO25D-06 POSTER** Insights into dissolved organic carbon transformations through comparative metatranscriptomics of coastal marine bacterioplankton: R Poretsky, S Sun, X Mou, M Moran

1730h  **BO25D-07 POSTER** Comparative Metagenomics of Microbial Communities from the Sargasso Sea During the Spring Bloom and Summer Stratification: B Beszteri, K Vergin, A Treusch, W Li, A Norbeck, C Nicora, A Monier, C A Carlson, J Green, A Z Worden, S Giovanni


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**BO25E Poster Hall E**

**Tuesday 1730h**

**Deep-Sea Food Webs: Origins and Interactions I Posters**

**Presiding:** T T Sutton, VIMS; J C Hoffman, US Environmental Protection Agency

1730h  **BO25E-01 POSTER** Benthic - Pelagic Coupling: Is Phytoplankton Variability a Driver for Benthic Gradation?: A S McInnes, E Easton, D Thistle, A Quigg

1730h  **BO25E-02 POSTER** Spatial Analysis of Deep Sea Benthic Prokaryotic and Macrofaunal Communities in the Central-Eastern Meditterranean Sea and in Adjacent Atlantic Ocean (Galicia Bank): S Aliani, E Baldighi, A Conversi, E Manin

1730h  **BO25E-03 POSTER** Preliminary Results on Feeding Ecology of Stomiiform Fishes of the Northern Mid-Atlantic: V Carpio, G Menezes, O Bergstad, T Sutton

1730h  **BO25E-04 POSTER** Community Composition and Carbon Fixation of Neutrophilic Iron-Oxidizing Chemotrophs at Hydrothermal Vents: R E Davis, K Klieflich, C L Moyer, B Tebo

1730h  **BO25E-05 POSTER** Using Multiple Chemical Tracers in Hawaiian Pelagic Food Webs: A Choy, B N Popp, J C Drazen

1730h  **BO25E-06 POSTER** Sources and sinks in the abyss, and their consequences for deep-sea biodiversity: S M Hardy, C R McClain, C R Smith

1730h  **BO25E-07 POSTER** Trophic Structure over the Northern Mid-Atlantic Ridge: The Bathyplagic Zone Really Matters: T Sutton, J C Hoffman, J Kidwell, T Falkenhaug, O Bergstad

1730h  **BO25E-08 POSTER** Biodiversity, trophic linkages and carbon flow in the deep-sea benthic food-web: L Pozzato, L Moodley, K Soetaert, J J Middelburg

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**BO25F Poster Hall E**

**Tuesday 1730h**

**Ecology and Diversity of Aquatic Protists: Advances and Methodologies I Posters**

**Presiding:** E Demir, MBARI; A Z Worden, Monterey Bay Aquarium Research Institute

1730h  **BO25F-01 POSTER** Newly Established Universal PCR Primers for Comprehensive Phytoplankton Analysis: K S Pin, M Hideo, W Keiko, K Tomohiko, T Tatsuki, K Norio

1730h  **BO25F-02 POSTER** Gene expression analysis of nitrogen assimilation in the Texas brown tide Aureoumbra lagunensis: M Agostoni, D Erdner
1730h  **BO25F-03 POSTER** Sequence diversity and mRNA quantification of a diatom nitrate transporter gene in the East China Sea: J Chang, L Kang, S L Hwang

1730h  **BO25F-04 POSTER** Abundance And Biomass Of Heterotrophic Microplankton In The Lower Hudson River Estuary, USA: Potential Importance Of Naked, Planktonic Amebas For Bacteirvory And Carbon Flux: A E Lesen, A R Juhl, O R Anderson

1730h  **BO25F-05 POSTER** Abundance and dynamics of Alexandria catenella near Redondo Beach (CA) as detected by quantitative PCR: M Garneau, A Schnetzer, E Fitzpatrick, A C Jones, P D Countway, E Seubert, D A Caron

1730h  **BO25F-06 POSTER** Toxicity of Hydrogen Peroxide to Four Species of Phytoplankton: M Franco, S Strom

1730h  **BO25F-07 POSTER** Vertical spatial and temporal dynamics of protistan taxa at the USC Microbial Observatory: D Y Kim, P D Countway, R Schaffner, J Botelho, D A Caron

1730h  **BO25F-08 POSTER** Large intra-specific diversity in a marine dinoflagellate: effect of origin on physiology of laboratory strains: T Berge, N Daugbjerg, P J Hansen

1730h  **BO25F-09 POSTER** Prasinophytae phylogenetic characterization along a transect from Monterey Bay to oligotrophic waters and application to 454-TAG sequence analysis: H A Skoning, A Monier, D McRose, H Wilcox, A Z Worden

1730h  **BO25F-10 POSTER** Protistan community structure as a function of top-down processes in the Southern Ocean: environmental gene libraries to study trophic dynamics: A Schnetzer, D J Lonsdale, D Y Kim, A C Jones, R M Cerrato, D A Caron

1730h  **BO25F-11 POSTER** A Comparison of Eukaryotic Diversity along a River-to-Ocean Gradient using Molecular and Traditional Tools: P Kahn, L Herford, T D Peterson, L McCue, P Zuber

1730h  **BO25F-12 POSTER** Seasonal Variability of the Protist and Cyanobacterial Communities in the Sargasso Sea: A M Hansen, S Neuer, A Freibott, J Amacher, M W Lomas


1730h  **BO25F-14 POSTER** Virus Induced Programmed Cell Death (PCD) in the Brown Tide Alga Aureococcus anophagefferens: C M Brown, P Woodruff, K Bidle

1730h  **BO25F-15 POSTER** Effect of Organic Carbon Uptake on Photosynthesis and Growth of Phytoplankton Cultures and Natural Communities; Use of ^13C-Glucose as a Radiotracer for Incorporation of Organic Carbon into Pigments: B E Cotti-Rausch, J L Pinckney
1730h  **BO25G-20 POSTER** Export Flux and its Transfer Efficiency During the North Atlantic Spring Bloom: P Martin, R Lampitt, R Sanders, M Perry

1730h  **BO25G-21 POSTER** A role for picocyanobacteria in the ocean’s Si cycle: S B Baines, B Twinning, M A Brzezinski, D Nunez-Millard, D Assael, S Vogt, H McDaniel, D Nelson

1730h  **BO25G-22 POSTER** Silicate not nitrate determines the drawdown of CO2 in coastal upwelling ecosystem: R C Dugdale, J R Fuller, A Marchi, A Parker, P Willkerson

**BO25H Poster Hall E Tuesday 1730h**

**Presiding:** S C Doney, Woods Hole Oceanographic Inst

1730h  **BO25H-01 POSTER** Modeling of Nutrient Budgets for the River-Network and Estuary in the Pearl River Delta: J Hu, S Li

1730h  **BO25H-02 POSTER** Interannual to decadal variations of marine ecosystem simulated in eddy-permitting marine ecosystem models: H Sumata, T Okunishi, T Hashioka, M Shigemitsu, N Okada, Y Yamanaka

1730h  **BO25H-03 POSTER** Spatio-temporal differences in plankton compositions among models from the first results of MARine Ecosystem Model Inter-comparison Project (MAREMIP): T Hashioka, Y Yamanaka, M N Aita, M Vogt, C Le Quere, S Alvain, L Bopp, T Buitenhuis, S C Doney, I Lima

1730h  **BO25H-04 POSTER** The ecosystem model analysis to reproduce a biomass in meso-pelagic zooplankton: H Moki

1730h  **BO25H-05 POSTER** Modeling Global Patterns in the Ratio of Mesozooplankton Production to Primary Production in Marine Ecosystems: C Stock, J P Dunne

1730h  **BO25H-06 POSTER** Ecosystem Changes and the Ocean Carbon Cycle in the NASA-GISS Climate Model: A Romanou, W W Gregg, R J Healy

1730h  **BO25H-07 POSTER** Modeling of zooplankton grazing dynamics in the Southern California Bight: Q P Li, P J Franks

**BO25I Poster Hall E Tuesday 1730h**

**Presiding:** K Stocks, Univ. of California San Diego; K Yarincik, Census of Marine Life - Ocean Leadership; M Feldman, Census of Marine Life - Ocean Leadership

1730h  **BO25I-01 POSTER** Genetic Fingerprinting of Pelagic Ecosystems by the Census of Marine Zooplankton: A C Bucklin, L Blanco Bercial, N J Copley, P H Wiebe

1730h  **BO25I-02 POSTER** A global census of marine life on seamounts: M Consalvey, M Clark, A Rowden, K Stocks, I Wright

1730h  **BO25I-03 POSTER** Submarine canyons as hotspots of deep-sea benthic biodiversity: F C De Leo, C R Smith, E Vetter, A Rowden


1730h  **BO25I-05 POSTER** Predicting Marine Species Occurrence Utilizing GIS and Habitat Preference Models: E Sandoval


**BO25J Poster Hall E Tuesday 1730h**

**Presiding:** N Himmerkus, Univ. of Kiel; M A Gutowska, Physiology Institute CAU; S L Dupont, Göteborg University; F Melzner, IFM-GEOMAR

1730h  **BO25J-01 POSTER** Regeneration as a model to understand physiological boundaries under multiple anthropomorphic stressors: M S Thorndyke, O Ortega-Martinez, S L Dupont

1730h  **BO25J-02 POSTER** Calcium transport across epithelia - Cross references from mammalian kidney physiology: N Himmerkus, Q Shan, M Bleich

1730h  **BO25J-03 POSTER** Characterization of ion transport properties and pH homeostasis in Emiliania huxleyi: K Suffrian, M A Gutowska, M Bleich

1730h  **BO25J-04 POSTER** Physiological Response to Temperature Stress Among Species and Across Life-History Stages of Kelp: S K Henkel, G E Hofmann

1730h  **BO25J-05 POSTER** Anthopleura elegantissima: a Thermoregulating Anemone?: I Freytes Ortiz, B Bingham

1730h  **BO25J-06 POSTER** Anthopleura elegantissima and its algal symbiont Symbiodinium muscatinei: T Towanda, E V Thuesen

1730h  **BO25J-07 POSTER** Electrophysiological Studies of the Cold-Water Coral Lophelia pertusa: W Holtmann, A Form, N Himmerkus, U Riebesell, M Bleich

1730h  **BO25J-08 POSTER** Finding Coral: the deep water corals of the British Columbia: M Reuscher, T C Shirley

1730h  **BO25J-09 POSTER** Genetic Diversity of Gorgonians in the Gulf of Mexico: A M Quattrini, P J Et нояер, E Cordes

1730h  **BO25J-10 POSTER** Jellywatch.org: a website for collecting citizen-reported jellyfish sightings: K Elliott, A Case, S Haddock

1730h  **BO25J-11 POSTER** Predator effects on benthic communities in the San Juan Islands, WA: K Turner, K P Sebens

1730h  **BO25J-12 POSTER** Effects of water-based drill cuttings on benthic macrofauna: H Trannum, H Nilsson, K Norling

1730h  **BO25J-13 POSTER** Habitat use of beluga whales in Disenchantment bay (AK) revealed by acoustic loggers: M Castellote, G O’Corry-Crowe, B Lucey, K Stafford, M O Lammers

1730h  **BO25J-14 POSTER** Predator effects on benthic communities in the San Juan Islands, WA: K Turner, K P Sebens

1730h  **BO25J-15 POSTER** Finding Coral: the deep water corals of the British Columbia: M Reuscher, T C Shirley

1730h  **BO25J-16 POSTER** Genetic Diversity of Gorgonians in the Gulf of Mexico: A M Quattrini, P J Et нояер, E Cordes

1730h  **BO25J-17 POSTER** Jellywatch.org: a website for collecting citizen-reported jellyfish sightings: K Elliott, A Case, S Haddock

1730h  **BO25J-18 POSTER** Predator effects on benthic communities in the San Juan Islands, WA: K Turner, K P Sebens

1730h  **BO25J-19 POSTER** Effects of water-based drill cuttings on benthic macrofauna: H Trannum, H Nilsson, K Norling
Chemical Oceanography

CO25A Poster Hall E Tuesday 1730h

Chemical Oceanography General Contributions Posters

*Presiding:* G A Cutter, Dept Ocean Earth & Atmosph Sci

1730h CO25A-01 POSTER Techniques to Enhance Quantitation of Raman Spectroscopy in Extreme Environments: W J Thompson, B J Marquardt

1730h CO25A-02 POSTER Substrata effects on the chemical characterization of EPS in biofilm formed in White Oak Bayou and Buffalo Bayou (Houston TX): S Zhang, P H Santschi, R Brinkmeyer

1730h CO25A-03 POSTER Chemical characterization of detrital combined amino acids in oceanic surface particulate organic matter: A Tsukasaki, T Nishida, E Tanoue

1730h CO25A-04 POSTER Effect of Natural Organic Matter on Oxidation and Reduction Rates of Iron in Coastal Water: M Fujii, T Oumura

1730h CO25A-05 POSTER Effects of Seawater Divalent Cations on Ligand Exchange Reaction between Organically Complexed Fe(III) and Siderophore Desferrioxamine B: H Ito, M Fujii, Y Masago, T Oumura

1730h CO25A-06 POSTER Dissolved Iron and Aluminium along 32°S across the South Indian Ocean Subtropical Gyre: Results from the CLIVAR I5 Repeat Hydrography Expedition: M M Grand, C I Measures, M Hatta, W M Landing, K J Gosnell

1730h CO25A-07 POSTER Dissolved Iron and Aluminium Distributions in the Western South Pacific Ocean During CLIVAR-CO2 Repeat Hydrography P06 Transect: M Hatta, C I Measures, M M Grand, K E Selph, W M Landing

1730h CO25A-08 POSTER Biogeochemistry of dissolved zinc in the southern Indian Ocean: results from the 2009 CLIVAR I5 transect: K J Gosnell, W M Landing, C I Measures, M Hatta, M M Grand

1730h CO25A-09 POSTER Determination of Spatial Variations of Dissolved Ag in Western Pacific Marginal Seas by Clean Method: L Wen, W Chun-Kai, C Lee, K Jiaan, C Wei

1730h CO25A-10 POSTER Functional Identification of Microorganisms that Transform Mercury in Marine and Arctic Sediments: L M Romas, C R Hammerschmidt


1730h CO25A-12 POSTER Rainfall deposition of mercury and other trace elements to the Northern Gulf of Mexico: N Krishnamurthy, W M Landing, J M Caffrey


1730h CO25A-14 WITHDRAWN

1730h CO25A-15 POSTER Trace metal behavior in river-seawater mixing zones: Definition of end-members based on Ga and Zr within the mixing zone: J A McAlister, J Charters, K J Orians

1730h CO25A-16 POSTER Mechanisms Controlling Trace Metal Composition and Distribution of Particulate Matter in the Black Sea: O Yigiterhan, J W Murray, S Turgul

1730h CO25A-17 POSTER Absorption and desorption of Cs, Rb, Pb, Cu and Cd in soil and sediment samples: W Ithier-Guzman, K A Quinn, R H Byrne

1730h CO25A-18 POSTER Does atmospheric aerosol deposit organic nitrogen into oceanic environment?: P Mingkwaw, M Gledhill, E P Achterberg, M Patey

1730h CO25A-19 POSTER Dust Deposition to the Surface Waters of the Global Ocean: C I Measures, W M Landing, C S Buck, M Brown, W T Hiscock, M M Grand, M Hatta, K J Gosnell

1730h CO25A-20 POSTER Examination of the role of hydrogen peroxide in the oxidation of sulfur dioxide in the marine boundary layer: D W O’ Sullivan, K A Lyles

1730h CO25A-21 POSTER Recent trends in air-sea CO2 flux and CO2 solubility in the central tropical Pacific Ocean: J Hinose, C A She, S A Larson, L Teneva, R B Dunbar


1730h CO25A-23 POSTER The ocean-atmosphere partitioning of carbon at steady state: A Omota, M Follows


1730h CO25A-25 POSTER Seasonal Variation of Surface FCO2 in the Southwestern East Sea/Sea of Japan: S Chooi, D Kim, K Kim, J Shim

1730h CO25A-26 POSTER Chemical characterization of strongly actinide binding exopolymeric substances (EPS) from two bacteria (Sagittula stellata and Pseudomonas fluorescens Biovar II): C Xu, S Zhang, C Chuang, K A Schwehr, P H Santschi

1730h CO25A-27 POSTER Fluorescence characteristics of CDOM in different water masses of Scotia Sea, Antarctica: S Kang, M Park, B G Mitchell

1730h CO25A-28 POSTER UVR increased toxicity of a polycyclic aromatic hydrocarbons mixture to marine phytoplankton: P Echeveste, S Agusti, J Dachs


1730h CO25A-33 POSTER Effect of photoirradiation on chemical characteristics of marine humic-like fluorescent dissolved organic matter: Y Omori, T Hama, M Ishii

1730h CO25A-34 POSTER Marine polymer self assembly: Implications for marine carbon cycling: P Verdugo, W Chin, P H Santschi
1730h CO25A-35 POSTER Oxygen and Carbon Isotopes of Hypoxic Waters from the 2009 Louisiana Hypoxic Zone: Indicators of Fresh Water Sources and Benthic Respiration: J Strauss, E L Grossman, S F Dimarco

1730h CO25A-36 POSTER RELATIVE IMPORTANCES OF DENITRIFICATION AND AMMONIA AS THE NITROGEN REMOVAL PROCESSES IN TIDAL FLAT SEDIMENTS OF THE KOREAN PENINSULA: J Lee, N Heo, S An


1730h CO25A-38 POSTER Do algae participate in chemical signaling similar to plants? Impact and response of DMS to Ulva lactuca: J Middleton, K Van Alstyne

1730h CO25A-39 POSTER Spatial Distribution Of Fluoride In Freshwater And Seawater Of The South Texas Rivers, Bays, And Nearshore Gulf Of Mexico: J C Enriquez, D Min

1730h CO25A-40 POSTER DENITRIFICATION AND REMINERALIZATION RATES OF ORGANIC MATTER IN THE ESTUARINE TIDAL FLAT OF SOUTHERN KOREA (SUNCHEON BAY/SEOMJIN RIVER ESTUARY/MASAN BAY, KOREA): N Heo, J Lee, J Choi, S An

1730h CO25A-41 POSTER Measurements of methyl halides in surface seawater and marine boundary layer of Northwest Pacific: A Ooki, Y Yokouchi

CO25B Poster Hall E Tuesday 1730h Getting the Right Number III Posters (joint with BO, PA, MT)

Presiding: G A Cutter, Dept Ocean Earth & Atmosph Sci; R M Sherrell, IMCS, Rutgers University


1730h CO25B-02 POSTER GEOTRACES Intercalibration: Improved Determination of Methy mercury in Seawater: K L Bowman, C R Hammerschmidt

1730h CO25B-03 POSTER GEOTRACES dFe Intercalibration and Application to the Tropical North Atlantic Oxygen Minimum Zone: J N Fitzsimmons, R Zhang, T Ito, E A Boyle

1730h CO25B-04 POSTER Analytical considerations in the determination of iron, cobalt, and manganese on a full-depth zonal section of the Southern Atlantic Ocean: A E Noble, M A Saito

1730h CO25B-05 POSTER The mini-mulvfs holder: A new 142mm filter holder design for particulate sampling from in-situ pumps: D Ohnemus, P J Lam, J K Bishop

1730h CO25B-06 POSTER Distribution of dissolved Cu, Cd, and Pb at the GEOTRACES BATS station determined by NTA resin and ID-ICPMS: J Lee, E A Boyle, R Kayser


1730h CO25B-08 POSTER Dissolved aluminum in the North Atlantic and North Pacific: SAFe and GEOTRACES Intercalibration Results: M Brown, K W Bruland, G J Smith

Education and Outreach

ED25A Poster Hall E Tuesday 1730h Research Experiences of Undergraduates in Aquatic Sciences I Posters (joint with BO, PA, IT, GO, CO)

Presiding: R L Cuhel, University of Wisconsin-Milwaukee; C Aguilar

1730h ED25A-01 POSTER Fidelity to Spawning Grounds by a Catadromous Fish, Centrotopus undecimalis: N Barkowski

1730h ED25A-02 POSTER The Effects Of Species Richness And Assembly History On Community Invisibility: L Brady, L Jiang

1730h ED25A-03 POSTER Seasonal Variability in Ciliates of the New England Shelf: E F Brownlee, H M Sosik, R J Olson

1730h ED25A-04 POSTER Calcium Biogeochemistry of Mussel Communities in Lake Michigan: Seasonal Cycles of Water Column Inventory and Ca:Mg Ratios in Shells: J J Falck, R L Cuhel


1730h ED25A-06 POSTER Recruitment and Mortality of Surfclams, Spisula solidissima: Field and Flume Experiments: J Goss, P Ramey


1730h ED25A-08 POSTER Thermal Tolerance and the Effect of Temperature on Morphological Plasticity of Pacific Cod, Gadus macrocephalus: K A Lavelle, T P Hurst

1730h ED25A-09 POSTER Assessing the Potential Viability of Algae for Environmental Remediation and as a Biofuel Feedstock: Biochemical Composition: H McIntosh, E A Canuel

1730h ED25A-10 POSTER CDOM Dynamics in Texas Bays During Drought Conditions: S A Miller, G C Shank


1730h ED25A-12 POSTER Responses Of Phytoplankton Alkaline Phosphatase Activity In Lake Michigan And A Eutrophic Urban Pond To Nutrient Enrichment: K Onorevole, A Bergmann, J A Berges, E B Young

1730h ED25A-13 POSTER Predator, Prey And Protein Interactions: The Importance Of Cell Surface Proteins In Facilitating Grazing Resistance In The Marine Cyanobacteria Synechococcus: N Siu, J Apple

1730h ED25A-14 POSTER Production Of Volatile Organic Compounds (VOCs) And Aerosolized Particles Associated With Blooms Of The Cyanobacterium Microcystis spp: K Smith, T Evans, G Saltzgaber, J Y Aller


1730h ED25A-16 POSTER Invasive Aquatic Vegetation Alters Interactions Between Native Plants And Invertebrates: C Valinoti, C Ho, A R Armitage

1730h ED25A-17 POSTER Oxygen, Manganese And Iron Dynamics In The Sediments Of The Hemipelagic Sediments Of The Saint Lawrence Estuary: J M Wrubel, G W Luther

1730h ED25A-18 POSTER Hydrographic Evidence for Enhanced Mixing in Fracture Zone Canyons: J Clark, A M Thurnherr
1730h ED25A-19 POSTER Senior Undergraduate Networking in Ocean Sciences: Career Path Continuity Through the REU-To-Meetings Program 1999-2010 (12 Sessions): C Aguilar, R L Cuhe

1730h ED25A-20 POSTER From The Very Beginning: Freshwater-Based Ocean Science REU Recruits for Aquatic Science at the UW-Milwaukee Center for Great Lakes Studies Over 23 Sessions!: R L Cuhe, C Aguilar


1730h ED25A-22 POSTER Marine Sciences Summer Intern Program at the University of Delaware: An overview: A I Dittel, D L Kirchman


1730h ED25A-24 POSTER The Woods Hole Oceanographic Institution REU Site: J Yoder, J Westwater, M McCafferty

1730h ED25A-25 POSTER 25 Years of the SURF REU Program at GSO/URI: R A Pockalny, D R Watts, M Wimbush, C R Kincaid, K A Donohue

1730h ED25A-26 POSTER Maryland Sea Grant Research Experiences for Undergraduates: Twenty-one years of marine science training for undergraduates: F C Moser, J Connors, J Clark, J G Kramer

1730h ED25A-27 POSTER University of Southern California (USC) REU Summer Site in GEOBIOLOGY - Marine Science at the interface between the life and earth sciences (2003-2008): L E Duguay

PRESIDING:

ED25B Poster Hall E Tuesday 1730h Research Experiences of Undergraduates in Aquatic Sciences II Posters (joint with BO, IT, PO, GO, CO)

Presiding: R L Cuhe, University of Wisconsin-Milwaukee; C Aguilar

1730h ED25B-01 POSTER Modeling Seasonal Dynamics in the Zanzibar Channel: M R Moulton, G Mayorga-Adame, M Garcia Reves, P Nadeau, J Zavala-Garay, J Theiss

1730h ED25B-02 POSTER In-Situ Video Analysis of Juvenile Flatfish Escape Response in Hypoxia-Affected Waters: N R Ehrlich, L Ciannelli

1730h ED25B-03 POSTER Mixing Water and Electricity: The Environmental Impact of Hydropower: K Crawford

1730h ED25B-04 POSTER Enhanced enzymatic activities in seawater surrounding aggregates: Consequences for carbon cycling: A B Jenkins, K Ziervogel, C Arnott

1730h ED25B-05 POSTER A simple technique to remove tidal influences from ADCP measurements: J Gilchrist, A Kumar

1730h ED25B-06 POSTER The effect of different N:P ratios and light levels on the growth rate of Proorocentrum minimum and Karlodinium veneficum, two harmful dinoflagellate species: M Molina, P M Gilbert, J Alexander, J Li

1730h ED25B-07 POSTER Detecting Vertical Gradients of Polycyclic Aromatic Hydrocarbons in Narragansett Bay Using Passive Samplers: A E Brandeis, R Lohmann

1730h ED25B-08 POSTER Anomalies in 2008 Upwelled Water Properties as Observed by Autonomous Underwater Gliders off the Oregon Coast: M M Flink, J A Barth, S D Pierce, R K Shearman, A Erofeev, J Brodersen, L Rubiano-Gomez

1730h ED25B-09 POSTER Satellite Surface Observations of the 2008 Oregon Coastal Upwelling Season: S Dewey, P T Strub, C James, J A Barth, M M Flink

1730h ED25B-10 POSTER Using HF Radar to Observe Coastal Ocean Tidal Features: A R Davies, J R Moisan, A Kumar

1730h ED25B-11 POSTER Factors Affecting Cyanobacterial Nitrogen Fixation on the Sassafras River, a Tributary of the Chesapeake Bay: E Brunner, J M O’Neil

1730h ED25B-12 POSTER Bioavailability and Transport of Bottom Boundary Layer Iron in the Oregon Upwelling System: P M Donovan, Z Chase

1730h ED25B-13 POSTER Development of Spectral Analyses For Rotary Sonar Images and Comparison to Predictive Ripple Models: C M Englert

1730h ED25B-14 POSTER Spatial and Temporal Patterns of Diversity in Coastal Cyanophagae Communities: S Taylor, R Parsons, M Marston

1730h ED25B-15 POSTER Environmental Impact of Hydropower: K Ziervogel, C Arnosti

1730h ED25B-16 POSTER 25 Years of the SURF REU Program at GSO/URI: R A Pockalny, D R Watts, M Wimbush, C R Kincaid, K A Donohue

1730h ED25B-17 POSTER Seasonal and Inter-annual variation of Ice retreat in the Gangotri glacier, Himalayas: T L Stricker, A Kumar

1730h ED25B-18 POSTER Can benthic foraminifera tell us about the regional extent or persistence of “acidified” waters off the northern California coast?: A R Admire, M Biddle, J Cypert, M Diebold, L A Evers, C Meyer, J S Padgett, B A Peebles, L Pierce, A Torres, J Abell, J Borgeld

1730h ED25B-19 POSTER Shatsky Rise: Remnants of a Jurassic Supervolcano?: N Idrisi, D Sanon, D Giff, S E Scientific Party

1730h ED25B-20 POSTER Distribution and community composition of dinoflagellate resting cysts on the continental shelf and slope off northern California: R Robertson, S A Goldthwait

PRESIDING:

GO25A Poster Hall E Tuesday 1730h Sediment Processes: Transport and Deposition in Lakes, Estuaries, Coastal Bays, and Continental Shelves IV Posters (joint with BO, PO, CO)

Presiding: J Xu, U.S. Geological Survey; N Hawley, Great Lake Environmental Research Laboratory

1730h GO25A-01 POSTER Particle Flocculation During Tidal Cycles on the Shoals of the San Francisco Bay Estuary: S M Gladding, A Brand, K Hsu, J R Hunt, J R Lacy, M T Stacey

1730h GO25A-02 POSTER Affect of seabed density and sediment pelletization on erosion/deposition processes at Clay Bank, York River, Chesapeake Bay, VA: C Rodriguez, S A Kuehl

1730h GO25A-03 POSTER A Study of Storm-Induced Variability in the Littoral Sediment Transport Patterns of Central Monterey Bay: J J Brower

1730h GO25A-04 POSTER Effects of Intertidal Creek Geomorphology on Sediment Accretion: J M Bell, R Torres

1730h GO25A-05 POSTER Comparison of measured and modeled suspended sediment transport and reference concentration over a hardbottom habitat on the inner-shelf of Myrtle Beach, SC: E K Cziraki, P A Wren

PRESIDING:

GO25A Poster Hall E Tuesday 1730h Sediment Processes: Transport and Deposition in Lakes, Estuaries, Coastal Bays, and Continental Shelves IV Posters (joint with BO, PO, CO)

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1730h GO25A-05 POSTER Comparison of measured and modeled suspended sediment transport and reference concentration over a hardbottom habitat on the inner-shelf of Myrtle Beach, SC: E K Cziraki, P A Wren
GO25B-06 POSTER Processes of Strata Formation in a Spartina alterniflora Salt Marsh: S M Moskaliski, C K Sommerfield

GO25A-07 POSTER IS THERE A THRESHOLD DISCHARGE THAT IS REQUIRED TO PRODUCE SEDIMENTARY DEPOSITS IN THE NEARFIELD OF THE PO PRODELTA (NORTHERN ADRIATIC SEA, ITALY): A Correggiari, L Langone, T Tesi, S Misereocchi, R A Wheatcroft


GO25A-09 POSTER Evaluation of contribution sources for the sediments of the La Paz Lagoon, based on statistical treatment of the mineralogy of their heavy fraction and surrounding rock and drainage basin characteristics: K Choumiline, J Wurl, L Godinez-Orta

GO25A-10 POSTER ACCUMULATION OF SEDIMENT AND RADIONUCLIDES IN TIDAL MARSHES OF THE MURDERKILL RIVER ESTUARY, DELAWARE: D G Stuart, C K Sommerfield

GO25A-11 POSTER Direct Assessment of Sediment Transport Pathways at the Mouth of the Columbia River: M Whitmont, H R Moritz, T Puckette

GO25A-12 POSTER Measurements of Waves, Currents and Sediment Transport at the Mouth of Columbia River and Benson Beach Nearshore: J M Cote, P Osborne

GO25A-13 POSTER THE EFFECT OF A SAND BYPASSING SYSTEM ON MORPHOLOGIC VARIABILITY AT THE INDIAN RIVER INLET, DELAWARE, USA: M Keshthpoor, J A Puleo

GO25A-14 POSTER Long-term sediment transport measurements on the sediment-starved inner-shelf of Long Bay, South Carolina: P A Wren

GO25A-15 POSTER Variability of Upper Beachface Sediment Composition and Submarine Groundwater Discharge (SGD) Rates Associated with Natural and Nourished Beaches in Long Bay, SC: J G Ledoux, C A McCoy, R F Viso, B L Lewis

GO25A-16 POSTER Structural controls on sediment distribution along the inner shelf of South Carolina: J C Hill, P T Gayes, R F Viso

GO25B Poster Hall E Tuesday 1730h

Sediment Processes: Transport and Deposition in Lakes, Estuaries, Coastal Bays, and Continental Shelves V Posters

Presiding: N Hawley, Great Lake Environmental Research Laboratory

GO25B-01 POSTER Turbid Plumes Observed in Hueneme Submarine Canyon: J Xu

GO25B-02 POSTER Dispersal of Mississippi and Atchafalaya Sediment on the Texas-Louisiana Shelf: K Xu, C K Harris, R D Hetland, J M Kaiahatu, N D Walker, R Bellotte


GO25B-04 POSTER Seasonal Variation in Sediment Transport and Deposition During Winter and Spring Flood Events: Umpqua River, Oregon: J M Moriarty, T A Kniskern, C K Harris, J A Warrick


GO25B-06 POSTER High-resolution event stratigraphy of mm-scale laminated sediments from coastal salt ponds: US Virgin Islands: R A Larson, G Brooks, G J Reichart, T Jilbert, E E Van Soelen, B Devine

GO25B-07 WITHDRAWN


GO25B-09 POSTER HIGH RESOLUTION GEOPHYSICAL SURVEY OF WESTERN LONG ISLAND SOUND OFFSHORE NEW YORK: AN ESTUARY FLOOR SHAPED BY BOTTOM CURRENTS AND HUMAN ACTIVITY: W Vargas, M Cormier, C M McHugh, P Marchese

GO25B-10 POSTER Seasonal variations of magnetic properties of the suspended particles in the Changjiang (Yangtze River): C Li, S Yang, W Zhang

GO25B-11 POSTER Impact of Breakwaters on Sedimentation Rates and Submerged Aquatic Vegetation Biomass in Chesapeake Bay: N Barth, C M Palinkas, E W Koch

GO25B-12 POSTER THE LAND-SEA CONNECTION: COMPOSITION & FLUX RATES OF TERRIGENOUS SEDIMENTATION ON CORAL REEFS IN COASTAL BAYS ON ST. JOHN, U.S. VIRGIN ISLANDS: M L Kolupski, M D Fox, S C Gray, A M DeGrood

GO25B-13 POSTER FLOC BEHAVIOR IN HIGH TURBIDITY COASTAL SETTINGS AS RECORDED BY LISST: THE ATCHAFALAYA DELTA INNER SHELF, LOUISIANA: M A Allison, A Sheremet, I Safak, D D Duncan

GO25B-14 POSTER On the deposition processes of high concentration plume in the estuary: H Chien, W Chiang, K K Liu, P Liu

GO25B-15 POSTER Effects of Historical Morphologic Change on Sediment Accumulation in Newark Bay, New Jersey: J R Halonen, C K Sommerfield

GO25B-16 POSTER Mud sediments in China Shelf Sea and their implication to environmental changes: A Li

GO25B-17 POSTER Predictive Modeling of Modern Sediment Transport Dynamics on the Northeastern Florida Continental Shelf: J E Georgen, C Neighbors

Interdisciplinary

IT25A Poster Hall E Tuesday 1730h

Basin-Scale Interpolation and Mapping of Ocean Properties Posters

Presiding: J Beckers, University of Liège

IT25A-01 POSTER Argo Products at the Asia-Pacific Data-Research Center: K V Lebedev, S DeCarlo, P W Hacker, N A Maximenko, J T Potemra, Y Shen

IT25A-02 POSTER Autocorrelation Characteristics of Global Surface Ocean pHCO3: S D Jones, C Le Quere, C Rödenbeck

IT25A-03 POSTER Climatological analysis of irregularly distributed data using Data Interpolating Variational Analysis (DIVA). (Invited): J Beckers, A Alvera-Azcarate, A Barth, C Troupin

IT25A-04 POSTER Mapping Surface PCO2 from Satellites and Bottles: A R Jacobson

IT25A-05 POSTER Estimating temperature and salinity climatologies in the Argo era: T Boyer, S Levitus, J I Antonov, H E Garcia
1730h  **IT25A-06 POSTER** Sea Surface Temperature (SST) spatio-temporal interpolation with multi-sources remote sensed data: P Tandeo, P Alliot, E Autret


1730h  **IT25A-08 POSTER** RECONSTRUCTION OF OCEAN STATE FROM NOISY AND GAPPY DATA: AN APPROACH AND PRACTICAL APPLICATIONS: C A Collins, L Ivanov, T Margolina, O Melnichenko

1730h  **IT25A-09 POSTER** Objective Mapping of Time-Dependent Ocean Properties: Data Sparsity and Least Squares Paradigm (Invited): A Kaplan

1730h  **IT25A-10 POSTER** Mapping the time-varying distribution of anthropogenic carbon in the ocean with Green functions (Invited): S Khatiwala, F W Primeau, T Hall

1730h  **IT25A-11 POSTER** Quantification of mapping errors using ensemble statistics from a global eddy-resolving model: S Peacock, F O Bryan, M E Maltrud

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**IT25B Poster Hall E Tuesday 1730h**

**Coastal Science Based on Lidar Posters**

**Presiding:** S J Purkis, Nova Southeastern University; J C Brock, USGS

1730h  **IT25B-01 POSTER** Scaling and Predictability in the Topography of Coral Reef Habitats: S J Purkis

1730h  **IT25B-02 POSTER** A comparison of ground and airborne laser scanning of coastal cliff change: M Lim, N Rosser, D N Petley, J Barlow, E Norman

1730h  **IT25B-03 POSTER** Sea Level Rise Visualization on the Alabama-Mississippi and Delaware Coastlines: D P Turnipseed, C Thatcher, S Sempier, S A Wilson, R R Mason, D Marcy, V R Burkett, D Carter, M Culver, K V Wilson

1730h  **IT25B-04 POSTER** Rugosity of Sandstone-Prone Sea Cliffs in the Oceanside Littoral Cell, Southern California, may Provide a Relative Time Scale Since Last Failure: E Johnstone, M J Olsen, J Raymond, N Driscoll

1730h  **IT25B-05 POSTER** Stochastic Uncertainty Analysis for Lidar-Derived Shoreline and Comparison with New Experimental Results: C E Parrish, S A White, B R Calder, S Peeri

1730h  **IT25B-06 POSTER** USACE National Coastal Mapping Program: Data Products to Support Environmental Monitoring: C Sullivan

1730h  **IT25B-07 POSTER** Using Acoustic Ground Discrimination Systems to Broaden and Enhance the Scope of LiDAR Mapping Products: G Foster

1730h  **IT25B-08 POSTER** A Coral Reef Habitat Index Derived from Satellite Multispectral Imagery and LiDAR Data: E J Hochberg, S Dollar

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**IT25C Poster Hall E Tuesday 1730h**

**Consequences of Long-Term Changes in Density Stratification in the Surface Ocean on Physical, Biogeochemical, and Ecosystem Processes Posters**

**Presiding:** R D Vaillancourt, Millersville University; V P Lance, Lamont-Doherty Earth Observatory at Columbia University; A Kumar, Millersville University; J Marra, Brooklyn University of New York

1730h  **IT25C-01 POSTER** Increased stratification and simultaneous shoaling of the euphotic zone of the California Current System – a paradox? (Invited): D L Aksnes, M D Ohman

1730h  **IT25C-02 POSTER** Modeling light control on primary production and biogeochemistry in the Ross Sea: the role of water column stability on phytoplankton growth under two climate scenarios: L R Kropuenske, G Van Dijken, K R Arrigo

1730h  **IT25C-03 POSTER** On the Relationship Between Upper Ocean Stratification and Primary Productivity in the Oligotrophic North Atlantic: R T Barber, L M Gerber, J B Palter, S Lozier

1730h  **IT25C-04 POSTER** An Examination of Local Stratification Control of Primary Productivity in The Subtropical North Pacific: A Dave, S Lozier

1730h  **IT25C-05 POSTER** The Impact of Oceanic Iron Fertilization on Stratification and the Mixed Layer Heat Budget (Invited): P G Strutton, K M Shell

1730h  **IT25C-06 POSTER** Long Term Density Stratification Trends off Delmarva Shelf Region: A Kumar

1730h  **IT25C-07 POSTER** Does density stratification control photosynthetic quantum yield at the deep chlorophyll maximum?: R D Vaillancourt, J Marra, V P Lance

1730h  **IT25C-08 POSTER** Deep ocean climatology and particle flux in the Sargasso Sea: M H Conte, J C Weber

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**IT25D Poster Hall E Tuesday 1730h**

**Impacts of Groundwater Inputs to Coastal Ecosystems Posters**

**Presiding (joint with BO, PO, MT, GO, CO):**

1730h  **IT25D-01** WITHDRAWN

1730h  **IT25D-02 POSTER** An interdisciplinary study of submarine groundwater discharge from a coastal aquifer receiving leachate from septic tanks (Invited): A B Boehm, N R de Sieyes, A Paytan, K M Yamahara

1730h  **IT25D-03 POSTER** Groundwater modeling and radium isotopes as tools for estimating coastal groundwater discharge: A field and modeling study, North Inlet Salt Marsh, Georgetown, South Carolina: A L Hughes, A M Wilson

1730h  **IT25D-04 POSTER** Detection of Groundwater Discharge in Subtropical Estuaries using CDOM fluorescence: R N Conmy, P G Coble, G E Williams

1730h  **IT25D-05 POSTER** Submarine Groundwater Discharge (SGD) in Long Bay, SC: Influences on Nearshore Hypoxia: C A McCoy, R F Viso, B L Lewis, R N Peterson

1730h  **IT25D-06 POSTER** What is the nutrient contribution of Submarine Groundwater Discharge to coastal seawater? A case study from the Carmel coast, Israel: Y S Weinstein, B Herut, Y Shalem, W Burnett, P W Swarzinski, Y Yechieli

1730h  **IT25D-07 POSTER** Estimating groundwater discharge and nutrient loading to Lynch Cove, Hood Canal, WA: R Sheibley, D O Rosenberry, E G Josberger, P W Swarzinski, C Chickadel, B Simonds, S Cox
1730h  **IT25D-08 POSTER** Processes controlling groundwater discharge to the ocean: examples from Florida, Brazil, and Norway: J E Cable, J B Martin, T C Stieglitz

1730h  **IT25D-09 POSTER** Geochemistry of Groundwater Discharge in a Mangrove Ecosystem: C J Sanders, E V Silva-Filho, R G Barcellos

**IT25E** Poster Hall E  **Tuesday 1730h**

**Interdisciplinary General Contributions Posters**

**Presiding:** C M Swan, University of California Santa Barbara

1730h  **IT25E-01 WITHDRAWN**

1730h  **IT25E-02 POSTER** Oxygen-nitrate relation of water masses in the mixed water Region between Kuroshio and Oyashio: M Ishizu, T Suga, C Sukigara, T Katsuya

1730h  **IT25E-21 POSTER** Ornithodiplostomum psycholepis (OP) Metacercariae Effects on Farhead Shoaling Activity: E Solá-Gracia, B D Wisenden

1730h  **IT25E-22 POSTER** Influence of the Sub-Oxic Trend in the Chesapeake Bay on Ph: C Burrell, B Cuker

1730h  **IT25E-23 POSTER** An Enhancement of the POP Ocean Model with Automatic Differentiation Technology: J Kim

1730h  **IT25E-24 POSTER** A Study of Trophic Interactions and Nutrient Cycling in Coastal Upwelling Systems: K M Okimura, M McCarthy, B Walker

1730h  **IT25E-25 WITHDRAWN**

**IT25F** Poster Hall E  **Tuesday 1730h**

**Limnology and Oceanography: Fluids and Environments - Celebrating Interdisciplinary Research in Aquatic Science Driven by Fluid Dynamic Interactions III Posters**

**Presiding:** J D Ackerman, University of Guelph

1730h  **IT25F-01 POSTER** Connecting High-Chlorophyll Regions in the North Atlantic: a Lagrangian look at the Biogeographic Connectivity of Marine Plankton: C Piecuch, H T Rossby, T Rymeran

1730h  **IT25F-02 WITHDRAWN**

1730h  **IT25F-03 POSTER** The hydrodynamics of two species of copepods: temperate and subtropical Euchaeta: K B Catton, D R Webster, J Yen

1730h  **IT25F-04 POSTER** The Hydrodynamic Disturbances of Two Species of Krill: D R Webster, K B Catton, S Kagawauchi, J Yen

1730h  **IT25F-05 POSTER** Temporal variation in estuarine flows relevant to chemically-mediated predators: M L Wilson, D R Webster, M Weissburg

1730h  **IT25F-06 WITHDRAWN**

1730h  **IT25F-07 POSTER** Ecosystem Engineering By Shellfish: Feedback Mechanisms On Primary Production: L A van Duren, T Troost, K Troost, J Wijsmans

1730h  **IT25F-08 WITHDRAWN**

1730h  **IT25F-09 POSTER** The effects of currents and waves on shear structure, turbulence, and sediment transport within seagrass meadows of Florida Bay: J C Romanowich, M A Reidenbach

1730h  **IT25F-10 POSTER** Stirring and Mixing of Reactive Scalars in Vegetated Aquatic Environments: Implications for Wetland Treatment Processes: B Winant, J Cadwell, T Stoesser

1730h  **IT25F-11 POSTER** Effects of Tides on River Bathymetry: R Torres, A E Yankovsky

1730h  **IT25F-12 WITHDRAWN**

1730h  **IT25F-13 POSTER** Physical-chemical analysis of the Neponset River along the river continuum: M Leavens, N Henderson, A D Christian

1730h  **IT25F-14 POSTER** Life history, population structure, and movement of gobid fishes in tropical urban and non-urban watersheds: S Santus-Coruo, A Ramirez

1730h  **IT25F-15 POSTER** Radium and radon in the hydrological system of a hypersaline lake: the Dead Sea: Y Kiro, Y S Weinstein, Y Yechieli, A Starinsky

1730h  **IT25F-16 POSTER** An Investigation of In-situ Denitrification in Urban and Forested Wetlands using the 15N Push-Pull Method: M D Harrison, P M Groffman
1730h  IT25F-17 POSTER Measurement and modeling of fluxes across the water sediment interface in a domestic waste impacted river system in Vietnam: T A Duc

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1730h  IT25G  Poster Hall E  Tuesday  1730h

Marine Ecosystem Regime Shifts: Observations and Predictions II Posters (joint with BO)

Presiding: P C Reid, Sir Alister Hardy Foundation for Ocean Science


1730h  IT25G-02 POSTER Assessing aquatic plant communities and density in eutrophic river impoundments with hyperspectral and multi-spectral remote sensing data: Y Q Tian, Q Yu, M Zimmerman, S Flint, M Waldron

1730h  IT25G-03 POSTER Phenological shifts of three interacting zooplankton groups in relation to climate change: M Schlüeter, A Merico, M Reginatto, K Wiltshire, M Boersma, W Greve

1730h  IT25G-04 POSTER Patterns of chlorophyll variability and phytoplankton community composition off southern California and the influence of macroscale and regional oceanographic processes: M Carter, Z Yin

1730h  IT25G-05 POSTER The Present and Future of the Dying Aral Sea: E Arashkevich, P O Zavialov, V Sergeeva, A Nikishina

1730h  IT25G-06 POSTER Climate-Related Ecosystem Variability and Its Potential Effects on Management of Atlantic Cod and Haddock on Georges Bank: J J Bisagni, D Georgianna, D G Mountain

1730h  IT25G-07 POSTER Marine acidification: reproduction and growth rates of Corallinaceae spores (Rhodophyta): F Cumani, F Bradassi, G Bressan, A Di Pascoli

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1730h  IT25H  Poster Hall E  Tuesday  1730h

Modeling in Emerging Data-Rich Environments Posters (joint with BO, PO)

Presiding: A M Baptista, Oregon Health & Science University

1730h  IT25H-01 POSTER Northeast Coastal Ocean Forecast System (NECOfS) (Invited): R C Beardsley, C Chen

1730h  IT25H-02 POSTER Canyon enhancement of seasonal upwelling in the northern California Current System: T Connolly, B M Hickey

1730h  IT25H-03 POSTER New tools for data assimilative and ecosystem modeling applied to the California Current System (Invited): C A Edwards, G Broquet, N L Goebel, A M Moore, C Veneziani, J P Zehr

1730h  IT25H-04 POSTER Challenges in high-resolution simulations of macrotidal estuaries (Invited): O B Fringer, B Wang


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1730h  IT25I  Poster Hall E  Tuesday  1730h

Ocean Exploration II Posters

Presiding: R A Beach, NOAA; N Alvarado, NOAA

1730h  IT25I-01 POSTER Development of a Miniaturized Fluorometer for Monitoring Anthropicogenic Inputs in Coastal Oceanic Waters: M Tedetti, C Guigue, M Goutx

1730h  IT25I-02 POSTER Nutrient Mapping of Surface Waters in Oregon/Washington Coastal Waters Using a 5-channel In Situ Nutrient Analyzer: M Gilbert, J A Needoba

1730h  IT25I-03 POSTER A Fluorosensor for Two-Dimensional In Situ Extracellular Enzyme Activity Measurements in Marine Sediments: Z Cao, Q Zhu, R C Aller, J Y Aller

1730h  IT25I-04 POSTER Two-Dimensional Hydrogen Sulfide Distributions in Salt Marsh Deposits Revealed by a Semi-Reversible Planar Optical Sensor: Q Zhu, R C Aller

1730h  IT25I-05 POSTER Remote measurement of above-water spectral reflectance using an autonomous fiber-optic system: R Miller, E Scott, C Buonassissi

1730h  IT25I-06 POSTER Using fluorescent dyes to characterize the light environment of a partially shaded stream: J A Austin, E C Minor, V Nelson, D Schminkey


1730h  IT25I-09 POSTER Impact of acoustic streaming on velocity measurements in flows with small average velocities: E A Variano, C Pointdexter

1730h  MT15A-14 POSTER A Small, Long-Range AUV with Flexible Speed and Payload: J G Bellingham, B Hobson, M A Godin, B Kieff, J Erikson, R McEwen, C Kecy, Y Zhang, T Hoover, E Mellinger
1730h **IT25J-08 WITHDRAWN**

1730h **IT25J-09 POSTER** The E/V Nautilus – Ocean Exploration and Archaeological Oceanography through Remotely Operated Vehicle Systems and Telepresence Technologies: D Coleman, R Ballard, K L Croft, M Brennan

1730h **IT25J-10 POSTER** 2-D temperature maps of ocean features from inversion of seismic oceanography data: T M Blacic, A Padhi, W S Holbrook, P Mukhopadhyay, S Mallick

1730h **IT25J-11 POSTER** Seismic images across the Luzon Passage and South China Sea: Internal waves, turbulence, and mixing: W S Holbrook, L S. Laurent, R W Schmitt, H L Simmons, D H Eakin

1730h **IT25J-12 POSTER** Incremental observations: Deep-sea corals as substrate for oviparous catsharks: P J Etnoyer, M Brancato, E Bowly, J Hyland

1730h **IT25J-13 POSTER** The Deep Sea Coastal Research and Technology Program: Exploration and Research to Conserve Biodiverse Deep-Sea Ecosystems: T F Hourigan, J Tomczuk, A David, M E Clarke, M Sullivan

**IT25K Poster Hall E Tuesday 1730h**

**Ocean-Aerosol Interactions II Posters (joint with BO, PO, MT, GO, CO)**

**Presiding:** N Meskhidze, North Carolina State University; N B Nelson, UCSB; S Gassó, GEST/UMBC

1730h **IT25K-01 POSTER** RELEASE OF Fe AND Mn FROM ATMOSPHERICALLY WEATHERED SAHARAN SOILS INTO ATLANTIC SEAWATER: P J Statham, A Xylouri, M D Krom

1730h **IT25K-02 POSTER** Particulate sulfur in the remote Equatorial Pacific troposphere during PASE: R M Simpson, B J Huebert, S G Howell, J Zhuang

1730h **IT25K-03 POSTER** Dust and Phytoplankton: A Double-Edged Sword: A M Colarco, W W Gregg, P R Colarco, A da Silva

1730h **IT25K-04 POSTER** Quantifying Marine Emissions of Biogenic Volatile Organic Compounds Using Laboratory and Field Measurements from North Carolina Estuarine System: A W Sabolis, N Meskhidze, D Kamikowsi, R E Reed

1730h **IT25K-05 POSTER** Contribution of atmospheric total nitrogen and phosphorus to marine biological activity over the western North Pacific Ocean: J Jung, H Furutani, M Uematsu

1730h **IT25K-06 POSTER** African Dust Transport to the Canary Region: M D Graldo-Caballero, J HERNANDEZ-BRITO, P Lopez, S Prieto, C Collado, O Llinas, M Rueda

1730h **IT25K-07 POSTER** WATER SOLUBLE DICARBOXYLIC ACIDS IN ATMOSPHERIC AEROSOLS: A CONTRAST BETWEEN LIVERPOOL AND TAIWAN AEROSOLS: O E Etuweve, M R Preston

1730h **IT25K-08 POSTER** The Impact of Marine Organic Emissions on Coastal Air Quality and Climate: N Meskhidze, J Xu, Y Zhang, B Gannt, G A Carlson, S J Ghan, A Nenes, X Liu, R C Easter, R A Zaveri

1730h **IT25K-09 POSTER** Cloud condensation nucleation activity of secondary organic aerosols formed from the oxidation of alkenes and diiodomethane: M D Petters, A Faulhaber, A J Prenni, C M Carrico, R C Sullivan, P J DeMott, S M Kreidenweis, P J Ziemann


1730h **IT25K-11 POSTER** The Concentrations and Solubilities of Aerosol Trace Elements over the Pacific Ocean: C S Buck, W M Landing

1730h **IT25K-12 POSTER** A Global satellite view of the link between surface wind speed and coarse marine aerosol optical depth: Y Lehahn, I Keren, E Boss, Y Ben Ami, O Altaratz

1730h **IT25K-13 POSTER** Atmosphere-Ocean Coupling Associated with 22–24 September, 2009 Australia Dust Event: R P Singh, N P Nezlin, R Singh

**IT25L Poster Hall E Tuesday 1730h**

**Science in Support of Operational Oceanography: Observing System Design, Implementation, and Informatics II Posters (joint with BO, PO, MT, GO, CO)**

**Presiding:** K Hill, Integrated Marine Observing System

1730h **IT25L-01 POSTER** An Operational Ocean Prediction System for the Western North Atlantic: HOPS Implementation for MARCOOS: A Campos Kersten Schmidt, A Gangopadhyay

1730h **IT25L-02 POSTER** OurOcean Portal for Operational Oceanography: P Li, Q Vu, J Farrara, Y Chao, X Jin, Z Li, X Wang, H Zhang

1730h **IT25L-03 POSTER** A Collaborative Environment for Ocean Modeling Test Beds: R Ramachandran, L E Bermudez, J Capella


1730h **IT25L-05 WITHDRAWN**


1730h **IT25L-07 POSTER** Identification of Large Amplitude Wave Groups: J Mann, A Brandt, S E Rennie

1730h **IT25L-08 POSTER** THE VOLUNTARY OBSERVING SHIP (VOS) SCHEME: E Kent, A D Hall

1730h **IT25L-09 POSTER** Extending and Improving HF Radar Coastal Current Coverage via OOI/RSN Connectivity: D Barrick, P Barletto, C W Whelan, L Pederson

1730h **IT25L-10 POSTER** Testing the Use of Microwave Radar Sensors for Long-Term Sea Level Monitoring in NOAA’s National Water Level Observation Network: R Heitsenrether

1730h **IT25L-11 POSTER** Real Time In-Situ Data Acquisition Using Cabled Seabed Observatories: S Ingle, K Duvall, S F Dimarco, M K Howard

1730h **IT25L-12 POSTER** PNW coastal morphology monitoring and observation network: G M Kaminsky, J C Allan, P Ruggiero
The Carbon Cycle in the North Pacific: Biological, Chemical, and Physical Processes III Posters (joint with BO, PO, GO, CO)

**Presiding:** T Saino, JAMSTEC; S R Emerson, University of Washington

1730h **IT25M-01** POSTER Effects of mesoscale eddies on the marine ecosystem in the Kuroshio Extension with an eddy-resolving coupled physical-biological model: Y Sasai, K J Richards, A Ishida, H Sasaki

1730h **IT25M-02** POSTER Effects of eddies on the subduction and distribution of mode waters in the North Pacific using an eddy-resolving ocean GCM: Nishikawa, H Tsujino, K Sakamoto, H Nakano

1730h **IT25M-03** POSTER Effects of storms on primary productivity and air-sea CO2 exchange in the subarctic western North Pacific: a modeling study: M Fujii, Y Yamanaka

1730h **IT25M-04** POSTER Seasonal and inter-annual variability of chlorophyll-a around the Kuroshio Extension during 1997-2008 using satellite remote sensing: K Sasaoka, Y Sasai, T Saino

1730h **IT25M-05** POSTER Long-term water mass fluctuations of the permanent pycnocline in the subtropical North Pacific: M Nakata, T Suga

1730h **IT25M-06** POSTER The Role of the Offshore Transport of Carbon and Nutrients from Coastal Oceans on the Carbon Cycle in the North Pacific Ocean: X Jin, N Gruber, C Deutsch, H Frenzel, Z Lachkar, D Loher, J C McWilliams, T Nagai

1730h **IT25M-07** POSTER Net community production from O2/Ar measurements in the Subarctic North Pacific: K E Giesbrecht, R C Hamme

1730h **IT25M-08** POSTER Net community biological oxygen production in the North Pacific: E M Howard, S R Emerson, S M Bushinsky, C Stump

1730h **IT25M-09** POSTER Major contribution of carbohydrates and amino acids to reactive organic matter in the upper mesopelagic zone of the subtropical North Pacific gyre: K Kaiser, R Benner

1730h **IT25M-10** POSTER Chemical characteristics of suspended particulate matter in the surface waters of the northern Pacific Ocean: B V Parli, A Tsukasaki, N Tamihito, T Eiichiro

1730h **IT25M-11** POSTER Trend of DIC increase and acidification in the interior of the western North Pacific subtropical gyre: M Ishii, D Sasano, N Kosugi, T Midorikawa, S Masuda, T Tokieda, T Nakano, H Y Inoue

1730h **IT25M-12** POSTER Global distribution of mixed layer depth from the Argo profiling floats: improving the temporal and spatial maps: S Hosoda, T Suga, K Sato, T Ohira

1730h **IT25M-13** POSTER Multiple linear and non-linear regression of alkalinity and dissolved inorganic carbon to temperature and salinity in surface waters of the ocean: J Yuan

1730h **IT25M-14** POSTER Assimilation of pCO2 data from Ship of Opportunity Observations into a simplified biogeochemical model and robust estimations of interannual air-sea CO2 fluxes: V Valsala, S S Maksyutov, M Ikeda

1730h **IT25M-15** POSTER Overcoming technical puzzles caused by Eddy Covariance System on the research vessel: Y Lan, B Tsuang, Y Chen, T Wu, S Chen

Use of Oceanographic Data in Ecosystem-Based Management Decision Making II Posters

**Presiding:** J Newton, Univ Washington

1730h **IT25N-01** POSTER Satellite Directed Sampling of the Gulf of Mexico for Atlantic Bluefin Tuna Larvae Sampling Decision Making: M A Roffler, J T Lamkin, B Muhling, G Gawlikowski, D Westhaver, M A Upton

1730h **IT25N-02** POSTER Effects of anthropogenic and landscape factors on coastal water quality: E López, C Lobón, N Weidberg, J L Acuna

1730h **IT25N-03** POSTER Use of IOOS-NANOOS observing data for understanding causes of hypoxia in Hood Canal, Puget Sound, WA: J Newton, A Devol, J E Richey, M J Warner, M Kawase, M H Alford, D Hannafious, E G Josberger, S Brewer, D Fagergren

1730h **IT25N-04** POSTER Hydrological Monitoring and Fisheries Management in the Mississippi Sound: R E Burris, T M Floyd, M S Runo

Marine Technology

**MT25A** Poster Hall E Tuesday 1730h

New Frontiers in Biogeochemical Microsensors for Ocean Observation II Posters (joint with BO, CO)

**Presiding:** K M Orcutt, University of Southern Mississippi; M L Wells, University of Maine

1730h **MT25A-01** WITHDRAWN


1730h **MT25A-03** POSTER Development of an underway flow-cytometer for continuous observations of phytoplankton distributions in the ocean: F Ribalet, J Swalwell, D Schruth, C D Fox, V Armbrust

1730h **MT25A-04** POSTER Analysis of Bioavailable Copper and Iron using Desferrioxamine-B Based Ligand Extraction and Inductively Coupled Plasma Optical Emission Spectroscopy: M Baldwin, C Tripp, N D Kopsar, W King, M L Wells

1730h **MT25A-05** POSTER The Wave Glider, a persistent platform for ocean science: J Manley, S Wilcox, R G Hine


Paleoceanography

**PA25A** Poster Hall E Tuesday 1730h

Ancient DNA in Marine and Lake Sediment Records Posters (joint with BO, GO)

**Presiding:** M J Coolen, Woods Hole Oceanographic Institution

1730h **PA25A-01** WITHDRAWN

1730h **PA25A-02** POSTER 7000 years of virus-host molecular dynamics in the Black Sea: M J Coolen
PA25B Poster Hall E Tuesday 1730h
Paleoceanography General Contributions Posters

Presiding: A Paytan, UCSC

1730h PA25B-01 WITHDRAWN

1730h PA25B-02 POSTER Pliocene records of ITCZ, wind field strength and thermocline temperatures in the Eastern Equatorial Pacific: S A Hovan, A Ravelo, H L Ford

1730h PA25B-03 POSTER Late Quaternary Planktic Foraminifer Fauna and Monsoon Upwelling Records From the Western South China Sea, Near the Vietnam Margin: An IMAGES Synthesis: M Chen, P Yu, H Mii, M Murayama, C Chou, C Liao

1730h PA25B-04 POSTER Proxy-model comparisons of North Atlantic sea surface conditions prior to the 8.2 ka event: K R Watkins, A J Wagner, C Morrill

1730h PA25B-05 POSTER Stable carbon and oxygen isotopes in deep-sea bamboo coral (Ludia ludia) in relation to growth and seawater temperature: J B Kimball, R B Dunbar, T P Guilderson

1730h PA25B-06 POSTER Seasonal Morphologic Variations in Globorhina bulloides Observed from Sediment Trap Samples Collected in the Equatorial Atlantic off the NW Coast of Africa: E Allen, L R Sautter


1730h PA25B-08 POSTER Sediment 231Pa/230Th as a recorder of the rate of the Atlantic meridional overturning circulation: Insights from a 2-D model: Y Luo, R H Francois, S E Allen

1730h PA25B-09 POSTER Glacial Inception in the Community Climate System Model: M Jochum, S Peacock, K T Lindsay, S Levis

1730h PA25B-10 POSTER Chemostratigraphic documentation of a complete upper/middle bathyal section of the Miocene Southern Ocean: Ocean Drilling Program Site 1120, Campbell Plateau off New Zealand: A Ando, B Kimh, T Nakano, H Takata

1730h PA25B-11 POSTER Chronostratigraphy and diatom abundance variations of a core LHB-3PC off the Lützow-Holm Bay, East Antarctica: Y Kim, K Katsuki, Y Suganuma, M Ikehara, B Kimh

1730h PA25B-12 POSTER Multiple sea ice states in an oceanic general circulation model coupled to a simple atmospheric model: D Mirzayof, Y Ashkenazy, H Gildor, E Tziperman

1730h PA25B-13 POSTER Evaluating the Source of Nd to the Southern Ocean During the Eocene Oligocene Transition: H D Scher, M L Delaney

1730h PA25B-14 POSTER Sensitivity of Red Sea circulation to Monsoonal variability during the Holocene: A modeling and sediment record study: E Biton, H Gildor, G Trommer, M Siccha, M Kucera, M van der Meer, S Schouten

1730h PA25B-15 POSTER Pliocene–Pleistocene links between south Atlantic subtropical gyre and eastern equatorial Atlantic upwelling region: D E Wojcieszek, P S Dekens

1730h PA25B-16 POSTER Reconstruction of radiocarbon of intermediate water from the SW Pacific during the last deglaciation: J P Landers, M S Cook, E L Sikes, T P Guilderson

Physical Oceanography

PO25A Poster Hall E Tuesday 1730h
Advances in Coastal Ocean Prediction: Ecosystem Modeling II Posters

Presiding: O Schofield, Rutgers University; I Shulman, Naval Research Laboratory; R He, North Carolina State Univ.

1730h PO25A-01 POSTER Vertical structure of Lidar backscattering is connected to above-surface ocean color variability: M A Montes-Hugo, R W Gould, Z Lee, J H Churnside, R A Arnone

1730h PO25A-02 POSTER Modeling Phytoplankton Dynamics in Monterey Bay: B Penta, J Shulman, J K Joliff, S deRada, S C Anderson

1730h PO25A-03 POSTER Observation and modelling studies of the abundance of cod eggs in the south-eastern Kattegat during 2005 and 2006: S V Pacariz, G M Bjørk, P Jonsson, P Börjesson

1730h PO25A-04 POSTER Operational coastal ecosystem modelling under ECOOP: the effect of model resolution on the quality of operational products: R J Torres, M Butenschon, S Ciavatta, S Saux-Picart

1730h PO25A-05 POSTER Assimilation of ocean color into a 1-D biochemical model of HAB (HABSIM): J M Lenes, R Chen, B Darrow, J Walsh

1730h PO25A-06 POSTER Numerical Investigation of the Middle Atlantic Bight Shelfbreak Circulation and Ecosystem Dynamics: K Chen, R He

1730h PO25A-07 POSTER Improving Ecosystem Model Prediction Through Data Assimilation: J Fiechter, A M Moore, G Broquet

1730h PO25A-08 POSTER Satellite Data Assimilation for a 3D Physical-Biological Model using a Particle Filter: J Mattern, K Fennel, M Dowd, J Wilkin, A Mannino

1730h PO25A-09 POSTER Regional Optical Modelling for Ecosystems, ROMEO: V Sanjuan Calzado, C Trees, S Besiktepe

PO25B Poster Hall E Tuesday 1730h
Coastal Processes and Features From Synthetic Aperture Radar Posters

Presiding: W A Perrie, Bedford Institute of Oceanography

1730h PO25B-01 POSTER Gulf Stream as Nature’s hydraulic breakwater for the US east coast (Invited): P Hwang, J V Toporkov, M A Sletten, D Perkovic, S J Fraser

1730h PO25B-02 POSTER Using spaceborne SAR for coastal ocean monitoring (Invited): X Li, W G Pichel, X Yang

1730h PO25B-03 POSTER Internal Wave Signature Analyses with Synthetic Aperture Radar Images in the Mid-Atlantic Bight: J Xue, M J Caruso, H C Graber

1730h PO25B-04 POSTER Using TerraSAR-X high resolution data to study of wave propagation (Invited): A Pleskachevsky, X Li, S Brusch, S Lehner

1730h PO25B-05 POSTER Evaluation of biological films and surface wind effects to sea surface roughness in the Philippine archipelagoes observed by SAR: D Hasegawa, I Asanuma

1730h PO25B-06 POSTER Submesoscale features observed by SAR: Y He, T Xie, G Liu, W Perrie

1730h PO25B-07 POSTER Update on Estimation Sea Surface Temperature Gradients from RADARSAT-2 SAR: W A Perrie, T Xie
1730h PO25C-01 POSTER Surface Current Observations in the Lower Chesapeake Bay, Mean Circulation Patterns and Modes: L P Atkinson, T Garner, J L Blanco, C Paternostro, P Burke
1730h PO25C-02 POSTER Tidal Currents in Prince William Sound, Alaska: K Glebushko, C L Paternostro
1730h PO25C-03 POSTER Inter-Comparison of Bed Roughness Parameters over Flat and Rippled Beds in the Wave-Current Bottom Boundary Layer: D P Frank, D L Foster
1730h PO25C-04 POSTER Rapid response measurements of hurricane waves and storm surge: U gravois, A B Kennedy, A Sheremet, R Dean
1730h PO25C-05 POSTER Storm Recurrence Period for Duck, NC: J J Smith, T Illgner, R Dolan, H F Lins
1730h PO25C-06 POSTER Observation of littoral hydrodynamics by ground based Dopplerized X-band Radar: S Flamouris, J Seemann, F Ziemer
1730h PO25C-07 POSTER Coherent Marine Radar Measurements of the Properties of Ocean Waves and Currents: D B Trizna, K K Hathaway
1730h PO25C-08 WITHDRAWN
1730h PO25C-09 POSTER X-band radar observations of waves near a tidal inlet and comparisons to the SWAN model: D A Honegger, S Meskill, M C Haller
1730h PO25C-10 POSTER Image Matching for Stabilizing Airborne Imagery with Shallow Water Applications: Y Rzhanov, T C Lippmann, S Peeri
1730h PO25C-11 POSTER Quantifying Short-Term Morphologic Evolution and Alongshore Sediment Transport Rates using Remote Sensing and GPS-Equipped Vehicles: C A Lindemer, J A Puleo
1730h PO25C-12 POSTER Ocean Wave Measurements Using a Shipboard Doppler Radar: D R Lyzenga
1730h PO25C-13 POSTER SeaHorse Tilt Current Meter: Inexpensive Near-Bottom Current Measurements Based on Drag Principle with Coastal Applications: V A Sheremet
1730h PO25C-14 POSTER Environmental Monitors on Lobster Traps: Building Near-Bottom Current Observing System with SeaHorse Tilt Current Meters: J P Manning, V A Sheremet
1730h PO25C-15 POSTER Progress in Coastal Processes Research in Ghana: T C Lippmann, G Wiafe, S Ababio, A Addo, K Agyeum, A D Ashton, C J Hakpe, A Vogel, J Roelvink
1730h PO25C-16 POSTER Stratification Control on Vertical Distribution of the Hypoxia on the Texas-Louisiana Shelf from Towed and Shipboard Observations: B Li, S F Dimarco, M K Howard
1730h PO25C-17 POSTER Relationships of Light Transmission, Stratification, and Fluorescence in the Hypoxic Region of the Texas-Louisiana Shelf in Spring/Summer 2009: J Towns
1730h PO25C-18 POSTER SCALES OF TEMPORAL AND SPATIAL VARIABILITY IN HYPOXIA IN THE NORTHERN GULF OF MEXICO: P Chapman, S F Dimarco
1730h PO25C-19 POSTER Attenuation of Nonlinear Surface Waves Due To The Interaction With Viscoelastic Mud: J M Kailhatu, N Tahvildari
1730h PO25C-20 POSTER Observations of wave-mud interaction across the Louisiana shelf: A Engelstad, T T Janssen, T H Herbers, S Elgar, R Raubenheimer
1730h PO25C-21 POSTER A method for estimating concentration profiles for suspended cohesive sediment based on profiles of acoustic backscatter: C Sahin, I Safak, A Sheremet, M A Allison
1730h PO25C-22 POSTER Fractional resuspension and sediment flux on a wave-dominated, non-cohesive, inner continental shelf: D Buscombe, J R Lacy, D M Rubin
1730h PO25C-23 POSTER Seasonal variations in offshore and longshore sediment transport along the Shimizu coast, Suruga Bay, Central Japan: S Yoshikawa, K Nemoto
1730h PO25C-24 POSTER CROSS-SHORE TRANSPORT OF COARSE GRAINED SEDIMENT: B Hicks, N Kobayashi, J A Puleo
1730h PO25C-25 POSTER Measuring Flow and Sediment Particle Motions Under Unidirectional Waves and Currents: J Calantoni
1730h PO25C-26 POSTER Field measurements of turbulent flow, sediment transport and migrating bed-forms in a tidally dominated estuary: S Reynolds
1730h PO25C-27 POSTER Comparison of Sediment Suspension During Different Weather Events Offshore of Myrtle Beach, South Carolina Using an Acoustic Backscatter Sensor: J J Birchler, P A Wren
1730h PO25C-28 POSTER Boussinesq modeling of observed surfzone tracer plumes: D B Clark, P Feddersen, R T Guza
1730h PO25C-29 POSTER Measurements of high speed vessel-induced wakes: D Kurennoy, T Soomere
1730h PO25C-30 POSTER A Decade of Morphologic Change at Fire Island, New York: Assessing Storm and Anthropogenic Impacts: E Lentz, C J Hakpe
1730h  **PO25D-11 POSTER** Formation mechanism of the Kuroshio small meander off the southeastern coast of Kyushu: Stochastic resonance on the seasonal cycle: **H Nakamura**, A Nishina, T Yamashiro

1730h  **PO25D-12 POSTER** Seasonal Cycles of Mixed Layer Salinity and Evaporation Minus Precipitation in the Pacific Ocean: **F Bingham**, G R Foltz, M J McPhaden, T Suga

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**Presiding:** C N Barron, Naval Research Laboratory

1730h  **PO25E-01 POSTER** Optimization of Ocean Sensor Positions: **P Rogowski**, R Srolkin, M Bruno

1730h  **PO25E-02 POSTER** Developing a National Ocean OSSE Capability: **E J Bayler**, R M Atlas

1730h  **PO25E-03 POSTER** Towards an integrated observation and modeling system in the New York Bight using variational methods: **W Zhang**, J Wilkin, J Levin, H G Arango

1730h  **PO25E-04 POSTER** OSSE assessment of a Loop Current observing system: **M Le Henaff**, V H Kourafalou, A Srinivasan, R M Atlas

1730h  **PO25E-05 POSTER** OSSEs with Ensemble Kalman Filters in Nantucket Sound, Massachusetts: **P Xue**, C Chen, R C Beardsley, R Limeburner

1730h  **PO25E-06 POSTER** An Optimal Observing System Study for the Kuroshio Extension using Particle Filters: **W Kramer**, P Van Leeuwen, S Pierini, H A Dijkstra

1730h  **PO25E-07 POSTER** Impact of Short Term Variability in an Okinawa Trough Observation System Study Experiment: **C N Barron**, R W Helber, L F Smestad, G A Jacobs, P L Spence

1730h  **PO25E-08 POSTER** Using OSSE in a mapping context to characterize the impact of altimeter orbits on the observation of mesoscale: **C Loren**, J Dorandeu, G Dibarboure, P Schluesnel, H Bonekamp, F Parisot

1730h  **PO25E-09 POSTER** Using high resolution altimetry to observe mesoscale and sub-mesoscale signals: **G Dibarboure**, M Pujol, P Le Traon, F Briol

1730h  **PO25E-10 WITHDRAWN**


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**Presiding:** S Minobe, Graduate School of Science, Hokkaido University

1730h  **PO25G-01 POSTER** Importance of Ocean-Atmosphere coupling for Tropical Cyclones activity in the south Indian Ocean: **M Lengaigne**, E M Vincent, J Vincent, G Madec

1730h  **PO25G-02 POSTER** Seasonal Variation of Upper Layer Circulation in the Northern Part of the East/Japan Sea: **T Kim**, J Yoon

1730h  **PO25G-03 WITHDRAWN**

1730h  **PO25G-04 POSTER** Contributions of different mechanisms for atmospheric response to the Gulf Stream in a regional atmospheric model: **K Takatama**, S Minobe, M Inatsu, R J Small

1730h  **PO25G-05 WITHDRAWN**


1730h  **PO25G-07 POSTER** Observations of Large-scale Upper Ocean Volume Transport in the Pacific Ocean: **A Rogers**, S Riser


1730h  **PO25G-09 POSTER** Westerly winds in the Atlantic ITCZ: **S A Grodsky**, J Carton

1730h  **PO25G-10 POSTER** Asymmetry in the Duration of El Niño and La Niña Events: **Y Okumura**, C Deser

1730h  **PO25G-11 POSTER** Temperature and chlorophyll advection in the Gulf of Guinea: **I Muhammed**, G D Quartly, P G Challenor
PO25I  Poster Hall E  Tuesday  1730h  
Operational Global Ocean Forecasting: Promise, Progress, and Performance II Posters

Presiding: G C Smith, Environment Canada

1730h  PO25H-01 POSTER Evaluating the Forecast Capabilities of an Operational Ocean Model for the Northern South China Sea: C M Cobb, A C Mask, C J DeHaan, J Rogers-Cotrone
1730h  PO25H-02 POSTER GULF STREAM PATHWAY AND TRANSPORT VARIATIONS: OBSERVATIONS AND MODELING: J G Richman
1730h  PO25H-03 POSTER The vertical structure of baroclinic tidal currents: The skill of global HYCOM: P G Timko, B K Arbic, R B Scott
1730h  PO25H-04 POSTER Comparison of Front and Eddy Detection Algorithms: A C Mask, F L Bub, C Szczechoski
1730h  PO25H-05 POSTER Modelling poleward undercurrents and subsurface eddies off the Northeastern Pacific Coast: L Zamudio, E Metzger, P J Hogan, A Wallcraft
1730h  PO25H-06 POSTER Development and Validation of an Operational Coastal Forecast System for the Korean Coast: Y P Chu, C A Blain
1730h  PO25H-07 POSTER Qualification of the Mercator Ocean/MyOcean Global Ocean Monitoring and Forecasting System: Skill Assessment for Various Applications: C Regnier, M drevillon, C Desportes, E Greiner, F Hernandez
1730h  PO25H-08 POSTER Multivariate and Multi-data Assimilation System in a Regional Model with High Resolution: M Benkiran, J Chanur, E Greiner, R Bourdalle-Badie, Y Drillet
1730h  PO25H-09 POSTER The Role of Geographical Information Systems in Navy Ocean Forecasting: J Wallmark, J J Runyan
1730h  PO25H-10 POSTER Interannual variability of the oceanic carbon cycle inferred from an operational biogeochemical-physical global model in 2002-2008: C Moulin, A Kremer, A El Moussaoui, C Ethe, L Bopp, E Dombrowsky, E Greiner, O Aumont, P Brasseur
1730h  PO25H-11 POSTER The impact of real-time in situ temperature and salinity data assimilation on operational global ocean forecasts of acoustically-relevant properties: T L Townsend, C N Barron, R W Helber
1730h  PO25H-12 POSTER Overview of validation scientific challenges for operational oceanography: F Hernandez, M drevillon, M Martin
1730h  PO25H-13 POSTER SOAP-3: AN EXAMPLE OF INTEGRATED OCEANOGRAPHIC INFORMATION SYSTEM FOR THE FRENCH NAVY: D Jourdan
1730h  PO25H-15 POSTER Recent advances on assimilation of sea ice data using the Mercator Ocean global operational system: C Testut, G Garric, L Parent, F Ardhuin

PO25J  Poster Hall E  Tuesday  1730h  
Physical Oceanography of Archipelagos III Posters (joint with IT)

Presiding: M Orlic, University of Zagreb; B H Jones, University of Southern California

1730h  PO25J-01 POSTER Seasonal Sea Surface Temperature Variability in the Indonesian Seas: S Kida, K J Richards
1730h  PO25J-02 POSTER Seasonal Physical Dynamics Of The Zanzibar Archipelago, A Modeling Approach: C G Mayorga Adame
1730h  PO25J-03 POSTER Why the inverted barometer effect may be surpassed by two orders of magnitude in the Middle Adriatic archipelago? M Orlic, D Belusci, I Janekovic, M Pasaric
1730h  PO25J-04 POSTER Observations of Internal Waves in the Philippines Archipelago: B S Chinn, M H Alford, J B Girton
1730h  PO25J-05 POSTER Submesoscale Flow and Dynamics in the Mindoro Straits: M R Schaferkotter, P C Gallacher, D A Hebert
1730h  PO25J-06 POSTER Influences of Madden-Julian Oscillations on the Maritime Continent: L Zhou, R Murtugudde
1730h  PO25J-07 POSTER Barotropic and Baroclinic Tidal Currents at the Sills of the Northern Gulf of California: L M Flores Mateos, M Lopez, J Candel
1730h  PO25J-08 POSTER Interannual Variability of the Indonesian Throughflow: Mechanisms and Pathways: E Behrens, C W Boening, A Bisztoch
1730h  PO25J-09 POSTER MONITORING OF OCEANIC FEATURE CHARACTERISTIC IN PHILIPPINE ARCHIPELAGO USING SAR, HF RADAR, OPTICAL IMAGE AND ALTIMETRY IMAGE DATA: Y Arvelyna, I Asanuma
1730h  PO25J-11 POSTER SAR-derived gap flow characteristics in the lee of the Philippine Island Archipelago: M M Gierach, H C Graber
1730h  PO25J-12 WITHDRAWN
1730h  PO25J-14 POSTER Exploratory Observations of Physical Processes in the Philippines' Eastern Straits: J P Martin, C M Lee, B H Jones
1730h  PO25J-15 POSTER Variability in the Optical Signature of the Archipelagic Waters of the Philippines: O C Cabrera, E Boss, C L Villanoy, L T David, B H Jones, G Toro-Farmer
1730h  PO25J-16 POSTER HF RADAR observations of coastal currents and upwellings in the lee of the Island of Panay, Philippines during the northeast monsoon: C A Repollo, X F Vidal, C P Chavanne, P J Flament, C L Villanoy
1730h  PO25J-17 POSTER Characteristics of the wind-driven eddy variability in the lee of the island of Hawaii: S Yoshida, B Qiu, P W Hacker
1730h  PO25J-18 POSTER Climate Signals in an Archipelagic Setting: L T David, R Borja, E Penaflor, C L Villanoy, L Parrott, R C Del Rosario
1730h  PO25J-19 POSTER Generation and variability of optical signatures in the tidally driven San Bernardino Strait: B H Jones, E Boss, C M Lee, G Toro-Farmer, M Ragan
1730h  **PO25J-07** POSTER Microwave imagery and in situ validation of eye mesovortex structure in Hurricane Katrina (2005) at peak intensity: T J Dunkerton, B A Walter, W Perrie, D Long, B Williams, C Nie, J Zhang, E Uhlhorn, R Rogers, P G Black

1730h  **PO25J-08** POSTER Ocean response to typhoon observed by synthetic aperture radar: D Kim, S Nam, W M Moon

1730h  **PO25J-09** POSTER Drag coefficient assessment by SAR spiral signatures of a tropical cyclone on a sea surface in a linear approach: B S Yurchak

1730h  **PO25J-10** WITHDRAWN

**Presiding:** E E McPhee-Shaw, Moss Landing Marine Laboratories; J B Girton, University of Washington

**PO25K** Poster Hall E  **Tuesday**  **1730h**

**The Role of Boundaries in Ocean Mixing III Posters**

**Presiding:** E E McPhee-Shaw, Moss Landing Marine Laboratories; J B Girton, University of Washington

1730h  **PO25K-01** POSTER Dynamics of Bottom Boundary Layer Thickness in Monterey Bay Canyon: K J Morrice, E E McPhee-Shaw, J B Girton, E Kunze, S R Brody

1730h  **PO25K-02** POSTER Observations of Mixing in the North Atlantic Deep Western Boundary Current on the Blake Outer Ridge: F Stahr, T B Sanford

1730h  **PO25K-03** POSTER The rates of mixing in shear flows generated by controlled two-layer exchanges: R W Griffiths, T Prastow, G O Hughes, A Hogg

1730h  **PO25K-04** POSTER Turbulent Mixing in the Deep Western Boundary Current of the Subpolar North Atlantic: C Mertens, M Walter, U Stober, M Rhein

1730h  **PO25K-05** POSTER ADRIASEISMIC-09: FIRST STEPS TO MERGE PHYSICAL OCEANOGRAPHIC OBSERVATIONS AND SIMULTANEOUS SEISMIC REFLECTION TO STUDY SHELF-SLOPE PROCESSES: S Carniel, J W Book, R W Hobbs, W T Wood, A Bergamasco, M Sclavo

1730h  **PO25K-06** POSTER Insights into canyon mixing and interior-boundary exchange from the Monterey Submarine Canyon, California: E E McPhee-Shaw, E Kunze, K J Morrice, J B Girton, S Brody

1730h  **PO25K-07** WITHDRAWN

1730h  **PO25K-08** POSTER The Oregon continental slope: a source or sink of internal tides?: S M Kelly, J D Nash, K I Martini, M H Alford, E Kunze

1730h  **PO25K-09** POSTER Spatial and Temporal Variability of Internal Wave Mixing Events at a Submerged Ridge: E L Hult, C D Troy, J R Koseff

1730h  **PO25K-10** POSTER How does the Red Sea Outflow Water Interact with Gulf of Aden Eddies?: M Ilicak, T M Ozgokmen, W E Johns

1730h  **PO25K-11** POSTER Tidal mixing effect on the oceanic circulation of the East/Japan Sea: H Lee, J Park, M Wimbush, K Choi, K Jung

1730h  **PO25K-12** POSTER Characterizing the Ras al Hadd Jet using NAVOCANSO Ocean Models: R (Carter

1730h  **PO25K-13** POSTER Internal waves and mixing on the Oregon continental slope: K I Martini, M H Alford, S M Kelly, J D Nash, E Kunze

1730h  **PO25K-14** POSTER Near-boundary internal waves simulated by a 1/10 degree OGCM: J von Storch

1730h  **PO25K-15** POSTER Non-tidal Variability in Semi-diurnar Internal Tide Generation in the Southern California Bight: C Hill-Lindsay, M C Buijsman, Y Uchiyama, J C McWilliams

**PO25L** Poster Hall E  **Tuesday**  **1730h**

**The Role of Ocean Observing Systems and Current Models in Emergency Marine Spill Incidents Posters**

**Presiding:** E J Terrill, UCSD

1730h  **PO25L-01** POSTER Sound Predictions 2009: Connecting ocean observing systems to spill response (Invited): W S Pegau

1730h  **PO25L-02** POSTER Texas Automated Buoy System and Oil Spill Response: N L Guinasso, L C Bender, R D Martin, R D Hetland

1730h  **PO25L-03** POSTER Operational oceanography (Mercator-ocean) contribution to drift applications: S N Law Chune, Y Drillet, P Daniel, P J De Mey

1730h  **PO25L-04** WITHDRAWN

1730h  **PO25L-05** POSTER An Ocean Current Information System for Marine Spill Response (Invited): Y Chao, J Farrara, X Jin, Z Li, P Li, Q Vu, X Wang, H Zhang, C Schoch

1730h  **PO25L-06** POSTER The Role of Near Real-Time Surface Current Mapping in Oil Spill Response: M P Otero, E J Terrill, L Hazard, S Kim, J Muskat

1730h  **PO25L-07** POSTER Utilization of HF radar-derived surface currents in oil spill responses: two years after the M/V Cosco Busan incident: N Garfield, J D Paduan, M Cook, C Halle

**PO25M** Poster Hall E  **Tuesday**  **1730h**

**Using a Nonlinear Dynamical Systems Approach to Forecasting Sea Level Oscillations Posters**

**Presiding:** P Capuano, University of Salerno

1730h  **PO25M-01** WITHDRAWN

1730h  **PO25M-02** POSTER Nonlinear Shallow water Tides on the European Shelf. (Invited): O B Andersen

**Wednesday A.M.**

**Biological Oceanography**

**BO31A**  **D137**  **Wednesday**  **0800h**

**Comparative Proteogenomics II**

**Presiding:** G Rocap, University of Washington; R Morris, University of Washington

0800h  **BO31A-01** Microbial Gene Expression in the Coastal Ocean (Invited): M Moran, S Gifford, R S Poretsky, J Rinta-Kanto

0815h  **BO31A-02** The Meta-Transcriptome of an Ammonia Oxidizing Archaea Bloom in Georgia Coastal Waters: J T Hollibaugh, S Gifford, N Bano, S Sharmai, M Moran

0830h  **BO31A-03** Observations of the most abundant and active genes in the biosphere—the ecology of viral genes: K Wommack, S J Williamson, L A Zeigler, D W Fadrosh, S W Polson

0845h  **BO31A-04** Seeking a signal of positive evolution in closely related diatom species: J A Koester, C Berthaume, D Schruth, V Armbrust

0900h  **BO31A-05** Integrated transcriptional and post-transcriptional regulatory responses of Pelagibacter ubique to environmental change (Invited): S Giovannoni, D P Smith, S Bowell, A Norbeck, M Lipton, C Nicora, D Barofsky, C A Carlson, R D Smith
0915h  **BO31A-06** Mapping out the biochemical pathways of diatoms under iron limitation: Quantitative proteomic mass spectrometry (*Invited*): **B L Nunn**, R F Strzepek, Y S Tsai, Y Ting, D Goodlett

0930h  **BO31A-07** Metal Stress in Cyanobacteria: Physiological and Proteomic Culture Studies of Atlantic Synechococcus: **A D Cox**, V Bulysin, M A Saito

0945h  **BO31A-08** Cyanobacterial Diversity And Niche Adaptation In Marine Environments: **A Post**, S Penno, N Kamennaya

**BO31B D135 Wednesday 0800h**

**Deep-Sea Food Webs: Origins and Interactions II**

**Presiding**: T T Sutton, VIMS; J C Hoffman, US Environmental Protection Agency

0800h  **BO31B-01** Cross-system comparison of zooplankton effects on transport of organic matter to the deep sea (*Invited*): **D K Steinberg**, S E Wilson, M R Gleiber, H Ducklow, K Buesseler

0815h  **BO31B-02** The Bathyplagic Community of Monterey Canyon: **B H Robison**, R E Sherlock, K R Reisenbichler

0830h  **BO31B-03** BIOENERGETIC IMPLICATIONS OF DEEP-SEA FOOD WEB STRUCTURE: **G T Rowe**

0845h  **BO31B-04** Bathyplagic food web structure of the northern Atlantic Mid-Atlantic Ridge based on stable isotope analysis: **J C Hoffman**, T T Sutton

0900h  **BO31B-05** MYCTOPHID (PISCES, MYCTOPHIDAE) COMMUNITIES AND TROPHIC STRUCTURE IN THE TASMAN SEA ABYSSAL BASIN: **A Flynn**

0915h  **BO31B-06** Trophic Structure of Midwater Fishes over Cold Seep Areas in the Gulf of Mexico: **J McClain**, S W Ross

0930h  **BO31B-07** Food-web diversity on the Hatteras middle slope: analysis of surface to benthic trophodynamics: **A W Demopoulos**, S W Ross, A M Quattrini, J McClain, D J Gualtieri, T T Casaza

0945h  **BO31B-08** Links between top predators of the abyss and the epipelagic: **D M Bailey**, J C Drazen, H A Ruhl, K Smith

**BO31C PB255 Wednesday 0800h**

**Understanding Ecophysiological Adaptation Potential to Climate Change: Mechanistic Approaches II**

**Presiding**: N Himmerkus, Univ. of Kiel; M A Gutowska, Physiology Institute CAU; S L Dupont, Göteborg University; F Melzner, IIFM-GEOMAR

0800h  **BO31C-01** The effects of simulated heat waves on the photo physiology of Northern and Southern populations of Zostera marina: **G Winters**, N Bergmann, P Nelle, B Fricke, G Rauch, T Reusch

0815h  **BO31C-02** A Proton Conductance in *Coccolithus pelagicus* – Implications for Coccolithophore pH Homeostasis in a Changing Ocean: **A Taylor**, A Chrachri, G Wheeler, C Brownlee

0835h  **BO31C-03** Dopamine signaling mediates adaptive phenotypic plasticity in response to food availability: **D K Adams**, L M Anger

0845h  **BO31C-04** Impact of CO2-driven ocean acidification on early life-history – Towards a physiological model: **S L Dupont**, M Stumpf, F Melzner, M S Thorndyke

0900h  **BO31C-05** Embryonic hypoxia and hypercapnia: tolerance mechanisms and sensitivity of cephalopod embryonic development in response to elevated environmental pCO2: **F Melzner**, M Y Hu, R Maneja, M A Gutowska, M Charmantier-Daures, G Charmantier

0915h  **BO31C-06** Adaptation to environmental extremes – insights from a doomed ecosystem: sea ice: **R Kiko**, U John, M Kramer, M Lucassen

0930h  **BO31C-07** Impact of elevated CO₂ on marine fish acid-base balance: an important component of the inorganic carbon cycle (*Invited*): **M Grosell**

0945h  **BO31C-08** Transcriptional remodeling during temperature acclimation of the eurythermal goby fish, Gillichthys mirabilis: **CA Logan**, G N Somero

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**Chemical Oceanography**

**CO31A D139 Wednesday 0800h**

**Interpreting Variability in Oceanic Biological Community Composition and Biogeochemical Fluxes I (joint with BO, IT)**

**Presiding**: Z Liu, UT Austin; J Leichter, T Meador, WHOI

0800h  **CO31A-01** Abandoning Sverdrup (*Invited*): **M Behrenfeld**

0830h  **CO31A-02** Investigating the decadal increase of primary production at Station ALOHA, Hawaii using data assimilative model: **Y Luo**, H Ducklow, S C Doney, M A Friedrichs

0845h  **CO31A-03** Fluxes of nutrients and chlorophyll associated with the internal wave climate of Moorea, French Polynesia: **J Leichter**, J L Hench, M Stokes, J Witting, L Washburn

0900h  **CO31A-04** Meridional variability in dissolved organic matter stocks and diagenetic state within the upper 600 m of the North Atlantic Subtropical Gyre: **S J Goldberg**, C A Carlson, B Bock, N B Nelson, D A Siegel


0930h  **CO31A-06** Investigation on physical, chemical and biological pathways of short peptides in seawater: **Z Liu**, P Hatcher, C Lee, M Mulholland

0945h  **CO31A-07** Peptide hydrolysis and dipeptide uptake in coastal and oceanic waters in the mid-Atlantic: **P W Bernhardt**, M R Mulholland, C Lee, K C Filippino, Y Tang

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**Education and Outreach**

**ED31A E141 Wednesday 0800h**

**Compound Interest: Research + Energy + Outreach = Career and Personal Yield I**

**Presiding**: L A Hotaling, Beacon Institute; S E Franks, University of California, San Diego

0800h  **ED31A-01** Making sense of NSF’s broader impacts criterion: how to address it and why: **J Holbrook**

0815h  **ED31A-02** Using Concept Maps To Teach Biological Oceanography: **M Perry**, A deCharon

0830h  **ED31A-03** From science via social media to web-TV production – an investment in outreach enhancing professional skills and networks. (*Invited*): **B Bye**

0845h  **ED31A-04** The Ross Sea Connection: Linking broad audiences to an Antarctic Ecosystem: **J T Kohut**, J D McDonnell, C Parsons, H Clark, C A Linder

0900h  **ED31A-05** SoundCitizen: Geochemical Studies of Aquatic Systems Using a Volunteer-Based Sampling Network: **R G Keil**, T Clay, J Neibauer, A Myers-Pigg, B Kimball
0915h  ED31A-06 Merging Outreach and Research: Lessons Learned on Balancing These Goals Using Ocean Ecosystem Health As a Focus: R M Kudela, L Beach, A R McGaraghan, J Q Lane, T Takahashi, H Kerker


0945h  ED31A-08 SENSE IT: Student Enabled Network of Sensors for the Environment using Innovative Technology: L A Hotaling

**Geological Oceanography**

**GO31A E143** Wednesday 0800h

**Advances in Coupled Models of Coastal Sedimentary Dynamics and Morphology I (joint with PO)**

**Presiding:** C R Sherwood, US Geological Survey; R Geyer, WHOI; T Hsu, University of Delaware

0800h  GO31A-01 The Regional Ocean Modeling System (ROMS) ... (Invited): H G Arango

0815h  GO31A-02 Wave-current interaction in a three-dimensional oceanic circulation model based on a vortex-force formalism: Applications to the surf-zone and inner-shelf circulations (Invited): Y Uchiyama, J C McWilliams, A P Shchepetkin

0830h  GO31A-03 Evaluation of the performance of the community sediment transport model at a complex coastal site (Teignmouth, UK): R J Whitehouse, T J Chersey, M A Knaapen, J M Harris, J Sutherland, R L Soulsby, C R Sherwood, W R Geyer, N K Ganju, R P Signell

0845h  GO31A-04 Observation and simulation of mean alongshore flows on the inner shelf: the role of tidal rectification and cross-shore resolution: N K Ganju, S J Lentz, T Farrar, C R Sherwood

0900h  GO31A-05 A numerical model for the coupled long-term evolution of salt marshes and tidal flats: G Mariotti, S Fagherazzi

0915h  GO31A-06 The Role of Turbulence Modulation in Wave-induced Fine Sediment Transport: C E Oezdemir, T Hsu, S Balachandar


0945h  GO31A-08 Modeling Sand Resuspension and Stratification in Turbulent Nearshore Flows: Sensitivity to Grain-Size Distribution: D C Conley, D Buscombe

**Interdisciplinary**

**IT31A PB254** Wednesday 0800h

**Assessing, Monitoring, and Predicting Coastal and Inland Water Quality Using Remotely Sensed Data and Products I (joint with BO, PO)**

**Presiding:** S R Greb, Wisconsin Department of Natural Resources; P M DiGiacomo, NOAA/NESSDIS; Z Lee, Northern Gulf Institute

0800h  IT31A-01 Mapping Water Turbidity Using High Resolution Multispectral Satellite Images: S Liew, L Kwok

0812h  IT31A-02 Uncertainties of inherent optical properties in the Dutch Lakes: S Salama, C Mannaerts

0824h  IT31A-03 Forecasting Chlorophyll Distributions from Satellite Ocean Color Imagery and Modeled Currents: R W Gould, D S Ko, T L Townsend, R D Smith, R A Arnone

0836h  IT31A-04 Remote estimation of chlorophyll-a concentration in inland and coastal waters: from close range to satellite observations: A A Gitelson, D Gurlin, W J Moses, D C Rundquist

0848h  IT31A-05 Using MERIS for monitoring cyanobacterial algal blooms, eutrophication and water quality in South African inland waters: M W Matthews, S Bernard

0900h  IT31A-06 Water Quality and Optical Property Characterizations for the China’s Lake Taihu from MODIS-Aqua Measurements: M Wang, W Shi

0912h  IT31A-07 COMPARISON OF MERIS AND HICO SPECTRAL IMAGING ALONG THE OREGON COAST: N Tufillaro, C O Davis, Z Lee


0948h  IT31A-10 A unified parameter for quantitative remote sensing of water clarity: Z Lee, A Weidemann, S Shang, R A Arnone

**IT31B PB252** Wednesday 0800h

**Oceans and Human Health: Identifying and Understanding Ocean Health Benefits and Threats I (joint with BO, PO, CO)**

**Presiding:** S L Smith, University of Miami; E A Laws, Louisiana State University

0800h  IT31B-01 Marine Cyanobacteria, a New Resource for Drug Discovery and Molecular Tools: W Gerwick, A C Jones, E Esquenazi, L G Gerwick, P Dorrestein

0812h  IT31B-02 FROM BEACH TO BEDSIDE: DISCOVERY IS ONLY THE FIRST STEP IN DEVELOPING NEW THERAPIES FROM THE SEA: D Baden

0824h  IT31B-03 Selenium Health Benefit Values as Seafood Mercury Risk Criteria: N V Ralston

0836h  IT31B-04 Ecology of pathogenic vibrios (Invited): C N Johnson

0848h  IT31B-05 Coastal margin collaboratories: from reactive to anticipatory science (Invited): A M Baptist, E V Arbrust, B C Crump, L Herfort, B M Howe, M D Levine, D Maier, C L McNeil, J Needoba, T D Peterson, F G Prabl, T B Sanford, H M Simon, M Smit, Y H Spitz, B Tebo, P Zuber

0900h  IT31B-06 Beach Bacterial Prediction in the Great Lakes (Invited): P Roberts

0912h  IT31B-07 Detection of Staphylococcus aureus and MRSA in Beach Water and Sand & the Performance of ChromAgar Media for Enumeration of Environmental Samples: K D Goodwin, M Pobuda, J Griffith, M Madison, D Ebenet, Y Cao, S Weisberg

0924h  IT31B-08 Uptake and Bioaccumulation of Nanoparticles in Suspension-Feeding Bivalves: JJ Doyle, J Ward, D Kach

0936h  IT31B-09 Extreme storm events drive pathogen contamination in urban coastal systems: S L McLellan, E P Sauer

0948h  IT31B-10 The role of viruses and bacteria on the bloom dynamics and toxicogenesis of Pseudo-nitzscha: S Jiang, M Sison-Mangus

58 2010 Ocean Sciences Meeting
Physical Oceanography

PO31A PB253 Wednesday 0800h
Advances in Coastal Ocean Prediction: Nested Modeling I
(joint with IT)

Presiding: V H Kourafalou, University of Miami/RSMAS; P J De Mey, LEGOS

0800h PO31A-01 Variational Assimilation of Satellite Observations in a Coastal Ocean Circulation Model off Oregon: A L Kurapov, G D Egbert, S P Sullivan, M Kosro

0815h PO31A-02 Modeling Interactions of M2, Internal Tide with Wind-Driven Circulation on the Oregon Shelf: J Osborne, A L Kurapov, G D Egbert, M Kosro

0830h PO31A-03 Ensemble smoother for optimizing tidal boundary conditions and wind forcing by assimilation of High-Frequency Radar surface currents measurements of the German Bight: A Barth, A Alveza-Azarate, K Gurgel, J Staneva, A Port, J Beckers, E V Stanev

0845h PO31A-04 Novel Embedding Schemes for Free-surface Data-Assimilative Modeling of Regional Multiscale Dynamics: P J Haley, P F Lermusiaux

0900h PO31A-05 C-NOOFS: Validation of a Canadian regional pre-operational ocean forecast system for the North West Atlantic: F J Davidson, G C Smith, A W Ratsimandresy, F Hernandez, D Power, C Bishop, C G Hannah

0915h PO31A-06 A Nested Atlantic-Mediterranean Sea General Circulation Model for Operational Forecasting: P Oddo, M Adani, N Pinardi, G C Fratini, M Tonani, D Pettenuzzo

0930h PO31A-07 Marine Rapid Environmental Assessment using relocatable nesting in large scale operational analyses: N Fabbroni, N Pinardi, P Oddo, P F Lermusiaux, M Demarte, M Poulain

0945h PO31A-08 The Evolution of an Urban Ocean Observatory – Marine Observing and Forecasting in New York/New Jersey Waters: T O Herrington, A F Blumberg, N Georgas, M Bruno, D Runnels

2010 Ocean Sciences Meeting 59
**PO31C** D136  Monterey Bay Region: Physical Processes and Their Impacts I
(joint with IT)

**Presiding:** R A Hall, University of Hawai‘i at Manoa; M C Gregg, University of Washington; G S Carter, University of Hawaii

0800h **PO31C-01** Internal Tide Energy Fluxes Within and Entering Monterey Canyon: S R Brody, J B Girton, E Kunze, E E McPhee-Shaw
0815h **PO31C-02** A regional view of the internal tide around Monterey Bay: J B Girton, Z Zhao, S Brody
0830h **PO31C-03** The energetics of barotropic and baroclinic tides in the Monterey Bay area: D Kang, O B Fringer
0845h **PO31C-04** Turbulence in the Wake of an Internal Solitary Wave Train (Invited): L Goodman, Z Wang
0900h **PO31C-05** Comparison of two cases of thin layers evolution in strong turbulence from a small AUV in Monterey Bay, CA: Z Wang, L Goodman
0915h **PO31C-06** Turbulent Mixing on the Inner Shelf of Monterey Bay and the Implications for Biological Thin Layers: M Stacey, M A McManus, J V Steinbuck, O M Cheriton, J P Ryan
0930h **PO31C-07** Fronts as Ecosystem Organizers in Monterey Bay (Invited): J P Ryan, M A McManus, C B Woodson, R M Kudela, J D Paduan
0945h **PO31C-08** What determines the dominant species of phytoplankton blooms in Monterey Bay?: H Kim, F Chavez, K Buck

**PO31D** PB256  Patchy Mixing and the Geography of the Ocean's Energy Cascade I

**Presiding:** S Elipot, Proudman Oceanographic Laboratory; J M Lilly, Earth and Space Research

0800h **PO31D-01** Modeling Near-Inertial Wave Generation and Radiation at the Global Scale — Implications for the Geography of Mixing (Invited): H L Simmons, M H Alford
0815h **PO31D-02** Maintenance of the mean kinetic energy in the global ocean by the barotropic and baroclinic energy routes: H Aiki, K J Richards
0830h **PO31D-03** Deep flow and mixing through the Southwest Indian Ridge: J A MacKinnon, G C Johnson, F Ascani, S Johnston, R Pinkel
0845h **PO31D-04** Upper Ocean Measurements of Turbulent Kinetic Energy Dissipation Rate with an Upwardly Moving Microstructure Profiler: A H Callaghan, B Ward, T Fristedt, J Vialard, R A Weller, C E Grosch
0900h **PO31D-05** An empirical study of diapycnal mixing in the abyssal ocean: T M decloedt, D S Luther
0915h **PO31D-06** Breaking of Unsteady Lee Waves Generated by Diurnal Tides: T Nakamura, Y Isoda, H Mitsudera, S Takagi, M Naganawa
0930h **PO31D-07** Intermittent intense mixing observed in an Arctic shelf sea: Y Lenn, T Rippeth, C Old, J A Hoelemann, S Bacon, I Polyakov, V Ivanov
0945h **PO31D-08** Eddy-induced mixing in the Southern Ocean (Invited): A C Naveira Garabato, R Ferrari, K L Polzin

**PO31E** EI46  The South Atlantic, Interocean Exchanges, and the Meridional Overturning Circulation I (joint with CO)

**Presiding:** K A Donohue, University of Rhode Island; S L Garzoli, NOAA/AOML

0800h **PO31E-01** Water mass variability in the subtropical South Atlantic (Invited): A R Piola
0815h **PO31E-02** Agulhas Leakage: The Neglected Player in the Variability of the Atlantic Meridional Overturning Circulation (Invited): A Biastoch, C W Boening, J R Lutjeharms
0830h **PO31E-03** Variability of the Western Boundary Components of the Meridional Overturning Circulation in the South Atlantic (Invited): C S Meinem, S L Garzoli, A R Piola, M O Baringer, E J Campos, S Speich
0845h **PO31E-04** Seasonal to Decadal changes in the Brazil Current Front: R Lumpkin, S L Garzoli, G J Goni, F Bringas, Gutierrez, P DiNezio
0900h **PO31E-05** Numerical simulation of the South Atlantic and Indian Ocean circulation forced with monthly means of NCEP Reanalysis since 1948: R C Goncalves, E J Campos, S L Garzoli, R Lumpkin, G J Goni
0915h **PO31E-06** New Measurements of Basin Exchange and Transports in the South Atlantic: B A King, E McDonagh, G Evans, G D McCarthy, M Woodgate-Jones, P Cipollini, E J Campos, C B Gramcianiov
0930h **PO31E-07** Climate impacts of changing intermediate water mass properties in the South Atlantic: J A Graham, D P Stevens, K J Heywood, Z Wang
0945h **PO31E-08** The encounter between anticyclonic eddies and a continental border: an analytical study: J L Azevedo, D Nof, M M Mata

**Physical Oceanography**

**PO32A** Oregon Ballroom  Physical Oceanography Plenary Session: Surface Salinity from Space: The Aquarius/SAC-D Mission on the Technological and Scientific Frontier of Oceanography and Climate Research

**Presiding:** R D Muench, Earth & Space Research

1030h **PO32A-01** Surface Salinity from Space: The Aquarius/SAC-D Mission on the Technological and Scientific Frontier of Oceanography and Climate Research: G S Lagerloef

**Wednesday P.M.**

**Biological Oceanography**

**BO33A** D137  Can Nitrogen Fixation in Aquatic Systems Reverse Nitrogen Limitation? II (joint with CO)

**Presiding:** M J McCarthy, Université du Québec à Montréal; R Maranger, Université de Montréal; R Fulweiler, Boston University

1300h **BO33A-01** Should We Regulate Nitrogen, Phosphorus or Both to Prevent and Reverse Eutrophication? (Invited): D W Schindler
1315h BO33A-02 Iron availability prevents diatom growth and the amelioration of nitrogen limitation in the Atlantic: M Moore, M Mills, C Mahaffey, E P Achterberg, R Geider, J La Roche, M Rijkenberg, S Steigenberger, S J Ussher

1330h BO33A-03 The nitrogen fix: Pelagic and benthic N fixation balance nitrogen deficits in the African Great Lakes: R Hecky, S Guildford

1345h BO33A-04 Why does N-limitation persist in aquatic ecosystems, despite the ubiquity of nitrogen (N2) fixers? (Invited): H W Paerl

1400h BO33A-05 Timescales and mechanisms of fixed nitrogen retention in freshwater benthic and planktonic communities: T Scott

1415h BO33A-06 Nitrogen fixation, denitrification and the nitrogen balance of the ocean. (Invited): A Devol

1430h BO33A-07 Spatial Variation in Nitrogen Fixation Activity and Impact in Tropical and Subtropical Oceanic Waters: J P Montoya, J P Landrum, M Crumley, P Moisander, J Hewson, J Zehr

1445h BO33A-08 Limitation of aquatic production: right answer, wrong question? (Invited): J Downing

BO33B D135 Wednesday 1300h Ecology and Diversity of Aquatic Protists: Advances and Methodologies II

Presiding: E Demir, MBARI; A Z Worden, Monterey Bay Aquarium Research Institute

1300h BO33B-01 Operational Taxonomic Units in planktonic eukaryotes: is the 18S rRNA a good marker? (Invited): H Moreau

1330h BO33B-02 Taxonomic and metabolic shifts in an iron-stimulated eukaryotic marine plankton community from the NE Pacific Ocean revealed through comparative metatranscriptomics: A Marchetti, D Schruth, C Durkin, C Berithaume, R Morales, M S Parker, R Kodner, V Armbust

1345h BO33B-03 Coherent Species Packing of Planktonic Protists: Tintinnid Ciliates in the Oligotrophic Mediterranean Sea: J R Dolan, M Ritchie

1400h BO33B-04 Eukaryotic Biodiversity in Polar Sea Ice – a Molecular Approach: J U Kegel, B Flemer, S Haase, C Uhlig, A Krell, G Dieckmann, K Valentin

1415h BO33B-05 Rapid detection of Pseudo-nitzschia phyotypes using DNA microarrays: T D Peterson, M W Smit, M Maier, H M Simon

1430h BO33B-06 Global Protistan Diversity and Biogeography: Part I. Where are we today?: D A Caron, L A Amaral-Zettler, K B Heidelberg, W C Nelson, S Cary, R Gast, E Sherr, B F Sherr, P D Countway


BO33C PB255 Wednesday 1300h Spatial Dynamics of Species Abundance and Interactions Across Trophic Levels I (joint with IT)

Presiding: J R Watson, James Watson; V Bartolino, National Board of Fisheries, Institute of Marine Research

1300h BO33C-01 Unravelling spatiotemporal dynamics using generalized additive models (Invited): L C Stige

1315h BO33C-02 Estimating Survey Detection Probability and Incorporating it into Spatial Dynamics of Species Abundance Studies: S Kotwicki

1325h BO33C-03 Spatial association between walleye pollock and euphausiids on the eastern Bering Sea shelf, 2004 – 2008: P H Ressler, S Kotwicki

1335h BO33C-04 Ontogeny and sex disentangle density-dependent and density-independent spatiotemporal dynamics of a marine fish population: V Bartolino, L Ciannelli, N M Bacheler, K Chan

1345h BO33C-05 Manifestations of meso-scale eddies in the northern Gulf of Alaska: Relating stable carbon and nitrogen isotope variation in the northern lampfish and Neocalanus with the marine survival rate of pink salmon: T C Kline

1355h BO33C-06 Patterns in the Marine Distribution of Oregon Chinoook Salmon: R Ireland, L Ciannelli, R Bellinger, M Banks, P W Lawson, G Sylvia

1405h BO33C-07 Synchrony in marine zooplankton biomass and abundance patterns: a world-wide comparison: H P Batchelder, D L Mackas, T D O’Brien

1415h BO33C-08 Spatio-temporal dynamics of the North Sea plankton functional groups over the last 50 years: P Licandro, M Llope, L C Stige

1425h BO33C-09 Environmental and spatial clues to explain anchovy expansion in the North Sea: K E Raab, M Llope, P Licandro, M Dickey-Collas

1435h BO33C-10 Dynamic Height: A Key Variable for Identifying the Spawning Habitat of Small, Pelagic Fishes: R G Asch, D M Checkley

1445h BO33C-11 SPATIO-TEMPORAL DYNAMIC OF REPRODUCTIVE AND RECRUITMENT PROCESSES OF EUROPEAN HAKE IN THE CENTRAL MEDITERRANEAN: G Garofalo, T Fortibuoni, M Gristina, G Sinacori, F Fiorentino

Chemical Oceanography

CO33A D139 Wednesday 1300h Interpreting Variability in Oceanic Biological Community Composition and Biogeochemical Fluxes II (joint with BO, IT)

Presiding: N Bouskill, Princeton University; R L Hansman, California Institute of Technology

1300h CO33A-01 Genomic and Transcriptomic Insights into Microbial and Viral Roles in Ocean Biogeochemistry (Invited): I Hewson, M Breitbart, J Brown, D Doud, L McDaniel, T F Ng, E Webb

1315h CO33A-02 Transition of Bacterioplankton Lineages Coupled to Mixing, Export and Transformation of DOM in the Mesopelagic Zone of the Northwestern Sargasso Sea (Invited): C A Carlson, R Morris, S Giovannoni, D A Hansell, S J Goldberg, R Parsons, A Treusch

1330h CO33A-03 Metabolic Strategies of Free-living and Aggregate Associated Bacteria Inferred from Biological and Chemical Profiles in the Black Sea Suboxic Zone: J Staley, C A Fuchsman, J K Birkpatrick, W J Brazelton, J W Murray

1345h CO33A-04 Phospholipid Turnover Rates Suggest Rapid Cycling of Heterotrophic Bacterial Carbon in the Upper Ocean: B Van Mooy, K Longenecker, K Poppendorf

1400h CO33A-05 An Exploration of Phytoplankton Metabolism Through 13C and 15N Patterns of Individual Amino Acids: a possible tracer of cyanobacterial vs. eukaryotic phytoplankton production?: J C Lehman, M McCarthy

1415h CO33A-06 Temporal and spatial analysis of ammonia-oxidizing organisms in Chesapeake Bay: N Bouskill, D Eveillard, B Ward
1430h CO33A-07 Denitrification and Controls on nirS Diversity, Gene Abundance and Expression in Coastal and Wetland Sediments: J L Bowen, B Ward

1445h CO33A-08 Dinitrogen gas production by dominant sponges on Conch Reef, Florida Keys (USA) measured by underwater Membrane Inlet Mass Spectrometry (MIMS): C S Martens, N L Lindquist, B N Popp, H P Mendlovitz, P J Gibson, R Camilli, J L Hench, A Duryea

Education and Outreach

ED33A E141 Wednesday 1000h
Ocean Literacy and Mutualism: Science Organizations Partnering With Informal Education Institutions

Presiding: M K Miller, Mary Miller; E Ban, Smithsonian Institution; C McDougall, NOAA

1305h ED33A-01 Mutualism, Commensalism, and Sometimes Parasitism: Partnerships with a Large Federal Science Organization: C McDougall

1315h ED33A-02 Applying Predictive Intelligence to Improve Ocean Literacy and Conservation Action: Findings from The Ocean Project Public Opinion Survey (Invited): J M Hekkers, B Mott, K Sher

1330h ED33A-03 The Smithsonian Ocean Initiative and Collaboration: Building an Ocean Literate Society Through Scientific and Educational Partnerships: E Ban

1345h ED33A-04 Building Effective Partnerships Among Scientists, Educators and Informal Science Institutions: J D McDonnell, C Parsons, C S Lichtenwalner, H Clark, R Lyons, L Bovitz, C Ripberger, S Mikulak

1400h ED33A-05 Science organizations and informal science education venues: Partnering to increase relevance and science literacy (Invited): E McCallie

1415h ED33A-06 Baiting the Hooks: Scientist-Educator team development through concept mapping and online tools: C Herren, A deCharon, J T Repa, A Holt Cline, C Companion, D Goodwin

1430h ED33A-07 Florida A&M University and the Orlando Science Center: Enhancing the Ocean Literacy of Underrepresented Students and Their Teachers: M A Owens, K Nixon

1445h ED33A-08 Social integration in ocean sciences: An emerging community partnership model (Invited): A Shouse

Geological Oceanography

GO33A E143 Wednesday 1000h
Observation and Modeling of Suspended Particle Dynamics in the Ocean I (joint with PO)

Presiding: P S Hill, Dalhousie Univ

1300h GO33A-01 Holographic imaging for the characterization of suspended particles and the estimation of settling velocity (Invited): A Nimmo-Smith, G W Graham

1315h GO33A-02 Turbulence/Sediment Interactions in a Tidal Strait: K M Braithwaite, D G Bowers, A Nimmo-Smith, G W Graham

1330h GO33A-03 Monitoring Size and Shape Variations of Suspended Particles with Holography: G W Graham, A Nimmo Smith, D Bowers, K Braithwaite

1345h GO33A-04 Optical properties of suspended particles: D G Bowers, K Braithwaite, A Nimmo-Smith, G Graham, C Jago, J Simpson

1400h GO33A-05 Optical Consequences of Particle Aggregation (Invited): W H Slade, E Boss

1415h GO33A-06 Predictability of Particle and Optical Properties of Suspended Sediment in a Nearshore Bottom Boundary Layer: P S Hill, T G Milligan, B A Law, J Newgard


1445h GO33A-08 Placing Particle Aggregation Processes in Larger Models: A Burd

Interdisciplinary

IT33A E147 Wednesday 1000h
Impact of Eutrophication and Climate Change on Marginal Seas I (joint with BO, PO, CO)

Presiding: M Li, University of Maryland CES; K Kim, Seoul National University

1300h IT33A-01 Harmful Algal Blooms and their Relation to Offshore and Onshore Water Transport (Invited): C Chen, R C Beardsley, P Ding

1315h IT33A-02 The Effect of Changjiang Discharged Nutrients on Primary Productivity of the East China Sea: A Numerical Assessment: K K Liu, S Chao, H Lee, G Gong, Y Teng

1330h IT33A-03 Eutrophication and algal blooms in coastal embayments: Teasing apart climate variability from anthropogenic impacts: P M Gilbert, D Hinkle, C Wazniak, B Sturgis

1345h IT33A-04 Typhoon’s Impacts on Marine Environment and Phytoplankton–base on Satellite and in situ Observation: D Tang


1415h IT33A-06 The role of the bottom boundary layer in seasonal hypoxia over the Texas-Louisiana continental shelf (Invited): R D Hetland

1430h IT33A-07 The Role of Sediment Biogeochemistry in the Evolution of Bottom Water Hypoxia: a Baltic Sea Case Study: D C Reed, C P Slomp, B G Gustafsson

1445h IT33A-08 Modeling Hypoxia Response to River Flow and Wind Forcing in Chesapeake Bay: Y Li, M Li

IT33B PB252 Wednesday 1000h
Oceans and Human Health: Predicting Harmful Algal Blooms I (joint with BO, PO, CO)

Presiding: C Anderson, University of California Santa Cruz; R M Kudela, University of California Santa Cruz

1300h IT33B-01 Comparative genomics provides new insights into HAB dynamics (Invited): V Armbrust, M S Parker

1315h IT33B-02 Alternative model approaches to HAB prediction (Invited): A Blauw

1330h IT33B-03 Karenia brevis aerosols: From Monitoring People, to Monitoring Beaches, to Forecasting Beach Impacts to Optimize Public Health: B Kirkpatrick, K Nierenberg, L E Fleming, R Currier, K Fisher, M C Tomlinson, R P Stumpf, G J Kirkpatrick

1345h IT33B-04 The fate of Mississippi River nutrients and their role in fueling West Florida Shelf red tides: M J Olascoaga

1400h IT33B-05 To bloom or not to bloom: application and validation of a logistic regression model developed for toxigenic Pseudo-nitzschia blooms in Monterey Bay, California: J Q Lane, P Raimondi, R M Kudela
Paleoceanography

PA33A-06  A Forecasting Bulletin for Harmful Algal Blooms in the Pacific Northwest: V Trainer, B M Hickey
1430h  IT33B-07 Predicting Harmful Algal Blooms in the Gulf of Maine: From Event Hindsight to Seasonal Forecasting (Invited): R He, D McGillicuddy, D M Anderson, B Keafer, Y Li
1445h  IT33B-08 Use of Satellite, Field, and Models to Forecast Harmful Algal Blooms: an Example from Lake Erie (Invited): R P Stumpf, T T Wynne, M C Tomlinson, J Dyble Bressie, A Meredith, G Lang

IT33C  PB254 Wednesday 1300h
The Indian Ocean: Recent Advances in Physical, Biogeochemical, and Ecosystem Dynamics I (joint with BO, PO, CO)

Presiding: R R Hood, University of Maryland Center for Environmental Science; W Yu, First Institute of Oceanography, State Oceanic Administration; Y Masumoto, Univ Tokyo Grad Schl of Sci; J D Wiggert, Univ. of Southern Mississippi

1315h  IT33C-02 Seasonal mixed layer heat balance of the southwestern tropical Indian Ocean: G R Foltz, J Vialard, P Kumar B., M J McPhaden
1330h  IT33C-03 Monsoonal Impacts on Biogeochemical Processes in the Northern Indian Ocean (Invited): T Rixen
1345h  IT33C-04 Impact of mesoscale processes on biological production in the Arabian Sea: L Resplandy, M Lévy, G Madec, O Aumont
1400h  IT33C-05 Modeling the Formation of the Arabian Sea and Bay of Bengal Oxygen Minimum Zones: J P McCreary, Z Yu, R R Hood, P Vinayachandran
1415h  IT33C-06 Biogeochemistry of Fixed Nitrogen Loss in the Arabian Sea: W Ward, A Jayakumar
1430h  IT33C-07 Climate Change and the Planktonic Ecosystem in the Arabian Sea off Oman: S L Smith, K A Hashmi, A A Azri, V Yellepeddi
1445h  IT33C-08 Intraseasonal response of Bay of Bengal temperature and salinity to heat and freshwater flux: S R Parampil, A Gera, M Ravichandran, D Sengupta

PA33A  E145 Wednesday 1300h
The Role of the North Pacific in Climate Variability I (joint with GO, PO)

Presiding: J A Addison, University of Alaska Fairbanks; S Praetorius, Oregon State University; M H Davies, College of Oceanic and Atmospheric Sciences; S E Strano, Oregon State University

1300h  PA33A-01 ENSO and the North Pacific Gyre Oscillation: an integrated view of Pacific decadal dynamics (Invited): E Di Lorenzo, N Schneider, K Cobb, J C Furtado, M A Alexander, B T Anderson
1315h  PA33A-02 Glacial flour as a reactive source of iron to the Gulf of Alaska: reflections on modern processes and their implications for the paleo record (Invited): J Crusius, A W Schroth, E R Sholkovitz, B C Bostick, M Gatica
1330h  PA33A-03 Mechanisms driving the presence of the Bolling-Allerod/Younger Dryas climate excursions in the subarctic Northeast Pacific: M H Davies, A C Mix, J S Stoner
1345h  PA33A-04 Early Deglaciation and Late Pleistocene Environments in the Northeastern Pacific: Data from Paleolimnology, Geomorphology and Palynology at 17,000 Years Before Present: N Misarti, J A Addison, B P Finney, J W Jordan, N H Bigelow

1400h  PA33A-05 Deciphering the paleoceanographic connection between the North Pacific and Arctic Ocean using non-invasive measurement techniques (Invited): J D Ortiz

1415h  PA33A-06 Glacial-Interglacial Changes in Biogenic Fluxes in the Subarctic North Pacific Ocean: K E Kohfeld, Z Chase

Physical Oceanography

PO33A  PB253 Wednesday 1300h
Advances in Coastal Ocean Prediction: Nested Modeling II (joint with IT)

Presiding: V H Kourafalou, University of Miami/RSMAS; P J De Mey, LEGOS

1300h  PO33A-01 Modelling the North-Eastern Atlantic (coastal) region with HYCOM (Invited): Y Morel, R Baraille, S Louazel, A Pichon, S Correard, S Casitas, L Quaresmas
1315h  PO33A-02 The NRL Relocatable Ocean Ensemble Forecast System (Invited): C D Rowley, P Martin, J A Cummings, G A Jacobs, P J Hogan, J G Richman, E F Coelho, C H Bishop, X Hong
1330h  PO33A-03 Enhancing predictability of the Loop Current variability using a regional Gulf of Mexico model: V Kourafalou, M Le Henaff, A Srivinasan
1345h  PO33A-04 Impacts of Two Major Hurricanes Gustav and Ike on the Gulf of Mexico Circulation in 2008: Numerical Investigation Using a Nested Regional Ocean Model: K Hyun, R He

1400h  PO33A-05 The Implementation, Calibration and Validation of a Coupled Numerical Ocean Modeling System for the West Florida Shelf: L W Lanerolle, R C Patchen, F Aikman

1415h  PO33A-06 Influence of Cuban eddies on the meandering of the Florida Current: H Kang, V H Kourafalou

1430h  PO33A-07 Transient and persistent dispersal kernel features in the Florida Keys, indicator of population resilience: C B Paris, V Kourafalou, H Kang, D M Holstein, S Sponaugle

1445h  PO33A-08 Climate Downscaling using ROMS within CCM3: K Hedstrom, E N Curchitser, J Wolfe, B Large

PO33B  PB281 Wednesday 1300h
Dynamics of Upper Ocean Boundary and Mixed Layers II

Presiding: R R Harcourt, Univ Washington; H Brix, UCLA

1300h  PO33B-01 Surface wave processes in the upper ocean boundary layer (Invited): W K Melville
1323h  PO33B-02 Dissipation and Diffusion Processes in Wave/Current Interactions: J M Restrepo, J M Ramirez, J C McWilliams, M L Banner

1338h  PO33B-03 Ocean Boundary Layers Driven by High Winds and Wave Effects (Invited): P P Sullivan, J C McWilliams, W K Melville

1400h  PO33B-04 WITHDRAWN
1415h PO33B-05 Multiscale Stability Analysis of the Coupling Between Langmuir Cells and Submesoscale Hydrostatic Internal Waves: G P Chini
1430h PO33B-06 Observations of Turbulent Mixing in the Transition Layer: B A Rahter, L St. Laurent
1445h PO33B-07 Can turbulence scalings predict dominant turbulence-generating processes in the upper ocean?: A E Gargett

PO33C D136 Wednesday 1300h Operational Applications of Ocean Satellite Observations I (joint with IT)

Presiding: R R Leben, Univ. of Colorado, Boulder; M M Srinivasan, NASA/Jet Propulsion Laboratory

1300h PO33C-01 Potential of Real-time Satellite Measurements to Advance Hurricane Intensity Prediction in the Gulf of Mexico (Invited): N D Walker
1315h PO33C-02 Application of a Google Earth Web Visualization and Web Map Service to the Investigation of a Hurricane-Intensified Cyclonic Mesoscale Ocean Eddy: J Hausman, D A Joy, R R Leben
1330h PO33C-03 WITHDRAWN
1345h PO33C-04 Utility of ASCAT Ocean Surface Wind Vector Observations in Detecting Hurricane Force (HF) Extratropical cyclones: K Ahmad, Z Jelenak, J M Sienkiewicz, P Chang
1400h PO33C-05 Blended and Gridded Global Sea Surface Winds and Their Applications in Ecosystem and Offshore Energy: H Zhang, C Eakin, J J Sturman
1415h PO33C-06 Operational Applications of Global Daily 9 km Multi-Satellite, Multi-Sensor Sea Surface Temperatures: C L Gentemann, D G Foley
1430h PO33C-07 Use of High Resolution SST Data for Operational Applications: G Jedlovec, F LaFontaine, J Shafer, J Vazquez, E M Armstrong, T M Chinn
1445h PO33C-08 CLOUD-FREE SATELLITE DATA FOR OPERATIONAL APPLICATIONS USING DINEOF: A Alvera-Azcarate, A Barth, D Sirjacobs, J Beckers

PO33D PB256 Wednesday 1300h Patchy Mixing and the Geography of the Ocean’s Energy Cascade II

Presiding: A C Naveira Garabato, National Oceanography Centre, Southampton; J A MacKinnon, Scripps Institution of Oceanography

1300h PO33D-01 FROM STIRRING TO MIXING AT THE OCEAN SUBMESOSCALE: G Flierl, R Ferrari
1315h PO33D-02 Submesoscale lateral dispersion following spatially correlated wave-breaking events: J Jacobs, M P Lelong, M A Sundermeyer
1330h PO33D-03 A climatology of vertical water velocity from Seaglider in the Labrador Sea: E Frajka-Williams, P B Rhines, C C Eriksen
1345h PO33D-04 Quantifying the Global Distribution of Mixing by Ocean Mesoscale Eddies: F O Bryan, B Fox-Kemper, J M Dennis
1400h PO33D-05 On the temporal variability of low-mode internal tides in the deep ocean: R D Ray, E D Zaron
1415h PO33D-06 Tidal Mixing over Rough Topography: S Legg, M Nikurashin
1430h PO33D-07 Intense high-frequency internal waves within a deep gravity current outflow: H Peters, J D Nash, S M Kelly, J L Pelegri, M Emilianov

1445h PO33D-08 Toward Regional Characterizations of the Oceanic Internal Wavefield (Invited): K L Polzin, Y V Lvov

PO33E E146 Wednesday 1300h The Greater Agulhas Current System and Its Key Role in Past, Present, and Future Climate I (joint with PA, GO)

Presiding: R Zahn, Universitat Autnoma Barcelona; A Biastoch, IFM-GEOMAR; L M Beal, Rosenstiel School of Marine and Atmospheric Science

1300h PO33E-01 The greater Agulhas Current system; where we were, are and should be going (Invited): J R Lutjeharsms, A Biastoch, R Zahn, W P DeRuijter, L M Beal, R E Roman, I J Ansorge, J V Durgado
1315h PO33E-02 Assessing Agulhas leakage (Invited): E van Sebille, A Biastoch, P Van Leeuwen, W de Ruijter
1330h PO33E-03 Sensitivity of the Agulhas Leakage to the strength of the Agulhas Current: P Penven
1345h PO33E-04 Strontium isotopes in detrital sediments constrain the glacial position of the Agulhas Retrosflection (Invited): A M Franzese, S R Hemming, S L Goldstein
1400h PO33E-05 Influence of the Agulhas Leakage on South East Atlantic upper ocean hydrography during Marine Isotope Stage 11 (Invited): A Dickson, M A Maslin, M J Leng, J A Bendle, E McLymont, R D Pancost, U Roehl
1415h PO33E-06 Transport and Variability of the Agulhas Undercurrent: L M Beal, A Biastoch
1430h PO33E-07 Generation and Growth Mechanism of the Natal Pulse: M Tsugawa, H Hasumi
1445h PO33E-08 Paleoclimatological records indicate rhythmic changes of Agulhas Current transports and Indian-Atlantic gateway circulation: R Zahn, J R Hall, G Marino, G Martinez-Mendez, F Peeters, P Ziveri

Biological Oceanography

BO34A D135 Wednesday 1530h Ecology and Diversity of Aquatic Protists: Advances and Methodologies III

Presiding: E Demir, MBARI; A Z Worden, Monterey Bay Aquarium Research Institute

1530h BO34A-01 Environmental DNA analysis and fluorescent in situ hybridization microscopy reveals a ‘missing link’ in the fungal tree of life (Invited): T Richards, R Massana, M D Jones
1600h BO34A-02 Intra-species genetic diversity of the centric diatom Thalassiosira pseudonana: Whole genome comparisons of seven strains using massively parallel short-read DNA sequencing: M S Parker, V S Iverson, C Berthiaume, E O Lin, R Morales, I Oleinikov, M W Knight, D Schruth, E V Armbrust
1615h BO34A-03 The plastid thien Diphysophyta acuminata has nuclear-encoded genes for plastid maintenance and metabolite exchange: J L Hughes, J D Hackett
1630h BO34A-04 Chemical Arms Race at Sea: The role of sphingolipids in regulating host-virus interactions in the marine coccolithophore Emiliana huxleyi (Invited): A Vardi, B Van Mooy, H Fredricks, L Haramaty, K Bidle
1645h BO34A-05 A Matter of life or death? Assessing the physiological role of programmed cell death-related genes to stress adaptation in diatoms: K D Bidle, K Thamtrakool, O Korenovska, S Brown, L Seyler
1700h BO34A-06 Genetic diversity and heat stress phenotypes in Symbiodinium: M D Johnson, J Lee, P G Falkowski

1715h BO34A-07 NICHE DIFFERENTIATION BETWEEN TWO OSTREOCOCCUS CLADES: E Demir, M L Cuvelier, H A Skoning, J Zehr, A Z Worden

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**BO34B PB255 Wednesday 1530h**

**Spatial Dynamics of Species Abundance and Interactions Across Trophic Levels II (joint with IT)**

*Presiding: P Licandro, SAHFOS; D Ainley, HT Harvey & Associates*

1530h BO34B-01 Estimating the effects of unresolved spatial and temporal heterogeneity in models of marine populations: D Grunbaum, W M Durham, E Lessard

1545h BO34B-02 Communities connected by currents: a study of nearshore marine species in the Southern California Bight: J R Watson, D A Siegel, P Raimondi, C Hays, S Mitarai, C Dong, J C McWilliams

1555h BO34B-03 Nearshore meroplankton distribution in the North Coast of Spain: a landscape study: N Weidberg, C Lobón, E López, J L Acuna

1605h BO34B-04 Explaining and modeling zoobenthos and their environment in the soft bottom communities of the northern Baltic Sea: H E Rousi, S Bäck, H Peltonen, J Mattila, E Bonsdorff

1615h BO34B-05 Influence of Gulf of Alaska mesoscale eddies on shelf and slope ichthyoplankton assemblages: E Atwood, J T Duffy-Anderson, J K Horne, C Ladd

1625h BO34B-06 Assessing the Ecological Role of Planktonic Thin Layers: T J Cowles, K J Benoit-Bird, M Benfield

1640h BO34B-07 Spatial dynamics of Northwest Atlantic predator-prey interactions: J Fisher, K Frank, W Leggett

1650h BO34B-08 Modelling the Distribution of Top Predators in the Ross Sea, Antarctica: D Ainley, D Jongsomjit, G Ballard

1700h BO34B-09 Chlorophyll Persistence Depicts Fractal Hotspots of Productivity and Predator Densities in the Open Ocean: R M Suryan, J Santora, W Sydeman

1710h BO34B-10 Marine reserves can have positive and negative impacts on fish abundance: the importance of understanding spatial dynamics: M Karnauskas, B Huntington

1720h BO34B-11 “Fishing out marine parasites?” A test of the impacts of fishing on rates of parasitism along the central Chilean coast: C L Wood, F Michel, M Fernandez, J Castillo, J Carvajal

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**BO34C D137 Wednesday 1530h**

**The Census of Marine Life: Understanding Marine Biodiversity for Better Ocean Management II (joint with IT, MT, MP)**

*Presiding: J Payne, Pacific Ocean Shelf Tracking Program; A Baco-Taylor, Florida State University; M Feldman, Census of Marine Life - Ocean Leadership; K Yarincik, Census of Marine Life - Ocean Leadership*

1535h BO34C-01 Quantifying Global Marine Species Richness, Diversity, and Discovery: D P Tittensor, P Bouchet, C Mora, E Vanden Berghe, T Erwin, J F Grasse, W Jetz, H K Lotze, D Ricard, B Worm

1549h BO34C-02 Mapping and Visualizing Biodiversity (Invited): J Cleary, P N Halpin, B Donnelly, E Fujioka, J Roberts, D Dunn, B Best

1603h BO34C-03 Using a new tree methods to model distribution of deep-sea species in response to physical environment in the northern Gulf of Mexico: C Wei, G T Rowe, R Pitcher, N Ellis, S J Smith, T C Shirley

1615h BO34C-04 Identifying and describing critical habitat for marine predators using electronic tracking data: An example with Atlantic leatherback turtles: I D Jonsen, I Kataria, A Winship, M James

1627h BO34C-05 Measuring survival and movements of mid-trophic level organisms: J Payne

1641h BO34C-06 Mapping marine predator hot spots in the north Pacific: B Block, D P Costa, S J Bograd, I D Jonsen, A Winship, S J Jorgensen, G Breed, H Bailey, S J Shaffer, B R Mate, H Dewar

1653h BO34C-07 Zooplankton phylogeography as a measure of Atlantic Ocean ecosystem connectivity: L Blanco Bercial, A C Bucklin, M Viñas, A Cornils

1705h BO34C-08 Phylogeographic Patterns of Deep-Sea Octocorals in the Genus Narella on North Pacific Seamounts: A Baco-Taylor, S Cairns

1717h BO34C-09 The Increasing Role of Science in the Management of Human Activities on Seamounts: M Clark, A Rowden, M Consalvey, K Stocks

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**Chemical Oceanography**

**CO34A D139 Wednesday 1530h**

**Carbon Biogeochemistry of the Arctic and Subarctic I (joint with BO, PO)**

*Presiding: N R Bates, Bermuda Institute of Ocean Sciences; J T Mathis, School of Fisheries and Ocean Sciences*

1530h CO34A-01 Aragonite undersaturation in the Canada Basin: effects of ocean acidification and sea ice melt (Invited): M Yamamoto-Kawai, P McLaughlin, E Carmack, S Nishino, K Shimada

1545h CO34A-02 Arctic Ocean Primary Productivity: A Decade of Change: K R Arrigo, G L van Dijken

1600h CO34A-03 Feedbacks on the Marine Carbon Cycle, Air-Sea CO2 Fluxes and Ocean Acidification Impacts in the Arctic Ocean: N R Bates, J T Mathis

1615h CO34A-04 Significant contribution of dissolved organic matter to seawater alkalinity: K Lee, H Kim

1630h CO34A-05 Characterizing and tracing the input of terrestrially derived colored dissolved organic matter from major Arctic Rivers to the Arctic ocean: C A Stedmon, R M Amon, A J Rinehart, S A Walker


1715h CO34A-08 Coupling Primary Production and Terrestrial Runoff to Ocean Acidification and Carbonate Mineral Suppression in the Eastern Bering Sea: J T Mathis, N R Bates
**Presiding:** R Sambrotto, Lamont-Doherty; M C McKay, San Joaquin County Office of Education

**GO34A E143 Wednesday 1530h**

**Tidal Flats: Hydrodynamic and Sedimentary Processes of Mesotidal Environments I (joint with PO)**

**Presiding:** C Nittrouer, University of Washington; B Raubenheimer, Woods Hole Oceanographic Institution; R A Wheatcroft, Oregon State Univ

1530h **GO34A-01** The dynamics of channels on Skagit tidal flats: R Geyer, D K Ralston, P Traylor

1545h **GO34A-02** Estuarine dynamics on the Skagit tidal flats: modeling and observations: D K Ralston, W R Geyer, P Traylor

1600h **GO34A-03** Role of Channel Morphology on Channel-Flat Sediment-Transport Dynamics of Tidal Flats: A S Ogston, D J Nowacki, K M Lee, K V Boldt

1615h **GO34A-04** Tidal channel hydrodynamics in mesotidal mudflats: S Fagherazzi, G Mariotti

1630h **GO34A-05** Effects of flocculation on modeling cohesive sediment transport in a meso-tidal estuary: M Son, T Hsu

1645h **GO34A-06** The Dynamics of Fine Grain Sediment on the Willapa Bay, WA. Tidal Flat: T G Milligan, P S Hill, B A Law, J Newgard

1700h **GO34A-07** Erodibility of Sediment in Tidal Flat-Channel Complexes in Willapa Bay, WA: P L Wiberg, B A Law, R A Wheatcroft, T G Milligan, P S Hill

1715h **GO34A-08** Tidal Flat Morphodynamics: A Synthesis: C T Friedrichs, J Bearman

**Interdisciplinary**

**IT34A E147 Wednesday 1530h**

**Impact of Eutrophication and Climate Change on Marginal Seas II (joint with BO, PO, CO)**

**Presiding:** K K Liu, Natl Central Univ; D Tang, Chinese Academy of Sciences

1530h **IT34A-01** Enhanced Buoyancy and Biogeochemistry on Continental Shelves (Invited): C Chen

1545h **IT34A-02** Impacts of human activities on nutrient transports in the Huanghe (Yellow River) Estuary (Invited): S Liu, L Li, G Zhang, Z Liu, J Ren, J Zhang

1600h **IT34A-03** Significance of Mn(IV) and Fe(III) reduction in carbon oxidation in Mn-oxides enriched surface sediments of the Ulleung basin, East Sea: J Hyun, J Mok

1615h **IT34A-04** Shift of CO2 uptake capacity (sink to source) in the shelf of East China Sea associated with changes in Changjiang runoff during the warm seasons in summer: C Tseng, H Lai, G Gong, K K Liu

1630h **IT34A-05** BALTSEM – A computationally efficient model of the eutrophication of the Baltic Sea designed for decision support purposes: B G Gustafsson, O P Savchuk

1645h **IT34A-06** Interannual and Decadal Sea-Level Variability in the South China Sea: Z Rong, Q Liu, Y Liu, M Li

1700h **IT34A-07** Warming of deep water and slowdown of its movement observed in the southwestern East Sea: Y Kim, K Chang, K Kim, J H Lee

1715h **IT34A-08** Dynamics of Seasonal Circulation Pattern off Vietnam Coast in South China Sea: D Wang, M Li

**IT34B PB254 Wednesday 1530h**

**The Indian Ocean: Recent Advances in Physical, Biogeochemical, and Ecosystem Dynamics II (joint with BO, PO, CO)**

**Presiding:** R R Hood, University of Maryland Center for Environmental Science; W Yu, First Institute of Oceanography, State Oceanic Administration; Y Masumoto, Univ Tokyo Grad Schl of Sci; J D Wiggert, Univ. of Southern Mississippi

1530h **IT34B-01** Subsurface chlorophyll maximum at the monsoon current intrusion into the Bay of Bengal: P Vinayachandran, R Jyothisub

1545h **IT34B-02** Simulated Interannual Variations of the Seychelles Dome: T Tozuka, T Yokoi, T Yamagata

1600h **IT34B-03** The Indian Ocean Dipole and its impacts over the past decades: W Cai, T Cowan

1615h **IT34B-04** Response of phytoplankton functional groups to 1997-98 Indian Ocean Dipole (IOD) in the Eastern Tropical Indian Ocean: K Mahapatra, T Ichii, Y Okada

1630h **IT34B-05** Impact of Indian Ocean Basin Mode and Dipole Mode on Asian Monsoon Variability: Q Liu, J Yang

1645h **IT34B-06** WITHDRAWN

1700h **IT34B-07** Sustained observations of the flow in the Mozambique Channel. (Invited): W de Ruijter, J R Lutjeharms, H Ridderinkhof, H M Van Aken, P Van Leeuwen, J E Ullgren, P van der Werf

1715h **IT34B-08** Toward an effective management and governance approach within Large Marine Ecosystems based on predictive monitoring and early warning: D Vousden, T G Bornman, J R Lutjeharms
**PO34A PB252**  
**Wednesday 1530h**  
**Breaking Waves and Associated Spray and Bubble Generation I**  

**Presiding:** B K Haus, University of Miami; T Hara, Univ Rhode Island  

1530h **PO34B-01** Sea spray contributions to the air-sea fluxes at moderate and hurricane wind speeds (Invited): F Veron  

1550h **PO34B-02** Bubble Formation and Breaking Wave Noise in the Ocean (Invited): G Deane  

1610h **PO34B-03** Turbulent Airflow above Young Seas with Frequent Wave Breaking Events: Large Eddy Simulation: N Suzuki, T Hara, P P Sullivan  

1625h **PO34B-04** Acoustical backscatter observations of bubble clouds under Hurricane Ivan: D W Wang, H W Wijesekera, W J Teague, E Rogers  

1640h **PO34B-05** A Laboratory Investigation of Droplets Generated by Breaking Water Waves: X Liu, J H Duncan  

1655h **PO34B-06** Observations of wave-induced turbulence (Invited): J Gemmrich  

1715h **PO34B-07** Modeling Gas Bubbles in the Ocean Boundary Layer: J Liang, J C McWilliams, P P Sullivan, B Baschek  

1730h **PO34B-08** Observations of bubble clouds at hurricane wind speeds: X Liu, H H Nakamura, J H Duncan, X Zhang  

1745h **PO34B-09** Experimental and numerical studies of bubble clouds at hurricane wind speeds: X Liu, H H Nakamura, J H Duncan, X Zhang  

1800h **PO34B-10** Observations of bubble clouds at hurricane wind speeds: X Liu, H H Nakamura, J H Duncan, X Zhang  

1815h **PO34B-11** Observations of bubble clouds at hurricane wind speeds: X Liu, H H Nakamura, J H Duncan, X Zhang  

1830h **PO34B-12** Observations of bubble clouds at hurricane wind speeds: X Liu, H H Nakamura, J H Duncan, X Zhang  

1845h **PO34B-13** Observations of bubble clouds at hurricane wind speeds: X Liu, H H Nakamura, J H Duncan, X Zhang  

1900h **PO34B-14** Observations of bubble clouds at hurricane wind speeds: X Liu, H H Nakamura, J H Duncan, X Zhang  

1915h **PO34B-15** Observations of bubble clouds at hurricane wind speeds: X Liu, H H Nakamura, J H Duncan, X Zhang  

1930h **PO34B-16** Observations of bubble clouds at hurricane wind speeds: X Liu, H H Nakamura, J H Duncan, X Zhang  

1945h **PO34B-17** Observations of bubble clouds at hurricane wind speeds: X Liu, H H Nakamura, J H Duncan, X Zhang  

1955h **PO34B-18** Observations of bubble clouds at hurricane wind speeds: X Liu, H H Nakamura, J H Duncan, X Zhang  

2010 **PO34C E146** **Wednesday 1530h**  

**Freshwater Transports on Shelves and Slopes and in Straits at High and Middle Latitudes I**  

**Presiding:** F Straneo, Woods Hole Oceanographic Institution; A Muenchow, University of Delaware  

1530h **PO34C-01** Modelling freshwater transports through the Canadian Arctic Archipelago: A Terwisscha van Scheltinga, P G Myers, J Pietrzak  

1545h **PO34C-02** Wind driven transport of the Norwegian Coastal Current: Øystein Skagseth, K F Drinkwater, E Terrile  

1600h **PO34C-03** Offshore delivery of freshwater under conditions of spatially-variable downwelling-favorable winds: A E Yankovsky, G Maze, J Rogers-Cotrone, T Weingartner  

1615h **PO34C-04** On the upstream spreading of bottom-trapped plumes: R P Matano, E D Palma  

1630h **PO34C-05** Two Configurations of the Western Arctic Shelfbreak Jet Advecting Pacific Summer Water in the Alaskan Beaufort Sea: W von Appen, R S Pickart  

1645h **PO34C-06** Freshwater export from the Labrador Current to the North Atlantic Current at the Tail of the Grand Banks of Newfoundland: P S Fratantoni, M S McCartney  

1700h **PO34C-07** Variability of the Fresh Water Export from Hudson Bay: What are the controls?: F Straneo, D A Sutherland, P St-Laurent, S J Dery  

1715h **PO34C-08** Storage and Release of Freshwater in a Subarctic Basin: The Case of Hudson Bay: P St-Laurent, F Straneo, J Dumas, D G Barber
1530h PO34D-01 Detection of tsunamis from changes in ocean surface roughness (Invited): B D Hamlington, O A Godin, V Irisov, R R Leben

1545h PO34D-02 Comparison between sea level anomalies from coastal tide gauges and nearby satellite altimetry data: J Y Cherniawsky, E Kulikov

1600h PO34D-03 Potential Improvement of Ocean Tides Over Coastal Regions Using Multi-Satellite Altimetry Observations: H Fok, H B Jia, C Shum, Y Yi, Z Huang

1615h PO34D-04 Operational Altimetry Applications at NOAA's National Weather Service: J J Lillibridge, J M Sienkiewicz, H L Tolman, E S Blake, M M Mainelli, L Russell

1630h PO34D-05 Development of an adjoint-based operational analysis/forecast system for the Mid Atlantic Bight: J Zavala-Garay, J Wilkin, J Levin

1645h PO34D-06 Chlorophyll and SST Fronts off the U.S. East Coast: T M Belkin, K J Hyde, J O'Reilly, T Ducas

1700h PO34D-07 GeoEye's SeaStar™ Operational Fisheries Oceanography for Fishermen, Fleet Managers and Fishery Resource Managers (Invited): M G Hammann

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PO34E PB256 Wednesday 1530h

Physical Oceanography General Contributions I

Presiding: N T Vinogradova, AER, Inc.; J Kaempf, Flinders University

1530h PO34E-01 THE 1960 ANTIPODAL ACOUSTIC PROPAGATION EXPERIMENT: A MEASURE OF A HALF-CENTURY OF OCEAN WARMING?: B D Dushaw

1545h PO34E-02 A Pause in the Rise in Upper Ocean Heat Content: How Unusual is it, and Where Does the Heat go?: C A Katsman, G van Oldenborgh

1600h PO34E-03 FIFTY-YEAR CHANGES IN THE HYDROLOGICAL CYCLE EXPRESSED IN OCEAN SALINITY: P J Durack

1615h PO34E-04 WITHDRAWN

1630h PO34E-05 Assessment of the upper ocean climatology in CMIP3 climate models: T Yasuda, M Sueyoshi

1645h PO34E-06 Ocean Self-Attraction and Loading Effects on Seasonal Variations of Bottom Pressure: N T Vinogradova, R M Ponte, M E Tamisiea, J Davis, E M Hill

1700h PO34E-07 Reconciling Vorticity and Momentum Views of the Large-Scale Ocean Circulation: H R Pillar, D P Marshall

1715h PO34E-08 Secular and seasonal changes of ocean tides: observations and model results: M Mueller

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PO34F PB251 Wednesday 1530h

Scientific and Practical Lessons Learned From Ocean Data Assimilation I (joint with BO, IT)

Presiding: I Fukumori, Jet Propulsion Laboratory; G Gebbie, Harvard Univ; E Chassignet, Florida State University

1530h PO34F-01 Relating Ocean Physics and Data Assimilation (Invited): K R Thompson, D G Wright

1545h PO34F-02 The global ocean circulation during recent decades estimated through model-data synthesis: an ECCO perspective. (Invited): P Heimbach, R M Ponte, G Forget

1600h PO34F-03 Consistency and fidelity of Indonesian-throughflow transport estimated by 14 ocean data assimilation products: T Lee

1615h PO34F-04 Lessons Learned from Assimilating Altimeter Data into a Coupled General Circulation Model with the GMAO Augmented Ensemble Kalman Filter: C Pei, G Vernieres, M M Rienecker, J Jacob, R Kouch

1630h PO34F-05 Data assimilation of glider observations in the Ionian Sea (Eastern Mediterranean): a study of the path of the Atlantic Ionian Stream: S Dobric, N Pinardi, P Testor, U Send

1645h PO34F-06 Assimilating ocean tracer data into the Bern3D model using an Ensemble Kalman Filter: M Gerber, F Joos

1700h PO34F-07 Effective momentum flux and empirical parameters inversely estimated by model Green's functions in the East Asian marginal seas: N Hirose

1715h PO34F-08 The practical relevance of the steady-state circulation that best fits modern tracer climatologies: G Gebbie

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Biological Oceanography

BO35A Poster Hall E Wednesday 1730h

Development, Validation, and Uncertainty Analysis of Optical Remote Sensing Algorithms for the Coastal Ocean III Posters (joint with IT)

Presiding: W Shi, NESDIS; C O Davis, Oregon State University

1730h BO35A-01 POSTER Estimating the Regional Uncertainty of a Bio-Optical Forecast Model: B Casey, R Arnone, D S Ko, S D Ladner

1730h BO35A-02 POSTER Inter-Satellite Comparison for Defining Optical Properties of the Coastal Zone: S D Ladner, R Arnone, R W Gould, B Casey, D Lewis, P Martinolich, A Lawson

1730h BO35A-03 POSTER The Chesapeake Bay Coastal Optical Characterization Experiment (COCE): M Ondrusak, E Stengel, C S Kinkade


1730h BO35A-05 POSTER Comparison of four MODIS NIR ocean contribution correction schemes using AERONET-OC data: C Jamet, H Loisel, G Zibordi, T Schroeder

1730h BO35A-06 POSTER ADJUSTMENTS OF WAVELENGTHS AND SPECTRAL RESOLUTION OF THE SPACEBORNE HYPERSPECTRAL IMAGER FOR THE COASTAL OCEAN (HICO): B Gao

1730h BO35A-07 POSTER Possibility of ocean remote sensing using Hyper-Spectrum Sensor in coastal waters: K Oshima, I Asanuma, S Odagawa

1730h BO35A-08 POSTER HICO Performance in the Shallow Water Environment: K Patterson

1730h BO35A-09 POSTER Estimate of colored dissolved organic matter from remote sensing: N Cao, I Asanuma, C Zhao, B Huang


1730h  BO35A-12 POSTER Influence of nonuniform vertical profiles of suspended particulate matter on remote-sensing reflectance of the ocean in the visible and near-infrared spectral regions: Q Yang, D Stramski

1730h  BO35A-13 POSTER Evaluating the importance of phytoplankton community structure to inherent optical properties in the Santa Barbara Channel, CA: R K Lawson, D A Siegel, N GuiUlochce

1730h  BO35A-14 POSTER Evaluation of SeaWiFs atmospheric corrections in the Upper Gulf of California using SIMBADA radiometer data: M L Bastidas-Salamanca, A G Gonzalez-Silvera, E Santamaria-del-Angel, R Frouin, R Millan-Nunez

BO35B Poster Hall E  Wednesday 1730h  Microscale Biophysical Interactions in the Life of Marine Microbes II Posters (joint with IT)

Presiding: J Mitchell, Flinders University

1730h  BO35B-01 POSTER Diatom sinking speeds: improved predictions and insight from a modified Stokes' law: K Miklasz, M Denny

1730h  BO35B-02 POSTER Individual-based models of choanoflagellate swimming and feeding in patchy environments: D Nicolau, J Kretf, M A Koehl

1730h  BO35B-03 POSTER Dinoflagellate Bioluminescence as a Model for Rapid Mechanotransduction and Cell Signaling: M I Latz, G Deane, M Stokes

1730h  BO35B-04 POSTER Sharks are injured often, but rarely sick: do skin-associated microbial communities contribute to shark health?: E A Dinsdale, J Busch, N Cassman, F Rohwer, K Barott, A Frieland, C Lewis, A Prieto-Davo, S Sandin, J Caselle, B Zgliczynski

1730h  BO35B-05 POSTER High-resolution velocity shear in relation to thin layers of a vertically migrating dinoflagellate: OSCAR Guadayol, T Cowles, C Wingard

BO35C Poster Hall E  Wednesday 1730h  Oxygen Minimum Zones and Climate Change: Observations and Prediction IV Posters

Presiding: G Lavik, K F Wishner, University of Rhode Island

1730h  BO35C-01 POSTER Stable Isotopic Composition of Zooplankton Size Classes in the Eastern Tropical North Pacific Oxygen Minimum Zone: R L Williams, S G Wakeham, R McKinney, K F Wishner

1730h  BO35C-02 POSTER Diel Vertical Migration Patterns of Micronekton in an Oxygen Minimum Zone in the Eastern Tropical North Pacific: S Frazier, D Outram, A Maas, K F Wishner

1730h  BO35C-03 POSTER Hypoxia induced metabolic suppression of an eastern tropical pacific euphausiid: J Schneider, B Seibel

1730h  BO35C-04 POSTER In situ Determination of O$_2$ Concentrations in Oxygen Minimum Zones and O$_2$ Contamination Associated with Collection of Water Samples: N P Revsbech, T Dalgaard, O Ulloa, M Pavez, B Thamdrup

1730h  BO35C-05 POSTER Is the Total Inorganic Carbon Versus Apparent Oxygen Utilization Relationship Significantly Affected by Non-biological Processes in the Oxygen Minimum Zone in the Mexican Pacific?: H Maske, R Cajaral-Medrano, J L Ochoa-de-La-Torre

1730h  BO35C-06 POSTER New Technique for Rapid, High Precision Dissolved Gas Ratio Analysis as Applied to the Peru Denitrification Zone: T Gulman, M A Altabet

1730h  BO35C-07 POSTER Nitrogen isotope studies of the Northeast Atlantic and Eastern Pacific Oxygen Minimum Zones: E Ryabenko, M A Altabet, D Wallace

1730h  BO35C-08 POSTER Habitat Mapping in the Peruvian OMZ: T Mosch, S Sommer, O Pfannkuche, K J Wallmann

1730h  BO35C-09 POSTER Benthic fluxes of iron, phosphate and silicate across the Peruvian Oxygen Minimum Zone: A Noffke, C Hensen, S Sommer, F Scholz, T Mosch, K J Wallmann

1730h  BO35C-10 POSTER Zooplankton response to redox-induced changes in nutrient stoichiometry: Mesocosm experiments in tropical upwelling areas: H Hauss, J U Sommer


1730h  BO35C-12 POSTER Is sulfide in OMZ waters an increasing phenomenon as a result global change?: G Lavik, A Paulmier, M Graco, H Siegel, M Frank, M M Kuyper

1730h  BO35C-13 POSTER Connections of the Atlantic and Pacific Oxygen Minimum Zones to the Surface Ocean Investigated in Models of Different Horizontal Resolutions: M S Glessmer, A Oschlies

1730h  BO35C-14 POSTER Ventilation and Reexposure pathways and time scales of oxygen minimum zone waters and their response to global warming: T Arsouze, S Khatiwala

BO35D Poster Hall E  Wednesday 1730h  Oxygen Minimum Zones and Climate Change: Observations and Prediction V Posters (joint with CO)

Presiding: C W Holmes, Environchron; S G Wakeham, Skidaway Institute of Oceanography

1730h  BO35D-01 POSTER Expansion of the Oxygen Minimum in the Northeastern Gulf of Mexico and Atlantic Ocean as Recorded by Deep-water Coral Chemistry: The Appleseed Effect: C W Holmes

1730h  BO35D-02 POSTER Adaptation Response of a Benthic Invertebrate Community to Hypoxia in the Northern Gulf of Mexico: S Shivarudrappa, K Briggs, V Hartmann

1730h  BO35D-03 POSTER Comparative analysis of water quality parameters of three Louisiana Bays: Potential contributions to hypoxia development: G A Sinclair, B A Schaeffer

1730h  BO35D-04 POSTER Coastal Upwelling Supplies Low Dissolved Oxygen Water To The Columbia River Estuary: C Roegner

1730h  BO35D-05 POSTER The effects of hypoxia on zooplankton distribution in lower Hood Canal, Puget Sound, Washington: L B Tuttle, J E Keister


1730h  BO35D-07 POSTER Declining oxygen off central Oregon: the Newport Hydrographic Line: S D Pierce, A A Barth, R K Shearman, A Erofeev, R L Smith, A Huyer

1730h  BO35D-08 POSTER Bacterial diversity in a seasonal hypoxic zone within the coastal Northeast Pacific Ocean: A D Bertagnolli, A Treusch, O U Mason, U Stirling, K Vergin, F Chan, S Giovannoni
1730h BO35D-09 POSTER Microbial Initiative in Low Oxygen areas off Concepción and Oregon (MI_LOCO) http://mi_loco.coas. oregonstate.edu/;

1730h BO35D-10 POSTER Seasonal changes in bacterial community structure in the ocean’s interior: J Wright, K Mitchell, O Shechuk, D Walsh, S J Hallam

1730h BO35D-11 POSTER Heterotrophic Denitrification or Anammox – Quantifying Collateral Effects on the Oceanic Carbon Cycle: W Koeve, P Kahler


1730h BO35D-13 POSTER Environmental regulation of SUP05 energy metabolism: proteogenomic responses to changing water column redox gradients: A K Hawley, D Walsh, E Zaikova, P D Tortell, H M Brewer, A Norbeck, L Pasa-Tolic, S J Hallam

1730h BO35D-14 POSTER A Comparison of Gill Morphometrics in Two Congeneric Fish from the Benguela Upwelling System: M McEnroe, L Rivera, P M Woodhead

1730h BO35D-15 POSTER How ambient habitat traits determine seasonal and spatial distribution patterns of cod Gadus morhua L. in the central Baltic Sea: M Schaber, H Hinrichsen, S Neuenfeldt

1730h BO35D-16 POSTER Soluble Mn(III) in sedimentary porewaters of the Lower Saint Lawrence River Estuary: M Schaber, L Rivera, P M Woodhead

1730h BO35E Poster Hall E Wednesday 1730h Unveiling the Secrets of Phytoplankton Life Cycles II Posters (joint with IT)

Presiding: P von Dassow, Station Biologique de Roscoff (CNRS)

1730h BO35E-01 POSTER New insights into the life cycle of the polar prymnesiophyte Phaeocystis antarctica and molecular approaches to its environmental adaptations: S Gäßler-Schwarz, L K Medlin

1730h BO35E-02 WITHDRAWN


1730h BO35E-05 POSTER Long-term survival, life-cycle changes and taxonomic position of a chrysophyte-like amoeba from anoxic marine sediment: M Ellegaard, N Lundholm, F Ekelund, G Hansen, ØJVMN Moestrup, T J Andersen

1730h BO35E-06 POSTER Tracking population changes through 100 years in Pentapharsodinium dalei from cysts preserved in historic sediments: physiological variability: S Ribeiro, T Berge, N Lundholm, M Ellegaard

1730h BO35E-07 POSTER Tracking population changes over 100 years in Pentapharsodinium dalei from cysts preserved in historic sediments: genetic variability: N Lundholm, S Ribeiro, T J Andersen, M Ellegaard

1730h BO35E-08 POSTER From plankton to benthos and back: diversity and germination patterns of diatom resting stages: M Montresor, C Di Prisco, D Sarno, A Zingone

1730h BO35E-09 POSTER Ecological classification of selected phytoplankton species from the Helgoland Roads Data: N Gruener, C Gebuehr, M Boersma, U Feudel, K Wiltshire, J Freund

1730h BO35E-10 POSTER Diet cycling of DNA-staining and mifH gene regulation in the unicellular cyanobacterium Crocosphaera watsonii Strain WH 8501: K Pennebaker, K R Mackey, S Williams, J P Zehr

1730h BO35E-11 POSTER Using microsatellites to determine bloom dynamics under conditions of viral and nutrient stress in the marine cocolithophorid Emiliania huxleyi: D J Hinz, A Larsen, M Enger, W H Wilson, T S Bibby, D Iglesias-Rodriguez

1730h BO35E-12 POSTER Growth Phase Dependent Hydrogen Isotopic Fractionation in Alkenone-Producing Haptophytes: M D Wolhowe, F G Prah, I Probert, M Maldonado

1730h BO35E-13 POSTER The effect of nutrient constraints on cellular division rates as evidence for the potential for a benthic subpopulation of the bloom forming dinoflagellate Karenia brevis: L G Waters, D Kamykowski, T G Wolcott, G A Sinclair

Chemical Oceanography

CO35A Poster Hall E Wednesday 1730h Carbon Biogeochemistry of the Arctic and Subarctic II Posters (joint with BO, PO)

Presiding: J T Mathis, School of Fisheries and Ocean Sciences


1730h CO35A-03 POSTER Modeling Primary Productivity and Biogeochemical Carbon Cycling in the Beaufort Sea, Canadian Arctic: M A Palmer, T E Reddy, D M Holland, K R Arrigo

1730h CO35A-04 POSTER Marine Microgels in a High Arctic Ice Core: C Raaschburg, A J Hind, P A Matrai, M V Orellana


1730h CO35A-06 POSTER Carbon and nutrient transformation in Siberian Shelf Seas: L G Anderson, G M Bjyrk, S Hjalmarsson, S Jutterstrom, I Wahlstrom


1730h CO35A-08 POSTER Analysis of Organic Sources and Carbon Sequestration in Holocene Sediments of the Western Arctic Ocean: J F Faux, L L Belicha, H R Harvey

1730h CO35A-09 POSTER Sedimentary Manganese and Reduced Inorganic Sulfur as Indicators of Carbon Cycling in the Canadian Arctic Archipelago: Z A Kuzyk, C Gobeil, R Macdonald, M A Goni

1730h CO35A-10 POSTER The Impact of Changing Physical Conditions on Arctic Phytoplankton: A Look at the Alaskan and Mackenzie Shelves: T E Reddy, M A Palmer, K R Arrigo, D M Holland
1730h CO35A-11 POSTER Estimating Holocene Sea Ice Algae productivity in the Western Arctic using stable isotopes: DJ Morris, S A Macko, H R Harvey, L L Belicka


1730h CO35A-13 WITHDRAWN

1730h CO35A-14 POSTER Absorption and fluorescence properties of CDOM in the southeastern Bering Sea during summer 2008: E J D’Sa, J I Goes, P S Naik, H R Gomes, S Singh

CO35B Poster Hall E Wednesday 1730h Interpreting Variability in Oceanic Biological Community Composition and Biogeochemical Fluxes III Posters (joint with BO, IT)

Presiding: J Leichter

1730h CO35B-01 POSTER Plankton growth possibly contributed by natural diffusion from offshore petroleum subterranean deposits: S Mori

1730h CO35B-02 POSTER Hydrologic and Biogeochemical Controls on Dissolved Inorganic Carbon Cycling and Flux in a Subterranean Estuary: A Dual A14C and δ13C Tracer Approach: J Cherrier, A Dorsett, J E Cable, J B Martin

1730h CO35B-03 POSTER In situ δ13C measurements of distinct marine picoplankton populations using FACS and SWIM-IRMS: R L Hansman, A L Sessions

1730h CO35B-04 WITHDRAWN

1730h CO35B-05 POSTER Stable isotopic studies of food chains at lower trophic levels in the western north Pacific and implications for the ecosystem modeling: M N Aita, R Ishii, K Tadokoro, S L Smith, N O Ogawa, E Wada, M J Kishi

1730h CO35B-06 POSTER The Effect of Oxygen Cycling on Long Term Stationary Phase Microbial Respiration Rates: M R Gawey, T Riedel, W Berelson

1730h CO35B-07 POSTER Variability of ammonia-oxidizing bacteria and archaea in the lower Columbia River Estuary: F U Moeller, H M Simon, J Needoba

1730h CO35B-08 POSTER Ecosystem Impacts of Dynamic Nitrogen Cycling by a Dominant Coral Reef Sponge Xestoposongia muta: P J Gibson, C S Martens, N L Linquist, J L Hench

1730h CO35B-09 POSTER Shelf Scale Phytoplankton Bloom on a Nitrogen Limited Coast: M J Lourey, P Thompson, J McLaughlin, M Feng

1730h CO35B-10 POSTER Particulate Carbon Export in the North Pacific Ocean Using Th-234-U-238 Disequilibrium: S Pal, C R Benitez-Nelson, S R Emerson, J W Murray, M T Kavanna

1730h BO25D-04 POSTER RUBISCO A LONG LIVE PROTEIN IN THE PACIFIC OCEAN: M V Orellana, R L Moritz, D A Hansell

CO35C Poster Hall E Wednesday 1730h Observations and Modeling of Air-Sea Biogeochemical Fluxes in Ice-Covered Waters Posters (joint with IT)

Presiding: N S Steiner, Fisheries & Oceans Canada; P A Matrai, Bigelow Laboratory for Ocean Sciences; L A Miller, Institute of Ocean Sciences

1730h CO35C-01 POSTER Gas transport between the atmosphere and the Southern Ocean interior through the seasonal ice zone: B Loose, P Schlosser

1730h CO35C-02 POSTER Developing a 1-D model for gas exchange in ice-covered regions: N S Steiner, K Denman


1730h CO35C-04 POSTER The Dynamical Transport of Passive Tracers within Sea Ice: N Jeffery, S M Elliott, E C Hunke

1730h CO35C-05 POSTER The diffusion of greenhouse gases in Antarctic sea ice: K Abrahamsson, A Fransson, M Chierici, D Barraud, J Engelbrektsson, A Karlsson, M Mattsdat, M Nilsson

1730h CO35C-06 POSTER Sea-ice carbonate system dynamics in the Amundsen and Ross Seas, Antarctica: A Fransson, M Chierici, P L Yager, M Mattsdat, M Nilsson, K Sines

1730h CO35C-07 POSTER Modeling methanesulfonic acid (MSA) deposition on Antarctica to understand the MSA-sea ice link: P J Hezel, B Alexander, C M Bitz, E J Steig

1730h CO35C-08 POSTER Characteristics of Winter and Spring Surface CO2 Exchange over Seasonal Sea Ice in the Canadian Arctic Archipelago: T N Papakyriakou, L A Miller, J Ehn

1730h CO35C-09 WITHDRAWN

Education and Outreach

ED35A Poster Hall E Wednesday 1730h Compound Interest: Research + Energy + Outreach = Career and Personal Yield II Posters

Presiding: G Scowcroft, University of Rhode Island

1730h ED35A-01 POSTER Getting the word out – successful communication with journalists: C Schallenberg

1730h ED35A-02 POSTER Salutations from the Southern Ocean: Making Web Logs Reach Further: E L Sikes, J Wilkin, M L Hardee, C S Lienenthaler, J D McDonnell

1730h ED35A-03 POSTER Reaching out to scientists: A model for integrating scientists’ research into teacher professional development: J Hare, L K Smith, S M Buhr, O P Persson, C W Fairall, S Linds, M S McCaffrey

1730h ED35A-04 POSTER A successful model for community-based mentoring in physical oceanography: L M Gerber, S Lozier

1730h ED35A-05 POSTER Teaching an old “salt” new tricks: One scientist can reach thousands through innovative curriculum design: M P Delaney

1730h ED35A-06 POSTER Adapting the Poster Session to Benefit Scientists and The Broader Community: T Clay, A Anderson, R G Keil

1730h ED35A-07 POSTER Ocean Core Lab as Capstone Undergraduate Research Opportunity: P A Cleary, P Rumford

1730h ED35A-08 POSTER The Ocean Society Education Collaborative (OSEC): a new initiative for K-16 ocean science education and outreach: S B Cook, G T Muller-Parker

1730h ED35A-09 POSTER From Research to Competition – Getting Research Scientists involved in Education: A L Byrd

1730h ED35A-10 POSTER The UW Program on Climate Change: a Structure and Context for an Evolving Partnership Between Climate Change Graduate Education and Public Outreach: M A Bertram, L Thompson, C S Bretherton, J W Murray

1730h ED35A-11 POSTER A Common Ground for Effective Science: C K Armbrrecht, A deCharon, F Chai, J Graves
1730h  ED35A-12 POSTER Making Stakeholders Matter: Involving Diverse Stakeholders through Narrative and Transdisciplinary Approaches: N M Bell, C B Anderson, J Holbrook, R Frodeman

1730h  ED35A-13 POSTER Work and Life at Sea - A Virtual Cruise: A Barna, C Berys, J H Swift, R Lee, M Shen, J Morison, I Chan, D Park, P Huang, C Lopez

1730h  ED35A-14 POSTER The Center for Ocean Science Education Excellence (COSEE) - Pacific Partnerships: Providing Opportunities for Ocean Scientists to Fulfill Broader Impacts that Involve Community Colleges and Informal Science Education Professionals and Volunteers: J Hodder, S Rowe, G W Boehlert, K Carlin Morgan, C Gehrke, J Cheung

ED35B Poster Hall E Wednesday 1730h

**COSEE Evaluations: What We've Learned and Implications for the Future II Posters (joint with IT)**

**Presiding:** J A Kastler, University of Southern Mississippi

1730h  ED35B-01 POSTER A Comparison of Two Summer Institutes: S Ross

1730h  ED35B-02 POSTER Developing Successful Online Workshop Models: J Lee, L Whitley

1730h  ED35B-03 POSTER Unlimited Access: Using collaborative products to make current scientific knowledge more accessible: J Woerner, T Bishop, T Carruthers, W Dennison, L Murray, C Gurbisz

1730h  ED35B-04 POSTER A Swim Through A One Day Professional Development Workshop Model: G K Noda, P Kwon

1730h  ED35B-05 POSTER The Impact COSEE Participation Has On Scientists: B McCann, S Ross

1730h  ED35B-06 POSTER The COSEE:CGOM experience: Enhanced Scientist Experiences in Summer Institutes: J A Kastler, S H Walker

1730h  ED35B-07 POSTER Marine Science Education of Xiamen University, China: M Chen, W Cao, A Zheng

ED35C Poster Hall E Wednesday 1730h

**Ocean Literacy and Mutualism: Science Organizations Partnering With Informal Education Institutions II Posters**

**Presiding:** M K Miller, Mary Miller; E Ban, Smithsonian Institution; C McDougall, NOAA

1730h  ED35C-01 POSTER Teaching Together: Scientists and Educators Creating a New Community of Practice: L U Tran, C Halversen

1730h  ED35C-02 POSTER Improving Ocean Literacy by Engaging Informal Science Education Facilities with COSEE SE Partnerships Bell, E.V. COSEE SE/SC Sea Grant Consortium, Charleston, SC, USA Thomas, C.J., N C.S.U., Raleigh, NC, USA Spence, L.L., COSEE SE/SC Sea Grant Consortium, Charleston, SC, USA Hathaway, T.K., NC Sea Grant, Manteo, NC, USA Bliss, A.C., COSEE SE/UGA-MAREX, Savannah, GA, USA: E V Bell, C Thomas, L Spence, T Hathaway, A Bliss

1730h  ED35C-03 POSTER Communicating Current Science: Ocean and Climate Researchers Collaborating with Informal Science Institutions to Reach Public Audiences: M K Miller, C McDougall

1730h  ED35C-04 POSTER COSEE Coastal Trends: Building Awareness of Trends in Coastal Ecosystems through Science-Education Partnerships: D M Gibson, L Murray, T Carruthers, C Witherspoon

1730h  ED35C-05 POSTER Making Meaning from Spherical Visualizations: C F Barthel, M Phipps, S Rowe

1730h  ED35C-06 POSTER Communicating Climate Change (C3): A Partnership between Science Centers and Science Organizations: K Crawford

1730h  ED35C-07 POSTER The Inner Space Center - Linking Ocean Exploration Programs with Aquariums: D Coleman, G Scowcroft

1730h  ED35C-08 POSTER Innovative Education and Outreach Opportunities for Scientists: Building Ocean Learning Communities: J Mathisen, S K Bullerick, K Sider

1730h  ED35C-09 POSTER Partnering Universities and ISEs to Bring Current Ocean Sciences and Communications Skills to Informal Science Educators: S Rowe, K Carlin Morgan

1730h  ED35C-10 POSTER NOAA AND THE EXPLORATORIUM: ENHANCING PUBLIC UNDERSTANDING OF OCEAN EXPLORATION: P Keener

1730h  ED35C-11 POSTER Developing Community Environmental Literacy Through Informal Education Partnerships: NOAA in the Pacific: W K Stovall, S Lewinski, M McBride, S Bennett

**Geological Oceanography**

GO35A Poster Hall E Wednesday 1730h

**Advances in Coupled Models of Coastal Sedimentary Dynamics and Morphology II Posters (joint with PO)**

**Presiding:** C R Sherwood, US Geological Survey; R Geyer, WHOI; T Hsu, University of Delaware

1730h  GO35A-01 POSTER UPCSALING OF SEDIMENT EROSION PARAMETERIZATION FROM SMALL-SCALE, INTRA-WAVE MODELS TO REGIONAL SCALE OCEAN MODELS: L Amoudry, P Liu, A J Souza, P Thorne

1730h  GO35A-02 POSTER Influence of Small-Scale Topography and Bottom Roughness on Modeled Waves and Circulation: C R Sherwood, N K Ganju

1730h  GO35A-03 POSTER A quantitative approach to determining seabed roughness for hydrodynamic and sediment transport models: P W Cazenave, J K Dix, D Lambkin

1730h  GO35A-04 POSTER Turbulence-Resolving Mixture Theory Simulations of Bedform Dynamics in the Wave Bottom Boundary Layer: A M Penko, J Calantoni, J Simeonov

1730h  GO35A-05 POSTER Numerical modeling on the dynamics of sediment-laden density plume: P J Snyder, T Hsu

1730h  GO35A-06 WITHDRAWN

1730h  GO35A-07 POSTER Is the Erosional Hotspot at Ocean Beach, San Francisco, Caused by wave focusing? - From Modeling Point of View: F Shi, J T Kirby, D M Hanes

1730h  GO35A-08 POSTER Deposition by seasonal wave- and current-supported sediment gravity flows interacting with spatially varying bathymetry: Waiapu shelf, New Zealand: Y Ma, C T Friedichs, C K Harris, L D Wright


1730h  GO35A-10 POSTER Variability of nearshore optical properties: T R Keen

1730h  GO35A-11 POSTER Wave-Induced Scour Burial Experiments in Carbonate Sediments near Oahu, Hawaii: M D Richardson, R H Wilkens

1730h  GO35A-12 POSTER Storm and fair-weather driven sediment transport offshore of a small mountainous river in Poverty Bay, New Zealand: A J Bever, C K Harris, J E McNinch
GO35B Poster Hall E  Wednesday 1730h  
Observation and Modeling of Suspended Particle Dynamics in the Ocean II Posters (joint with PO)


1730h GO35B-01 POSTER Are Transport Behaviors of Cohesive and Non-Cohesive Finely Really That Different?: N T Hamm, W B Dade
1730h GO35B-02 POSTER Sorting of non-cohesive silts by unidirectional currents: W B Dade, N T Hamm
1730h GO35B-03 POSTER Marine snow originating from appendicularian houses: age-changes in settling characteristics: L Fabien, T Kierboe
1730h GO35B-04 POSTER On Using the LISST-STX for Measurements of Settling Velocity Spectra: O A Mikkelsen, Y C Agrawal
1730h GO35B-05 POSTER ACOUSTICAL AND OPTICAL OBSERVATIONS OF PARTICLE DYNAMICS IN A BOTTOM BOUNDARY LAYER: C Russo, W H Slade, E Boss
1730h GO35B-06 POSTER Predictive Theoretical Optical Relations For Suspended Mineral Matter: R H Stavn
1730h GO35B-07 POSTER High Resolution Measurements of Particle Size Distributions in a Coastal Upwelling System: D E Archer, S A Siedlecki, T Jokulsdottir
1730h GO35B-08 POSTER Flocculation in a nutrient-rich coastal area (southern North Sea): Measurements and modeling: P Chen, J C Yu, M Fretweis, D Van den Eynde, F Maggi
1730h GO35B-09 POSTER The Spatial Structure of Surface Turbidity from Synchronized Satellite and In-Situ Observations of Puget Sound: M Howard, K Humes, M G Logsdon
1730h GO35B-10 POSTER Flocculation effects on lateral trapping of fine-grained sediment in an idealized partially mixed estuary: F Xu, D Wang, N S Riemer
1730h GO35B-11 POSTER A numerical study of suspended particulate matter in the East China Sea: J Ono, X Guo
1730h GO35B-12 POSTER Direct Numerical Simulation of a Model Estuary: E Meiburg, R Henniger, L Kleiser

GO35C Poster Hall E  Wednesday 1730h  
Tidal Flats: Hydrodynamic and Sedimentary Processes of Mesotidal Environments II Posters (joint with PO)

Presiding: C Nittouer, University of Washington; B Raubenheimer, Woods Hole Oceanographic Institution; R A Wheatcroft, Oregon State Univ

1730h GO35C-01 POSTER Temporal Variability of Skagit Bay from Synthetic Aperture Radar Measurements: M J Caruso, H C Graber, R Romeiser, P Mallas
1730h GO35C-02 POSTER Remote Characterization of Tidal Flats using Airborne MultiSpectral Polarimetric Imaging: B Hooper, B Baxter, K Vierra, C Piotrowski
1730h GO35C-03 POSTER Propagation and dissipation of a freshwater plume front: S M Henderson
1730h GO35C-04 POSTER Stratification on a Mesotidal Flat: R R Yopak, B Raubenheimer, S Elgar, V Pavel
1730h GO35C-05 POSTER Vertical Shear and Stratification on a Tidal Flat: S D Kilgallin, B Raubenheimer, S Elgar
1730h GO35C-06 POSTER Bottom Drag Coefficients on a Tidal Flat: S F Zippel, B Raubenheimer, S Elgar
1730h GO35C-07 POSTER Wind-driven Flows on a Mesotidal Flat: D L Giffen, B Raubenheimer, S Elgar, J M Thomson
1730h GO35C-08 POSTER Classification of Intertidal Sediments Using Infrared Sensing: J M Thomson, C Chickadel, P Rineheimer
1730h GO35C-09 POSTER Using vertical temperature gradients in tidal flat sediments to estimate sediment composition: J L Miselis, K Holland, A H Reed
1730h GO35C-10 POSTER Heat Measurements and Numerical Modeling of Thermal Diffusivity Through Heterogeneous Tidal Flat Sediments: A H Reed, A Abele, J L Miselis, K Holland
1730h GO35C-11 POSTER Dramatically Different Fates for Fine Sediment on Two Mesotidal Flats: Skagit Bay and Willapa Bay, Washington: C Nittouer, K V Boldt, K M Lee, D J Nowacki
1730h GO35C-12 POSTER Water-surface elevation controls on sediment-transport dynamics in channel-flat environments of intertidal flats: D J Nowacki, A S Ogston, C Nittouer
1730h GO35C-13 POSTER Seasonal variations of tidal-flat sedimentation in Willapa Bay, Washington: K V Boldt, A S Ogston, C Nittouer
1730h GO35C-14 POSTER Size-sorting on tidal flats: Results from Willapa Bay: B A Law, T G Milligan, P S Hill, J Newgard, P L Wiberg, R A Wheatcroft
1730h GO35C-15 POSTER Is Fracture Toughness an Indicator of Sediment Erodibility?: M A Barry, B Johnson
1730h GO35C-17 POSTER Coupling of Water Quality Data and a Circulation Model to Interpret Nitrate Sources and Distribution within Morro Bay Estuary, California: J Weston, M Moline, D E Wendt, J Penvenne, L F Hubler, I Robbins, B C Zelenke
1730h GO35C-18 WTHDRAWN
1730h GO35C-19 POSTER Cohesive Sediment Erosion Rates and Bed Stress Measured in a Laboratory Flume: P J Rusello, E A Cowen

GO35D Poster Hall E  Wednesday 1730h  
Tidal Flats: Hydrodynamics and Morphodynamics of Macrotidal Estuarine and Beach Environments I Posters (joint with BO, PO)

Presiding: G Lee, Inha University

1730h GO35D-01 POSTER Calculation of heat flux between seawater and seabed using FVCOM in a macro tidal flat, southwest coast of Korea: Y Cho, T Kim
1730h GO35D-02 POSTER Monitoring tidal movements in Cook Inlet, Alaska, using the integration of remote sensing data, GIS, and inundation models: H Liu, T Ezer
1730h GO35D-03 POSTER Tidal Flush and Circulation in the Estuarine-Shef of Plum Island Sound and Merrimack River: L Zhao, C Chen, J J Valtino, C Hopkinson
1730h GO35D-04 POSTER Wave Breaking Criteria for Macro-tidal Beach: J Chae, D Lee, Y Kuriyama, K Balk
1730h GO35D-05 POSTER Development and Validation of Surf Prediction System for Macro-tidal Beach: K Jun, J Yoo, D Lee
1730h GO35D-06 POSTER Validation of nearshore circulation and water-level at macro-tidal beach: S Hyun, D Lee, B Liang, K Park
1730h GO35D-07 POSTER Wave Runup and Overtopping under Macrotidal Environment: S Oh, J Yoo, D Lee
1730h GO35D-08 POSTER THE EFFECT OF MACRO-TIDAL RANGE ON BEACH PROFILE FEATURES OF MIXED SAND COMPOSITION: J Lee, J Lee, D Lee
Interdisciplinary

IT35A Poster Hall E Wednesday 1730h Assessing, Monitoring, and Predicting Coastal and Inland Water Quality Using Remotely Sensed Data and Products II Posters (joint with BO, PO)

Presiding: Z Lee, Northern Gulf Institute


1730h IT35A-02 POSTER Influence of Averaging Method on the Evaluation of a Coastal Ocean Color Event on the U.S Northeast Coast: J G Acker, S E Schollaert Uz, S Shen, G G Leptoukh

1730h IT35A-03 POSTER Atmospheric Correction of MODIS Observations in the Coastal Zone for Suspended Sediment Concentration Retrievals: J E Davies, C B Mouw, C C Moeller

1730h IT35A-04 POSTER Remote sensing estimation of the euphotic zone depth in coastal waters: M Darecki


1730h IT35A-06 POSTER Inversion of the optical backscattering to scattering ratio of marine particles from ocean color radiometry: Application to the Monterey Bay: B Lubac, Z Lee, R W Gould, I Shulman

1730h IT35A-07 POSTER Hyperspectral Imager for the Coastal Ocean (HICO): A space-borne earth observation sensor for ocean color investigations: D Lewis, R Arnone, B Casey, W Hou, R W Gould, S D Ladner, A Lawson, P Martinolich, M J Montes, K W Patterson, T Scardino, R Vaughan

1730h IT35A-08 POSTER Toward Assessing and Monitoring Estuarine Water Quality from Satellite in the Chesapeake Bay: C S Kinkade, X Liu, M Wang

1730h IT35A-09 POSTER Numerical experiments using multi-temporal MODIS 250 m data: cohesive sediment dynamics in a shallow lake under wind-waves and tidal forcing: I Georgiou, R Miller, C J Buonassisi, A McCorquodale

1730h IT35A-10 POSTER Chromophoric Dissolved Organic Matter in the nearshore waters of the western Taiwan Strait: C Du, S Shang, Q Dong, C Hu

IT35B Poster Hall E Wednesday 1730h Autonomous Lagrangian Platforms and Sensors I Posters (joint with BO, PO, MT, IT, ED, CO)

Presiding: E Boss, University of Maine; T Martz, Scripps Institution of Oceanography; N Gruber, ETH Zurich; M Perry, University of Maine

1730h IT35B-01 POSTER Trans-Atlantic Glider Technology School (TAGTS): Engaging students in long duration underwater glider missions through a Trans-Atlantic partnership: C Barrera, J T Kohut, A M Martins, M Rueda, S M Glenn, O Schofield, C Jones, R Moran, O Llinas

1730h IT35B-02 POSTER Aggregate Formation And Distribution During And Following The 2008 North Atlantic Bloom: N Briggs, M Perry, I Cetinic, E A D’Asaro, C M Lee, M E Sieracki, A Gray, E Rehm

1730h IT35B-03 POSTER Correction and Comparison of Pumped and Non-Pumped CTD sensors on the Slocum Glider: J Kerfoot, O Schofield, S M Glenn, D Aragon, C Haldeman, C Jones, D Pingal

1730h IT35B-04 POSTER From the shape of the vertical profile of Chlorophyll a Fluorescence to Chlorophyll a concentration: a method towards ensuring chlorophyll a data consistency acquired by various platforms: A Mignot, H Claustre, F D’Ortenzio, A Poteau, V Taillrand, X Xing, C Guinet

1730h IT35B-05 POSTER Real-time and delayed-mode quality control for biogeochemical data acquired by autonomous platforms: A Poteau, F D’Ortenzio, H Claustre, A Mignot, X Xing

1730h IT35B-06 POSTER Optical Determination of Phytoplankton Size Structure From Water-following Radiometry During The 2008 North Atlantic Spring Bloom Experiment: E Rehm, E A D’Asaro, M Perry, N Briggs, E Kallin, N Poulton, M E Sieracki, B Thompson, C D Mobley

IT35C Poster Hall E Wednesday 1730h Climate Change Impacts on the Bering Sea and Related Polar Seas: From Observation to Prediction I Posters

Presiding: M W Lomas, BIOS

1730h IT35C-01 POSTER Euphausiid Feeding and Growth in the Eastern Bering Sea: E Lessard, C T Shaw, M J Bernhardt, V L Engel, M S Foy

1730h IT35C-02 POSTER Euphausiid Responses to Changing Food Resources: Lipids as Molecular Tracers of Diet History in the Bering Sea: R L Pleuthner, E Lessard, M J Bernhardt, C T Shaw, H R Harvey

1730h IT35C-03 POSTER Mesozooplankton – Microbial Food Web Interactions in the Bering Sea During Spring Sea-Ice Conditions: R G Campbell, J Ashjian, B F Sherr, E Sherr

1730h IT35C-04 POSTER Recent Ostracoda from the Northern Bering and Chukchi Seas: L Gemery, T M Cronin, L W Cooper, E M Brouwers

1730h IT35C-05 POSTER Primary Production on the Eastern Bering Sea Shelf as Estimated from Oxygen/Argon Ratios and Triple Oxygen Isotopes: M G Prokopenko, J Granger, C Mordy, N Cassar, P J DiFiore, N Kachel, D Kachel, E D Colete, D M Sigman, B Moran

1730h IT35C-06 POSTER Lipid profiles of heterotrophic protists as tracers of euphausiid diets in the Bering Sea: V L Engel, E Lessard, H R Harvey, R L Pleuthner, M J Bernhardt

1730h IT35C-07 POSTER Comparison of northeast Pacific Ocean model hindcasts to in-situ observational data: T Weingartner, E N Curchitser, K Hedstrom, S L Danielson
Experiments on hydrographic structure over the SE Bering Sea Shelf: N B Kachel, C W Mordy, P J Stabeno

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1730h IT35C-08 POSTER Spatial variation in the distribution and energy density of juvenile walleye pollock in the southeastern Bering Sea: N E McIntosh, L D Whitman, K J Benoit-Bird, S A Heppell

1730h IT35C-09 POSTER Comparison of four decades of hydrographic structure over the SE Bering Sea Shelf: N B Kachel, C W Mordy, P J Stabeno

1730h IT35C-10 POSTER Spatial Scales of Correlation on the Bering Sea Middle Shelf: S A Salo, P J Stabeno

1730h IT35C-11 POSTER 3D Hydrographic Measurements from the Bering Sea Bottom Trawl Survey: E D Cokelet

1730h IT35C-12 POSTER Communicating Ecosystem Science: N L Deans, F K Wiese

1730h IT35C-13 POSTER New and recycled nitrate on the eastern Bering shelf during the 2007 ice retreat: J Granger, D M Sigman, M G Prokopenko, C W Mordy

1730h IT35C-14 POSTER Fish and macrozooplankton distribution in ice-covered and open-water areas of the eastern Bering Sea: A De Robertis

1730h IT35C-15 POSTER Specific phytoplankton absorption along the 70-m isobath of the southeastern Bering Sea during July 2008: P S Naik, E J D’Sa, J J Goes, H R Gomes

1730h IT35C-16 POSTER The Bering Sea Climate and the Alaskan Stream Variability: A Numerical Modeling Study: T Ezer, L Oey

1730h IT35C-17 POSTER Temperature and salinity seasonal climatology and interannual variability over the central eastern Bering Sea shelf: S L Danielson, L B Eisner, T Weingartner, K Aagaard

1730h IT35C-18 POSTER A Brief History of an Ecosystem Spring Setup as Seen in Annual Ice Cover: M E Sullivan, C W Mordy, P J Stabeno, N B Kachel, D G Kachel, S A Salo

1730h IT35C-19 POSTER The Annual Nutrient Cycle on the Bering Sea Shelf: Seasonal Drawdown vs. Winter Replenishment: C W Mordy, C Ladd, M W Lomas, R Sambrotto, P J Stabeno

1730h IT35C-20 POSTER Multiple Scale Variations in the Sea Ice and Oceanic Circulation, the Ecosystem in the Bering Sea: W P Budgell, C Dong, Y Chao, H Zhang, L Shi, F Chai, J C McWilliams

1730h IT35C-21 POSTER The Bering Sea Integrated Ecosystem Research Program: downscaling climate change to a subarctic region with coupled biophysical models: A J Hermann, K Aydin, N A Bond, W Cheng, E N Curchitser, G A Gibson, K Hedstrom, I Ortiz, M Wang, P J Stabeno

1730h IT35C-22 WITHDRAWN

1730h IT35C-23 POSTER Vertical distribution of two common larval gadids, walleye pollock ( Theragra chalcogramma ) and Pacific cod ( Gadus macrocephalus ), in the eastern Bering Sea: T Smart, E Siddon, J T Duffy-Anderson, N Hillgruber

1730h IT35D-04 POSTER Everything You Always Wanted to Know About <Sex> Wave-Driven Upwelling Pumps But Were Afraid to Ask: P W Kirkil

1730h IT35D-05 POSTER Wave-Driven Upwelling as a Tool for the Enhancement of Biological Sequestration of Carbon in Open Oceans: R M Letelier, A White, D M Karl

1730h IT35D-06 WITHDRAWN

1730h IT35D-07 POSTER Response of a flagellate dominated plankton community to artificial iron enrichment in the Southern Ocean: I Schulz, P Assmy, C Klasa, V Smetacek

1730h IT35D-08 POSTER Sequestering CO2 in the Built Environment: B R Constantz

1730h IT35D-09 POSTER Ocean Wave Energy Overview and Research at Oregon State: T Brekken, A Von Jouanne, A Yokochi

1730h IT35D-10 POSTER Hydrokinetic Turbine for Pacific Equatorial Undercurrent: J Duke

IT35E Poster Hall E Wednesday 1730h Impact of Eutrophication and Climate Change on Marginal Seas III Posters (joint with BO, PO, CO)

Presiding: K K Liu, Natl Central Univ; M Li, University of Maryland CES; D Tang, Chinese Academy of Sciences; K Kim, Seoul National University

1730h IT35E-01 POSTER Impacts of surface forcing on interannual variability in fall phytoplankton bloom: A process-oriented modeling study of the Gulf of Maine: S Hu, C Chen, R Ji, D W Townsend, R C Beardsley, R Tian, C S Davis

1730h IT35E-02 POSTER Characteristics and development of coastal eutrophication in China: Z Yu

1730h IT35E-03 POSTER A Modeling Study of the Chub mackerel (Scomber Japonicus) Recruitment in the East China Sea: Y Li, C Chen, X Chen, J Ge, R Tian, R Ji, L Xu

1730h IT35E-04 POSTER Analysis of East/Japan Sea Intermediate Water and its physicochemical features from OMP analysis: I Kim, D Min, T Lee

1730h IT35E-05 POSTER Historical Trends of Hypoxia in Changjiang River Estuary: Applications of Chemical Biomarkers and Microfossils: X Li, T S Bianchi, Z Yang, L E Osterman, M A Allison, S DiMarco

1730h IT35E-06 WITHDRAWN

1730h IT35E-07 POSTER The significance of biological activities to the air-sea exchange of CO2 in the northern South China Sea: a numerical assessment: L Wang, M Kueh, C Tseng, W Chou, C Sui, J J Hung, K K Liu


1730h IT35E-09 POSTER The influence of Changjiang plume size on summer microplankton phosphorus-deficiency in the East China Sea based on alkaline phosphatase activities: H Liu, J Chang, G Gong, T Ho, C Shih

1730h IT35E-10 POSTER The impact of the Changjiang River plume extension on the nanoflagellate community in the East China Sea: K Chang

1730h IT35E-11 POSTER Seasonal and Interannual Variation of the SeaWiFS Chlorophyll a in the Yellow and East China Seas: H Yamaguchi, H Kim, Y Son, S Kim, K Okamura, Y Kiyomoto, J Ishizaka
1730h IT35F-12 POSTER Biomarker Records of Phytoplankton Productivity and Community Structure Changes in the Yellow Sea over the Last 6500 Years: X Zhao, L Xing, L G Xue, T S Qin, M Zhao

1730h IT35F-13 POSTER High primary productivity in summer in the southwestern part of the EAST/Japan Sea: Association with high NO uptake due to shallow stratification: J Kwak, E Choy, H Park, D Kang, T Lee, K Chang, K Kim, C Kang

1730h IT35F-14 POSTER Dynamics of hypoxia in the Humen Channel of Pearl River Estuary: L Luo, W Wang, W Zhou

1730h IT35F-15 POSTER Potential Impacts of Climate Change on Hypoxia in a Eutrophic Freshwater Bay: J V Klimes, J T Waples, P Baumgarten, K Ferranich

1730h IT35F-16 POSTER Total soluble inorganic nitrogen concentrations and total suspended sediments in four tropical rivers across a land use gradient: R Rasse, T J Perez, A Giulianti, J Flores, A Rojas, L Donoso, L Lorenzoni, E Muller-Karger

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IT35F Poster Hall E Wednesday 1730h

**Oceans and Human Health: Identifying and Understanding Ocean Health Benefits and Threats II Posters (joint with BO, PO, CO)**

**Presiding:** S L Smith, University of Miami; E A Laws, Louisiana State University; P A Sandifer, NOAA

1730h IT35F-01 POSTER Engaging multiple stakeholders to improve coastal-ocean stewardship: F C Dobbs

1730h IT35F-02 POSTER Microscopic Islands: Does the Theory of Island Biogeography apply to aquatic pathogens and marine aggregates?: M Lyons, F C Dobbs, J Ward, R Hicks, J Drake

1730h IT35F-03 POSTER Modeling of the release of enterococci from beach sands by waves and currents: Z Feng, A J Reniers, B K Haus, J D Wang, R G Zepp, E M White, M Molina, C D Sinigalliano, M Gidley, D I Aranda

1730h IT35F-04 WITHDRAWN

1730h IT35F-05 POSTER Microbial Biofilms: A Refugia for Fecal Indicator Bacteria and Other Microbial Pathogens?: A M Piggot, J S Klaus

1730h IT35F-06 POSTER From Cesspit to Sewer: Utilization of molecular microbial source tracking in residential canals and near-shore waters to assess sanitary infrastructure improvements in a tropical coastal island community in Vaca Key in Marathon, Florida: D I Aranda, M Gidley, D Wanless, H Briceno, J N Boyer, J Absten, W Pomenti, P Given, C Sinigalliano

1730h IT35F-07 POSTER Development and Application of a Taqman qPCR Assay for Environmental Detection of Gulf-Specific Fecal Contamination in a Non-Point-Source Subtropical Beach: C D Sinigalliano, D Wanless, N Lucey, T Scott, H Solo-Gabriele, L E Fleming, J D Wang, J Lu, H Ryu, N Ashboltt, J Santo Domingo, J Griffith

1730h IT35F-08 POSTER Traditional and Molecular Assessment Fecal Indicator Bacteria and Selected Pathogens and Their Association to Health Effects at a Non-Point-Source Subtropical Recreational Beach: M Gidley, C D Sinigalliano, J Fleisher, H Solo-Gabriele, T Shibata, L Plano, S Elmir, J D Wang, J Kish, L Backer, L E Fleming

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IT35G Poster Hall E Wednesday 1730h

**Oceans and Human Health: Predicting Harmful Algal Blooms II Posters (joint with BO, PO, CO)**

**Presiding:** B M Hickey; D J McGillicuddy, WHOI

1730h IT35G-01 POSTER Transboundary harmful algal blooms in the southwest Sea of Japan: G Onitsuka, K Miyahara, N Hirose, S Watanabe, H Semura, R Hori, T Nishikawa, K Miyaji, M Yamaguchi

1730h IT35G-02 POSTER Can benthic herbivores transmit brevetoxins through estuarine food webs? A test of an unrecognized pathway in the Gulf of Mexico: E E Sotka, A McCarty, E Monroe, N Oakman, F Van Dolah

1730h IT35G-03 POSTER Can the halo-tolerance of the toxic raphidophyte alga, Heterosigma akashiwo provide a refuge from microzooplankton predation?: E Harvey, S Strom, S Menden-Deuer

1730h IT35G-04 POSTER Development of a direct detection method for Alexandrium spp. in the Gulf of Maine using surface plasmon resonance and peptide nucleic acid probes: A R Bratcher, L B Connell, P Millard


1730h IT35G-06 POSTER What is the Right Strategy to Observe Potentially Harmful Algal Blooms off the California Coast?: S Frolov, J P Ryan, R M Kudela, J G Bellingham

1730h IT35G-07 POSTER Validation of a new multi-algorithm method for detecting the Florida Red Tide (Karenia brevis) using satellite ocean color measurements: G Carvalho, P J Minnett

1730h IT35G-08 POSTER Development of a Predictive Model for In Situ Domoic Acid Concentrations off the Oregon Coast: S M McKibben, P G Strutton, M Wood, G Miller, B Eberhart, V Trainer


1730h IT35G-10 POSTER Influence of Kennebec Discharge and Wind Forcing on Subtidal Circulation in Eastern Casco Bay, Gulf of Maine: M Wolovich, E P Laine, C Roesler, G J Teegarden

1730h IT35G-11 POSTER Chaotic succession and atypical species composition of phytoplankton communities in a HAB-prone embayment in Casco Bay, Gulf of Maine: G J Teegarden, S J Hankinson, E P Laine, N Ebel, C Roesler

1730h IT35G-12 POSTER The Effects of Harmful Algal Species and Food Concentration on Zooplankton Grazer Production of Dissolved Organic Matter and Inorganic Nutrients: G K Saba, D K Steinberg, D A Bronk, A R Place

1730h IT35G-13 POSTER Oceanographic regimes and Foraging patterns: an underlying cause of domoic acid induced Sea Lion strandings: S Bargu, M W Silver, T Goldstein, K Roberts, F Gulland

1730h IT35G-14 POSTER Comparative genomics of saxitoxin-producing cyanobacteria and dinoflagellates: J D Hackett, J L Hughes, D M Anderson, D Bhattacharya, G Plumley

IT35H Poster Hall E Wednesday 1730h
Plastic Debris in the Ocean: Quantifying the Problem and Investigating Its Impacts II Posters

Presiding: K L Law, Sea Education Association

1730h IT35H-01 POSTER Convergence Zones at the Ocean Surface with Implication for Marine Debris Distribution: J Hafner, N A Maximenko, P Niller

1730h IT35H-02 POSTER The Impact of Wind Stress on the Concentration of Plastic Debris in the Open Ocean: G Proskurowski, K L Law, S Moret, C M Reddy


1730h IT35H-04 POSTER Initial Analysis of Marine Debris Accumulation in the Subtropical Convergence Zone of the North Pacific Gyre: A C Neal, M Gonsior, M Gassel, H Coleman, N Argyropoulos, C Hume, R Mielke, D Steuerman, K D Knobelspiesse, B Balestra

1730h IT35H-05 POSTER Preliminary Data on Plastic Pollution in the Sargasso Sea in the Vicinity of the Bermuda Atlantic Time Series Station: W Cooper, B Monteleone, J O'Keefe, M Gonsior, A Neal, M H Conte, C Moore, M Eriksen

1730h IT35H-06 POSTER Establishing a robust characterization of beach plastics: C M Reddy, E Peacock, S Moret-Ferguson, E Murphy, K L Law


1730h IT35H-08 POSTER SoundCitizen: Evaluating Anthropogenic Inputs to Puget Sound: R G Keil, B Kimball, J Neibauer, A Myers-Pigg

1730h IT35H-09 POSTER Spatial Distribution of Plastic Marine Debris in the Marine Environment: M Eriksen, A Cummins

IT35J Poster Hall E Wednesday 1730h
The California Current Ecosystem: Managing Fisheries Resources in the Face of Climate Variability and Change I Posters (joint with BO, PO, MP)

Presiding: F Schwing; E Casillas, NOAA Fisheries; D Detlor, NOAA Fisheries

1730h IT35J-01 POSTER Approach on goals and achievements of WCPFC from China's perspectives: L Xu, X Chen

1730h IT35J-02 POSTER Aerobic and Anaerobic Enzyme Assays in Southern California Rockfish: Proxies for Physiological and Ecological Data: E M Hudson, J Donnelly, M E Clarke, W W Wakefield, J Torres

1730h IT35J-03 POSTER Evaluating multi-predator proxies as ecosystem indicators off Central Oregon: A J Gladics, R M Suryan, J Parrish, W T Peterson

1730h IT35J-04 POSTER Resolving phytoplankton biodiversity in an ecosystem model within the California Current System: N Goebel, C A Edwards, J Zehr, M Follows

IT35K Poster Hall E Wednesday 1730h
The Indian Ocean: Recent Advances in Physical, Biogeochemical, and Ecosystem Dynamics III Posters (joint with BO, PO, CO)

Presiding: R R Hood, University of Maryland Center for Environmental Science; W Yu, First Institute of Oceanography, State Oceanic Administration; Y Masumoto, Univ Tokyo Grad Schl of Sci; J D Wiggert, Univ of Southern Mississippi

1730h IT35K-01 POSTER IS THE RECENT RECURRENT ANOXIA OF THE SOUTHWEST MONSOON ALONG MUCH OF INDIA'S WEST COAST TO LAST?: K Banse, S Naqvi, M S Rajagopalan, P V Narvekar, J R Postel

1730h IT35K-02 POSTER Mode shift in the Indian Ocean through 20th century recorded in Kenyan coral: N Nakamura, H Kayanne, H Iijima, T R McClanahan, S K Behera, T Yamagata

1730h IT35K-03 POSTER Preliminary results from the 2008-2009 ecosystem assessments in the South Western Indian Ocean: T T Bornman, D Vousden, J R Lutjeharms

1730h IT35K-04 POSTER Ten Years Oceanographic and Water Quality Monitoring in the Eastern Indian Ocean: J D Wiggert, J Vialard, M Behrenfeld

1730h IT35K-05 POSTER Basinwide modification of dynamical and biogeochemical processes by the positive phase of the Indian Ocean Dipole during the SeaWiFS era: J D Wiggert, J Vialard, M Behrenfeld

1730h IT35K-06 POSTER Interannual Variation Of Biological Productivity In The Arabian Sea – An Analysis Of Multiple Remote Sensing Products: C K Armbrrecht, A P Palacz, A Millar, H Xue, F Chai

1730h IT35K-07 WITHDRAWN

1730h IT35K-08 POSTER Wyrkti Jet Dynamics: M Nagura, M J McPhaden
1730h IT35K-09 POSTER The oceanic preconditioning of the monsoon onset over Bay of Bengal: W Yu

1730h IT35K-10 WITHDRAWN

1730h IT35K-11 POSTER Transport and mixing of the intermediate water in the Arabian Sea: An idealized tracer study: A Ishida, Y Sasai, Y Masuda, Y Yamanaka, H Sasaki

1730h IT35K-12 POSTER Long Term Measurements of Currents and Thermohaline Fields from the Mozambique Channel: J E Ullgren, H Riddersinkof, W de Ruijter, P van der Werf, H M Van Aken, P Van Leeuwen

1730h IT35K-13 POSTER Seasonal Intrusion of Indian Ocean Surface Water into the Persian Gulf: F Yao, W E Johns

1730h IT35K-14 POSTER Eddy flux observations of evaporation and vapor advection in the Gulf of Aqaba (Eilat), northern Red Sea: G Bohrer, D Shlomo, S Yair, I Berenshtein


1730h IT35K-16 POSTER Effect of low-frequency Rossby Wave on the thermal structure of the upper southwestern tropical Indian Ocean: J Feng, X Bai, Y Chen, D Hu

1730h IT35K-17 POSTER Salt transport in the Indian Ocean monsoon seasons using HYCOM data: E S NYADJRO, S Bulusu, V Murty

1730h IT35K-18 POSTER Climate Variability in the Southern Indian Ocean as Revealed by Self-Organizing Maps: Y Morioka, T Tozuka, T Yamagata

1730h IT35K-19 POSTER Decadal variations of sea levels in the tropical Pacific and their influence on the Leeuwin Current system: M Feng, M J McPhaden, T Lee

1730h IT35K-20 POSTER Interannual modulation of mesoscale eddy variability in the southeastern tropical Indian Ocean: T Ogata, Y Masumoto

1730h IT35K-21 POSTER Coherent oceanic intraseasonal variations in the eastern equatorial Indian Ocean and in the Lombok and Ombai Straits: I Iskandar, Y Masumoto, K Mizuno

1730h IT35K-22 POSTER Mixed layer temperature balance in the eastern Indian Ocean during the 2006 Indian Ocean dipole: T Horii, Y Masumoto, I Ueki, H Hase, K Mizuno

1730h IT35K-23 WITHDRAWN

1730h IT35K-24 WITHDRAWN

1730h IT35K-25 POSTER MECHANISMS CONTROLLING SEASONAL MIXED LAYER TEMPERATURE AND SALINITY IN THE SOUTHWESTERN TROPICAL INDIAN OCEAN: D J Halkides, T Lee

1730h IT35K-26 POSTER Oceanographic observation of the Saint Martin’s Island (only coral island) of the Bay of Bengal, Bangladesh: M H Islam

1730h IT35L-03 POSTER EFFECT OF PHOTOLYSIS ON THE COMPOSITION OF ORGANIC NITROGEN IN WASTEWATER EFFLUENT: R E Sipler, M P Sanderson, C P Funkey, Q N Roberts, M R Mulholland, N G Love, R Mesfioui, C Burbage, P Hatcher, C Schweitzer, K C Filippino, D A Bronk

1730h IT35L-04 POSTER Significant changes in macronutrient composition along the urban corridor of Puget Sound from 1998-2008: C Krembs, B S Sackmann, C Maloy, S Albertson, J Bos, M Keyzers, S Hofler

1730h IT35L-05 POSTER Combustion-derived substances in deep basins of Puget Sound: Historical inputs from fossil fuel and biomass combustion: L Kuo, P Louchouarn, B E Herbert, J M Brandenberger, T L Wade, E Creecy

1730h IT35L-06 POSTER Responses of benthic macrofauna to environmental stressors: Are there characteristic responses?: T Grayson

1730h IT35L-07 POSTER Atmospheric deposition of trace elements to the near shore ecosystem of Puget Sound, WA, USA: J M Brandenberger, E Creecy, P Louchouarn, G A Gill, L Kuo

1730h IT35L-08 WITHDRAWN

1730h IT35L-09 POSTER Population Dynamics of E. coli Bacteria in Two Houston, TX ‘Urban’ Watersheds and Their Impact on Water Quality in Galveston Bay: R Brinkmeyer, R M Amon, S Duan, J Schwarz

1730h IT35L-10 WITHDRAWN

IT35M Poster Hall E Wednesday 1730h Toward Comprehensive Observing Systems in Polar Regions I Posters (joint with BO, PO, MT, GO, ED, CO)

Presiding: M S Murray, University of Alaska Fairbanks

1730h IT35M-01 POSTER Aircraft Surveys and Other Observations to Improve Arctic Sea Ice Outlooks: J H Morison, J E Overland, M Stee, I G Rigor, T Kikuchi, K Kwok, S V Nghiem

1730h IT35M-02 POSTER Antarctic Bottom Water Warming Since the 1990s and Implications for Global Heat and Sea Level Budgets: S G Purkey, G C Johnson

1730h IT35M-03 WITHDRAWN

1730h IT35M-04 POSTER Constituents of sea surface height variability in Drake Passage: A L Cutting, K A Donohue, T K Cherestkin, D R Watts, K L Tracey

1730h IT35M-05 WITHDRAWN

1730h IT35M-06 POSTER Climatic impacts on Antarctic sea ice algal production: a time series analysis from 1990-2006: B L Saenz, K R Arigo

1730h IT35M-07 POSTER Instrumentation for Observing and Sampling Drifting Icebergs in the Southern Ocean: P R McGill, A D Sherman, B Hobson, K Smith

1730h IT35M-08 POSTER Regional Comparisons of Deep-Ocean Sound in the Southern Ocean: J H Hazel, R P Dziak, M Park, D R Bohnenstiehl, H Matsumoto, W Lee, M J Fowler, T A Lau, D K Mellinger, H Klinken

IT35L Poster Hall E Wednesday 1730h The Urban Ocean II Posters (joint with CO, MP)

Presiding: L E Duguay, University of Southern California

1730h IT35L-01 POSTER Tracking storm water discharge plumes and water quality of the Tijuana River with multispectral aerial imagery: J Svejkovsky, N P Nezlin, N M Mustain, J B Kurn

1730h IT35L-02 POSTER Release of total and methyl-mercury from the sediments of Sinclair Inlet and other estuaries of Puget Sound, Washington: A J Paulson, J F DeWild, G Aiken
Marine Technology

MT35A  Poster Hall E  Wednesday  1730h
Ocean Technology and Infrastructure Needs for the Next 20 Years II Posters (joint with IT)

Presiding: D Glickson, National Research Council; E J Barron, NCAR; S Roberts, National Research Council; C Mengelt, the National Academies


1730h  MT35A-02 POSTER Conducting science at sea in the Arctic; An update on the facilities and support aboard the US Coast Guard icebreaker Healy: D Forcucci, D N Chayes, S Roberts


1730h  MT35A-06 POSTER AUTONOMOUS AIR & SEA SYSTEMS AS COMPONENTS OF FUTURE OCEAN SCIENCE INFRASTRUCTURE: STATUS, NEEDS AND BARRIERS: D S Schwartz, P A McGillivary

1730h  MT35A-07 POSTER Meeting U.S. Needs for Sustained, Systematic Observations of the Oceans from Satellites: W S Wilson

1730h  MT35A-08 POSTER PLOCAN: a Permanent Observing System for the Central-Eastern Atlantic Ocean: J HERNANDEZ-BRITO, E Delory, O Llinas

1730h  MT35A-09 POSTER Development of Iridium Short Burst Data Messaging for Reliable Data Transmission and Potential for Event-Driven Two-Way Communications: E B Roggenstein, D C Finnegan, R M Heisentretsher, M Bushnell

1730h  MT35A-10 WITHDRAWN

1730h  MT35A-11 POSTER Coastal Radar “WERA”, a tool for hazards management: D B Fissel, T Helzel, V Mariette, M Pavec, D Lemon

1730h  MT35A-12 POSTER Towards Model Based Autonomy for Marine Bloom Prediction and Tracking with Multiple AUVs: J Das, K Rajan, F Py, D A Caron, G Sukhatme

1730h  MT35A-13 POSTER The Extended Draft Platform: A high power, high bandwidth, deep-ocean science observatory: J Berger, J A Orcutt, J Halkyard

1730h  MT35A-14 WITHDRAWN

1730h  MT35A-15 POSTER Ocean moored profiler Aqualog: A G Zatsepin, A Ostrovskii, D Shvoev, V Solovyev


1730h  MT35A-17 POSTER Advanced communications for remote ocean platforms in the coming 15 years: S Foley, J Berger, J A Orcutt, F L Vernon

1730h  MT35A-18 POSTER A Global Ocean Acoustic Observing Network: P F Worcester, B D Dushaw

1730h  MT35A-19 POSTER Recent Advances in Shallow Coastal Radiometry: J H Morrow, R Lind, S B Hooker, G H Bernhard, C R Booth

Palaeoceanography

PA35A  Poster Hall E  Wednesday  1730h
Calcification and Ocean Acidification: From Laboratory to Geological Time Scales II Posters (joint with BO, GO)

Presiding: W R Howard; B Hoenisch, Lamont-Doherty Earth Observatory; D M Anderson, National Climatic Data Center

1730h  PA35A-01 POSTER Coral growth on high-latitude reefs of the Caribbean: no decline in calcification or extension over a 60-yr period, 1937 to 1996: K P Helmle, R E Dodge, P K Swart

1730h  PA35A-02 POSTER Can Changes in Oceanic Biogeochemical Cycles Explain Atmospheric Carbon Dioxide Levels and Radiocarbon Levels During the Last Glacial Maximum?: K G Harrison

1730h  PA35A-03 POSTER Seawater carbonate ion concentrations in the Glacial Ocean reconstructed using fossil foraminiferal assemblages: D M Anderson

1730h  PA35A-04 POSTER Reconstruction of deep sea calcite dissolution through fossil fragmentation and whole shell weight: towards a global core top calibration: F Mekik

1730h  PA35A-05 POSTER Ocean acidification impacts on Southern Ocean calcareous zooplankton: W R Howard, A D Moy, D Roberts, T W Trull, S Bray, R H Hopcroft, J L Roberts, N Roden

1730h  PA35A-06 POSTER COMPARABILITY OF DIFFERENT MEASURING METHODS FOR THE CALCIFICATION RATE OF COCCOLITHOPHORES: I Benner, E J Carpenter

1730h  PA35A-07 POSTER Comparing planktic foraminiferal B/Ca and boron isotopes as paleo-CO2 proxies: K A Allen, B Hoenisch

1730h  PA35A-08 POSTER TEMPERATURE AND PH DEPENDENT UPTAKE OF DIVALENT CATIONS IN CULTURED CORALS: I Taubner, F Boehm, A Eisenhauer, C Garbe-Schoenberg, J Erez

1730h  PA35A-09 POSTER Using Recorded and Proxy Sea Surface Temperature and Sea Surface Salinity to Estimate The Aragonite Saturation State, Correlations with Coral Calcification Rates: A Venti

PA35B  Poster Hall E  Wednesday  1730h
From Bench Top to Core Top: Calibration of Novel Oceanic Proxies Through Experiment, Theory, and Study of Modern Analog Environments III Posters (joint with CO, GO, BO)

Presiding: S Severmann, Rutgers University; W P Gilhooly, University of California, Riverside; H D Scher, University of South Carolina

1730h  PA35B-01 POSTER Magnesium Isotope Fractionation in Inorganic and Biogenic Calcite: B Kisakurek, A Niedermayr, M N Müller, I Taubner, A Eisenhauer, M Dietzel, D Buhl, J Fietzke, J Erez

1730h  PA35B-02 POSTER Living (rose bengal stained) benthic foraminifera of the Peruvian oxygen minimum zone – discovering new proxies for oxygen reconstruction: J Mallon, N Glock, J Schoenfeld, S Sommer
PA35B-03 POSTER 85Fe in surface sediments from the northeast margin of Papua New Guinea as a tracer for the origin of iron to the equatorial undercurrent: J W Murray, L S Balistrieri, B Paul, B K Nelson, J Laydbak, J Brunskill


PA35B-05 POSTER Compound-specific nitrogen isotope analyses of amino acids: A possible new proxy for reconstruction of paleo-nitrogen sources and cycling: F C Batista, C Ravelo, M McCarthy

PA35B-06 POSTER Variability in Surface Water Nutrients And Physical Properties From Elemental And Isotopic Ratios in Oman Upwelling Corals: L M Montone, R M Sherrell, M LaVigne, R A Mortlock, J Wright

PA35B-07 POSTER Influences of biochemical cycling of phytoplanktonic organic matter on lipid biomarker-based chemical and isotopic signals: H Pan, M Sun

PO35A-02 POSTER On Navidad Current occurrences in 2002-2004 as seen by satellite altimetry, SST data and a high resolution coastal model: G Herbert, N K Ayoub, P Marsaleix, F Lyard

PO35A-03 POSTER Rapid Environmental Assessment in the Northern Adriatic: S Simoncelli, N Pinardi, P Oddo, A Mariano

PO35A-04 POSTER OCEAN FORECASTING IN THE AEGEAN-LEVANTINE REGION: S S Sofianos, N Skliris, A Mantziafou, M Tzali


PO35A-06 POSTER Performance of COAMPS and SWAN Models during the Turkish Straits System Trials in 2008 and 2009: J D Dykes, M K Cambazoglu

PO35A-07 POSTER Comparisons of Quasi-Homogenous NCOM and HYCOM Simulations in the Gulf of Mexico: S deRada, P J Hogan

PO35A-08 POSTER The Impact of Wind-driven and Eddy-driven Dynamics over the Transport and Mixing of the Mississippi River Waters: R V Schiller, V Kourafalou, P J Hogan, W J Teague

PO35A-09 POSTER Understanding circulation dynamics and larval transport mechanisms in the Florida Big Bend region using a high-resolution coastal ocean model: A C Todd, S L Morey, E Chassignet

PO35A-10 POSTER On the Uncertainty of Storm Surge Prediction: Lessons Learned from Nested Simulation of a Storm Surge in the Northeastern Gulf of Mexico: D S Dukhovskoy, S L Morey

PO35A-11 POSTER Simulation of Storm Surge Along the US East Coast Using a Multi-Scale Model: H Xu, K Zhang, J Shen

PO35A-12 POSTER Implementation of an unstructured ADCIRC-SWAN coupled model for the Puerto Rico region: J O Gonzalez-Lopez, A Mercado, J Capella, J M Morell

PA35C-01 POSTER Anomalus Freshwater Inputs in the Ne Pacific: Possible Implications for Paleocenographic Reconstructions: C Lopes, A C Mix

PA35C-02 POSTER California Current Sea Surface Temperatures During a Time of Global Warming: P S Dekens, C M Reed, D E Wojcieszek

PA35C-03 POSTER IODP Expedition 323 initial results: History of Bering Sea deep water ventilation and surface water productivity over the last 4 Ma from benthic and planktic foraminiferal faunas: S Kender, K Husum, C A Alvarez Zarikian, M Chen, E Colmenero-Hidalgo, J Onodera, Y Okazaki, T Radi, Z N Stroynowski, C Ravelo, K Takahashi

PA35C-04 POSTER Sea Surface Temperature and Upwelling Conditions off Northern California Coast During the early Pliocene: C M Reed, P S Dekens, L D White

PA35C-05 POSTER Quasi-annual Records of Sea Surface Temperature and Productivity Over the past 200 Years from the Soledad Basin off Baja California: L Ding, L Xing, H Zhang, A van Geen, M Zhao

PA35C-06 POSTER Preliminary Results from IODP Exp. 323 to the Bering Sea: the ocean history for the last 5 Ma: Z N Stroynowski, F F Abrantes

PA35C-07 POSTER Paleocenographic changes in the Bering Sea over the last 120 kyr: S KIM, B Khim, M Uchida, T Itaki

PA35C-08 POSTER Composite depth profiles of cores YK0704-GC9A and MR0604-PC5B from the central region of the Okhotsk Sea; a history of 500 kyr: B Khim, T Sakamoto, H Shin, K Ikehara

PA35C-09 POSTER A North Pacific perspective on the Younger Dryas cooling event: S Praetorius, A C Mix

PA35C-10 POSTER The LGM/Holocene transition in the Subarctic Northeast Pacific Ocean – a view from the Gulf of Alaska continental slope: J A Addison, B P Finney, W E Dean, M H Davies, J M Jaeger

PA35C-11 POSTER Reconstructing Regional Environmental Variability over the past 15,000 years using Environmental Magnetic Properties from the Gulf of Equibel, Alaska: S E Strano, J S Stoner, J A Addison, B P Finney, J M Jaeger, G P Rosen, J E Channell

IT25E-13 POSTER A shift of the Pacific/North American (PNA) pattern in the inter-decadal time scale and associated synoptic eddy feedback: Y Lee, J KUG, G Lim
1730h  **PO35B-01** POSTER Northward flowing coastal currents along the eastern boundary of the Yellow Sea in summer 2007: K Kwon, B Choi, S Lee

1730h  **PO35B-02** POSTER Modeling the offshore transport and dispersal pathway of the freshwater discharged from the Changjiang River: J Moon, N Hirose, I Pang

1730h  **PO35B-03** POSTER Development of the Taiwan Multi-scale Community Ocean Model (TIMCOM): W Tay, Y Tseng, N Chien, Y Liang, M Chien

1730h  **PO35B-04** POSTER A Nested Coastal Ocean Model for Simulating the Kuroshio Frontal Disturbances along the Irregular Topography South of Japan: H Kuroda, M Shimizu, K Aoki, T Setou

1730h  **PO35B-05** POSTER Hindcast of the Circulation in the Chukchi Sea and Bering Strait with a Nested 4D-var Data Assimilation System: D Nechaev, G Pantaleev, M Yaremchuk, T Kikuchi

1730h  **PO35B-06** POSTER Gulf of Alaska Simulated by Regional Ocean Modeling System (ROMS) during 2000-2005: W Cheng, A J Hermann

1730h  **PO35B-07** POSTER Towards an Operational Modeling System for Predicting the State of the Ocean in Brazil: R L Mello, F Calixto, W Santos, E J Campos

1730h  **PO35B-08** POSTER An evaluation of a regional scale pre-operation forecast system for the Eastern and Southeastern Brazilian Shelf-Slope Region: M Cirano, J Pereira, M Marta-Almeida, F N Amorim

1730h  **PO35B-09** POSTER A NUMERICAL STUDY OF COASTAL TRAPPED WAVES IN THE SOUTHERN BRAZILIAN COAST: J Souza, M Gabiouz, C S Vladimir, A D Paiva

1730h  **PO35B-10** WITHDRAWN

1730h  **PO35B-11** POSTER Flow Past Large Amplitude, Complex Topography: Comparison of 2D and 3D Nonhydrostatic Simulations: D A Hebert, P C Gallacher, M R Schaferkotter

1730h  **PO35B-12** POSTER Implementation of a wave forecasting system with a third generation spectral wave model for the Puerto Rico region: C M Anselmi-Molina, A Mercado-Irizarry, M Canals, J Capella, J Morell, J C Ortiz-Royero

1730h  **PO35C-01** POSTER On the origin of jets in the ocean: Y Afanasyev, S O’Leary, P B Rhines

1730h  **PO35C-02** POSTER Alternating zonal jets in the double gyre circulation: D Straub, B Nadiga

1730h  **PO35C-03** POSTER A unified view of zonal jets and Rossby waves: K Zhao, K Smith

1730h  **PO35C-04** POSTER Transport of Momentum and Scalars in Anisotropic Turbulence with Dispersive Waves: B Galperin, S Sukoriansky

1730h  **PO35C-05** POSTER Realistic jet structure and stability from an idealized PV mixing barrier perspective: C Wilson, J Blundell, C W Hughes, A Thompson

1730h  **PO35C-06** POSTER Anisotropic material transport by eddies and eddy-driven zonal jets in a model of the North Atlantic: I V Kamenkovich, P Berloff, J Pedlosky

1730h  **PO35C-07** POSTER Regimes of Eddy-Saturated Transport in a Wind-Forced Channel Model: M Ward, A Hogg

1730h  **PO35C-08** POSTER Statiations in the South-East Indian Ocean from BLUElink Reanalysis: P Divakaran, G B Bragginton, K J Walsh

1730h  **PO35C-09** POSTER A subtropical countercurrent driven by localized sinking: With application to the South Indian Countercurrent: R Furue, J P McCreary

1730h  **PO35C-10** POSTER Wind-driven zonal jets in the South Pacific Ocean: L Gourdeau, W S Kessler

1730h  **PO35C-11** POSTER In Situ Observations of ocean jets entering the eastern Coral Sea of the southwest Pacific: C Maes, D Varillon, F Gasparin, A Ganachaud, L Gourdeau, W S Kessler

1730h  **PO35C-12** POSTER Ageostrophic Feature of Coherent Mesoscale Vortices in the Subtropical North Atlantic: J Park, Y Kwon, D M Fratantoni

1730h  **PO35C-13** POSTER Sudden Acceleration of Kuroshio Jet off the Cape Shionomisaki in JCOPE2 Ocean Reanalysis Data: T Miyama, Y Miyazawa

1730h  **PO35C-14** POSTER Numerical Study of the Penetration of the Subsurface Kuroshio Water onto the Continental Shelf Northeast of Taiwan: T Endoh, K Ichikawa

1730h  **PO35D-01** POSTER Air-sea momentum flux in the presence of frequent wave breaking events: theory and laboratory observations: T Hara, B K Haus, T Kukulka

1730h  **PO35D-02** POSTER The distribution and fate of surface-active substances in the sea-surface microlayer and water column and their effect on the near surface light field: O Wurl, L A Miller, M Shink, S Vagle

1730h  **PO35D-03** POSTER Wave breaking statistics derived from Digital Imaging of Surface Curvature: B K Haus

1730h  **PO35D-04** POSTER Solitary Wave Breaking Simulation on Beaches by SPH Method: Z Sun, K Zheng, J Sun, Z Zhang

1730h  **PO35D-05** POSTER Laboratory Study of the Contribution of spray to the Enthalpy Flux at the Air-Water Interface: D Jeong, B K Haus, M A Donelan

1730h  **PO35E-01** POSTER The improvement of KPP vertical-mixing scheme by including the surface wave-induced vertical mixing: Q Shu, F Qiao, Z Song

1730h  **PO35E-02** POSTER Impact of freshwater balance on ocean mixed layer: A case study at HOTS: R Pal, J G Richman, A J Wallcraft

1730h  **PO35E-03** POSTER Diurnal and Weekly Transition Layer Variations at the Arabian Sea Mooring: S Majumder, A Tandon, D L Rudnick
1730h  **PO35E-04** Poster  Subseasonal Variability of Oceanic Barrier and Compensated Layers in the North Pacific: H Liu, S A Grodsky, J Carton

1730h  **PO35E-05** Poster  Winter Mixed Layer Formation in the Gulf of Maine: F A Fernandes, W S Brown

1730h  **PO35E-06** Poster  GOASMs time series stations in the Bay of Biscay during May 2009: G Reverdin, B Ward, P Bouruet-Aubertot, D Bourras, J Boutin, A H Callaghan, D Legain, L Marie

1730h  **PO35E-07** Poster  The competing influence of temperature and salinity on the upper ocean density and sound speed structure: R W Helber, J G Richman, C N Barron

1730h  **PO35E-08** Poster  The correctness to spuriously simulated sea surface temperature semi-annual cycle in the equatorial eastern Pacific: Z Song, F Qiao, C Wang

1730h  **PO35E-09** Poster  Observed seasonal variability of barrier layer in the South China Sea: L Zeng, W Wang, Y DU

1730h  **PO35E-10** Poster  Near-Surface Measurements of Temperature and Salinity from Profiling Floats: The Diurnal Cycle at Low Latitudes: S Riser, J E Anderson

1730h  **PO35E-11** Poster  Upper ocean heat budget in the East China Sea during the East Asian monsoon: Q Sun

1730h  **PO35E-12** Poster  Sensitivity of the Gulf Stream mixed-layer heat budget to atmospheric forcing in an eddy-permitting model: N K Ayoub, M A Lucas

1730h  **PO35E-13** Poster  Mixed Layer Lateral Eddy Fluxes Mediated by Air-Sea Interaction: E Shuckburgh, G Maze, J Marshall, D Ferreira

1730h  **PO35E-14** Poster  Seasonal Variations in the Speed Factor and Deflection Angle of the Wind-Driven Surface Flow in the Tsushima Strait: Y Yoshikawa, A Masuda

1730h  **PO35E-15** Poster  Surface Current Response to Wind Force during winter in the Coastal Sea off the Keum River Estuary (South Korea): C Kim, S Lee, H Moon, M Kosro

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**PO35F** Poster Hall E  **Wednesday**  1730h  **PO35F-08** Poster  Surface wave breaking effects on the oceanic boundary layer: An one-dimensional water column model study: H He, D Chen

1730h  **PO35F-09** Poster  Subgrid-scale modeling in large-eddy simulation of the upper ocean mixed layer: A E Tejada-Martinez, C E Grosh, A E Gargett, J A Polton, J A Smith, J A MacKinnon

1730h  **PO35F-10** Poster  The inhibiting effect of stratified mixing on surface-stress-driven flow in a cylinder: A Shravat, C Cenedese, C C Caulfield

1730h  **PO35F-11** Poster  Turbulence and Internal Waves in the Equatorial Undercurrents Model: H T Pham, S Sarkar

1730h  **PO35F-12** Poster  Generation of near-N internal waves: field observations: S T Nguyen, J A Smith, J A MacKinnon

1730h  **PO35F-13** Poster  Turbulence processes during resonant wind driven mixing: A L Grant, S E Belcher

1730h  **PO35F-14** Poster  Examination of the Contribution of Wind Stress to the Mixed Layer Deepening Using LES: Y Noh, G Goh, S Raasch

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**POSTER**  **Wednesday**  1730h  **PO35G** Poster Hall E  **Wednesday**  1730h  **PO35G-01** Poster  Numerical evaluation of river run off on near-shore circulation pattern and nutrients distribution on the inner West Florida Shelf: S Liang, M J Olascoaga, L Brand, M B Framinan

1730h  **PO35G-02** Poster  Observational and Modeling Studies of the Changjiang Salinity Plume in the Inner East China Sea Shelf: P Ding, J Ge, C Chen

1730h  **PO35G-03** Poster  Dynamics of the Coastal Oyashio and Its Seasonal Variation in a High-Resolution Western North Pacific Ocean Model: K Sakamoto, H Tsujino, S Nishikawa, H Nakano, T Motoi

1730h  **PO35G-04** Poster  Volume, freshwater and heat transport through Davis Strait, 2004-2005: B Curry, C M Lee, B Petrie

1730h  **PO35G-05** Poster  Three-dimensional numerical simulation of saltwater intrusion in winter of the Pearl River Estuary: W Zhou, W Wang, L Luo, H Xu

1730h  **PO35G-06** Poster  Tracer-derived freshwater composition of the Siberian continental shelf and slope: E P Abrahamsen, M P Meredith, K K Falkner, S Torres-Valdes, M J Leng, M B Alkire, S Bacon, S Laxon, I Poljakov, V Ivanov

1730h  **PO35G-07** Poster  Buoyant plume from multiple sources of freshwater in the presence of cyclonic wind field: G Maze, A E Yankovsky

1730h  **PO35G-08** Poster  MOCHA: A 3-D Climatology of the Temperature and Salinity of the Mid Atlantic Bight: N E Fleming, J Wilkin

1730h  **PO35G-09** Poster  Understanding the role of abrupt freshwater release “megafloods” on ocean circulation, and the 8.2 Kyr cold event: A Condron, P Winsor

1730h  **PO35G-10** Poster  Interannual and Mesoscale Variability of Buoyant Discharges from the Arctic Ocean to the West of Greenland 2003-2009: A Muenchow, H Melling, B Rabe

1730h  **PO35G-11** Poster  Coastal hydrography and volume transport offshore of Barrow, Alaska in summer: A J Plueddemann, E Shroyer
1730h  PO35G-12 POSTER THE WEST GREENLAND CURRENT DURING SUMMER IN BAFFIN BAY: P G Myers, M H Ribergaard, S Rysaard, J Mortensen

**PO35H Poster Hall E Wednesday 1730h**

**Monterey Bay Region: Physical Processes and Their Impacts II Posters (joint with IT)**

**Presiding:** M C Gregg, University of Washington

1730h  PO35H-01 POSTER Internal tides in Monterey Submarine Canyon: R A Hall, G S Carter

1730h  PO35H-02 POSTER Semidiurnal tides in Monterey Bay: G S Carter

1730h  PO35H-03 POSTER Evaluation of vertical velocity from a coastal ocean model with direct application to upwelling monitoring: X Wang, Y Chao, L C Breaker, H Zhang

1730h  PO35H-04 POSTER Sea Breeze Driven Processes in the Northern Monterey Bay: W J Teague, H W Wijesekera, J W Book, I Shulman, F Chavez

1730h  PO35H-05 POSTER Simulation of the Ocean Biological Feedback Effect in Monterey Bay: J K Jolliff, B Penta, I Shulman, S dElRada, W J Teague

1730h  PO35H-06 POSTER Observations and Modeling of Diurnal Period Oscillations on the Northern Monterey Bay Inner Shelf: S H Suanda, J A Barth

**PO35I Poster Hall E Wednesday 1730h**

**Operational Applications of Ocean Satellite Observations III Posters (joint with IT)**

**Presiding:** R R Leben, Univ. of Colorado, Boulder

1730h  PO35I-01 POSTER RETRIEVING PHYTOPLANKTON FUNCTIONAL TYPES FROM OCEAN COLOR PARTICLE SIZE DISTRIBUTION DATA: T S Kostadinov, D A Siegel, S MARTORENA, N GUilHouCau

1730h  PO35I-02 POSTER Polarization Sensitivity of the VIIRS Instrument on NPP; Outcome of the Various Sensor Test Data: P Pratt

1730h  PO35I-03 POSTER Satellite Derived Salinity Predictions of the Mid-Atlantic Coastal Ocean: E F Geiger, M D Grossi, A C Trembanis, J T Kohut, M J Oliver

1730h  PO35I-04 POSTER Altimetry and precise localisation at CNES: the SALP team, a wide range of activities from operations to production for the benefits of users’ community: V Toumazou, F Bailly-Poirot, E Bronner, P Ferrage, T Guinle, E Lourme, N Maléchaux, H Poussin, C Tourain

1730h  PO35I-05 POSTER G1SST: A Blended Global 1-km Sea Surface Temperature Data for Research and Applications: B Tang, Y Chao, Z Li, P Li, Q Vu

1730h  PO35I-06 POSTER Operational High Resolution Sea Surface Temperatures: A Historical and Future Perspective: G Forti, E M Armstrong, J Vazquez, T M Chin

1730h  PO35I-07 POSTER Observation of Guangdong Coastal Upwelling by Using Satellite Multi-sensor Data: Y Gu, J Pan, H Lin

1730h  PO35I-08 POSTER The global and regional high resolution SST analysis ODYSSEA: E Autret, P Tandeo, J Piolle

1730h  PO35I-09 POSTER Multivariate Regression Model Approach to Integrate Multiple Satellite and In-Situ Sea Level Data for Real Time Sea Level Prediction: P Knudsen, O B Andersen

1730h  PO35I-10 POSTER A Revised ASCAT Geophysical Model Function and Validation at NOAA/NESDIS: S Soisuvarn, Z Jelenak, P Chang, Q Zhu


1730h  PO35J Poster Hall E Wednesday 1730h**

**Patchy Mixing and the Geography of the Ocean’s Energy Cascade II Posters**

**Presiding:** H Aiki, Japan Agency for Marine-Earth Science and Technology; T Tsubouchi, National Oceanography Centre

1730h  PO35J-01 POSTER Diapycnal mixing estimates based on strain: R Alvarado Bustos, J Huthnance

1730h  PO35J-02 POSTER Turbulent mixing at the Bussol’ Strait in the Kuril Islands: M Yagi, J Yasuda

1730h  PO35J-03 POSTER Spatial and temporal variability of turbulent hot spots in a large stratified lake: L Boegman, D Bouffard, R R Yerubandi

1730h  PO35J-04 POSTER Mixing by Breaking Internal Wave Groups: D A Birch, M A Sundermeyer

1730h  PO35J-05 POSTER A novel method of measuring deep water profiles of TKE dissipation rate using a lowered ADCP: C OId, T Rippeth, J Simpson, Y Lenn

1730h  PO35J-06 POSTER Effect of small-scale turbulent mixing on mixed-layer iron supply in southern Drake Passage: M Frants, S T Gille, M Zhou

1730h  PO35J-07 POSTER Boundary mixing on the continental shelf and slope region by direct measurement of turbulence off Cape Darnley, Antarctica: D Hirano, Y Kitade

1730h  PO35J-08 POSTER Temporal Variability in Diapycnal Mixing in Shag Rocks Passage (Southern Ocean): G Damerell, K J Heywood, D P Stevens, A C Naveira Garabato

1730h  PO35J-09 POSTER Direct measurement of turbulent mixing along a meridional transect in the western North Pacific: H Kaneko, I Yasuda, S Itoh

1730h  PO35J-10 POSTER Temporal variability of mixing at two long oceanic station time-series in the Sargasso Sea: J P Aucan

1730h  PO35J-11 POSTER Mapping the Internal Tide and Its Energetics Along the Hawaiian Ridge: E D Zaron, G D Egbert

1730h  PO35J-12 POSTER Finescale strain distribution estimated by Multi-Channel Seismic data: K Yokota, K Katsumata, T Hibiya, M Yamashita, Y Fukuo, S Kodaira, S Miura

1730h  PO35K Poster Hall E Wednesday 1730h**

**Patchy Mixing and the Geography of the Ocean’s Energy Cascade IV Posters**

**Presiding:** Z Liu, Xiamen University; Y Lenn, School of Ocean Sciences

1730h  PO35K-01 POSTER Instability of Baroclinic Tidal Flow in a Stratified Fjord: Z Liu

1730h  PO35K-02 POSTER Mesoscale Variability In Small Scale Vertical Mixing: - Forryan, A P Martin, E Popova, M Srokosz

1730h  PO35K-03 POSTER Advances in the Study of Internal Tides from Satellite Altimetry: Z Zhao, M H Alford

1730h  PO35K-04 POSTER Time-variable M2 Internal Tide Generation at the Kaena Ridge: N V Zilberman, M A Merrifield, G S Carter, D S Luther, M D Levine, T Boyd

1730h  PO35K-05 POSTER Mapping turbiditic currents using Seismic Oceanography: E A Vsemirnova, R W Hobbs

1730h  PO35K-06 POSTER Scales, growth rates and spectral fluxes of baroclinic instability in the ocean: R Tulloch, J Marshall, K Smith, C N Hill
1730h  **PO35K-07 POSTER** Turbulent Mixing by Kelvin-Helmholtz Billows in Fingering-favorable Stratification: W Smyth, S Kimura

1730h  **PO35K-08 POSTER** The dynamics of the high-frequency internal gravity wave field radiated by a stratified turbulent momentum wake: A Abdilghanie, P Diamessis

1730h  **PO35K-09 POSTER** Internal Tides and Enhanced Turbulent Dissipation Rates in a Major Pathway of the Atlantic Meridional Overturning Circulation: E J Venables, M Inall, T J Sherwin

1730h  **PO35K-10 POSTER** The role of eddies in open-ocean mixing revealed by seismic oceanography: C A Papenborg, C Meneguens, B Hua, R W Hobbs, D Klaeschen, G Krahmann

1730h  **PO35K-11 POSTER** The Southern Ocean Fine Structure Project: Turbulent dissipation rates and mechanisms in a mixing hotspot: S N Waterman, A C Naveira Garibato, K L Polzin

1730h  **PO35K-12 POSTER** Near-inertial waves and internal tides in the subtropical Indian ocean during Cirene experiment: Y Cuypers, Y Cuypers, P Bourret-Aubertot, J Vialard, M J McPhaden

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**PO35L Poster Hall E Wednesday 1730h**

**Presiding:** D M Fratantoni, WHOI

1730h  **PO35L-01 POSTER** Effect of Interannual Variability on Multi-Decadal World Ocean Temperature Trends: M L Carson, D Harrison

1730h  **PO35L-02 POSTER** Remote Sensing Reflectance Reconstruction to Obtain Water Optical Properties: M Schmeltz, J Froidefond, F Jourdin

1730h  **PO35L-03 POSTER** Backscatter and its modeling in ocean dynamics: B T Nadiga, F Bouchez

1730h  **PO35L-04 POSTER** First direct measurements of topographic form drag: U Stoeber, J N Moum, J D Nash, P MacCready

1730h  **PO35L-05 POSTER** Environmentally-Adaptive Deployment of Lagrangian Instrumentation using a Submerged Autonomous Launch Platform: D M Fratantoni

1730h  **PO35L-06 POSTER** A Comparison of the Observed and Simulated Upper Ocean Response to Hurricane Passage in the Subtropical Atlantic Ocean: J A Sirak, K Park, S Kim, Y Chao, T D Dickey

1730h  **PO35L-07 POSTER** Prediction of ENSO with an AGCM Coupled to a Reduced Gravity Ocean Model: X Tang, P Chang, F Wang

1730h  **PO35L-08 POSTER** Ocean bottom pressure modeling for detection of seafloor vertical deformation: D Inazu, R Hino, H Fujimoto

1730h  **PO35L-09 POSTER** Source of anisotropy in salt water turbulence: S Kimura, W Smyth

1730h  **PO35L-10 POSTER** Bottom Water Circulation in Cascadia Basin and Adjacent Areas: S L Hautala, D E Hammond, T A Esther, H P Johnson, C I Wolfe, P Engstrom, R Penton, A N Paukert, R Schwartz

1730h  **PO35L-11 POSTER** Gravity and Capillary Waves in a Laboratory Wind-Wave Channel: C S Cox, X Zhang

1730h  **PO35L-12 POSTER** Statistical mechanics explanation of ocean current and vortex structures: F Bouchez, B Nadiga, A Venaille

1730h  **PO35L-13 POSTER** Level 2 Swath Subsetting and Visualization Web Interface for Physical Oceanographic Data: C K Thompson, M Henderson, J Piolle, S Gerard

1730h  **PO35L-14 POSTER** Mapping heat content changes due to bottom water warming and comparison with results from an assimilation model: S Kouketsu, T Doi, T Kawano, H Uchida, K Katsumata, Y Kawai, S Masuda, N Sugitaka, T Toyoda, Y Sasaki, H Igarashi, T Awaji, M Fukasawa

1730h  **PO35L-15 POSTER** Temporal Residual Mean diagnostics of a 1/4° simulation of the North Atlantic circulation: N Ducouso

1730h  **PO35L-16 POSTER** Atmospheric correction of high-spatial- and low-spectral-resolution optical imagery with simultaneous measurements of surface irradiance reflectance for remote sensing of water qualities: C Liu, C Liu, C Chang

1730h  **PO35L-17 POSTER** Analysis of the Development and Termination of Sea Surface Temperature Anomalies in the Tropical Pacific: D Lee, D G DeWitt

1730h  **PO35L-18 POSTER** Optimizing Deployment of Moorings and Autonomous Underwater Vehicles for Ocean Flux Estimation: Y Zhang, J G Bellingham, Y Chao

1730h  **PO35L-19 POSTER** Using Gliders and Moorings to Characterize North Atlantic Eddies: X Fan, U Send, P Testor, P Lherminier, J Karstensen

1730h  **PO35L-20 POSTER** Glider Observations of Temperature and Salinity in Support of Oceanographic Forecast Models and Sonar Performance Prediction: N Allen, K L Mahoney

1730h  **PO35L-21 POSTER** A High-Resolution Model Study Of Western Boundary Currents Using A New Computationally Efficient Ocean General Circulation Model: R L Jacob, Z Zhang, L Wu

1730h  **PO35L-22 WITHDRAWN**

1730h  **PO35L-23 POSTER** Analysis of wave effect on the vertical mixing of momentum and suspended sediment: B Liang, D Lee, H Li, S Hyun

1730h  **PO35L-24 POSTER** Turbulence and internal waves at a non-sloping boundary underneath a M2 tide: B Gayen, S Sarkar, J R Taylor

1730h  **PO35L-25 POSTER** Relative versus absolute wind stress forcing within an eddy-permitting OGCM: global and regional comparisons to QuikSCAT: D F Moroni, H Brix, D Menemenlis, H Zhang

1730h  **PO35L-26 POSTER** How the reservoir water quality responses to the extreme weather? The evidence revealed from Formosa-2 high-spatiotemporal-resolution imagery of Tseng-Wen Reservoir: I Cheng, C Liu, C Chang

1730h  **PO35L-27 POSTER** Monitoring Deep Ocean Change along the deep western boundary current of the Pacific Ocean: B Sloyan, S A Wijffels

1730h  **PO35L-28 POSTER** A Physical-chemical Mechanism for the Formation of Subtropical Mode Water: C Dai, Y Tseng

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**PO35M Poster Hall E Wednesday 1730h**

**Presiding:** G Peng, NCDC; T Lee, Jet Propulsion Laboratory

1730h  **PO35M-01 POSTER** A Coupled Data Assimilation System for ENSO Forecast: J Zhu, F Zheng

1730h  **PO35M-02 POSTER** Ocean Data Assimilation with a Coupled Climate Model: Assessment of Skill and Impact: G Peng, I Fukumori, M J Harrison

1730h  **PO35M-03 POSTER** The application of ensemble adjustment kalman filter in a global ocean model based on MOM4: X Yin, F Qiao, Q Shu
1730h  **PO35M-04** POSTER Multivariate Covariance Modeling in the GMAO Ocean Data Assimilation System: G Vernieres, C L Keppenne, M M Rienecker, J Jacob, R Kovach

1730h  **PO35M-05** POSTER Covariance regularization in inverse space and its implementation techniques: G Ueno, T Tsuchiya

1730h  **PO35M-06** POSTER The role of surface emissivity in the assimilation of AMSR-E brightness temperatures to estimate sea-ice concentration using a coupled ice-ocean model: A Scott, M Buchner, T G Carrieres, A Caya

1730h  **PO35M-07** POSTER A data assimilation method based on the representation of error evolution as a diffusion process and comparisons with LEnKF over the Atlantic in conjunction with HYCOM and ARGO data: C A Tanajura, K P Belyaev, G A Ruggiero, R R Ramos-da-Silva, J C Einsiedler

1730h  **PO35M-08** POSTER How well do we know the global ocean in the post-Argo era?: M A Balmaseda, K Mogensen, F Molteni

1730h  **PO35M-09** POSTER Using time-series data to optimize the parameters of a marine ecosystem and biogeochemical model: D Santaren, N Gruber

1730h  **PO35M-10** POSTER Water mass variability in the western North Pacific detected in a 17-year eddy resolving ocean reanalysis: Y Miyazawa, R Zhang, S M Varlamov, T Setou, D Ambe, T Watanabe

1730h  **PO35M-11** POSTER Multi-altimeter sea level assimilation in a numerical model: Impact on mesoscale structures in the Mediterranean Forecasting Model: M Pujol, S Dobricic, N Pinardi, M Adani

1730h  **PO35M-12** POSTER The formation and the variability of the Azores Current as revealed from an ECCO2 data synthesis: D Volkov, L Fu

1730h  **PO35M-13** POSTER Implementation of 4D-Variational data assimilation around the Hawaiian Islands: D K Matthews, B Powell

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**Thursday A.M.**

**Biological Oceanography**

**BO41A D135**  **Thursday 0800h**

Growth Increments and the Environment: Multidecadal Perspectives on Climate and Ecology in Marine Systems I (joint with PA)

**Presiding:** B A Black, Hatfield Marine Science Ctr; T E Helser, National Oceanic and Atmospheric Administration

0800h  **BO41A-01** Sclerochronological assessment of the common bean clam *Donax gouldii* in San Diego, CA: M B Hatch, S A Schellenberg

0815h  **BO41A-02** Growth rates provide evidence of physiological responses of fossil marine bivalves to long-term climate warming: C L Belanger

0830h  **BO41A-03** Calibration and evaluation of Mytilus californianus as chronicles of recent changes in the ocean environment: S J McCoy, C A Pfister, J Wootton, P A Martin, A S Colman

0845h  **BO41A-04** Fish Otoliths and Coral Cores as Environmental Loggers of Pulsed Upwelling and Flood Events: B Walther, M J Kingsford, M T McCulloch

0900h  **BO41A-05** Application of tree-ring techniques across diverse species and ecosystems in western North America: B A Black

0915h  **BO41A-06** Climate-driven synchrony in otolith growth-increment chronologies for three Bering Sea flatfish species: M E Matta, B A Black, T Wilderbuer
0930h  BO41A-07 Validation of crossdated age estimates with bomb-produced radiocarbon for Pacific geoduck (Panopea abrupta): C R Kastelle, T E Helser, B A Black, D Gillespie, J McArthur, D Little, K Charles, S MacLellan, C Hand

0945h  BO41A-08 Growth-increment chronologies of Pacific geoduck (Panopea abrupta) reflect climate heterogeneity along the British Columbia coast: E Whitney, B A Black

BO41B  PB255  Thursday  0800h
Linking Ecology and Biogeochemistry in Coastal Sediments: New Approaches for the 21st Century I (joint with GO, CO)

Presiding: K M Dorgan, University of California, Berkeley; G Waldbusser, Oregon State University

0800h  BO41B-01 The imprint of burrowing infauna on carbon processing in marine sediments: a global perspective (Invited): F J Meysman, O Maire, F Bockelmann, R Glud

0815h  BO41B-02 The role of anaerobic metabolism in burrowing energetics: K M Dorgan

0830h  BO41B-03 Overview of Microbial Biofilms, EPS, and Quorum Sensing, and Their Links to Sediment Biogeochemical Processes: A W Decho

0845h  BO41B-04 Linking Molecular Microbial Ecology to Geochemistry in a Coastal Hypoxic Zone: B K Reese, H J Mills, S Dowd, X Li, A Shepard, T Bianchi, J W Morse

0900h  BO41B-05 LINKING SOURCE, ABUNDANCE, AND LABILITY OF ORGANIC MATTER TO METABOLIC ACTIVITY AND SEDIMENT REDOX CONDITIONS: R A Briggs, A Ricardo, K C Ruttenberg, B T Glazer

0915h  BO41B-06 Do spatial burrow patterns accentuate benthic exchange fluxes? A combined modeling and laboratory study (Invited): C D Meile, T Dornhoffer, G Waldbusser

0930h  BO41B-07 Use of Computed Tomography to Determine the Impact of Hypoxia on Biogenic Structures of Benthic Invertebrate Communities on the Louisiana Continental Shelf: V Hartmann, K B Briggs, A H Reed, R J Diaz, S Shivashankarra

0945h  BO41B-08 Porewater bioadvection and the oscillatory character of marine sediments: N Volkenborn, G Y Matsui, L Polerecky, D S Wethey, C R Lovell, S A Woodin

BO41C  D137  Thursday  0800h
New Methods and Applications for Metagenomics and Metatranscriptomics in Biological Oceanography I

Presiding: I Hewson, Cornell University; R B Kodner, Univ. of Washington

0800h  BO41C-01 Metaproteomics of marine bacterioplankton in Puget Sound (Invited): R Morris, B L Nunn, Y Ting, C Frazar, D Goodlett

0815h  BO41C-02 RESHAPING METAGENOMICS FOR INVESTIGATING EUKARYOTIC PHYTOPLANKTON IN THE NATURAL ENVIRONMENT (Invited): A Z Worden, R M Welsh, E Demir, A Monier, R Lasken, T Ishaoy, K Mavrommatis, N Kyprides, S Tringe, T Woyke

0830h  BO41C-03 Community Gene Expression (Metatranscriptomics) of Nitrogen-fixing Microbial Communities in the Equatorial Atlantic Ocean: J Zehr, H Tripp, S Boyarsky, I Hewson, K Turk, J Stuart, J P Montoya

0845h  BO41C-04 Novel Methods for Comparative High-Throughput Metagenomic Analysis Provide Deeper Insights into Microbial Diversity, Metabolic Potential, and Community Succession: V S Iverson, R Morris, C Frazar, C Berthiaume, R Morales, E O Lin, V Armbrecht

0900h  BO41C-05 The Application of 454 FLX Pyrosequencing to Characterize Active Bacterial Populations from the Marine Subsurface Biosphere: A Shepard, N Riedinger, S Dowd, B K Reese, T G Femandel, H J Mills

0915h  BO41C-06 Shedding Light on the Twilight Zone: Single-cell Sequencing of Marine Microbes from the Mesopelagic: R Stepanauskas, B K Swan, M Martinez-Garcia, D Masland, N Poulton, M E Sieracki


0945h  BO41C-08 Pplacer and mokophy: new phylogenetic package for accurate sequence identification and statistical comparison of phylogenetic trees for environmental samples: R Kodner, F A Matsen, S N Evans, V Armbrecht

Chemical Oceanography

CO41A  D139  Thursday  0800h
Carbon Biogeochemistry of the Arctic and Subarctic III (joint with BO, PO)

Presiding: N R Bates, Bermuda Institute of Ocean Sciences; J T Mathis, School of Fisheries and Ocean Sciences


0815h  CO41A-02 Saturation State of Seawater with respect to Calcite and Aragonite from the Canadian Arctic Archipelago to the Labrador Sea: Corrosive Arctic Outflow to the North Atlantic: K Azetsu-Scott, A Clarke, K K Falkner, J Hamilton, P Jones, C M Lee, B Petrie, S J Prinsenberg, M Starr, P Yeats

0830h  CO41A-03 Estimating the recent ocean CO2 sink in the Arctic: A model study: M Manizza, M Follows, S Dutkiewicz, D Menemenlis, R M Key, C N Hill


0900h  CO41A-05 Distribution of dissolved organic carbon in the source waters of the Trans Polar Drift: Inferences on terrigenous DOC dynamics in the eastern Arctic Ocean: R T Letscher, D A Hansell, D C Kadko

0915h  CO41A-06 Stable Carbon and Nitrogen Isotopic Composition of Suspended Particulate Organic Matter From the Western Arctic Ocean: L Guo, T Tanaka, C Gueguen, M Chen, M Sun

0930h  CO41A-07 The Use Of River Water Tracers To Improve Our Understanding Of Surface Ventilation In The Arctic Ocean: R M Amon, S A Walker, P Louchouarn, S Duan, R H Benner, K Kaiser, C A Stedmon

0945h  CO41A-08 Seasonal Pulses of Terrigenous and Marine Dissolved Organic Matter in the Western Arctic Ocean: R Benner, J L Davis, K Kaiser
**New dynamic information provided by multifractal analysis of satellite and modelled 2D maps: A Turiel**
0945h PO41C-07 Direct measurements of air-sea fluxes from a buoy: J Song, Y Huang, C Fan

0936h PO41E-08 Variational Data Assimilation using the Navy Coastal Ocean Model (NCOM): H E Ngodock, S R Smith, M Carrier, G A Jacobs

0948h PO41E-09 Variational Assimilation of HF Radar Surface Currents in the Coastal Ocean Circulation Model off Oregon: P Yu, A L Kurapov, G D Egbert, J S Allen, M Kosro

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PO41D PB253 Thursday 0800h
Observational, Theoretical, and Modeling Studies of Large-Amplitude Internal Waves I

Presiding: P F Cummins, Institute of Ocean Sciences; S M Jachec, Florida Institute of Technology

0800h PO41D-01 Nonlinear Internal Wave Generation: D M Farmer, Q Li

0830h PO41D-02 Turbulent Mixing and Vertical Heat Fluxes driven by Nonlinear Waves over the Continental Shelf (Invited): E Shroyer, J N Moum, J D Nash

0845h PO41D-03 Upstream internal jumps in stratified sill flow: observations of formation, evolution and release: P F Cummins, L Armi

0900h PO41D-04 Numerical study of K, internal tides in the Kuril Straits: Y Tanaka, T Hibiya, Y Niwa, N Iwamae

0915h PO41D-05 Tidal Currents and Mixing at the INSTANT Mooring Locations: R Robertson

0930h PO41D-06 Do Nonlinear Internal Waves Transport Material Onshore or Offshore? Answer: Yes: J A Lerczak, R K Shearman, S Kanner, L Rubiano-Gomez, B G Nelson

0945h PO41D-07 Asymmetry in Nonlinear Internal Waves to the West and East of Luzon Strait: M C Buijsman, J C McWilliams

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PO41E E146 Thursday 0800h
Science of Ocean Forecasting From Advanced Data Assimilation Methods I

Presiding: B Powell, University of Hawaii; G Jacobs, NRL


0815h PO41E-02 A nonlinear statistical method for targeted observation strategies (Invited): R Kleeman

0830h PO41E-03 Dynamically Orthogonal Field Equations for Stochastic Ocean Modeling: P F Lermusiaux, T Sapsis

0845h PO41E-04 A Study on The Predictability of The Atlantic Meridional Overturning Circulation Depending on Observing Systems (Invited): S Zhang, A Rosati, T L Delworth

0900h PO41E-05 Comparison of Singular Vectors and a Second Order Adjoint Method for Targeted Observations: H C Godinez, D N Daescu

0912h PO41E-06 Model Representation Error for Ocean Data Assimilation: R Miller, J G Richman

0924h PO41E-07 Representation of the Leeuwin Current in the Ocean Analyses: G Wang, H Hendon, O Alves

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PO41F PB256 Thursday 0800h
Tsunami Forecasting: A Framework for Advances in Tsunami Research I (joint with MT)

Presiding: R Lawson, SAIC; E N Bernard, NOAA

0800h PO41F-01 Tsunami Forecasting: A Framework for Advances in Tsunami Research: E N Bernard

0820h PO41F-02 NOAA’s Deep Ocean Assessment and Reporting of Tsunami (DART) System (Invited): C Meinig, S E Stalin, E N Bernard, H Milburn

0840h PO41F-03 Tsunami Forecast: Lessons from 2009 Tsunamis (Invited): V V Titov

0900h PO41F-04 WITHDRAWN

0920h PO41F-05 Near-field Tsunami Forecasting Based on Fault-slip Inversion of Offshore Tsunami Waveforms: H Tsushima, R Hino, H Fujimoto, Y Tanaka, F Imamura

0940h PO41F-06 The Adriatic meteotsunami research and warning network: J Sepic, I Vilibic, D Ivanovic, S Marasovic, S Muslim

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Marine Policy

MP42A Oregon Ballroom Thursday 1030h
Marine Policy Plenary Session: Administration Priorities in the Ocean Sciences: Moving Forward on Recommendations From the Interagency Ocean Policy Task Force

Presiding: J D Pullen, Stevens Institute of Technology

1030h MP42A-01 Administration priorities in the ocean sciences: Moving forward on recommendations from the Interagency Ocean Policy Task Force: J Lubchenco

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Biological Oceanography

BO43A D135 Thursday 1300h
Characterizing the Effects of Climate on Living Marine Resources II

Presiding: J Phinney, NOAA Fisheries


1315h BO43A-02 Climate change and spatial scales: Evaluating responses in bottom fish communities: A Sell, S Ehrich, N Rieck, V Stelzenmuller, G Wegner

1330h BO43A-03 The impact of climate change on Baltic sprat population dynamics - a matrix model approach: H Haslob, D Sondgerath, C Peterret, C Clemmesen

1345h BO43A-04 Fish Community Dynamics on Georges Bank: A State Space Modeling Approach: H Liu, M J Fogarty

1400h BO43A-05 Climate-induced changes in the spatial distribution of Northeast US fish and invertebrates: implications for management: J A Nye, J Phinney, S Lucey, J A Hare
1415h BO43A-06 Coherence of Key Indicators in Contiguous Large-scale Ecosystems in the Northwest Atlantic in Response to Climate and Fishing: N Shackell, A Bundy, J A Nye, J Pinhey

1430h BO43A-07 Shifting warm-water to cold-water conditions and foodweb-dynamics of juvenile Pacific salmon in the Eastern Bering Sea Ecosystem: A Mazumder, M Trudel, E Farley, J Moss, L B Eisner, J Murphy

1445h BO43A-08 Using a historical analogy approach towards assessing the potential effects of future climate change for the Chesapeake Bay estuarine ecosystem: R J Wood, E J Martino, X Zhang, J Johnson

BO43B D137 Thursday 1300h Recent Technological Advances for Studying the Ecology of Top Marine Predators I (joint with MT)

Presiding: D M Palacios, NOAA/NMFS/SWFSC; M Baumgartner, Woods Hole Oceanographic Institution; S J Bograd, NOAA/SWFSC

1300h BO45G-11 Analysis of Marine Animal Movement Data Using State Space Models for Behavioural Inference: R Joy, M Dowd

1315h BO43B-02 Inter-Animal Telemetry Using “Business Card” Tags: First Results and Future Directions: K Holland

1330h BO43B-03 First you look, and then you listen: the value of using passive acoustics to monitor killer whale predation on northern fur seals at the Pribilof Islands in the Bering Sea: K A Newman, A Springer, C Matkin, J Durban

1345h BO43B-04 Behavioral ecology of a deep-water flatfish: Large-scale and small-scale experiments with electronic tags: O Albert, T Vollen, B Plunke

1400h BO43B-05 Resolving Basking Shark Migratory Connectivity in the Western Atlantic: Incorporating Satellite Archival Tagging and Ecogeography Techniques: L Hamady, L J Natanson, L Houghton, G Skomal, S R Thorrold

1415h BO43B-06 Environmental Determinants of Migration and Behavior of White Sharks in the North Eastern Pacific: S J Jorgensen, T K Chapple, S Anderson, C Perle, A Brown, A Klimley, B Block

1430h BO43B-07 Investigating leatherback turtle foraging ecology in the California Current Ecosystem with the aid of a non-invasive video technique: S R Benson, J T Harvey, T R Graham, K A Forney, W E Watson

1445h BO43B-08 Multi-species applications of switching state-space models to satellite telemetry data: H Bailey, D M Palacios, S J Bograd, B R Mate, L Irvine, G Breed, D P Costa, L Jonsen, S Jorgensen, G L Shillinger, B Block

BO43C PB255 Thursday 1300h Understanding Diatom Interactions With Their Environment: From Single Molecules to Global Ecosystems I

Presiding: A Marchetti, University of Washington; F Ribalet, University of Washington

1300h BO43C-01 HOT and BATS: A comparative analysis of the silicon cycle: M A Brzezinski, J W Krause, B Li, M J Church, D M Karl, J L Jones

1315h BO43C-02 Investigations into the temporal and spatial dynamics of diatoms in the North Pacific Subtropical Gyre (NPSG): B Li, M A Brzezinski, D M Karl, M J Church

1330h BO43C-03 Common cell wall related genes in diatoms and their potential use as biological indicators in changing ocean environments: C A Durkin, S J Bender, T Truong, A Marchetti, V Armbrust

1345h BO43C-04 Shaping the neighborhood - Ice-binding-proteins in polar diatoms: C Uhlig, M Bayer-Giraldi, T Eberlein, J Kabisch, H Besir, G Dieckmann, A Krell

1400h BO43C-05 Ion channels, signalling and cellular homeostasis in diatoms and other algal groups (Invited): C Brownlee, F Verrett, G Wheeler, A R Taylor

1415h BO43C-06 Proteome Changes Associated with Salinity Stress and DMSP Accumulation in Fragilaropsis cylindrus: B R Lyon, P Lee, J Stavoy, A Bland, E Favre, G R DiTullio, M J Janec

1430h BO43C-07 Proteomics of Vitamin B12, and Iron Stress and Co-stress in Marine Diatoms: E M Bertrand, V Bulygin, M A Saito

1445h BO43C-08 Luxury iron uptake and storage in pennate diatoms from the Equatorial Pacific Ocean: B Twinning, S Baines, S Vogt, D Nelson

Chemical Oceanography

CO43A D139 Thursday 1300h Methane Biogeochemistry I (joint with BO, IT, PA)

Presiding: D L Valentine, University of California Santa Barbara; S Yoon, MPI for Biogeochemistry

1300h CO43A-01 Fifty Years of Ocean Methane Observations. What have we learned, and what does the future hold? (Invited): W S Reeburgh

1325h CO43A-02 The Relationship of Ocean Methane to the Stability of Methane Clathrates: E D Sloan

1345h CO43A-03 Late Holocene atmospheric methane isotope records may point to clathrate destabilization event: T A Sowers


1445h CO43A-06 Anaerobic Oxidation of Methane and the Stoichiometry of Remineralization Processes in Continental Margin Sediments: D J Burdige, T Komada

Education and Outreach

ED43A E141 Thursday 1300h Innovative Integrative Approaches to K-Gray Ocean Sciences and Geosciences Education I

Presiding: M J Richardson, Texas A&M University; V L Green, Oregon Health & Science University; C M Stepah, Kauai Community College


1315h ED43A-02 Educating a Diverse Generation of Geoscientists: M J Richardson, W D Gardner

1330h ED43A-03 HBCU Educator at Sea: Integrated Ocean Drilling Program: N Idrisi, D Drost, M Morell, S K Cooper, L Peart

1345h ED43A-04 Engaging the public in coral reef research through community-based management in Hawaii (Invited): B N Tissot, S Peck

1415h ED43A-05 Intentionally Integrated Education at the Center for Microbial Oceanography: Research and Education (C-MORE) (Invited): B C Brown, K Weersing, J Foley, B A Gibson
1430h IT43A-06 Bringing ocean researchers, students and marine volunteers together through field research: A G Sprenger, F Stahr
1445h IT43A-07 Marine Clean-up as Meaningful Science Learning: C M Stepath, J S Bacon

Geological Oceanography

GO43A E143 Thursday 1300h
Tidal Flats: Hydrodynamics and Morphodynamics of Macrotidal Estuarine and Beach Environments I (joint with BO, PO)

Presiding: G Lee, Inha University; B Ebersole, U.S. Army Corps of Engineers

1305h GO43A-01 Large-Tidal Beaches: A Synthesis With Examples From England And Wales (Invited): G Masselink, T Scott, P E Russell
1330h GO43A-02 MaBEX: Macrotidal Mallipo Beach Experiment: D Lee, B Ebersole, J Jin, H Lee, G Lee
1345h GO43A-03 Beach profile monitoring at a macro-tidal beach through combination of LiDAR and multi-beam sounding: J Shim, J Kim, T Pratt, W Butler, D Lee
1400h GO43A-04 Characteristics of Wave Properties in the Macrotidal Surf Zone Observed by Remote Imaging Methods: J Yoo, D Lee, S Kim, S Kim
1415h GO43A-05 WAVE SET-UP IN MALIPO BEACH WITH LARGE TIDAL RANGE: D Yoo, D Lee, J Choi
1430h GO43A-06 General Pattern of Sediment Transport and Associated Bed Evolution at Malipo, a Macrotidal Sand Beach, Korea: J Jin, J Do, S Nam, J Oh
1445h GO43A-07 Morphological Change Processes on a Macrotidal Beach: B Johnson, G Lee

Interdisciplinary

IT43A PB254 Thursday 1300h
From Field Observations to Modeling Connectivity in the Nearshore and Back Again: Circulation, Dispersal, and Settlement I (joint with BO, PO)

Presiding: M A McManus, University of Hawaii at Manoa; C B Woodson, Stanford University

1300h IT43B-01 Linkages between larvae and recruitment of coral reef fishes along the Florida Keys shelf: An integrated field and modeling analysis of population connectivity in a complex system (Invited): S Sponaugle, R K Cowen, C B Paris, V H Kourafalou, K Shulzitski, M Huff, E D’Alessandro, K Walter, C Guigand
1315h IT43B-02 An Empirical Examination of Simulated Connectivity, with Application to the Southern California Bight: S Mitarai, D A Siegel, R R Warner, J E Caselle
1330h IT43B-03 Transport of Lagrangian drifters within a Chesapeake Bay tributary; implications for ecosystem connectivity and restoration efforts: C N Steppe, D W Fredriksson, C D Janzen
1345h IT43B-04 Seascape genetics along a steep cline: Using genetic patterns to test predictions of coastal marine larval dispersal: H M Galindo, A S Pfeiffer-Herbert, M A McManus, Y Chao, F Chai, S Palumbi
1400h IT43B-05 Euphausiid larval distributions on the Western Antarctic Peninsula Southern Ocean GLOBEC study site: offshore or onshore origin?: P H Wiebe, C J Ashjian, A Piñones, G L Lawson, N J Copley
1415h IT43B-06 To Go or Not to Go with the Flow? Variable Dispersal Patterns of an Open Coast Rocky Reef Fish: G S Cook
1430h IT43B-07 Larval Transport by Tidal Salinity Fronts in a Tropical Mangrove-Fringed Estuary: B L White, J Pineda, V Starczak
1445h IT43B-08 Downscaling an eddy resolving model to investigate seasonal and inter-annual variability in coastal connectivity in a Western Boundary Current: M Roughan, H S Macdonald, M E Baird, T Glasby

IT43C E147 Thursday 1300h
Predicting Climate Change and Its Impacts on the Pacific Sector of Antarctica I: Physical and Geochemical Framework (joint with PO, BO, CO)

Presiding: S E Stammerjohn, UCSC; P L Yager, University of Georgia; R M Sharrell, IMCS, Rutgers University

1300h IT43C-01 Observations and Implications of a Coastal Antarctic Salinity Anomaly (Invited): S Jacobs, C F Giulivi
1315h IT43C-02 BATHYMETRY BENEATH PINE ISLAND GLACIER REVEALED BY AUTOSUB3 AND IMPLICATIONS FOR RECENT ICE STREAM EVOLUTION: A Jenkins, P Dutrieux, S McPhail, J Perret, A Webb, D White, S Jacobs
1330h IT43C-03 Glacial Melt Water on the Amundsen Sea Continental Shelf: X Yuan, S E Stammerjohn, A Wahlin, C Li
1345h IT43C-04 Wind Effects on Circumpolar Deep Water Intrusions on the West Antarctic Peninsula Continental Shelf: M S Dinniman, J M Klinck
1400h  **PO43A-05** Dissolved iron in the Pacific sector of the Southern Ocean: distribution, seasonality, and prospects for future change *(Invited): P N Sedwick, A R Bowie, T W Trul

1415h  **IT43C-06** THE IMPACTS OF INCREASED ICE COVER, CO2 AND LIGHT ON IRON SPECTAION IN THE ROSS SEA: M C Lohan, P N Sedwick, C Marsay, A M Aguilar-Islas, Y Feng, D A Hutchins, G R DiTullio

1430h  **IT43C-07** Sources of Particulate Iron in One of the Most Productive Antarctic Polynyas: the Amundsen Sea: **H Planquette**, R M Sherrell, S E Stammerjohn, M P Field

1445h  **IT43C-08** The Isotopic Composition of Nd in water from the Southern Ocean: InFluence of Detrital Material From the Antarctic Continent: P S Andersson, R M Sherrell, H Planquette, H Kylin

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**IT43D E145 Thursday 1300h**

**Predicting the Effects of Climate Change on Marine Ecosystems II**

**Presiding:** A J Pershing, University of Maine; E N Curchitser, Rutgers University

1300h  **IT43D-01** Predicting the response of copepod dormancy to climate change: Implications for timing and lipid accumulation *(Invited): J J Pierson, A Leising, J A Runge, F Maps, C L Johnson, S Plourde, A J Pershing

1315h  **IT43D-02** Interannual differences in the simulated planktonic ecosystem of the Gulf of Alaska shelf using a coupled circulation-NPZ model and field observations: K O Coyle, A J Hermann

1330h  **IT43D-03** Biological-Physical Interactions that Control Oxygen Dynamics in the Oregon Coastal Ocean: A O Koch, Y H Spitz, H P Batchelder, A K Lurapov

1345h  **IT43D-04** Modeling ocean acidification’s potential to impact commercial marine harvests at regional scales: S R Cooley, K Fennel, S C Doney

1400h  **IT43D-05** An analysis of consequences of modifications to a Southern Ocean food web: T Ballerini, D Ainsky, K L Daly, E E Hofmann, M Marrari, C Ribic, W Smith, J H Steele

1415h  **IT43D-06** Remote and local connectivity of Antarctic krill (Euphausia superba) populations along the western Antarctic Peninsula: A Piñones, E E Hofmann, K L Daly, P H Wiebe, M S Dinniman, M J Klinck

1430h  **IT43D-07** The effects of nitrogen limitation on *Macrocystis pyrifera* frond loss via hydrodynamic stress in the Santa Barbara Channel, California, USA: G Rodriguez

1445h  **IT43D-08** Sensitivity of the marine carbonate cycle to atmospheric CO2: R Gangstø, F Joos, M Gehlen

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**Physical Oceanography**

**PO43A E146 Thursday 1300h**

**Advances in Computational Oceanography I**

**Presiding:** W Weijer, Los Alamos National Laboratory; P Heimbach, MIT; S Khatiwala, Lamont-Doherty Earth Observatory of Columbia University

1300h  **PO43A-01** Numerical Stability and Accuracy in LANS-alpha ocean models: B A Wingate, M Petersen, M W Hecht

1315h  **PO43A-02** Strongly eddying and yet computationally efficient: Incorporating the LANS-alpha turbulence model for more realistic ocean climate simulation: M W Hecht, J Gattiker, M Petersen, B A Wingate

1330h  **PO43A-03** Improving the numerical convergence of viscous-plastic sea ice models with the Jacobian-free Newton-Krylov method *(Invited): J Lemieux, B Tremblay, J Sedlacek, P Tupper, S Thomas, D B Huard, J Auclair

1345h  **PO43A-04** Application of a Newton-Krylov solver to spin up biogeochemical tracers: K T Lindsay

1400h  **PO43A-05** Multiscale marine modeling with high-order discontinuous finite elements *(Invited): V Legat

1415h  **PO43A-06** The Inner Element Subgrid Scale Model for Stabilisation of Oceanic Transport Processes: A S Candy, C C Pain, M D Piggott

1430h  **PO43A-07** Application of Open Loop H-Adaptation to an Unstructured Grid Model of a Mesotidal Estuary: G W Cowles, Y Jung

1445h  **PO43A-08** Bifurcation analysis with MOM4 using JFNK techniques: E Bernsen, H A Dijkstra

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**PO43B D136 Thursday 1300h**

**Mixing Processes and Buoyant Flows: Estuaries I**

**Presiding:** M M Whitney, University of Connecticut; M J Bowman, State University of New York

1300h  **PO43B-01** Near surface turbulence and coherent structures, Part I: connecting the river bottom to the surface: S A Talke, A R Horner-Devine, C Chickadel, A T Jessup

1315h  **PO43B-02** Near surface turbulence and coherent structures, Part II: near-surface modification of turbulent structures: A R Horner-Devine, S A Talke, C Chickadel, A T Jessup

1330h  **PO43B-03** Momentum budget for a macrotidal, shallow, salt-wedge estuary: S N Giddings, D A Fong, S G Monismith

1345h  **PO43B-04** Exploring spatial and temporal variations of the drag coefficient in a tidal-forced flow over varying bed roughness: D A Fong, S N Giddings, S G Monismith

1400h  **PO43B-05** The cycle of vertical and horizontal mixing in a shallow tidal creek: D Di Iorio, P Mckay

1415h  **PO43B-06** Effects of wind on a shallow lagoonal estuary: P Jia, M Li

1430h  **PO43B-07** Development of a transverse circulation in a shoal-channel system under stratified conditions: A Collignon, C Holleman, A Brand, J R Lacy, M T Stacey

1445h  **PO43B-08** Relative role of Coriolis and advective accelerations on the dynamics of a coastal plain estuary *(Invited): A Valle-Levinson, R Chant, M Li

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**PO43C PB253 Thursday 1300h**

**Observational, Theoretical, and Modeling Studies of Large-Amplitude Internal Waves II**

**Presiding:** P F Cummins, Institute of Ocean Sciences; H L Simmons, University of Alaska Fairbanks

1300h  **PO43C-01** Effects of Rotation on Internal Solitary Waves *(Invited): K R Helfrich, R Grimshaw, E R Johnson

1315h  **PO43C-02** Determining the phase in the tide at which internal waves are generated over ridges: Z Zhang, O B Fringer, S R Ramp

1330h  **PO43C-03** A laboratory study of low-mode internal tide scattering by supercritical topography: T Peacock, T Dauxois, M Mercier

1345h  **PO43C-04** Towards a comprehensive understanding of the internal wave dynamics on the Australian North West Shelf: N L Jones, M D Rayson, K Lim, C Bluteau, M Meuleners, G N Ivey
1400h  **PO43C-05** Benthic Excitation by Fully Nonlinear Internal Waves of Depression: P Diamessis, T Stefanakis

1415h  **PO43C-06** Pressure Perturbations Induced by Large-Amplitude Solitary Internal Waves: R Lien, Y Yang, M Chang, T D Tang

1430h  **PO43C-07** High-amplitude internal waves and tides northeast of Taiwan: T F Duda, G Gawarkiewicz, J P Lynch, A Newhall, Y Lin, P Lermusiaux, J Sen, Y Yang

1445h  **PO43C-08** The shoaling of energetic internal tides on the Western slope of the S. China Sea: R Pinkel, J M Klymak, O M Sun

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**Theory and Modeling of the Equatorial Ocean I**

**Presiding:** J P McCreary, University of Hawaii; T Durland, Oregon State University

1305h  **PO43D-01** Sea Surface Cooling at the Equator by Sub-Surface Mixing in Tropical Instability Waves (Invited): J N Moum, R Lien, A Perlin, J D Nash, M C Gregg, P Wiles

1325h  **PO43D-02** Mixing in the equatorial thermocline induced by transient wind events (Invited): A Natarov, K J Richards, H Aiki

1345h  **PO43D-03** On the seasonal variability of upper ocean mixing processes and diapycnal heat flux in the central and eastern equatorial Atlantic: M Dengler, R Hummels, B Bourles

1400h  **PO43D-04** The impact of tropical ocean gateways on ENSO variability: A S von der Heydt, H A Dijkstra

1415h  **PO43D-05** On the connection between Benguela and Equatorial Atlantic Ninots: J F Lübbecke, C W Boening, N S Keenlyside, S Xie

1430h  **PO43D-06** Interannual modulation of the intraseasonal oceanic Kelvin waves in boreal winter by the Indian Ocean Dipole - possible influence on El Nino: T Izumo, S Cravatte, J Vialard, M Lengaigne, S K Behera, T Yamagata

1445h  **PO43D-07** Vertical structure of Kelvin waves in the Indonesian Throughflow exit passages: K Drushka, J Sprintall, S T Gille

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**Tsunami Forecasting: A Framework for Advances in Tsunami Research II (joint with MT)**

**Presiding:** R Lawson, SAIC; E N Bernard, NOAA

1300h  **PO43E-01** Reconnaissance of the 29 September 2009 Samoa Tsunami: H M Fritz, J C Borroto, E Okal, C E Synolakis, R Weiss, B E Jaffe, S Foteinis, P J Lynett, V V Titov, I Chan, P Liu

1320h  **PO43E-02** Tsunami Forecast beyond 2004 Indian Ocean: Achievements and Challenges highlighted in the 29 September 2009 Samoa Tsunami: Y Wei, D Arcas, V V Titov, E N Bernard, C Chamberlin, L Tang, B Uslu, M C Eble, C W Moore

1340h  **PO43E-03** The Samoa Tsunami of 29 September 2009: Comparative analysis of near- and far-field tide gauge records: A Rabinovich, I Fine, R Thomson

1400h  **PO43E-04** The 2009 Samoa Tsunami Recorded by the NEPTUNE Canada Tsunami Array off the coast of British Columbia and Washington: R Thomson, E E Davis, M Heesemann, S F Mihaly, A Rabinovich, I Fine, J Y Cherniawsky

1420h  **PO43E-05** Propagation modeling of the September 2009 Samoan tsunami on a massive parallel processing system: Preliminary results: A Jamelot, D Reymond, P Heinrich, H Hebert

1440h  **PO43E-06** Observations from the 2009 Tsunami: Correlations between Tsunami Forcing and Infrastructure Damage and Coastal Resiliency: J L Irish, J Brandt, L A Dengler, L Ewing, C P Jones, K Long, M Yashinsky

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**Biological Oceanography**

**BO44A D135** Thursday 1530h  **Climate Change and Ocean Biology: Integrating Conceptual Frameworks and Experimental Approaches to Predicting Planktonic Responses II**

**Presiding:** P W Boyd, Univ Otago; D A Hutchins, Univ. of Southern California

1530h  **BO44A-01** Will small do better? Temperature effects on autotrophic and heterotrophic picoplankton in the North Atlantic: X G Morán, ÁNGEL López-Urrutia, W K Li, H Ducklow, A Calvo-Díaz, L Franco-Vidal

1545h  **BO44A-02** How Will the Marine Nitrogen Cycle Respond to a Changing Ocean Environment?: D A Hutchins

1600h  **BO44A-03** A multi-stranded conceptual framework to improve the design of climate change-phytoplankton studies: F Fu, P W Boyd

1615h  **BO44A-04** Trait-based approaches to predicting plankton community reorganizations under global environmental change (Invited): E Litchman, C Klausmeier

1630h  **BO44A-05** Optimality-based modeling of phytoplankton: Implications for predictive modeling, interpreting data and designing experiments: S L Smith

1645h  **BO44A-06** Insight into the response of diatom carbon concentrating mechanisms to rising CO$_2$ through analysis of cellular inorganic carbon fluxes: B Hopkinson, F M Morel

1700h  **BO44A-07** On the Organization of Marine Phytoplankton Communities (Invited): M Follows, S D'urkiewicz, F Monteiro, J Bragg

1715h  **BO44A-08** Physiological processes of phytoplankton that align growth rate to nutrient environment: K H Halsey, A J Milligan, M J Behrenfeld
1630h  BO44B-05 Use of suction cup attached tags on whales to examine underwater behavior, feeding, vocalizations, and interactions with ships: J Calambokidis, E Oleson, J Goldbogen, M McKenna

1645h  BO44B-06 Identification of high-use internesting habitats for eastern Pacific leatherback turtles: Role of the environment and implications for conservation: G L Shillinger, A Swinnenbank, S J Bograd, H Bailey, M Castelton, B Wallace, J Spotila, F Paladino, R Piedra, B Block

1700h  BO44B-07 Anti-cyclonic circulation and the long-range foraging movements of Hawaiian Petrels (Pterodroma sandwichensis) in the North Pacific: J Adams, D Ainley, J Penniman, H Freifeld, S Flora

1715h  BO44B-08 Habitat partitioning of two seal species in the Western Antarctica Peninsula: L Huckstadt, B McDonald, A Piñones, M S Dinniman, E E Hofmann, M E Goebel, D E Crocker, D P Costa

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**Education and Outreach**

**ED44A E141 Thursday 1530h**

**Achieving Increased Diversity of Participants in Ocean Sciences: A 21st Century Imperative for the Ocean Science and Technology Workforce**

**Presiding:** J W Farrington, WHOI; J Aearld, NOAA Fisheries

1535h ED44A-01 The SMILE Program Model for Partnerships: Promoting Life-Long Academic Aspirations for Underrepresented Minority High-School Students Through a Contextual Ocean Science Challenge: R Collay

1550h ED44A-02 Recruiting for STEM in Grades 6-12: The Columbia Earth Institute experience: R Newton, N Degnan, R Quatrone, S Scovronick, S C Silverstein


1620h ED44A-04 From Desegregation to Center of Excellence: 30 years of building a Diverse Marine Sciences Community and Programs at Savannah State University: M Gilligan, C J Pride

1635h ED44A-05 The Woods Hole Partnership Education Program (PEP): Expanding Diversity in the Ocean and Environmental Sciences: A Jearld, J Yoder, B T Gutierrez

1650h ED44A-06 Increasing Participation by Underrepresented Groups in Ocean Sciences: A 21st Century Imperative!: J W Farrington

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**Geological Oceanography**

**GO44A E143 Thursday 1530h**

**Tidal Flats: Hydrodynamics and Morphodynamics of Macrotidal Estuarine and Beach Environments III (joint with BO, IT, PA)**

**Presiding:** B Ebersole, U.S. Army Corps of Engineers; D Lee, 1Korean Ocean Research and Development Institute

1530h GO44A-01 Field monitoring of resuspension of fine sediment in Ariake Bay, Japan: Y Nakagawa

1545h GO44A-02 Formation of High Concentration Bottom Suspensions Under Strong Tidal Flows: G C Kineke, T G Milligan, B A Law, K M Heath

1600h GO44A-03 High resolution numerical modeling of cohesive sediment transport in tide-dominated estuaries (Invited): T Hsu, M Son, G Lee


1630h GO44A-05 A Fully Coupled Wave-Current-Sediment FVCOM Model System: An Application to the Changjiang Estuary (Invited): J Ge, C Chen, P Ding, L Wu, J Qi, R C Beardsley

1645h GO44A-06 SIMULATION OF FINE SEDIMENT TRANSPORT AT MACRO-TIDAL GUNSAN ESTUARY: J Yoon, D Kim, H Lin, J Jin, J Do, D Lee
Interdisciplinary

IT44A PB252 Thursday 1530h
Biological-Physical Interactions at Submesoscales II (joint with BO, CO)

Presiding: A Mahadevan, Boston University; P J Franks, Scripps Institution of Oceanography

1530h IT44A-01 Eddies impacts on upper-ocean nutrient supply
(Invited): A Oschlies

1545h IT44A-02 Glider-based Analysis of Covariability of Ocean Fronts and Zooplankon Acoustic Backscatter in the California Current System: J R Powell, M D Ohman, R E Davis

1600h IT44A-03 Observations of Microscale Turbulent Dissipation and Submesoscale Physical and Biological Structures in the Kuroshio Front: T Nagai, A Tandon, H Yamazaki, M Doubell, S Gallager, A D York, S Clayton, E M Holmes

1615h IT44A-04 Signatures of Sub-Mesoscale Mixing and Stirring of Passive Tracers: M A Sundermeyer, M P Lelong

1630h IT44A-05 Seasonal and higher frequency wind controls on the nearshore biogeochemistry of an Eastern Boundary upwelling system (Invited): B R Hales, M Segura-Noguera, D Hebert, R K Shearman, S A Siedlecki

1645h IT44A-06 Lateral Mixing by Submesoscale Processes: A Tandon, A Mahadevan

1700h IT44A-07 Importance of Mesoscale and Submesoscales in Vertical Transport of Nutrients: G Lapeyre, P Klein


IT44B PB254 Thursday 1530h

From Field Observations to Modeling Connectivity in the Nearshore and Back Again: Circulation, Dispersal, and Settlement II (joint with BO, PO)

Presiding: L Washburn, UC Santa Barbara; C A Edwards, UCSC

1530h IT44B-01 The influence of anoxia on larval connectivity: a model-based hypothesis (Invited): E W North, Z Schlag

1545h IT44B-02 Particle dynamics at exposed benthic habitats: Larval dispersal and connectivity at boulder reefs in Danish waters and implications for ecosystem management: C Mohn, K Dahl

1600h IT44B-03 Connectivity of Lobster Populations in the Gulf of Maine: H Xue, S Cousins, L S Ince, R Wahle, A C Thomas

1615h IT44B-04 Persistent Fronts and Connectivity: A missing piece of the puzzle?: C B Woodson, J A Tyburczy, M A McManus, J A Barth, L Washburn, P Raimondi, B A Menge, S Palumbi

1630h IT44B-05 WITHDRAWN

1645h IT44B-06 Empirical Estimation of Larval Connectivity Across a Species Range from Multivariate Natural Tag-Recapture Data: B P Kinlan, S E Koch, D C Zacherl, R R Warner

1700h IT44B-07 Empirical approaches to measuring larval dispersal in reef fish populations: new methods, old limitations: S R Thorrold, G R Almany, M Berumen, G P Jones, S Planes

1715h IT44B-08 Observational and computational perspectives on regional population connectivity: Synthesizing and quantifying interdisciplinary results: L L Rasmussen, L A Levin, B D Cornuelle, B Becker, F J Fodrie

IT44C E147 Thursday 1530h

Predicting Climate Change and Its Impacts on the Pacific Sector of Antarctica II: Biological and Biogeochemical Response (joint with BO, PO, CO)

Presiding: S E Stammerjohn, UCSC; P L Yager, University of Georgia; R M Sherrell, IMCS, Rutgers University


1545h IT44C-02 Continuous Chlorophyll Fluorescence Measurements in the Ross Sea, Antarctica: Scales Of Variability: W Smith, S Tozzi, V L Asper

1600h IT44C-03 The control of phytoplankton primary productivity in the Amundsen Sea by nitrogen, iron and light: A Alderkamp, M Mills, G L van Dijken, P Laan, L Gerrina, C Thuroczy, H J de Baar, C D Payne, P Tortell, K R Arrigo

1615h IT44C-04 Trace Element Composition of Phytoplankton and Suspended Particles in the Amundsen Sea, Antarctica, and Potential Climate Change Effects: R M Sherrell, H Planquette, E D Ingall, J Diaz

1630h IT44C-05 Excess Accumulation of Zinc Relative to Silicon in Southern Ocean Diatoms and Silicoflagellates: J Diaz, E D Ingall, S Vogt, L Finney, R M Sherrell, J A Brandes

1645h IT44C-06 Impact of Polyphosphates on Marine Dissolved Phosphorus Composition and Cycling in the Amundsen Sea: E D Ingall, J Diaz, R Sambrotto

1700h IT45I-02 Interannual variability of phytoplankton abundance within the Amundsen Sea polynyas, 1997 to 2009: K E Lowry, G L van Dijken, K R Arrigo

1715h IT44C-08 Bacterial Growth and Respiration in Polynyas and Sea Ice Communities of the Pacific Sector of the coastal Antarctic: is the Biological Pump Sensitive to Climate?: P L Yager, J B Heimlich

IT44D E145 Thursday 1530h

Predicting the Effects of Climate Change on Marine Ecosystems III

Presiding: D B Haidvogel, Rutgers University; E J Turner, NOAA

1530h IT44D-01 Climate Impacts on Whales (and Vice Versa) (Invited): A J Pershing

1550h IT44D-02 Climate Change and Habitat Selection of Seals in the Western Antarctic Peninsula: D P Costa, D E Crocker, M A Fedak, M E Goebel, B McDonald, L A Huckstadt, E E Hofmann, J M Klinck, M S Dinniman

1610h IT44D-03 Community consequences of climate change in the Oregon coastal rocky intertidal ecosystem: B A Menge, F Chan, K Nielsen, T Freidenburg

1625h IT44D-04 Variation in species response to environmental variability and climate change: salmon and cod as examples: L W Botsford, L Worden, M Holland, H Wang, W White, F Juanes, M Fogarty, A Hastings

1640h IT44D-05 Assessing the Impacts of Future 2°C Global Warming on Southern Ocean Cetaceans: C T Tyner, J L Russell

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1655h IT44D-06 Toward a threshold: Climate change implications for physics, phytoplankton and fish in a historically low-wind upwelling ecosystem: A Nieblas, B Sloyan, M Haddin, A Butler, R Coleman, A Richardson

1710h IT44D-07 Potential Climate Change Impacts on the Ocean Thermal Habitat Area and Ranges of Pacific Salmon: O Abdul-Aziz, N J Mantua

Physical Oceanography

PO44A E146 Thursday 1530h Advances in Computational Oceanography II

Presiding: W Weijer, Los Alamos National Laboratory; P Heimbach, MIT; S Khatiwala, Lamont-Doherty Earth Observatory of Columbia University

1530h PO44A-01 Vertical Mixing in a Sigma Coordinate Model: D A Terry, R Robertson

1545h PO44A-02 Advances towards accurate general coordinate ocean models: remapping, regridding and continuous isopycnal coordinates: A Adcroft, L White, R Hallberg

1600h PO44A-03 Higher Order Numerics as an Alternative to Diffusive Subgridscale Parameterizations: A C Hammann, A Gnanadesikan


1630h PO44A-05 Global ocean state estimation in the presence of eddies and ice (Invited): D Menemenlis

1645h PO44A-06 Scalable sequential data assimilation with the Parallel Data Assimilation Framework PDAF: L Nerger, W Hiller, J Schröter

1700h PO44A-07 A Minimal Conserved Adjustment Scheme for Ocean Data Assimilation: P C Chu, C Fan

1715h PO44A-08 Eddy-resolving ocean modeling of the pan-Arctic region: R Osinski, W Maslowski

PO44B PB256 Thursday 1530h Circulation in the Gulf of Mexico and Its Connection With the Caribbean Sea and the Atlantic Ocean I

Presiding: P Hamilton, SAIC; L Oey, Princeton University

1535h PO44B-01 The birth and scale of Loop Current rings (Invited): D Nof

1555h PO44B-02 Adjoint sensitivity studies of Loop Current and Eddy Shedding in the Gulf of Mexico: G Gopalakrishnan, B D Cornuelle, I Hoteit

1610h PO44B-03 Effects of winds on Loop Current and eddies: L Oey, E Chang

1625h PO44B-04 Is the Loop Current behavior preconditioned by the Mexican Caribbean Circulation? (Invited): J Candela, G Athie, J L Ochoa-de-La-Torre, J Sheinbaum

1645h PO44B-05 Observations and Modeling of Shelf Wave Response to Hurricane Andrew: S M Pearce, D Smith, S F Dimarco

1700h PO44B-06 Deep Currents in the Bay of Campeche: N Kolodziejczyk, J L Ochoa-de-La-Torre, J Candela, J Sheinbaum

1715h PO44B-07 Direct observations of the upper layer circulation in the Bay of Campeche: P Perez-Brunius, J Dubranna, P Garcia-Carrillo, J Candela

PO44C D136 Thursday 1530h Mixing Processes and Buoyant Flows: Estuaries II

Presiding: M E Scully, Old Dominion University; R E Wilson, Stony Brook University

1530h PO44C-01 Modes of Subtidal Variability of Surface Elevation and Exchange in Chesapeake Bay: J M Brubaker, J D Boon

1545h PO44C-02 Response of Chesapeake Bay Estuary to Climatic Forcing (Invited): M Li, Y Li, R Najjar

1600h PO44C-03 Atmospheric and Tidal Influences on the Near-Surface Turbulent Energy Budget in an Estuary: P M Orton, C J Zappa, W R McGillis

1615h PO44C-04 Observations of Energetic Sub-inertial Internal Waves in a Washington Fjord: J B Mickett, M H Alford, A Devol

1630h PO44C-05 WITHDRAWN


1700h PO44C-07 Exploring the patterns of exchange flow in Puget Sound and its connection to the coastal ocean: D A Sutherland, P MacCready, N S Banas

1715h PO44C-08 The last-kilometer problem: What is the salinity of water leaving an estuary? (Invited): P MacCready

PO44D PB253 Thursday 1530h Regional and Mesoscale Coupled Air-Sea Modeling I

Presiding: H Seo, University of Hawaii; R J Small, Naval Research Laboratory

1530h PO44D-01 Regional Earth System Prediction: A decision-making tool (Invited): R Murtagudde, C Forecast Team

1555h PO44D-02 Coupled atmosphere-wave-ocean strategies for tropical cyclone modeling and forecasting (Invited): I Ginis, Y Fan, T Hara, B Thomas

1615h PO44D-03 Wave-current interaction at a front: H Tamura, L Oey, Y Miyazawa

1630h PO44D-04 Weather Events Related to Air-Sea Coupled Interactions and the Need for an Expanded, Enhanced Essential Marine Buoy Network as a Core Element of the National Network of Networks: L J Pietrafesa, S Bao, M Peng, P T Gayes

1645h PO44D-05 OPERATIONAL COUPLED ATMOSPHERE · ICE · OCEAN FORECAST SYSTEM FOR THE GULF OF ST. LAWRENCE, CANADA: F Roy, M Faucher, S Desjardins, C Fogarty, P Pellerin, H Ritchie, B Denis, G C Smith

1700h PO44D-03 Air-Sea-Wave Coupled Modeling of the Adriatic Sea: T A Smith, R A Allard, T J Campbell, P Martin, E Rogers

1715h PO44D-07 Seasonal Variability of Upwelling and Mesoscale Eddies in the Peru-Chile Current System: D Putrasahan, H Seo, A J Miller

PO44E PB251 Thursday 1530h Theory and Modeling of the Equatorial Ocean II

Presiding: D W Moore, NOAA/PMEL; J P McCreary, University of Hawaii

1535h PO44E-01 Analytical Theory for the Quasi-Steady and Low-Frequency Equatorial Ocean Response to Wind Forcing: The 'Tilt' and 'Warm Water Volume' Modes: A J Clarke

1550h PO44E-02 Pacific Decadal Variability in the View of Linear Equatorial Wave Theory: J Emile-Geay, M A Cane

1605h PO44E-03 Barotropic Rossby waves seen radiating from tropical instability waves in the Pacific (Invited): T Farrar
1625h  **PO44E-04** Nonlinear Shallow Water Tropical Instability Waves on the Equatorial beta-plane: Genesis of Two Distinct Types of Waves: C Zhou, J Boyd

1640h  **PO44E-05** Deep equatorial ocean circulation induced by a forced-dissipated Yanai beam (Invited): F Ascani, E Firing, P Dutilieux, J P McCreary, A Ishida

1700h  **PO44E-06** Dynamics of Extra-Equatorial, Equatorial Deep jets and intermittent layering in the Atlantic: C Meneguen, B Hua, M D Fruman, R Schopp

1715h  **PO44E-07** ANNUAL REVERSAL OF THE EQUATORIAL INTERMEDIATE CURRENTS IN THE PACIFIC OCEAN: E H Kestenare, F Marin, T Delcroix, F Durand, S Cravatte, G Eldin, R Boudallé-Badie

### Biological Oceanography

**BO45A** Poster Hall E  **Thursday**  **1730h**

**Biological Consequences of Ocean Acidification II Posters**

**(joint with CO)**

**Presiding:** B Gaylord, Bodega Marine Lab, University of California at Davis

1730h  **BO45A-01** POSTER Effects of ocean acidification and temperature on the early development of pinto abalone (Haliotis kamtschatica): R Crim, J Sunday, C Harley

1730h  **BO45A-02** POSTER Growth and predation susceptibility of the barnacle, Balanus glandula, with moderate ocean acidification: R A Gooding, C Harley

1730h  **BO45A-03** POSTER The effect of pH and temperature on early development of the green sea urchin (Lytechinus variegatus): A N Anderson, J M Fox, M G Nipper, T C Shirley, A L Lawrence

1730h  **BO45A-04** POSTER Ocean acidification and warming: consequences for various life stages of the barnacle Amphibalanus improvisus: C Pansch, A Nasrolahi, Y Appelhans, F Melzner, M Wahl

1730h  **BO45A-05** POSTER Size-dependent Effects of pH on Biocalcification in the Hard Clam Mercenaria mercenaria: G Waldbusser, H Berghsneider, M A Green

1730h  **BO45A-06** POSTER Can ocean acidification affect the population dynamics of the barnacle Semibalanus balanoides at the southern edge of its range?: H S Findlay, M T Burrows, M A Kendall, J Spicer, S Widdicombe

1730h  **BO45A-07** POSTER CHARACTERIZING THE RESPONSE OF THE PACIFIC OYSTER (Crassostrea gigas) TO ELEVATED CO2 AND DISEASE EXPOSURE: E Timmins-Schiffman, T Green, S Roberts, S White

1730h  **BO45A-08** POSTER pHt, calcium homeostasis and hematology under high pCO2 conditions in the Eastern Oyster Crassostrea virginica: C Krome, G H Wikfors, S L Meseck

1730h  **BO45A-09** WITHDRAWN

1730h  **BO45A-10** POSTER The Impact of Elevated CO2 on Initial Calcification by the Bay Scallop (Argopecten irradians): D C McCorkle, A Cohen, E Sogin, M Pinard, K Rose

1730h  **BO45A-11** POSTER Sour times for sea stars – The influence of seawater acidification on feeding behaviour, growth and body fluid composition of Asterias rubens: Y S Appelhans, J Thomsen, C Pansch, F Melzner, M Wahl

1730h  **BO45A-12** POSTER Effects of ocean acidification on swimming behaviors of larval sand dollar, Dendraster excentricus: K Chan, D Grunbaum, M J O'Donnell

1730h  **BO45A-13** POSTER Experimental Observations of the Benthic Foraminifer Amphistegina gibbsa Maintained under Elevated pCO2: P O Knorr, L L Robbins, P Hallock Muller

1730h  **BO45A-14** POSTER Impact of future elevated atmospheric pCO2 and ocean acidification on benthic foraminifera: A McIntyre-Wressnig, J M Bernhard, D C McCorkle, P Hallock Muller

1730h  **BO45A-15** POSTER Recreating the future: A system for laboratory simulation of future ocean carbon dioxide, dissolved oxygen and temperature variability: P McElhaney, J Colt, J Miller, M Maher, S Busch, J Niedermeyer

1730h  **BO45A-16** POSTER Automated, pCO2-controlled culture system for the study of coralline algae: C McGraw, C Cornwall, M R Reid, K Currie, C Hepburn, P W Boyd, C Hurd, K A Hunter

1730h  **BO45A-17** WITHDRAWN

### Comparative Analysis of Marine Ecosystems II Posters

**Presiding:** D A Bronk, College of William and Mary/VIMS

1730h  **BO45B-01** POSTER A New Tool for Inferring Trophic Interactions and Fish Movement Using Stable Carbon Isotope Analysis of Otolith Amino Acids: K McMahon, M L Fogel, S R Thorrold

1730h  **BO45B-02** WITHDRAWN

1730h  **BO45B-03** POSTER Interannual variation in food web structure in the northern California current: H Bi, W T Peterson, J Lamb, C Morgan, P T Strub

1730h  **BO45B-04** WITHDRAWN

1730h  **BO45B-05** POSTER Cross system comparison of the relative contribution of DIN and DON to plankton nitrogen nutrition: D A Bronk, M P Sanderson, Q N Roberts, L Killberg-Thoreson, M R Mulholland, P W Bernhardt, J M O’Neil, C Heil

1730h  **BO45B-06** WITHDRAWN

1730h  **BO45B-07** POSTER Polychromatism in Ischnochiton sps. (Mollusca: Polyplacophora) in different habitats at Puerto Rico: M Castro-Ortiz, W Cruz-Marrero, H Manrique, D Padilla, C Garcia

1730h  **BO45B-08** POSTER Shallow winter macrofaunal assemblages along the depth and distance-to-glacier gradients (79° N, Spitsbergen): M Ledra, J K Legezynska, W Moskal, W Walkusz

1730h  **BO45B-09** POSTER Trophic diversity within the sublittoral amphipod community in Arctic: J Legezynska, M Ledra, W Walkus, W Moskal

1730h  **BO45B-10** POSTER A Comparison of Eutrophication Impacts in Two Eutrophic Harbors in Hong Kong with Different Hydrodynamics Abstract: J Xu, K Yin, P J Harrison

1730h  **BO45B-11** WITHDRAWN

1730h  **BO45B-12** POSTER Modeling the Effect of Changing Primary Production on Pelagic Ecosystems: K Kearney, J L Sarmiento, C A Stock

1730h  **BO45B-13** POSTER Pelagic Community Response to Multiple Anthropogenic Stressors: H Vestheim, J K Egge, T F Thingstad, T Andersen, K Hylland

1730h  **BO45B-14** WITHDRAWN

1730h  **BO45B-15** POSTER Gene flow between populations of Laminaria digitata along Spitzbergen and mainland Norway: A M Lydon, M Moline

1730h  **BO45B-16** WITHDRAWN
**BO45C** Poster Hall E Thursday 1730h

*Growth Increments and the Environment: Multidecadal Perspectives on Climate and Ecology in Marine Systems II Posters (joint with PA)*

**Presiding:** T E Helser, National Oceanic and Atmospheric Administration

1730h **BO45C-01** POSTER A DETERMINATION OF AGE DISTRIBUTION OF THE CHINOOK SALMON (Oncorhyncus tshawytscha) OF THE KLAMATH RIVER SYSTEM: D Hernandez

1730h **BO45C-02** POSTER Stable isotopic composition Chinook salmon otoliths: A record of past environmental conditions and life history: H Browning, J Miller, J L McKay

1730h **BO45C-03** POSTER Coralline Red Algae as Recorders of Past Temperature and Salinity Variability of the Alaska Coastal Current: P Chan, J Halfar, S Hetzinger, B Steneck, T Zack, B Kunz, D Jacob

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**BO45D** Poster Hall E Thursday 1730h


**Presiding:** K M Dorgan, University of California, Berkeley; G Waldbusser, Oregon State University

1730h **BO45D-01** POSTER The biogeography of salt marsh ammonia-oxidizing bacteria across geographic scales: C Horner-Devine, J Eisen, K Penn, J Martiny

1730h **BO45D-02** POSTER EFFECTS OF AN INVASIVE EELGRASS (ZOSTERA JAPONICA) ON SEDIMENT N-CYCLING MICROBIAL COMMUNITIES AND PROCESSES: J M Silver, C Horner-Devine

1730h **BO45D-03** POSTER Influence of the invader Spartina alterniflora on the accumulation of biogenic silica in tidal marshes of the bay of Brest: J Querne, O Raguenneau, N Poupart

1730h **BO45D-04** POSTER Silicic acid profiles and benthic fluxes variability induced by microphytobenthos in shallow coastal ecosystems: experiments and modelling: M Raimonet, A Leynaert, O Raguenneau, K Soetaert, L Mermet

1730h **BO45D-05** POSTER SULFATE REDUCTION ON SMALL SCALES: THE ROLE OF BIOTURBATION AND MICRONICHES IN COASTAL MARINE SEDIMENTS: V J Bertics, W Ziebis

1730h **BO45D-06** POSTER Iron Cycling at the Sediment-Water Interface of the Burrows of Neotrypaea californiensis: R Day, W Ziebis, V J Bertics, L Lewis

1730h **BO45D-07** POSTER DEVELOPMENT OF AUTONOMOUS SENSING TECHNIQUES FOR IN SITU BENTHIC FLUX, DEPTH PROFILE, AND TIME SERIES MEASUREMENTS OF THE MAIN REDOX SPECIES INVOLVED IN SEDIMENT BIOGEOCHEMISTRY: D J Meiggs, D Nuzzio, G W Luther, M Taillefer

1730h **BO45D-08** POSTER Long thin slimy ones, short fat juicy ones: Exploring how worms with varying body morphologies burrow: E A Murphy, K M Dorgan

1730h **BO45D-09** POSTER Do the ends justify the means? Mechanics and kinematics records of forward and backward burrowing: J Che, K M Dorgan

1730h **BO45D-10** POSTER A Two-Way Street: Burrow Bioirrigation Behavior and Boundary Layer Flow: S M Zeman, K M Dorgan

1730h **BO45D-11** POSTER Benthic foraminiferal records and sedimentological analyses to understand natural and anthropogenic change in Tomales Bay, CA: S C Flores, T M Hill, A D Russell, G Brooks

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**BO45E** Poster Hall E Thursday 1730h

*New Methods and Applications for Metagenomics and Metatranscriptomics in Biological Oceanoigraphy II Posters*

**Presiding:** J Gryzmski, Desert Research Institute; I Hewson, Cornell University

1730h **BO45E-01** POSTER Functional Genomics And Metagenomics Of Marine Synechococcus: B Palenik, I Paulsen, R Stuart, S Tetu, C Dupont, B Brahamsha, V Tai, A Johnson

1730h **BO45E-02** POSTER Transcriptomic Analysis of Bacterial Communities Found in Gulf of Mexico Surface Water via a Comprehensive Microarray for Biogeochemical, Ecological and Environmental Processes (GeoChip 3.0): B Wawrrik, J D Van Nostrand, J Xie, J Zhou

1730h **BO45E-03** POSTER A Physiological Study of the Giant Kelp, Macrocystis pyrifera, Using Metatranscriptomics: T Konotchick, C Dupont, J Badger, A E Allen

1730h **BO45E-04** POSTER Genome-wide Transcriptional Analysis in Tribodesmium sp. Strain IMS 101 During Light/Dark Cycles: I Ilikchyan, T Shi, J Zehr

1730h **BO45E-05** POSTER Subcellular Localization of Marine Bacterial Alkaline Phosphatases: H Luo, R H Benner, R A Long, J Hu

1730h **BO45E-06** WITHDRAWN

1730h **BO45E-07** POSTER Metagenomic reconstruction of planktonic Archaea from Gulf of Maine surface waters: B J Tully, W C Nelson, J F Heidelberg

1730h **BO45E-08** POSTER Genome Level Adaptations to Resource Availability in Different Size Classes of Marine Bacteria; Insights and Comparisons of Indian Ocean Metagenomics: J P McCrow, J Badger, S Yoospeh, C Dupont, A E Allen

1730h **BO45E-09** POSTER Microbial Metagenomes Across a Southern California Current Upwelling Mosaic: L A Zeigler, J Badger, J P McCrow, J Paulsen, E E Allen, S J Williamson, A Allen

1730h **BO45E-10** POSTER Bacterioplankton adaptations to Antarctic winter: J Gryzmski, C Riesenberg, A E Murray

1730h **BO45E-11** POSTER The Other DNA Viruses: Metagenomic Assessment of ssDNA Virioplankton Assemblages: S W Polson, K Wommack, L A Zeigler, D W Fadros, S J Williamson

1730h **BO45E-12** POSTER Genome-Wide Analysis of Selenoproteins in Emiliana huxleyi: K N Gonzalez, A Sarno, B A Read

1730h **BO45E-13** POSTER Genome-Wide Analysis of microRNAs Present in the E. huxleyi Genome: J Garza, X Zhang, J Gamarrta, A Hadaegh, B A Read

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**BO45F** Poster Hall E Thursday 1730h

*Plankton Grazing Rates in the Sea: So Many Methods, So Much Learned, So Much to Do I Posters*

**Presiding:** J M O’Neil, Univ of Maryland; M Olson, Western Washington University

1730h **BO45F-01** POSTER Nitrogen source affects grazing rate of grazing-resistant and non-resistant Synechococcus spp: V C Selz, S Strom, J Apple

1730h **BO45F-02** POSTER Why do picophytoplankton bloom in some estuaries and not others?: M Wetz, J Leonard, H W Paerl, A Gaulke

1730h **BO45F-03** POSTER Microzooplankton Grazing Inside and Outside Blooms of the Toxic Dinoflagellate Karenia spp. Using the Dilution Method: J M O’Neil, K Meyer, C A Heil, D A Bronk, L Killberg-Thoreson, Q N Roberts, M R Mulholland
1730h **BO45F-04 POSTER** Assessing the role of micro- and mesozooplankton grazing on the development and decline of a noxious cyanobacteria bloom: G R Rollwagen-Bollens, J Duer, S Bollens, A Gonzalez, Z Zimmerman

1730h **BO45F-05 POSTER** Grazing on Synechococcus by cultured and natural populations of Karenia brevis from the Gulf of Mexico: L Procise, M Mulholland

1730h **BO45F-06 POSTER** Microzooplankton grazing in green water – results from two contrasting estuaries: J K York, B A Costas, G B McManus

1730h **BO45F-07 POSTER** Size-structured growth and grazing of the microbial community in the equatorial Pacific: D A Taniguchi, M R Landry, P J Franks

1730h **BO45F-08 POSTER** Detection of in-situ copepod grazing on low-concentration populations of Alexandrium fundyense using PCR identification of ingested prey: S Haley, A Juhl, B Keafer, S Dyhrman, D M Anderson

1730h **BO45F-09 POSTER** Increased respiration due to feeding activity in Diioithona oculata, a small swarm-forming copepod: A B Bochdansky

1730h **BO45F-10 POSTER** Model of Zooplankton Optimal Current Feeding: M Pahlow, A Prose

1730h **BO45F-11 POSTER** Influence of UV radiation on variability of grazing and growth rates of plankton communities from the Humboldt Current area: A Coello, F Vidal, S Lasternas, F Maurin, M Fernandez, S Agusti

1730h **BO45F-12 WITHDRAWN**

1730h **BO45F-13 POSTER** Intoxicated copepods: Ingesting toxic phytoplankton can lead to risky behavior: R S Lasley

1730h **BO45F-14 POSTER** Low-temperature amplification of small particle counts in a Coulter Counter Multisizer: E Rice, G M Stewart

1730h **BO45F-15 POSTER** Global biogeochemical fluxes through microzooplankton: E T Buitenhuis, R B Rikvin, S Sailing, C Le Quere

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**BO45G Poster Hall E Thursday 1730h**

**Recent Technological Advances for Studying the Ecology of Top Marine Predators III Posters (joint with MT)**

**Presiding:** D M Palacios, NOAA/NMFS/SWFSC; M Baumgartner, Woods Hole Oceanographic Institution; S J Bograd, NOAA/SWFSC

1730h **BO45G-01 WITHDRAWN**

1730h **BO45G-02 WITHDRAWN**

1730h **BO45G-03 POSTER** Long-Term, Autonomous Detection of Deep-Diving Cetaceans using High-frequency Acoustic Recording Packages: K Merkens, S M Wiggins, M McDonald, J Hildebrand

1730h **BO45G-04 POSTER** Biophysical Ocean Observation in the Southeastern Bering Sea: K Stafford, S E Moore, P J Stabeno, V Holliday, J M Napp

1730h **BO45G-05 POSTER** Aggregation characteristics of prey determine blue whale distribution at the Costa Rica Dome: R S Matteson, K J Benoit-Bird, B R Mate, J Calambokidis


1730h **BO45G-07 POSTER** MEOP: An Example Of A Large-Scale Investigation Of Marine Animal Habitats: M A Fedak, M Bester, M Biuw, D P Costa, L Boehme, C Guinet, M Hammill, K Kovacs, C Lydersen, M Muelbert, O Anders Nøst, J Ploetz, G Stenson, A Rosing-Asvid, M Hindell

1730h **BO45G-08 POSTER** An Encoded Micro-Transponder for Ultrasonic Tracking of Underwater Targets: A W Franzheim, C de Moustier, J Testa

1730h **BO45G-09 POSTER** Combining preexisting and novel techniques to determine short-term movement patterns of bottlenose dolphins (Tursiops truncatus): B Balmer, R Wells, L Schwacke, W McLeLLan, T Rowles, F Townsend, J Schwacke, E Zolman, D A Pabst

1730h **BO45G-10 POSTER** Using a new short-term dermal attachment tag to study bowhead whale foraging ecology in the western Beaufort Sea: M Baumgartner, T Hammar

1730h **BO45G-11 POSTER** A Monte Carlo Method for Projecting Uncertainty onto Surface Trajectories for Sea Turtles: A Robel, S Lomizer, S F Gary, S J Bograd

1730h **BO45G-13 POSTER** Xtract-o-matic: a tool to help bio-loggers integrate environmental data: D G Foley

1730h **BO45G-14 WITHDRAWN**

1730h **BO45G-15 POSTER** Is the Southwestern Atlantic a High-Use Area for Juvenile Loggerhead Sea Turtles?: C Barcelo, A Domingo, P Miller, Y Swimmer

1730h **BO45G-16 POSTER** Movements of non-breeding sooty shearwaters (Puffinus griseus) in the California Current System: seabird response to temporal and spatial variability in winds and upwelling: M S Nakagawa, J Adams, E E McPhee-Shaw, J T Harvey

1730h **BO45G-17 POSTER** Selective foraging by harbor seals (Phoca vitulina): The importance of herring spawning and holding aggregations: A C Thomas, M Lance, S Jeffries, A Acedo-Gutiérrez

1730h **BO45G-18 POSTER** Environmental correlates of movement behavior in Northeast Pacific blue whales from state-space modeled satellite tracks and remote sensing: D M Palacios, B R Mate, L Irvine, H Bailey, S J Bograd, D P Costa

1730h **BO45G-19 WITHDRAWN**

1730h **BO45G-20 POSTER** DISTRIBUTION OF MARINE MAMMALS IN THE EASTERN EQUATORIAL PACIFIC: SATELLITE AND SHIP-BASED OCEANOGRAPHY APPLIED TO SMALL-SCALE VARIABILITY IN DISTRIBUTION: J E O’Hern, K Mullin, K Barry, E P Usoschovich

1730h **BO45G-21 POSTER** Regional variation in yellowfin and bigeye tuna mercury concentrations in the Pacific Ocean: B E Ferriss, T E Essington

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**BO45H Poster Hall E Thursday 1730h**

**Spatial Dynamics of Species Abundance and Interactions Across Trophic Levels III Posters (joint with IT)**

**Presiding:** M Llope, Instituto Español de Oceanografía

1730h **BO45H-01 POSTER** Deep-Water Refugia: A Review of Evidence, Implications and Avenues of Future Research for the Caribbean Spiny Lobster: G Saluta, R Lipcius

1730h **BO45H-02 POSTER** WINTER AND SUMMER TROPHIC FOOD WEB (79° N, SPITSBERGEN) – STABLE ISOTOPES (13C, 15N): M R Landry, P J Stabeno, J Schwacke, E Zolman, D A Pabst

1730h **BO45H-03 POSTER** Variability in the Community Composition of Phytoplankton and its impact on Larval Fish in the Gulf of Mexico: S Dorado, A Quigg, J R Rossker, J Simms

1730h **BO45H-04 POSTER** Lipids and fatty acids - Shallow trophic interactions in the high arctic fjord (79° N, Spitsbergen): W R Moskal, J Legezynska, K Kulinski, W Moskal, M Bedra

1730h **BO45H-05 POSTER** Abundance and distribution of bacterioplankton in the South Atlantic: C Frazar, R Morris
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<thead>
<tr>
<th>Time</th>
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<th>Authors</th>
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<tbody>
<tr>
<td>1730h</td>
<td>BO45H-06 POSTER</td>
<td>Comparison of early life history stages of Pacific halibut and Greenland halibut in the eastern Bering Sea: Abundance, distribution, and drift pathways</td>
<td>D Sohn, L Cianielli, J T Duffy-Anderson</td>
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<tr>
<td>1730h</td>
<td>BO45H-07 POSTER</td>
<td>Physical factors affecting the distribution of Pacific halibut (Hippoglossus stenolepis) and Greenland halibut (Reinhardtius hippoglossoides) early life history stages in the Eastern Bering Sea</td>
<td>C Westfall, L Cianielli, J T Duffy-Anderson, D Sohn</td>
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<tr>
<td>1730h</td>
<td>BO45H-08 POSTER</td>
<td>10-250 Grams Dry Weight Per Square Meter: Evidence of Extensive Excretion of Phytoplankton Nutrients by Invasive Quagga Mussels Varies with Bathymetry and Circulation</td>
<td>R L Cuhel, C Aguilar, Y Hutchinson, I Sierra-Espada, P Wilkins</td>
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<tr>
<td>1730h</td>
<td>BO45H-09 POSTER</td>
<td>Salinity and the Correlation Between Mesozooplankton and Bay Anchovy, Anchoa mitchilli</td>
<td>C R Kelble, P B Ortner, G L Hitchcock</td>
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<tr>
<td>1730h</td>
<td>BO45H-10 POSTER</td>
<td>Comparing zooplankton consumed by walleye pollock and caught by nets in the eastern Bering Sea</td>
<td>T Buckley, T TenBrink, J M Napp, K Aydin</td>
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<tr>
<td>1730h</td>
<td>BO45H-11 POSTER</td>
<td>Influence of coastline topography and oceanoGraphic variables on appendicularian distribution along the Asturian coast (N. of Spain): C Lobon, E López, N Weidberg, J L Acuna</td>
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<td>1730h</td>
<td>BO45H-12 POSTER</td>
<td>Linking Albacore (Thunnus alalunga) distribution to environmental variability in the North Pacific</td>
<td>A J Phillips, L Cianielli, W G Percy</td>
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<tr>
<td>1730h</td>
<td>BO45H-13 POSTER</td>
<td>Spatial and temporal distributions of Pacific cod in a variable environment: investigating the roles of climate change and fishing pressure in the Eastern Bering Sea:</td>
<td>D C Reese, L Cianielli, K M Bailey</td>
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<tr>
<td>1730h</td>
<td>BO45H-14 POSTER</td>
<td>The use of Glider-mounted optics and acoustics and in-situ imaging systems to resolve spatial and temporal distributions of plankton in Monterey Bay, CA: Biological responses to different physical regimes:</td>
<td>M Sutor, D M Fratantoni</td>
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**BO45J Poster Hall E Thursday**

**The Next 25 Years: Unanswered Questions in Zooplankton Ecology I Posters**

**Presiding:** E Sherr, Oregon State University

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<th>Time</th>
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<td>1730h</td>
<td>BO45J-01 POSTER</td>
<td>WITHDRAWN</td>
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<td>1730h</td>
<td>BO45J-02 POSTER</td>
<td>Overwintering Habitat of Calanus finmarchicus in the North Atlantic Inferred from Autonomous Profiling Floats:</td>
<td>R W Campbell</td>
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<td>1730h</td>
<td>BO45J-03 POSTER</td>
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<td>1730h</td>
<td>BO45J-04 POSTER</td>
<td>The role of krill, Thyssanoessa raschii, in the pelagic ecosystem of Godthåbsfjorden, Southwestern Greenland:</td>
<td>M D Agersted, T G Nielsen</td>
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<tr>
<td>1730h</td>
<td>BO45J-05 POSTER</td>
<td>Patterns and Sources of Copepod Mortality in the Chesapeake Bay: D T Elliott, C S Freund, K Tang</td>
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<tr>
<td>1730h</td>
<td>BO45J-06 POSTER</td>
<td>Temporal variability in larval exchange: insights from a mussel population connectivity time series:</td>
<td>H S Carson, P C López-Duarte, L A Levin</td>
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<tr>
<td>1730h</td>
<td>BO45J-07 POSTER</td>
<td>Abundance and Distribution of Ichthyoplankton and Ctenophores in Maryland Coastal Bays:</td>
<td>M Taylor</td>
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<td>1730h</td>
<td>BO45J-08 POSTER</td>
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<td>1730h</td>
<td>BO45J-11 POSTER</td>
<td>Species Migration, Dispersal Limitation, and Technological Innovation: The application of a novel technique to identify and count marine larvae to assess dispersal at species range boundaries:</td>
<td>E A Hoaglund, C M Henzler, S D Gaines</td>
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<td>1730h</td>
<td>BO45J-12 POSTER</td>
<td>A DNA Analysis of Gut Contents in the Northern Krill, Meganyctiphanes norvegica: A C Cleary, E G Durbin, T Rynearson</td>
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<td>1730h</td>
<td>BO45J-13 POSTER</td>
<td>Understanding Diatom Interactions With Their Environment: From Single Molecules to Global Ecosystems III Posters</td>
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<td>1730h</td>
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<td>1730h</td>
<td>BO45J-16 POSTER</td>
<td>WITHDRAWN</td>
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Chemical Oceanography

**CO45A** Poster Hall E Thursday 1730h

**Carbon Cycling in the Coastal Oceans I Posters (joint with IT, PO, BO)**

**Presiding:** J T Mathis, School of Fisheries and Ocean Sciences; S R Alin, NOAA/PMEL; G A McKinley, Univ. Wisconsin - Madison

1730h **CO45A-01** WITHDRAWN

1730h **CO45A-02** POSTER Spatial-temporal Variability of pCO2 in a Microtidal, Eutrophic Estuary: J Crosswell, M Wetz, B R Hales, H W Parel

1730h **CO45A-03** POSTER Post European Settlement Black Carbon Burial and Carbon Sequestration in a Chesapeake Bay Sediment Core: S Mitra, A R Zimmerman, D R Corbett, G B Hunsinger, D A Willard

1730h **CO45A-04** POSTER New Directions: Remote Sensing of Lake Superior with MERIS: C B Mouw, G A McKinley

1730h **CO45A-05** POSTER Carbon and Oxygen Cycling on the Vancouver Island Shelf: L Bianucci, K Denman

1730h **CO45A-06** POSTER Geospatial Data Synthesis Activity for Chromophoric Dissolved Organic Matter (CDOM) in the Northern Gulf of Mexico: C L Osburn, T S Bianchi, R F Chen, P G Coble, E J D’Sa

1730h **CO45A-07** POSTER Typhoon’s effect on carbon flux in the southern East China Sea: C Hsieh, G Gong, M Lee, S Huang, C Hung

1730h **CO45A-08** POSTER Primary production and respiration in the surface and bottom waters of the Louisiana shelf hypoxic region: J C Lehrer, J Hagy, M C Murrell, B A Sheaffer, B Fry, B M Boyd

1730h **CO45A-09** POSTER Temporal and spatial distribution of pCO2 in the Louisiana-Texas Shelf: W Huang, W Cai, X Hu, Y Wang

1730h **CO45A-10** POSTER The seasonal cycle of surface ocean pCO2 off the Oregon and Washington coast: W W Evans, B R Hales, P G Strutton

1730h **CO45A-11** POSTER Seasonal and spatial changes in the chemical compositions of dissolved organic matter along an estuarine transect: A study using two dimensional correlations of 13C-NMR and FTIR: H A Abdulla, E C Minor, P Hatcher

1730h **CO45A-12** POSTER Seasonal evolution of carbon sources and sinks along the western continental margin of North America: S R Alin, B R Hales, A J Vander Woude, P G Strutton, G Holmgrieve

1730h **CO45A-13** POSTER Tracking changes of solar exposed dissolved organic matter fractions using multidimensional fluorescence and PARAFAC analysis: W G Mendoza, Y Yamashita, R G Zika

1730h **CO45A-14** POSTER Variability of Carbon Dioxide Photoproduction in Coastal Waters: H E Reader, W L Miller

1730h **CO45A-15** POSTER Benthic Iron Flux on the Oregon Shelf: Z Chase, A Devol, C Holm

**CO45B** Poster Hall E Thursday 1730h

**Methane Biogeochemistry III Posters (joint with BO, IT, PA)**

**Presiding:** D L Valentine, University of California Santa Barbara; S Troublone, MPI for Biogeochemistry

1730h **CO45B-01** POSTER Q10 Of Methane Emissions From Rice Agriculture: A Sithole, M Shearer, C L Butenhoff, A Khalil

1730h **CO45B-02** WITHDRAWN

1730h **CO45B-03** POSTER Trends of Methane Emissions From Rice Agriculture: C L Butenhoff, A K Khalil, M Shearer, A Sithole

1730h **CO45B-04** POSTER Reduced Net Atmospheric CH4 Consumption is a Sustained Response to Elevated CO2 in a Temperate Forest: S C Whalen, L L Dubbs, E N Fischer, R L Phillips


1730h **CO45B-06** POSTER Correlation of Microbial Activity and Methane Sources with Shallow Faults in the Gulf of Mexico: B Holmes, L Lapham, J H Knapp, C C Knapp, C A Brunner, L Macelloni, C Lutken, J Chanton

1730h **CO45B-07** POSTER The importance of biological methanogenesis in the methane cycle of cold seeps: S B Joye, M Bowles, S Vladimir, M Crespo-Medina, C Hyacinthe

1730h **CO45B-08** WITHDRAWN

1730h **CO45B-09** POSTER Subseafloor Macroscopic Biofilms Involved in Anaerobic Oxidization of Methane: B R Briggs, J Hieter, J Pohlman, M E Torres, K Rose, C Joseph, M Riedel, F S Colwell

1730h **CO45B-10** POSTER The Use of 222Rn to Constrain Characteristics of Hydrate Abundance and Gas Vent Source Regions on Hydrate Ridge, Cascadia Basin: D E Hammond, S L Colbert, M E Torres

1730h **CO45B-11** POSTER Reevaluating the conclusion that stable isotope fraction factors for methanogenesis are influenced by the stable of microbial growth: J D Kessler, E W Chan

1730h **CO45B-12** POSTER Methane Consumption in the Water Column of the Santa Monica Basin: A Comparison From Two Sampling Expeditions: M B Heintz, S Mau, D L Valentine

1730h **CO45B-13** POSTER High-Resolution Observations of Methane Distributions in the Water Column on the Continental Shelf of a Productive Convergent Margin: R Collier, B R Hales, M Sparrow, M A de Angelis

1730h **CO45B-14** POSTER The Effects of Pressure Changes on Bubble Growth, Stability and Rise in Mud: C K Algar, B P Boudreau
Education and Outreach

**CO45C Poster Hall E Thursday 1730h**

**Radiocarbon Insights into the Global Carbon Cycle I Posters**

*Presiding: S R Beaufre*, Orange Coast College; L A Ziolaowski, McMaster University; N Drenzek, Schlumberger-Doll Research

**CO45C-01 POSTER** Constraining the 2-Component Model of Marine Dissolved Organic Radiocarbon: S R Beaufre, L I Aluwihare

**CO45C-02 POSTER** The Age Distribution of Dissolved Organic Carbon in the Deep Ocean and its Relation to Current Flux Estimates: C L Follett, D C Forney, D Repeta, D Rothman

**CO45C-03 POSTER** Radiocarbon in the Canada Basin: Carbon Transfer Processes in the Changing Arctic: A P McNichol, L Xu, D R Griffith, T I Eglinton, R Macdonald, F A McLaughlin

**CO45C-04 POSTER** Compound specific radiocarbon analysis of black carbon in marine dissolved organic matter: L A Ziolaowski, E R Druffel

**CO45C-05 POSTER** Compound specific radiocarbon analyses in sediments from the Northeast Pacific: E R Druffel, L A Ziolaowski, D Zhang, X Xu, J R Sourthon, G M dos Santos, S Trumbore

**CO45C-06 POSTER** The Radiocarbon Content of Decomposing Sedimentary Organic Matter: W R Martin, D C McCorkle

**Co45C Poster Hall E Thursday 1730h**

**Success and Challenges in Aquatic Observing Systems Education and Outreach II Posters**

*Presiding: J D McDonnell*, Institute of Marine & Coastal Sciences

**CO45C-01 POSTER** Enabling Undergraduate Education through Ocean Observatories – A Student Viewpoint: D Goldinger, S M Glenn, J D McDonnell, O Schofield, J T Kohut

**CO45C-02 POSTER** Developing Online Ocean Science Instructional Materials for Classroom Use: Lessons from the COOL Classroom: C Ferraro, J D McDonnell, R G Duncan, C S Lichtenwalner, R G Lathrop

**CO45C-03 POSTER** Ocean Observing Data and Science Center Visitors: Creating Motivation and Relevance: S Mikulak, S Rowe, N Hunter, C Orrico

**CO45C-04 POSTER** Ocean Observing Products: Identifying User Needs, Outreach Opportunities and Data Stream Challenges: C Gallagher, F C Moser, E Smith, S Shingledecker, J Yapalater

**Geological Oceanography**

**GO45A Poster Hall E Thursday 1730h**

**Geological Oceanography General Contributions I Posters**

*Presiding: P N Adams*, University of Florida; C J Hapke, U.S. Geological Survey

**GO45A-01 POSTER** Experimental analysis of erosive cohesive coastline morphology: B Caplain, D Astruc, V Regard, F Moulin

**GO45A-02 POSTER** The variations in microseismic motion of coastal rock cliffs: N J Rosser, E Norman, M Lim, J Barlow, D N Petley

**GO45A-03 POSTER** Erosional processes and short term coastal cliff changes measured from airborne LiDAR in southern California: A P Young, R T Guza, R E Flick, W C O’Reilly

**GO45A-04 POSTER** Relationship between Cliff Erosion, Wave Reworking of Failures, and Beach Sand Supply in the Oceanside Littoral Cell, Southern California: J Raymond, M J Olsen, E Johnstone, N Driscoll

**GO45A-05 POSTER** The Influence of geologic framework on habitat and sediment distribution in Grays Reef National Marine Sanctuary: S Klotsko, J C Hill, P T Gayes, R F Viso, C R Alexander, G McFall

**GO45A-06 POSTER** Clay minerals of sediment in the western Philippine Sea and their paleoclimate implications since the last 250 ka: F Jiang, T Li, A Li

**GO45A-07 POSTER** The outlook of tephrerchronology in the northwest Pacific, the Sea of Japan and the Sea of Okhotsk: K Aoki

**GO45A-08 POSTER** Morphology, seismic characteristics and forming mechanism of Central Canyon in Qiongdongnan Basin, South China Sea: M Su, X Xie, J Li, T Jiang, C Zhang, Y He, S Tian

**GO45A-09 POSTER** Age of Cobb Seamount: Y R Nayudu

**ED45C Poster Hall E Thursday 1730h**

**Authentic Research Experiences for Teacher and Student Benefits II Posters**

*Presiding: M C McKay*, San Joaquin County Office of Education

**ED45A-01 POSTER** From Ocean to Desert: NOAA Teacher at Sea Program Participation Facilitates Student-Centered Inquiry and Ocean Literacy: T Haste

**ED45A-02 POSTER** Education Outreach: From the Field to the Classroom: M Sutton

**ED45B Poster Hall E Thursday 1730h**

**Innovative Integrative Approaches to K-Gray Ocean Sciences and Geosciences Education II Posters**

*Presiding: M J Richardson*, Texas A&M University; V L Green, Oregon Health & Science University

**ED45B-01 POSTER** WITHDRAWN

**ED45B-02 POSTER** Integrated Climate Science Education at the Center for Multiscale Modeling of Atmospheric Processes: M A Burt, A Denning, D A Randall

**ED45B-03 POSTER** Rivers, Deltas, Dams: the Engaging Power of Physical Experiments Across the Learning Spectrum: K M Campbell

**ED45B-04 POSTER** Partners in Discovery – from Cascades to Coast: The power of scientist-teacher partnerships to connect kids and community to local scientific research: G Rollwagen-Bollens, T H Nelson, A Kennedy, B N Tissot, B Lock, S Bollens, J Duerr, C Shea

**ED45B-05 POSTER** Exploring Informal Science Education Through Ocean Inquiry: D Goodwin, J Benson, E Abrams, J Salisbury, A deCharon, J W Campbell

**ED45B-06 POSTER** Interdisciplinary Graduate Education in Marine Science: Lessons from the Marine Ecosystem Sustainability IGERT in Alaska: G L Eckert

**ED45B-07 POSTER** gidaiimaanaanigwimig (Our Earth Lodge): Broadening Participation of Native Americans in the Geosciences: D M Dalbotten, E Ito, H Pellerin, A Burger, A Myrbo, L Greensky
1730h GO45A-10 POSTER AN ALTERNATIVE ORIGIN OF HOTSPOTS: INTERSECTIONS OF PROPAGATING BELTS OF LITHOSPHERIC EXTENTION AND THE SIGNIFICANCE OF MID-OCEAN SPREADING RIDGE PROVINCES: F R Shaffer

GO45B Poster Hall E Thursday 1730h Quantitative and Qualitative Estimation of Late Quaternary Climatic Changes I Posters (joint with BO, PO, PA, CO)

Presiding: N Khare, Ministry of Earth Sciences; S R Patchineelam, Universidade Federal Fluminense

1730h GO45B-01 POSTER Evaporation-Precipitation Changes in the Eastern Arabian Sea for the last 68 ka: Implications on Monsoon Variability: P Govil

1730h GO45B-02 POSTER Forminiferal signatures for 489 yrs high resolution paleoclimatic record from marine sediments from Myanmar: R Panchang, Dhumal, R Nigam

1730h GO45B-03 POSTER Impact of orbitally-induced changes in the mean state of the tropical Pacific on ENSO variability: O R Salau, B Schneider, W Park, M Latif

1730h GO45B-04 POSTER Mid-Brunhes Strengthening of the Indian Ocean Dipole triggered precipitation change in East African and Australasia: A K Gupta, S Sarkar, S De, S C Clemens, A Velu

1730h GO45B-05 POSTER Recent Anthropogenic Climate Change: Space based Observations of the accelerating effects and consequences over the Earth’s Polar region: S Bhandari, N Khare

1730h GO45B-06 POSTER Late Pleistocene Glacial /interglacial variability in the 230ThXs - normalized carbonate sedimentation in Equatorial Indian Ocean: D V Borole

1730h GO45B-07 POSTER Last Interglacial (MIS-5e) SSTs estimated from annual growth bands in the massive coral Siderastrea siderea (Ellis & Solander, 1786): A L Cohen, P Blanchon

1730h GO45B-08 POSTER Using Diatoms for climate change related studies: A C Pandey

1730h GO45B-09 POSTER DECIPHERING THE MODERN CALCIFICAITION DEPTH OF GLOBGERINA BULLOIDES IN THE SOUTHERN INDIAN OCEAN FROM ITS OXYGEN ISOTOPIC COMPOSITION: N Khare, N Saraswat

1730h GO45B-10 POSTER Surface seawater 818O variation from the equatorial Indian Ocean during the Late Quaternary: R Saraswat, R Nigam, A Mackensen, S Weldeab

Interdisciplinary

IT45A Poster Hall E Thursday 1730h Biological-Physical Interactions at Submesoscales III Posters (joint with BO, PO, CO)

Presiding: A Mahadevan, Boston University

1730h IT45A-01 POSTER Fine-scale observations of plankton community structure across the Kuroshio Front: S Clayton, M Doubell, T Nagai

1730h IT45A-02 POSTER Sharp frontal transitions of microbial communities in the southern California Current: A G Taylor, M R Landry, K E Selph, D A Wick

1730h IT45A-03 POSTER POLEWARD FRONT OF UPWELLING FILAMENTS GENERATES SUBSURFACE ANTICYCLONIC EDDIES (FEDDY): A CAIBEX PROJECT CONTRIBUTION: P Sangræ, J Aristegui, C Troupin, E D Barton

1730h IT45A-04 POSTER Vertical Fluxes at Submesoscales: E M Holmes, A Tandon, A Mahadevan

1730h IT45A-05 POSTER Subsidence in the deep North Western Mediterranean Sea: J J Van Haren, P Coyle

1730h IT45A-06 POSTER Horizontal dispersion of ocean tracers in internal wave shear: J V Steinbuck, J R Koseff, A Genin, M T Stacey, S G Monismith

1730h IT45A-07 POSTER The role of dissolved organic phosphorus and sediment resuspension in the phytoplankton dynamics of Alfacs Bay (Mediterranean Sea). A modeling study: C Llebot, Y H Spitz, J Solé, M Estrada

1730h IT45A-08 POSTER Quantifying Copepod Swimming Kinematics in Response to Vertical Shear Layers: A True, D Webster, M Weissburg, J Yen, A Genin

1730h IT45A-09 POSTER Coupling Inexpensive Lagrangian Drifters with Sediment Traps to Evaluate Fine Scale Patterns in Space-Time Variation within a Coastal Fjord: M G Logsdon, R G Keil, C L Greengrove

1730h IT45A-10 POSTER Bio-physical patterns associated with methane bubble plumes on the Washington continental shelf: J E Keister, H P Johnson, I Leifer, S L Hautala

1730h IT45A-11 POSTER REMOTE IMPACTS OF SUB-MESOSCALE DYNAMICS ON THE SUB-SURFACE NUTRIENT RESERVOIR AND NEW PRODUCTION: D Iovino, M Levy, G Madec, M Sébastien, K Takahashi

1730h IT45A-12 POSTER Modeling vertical transport of gyrotactic organisms across an unstable shear layer: M Hoecker-Martinez, W Smyth

1730h IT45A-13 POSTER Investigation of spatial and temporal variability in primary nitrite and deep chlorophyll maxima: L Adornato, R A Easley, R H Byrne

1730h IT45A-14 POSTER Spatio-temporal characteristics of the biological response to the submesoscale non-linear vortex-wave interaction: M Clarot, Y H Spitz, ÁLVARO Viúdez

1730h IT45A-15 POSTER A Dye Study of Lateral Mixing off the Oregon Coast: B Cervantes, M D Levine, S D Pierce

1730h IT45A-16 POSTER An investigation of mechanisms governing the distribution of biomass in mesoscale eddies: A Samuelsen, S S Hjollo, R Patel, J A Johannessen

1730h IT45A-17 POSTER The dynamic interaction of internal waves and krill: hot-spot generation in the Gulf of Maine: P B Stetson, A Pershing, D Bourgault, L S Ince

1730h IT45A-18 POSTER Networked sensing of small-scale water column and plankton dynamics in near-shore urban embayments: B A Stauffer, G Sukhatme, D A Caron

1730h IT45A-19 POSTER Spatial and Temporal Structure of Marine Predator-Prey Interactions in the Columbia River Plume: J E Zamon, E Phillips, L H Reinhalda

1730h IT45A-20 POSTER High-frequency ammonium measurements during an upwelling event at the Oregon coast: M Segura-Noguer, B R Hales, S A Siedlecki, J Jennings, D Hubbard

1730h IT45A-21 POSTER Subduction and Thin-Layer Formation at a Coastal Upwelling Front: R K Shearman, J A Barth, A Erofeev, L Rubiano-Gomez, J Brodersen, R Fortier

1730h IT45A-22 POSTER A test for extra-environmental patchiness in plankton: A Solow, C M Petrlik

1730h IT45A-23 POSTER Estimating Small-Scale Lateral Diffusivity from Tracer Streaks in a Mesoscale Eddy Field: D Schwartz, M A Sundermeyer

1730h IT45A-24 POSTER The Coastal Ocean as a Supplier of Global Iron: Mechanisms for Iron Export in an Upwelling Regime: S A Siedlecki, A Mahadevan, D E Archer
IT45A-25 POSTER Spatial patterns in nearshore phytoplankton blooms: M M Omand, F Feddersen, P J Franks, R T Guza


IT45B Poster Hall E Thursday 1730h
Carbon Cycling in Coastal Watersheds and Estuaries: Terrestrial and Aquatic Linkages and Integration of Observations With Predictive Models II Posters (joint with BO, CO)

Presiding: P J Neale, Smithsonian Env. Res. Ctr; M Tzortziou, University of Maryland

1730h IT45B-01 POSTER Transport of Organic Carbon in Small Coastal Rivers: What is Happening to Terrestrial Material?: P M Medeiros, E L Sikes, B Thomas, K H Freeman

1730h IT45B-02 POSTER Natural variability and sources of dissolved and particulate carbon in the streams of small watersheds of various land-use types within the North Appalachian Experimental Watershed in Ohio: Y Matsui, A G Grotolland, T Huey

1730h IT45B-03 POSTER The Effect of Rainfall on Intertidal Zone Carbon Cycling: S Chen, R Torres, M A Goni

1730h IT45B-04 POSTER The source and distribution of dissolved and particulate organic matter in the Bay of St. Louis, Mississippi: Y Cai, L Guo, X wang, A K Mojzis, D G Redalje

1730h IT45B-05 POSTER Carbon Quality Influences Microbial Respiration and the Optical Properties of Dissolved Organic Matter Exported from Tidal Marshes: J P Megonigal, P J Neale, M Tzortziou, M Butterworth, A Bullock

1730h IT45B-06 POSTER Dissolved Organic Matter Composition and Bioavailability Across a Catchment to Estuary Gradient, Swan-Canning River System, South-Western Australia: K C Petrone, J Fellman, P F Grierson


1730h IT45B-08 POSTER NATURAL AND COMBUSTION- DERIVED ORGANIC MATTER IN OUTWELLING FROM INTERTIDAL ENVIRONMENTS ALONG THE BRAZILIAN COAST: W T Cooper, T Dittmar, J Paeng, D C Podgorski, J D'Andrilli, C Rezende

1730h IT45B-09 POSTER Examination of transport dynamics in a small urban estuary through the combination a system of cost effective buoys, high resolution numerical modeling and periodic surveys: G B Gardner, M Jiang, R F Chen, F Peri, J Arriola

1730h IT45B-10 POSTER Concentration and quality of carbon-based compounds exported from the Mackenzie Delta, western Canadian Arctic, during annual high-water periods: J Gareis, L Lesack

1730h IT45B-11 POSTER Production and losses of carbohydrates from intertidal sediments dominated by microphytobenthos: D C Thornton, C E Wilson, L A Visser, R A Long

1730h IT45B-12 POSTER Material Transport to the Albemarle-Pamlico Estuary and Atlantic Shelf Following Hurricanes Dennis, Floyd and Irene Using SeaWiFS Imagery: C Buonassissi, R Miller

1730h IT45B-13 POSTER Effects of Temperature on Biochemical Oxygen Demand in Urbanizing Streams: C Manrique, S Kaushal, K Delaney, A Sides, T Newcomer

IT45C Poster Hall E Thursday 1730h
Challenges in Observing and Modeling Coastal Ocean Carbon Cycling I Posters (joint with CO, PO, GO, CO)

Presiding: M A Friedrichs, Virginia Institute of Marine Science; E E Hofmann, Old Dominion University

1730h IT45C-01 POSTER Studies of Calcification in a Coastal Coral Reef Using in situ pH and O$_2$ Measurements: S E Cullison, M D DeGrandpre, C Langdon, J E Corredor

1730h IT45C-02 POSTER Changes in Gene Expression by Scleractinian Coral Exposed to Acute Hyposaline Conditions: S E Edge, J Voss, B Mason

1730h IT45C-03 POSTER The Atlantic Ocean Acidification Text-bed, La Parguera, PR: D K Gledhill, C Langdon, J Corredor, J C Hendee, R H Wanninkhof

1730h IT45C-04 POSTER Merging active and passive ocean sensors to improve retrieval of primary production in the Arctic Ocean: V Hill, R C Zimmerman, Y Hu, C Sukenik

1730h IT45C-05 POSTER Exploiting LIDAR To Retrieve Particle Distributions Of The Upper Ocean: C J Sukenik, R C Zimmerman, V Hill, Y Hu

1730h IT45C-06 POSTER Parameter Optimization of a Two-Layered Sediment Model Through Variational Assimilation: R Wilson, K Fennel, D Brady, D M Di Toro

1730h IT45C-07 POSTER A Model Study of Phytoplankton Phenology on the Northeast U.S. Continental Shelf: Y Xiao, M A Friedrichs, K Fennel, K J Hyde, J O'Reilly

1730h IT45C-08 POSTER High-resolution sampling of particulate organic carbon in a coastal upwelling system: R Holser, M A Goni, B R Hales

1730h IT45C-09 POSTER DEVELOPMENT AND ANALYSIS OF SATELLITE CARBON DATA PRODUCTS FOR THE COASTAL OCEAN: A Mannino, S B Hooker, X Pan, M E Russ

1730h IT45C-10 POSTER Model-based Analyses of Carbon Cycling on the Mid-Atlantic Bight: T Tian, M A Friedrichs, E E Hofmann

IT45D Poster Hall E Thursday 1730h
Ecological Forecasting of Ocean and Coastal Ecosystem Processes:Advances and Challenges Posters (joint with BO, PO, GO, CO)

Presiding: N J Valette-Silver, NOAA/NOS; E J Turner, NOAA; E J Turner, NOAA

1730h IT45D-01 POSTER The Integrated Ecosystems Assessment Initiative - Enabling the Assessment of Climate Impacts on Large Marine Ecosystems: Bringing Informatics to the Forefront of Science Based Decision Support: A R Maffei, P Fox, S Lawrence, C L Chandler

1730h IT45D-02 POSTER Prediction of Dissolved Oxygen in the Chesapeake Bay: B Mathukumalli, W Long, R Murtugudde, X Zhang, R J Wood

1730h IT45D-03 POSTER Beyond the Story of Nitrogen, Why was the Area of Hypoxia Off the Mississippi River Smaller than the Prediction in 2009?: Y Feng, G A Jackson, S F Dimarco, R D Hetland, K Fennel

1730h IT45D-04 POSTER Chesapeake Bay striped bass habitat suitability forecasting: moving ecosystem modeling from research to operation: X Zhang, R J Wood, L Bahner, S A Ludsin, E J Martino, B Mathukumalli, W Long, R Murtugudde
1730h **IT45D-05 Poster** From Observation and Research Toward Operation of Ecological Forecasts: **N J Valette-Silver**, E J Turner, D Scheurer, D Green, M C Colton, L Uccellini, R Magnien, G C Matlock, C Brown, D Wilson

1730h **IT45D-06 Poster** Improving ecological forecasts with genetic algorithms: application to a biological-physical copepod community model: **N R Record**, A J Pershing, J A Runge, C Mayo, B C Monger

1730h **IT45D-07 Poster** Using spatially-structured data in nonlinear forecasting models: an application to catch-per-unit-effort for North Pacific albacore: **S M Glaser**, H Ye, E R Doyle, G Sugihara

**IT45E Poster Hall E Thursday 1730h**

**Presiding: M C Kruk**, STG; **D H Levinson**, NOAA National Climatic Data Center

1730h **IT45E-01 Poster** Examining Historical Tropical Cyclones: Uncertainty in Extreme Winds: **M C Kruk**, D H Levinson, P A Henness

1730h **IT45E-02 Poster** On the Application of Climate Indices for Assessing Variability and Trends in Extreme Rainfall across Coastal Watersheds in the Pacific Northwest: **D H Levinson**, M C Kruk

1730h **IT45E-03 POSTER** Long-term behaviors of Bombard around Japan: Number and intensity: **M Okazaki**, S Sugimoto, K Hanawa

1730h **IT45E-04 Poster** Using NOAA buoy data to characterize and predict storm surge related to winter storms: **H Salmon**, A Molod, K Wisniewska, F Buonaiuto

1730h **IT45E-05 WITHDRAWN**

**IT45F Poster Hall E Thursday 1730h**

From Field Observations to Modeling Connectivity in the Nearshore and Back Again: Circulation, Dispersal, and Settlement III Posters (joint with BO, PO)

**Presiding: L Washburn**, UC Santa Barbara; **M A McManus**, University of Hawaii at Manoa; **C A Edwards**, UCSC; **C B Woodson**, Stanford University

1730h **IT45F-01 Poster** Interannual variability of sea scallop larval dispersion and settlement over Georges Bank: A model simulation experiment: **R Tian**, C Chen, K D Stokesbury, B J Rothschild

1730h **IT45F-02 Poster** Effects of prey availability on the dispersal of adult Euphausiid populations off the Oregon coast: A numerical study: **Y M Rii**, M Cape, E Del Ser Lorente, J Dorman, K J Kroeker, B J Lindsey, D A Narvaez, R Wilson, J Fiechter, T M Powell

1730h **IT45F-03 POSTER** Scaling *Montastra faveolata* reproductive and larval behavior to model vertical connectivity in mesophotic coral ecosystems: **D M Holstein**, C B Paris, T B Smith, L M Cherubin, A Srinivasan


1730h **IT45F-05 Poster** Quantifying the Coastal Connectivity in the Gulf of Maine: **Y Li**, R He

1730h **IT45F-06 Poster** Developmentally-based migration behavior in *Euphausia pacifica* and cross-shelf distributions in a dynamic upwelling region: a 2-D modeling study: **B J Lindsey**, H P Batchelder

1730h **IT45F-07 POSTER** Modeling cross-shore particle dispersion over the central California shelf and slope: **P Drake**, C A Edwards

1730h **IT45F-08 POSTER** Here, There and Everywhere: Bottomfish larval dispersal in the Hawaiian region and its implications for fisheries management: **A C Vaz**, K J Richards, C B Paris, C D Kelley

1730h **IT45F-09 POSTER** The dilution and dispersion of ballast water discharged into the Port of Goderich, Lake Huron: Implications of physical processes for aquatic invasive species establishment: **M G Wells**, S Bailey, B R Ruddick

1730h **IT45F-10 POSTER** Climate change and snow crab in the Bering Sea: connectivity between larval release sites and potential settlement areas: **S Hinckley, C Parada, A J Hermann**, L Orensanz, B Ernstr, D Armstrong, B Megrey, J M Napp

1730h **IT45F-11 POSTER** Assessing connectivity of a commercially important marine invertebrate with molecular markers: **A J Haupt**, F Micheli, S Palumbi

1730h **IT45F-12 POSTER** Connectivity and Self-recruitment of Coral Reef Fishes in a Marine Reserve Network in Kimbe Bay, Papua New Guinea: **M Berumen**, G R Almany, S Planes, G P Jones, S R Thorrold

1730h **IT45F-13 Poster** Low-frequency transport dynamics in the California Current: **F Chenillat**, P Riviére, V Combes, E Di Lorenzo, S J Bograd, M D Ohman

1730h **IT45F-14 POSTER** Effects of Behavior and Growth on Dispersal of Oyster Larvae in Delaware Bay: A Numerical Study: **D A Narvaez**, J M Klinck, E Powell, E E Hofmann, J Wilkin, D B Haidvogel

1730h **IT45F-15 POSTER** A rapid method for counting and sorting species of marine larvae: **FISH-CS**: **C M Henzler**, E A Hoaglund, S D Gaines

1730h **IT45F-16 POSTER** Flow patterns and connectivity on the inner shelf near Point Conception and around the Northern Channel Islands, California: **M R Frewings**, L Washburn, C Ohlmann

1730h **IT45F-17 POSTER** The coastal boundary layer: Nearshore velocity attenuation as another contributor to passive physical retention of marine larval organisms: **K J Nickols**, B Gaylord, J L Largier

1730h **IT45F-18 POSTER** Dynamics of Myrionecta Rubra blooms in the Columbia River estuary: **S M Durski**, Y H Spitz, A M Baptista, J Cho, L Herfort, T D Peterson, Y J Zhang

1730h **IT45F-19 POSTER** A numerical simulation of larval dispersal along the Oregon Coast: **S Kim**, J A Barth

1730h **IT45F-20 POSTER** Red king crab nurseries in an Alaskan coastal ecosystem: Relationships between larval supply, settlement, and benthic habitat quality: **J L Pirtle**, G L Eckert

**IT45G Poster Hall E Thursday 1730h**

**Presiding: B T Glazer**, University of Hawaii; **B Goenar**, Woods Hole Oceanographic Institution

1730h **IT45G-01 Poster** Colonization of subsurface microbenthic observatories deployed in young ocean crust: **B Orcutt**, W Bach, A T Fisher, B M Toner, C G Wheat, K J Edwards

1730h **IT45G-02 POSTER** Hydrothermal vent influence on basalt-hosted communities: Insights from incubated basalt chips: **A Turner**, K J Edwards

1730h **IT45G-03 POSTER** New Developments in the Collection of High Integrity Fluid Samples from the Deep Subsea Floor Basement (basaltic crust) Aquifer for Geochemical and Microbial Ecological Studies: **J P Cowen**, H Lin, M Rappe, S Jungbluth, B T Glazer, M Matzinger
IT45G-04 POSTER  Microbial Diversity of Sulfide Chimneys Collected from Contrasting Vent Fields along the Mid-Atlantic Ridge: G E Flores, J Steinberg, M Podar, A Reysenbach

IT45G-05 POSTER  The effect of Fe oxidizing microbes on the speciation of iron in the hydrothermal plume environment: S A Bennett, J W Moffett, K J Edwards

IT45G-06 POSTER  Larval dispersion along an axially symmetric mid-ocean ridge: D J McGillicuddy, J W Lavelle, A M Thrushnerr, V K Kosnyrev, L S Mullineaux

IT45G-07 POSTER  Larvae from Afar Colonize Deep-Sea Hydrothermal Vents after a Catastrophic Eruption: L S Mullineaux, D K Adams, S W Mills, S E Beaulieu

IT45G-08 POSTER  Controls of Plume Dispersal at the Slow Spreading Southern Mid-Atlantic Ridge: M Walter, C Mertens, U Stoeber, J Koehler, J Suelenfuss, M Rhein, R S Keir, C R German, D Yoerger, E T Baker, B Melchert

IT45G-09 POSTER  Regional Circulation Near the Crest of the East Pacific Rise Between 9 and 10N: A M Thrushnerr, J W Lavelle

IT45G-10 POSTER  Subinertial Variability in the Deep Ocean Near the East Pacific Rise: X Liang, A M Thrushnerr, J W Lavelle


IT45G-12 POSTER  Early-stage hydrothermal particle formation along the Eastern Lau Spreading Center: J A Breier, K Anantharaman, J B Sylvan, S N White, K J Edwards, G Dick, B M Toner

IT45G-13 POSTER  Hydrothermal vent flow and turbulence measurements with acoustic scintillation instrumentation: G Xu, D Di Iorio

IT45G-14 POSTER  Combined stable isotope analysis and molecular identification of gut contents reveal different sources of local primary production at hydrothermal vents: B Govenar, T M Shank

IT45H-06 POSTER  Temperature, Salinity and Density Variability in the Central Middle Atlantic Bight: Five Years of Glider Observations: R Castelao, S M Glenn, O Schofield

IT45H-07 POSTER  Numerical simulations of Low Frequency Variability in the Northern Arabian Sea Associated with Tropical Cyclone Gonu: D Smith, X Zhang, S F Dimarco, R Hetland

IT45H-08 WITHDRAWN

IT45H-09 WITHDRAWN

IT45H-10 POSTER  Benthic Dynamics in Barkley Canyon: Preliminary Results Using the NEPTUNE Canada Cabled Undersea Observatory: D J Schillinger, P Archambault, A E Hay, K Juniper, A Metaxas, P Snedgrove

IT45H-11 POSTER  Preliminary Data from Deep Benthic Environmental Monitoring Platforms in an Oil Extraction Lease Block off the Coast of Angola: M F Vardaro, K Smith, G T Rowe, I G Priede, P Bagley, B Bett, H A Ruhl, D M Bailey, B Bazika, A Walls, J Clarke


IT45H-13 POSTER  Observations of Inertial and Low Frequency Variability in the Northern Arabian Sea Associated with Tropical Cyclone Gonu: M K Howard, S F Dimarco, M Stoessel, S M Pearce, K Duvall

IT45H-14 POSTER  A CeNCOOS Product for Oyster Growers in Humboldt Bay, CA: A Tool for Predicting Chlorophyll Levels in the Bay: F J Shaughnessy, G B Crawford


IT45I-01 POSTER  Ocean Heat Flux under Sea Ice in the Bellingshausen and Amundsen Seas derived from Buoy Measurements: S F Ackley, E A Murphy

IT45I-02 POSTER  Transformation of carbon in the Amundsen Sea, Antarctica: M Chierici, A Fransson, S E Stammerjohn, X Yuan

IT45I-03 POSTER  The big bloom of 2009: G Van Dijken, A Alderkamp, M Mills, H J de Baar, L Gerringa, E A Murphy

IT45I-04 POSTER  Trace metals in fast ice and snow: A Granite Harbour study: A M Aguilar-Islas, K Ryan, R D Rember, S Davy, M Heath

IT45I-05 POSTER  Iron addition effects on growth of different Antarctic phytoplankton species: D Moran, M A Saito, A E Allen

IT45I-06 POSTER  Satellite Analysis of Climate Mediated Changes in Antarctic Food-Webs: M J Oliver, B Fraser, O Schofield, J T Kohut, A J Irwin

IT45J Poster Hall E Thursday 1730h
Resolving Temporal Scales of Biological and Biogeochemical Variability in the Sea From Hours to Decades Posters

Presiding: A Mannino, NASA GSFC

1730h IT45J-01 POSTER Short-term variability of natural hypoxia observed near the shelf break bottom in Southern California Bight: S Nam, U Send, L A Levin

1730h IT45J-02 POSTER Diel cycles of the particulate beam attenuation under varying trophic conditions in the NW Mediterranean Sea: observations and modeling: P Gernez, D ANTOINE, Y Huot

1730h IT45J-03 POSTER Imaging Biological and Biogeochemical Variability in the Sea at a Range of Temporal Scales (Invited): P S Bontempi, J A Al-Saadi

1730h IT45J-04 WITHDRAWN


1730h IT45J-06 POSTER Sea Surface Temperature and Biogeochemical Anomalies due to Coastal Upwelling in the Delaware Estuary: Y Voyanova, J H Sharp, M J Oliver

1730h IT45J-07 POSTER Biological - physical interactions at mesoscale from in-situ data: a field survey of the Iberian Peninsula Upwelling System: V Rossi, Y Morel, J Tassel, F Jourdin, P Morin, V Garçon


1730h IT45J-09 POSTER Diagnosis of advective and biological time scales from satellite data: J F Tweddel, J Salisbury, A Mahadevan

IT45K Poster Hall E Thursday 1730h
Southern Ocean Dynamics, Biogeochemistry, and Air-Sea Exchange I Posters

Presiding: S T Gille, Univ California San Diego; T Ito, Colorado State University

1730h IT45K-01 POSTER Dynamical Interaction of Icebergs and Sea Ice: E C Hunke, D Comeau

1730h IT45K-02 POSTER Mechanisms of the Southern Ocean Warming Delay: C H Kirkman IV, C M Bitz

1730h IT45K-03 POSTER How does ice physics affect primary production in Antarctic sea ice?: M Vancoppenolle, C M Bitz, H Goosse, J Tison

1730h IT45K-04 POSTER On the effects of high-resolution wind forcing of Southern Ocean sea ice in a global OGCM: Z Zhang, A Stoessell, T Ihmha

1730h IT45K-05 POSTER Numerical modeling of ocean circulation in the Adelie Depression, East Antarctica: K Kusahara, H Hasumi

1730h IT45K-06 POSTER Decadal variation of Southern Hemisphere bottom water outflow: K Katsumata, T Kawano, S Masuda

1730h IT45K-07 POSTER Buoyancy and wind forcing of an eddy-resolving Antarctic Circumpolar Current: A Hogg

1730h IT45K-08 POSTER Spin-up and adjustment of the Antarctic Circumpolar Current: L C Allison, H L Johnson, D P Marshall, D R Munday

1730h IT45K-09 POSTER Influences on Southern Ocean mass variability derived from GRACE gravity field anomalies: C Boening, V Zlotnicki

1730h IT45K-10 POSTER USING DYNAMIC OCEAN TOPOGRAPHY TO PROBE SOUTHERN OCEAN CIRCULATION: A Griesel, S T Gille, M R Mazloff

1730h IT45K-11 POSTER Basin and Channel Contributions of the Antarctic Circumpolar Current: L Nadeau, D Straub

1730h IT45K-12 POSTER Topography and the 3D structure of irreversible mixing in the Southern Ocean: J Lu, K G Speer

1730h IT45K-13 POSTER The Physical Transport of carbon into the Southern Ocean interior: J Sallee, R J Matear, S R Rintoul, K G Speer

1730h IT45K-14 POSTER Implied Carbon Uptake by the Southern Ocean in IPCC-AR4 Coupled Climate Models: Implications for IPCC-AR5: J L Russell, P J Goodman, A Drain

1730h IT45K-15 POSTER The Northern Boundary Condition in an Eddy-Resolving Channel Model of the Southern Ocean Overturning Circulation: RP Abernathey, J Marshall

1730h IT45K-16 POSTER Sensitivity of oceanic carbon uptake to Southern Ocean physics: J M Lauderdale, A C Naveira Garabo, D Smeed

1730h IT45K-17 POSTER Global SubAntarctic Mode Water Properties in the 2000s from Argo Float Data and Historical Variability: S Schmitzko, G C Johnson

1730h IT45K-18 POSTER Paleo-Climate Reconstruction Of Southern Hemisphere Intermediate Water Formation Over The Last Millennium From Analysis Of The Skeletal Composition Of Deep-Water Isidids: B E Thresher, H Neil, C MacRae, N Wilson, S J Fallon, O Sherwood

1730h IT45K-19 POSTER Decadal variability of Subantarctic Mode Water and Antarctic Intermediate Water in the southern Pacific Ocean: T G Casal, M O Baringer, S Dong, M S McCartney

1730h IT45K-20 POSTER Variability of Mixed-Layer Depth in Drake Passage: G R Stephenson, S T Gille, J Sprintall

1730h IT45K-21 POSTER The annual range of Southern Hemisphere SST; Comparison with surface heating and possible reasons for the high-latitude fall off: A M Chiodi, D Harrison

1730h IT45K-22 POSTER The Vertical Structure of the Antarctic Circumpolar Current in Drake Passage from Direct Velocity Observations and the Southern Ocean State Estimate: Y L Firing, T K Chereskin, M R Mazloff

1730h IT45K-23 POSTER The seasonal mixed layer salinity budget in the Southern Ocean: L Ren, K Speer, E Chassignet

1730h IT45K-24 POSTER The Fawn Trough across the Kerguelen Plateau: a major pathway for the ACC: F Roquet, Y Park, F Vivier

1730h IT45K-25 POSTER Current and Transport on the Antarctic Slope near 30°E from CLIVAR I6S Data: J Dong, K G Speer

1730h IT45K-26 POSTER Decadal Changes in Anthropogenic CO₂ Along P18 in the Pacific: T Peng

IT45L Poster Hall E Thursday 1730h
Southern Ocean Dynamics, Biogeochemistry, and Air-Sea Exchange II Posters (joint with BO, PO, PA, CO)

Presiding: C L Sabine, NOAA/PMEL; D T Ho, University of Hawaii

1730h IT45L-01 POSTER Larval Antarctic Krill Energetics During Fall and Winter: Simulations of an Individual-Based Model: A T Low, L B Quetin, R M Ross, S A Oakes, M Vernet, W Kozlowski, L Yarney, C H Fritsen

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1730h  **IT45L-02** POSTER  Krill super aggregations in the embayments of western Antarctic Peninsula: M Zhou, Y Zhu, E L Hazen, M Jiang, A Friedlaender, D P Nowacek, P N Halpin, D Johnston, A Read

1730h  **IT45L-03** POSTER  Southward decrease in the isotope effect of nitrate assimilation across the Southern Ocean: P J Di Fiore, D M Sigman, K L Karsh

1730h  **IT45L-04** POSTER  Biological oxygen saturation and net community production in the polar Southern Ocean: M C Long, P D Tortell, R B Dunbar, W Smith, D A Mucciarone, G R DiTullio

1730h  **IT45L-05** POSTER  Comparison between two primary productivity models in the Southern Ocean- preliminary results: S Shang, M J Behrenfeld, Z Lee

1730h  **IT45L-06** POSTER  Beyond CO2: Air-Sea Volatile Organic Carbon Exchange in the Southern Ocean: S Ruiz-Halpern, C M Duarte, J Dachs

1730h  **IT45L-07** POSTER  Modeling the decadal trends of ecosystem dynamics and the carbon cycle in the Southern Ocean: S Wang, K Moore

1730h  **IT45L-08** POSTER  Oceanic controls on atmospheric pCO2: the coupled roles of Southern Ocean biology, air-sea CO2 disequilibrium and anthropogenic emissions: R Zarzu, I Marinov

1730h  **IT45L-09** POSTER  Trends in Southern Ocean uptake and storage of anthropogenic CO2 over the industrial era reconstructed from tracer observations: F Terenzi, S Khatiwala

1730h  **IT45L-10** POSTER  Constraining trends in the Southern Ocean CO2 sink with surface water measurements of CO2 and C-14 of Total CO2: C Sweeney, T Takahashi, T Newberger, T P Guilderson, P Quay, K B Rodgers, R M Key, S E Mikaloff Fletcher, N S Lovenduski

1730h  **IT45L-11** POSTER  REMOTE SENSING OF SOUTHERN OCEAN AIR-SEA CO2 FLUXES: A J Vander Woude, P G Strutton, B R Hales

1730h  **IT45L-12** POSTER  Depth Integrated CO2, and O2 in the Southern Ocean During the Austral Fall, 2008: T S Moore, M D DeGrandpre, C L Sabine, R A Feely, C J Zappa, W R Mc Gillis, R C Hamme

1730h  **IT45L-13** POSTER  Air-Sea Coupling and the Transport Phenomena at the Air-Sea Boundary Layer: A Cifuentes-Lorenzen, J B Edson, C J Zappa

1730h  **IT45L-14** POSTER  GASEX III air-sea transfer observations: A possible divergence of DMS and CO2 air-sea fluxes at high wind speeds: P Vlahos, E C Monahan


1730h  **IT45L-16** POSTER  On the effect of waves on air-sea momentum fluxes: E Sablee, W M Drennan

1730h  **IT45L-17** POSTER  Simulation of the Dynamics of the Mixed Layer during SO GasEx: D Hebert, D S Ullman, G C Johnson, J B Edson, D T Ho

1730h  **IT45L-18** POSTER  Contributions of calcite, phytoplankton and bubbles to backscattering and reflectance in the Polar Front Region of the Southern Ocean: H M Dierssen, W M Balch, M S Twardowski, K L Randolph, S Freeman, D Drapeau

1730h  **IT45L-19** POSTER  Spatial and Temporal Patterns of Phytoplankton and CDOM in Support of Productivity Estimates During the Southern Ocean Gas Exchange Lagrangian Tracer Experiments: B R Hargreaves

**Marine Policy**

**MP45A**  Poster Hall E  Thursday  1730h

**Approaches to Ocean Planning: To Zone or Not to Zone? Posters (joint with IT)**

**Presiding:** C D Hunt, Battelle

1730h  **MP45A-01** POSTER  GIS-based tools to support marine spatial planning: J Lee, V Stelzenmuller, S Rogers

1730h  **MP45A-02** WITHDRAWN

1730h  **MP45A-03** POSTER  Visualizing Oregon’s Ocean – How Oregon’s Territorial Sea Plan Chooses to Plan for Marine Renewable Energy: A S Lanier, B Bailey, P Klarin, T Haddad

1730h  **MP45A-04** POSTER  Identifying Priority Conservation Areas on the Continental Shelf: Marine Ecoregional Assessments: J Smith, D Vander Schaaf, K Popper, D Kelly, J R White

1730h  **MP45A-05** WITHDRAWN

**MP45B**  Poster Hall E  Thursday  1730h

**Coastal Ocean Science Solutions: Research Leading to Management Tools and the Development of Ocean Policy I Posters (joint with IT)**

**Presiding:** R L Waters, Washington Sea Grant; R A Moll, California Sea Grant; L E Duguy, University of Southern California; F C Moser, University of Maryland

1730h  **MP45B-01** POSTER  Assessing Population Connectivity to Inform Invasive Species Eradication and Control Programs: P C Lopez-Duarte, C Tanner, H S Carson, L R Lasmussen, L A Levin

1730h  **MP45B-02** POSTER  Analysis of Extended Layups of Commercial Vessels Operating in California Waters: Implications for Vessel Fouling and Species Introductions: C Scianni, N Dobroski, L Takata, M Falkner

1730h  **MP45B-03** POSTER  Biological uncertainties and ballast water management: when one size does not fit all: J F Tavares-Reager

1730h  **MP45B-04** POSTER  Landscape attributes and benthic fish distributions off Point Piedras Blancas, Central California: Using a set of generalized linear models on habitat usage to inform spatial management measures: A Knight, J Lindholm, F G Watson, A De Vogelaere

1730h  **MP45B-05** POSTER  An assessment of spatial dynamics of stock structure for three Gulf of Maine groundfish species: A Al-Humaidhi, Y Chen, J Wilson

1730h  **MP45B-06** POSTER  Using Stable Isotopes to Evaluate Essential Fish Habitat: R Reilly, C M Jones, R F Dias

1730h  **MP45B-07** POSTER  Direct quantification of oyster-based nutrient biosequestration in Chesapeake Bay: C B Higgins, K Stephenson, B L Brown

1730h  **MP45B-08** POSTER  Oyster larval transport and marine sanctuaries in Pamlico Sound, North Carolina: C N Cudack, J F Tavares-Reager, A T Haase

1730h  **MP45B-09** WITHDRAWN

1730h  **MP45B-10** POSTER  Blending Remote Sensing and Traditional Ecological Knowledge to Support Restoration in Coastal Louisiana: M Bethel, S Laska, J Troutman, M Giardino, M Phillips

1730h  **MP45B-11** POSTER  Functions and (Fractal) Values of an Artificial Reef Designed for Mitigation in Hilo Bay, Hawaii: R E Bourke
1730h  **MP45B-12** POSTER The Northern Gulf Institute: A Multi-University and NOAA Research Partnership Targeting the Needs of State and Federal Decision Makers in the Northern Gulf of Mexico: J M Harding, M J Carron, J Lartigue

1730h  **MP45B-13** WITHDRAWN

1730h  **MP45B-14** POSTER VHSV Research Products Influencing Management and Regulatory Decisions: R G Getchell, G H Groocock, E R Cornwell, K M Hope, R N Casey, J W Casey, P R Bowser

1730h  **MP45B-15** POSTER The past and future of coastal and open ocean upwelling in the NE Pacific: T Mitchell, N J Mantua, E P Salathe

1730h  **MP45B-16** POSTER Effectiveness of the Participatory Engagement Process Among Fishermen in Rhode Island and Massachusetts Marine Spatial Planning Efforts: H M Nutters

1730h  **MP45B-17** POSTER Climate and the Ocean - Toward a Comprehensive Understanding: C E Nettleton

1730h  **MP45B-18** WITHDRAWN

1730h  **MP45B-19** POSTER International Cooperation in the Enforcement of Fisheries Laws and Regulations———Chinese Practice of Enforcement at Sea: S Huang

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**Physical Oceanography**

**PO45A** Poster Hall E Thursday 1730h Advances in Computational Oceanography III Posters

Presiding: W Weijer, Los Alamos National Laboratory; P Heimbach, MIT; S Khatiwala, Lamont-Doherty Earth Observatory of Columbia University

1730h  **PO45A-01** POSTER Analysis of the forward-backward time differencing algorithm in the Princeton Ocean Model, and comparison with the original model scheme: M Curcic, M Vujadinovic, V Djurdjevic, B Rajkovic

1730h  **PO45A-02** POSTER Extension of Brinkman Penalization for Ocean Circulation Modeling using Adaptive Wavelet Collocation Method: S M Reckinger, O V Vasilyev

1730h  **PO45A-03** POSTER Diagnostics of diapycnal diffusion in z-level ocean general circulation models: J Getzlafl, A Oschlies, G Nurser

1730h  **PO45A-04** WITHDRAWN

1730h  **PO45A-05** POSTER Onset of Time-dependence in a Double-gyre Ocean Circulation: Barotropic Basin Modes vis Classical Baroclinic Modes: H G Hristova, H A Dijkstra, M A Spall

1730h  **PO45A-06** POSTER An Efficient Marching Solver with Parallel Domain Decomposition for Pressure Equation in the Ocean General Circulation Model: C Mu-hua

1730h  **PO45A-07** POSTER Effect of model resolution on the circulation in the Yellow Sea and the East China Sea: C Kim, Y Cho, G Seo, B Choi, K Jung

1730h  **PO45A-08** POSTER Sensitivity test to different model parameters and mixing schemes in the Yellow Sea: M Kwak, Y Cho, C Kim, B Choi

1730h  **PO45A-09** POSTER An new advection scheme and its application in model study of saltwater intrusion in the Changjiang Estuary: H WU

1730h  **PO45A-10** POSTER ESTIMATION OF SUSPENDED SEDIMENT CONCENTRATION USING ACOUSTIC DOPPLER CURRENT PROFILER IN THE VICINITY OF IMAM KHOMEINI PORT OF IRAN: M Nazarali, N Afshar Kaveh

1730h  **PO45A-11** POSTER A global, dynamically-consistent, eddy-admitting ocean and sea ice state estimate obtained using the adjoint method: H Zhang, D Menemenlis, G Forget, P Heimbach, C N Hill
1730h | PO45B-01 POSTER | The Evolution of North Atlantic Eighteen Degree Water and The Role of Lateral Oceanic Fluxes in the Eighteen Degree Water Formation Region: X J Davis, P Straneo

1730h | PO45B-02 POSTER | North Pacific Intermediate Water Volume Variation at the South of Japan: Their Relation to the Large-Scale Atmospheric Variation: S Sugimoto, K Hanawa

1730h | PO45B-03 POSTER | Decadal Variability of North Pacific Subtropical Mode Water in a Climatologically-Forced Model: E Douglass, S R Jayne, F O Bryan, S Peacock, M E Maltrud

1730h | PO45B-04 POSTER | The Kuroshio Extension - Recirculation and Subtropical Mode Water: S R Jayne, L Rainville, M F Cronin

1730h | PO45B-05 POSTER | Surface heat flux variations across the Kuroshio Extension as observed by surface flux buoys: M Konda, H Ichikawa, H Tomita, M F Cronin

1730h | PO45B-06 POSTER | THE RELATIVE ROLES OF AIR-SEA BUOYANCY FLUX AND EDDY BUOYANCY FLUX IN NORTH PACIFIC SUBTROPICAL MODE WATER FORMATION: I Cerovecki

1730h | PO45B-07 POSTER | Air-Sea interaction over the Gulf Stream: results from a high resolution coupled model assessed using CLivar M0de Water Dynamic Experiment (CLIMODE): R J Small, T M Joyce, T J Campbell, T G Jensen, S Chen, R A Allard

1730h | PO45B-08 POSTER | Projected changes in the mixed layer depth over the North Pacific from IPCC AR4 models: C Jiang, Y Kwon, J Park

1730h | PO45B-09 POSTER | Local Versus Remote Forcing of Interannual Kuroshio Variability: M Andres, Y Kwon, J Yang

1730h | PO45B-10 POSTER | Temporal Variability of Coastal Upwelling off California: M Garcia Reyes, J L Largier

1730h | PO45B-11 POSTER | Reconciliation of Wind-Speed and Wave-Age Dependent Drag Coefficients using CLIMODE Data: J B Edson, R A Weller, S P Bigorre, C W Fairall

1730h | PO45C-07 POSTER | Vertical diffusivity of the Western Arctic Ocean Pycnocline: W J Shaw, T P Stanton

1730h | PO45C-08 POSTER | Ocean Current Variability in Naers Strait, West of Greenland, from 2003-06: B Rabe, A Munehow, H L Johnson, H Melling

1730h | PO45C-09 POSTER | Long-term sea surface height variability in the Nordic Seas: A I Kaczmarska, S Bacon, A C Naveira Garabato, S Laxon, A Ridout

1730h | PO45C-10 POSTER | Arctic Ocean Bottom Pressure Variations From Weekly to Inter-Annual Time Scales: A C Peralta Ferriz, J H Morison

1730h | PO45C-11 POSTER | The First Sensor-Based Measurements of the NO Parameter in the Arctic Ocean: M B Alkire, K K Falkner, J H Morison, R Desiderio, C K Guay, M McPhee

1730h | PO45C-12 POSTER | Intermediate Waters from Bering Strait to the Iceland-Scotland Sills: J H Swift, K Aagaard

1730h | PO45C-13 POSTER | Formation of the Western Arctic Upper Halocline in a Coupled Ocean and Sea-ice Model: A T Nguyen, D Menemenlis, R Kwok

1730h | PO45C-14 POSTER | Sedimentology, Lithostratigraphy and Physical Properties of Recently Acquired Shallow Piston and Vibra Cores from the U.S. Beaufort Shelf and Slope, Arctic Ocean: K Rose, J E Johnson, A H Reed, J P Smith

1730h | PO45D-01 POSTER | The Variability of the Denmark Strait Overflow: S Hall, K J Heywood, M Wadley, S Dye

1730h | PO45D-02 POSTER | Circulation, Transport and Freshwater Fluxes in the Western Boundary Current at Cape Farewell, Greenland: N P Holliday, S Bacon, P Saunders, K Gowers

1730h | PO45D-03 POSTER | Deep winter mixed layers in the Irminger Sea: F de Jong, H M Van Aken

1730h | PO45D-04 POSTER | The Irminger Gyre: Circulation, convection, and interannual variability: K Vaage, R S Pickart, A Sarafanov, ØVIND Knutsen, H Mercier, P Lherminier, M Bersch, H M Van Aken, J Meincke, D Quadfasel

1730h | PO45D-05 POSTER | Seasonal and Interannual Variability of the West Greenland Current System in 1992-2008: T A Rykova, F Straneo, A S Bower

1730h | PO45D-06 POSTER | LABRADOR SEA WATER FORMATION AND EXPORT FROM A HIGH RESOLUTION REANALYSIS, 1948-1999: N Kulan, P G Myers

1730h | PO45D-07 POSTER | A model study of interannual sea-ice variability in the Labrador Sea from 1948 to 2004: M Cooke, E K Demirov

1730h | PO45D-08 POSTER | Interannual variability of the eddy kinetic energy in the Labrador Sea: H Luo, A Bracco

1730h | PO45D-09 POSTER | WITHDRAWN

1730h | PO45D-10 POSTER | The Norröna Project and the MOC, Progress and Prospects: C N Flagg, H T Rossby, G Schwartze, S Fontana, D L Luce

1730h | PO45D-11 POSTER | Model Study of Variability of the North Atlantic Water in the Arctic Ocean: S Lundrigan, E K Demirov

1730h | PO45D-12 POSTER | Modelling of 129I Transport through the Arctic and North Atlantic Oceans: J N Smith, F A McLaughlin, M J Karcher, W M Smethie
1730h  **PO45D-13** POSTER BIDECADAL VARIABILITY OF WATER MASSES AROUND THE SUBARCTIC NORTH PACIFIC AND THE RELATION WITH THE 18.6-YEAR PERIOD NODAL TIDAL CYCLE: S Osafune, I Yasuda

1730h  **PO45D-14** POSTER On the Mechanism of Pacific Multidecadal Climate Variability in CCSM3: The Role of Subpolar North Pacific Ocean: Z Liu, Y Zhong

**PO45E** Poster Hall E  Thursday  1730h  Circulation in the Gulf of Mexico and Its Connection With the Caribbean Sea and the Atlantic Ocean II Posters

**Presiding:** P Hamilton, SAIC

1730h  **PO45E-01** POSTER Observations of Baroclinic Instability in the Loop Current: P Hamilton, K A Donohue

1730h  **PO45E-02** POSTER A 30-Year Record of Loop Current Eddy Separation Events: R Leben, C A Hall

1730h  **PO45E-03** POSTER Long term VM-ADCP observations of the Florida and Yucatan Currents from a Caribbean cruise ship: C Roussset, L M Beal

1730h  **PO45E-04** POSTER On the Seasonality of the Yucatan Upwelling: J Zavala-Hidalgo, A Mateos-Jasso, R ROMERO-CENTENO

1730h  **PO45E-05** POSTER Modeling the Dynamics of Energetic Deep Currents along the Sigsbee Escarpment: S L Morey, D S Dukhovsky

1730h  **PO45E-06** POSTER Full Water Column High Velocity Current Events Near the Sigsbee Escarpment and Relationships to Loop Current Frontal Eddies: K P McKone, N D Walker, E Weeks, R R Leben

1730h  **PO45E-07** POSTER Circulation in the Gulf of Mexico from a 40 year run of a two-way nested NEMO-AGRIF numerical model: J Sheinbaum, P Perez-Brunius, M Lopez, B Barnier, J Molines

1730h  **PO45E-08** POSTER High resolution numerical modeling of tides in the western Atlantic, Gulf of Mexico, and Caribbean during the Holocene: D F Hill, S Griffiths, W R Peltier, B Horton, T E Tornqvist

**PO45F** Poster Hall E  Thursday  1730h  Detection and Analysis of Cohesive Eddies and Filamental Structures From Observational Data and Numerical Model Outputs II Posters

**Presiding:** A Turiel, Institut de Ciencies del Mar, CSIC.

1730h  **PO45F-01** POSTER The Cape Ghir (Nw Africa) Upwelling Filament: Modeling and Observation during the CAIBEX Campaign: C Troupin, P Sangrà, J Aristegui, J Beckers, E D Barton

1730h  **PO45F-02** POSTER Lagrangian analysis by Finite-Size Lyapunov exponents in East/Japan Sea from satellite altimetry: Y Son, K Chang, B Choi

1730h  **PO45F-03** POSTER Dynamics of a Stratified Layer with Horizontal Shear: E M Arobone, S Sarkar

1730h  **PO45F-04** POSTER Modeling impacts of mesoscale eddies on biogeochemical processes in the South China Sea: P xiu, F Chai

1730h  **PO45F-05** POSTER Observations of upwelling filaments in the southern North-West African upwelling system : a joint effect of the bottom topography and the offshore eddy field ?: T Meunier, B Barreiro, R J Torres, E D Barton, Y Morel, X J Carton, V Rossi

1730h  **PO45F-06** POSTER On the properties of eddies in the California Current System: J Kurian, F Colas, J C McWilliams, X Capet

1730h  **PO45F-07** POSTER Meso scale representation in the 1/12° global Mercator-ocean model: R Bourdalle-Badie, O Le Galloudec, Y Drillet, C Bricaud, C Derval, G Garric, S N Law Chune

1730h  **PO45F-08** POSTER Seasonal Evolution of a “Point Arena” Coastal Eddy: C Halle, J L Largier, G B Crawford

1730h  **PO45F-09** POSTER Stochastic Heterogeneity Mapping around a Mediterranean Salt Lens: G G Buffett, C A Hurich, E A Vsemirnova, R W Hobbs, V Sallares, R Carbonell, D Klaeschen, B Biscas

**PO45G** Poster Hall E  Thursday  1730h  Lagrangian Predictability and Data Assimilation I Posters (joint with IT)

**Presiding:** T M Ozgokmen, RSMAS, University of Miami

1730h  **PO45G-01** POSTER Spindown of Rings by Loss of Mass: A D Kirwan, H S Huntley, B L Lipphardt, M Branicki

1730h  **PO45G-02** POSTER Diagnosing lateral mixing in the upper ocean with virtual tracers: S R Keating, K Smith

1730h  **PO45G-03** POSTER Lagrangian data assimilation: accomplishments and challenges for surface drifter applications: A Griffa, V Taillandier, T M Ozgokmen, A J Molcard, Y Chang

1730h  **PO45G-04** POSTER Deducing an Upper Bound to the Horizontal Eddy Diffusivity Using a Stochastic Lagrangian Model: H Gildor, D F Carlson, E Fredj, V Rom-Kedar

1730h  **PO45G-05** POSTER LARGE EDDY SIMULATIONS OF MIXED LAYER INSTABILITIES AND SAMPLING STRATEGIES: T M Ozgokmen

1730h  **PO45G-06** POSTER MULTI-CONSTITUENT ASSIMILATION OF MULTIPLE DATA SETS FOR MODELING BAROTROPIC TIDES: S Erofeeva, G D Egbert, L Padman

1730h  **PO45G-07** POSTER Lagrangian data assimilation of ARGS subsurface displacements with combined satellite-based altimeters, and ARGS floats profiles: L Liu, C J Lozano

1730h  **PO45G-08** POSTER Predicting drift in the East China Sea more accurately through normal mode analysis and data blending: H S Huntley, P A Muscarella, B L Lipphardt, A D Kirwan

1730h  **PO45G-09** POSTER Resolution and Scale Dependence of Relative Dispersion in a Hierarchy of Ocean Models: A C Poje, A C Haze, T M Ozgokmen

1730h  **PO45G-10** POSTER Relative Dispersion Observations in the Coastal Ocean and Lagrangian Modeling with HF Radar: C Ohlmann, L Washburn

1730h  **PO45G-11** POSTER Effect of wave-averaging on coherent structure boundaries in the surfzone: J Geiman, J T Kirby, A J Reniers, J H MacMahan, J Brown, T P Stanton

1730h  **PO45G-12** POSTER Analysis of Controlled Lagrangian Particle Tracking Errors: F Zhang

**PO45H** Poster Hall E  Thursday  1730h  Measuring and Understanding Turbulence in the Presence of Surface Waves II Posters (joint with CO, MT)

**Presiding:** J L Hench, Duke University; J Rosman, University of North Carolina at Chapel Hill; J D Bricker, URS Corp.

1730h  **PO45H-01** POSTER Observation and estimation of Lagrangian, Stokes and Eulerian currents, induced by wind and waves at the sea surface: F Ardhuin

1730h  **PO45H-02** POSTER Airflow separation above wind waves: M Buckley, F Veron
1730h PO45H-03 POSTER An Experiment on the Non-Breaking Surface-Wave-Induced Vertical Mixing: D Dai, F Qiao, W Sulisz, L Han, A Babanin


1730h PO45H-05 POSTER Turbulence Measurements on Two Equatorial Moorings – Comparison to Profiling Measurements: A Perlin, J N Moun

1730h PO45H-06 POSTER The key effects of surface wave-induced vertical mixing on ocean upper mixed layer and climate: F Qiao, Z Song, C Xia, Y Yuan

1730h PO45H-07 POSTER Examining turbulence under waves in the laboratory and the field: a return to Lumley and Terray 1983: J Rosman

1730h PO45H-08 POSTER Exploring wave bias removal methods for turbulence over rough topography: M Squibb, S G Monismith, C B Woodson

1730h PO45H-09 POSTER Wavy turbulence in Florida Bay seagrass canopies: J S Weitzman, K Aveni-Deforge, J R Koseff, F I Thomas

1730h PO45H-10 POSTER High frequency wind-waves in a basin: comparison between linear theory and ADCP observations: C D Winant, A Valle-Levinson

**PO45I Poster Hall E Thursday 1730h**

**Mixing Processes and Buoyant Flows: Estuaries III Posters**

**Presiding:** M E Scully, Old Dominion University; M M Whitney, University of Connecticut; M J Bowman, State University of New York; R E Wilson, Stony Brook University


1730h PO45I-02 POSTER Length Scale Dependence of Mixing Efficiency in a Stratified Estuary: M E Scully, W R Geyer

1730h PO45I-03 POSTER The effects of channel deepening on tides, salinity and estuarine circulation in Newark Bay: J Guo, C K Sommerfield, R J Chant

1730h PO45I-04 POSTER Diurnal and Neap to Spring Variations in Bottom Boundary Layer Development in a Partially Mixed Estuary: J Wang

1730h PO45I-05 POSTER Saltwater intrusion and its prediction in the Sumjin River Estuary, Korea: D C Shaha, Y Cho, T Kim, Y Sun, N Ahmed

1730h PO45I-06 POSTER Observations and modeling of turbulent mixing at the mouth of Tokyo Bay: Y Kokubu, H Yamazaki, T Nagai, E S Gross, J D Bricker

1730h PO45I-07 POSTER Frictional hydraulics generate along-channel variability of tidal pumping in a partially mixed estuary: P A Engel, W R Geyer, M E Scully

1730h PO45I-08 POSTER Reach-Scale River Hydrodynamics And Bathymetric Sensitivity: G Wilson, H T Ozkan-Haller

1730h PO45I-09 POSTER INFLUENCE OF BATHMETRY AND BUOYANT OUTFLOW PLUME DYNAMICS AT AN ESTUARY/OCEAN TRANSITION: J Lee, A Valle-Levinson, P Cheng, J A Austin, J M Fringer

1730h PO45I-10 POSTER Understanding turbulent mixing in a partially stratified estuary using SUNTANS: B Wang, O B Fringer, E S Gross

1730h PO45I-11 POSTER Vertical mixing in the tidally induced bottom boundary layer in the Ariake Bay: E Tsutsumi, T Matsuno

1730h PO45I-12 POSTER Modeling Study of Salinity Change under Different Sea-level Rise Scenarios in the Chesapeake Bay: B Hong, J Shen

1730h PO45I-13 POSTER Directional Response to Wind Forcing in a Wide Estuary: R E Wilson

1730h PO45I-14 POSTER Efficiency of the k-e Turbulence Model in Horizontal Gravity Currents’ Simulations: A Bahari, K Hejazi

1730h PO45I-15 POSTER Effects of a scour pit on the flow through a narrow inlet to a tropical lagoon: A F Waterhouse, A Valle-Levinson, R A Morales Perez, H Velez

1730h PO45I-16 POSTER Estimates of Water Column Turbulence in Partially Mixed Estuaries using ADCP and SCAMP: L H Brasseur, J M Brubaker


**PO45J Poster Hall E Thursday 1730h**

**Mixing Processes and Buoyant Flows: Plumes and the Coastal Ocean I Posters**

**Presiding:** R D Hetland, Texas A&M University

1730h PO45J-01 POSTER Turbulent Field Heterogeneity in a Near-Field River Plume: D G MacDonald, L Goodman, R D Hetland, F Chen

1730h PO45J-02 POSTER Numerical Simulations of a buoyant plume in a rotating tank: E Soosaar, R D Hetland, A R Horner-Devine, M E Averen

1730h PO45J-03 POSTER Comparison between observational and numerical drifters in the Merrimack River mid-field plume: G Kakoulaki, D G MacDonald, R D Hetland, F Chen

1730h PO45J-04 POSTER Residual Circulation in the Liverpool Bay Region of Freshwater Influence: J Hopkins, J Howarth

1730h PO45J-05 POSTER Mixing in an idealized tidally pulsed river plume: K L Cole, R D Hetland

1730h PO45J-06 POSTER The Distribution of Age in Coastal River Plumes: M L Nagamine, A R Horner-Devine

1730h PO45J-07 WITHDRAWN

1730h PO45J-08 POSTER The response of a buoyant estuarine plume to cross-shelf winds: J T Jurisa, R Chant

1730h PO45J-09 POSTER Observations of internal waves, mixing, and plume dynamics in the vicinity of the Columbia River using AUVs and shipboard echosounder: C L McNiel, A Shcherbina, T Litchendorf, T Swanson, A Baptistia, K Cho, M D Levine, C Wingard

1730h PO45J-10 POSTER Challenges in Tracking Dye in the Columbia River Plume: M D Levine, S D Pierce, L F Kilcher, M Kosro, A M Baptistia, B C Crump

1730h PO45J-11 POSTER Seasonal Variability Analyses of the Chesapeake Bay Outflow Plume from Satellite Ocean Color Observations: Y Zhang, G Leptoukh, S Shen, J G Acker

**PO45K Poster Hall E Thursday 1730h**

**Mixing Processes and Buoyant Flows: Plumes and the Coastal Ocean II Posters**

**Presiding:** R D Hetland, Texas A&M University

1730h PO45K-01 POSTER Hydrographic variability on a coastal shelf directly influence by estuarine outflow: B Dzwonkowski, K Park, H Ha

1730h PO45K-02 POSTER A numerical study of the Texas-Louisiana continental shelf: X Zhang, R D Hetland
1730h  PO45K-03 POSTER Vertical mixing, mesoscale structures, and high frequency winds in South China Sea: Y Cardona, A Braco

1730h  PO45K-04 POSTER Mechanisms of the Upwelling off China Coasts in Summer: X Liu, F Qiao

1730h  PO45K-05 POSTER Evolution of a reef pass jet from Microstructure Profiles: J D Fleischfresser, J L Hench, L M Walter, S G Monismith, J R Koseff

1730h  PO45K-06 POSTER The response of buoyant plumes to downwelling-favorable wind forcing (a numerical modeling study): C F Moffat

1730h  PO45K-07 POSTER Mid-Shelf Buoyancy Fronts: Hydrographic and Velocity Variability and Across-Shelf Heat Fluxes in the New York Bight: D S Ullman, D Hebert, L B Decker, D L Codiga, C R Kincaid

1730h  PO45K-08 POSTER Freshwater flow along the Hudson Shelf Valley: Do fish in the Mid-Atlantic Bight really care?: J T Kohut, J Manderson, M J Oliver, L Palamara, D Gong

1730h  PO45K-09 POSTER Numerical study on the fresh water mixing area in the various conditions: J Ahn, J H Hwang, Y Park, D Jang

1730h  PO45K-10 POSTER Vertical Structure of Subtidal Frequency Current Observed during summer off the Keum River Estuary (South Korea): H Moon, S Lee, B Choi, Y Cho, C Kim

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1730h  PO45L-01 POSTER The development of internal boluses over the continental shelf in the South China Sea: observations and models using mixed input tidal forcings: S M Jache, G G Gawarkiewicz

1730h  PO45L-02 POSTER Three-dimensionality of Nonlinear Internal Waves in Massachusetts Bay as Detected by a Seafloor Pressure Sensor Array: Z Kurokawa, J N Moum, J A Lerczak, R K Shearman

1730h  PO45L-03 POSTER Instability and breaking of progressive internal gravity waves: W Liu, F Bretherton, Z Liu, L Smith

1730h  PO45L-04 WITHDRAWN

1730h  PO45L-05 POSTER Observations on Shoaling Nonlinear Internal Waves in Massachusetts Bay: E R Batt, J A Lerczak, R K Shearman

1730h  PO45L-06 POSTER A numerical study of the energy of internal waves generated by the barotropic tidal flow over a ridge: H Qian, P Shaw

1730h  PO45L-07 POSTER High-frequency Internal Waves and Their Impacts on Plankton Dynamics in Massachusetts Bay: Z Lai, C Chen, R C Beardsley, G W Cowles

1730h  PO45L-08 POSTER Observations of Non-Linear Internal Waves in Massachusetts Bay Using Shipboard X-Band Radar: B G Nelson, J A Lerczak, R K Shearman

1730h  PO45L-09 POSTER Observing and Modeling Tidally Forced Internal Waves in the Gulf of Eilat: D F Carlsson, H Gildor, A Genin, S G Monismith, J V Steinbuck, E Biton, E Fredj

1730h  PO45L-10 POSTER Spurious diapycnal mixing associated with internal wave propagation in fixed coordinate ocean models: F Guillon, E Chassignet

1730h  PO45L-11 POSTER Conditions for generation of solitary waves in a pycnocline by an internal wave beam: N Grisouard, C Staquet, T Gerke

1730h  PO45L-12 POSTER Wind Induced Coastal Strong Current Observed along the Noto Peninsula, Japan: Y Igeta, H Yamada, T Watanabe, O Katoh

1730h  PO45L-13 WITHDRAWN

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1730h  PO45M Poster Hall E Thursday 1730h Observational, Theoretical, and Modeling Studies of Large-Amplitude Internal Waves IV Posters

Presiding: P F Cummins, Institute of Ocean Sciences

1730h  PO45M-01 POSTER The Structure and Dynamics of Large Amplitude Internal Waves in the South China Sea: P C Gallacher, M R Schaferkorter, D A Hebert

1730h  PO45M-02 POSTER Revisiting internal wave generation by tide-topography interaction: K Mohri, T Hibiya, N Iwamae

1730h  PO45M-03 POSTER Near-vertical internal tide propagation in the deep ocean: B T King, M Stone, H Zhang, R B Scott, H L Swinney

1730h  PO45M-04 POSTER Observations of energy transfer between inertial and high-frequency internal waves at Kaena Ridge, Hawaii: O M Sun, R Pinkel, J Vanderhoff

1730h  PO45M-05 POSTER Long-term Variations of Nonlinear Internal Waves in the South China Sea: M Chang, R Lien, T D Tang

1730h  PO45M-06 POSTER Shoaling of solitary waves at ASIEX site in South China Sea: A C Warn-Varnas, K Lamb

1730h  PO45M-07 POSTER Intra-Annual Variation of Internal Tides in the South China Sea: B B Ma, R Lien, D S Ko

1730h  PO45M-08 POSTER Nonlinear Internal Wave Generation in the South China Sea: Q Li

1730h  PO45M-09 POSTER Effects of pycnocline depth and background current on the surface signals of internal waves: H Lu, Y He, H Shen, G Liu

1730h  PO45M-10 POSTER Tracer transport by internal wave beams: J Hazewinkel, S B Dalziel, A Doelman, L Maas

1730h  PO45M-11 POSTER Transformation of large amplitude interfacial solitary wave at the steps: V Maderyc, T Talipova, K Terletska, I A Brovchenko, E N Pelinovsky, B Choi

1730h  PO45M-12 POSTER Physics, Data Analysis and Modeling of Large Amplitude Internal Waves with the 2+1 Gardner Equation: A R Osborne

1730h  PO45M-13 POSTER Internal Wave Generation and Energy Fluxes in a Partially Mixed Estuary: C Richards, D Bourgault, P S Galbraith, A E Hay, D E Kelley

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1730h  PO45N Poster Hall E Thursday 1730h Ocean-Atmosphere Observing and Modeling Strategies for Improving Tropical Cyclone Forecasts I Posters

Presiding: G R Halliwell, NOAA/AOML

1730h  PO45N-01 POSTER Oceanic controls on hurricane intensity: I D Lloyd, G A Vecchi

1730h  PO45N-02 POSTER Bayesian estimation of the drag coefficient from the upper ocean response to a hurricane: a feasibility study: S E Zedler, R L Korty, G Kanschat, I Hoteit

1730h  PO45N-03 POSTER Impact of ocean-atmosphere coupling on tropical cyclone activity in the intraseasonal time scale: F Vitart, F Molteni

1730h **PO45N-05** POSTER Verification of Operational Storm Surge Predictions from the Sea, Lake, and Overland Surf from Hurricanes (SLOSH) Model for Hurricanes Gustav and Ike (2008): J L Schauer, J Rhone

1730h **PO45N-06** POSTER A Numerical Study of the Long Wave Response to an Atmospheric Cyclone Landfall: Z Ke, A E Yankovsky

1730h **PO45N-07** POSTER The Impact of the 2005 Hurricane Fabian on the Upper Ocean in the Vicinity of Bermuda: H Zhang, Y Chao, K Park

1730h **PO45N-08** POSTER Linking the meridional overturning circulation at 26.5°N to sea surface temperature anomalies: J Hirsch, R Marsh, C J Wallace, H L Bryden, S A Cunningham, T Kanzow

1730h **PO45N-09** POSTER Pseudo CTD data assimilation in NCEP (National Centers for Environmental Prediction) RTOFS (Real-Time Ocean Forecast System) for hurricane intensity forecast experiments: A Mehr, H Kim, G J Goni, J Whiting

1730h **PO45N-10** POSTER Interactions between Hurricane Catarina (2004) and Warm Core Rings in the South Atlantic Ocean: M L Vianna, V V Menezes, A B Pezza, I Simmonds

**PO45O** Poster Hall E Thursday 1730h

**POSTER** The Ocean’s Role in Natural and Anthropogenic Climate Variability I Posters (joint with BO, IT, GO, CO)

*Presiding:* J Carton, Univ. of Maryland

1730h **PO45O-01** POSTER Last four decades of mixed layer depth variability in the southern Bay of Biscay: R Somavilla Cabrillo, C Gonzalez-Pola, M Ruiz-Villareal, A Lavin

1730h **PO45O-02** POSTER Mechanisms of decadal-to-multidecadal variability in the North Atlantic Ocean: L M Frankcombe, H A Dijkstra, A S von der Heydt

1730h **PO45O-03** POSTER A Comparative study of two ENSO events: S Ray, B S Giese

1730h **PO45O-04** POSTER The impacts of inter-El Nino events and Atlantic variability on the Northeast Brazil climate: R R Rodrigues, E J Campos, R Haarsma

1730h **PO45O-05** POSTER Effects of Variable Wind Stress on the Ocean and Climate in a Global Warming Scenario: K Klima, J R Scott, P H Stone

1730h **PO45O-06** POSTER A New Method for Diagnosing Natural ENSO Variability on Decadal to Centennial Timescales: S L Stevenson, B Fox-Kemper, M Jouchum, B Rajagopalan, S G Yeager

1730h **PO45O-07** POSTER Pacific Subtropical Cells (STC) in SODA 1890-2005: C Yang, B S Giese

1730h **PO45O-08** POSTER 18.6-year period moon-tidal cycle in ocean and climate: J Yasuda

**PO45P** Poster Hall E Thursday 1730h

**POSTER** Physical Processes on Coral Reefs and Their Role in Reef Dynamics I Posters (joint with BO, GO, ED, CO)

*Presiding:* C D Storlazzi, U.S. Geological Survey

1730h **PO45P-01** POSTER Classification of remote Pacific coral reefs by physical environment: L A Franck, R D Norris, A J Miller

1730h **PO45P-02** POSTER Low frequency sea level and current variability in a coral reef ecosystem: Effects of mesoscale processes: L Washburn, J L Hench, J Leichter, S MacIntyre, C Gotschalk

1730h **PO45P-03** POSTER Modeling Spectra of Breaking Waves Over a Fringing Reef: S Su, A Sheremet, J M Smith

1730h **PO45P-04** POSTER Mesophotic ADCP and temperature measurements from the El Hoyo transect, La Parguera, Puerto Rico: W E Schmidt

1730h **PO45P-05** POSTER Coral reef ecosystem health around offshore archipelagos of the southwestern Atlantic: C F Barbosa, B P Ferreira, J Socoli Seoane, P O Silva, R C Cordeiro

1730h **PO45P-06** POSTER Numerical modeling of near bottom currents and food particle transport for cold water reef structures: T Torsvik, X A Thiem, J Fosså, J Berntsen, B Adlandsvik

1730h **PO45P-07** POSTER Surfzone Dynamics in Critical Elkhorn Coral Habitat: Tres Palmas Marine Reserve, Rincón, Puerto Rico: M Canals

1730h **PO45P-08** POSTER Recurring Temperature Shock At A Cold-Water Coral Reef, Testing Lophelia Pertusa Physiological Limits: D Guineh, T Lundälv, M White

1730h **PO45P-09** POSTER Oxygen Respiration Estimates at a cold water coral ecosystem: Implications for regional benthos carbon turnover: M G White, G Wolff, D Guineh, K Kiriaokoulakis, T Lundälv

1730h **PO45P-10** POSTER Temperature variability in a shallow, semi-isolated coral reef lagoon: R M McCabe, P Estrade, J H Middleton, W K Melville, M Roughan, L Lenain

1730h **PO45P-11** POSTER Fluctuations in flow and water column properties over coral reefs and their implications for predicted rising sea surface temperatures: Asan Bay, Guam: M Presto, C D Storlazzi, J B Logan

1730h **PO45P-12** POSTER Physical Mechanisms that Govern Broadcast Spawning Fertilization Success: J Cadwell, K Keller, J Crimaldi

1730h **PO45P-13** POSTER Broadcast Spawning: Effects of Biological Processes on Fertilization Efficiency in Vortex Flows: K Keller, J Cadwell, J Crimaldi

1730h **PO45P-14** POSTER Impacts of physical processes on a rubble-dominated reef flat: K J Thornborough, P J Davies

1730h **PO45P-15** POSTER The Ofu lagoons, American Samoa. A natural laboratory for studying future oceans: P Wiles

1730h **PO45P-16** POSTER Modeling sediment transport on a fringing reef flat: Insights from Molokai, Hawaii: C D Storlazzi, E Elias, M E Field

1730h **PO45P-17** POSTER Numerical and Laboratory Studies of Wave Transformation over Fringing Reefs: V Roebel, K Cheung

**PO45Q** Poster Hall E Thursday 1730h

**POSTER** Quantifying the Sea Surface Temperature Error Budget I Posters (joint with IT)

*Presiding:* P C Cornillon, Univ Rhode Island; C L Gentemann, Remote Sensing Systems; E J Lindstrom, NASA Headquarters; E maturi, NOAA/NESDIS

1730h **PO45Q-01** POSTER Monitoring of IR Clear-sky Radiances over Oceans for SST (MICROS): Towards reconciliation of a radiative transfer model with satellite radiances: A Ignatov, X Liang

1730h **PO45Q-02** POSTER Aerosol Impact on Sea Surface Temperature Retrievals: Exploration of a Next Generation Approach: A S Bogdanoff, D L Westphal, J A Cummings, C Clayson

1730h **PO45Q-03** POSTER Global and Regional Behavior of the Spatial and Temporal Variability of MODIS SST Accuracies: M B Framinan, P J Minnert, R H Evans, K Kilpatrick

1730h **PO45Q-04** POSTER A comparison between the Pathfinder Version 5.0 and Version 4.1 Sea Surface Temperature Data Sets: A Case Study for High Resolution: J Vazquez, E M Armstrong, K S Casey, R H Evans, K Kilpatrick
PO45T Poster Hall E Thursday 1730h Science of Ocean Forecasting From Advanced Data Assimilation Methods II Posters

**Presiding:** B D Cornuelle, Scripps Institution of Oceanography/UCSD

1730h **PO45T-01** POSTER Estimates of Prior Error and Observational Contributions to Hawaiian Prediction: B Powell, D Matthews, A M Moore

1730h **PO45T-02** POSTER An application of the Local Ensemble Transformed Kalman Filter in the South Atlantic Ocean: G A Ruggiero, I Monteiro, C Tanajura, K Belyaev, I Soares

1730h **PO45T-03** POSTER Estimating ocean states during the LTER CCE-P0605 cruise using ocean data assimilation analysis: H Song, A J Miller, B D Cornuelle

1730h **PO45T-04** POSTER A hybrid data assimilation scheme for model parameter estimation: application to morphodynamic modelling: P Smith, S Dance, N Nichols

1730h **PO45T-05** POSTER Sequential data assimilation in Jiaozhou Bay with FVCOM: J Zhao, X Chen, J Xu, J Chen, C Wang

1730h **PO45T-06** POSTER Hybrid data assimilation method with continuously inflated ensemble: V Korabel, A C Warn-Varnas

1730h **PO45T-07** POSTER On the interaction of small and large scales in an ocean model: P W Jones, B Nadiga, D Straub

1730h **PO45T-08** POSTER A hybrid error covariance model for 3DVar data assimilation: M Yaremchuk, N Nechaev

1730h **PO45T-09** POSTER Background-Error Correlation Model based on the Implicit Solution of a Diffusion Equation: M Carrier, H Ngodock, S R Smith

1730h **PO45T-10** POSTER A Multi-Scale Three-Dimensional Variational Data Assimilation Algorithm for Costal Ocean Forecasting Systems: Z Li, Y Chao, J C McWilliams, K Ide

1730h **PO45T-11** WITHDRAWN

1730h **PO45T-12** POSTER ASSIMILATION OF HYDROGRAPHY DATA IN THE NORTHWEST PACIFIC MODEL USING ENSEMBLE KALMAN FILTER: G Seo, Y Cho, B Choi, S Kim, Y Kim

1730h **PO45T-13** POSTER Efficient Assimilation of AUV Data in a High-Resolution Coastal Model: P Choboter, C M Clark, M Moline

1730h **PO45T-14** POSTER Recent Advances in Representor-based Dual-Formulation Variational Data Assimilation Methods: B S Chua, E D Zaron, L Xu

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**PO45U Poster Hall E Thursday 1730h Submesoscales: From Space to the Ocean Interior I Posters (joint with BO)**

**Presiding:** G Laptey, Laboratoire de Meteorologie Dynamique

1730h **PO45U-01** POSTER Ageostrophic Submesoscale Instability in Rotating Shallow Water: P Wang, J C McWilliams

1730h **PO45U-02** POSTER Cross-frontal exchange in the upper ocean driven by submesoscale subduction: P Hosegood, M C Gregg, M H Alford

1730h **PO45U-03** POSTER Characteristics of adjustment-driven submesoscale turbulence: M P Lelong, M A Sundermeyer

1730h **PO45U-04** POSTER Dynamical model of mixed layer sub-mesoscales and its test against available simulation data: V M Canuto, M S Dubovikov

1730h **PO45U-05** POSTER Modification of gyre circulation by submesoscale physics: M Levy, P Klein, A Treguier, D Iovino, G Madec, M Sébastien, K Takahashi

1730h **PO45U-06** POSTER Examining Small-scale Eddies in the Southern California Bight from SAR Observations: B Holt

1730h **PO45U-07** POSTER A Bayesian Approach to the Estimation of Ocean Temperatures from Seismic Reflection, CTD, and XBT observations: W T Wood, R W Hobbs, J Book, K Schroeder, S Carniel

1730h **PO45U-08** POSTER Effects on intrusion of Kuroshio into the South China Sea by submesoscale processes: G Liu, H Shen, Y He, Z Qiu

1730h **PO45U-09** POSTER Topographic Effect on Bottom Water Formation in the Southern Weddell Sea: Y Matsumura, H Hasumi

1730h **PO45U-10** POSTER 3D structure, temporal evolution, and origins of submesoscale thermohaline intrusions of the North Pacific Subtropical Front: A Shcherbina, M C Gregg, M H Alford, R R Harcourt

1730h **PO45U-11** POSTER Eddy formation in Northern Mediterranean coastal sea: P Fraunie, A Schaeffer, A Molcard, P Forget, P Garreau, G Reffray

1730h **PO45U-12** POSTER Geostrophic transport variability and vertical secondary circulations associated with the upwelling front off Pisco (Peru, 14°S) from glider data: A Pietri, P Testor, A Chaigneau, L Mortier, V Echevin, G Eldin, C Grados

1730h **PO45U-13** POSTER Coupled response to wind on small-scale ice and ocean features: A Fujisaki, L Oey

1730h **PO45V Poster Hall E Thursday 1730h Submesoscales: From Space to the Ocean Interior II Posters (joint with BO)**

**Presiding:** G Laptey, Laboratoire de Meteorologie Dynamique

1730h **PO45V-01** POSTER Reconstruction of 3D dynamics in the North Pacific using outputs of realistic high-resolution ocean simulations: H Sasaki, P Klein, G Laptey, B Taguchi, N Komori

1730h **PO45V-02** POSTER Structure of eddies in the Southern Ocean: diagnostics and dynamics from primitive equation and quasi-geostrophic models: A Venaille, K Smith, G K Vallis

1730h **PO45V-03** POSTER A parameterization of submesoscale tracer stirring for use in eddy resolving models: J Le Sommer, F d’Ovidio, G Madec

1730h **PO45V-04** POSTER Resolving Submesoscale Eddies in the Straits of Florida with HF Radar and the Okubo-Weiss Parameter: A B Parks, L K Shay, J J Martinez-Pedraja

1730h **PO45V-05** POSTER Thermohaline finestructure along 22.75-34.5°N, 158°W: S T Cole, D L Rudnick

1730h **PO45V-06** POSTER Observations of small-scale processes in the upper ocean using high resolution SAR imagery: J Fenton, C Mainot, S Matt, A Soloviev, M Gilman, D Velotto, S Lehner


1730h **PO45V-08** POSTER Global Mesoscale and Submesoscale Vortex Characteristics from High-Resolution Surface Drifters: J M Lilly, S C Olhede, R Lumpkin

1730h **PO45V-09** POSTER Turbulent Convection and Forced Symmetric Instability at Submesoscale Density Fronts: J R Taylor, R Ferrari

1730h **PO45V-10** POSTER Three-Dimensional Barotropic Instability: F J Poulin

1730h **PO45V-11** POSTER Vortical Mode Stirring in a Time-Varying Strain Field: A E Brunner-Suzuki, M A Sundermeyer, M P Lelong
1730h  **PO45V-12 POSTER** Short-term Water Dynamics Variability at the Narrow Black Sea Shelf: Physical Mechanisms: V Kremenetskii, A Ostrovskii, A G Zatsepin

1730h  **PO45V-13 POSTER** Frontogenesis in the Irminger Sea: role of the mesoscale current field: A Despres, F d‘Ovidio, G Reverdin

1730h  **PO45V-14 POSTER** Evolution of a cyclonic gyre in Prince William Sound, Alaska: M Halverson, C Ohlmann

**PO45W** Poster Hall E  Thursday 1730h 

**Theory and Modeling of the Equatorial Ocean III Posters**

*Presiding:* D W Moore, NOAA/PMEL; T Durland, Oregon State University

1730h  **PO45W-01 POSTER** The Atlantic Meridional Mode and its coupled variability with the Guinea Dome: T Doi, T Tozuka, T Yamagata

1730h  **PO45W-02 POSTER** Seasonal cycle in the upper Equatorial Atlantic Ocean: H Ding, N S Keenlyside, M Latif

1730h  **PO45W-03 POSTER** Meridional Wind Stress and the Circulation and SST of the Eastern South Pacific: B A Klinger, M J Harrison

1730h  **PO45W-04 POSTER** The effect of ocean vertical mixing in the extra-tropics on the equatorial cold tongue: C M Brierley, A V Fedorov, K Emanuel

1730h  **PO45W-05 POSTER** Source regions and transit-time distributions of Pacific equatorial thermocline waters: consequences of a warmer climate: D Wang, S Khatiwala, M A Cane

1730h  **PO45W-06 POSTER** Adjacent sensitivity of Niño-3 SST to atmospheric fields and ocean state: X Zhang, B D Cornuelle, D H Roemmich

1730h  **PO45W-07 WITHDRAWN**

1730h  **PO45W-08 POSTER** Internal Waves, Instability, and Turbulence below the Pacific Equatorial Cold Tongue: R Inoue, R Lien, M C Gregg, J N Moum

1730h  **PO45W-09 POSTER** The impact of parameterized finescale vertical mixing on the equatorial Pacific: W Sasaki, K J Richards

1730h  **PO45W-10 WITHDRAWN**

1730h  **PO45W-11 POSTER** The effect of vertical mixing on intraseasonal SST variability in the eastern Pacific warm pool: L P Van Roekel, D A Randall, E D Maloney

1730h  **PO45W-12 POSTER** Formation mechanism of the Pacific equatorial thermocline revealed by an OGCm with a high accuracy tracer transport algorithm: H Tatebe, H Hasumi

1730h  **PO45W-13 POSTER** An improvement on the tropical precipitation by using wave-induced mixing in CCSM3: Y Song, F Qiao, Z Song

1730h  **PO45W-14 POSTER** Meridional Kelvin Waves on an equatorial beta plane: D W Moore, J P McCreary

1730h  **PO45W-15 POSTER** Kelvin Waves in the Nonlinear Shallow Water Equations on the Sphere: Nonlinear Traveling Waves and the Corner Wave Bifurcation: J P Boyd, C Zhou

1730h  **PO45W-16 POSTER** Effect of Meridional Shear on Long Equatorial Rossby Waves: T Durland, D B Chelton, R M Samelson, R deSzeoke

**PO45X** Poster Hall E  Thursday 1730h 

**Tsunami Forecasting: A Framework for Advances in Tsunami Research III Posters** (joint with MT)

*Presiding:* R Lawson, SAIC; E N Bernard, NOAA

1730h  **PO45X-01 WITHDRAWN**

1730h  **PO45X-02 POSTER** Design and Implementation of an Operational Tsunami Forecast Tool: D W Denbo, J Osborne, C Pells, M Traum

1730h  **PO45X-03 POSTER** Desktop SIFT: The Transition from Research to Operations: C Pells, D W Denbo, M Traum, J Osborne

1730h  **PO45X-04 POSTER** Desktop SIFT: A Demonstration: M Traum, D W Denbo, C Pells, J Osborne

1730h  **PO45X-05 POSTER** Simulations of Tsunami Generation, Propagation, and Runup from a Potential Submarine Mass Failure at the East Breaks Slump in the Gulf of Mexico: B L Valle, N Kalligeris, C E Synolakis, A N Findikakis

1730h  **PO45X-06 POSTER** Obtaining natural oscillatory modes of bays and harbors via Empirical Orthogonal Functions analysis of tsunami wave fields: W L Power, E Tolkova

1730h  **PO45X-07 POSTER** The Development of Small Unit Tsunami Inverse Method and the Application to the 2006 Pingtung Earthquake Doublet: T Wu, D He

1730h  **PO45X-08 POSTER** The Alaska Tsunami Forecast Model Results for the Samoa Tsunami Event, September 29th, 2009: K Sterling, W Knight, P Whitmore

1730h  **PO45X-09 POSTER** Hydrodynamics bore in the near shore zone: I Shugan, H Hwang, R Yang

1730h  **PO45X-10 POSTER** Extracting Tsunami Source Parameters Via Inversion of DART™ Buoy Data: E Gica, D W Denbo, M C Eble, H O Mofjeld, D B Percival, M C Spillane, E Tolkova, V V Titov

1730h  **PO45X-11 POSTER** TSUNAMI NUMERICAL MODELING IN SOUTHWESTERN PART OF THE MEDITERRANEAN: CASE STUDY; FETHIYE TOWN: D I Dilmener, V V Titov, A C Yalciner

1730h  **PO45X-12 POSTER** DEM research to support tsunami modeling and forecasting efforts: B Eakins, K S Carignan, P R Medley, L A Taylor

1730h  **PO45X-13 POSTER** A Tsunami Hazard Assessment for Newport, Oregon: D Righi, D Arcas

1730h  **PO45X-14 POSTER** Predicting tsunamis generated by three-dimensional deformable granular landslides: F Mohammed, H M Fritz

**PO45Y** Poster Hall E  Thursday 1730h 

**Western Tropical Pacific: Capturing and Understanding Its Variability I Posters**

*Presiding:* D Wang, SCSIO, Chinese Academy of Sciences; D Yuan, Institute of Oceanology, Chinese Academy of Sciences

1730h  **PO45Y-01 POSTER** Annual zonal displacement of Pacific warm pool in association with El Niño onset: K Ando, T Hasegawa

1730h  **PO45Y-02 POSTER** The 3D structure of mesoscale eddies east of Philippine Islands and their role in the variation of the North Equatorial Current Bifurcation latitudes: Z Hui

1730h  **PO45Y-03 POSTER** Upwelling in downwelling-favorable wind: Y E Chang, L Oey, C Wu, H Lu

1730h  **PO45Y-04 POSTER** A dynamically consistent view of the current system in the Indonesian throughflow region: Y DU, T Qu

1730h  **PO45Y-05 POSTER** Intraseasonal Variability in Sea Surface Height over the South China Sea: W Zhuang, S Xie, W Wang, B Taguchi, H Aiki, H Sasaki

1730h  **PO45Y-06 WITHDRAWN**

1730h  **PO45Y-07 POSTER** The formation and dynamics of cold-dome northeast of Taiwan: M Shen, Y Tseng, S Jan
1730h  **PO45Y-08 POSTER** Original study of the Equatorial Pacific Ocean fertilization based on a lagrangian simulation of the circulation coupled to Nd isotopic composition and Rare Earth Element concentration data: M Grenier, C Jeandal, F Durand, S Cravatte, F Lacan

1730h  **PO45Y-09 POSTER** The Subsurface Countercurrents beneath the thermocline in the Western Pacific Ocean: F Wang, N Zang, Y Li, D Hu

1730h  **PO45Y-10 POSTER** The Influence of Chlorophyll on SST in the West Pacific Warm Pool: E Robertson, A L Grant, S Woolnough, S E Belcher

1730h  **PO45Y-11 POSTER** A North Pacific decadal variability in subduction rate: J Chen, T Qu

1730h  **PO45Y-12 POSTER** Numerical Study on the Kuroshio in the vicinity of Luzon Strait: Y Hsin

1730h  **PO45Y-13 POSTER** Seasonal and interannual variations of Pacific warm pool: I Ueki

1730h  **PO45Y-14 POSTER** Current Structure observed from a Current Monitoring Buoy System in the Tropical Northwestern Pacific Ocean: E Kim, D L Jeon, C Shin, S Hwang

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**Friday A.M.**

**Biological Oceanography**

**BO51A PB253**  **Friday**  **0800h**  
*Biological Consequences of Ocean Acidification III (joint with CO)*

**Presiding:** B Gaylord, Bodega Marine Lab, University of California at Davis; T M Hill, UC Davis

0800h  **BO51A-01** Impact of ocean acidification on the burrowing shrimp *Upogebia dacta* and the consequences for ecosystem function. (Invited): S Widdicombe, P Donohue, A Strobel, B Laverock, D Lowe, J Spicer, P Calosi

0815h  **BO51A-02** Overcalcified Coccolithophores during Winter (Low CaCO3 Saturation) in the Bay of Biscay: T Tyrrell, H Smith, L Petit, A Charalampopoulos, C C Dumousseaud, B Garley, E P Acherterberg, D Hydes

0830h  **BO51A-03** Impacts of ocean acidification on dimethyl sulphide (DMS) emission and photophysiology in the chlorophyte macroalga Ulva lactuca: P Kerrison, D Sugget, L Hepburn, M Steinke


0900h  **BO51A-05** Interactive effects of elevated carbon dioxide, fluctuating temperatures and biodiversity on primary production in estuarine systems: N Hicks, M T Bulling, M Solan, P White, D Raffaelli, D Paterson

0915h  **BO51A-06** Ocean acidification reduces larval and juvenile growth in the Olympia oyster (*Ostrea lurida*): A Hettinger, E Sanford, B Gaylord, T M Hill, A D Russell, M Forsch, H N Page, K Sato

0930h  **BO51A-07** Transcriptomic Response of Sea Urchin Larvae to CO2-driven Seawater Acidification: G E Hofmann

0945h  **BO51A-08** What’s new in ocean acidification? Paradigms of acclimation and adaptation to rapid climate change: D Iglesias-Rodriguez, M Lebrato, S Blanco Amejeiras

**BO51B D135**  **Friday**  **0800h**  
*Plankton Grazing Rates in the Sea: So Many Methods, So Much Learned, So Much to Do II*

**Presiding:** J M O’Neil, Univ of Maryland; M Olson, Western Washington University

0800h  **BO51B-01** COMMUNITY-LEVEL CONSTRAINTS ON GRAZING RATES IN NATURAL MARINE ECOSYSTEMS (Invited): M R Landry

0815h  **BO51B-02** Mission Impossible: Estimating Copepod Grazing Rates in the Sea (Invited): M R Roman

0830h  **BO51B-03** Estimating grazing rates for the salp Salpa thompsoni: P Kremer, L von Harbou, B Phillips, L Madin

0845h  **BO51B-04** Use Of Quantitative PCR-Based Techniques For Assessing Zooplankton Grazing On Harmful Algae: A Tale Of Two Grazers: A R Juhl, S Haley, R R Kelly, S Dyhrman

0900h  **BO51B-05** Trophic Structure Variability in the California Current: Independent Methods to Assess Trophic Relationships in Dominant Zooplankton: M Decima, M R Landry, M McCormick, B N Popp, E Gier

0915h  **BO51B-06** PREY SELECTION AND TROPHIC INTERACTIONS IN MICROZOOPLANKTON COMMUNITIES: EFFECTS ON HERBIVORY ESTIMATES IN DILUTION EXPERIMENTS: P J Lavrenyev, F J Jochem, M R First

0930h  **BO51B-07** Assessing copepod grazing in situ: an examination of the foraging sorties hypothesis using a novel fluorescence imaging system: E Karakoylu, P J Franks, J S Jaffe

0945h  **BO51B-08** Effects of zooplankton feeding strategies on community structure in a simple plankton model: F Prowe, M Pahlow, M Follows, S Durkiewicz, A Oschlies

**Chemical Oceanography**

**CO51A D137**  **Friday**  **0800h**  
*Radiocarbon Insights Into the Global Carbon Cycle II (joint with BO, PO, PA, IT)*

**Presiding:** S R Beaupre, Orange Coast College; L A Ziolkowski, McMaster University; N Drenzek, Schlumberger-Doll Research

0800h  **CO51A-01** The Queen of Isotopes (Invited): W J Jenkins, A P McNichol, K F Von Reden, M Roberts

0815h  **CO51A-02** Prediction and biogeochemical significance of the radiocarbon age of organic carbon in marine surface sediments: D R Griffith, W R Martin, T I Eglinton

0830h  **CO51A-03** Isotopic Signatures of Porewater DIC in Santa Monica Basin Sediments: A Method for Determining DIC Sources: S M Crispo, L Johnson, T Komada, D J Burdige

0845h  **CO51A-04** Evolution of air-sea 14C fluxes in recent decades and implications for Δ14C gradients in atmospheric CO2: H D Graven, N Gruber

0900h  **CO51A-05** An Improved Method for Estimating Water-Mass Ventilation Age from Radiocarbon Measurements: T J DeVries, F W Primeau

0915h  **CO51A-06** HPLC purification of higher plant-derived lignin phenols for radiocarbon dating: E E Ellis, A E Ingalls, K McDuﬃe, R G Keil, G M dos Santos, E R Druffel

0930h  **CO51A-07** Evaluation of acid soluble organic matter radiocarbon signatures as a new proxy for directly tracing upwelling-derived organic carbon in the California Current System: B Walker, T P Guilderson, M McCarthy
Geological Oceanography

**G051A E143**  
**Friday**  
**0800h**  
**Geological Oceanography General Contributions II (joint with PO)**

**Presiding:** P N Adams, University of Florida; C J Hapke, U.S. Geological Survey

0805h  **G051A-01** Modeling the Effect of Climate Change on Hard and Soft Rock Coasts (Invited): A S Trenhaile

0830h  **G051A-02** Untangling the History of Sea Cliff Retreat, Uplift, and Sea Level Rise From Shelf Bedrock Profiles: P N Adams

0845h  **G051A-03** Long-term sea-cliff retreat rate recorded by 10Be: V Regard, T Dewez, D L Bourles, A Duprerr, S Costa, L Leann, E Lasseur, K Pedeo, G M Maillot

0900h  **G051A-04** Numerical Modeling of Sea Cliff Retreat as a Function of Wave Climate, Sediment Availability, Abrasion, and Failure: S W Kline, P N Adams

0915h  **G051A-05** Probabilistic Forward Modeling of Coastal Cliff Retreat: C J Hapke, N G Plant, M G Kratzmann, P Ruggiero

0930h  **G051A-06** Linear stability analysis and numerical modeling of large-scale rocky coastline dynamics: P W Limber, A B Murray

0945h  **G051A-07** Theoretical equilibrium responses of rocky coasts to changes in the rate of sea level rise: A D Ashton, M J Walkden, M E Dickson

**G051B E145**  
**Friday**  
**0800h**  
**Quantitative and Qualitative Estimation of Late Quaternary Climatic Changes II (joint with BO, PO, PA, CO)**

**Presiding:** R Nigam, National Institute of Oceanography; D Nuernberg, IFM-GEOMAR

0805h  **G051B-01** LATE PLEISTOCENE LOOP CURRENT, MISSISSIPPI, AND GULF OF MEXICO INTERMEDIATE WATER DYNAMICS IN RELATION TO ATLANTIC WARM POOL EXPANSION AND ATLANTIC MERIDIONAL OVERTURNING CIRCULATION CHANGES: D Nuernberg, A Bahr, C Karas, C Jung

0820h  **G051B-02** IS ARABIAN SEA Responding to GLOBAL WARMING?: S Kumar, R P Roshin, J Narvekar, P Kumar, E Vivekanandan

0835h  **G051B-03** West African monsoon evolution over the past 150,000 years: S Weldeab


0900h  **G051B-05** LATE QUATERNARY CLIMATIC HISTORY OF EAST ANTARCTICA: A TEXTURED MOSAIC?: S Rajan, N Khare

0910h  **G051B-06** CO2 contribution to the atmosphere from expanding neritic environments on the continental shelves since the Last Glacial Maximum: How much is expected from Sunda and North Australian shelves?: L T Teneva, J L Mey

0920h  **G051B-07** WITHDRAWN

0930h  **G051B-08** Cyclicity in monsoon changes: First report from the Bay of Bengal: S S Rana, R Nigam

0940h  **G051B-09** Changes in the stable oxygen isotopic composition of Pararotalia nipponica and Rosalina with reference to temperature and salinity: Culture experiments: S R Kurtarkar, R Nigam, L Na, R Saraswat

**Interdisciplinary**

**IT51A E147**  
**Friday**  
**0800h**  
**Autonomous Lagrangian Platforms and Sensors II (joint with BO, PA, MT, IT, ED, CO)**

**Presiding:** E Boss, University of Maine; T Martz, Scripps Institution of Oceanography; N Gruber, ETH Zurich; M Perry, University of Maine

0800h  **IT51A-01** High Temporal Resolution Observations of Chlorophyll and Particle Concentration Dynamics at Station ALOHA Derived from Seaglider Optical Records: J Nahorniak, A L Whitmire, R M Letelier, S Poulos, L Fujiuki, D M Karl

0815h  **IT51A-02** Observing the seasonal cycle of net community production using ISUS nitrate sensors deployed on profiling floats (Invited): K S Johnson, S Riser, T Martz, D Swift, H W Jannasch, L Coletti, J Plant, C Sakamoto

0830h  **IT51A-03** Oxygen and carbon observations from floats and gliders - technological achievements and science showcases (Invited): A Koerzhinger


0900h  **IT51A-05** Was Sverdrup wrong? Evolution of the Western North Atlantic spring bloom as observed by a profiling float: E Boss, M Behrenfeld


0945h  **IT51A-08** Sustained bio-optical measurements across the Leeuwin Current system via ocean gliders: spatio-temporal patterns and links to physical forcing: C E Hanson, C B Pattiaratchi, L Woo, B Hollings, D Stanley

**IT51B D139**  
**Friday**  
**0800h**  
**Challenges in Observing and Modeling Coastal Ocean Carbon Cycling II (joint with CO, PO, CO, BO)**

**Presiding:** M A Friedrichs, Virginia Institute of Marine Science; A Mannino, NASA GSFC; E E Hofmann, Old Dominion University

0800h  **IT51B-01** Carbon budget for the continental shelf of the Eastern United States: R Najjar, D E Butman, W Cai, M A Friedrichs, K D Kroeger, A Mannino, P A Raymond, J Salisbury, D C Vandemark, P Viahos

0815h  **IT51B-02** CO2 Uptake, DIC Production, and Net Heterotrophy in Continental Shelves (Invited): W Cai

0830h  **IT51B-03** Understanding the Temporal Evolution of the Flux of Organic Matter from a Watershed to the Coastal Ocean: R F Chen, M Jiang, Y Q Tian, G B Gardner, F Peri, W Huang, K T Cialino
**IT51B-04** The effect of river discharge on U.S. Eastern continental shelf carbon cycling: **J Xue**, M A Friedricks, B E Cahill, J Wilkin, A Mannino, K Fennel, E E Hofmann, R Najjar

**0900h IT51B-05** DINITROGEN FIXATION IN THE COASTAL MID-ATLANTIC OCEAN (Invited): **M R Mulholland**, A Mannino, P W Bernhardt

**0915h IT51B-06** Carbon and nutrient cycling in Eastern Boundary Upwelling Systems: **Z Lachkar**, N Gruber, C Hauri

**0930h IT51B-07** The importance of phosphorus in fueling phytoplankton production in a coastal upwelling zone: **Y H Spitz**, S Dyhrman, K C Ruttenberg

**0945h IT51B-08** WITHDRAWN

**IT51C PB255** 

**Friday 0800h** 

Extensive Climatologies: Integrating Data and Information Related to Coastal Storm Hazards, Climate Variability, and Climate Change II (joint with PO)

**Presiding:** **D H Levinson**, NOAA National Climatic Data Center; **J Marra**, Brooklyn University of New York

**0800h IT51C-01** Trends in Heavy Precipitation Frequency in U.S. Coastal States (Invited): **K Kunkel**

**0815h IT51C-02** Elevated East Coast Sea Level Anomaly: June - July 2009 (Invited): **W Sweet**, C Zervas, S Gill

**0830h IT51C-03** Grid-enabled computation of storm surge for application to coastal hazard and risk assessment (Invited): **B O Blanton**, P J Vickery, R A Luettich, J McGee

**0845h IT51C-04** Statistical downscaling of rainfall extremes for the Hawaiian Islands (Invited): **O Elison Timm**, H F Diaz, T W Giambelluca

**0900h IT51C-05** Accounting for climate change in coastal flood and erosion hazard assessments: **P Ruggiero**, J C Allan, P D Komar, N J Wood, P Corcoran, E Harris, H Baran, J Mull

**0915h IT51C-06** Alaska Coastal Strong Wind Events in the Context of Major Climatic Modes: **D E Atkinson**

**0930h IT51C-07** U.S. Pacific Northwest Sea Levels: Interdecadal Trends, El Niño Cycles and Storm Surge Elevations: **J C Allan**, P D Komar, P Ruggiero

**0945h IT51C-08** Climate Variability in the U.S.-Affiliated Tropical Islands of the Western North Pacific: Data Sources, Extreme Values, and Trends: **M A Lander**

**IT51D PB254** 

**Friday 0800h** 

Integration of Physical Observations and Modeling for Improved Understanding of Biogeochemical Phenomena in Inland Waters

**Presiding:** **A Wuest**, Eawag; **J D Ackerman**, University of Guelph; **C R Rehmann**, Iowa State University; **S MacIntyre**, UCSB

**0800h IT51D-01** Integrated Physical and Biogeochemical Sensor Data Test the Applicability and Validity of Lake Ecosystem Models (Invited): **D P Hamilton**, M G Allan, P C Hanson, L Luo

**0815h IT51D-02** The Role of Physical Limnology in the Current Distribution and Future Spread of the Invasive Clam Corbicula Fluminea in Lake Tahoe: **G S Schladow**, M Wittmann, J Reuter, S Chandra, A Forrest, F Rueda

**0830h IT51D-03** Confining the methane new formation rate of Lake Kivu by quantifying phosphorus and carbon cycling: **A Wuest**, F A Mvundla, N Pasche, M Schmid

**0845h IT51D-04** Insights into physical controls on primary productivity based on high temporal resolution measurements (Invited): **J P Antenucci**, L F Yeo, S Parkinson, A Meuleman

**0900h IT51D-05** Physical processes that lead to zooplankton patchiness in Lake Opeongo, Canada: **P Pernica**, M G Wells

**0915h IT51D-06** SPATIAL AND TEMPORAL VARIABILITY OF MIXED LAYER DYNAMICS IN LAKE VICTORIA, EAST AFRICA: **S MacIntyre**, J R Romero, G W Kling

**0930h IT51D-07** Validation of a vertical turbulent diffusivity parameterization at the field scale: **D Bouffard**, L Boegman

**0945h IT51D-08** Mixing in Density Stratified Shear Flows: **G A Lawrence**

**IT51E PB252** 

**Friday 0800h** 

Southern Ocean Dynamics, Biogeochemistry, and Air-Sea Exchange III (joint with PO, PA, BI, CO)

**Presiding:** **S T Gille**, Univ California San Diego; **H E Phillips**, Univ. of Tasmania

**0800h IT51E-01** GEOSTROPHIC EDDY MIXING IN THE SOUTHERN OCEAN (Invited): **R Ferrari**

**0815h IT51E-02** Deep Cyclogenesis in Drake Passage: **T K Chereskin**, K A Donohue, D R Watts, K L Tracey, Y L Firing, A Cutting

**0830h IT51E-03** On the Effect of Mesoscale Eddies on Ocean Carbon Storage and Atmospheric pCO₂: **D R Munday**, D P Marshall

**0845h IT51E-04** ACC Structure, Transport and Variability South of Tasmania: A Tale of Model-Data Synergy: **D S Luther**, C S Meinen, M E Maltrud

**0900h IT51E-05** The role of interior mixing in Southern Ocean water mass transformation: **S Downes**, A Gnanadesikan, J L Sarmiento, S M Griffies, E D Galbraith

**0915h IT51E-06** The 3-D structure of Antarctic Circumpolar Current flow near Kerguelen from EM-APEX profiling floats: **H E Phillips**, N L Bindoff

**0930h IT51E-07** On the Persistence of Cold Season SST Anomalies associated with the Annular Modes: **L M Ciasto**, M England, M A Alexander, C Deser

**0945h IT51E-08** On the response of the Antarctic Circumpolar Current transport to climate change in coupled climate models: **Z Wang**, T Kuhlbrodt, M P Meredith

**Marine Policy**

**MP51A E141** 

**Friday 0800h** 

Approaches to Ocean Planning: To Zone or Not to Zone II (joint with IT)

**Presiding:** **D Kraft**, ICBM; **C D Hunt**, Battelle

**0800h MP51A-01** Abstract Maritime Spatial Planning in the European Union (Invited): **H Busschbach**

**0815h MP51A-02** Marine Spatial Planning – Rhode Island 26 Years Implementation Experience (Invited): **G J Fugate**

**0830h MP51A-03** The Massachusetts Ocean Management Plan: **J W Weber**

**0845h MP51A-04** Marine Ecosystems Include People: Stakeholder Dialogue and Marine Spatial Planning: **M Gopnik**, L B Crowder, R Sagarin

**0900h MP51A-05** Integrated modelling: providing support for coastal zone management and maritime spatial planning: **D Kraft**

**0915h MP51A-06** Linking GIS with Bayesian Belief Networks as a practical approach to support marine spatial planning: **V Stelzenmuller**, J Lee, E Garnacho, S Rogers
Physical Oceanography

### PO51A D136 Friday 0800h

**Arctic and Subarctic Ocean Variability: Observations, Models, Perspectives III** (joint with BO, ED, MT, IT, GO, CO)

**Presiding:** I Yashayaev, Bedford Institute of Oceanography; S Levitus, NODC

- **0805h** PO51A-01 Recent coupled variations of the Arctic ice-ocean-atmosphere system (Invited): J Walsh
- **0830h** PO51A-02 Multidecadal variability of the Barents Sea: D Seidov, G Matishov, I Smolyar; S Levitus
- **0845h** PO51A-03 Decadal variability of the Arctic Ocean based on reanalysis results: Y Proshutinsky, G Panteleev, D Nechaev, Z Jhang
- **0900h** PO51A-04 Recent changes in Arctic Ocean freshwater distribution: L de Steur, M Steele, J H Morison, I G Rigor, E Hansen
- **0915h** PO51A-05 An assessment of pan-Arctic Ocean freshwater content changes from the 1990s to the IPY period: B Rabe, M Karcher, U Schauer, R A Krishfield, J M Toole, S Pisarev, R Gerdes, F Kauker, T Kikuchi
- **0930h** PO51A-06 Upper Ocean Heating Processes in the Thinning Ice of the West and Central Arctic Ocean: T P Stanton, W J Shaw
- **0945h** PO51A-07 Moored observations of bottom-intensified motions in the deep Canada Basin, Arctic Ocean: M Timmermans, L Rainville, L N Thomas, Y Proshutinsky

### PO51B E146 Friday 0800h

**Ocean-Atmosphere Observing and Modeling Strategies for Improving Tropical Cyclone Forecasts II**

**Presiding:** G R Halliwell, NOAA/AOML; I Ginis, University of Rhode Island; L K Shay, University of Miami/RSMAS

- **0800h** PO51B-01 Upper Ocean Response to Hurricane Frances Observed With EM-APEX Floats (Invited): T B Sanford, J F Price, J B Girton
- **0815h** PO51B-02 Evaluation of an Ocean Model Response to Hurricane Ivan over the Northern Gulf of Mexico Continental Shelf and Slope: J K Brewster, G R Halliwell, L K Shay, W J Teague
- **0830h** PO51B-03 Impact of river plumes on tropical cyclone intensity (Invited): I Moon, S Kim
- **0845h** PO51B-04 The impact of wind-wave-current interaction on hurricane predictions: Y Fan, I Ginis
- **0900h** PO51B-05 Upper Ocean Cooling in the Loop Current System during Hurricanes Katrina and Rita: B Jaimes de la Cruz, L K Shay
- **0915h** PO51B-06 On the impact of sea surface temperature variability before and during hurricane passage on its intensity: H Kim, C J Lozano, V Tallapragada
- **0930h** PO51B-07 A Numerical Investigation of Feedback Processes in the Droplet Evaporation Layer for Tropical Cyclones: L Bianco, J Bao, C W Fairall, S Michelson
- **0945h** PO51B-08 Effect of Two-Phase Environment at the Air-Sea Interface on the Drag Coefficient under High Wind Speed Conditions: A Soloviev, R Lukas
Interdisciplinary

**IT52A PB251** Friday 1030h

*Walter Munk Lecture: Acoustical Oceanography and Shallow Water Acoustics*

*Presiding: J D Pullen, Stevens Institute of Technology*

1030h **IT52A-01** Acoustical Oceanography and Shallow Water Acoustics *(Invited): J F Lynch*

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**Friday P.M.**

Biological Oceanography

**BO53A PB253** Friday 1300h

*Biological Consequences of Ocean Acidification IV (joint with CO)*

*Presiding: T M Hill, UC Davis; A D Russell, University of California, Davis*

- 1300h **BO53A-01** Why Corals Care about Ocean Acidification: the Role of Nutrition *(Invited): A L Cohen, D C McCorkle, S J de Putron, M Holcomb, K Rose*
- 1315h **BO53A-02** BEACON: Bermuda Ocean Acidification and Coral Reef Investigation - Overview and Early Results: A J Andersson, N R Bates, S J de Putron
- 1330h **BO53A-03** Carbonate chemistry and reef metabolism of the Florida Keys: N Muhlehlener, C Langdon
- 1345h **BO53A-04** Effects of increased pCO2 on zinc bioaccumulation and calcification in the tropical coral Stylophora pistillata: F Houlbreque, R Rodolfo-Metalpa, C Ferrier-Pages, F Boisson, K Al-Trabeen, F Oberhaensli, R Jeffree
- 1415h **BO53A-06** Shellfish face uncertain future in high CO2 world: influence of acidification on oyster larval calcification and growth in estuaries *(Invited): W Miller, A Reynolds, C Sobrino, G F Riedel*
- 1430h **BO53A-07** Combined Impacts of Climate Warming and Ocean Carbonation on Eelgrass (Zostera marina L.): R C Zimmerman
- 1445h **BO53A-08** Community-level and population-level changes in small mobile invertebrates in response to ocean acidification: K J Kroeker, M Gambi, F Micheli

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**BO53B D137** Friday 1300h

*Comparative Analysis of Marine Ecosystems II*

*Presiding: W T Peterson, NOAA-NWFSC; M Scheuerr, NOAA Fisheries Service*

- 1300h **BO53B-01** Zonal gradients in zooplankton species abundance, community structure and population connectivity in shelf, slope and oceanic waters off Newport Oregon: W T Peterson, C A Morgan, J Menkel, C T Shaw, J O Peterson, H Bi
- 1315h **BO53B-02** Super-crunching multi-species plankton data: E Holmes
- 1330h **BO53B-03** The Influence of Management Scenarios on Biotic Interactions and Stability in the California Current: T Francis, P Levin, P Horne, I R Kaplan

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Chemical Oceanography

**CO53A D139** Friday 1300h

*Carbon Cycling in the Coastal Oceans II (joint with IT, PO, BO)*

*Presiding: J T Mathis, School of Fisheries and Ocean Sciences; S R Alin, NOAA/PMEL; G A McKinley, Univ. Wisconsin - Madison*

- 1300h **CO53A-01** A Preliminary Carbon Budget for the Gulf of Mexico *(Invited): P G Coleb, K L Daly, W Cai, K Fennel, S E Lohrenz, L L Robbins*
- 1330h **CO53A-03** Distributions of the CO2 System along the US Atlantic and Gulf of Mexico Coast: Z A Wang, R H Byrne, W Cai, R H Wanninkhof
- 1345h **CO53A-04** Carbon cycling in the Great Lakes *(Invited): N R Urban*
### Interdisciplinary

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<td>COS3A-05 Mean circulation patterns and mechanisms of Lake Superior:</td>
<td>V Bennington, G A McKinley, C H Wu, N R Urban, A R Desai</td>
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<td>COS3A-06 Sources and Cycling of Carbon in Lake Superior: Insights</td>
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<td>COS3A-07 Seasonal Variability of Dissolved Inorganic Carbon</td>
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<td>T H Johengen, M Atkinson, D Schar, M Tamburri</td>
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#### COS3A E147 Friday 1300h

**Climate Change Impacts on the Bering Sea and Related Polar Waters:** From Observation to Prediction II

*Presiding:* C J Ashjian, Woods Hole Oceanographic Institution; H N Edmonds

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<td>The north – south structure of eastern Bering Sea shelf – Implications</td>
<td>P J Stabeno, N B Kachel, C Mordy, J M Napp, M C Spillane</td>
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<td>EMPIRICAL DOWNSCALING FROM GLOBAL CLIMATE MODELS:</td>
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<td>Seaward Dispersal of Coastal Waters on the Central Bering Shelf:</td>
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<td>New Insights on the Northern Bering Sea Ecosystem from Early Seasonal</td>
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<td>Sampling in March 2008 and 2009:</td>
<td>L W Cooper</td>
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<td>Stratification on the Eastern Bering Sea Shelf:</td>
<td>C Ladd, G L Hunt, C Mordy, P J Stabeno</td>
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<td>Spatial and interannual variability in nutrients, phytoplankton and</td>
<td>L B Eisner, S L Danielson, K Cieciel, E Farley</td>
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<td>zooplankton in the eastern Bering Sea: Results from U.S. BASIS surveys</td>
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<td>Bioenergetic Constraints on Winter Survival in Subadult Walleye</td>
<td>R Heintz, E Siddon, J Vollenweider</td>
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<td>Pollock (Theragra chalcogramma):</td>
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#### COS3B E145 Friday 1300h

**Hydrogeology, Geochemistry, and Microbial Ecology at Hydrothermal Sites and Subseafloor Observatories II** (joint with BO, MT, GO, CO)

*Presiding:* B T Glazer, University of Hawaii; B Orcutt, University of California

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<td>1300h</td>
<td>Integration of physicochemical processes is necessary for</td>
<td>W P Inskeep</td>
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<td>understanding spatial-temporal distribution and function of</td>
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<td>microorganisms in high-temperature environments:</td>
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<td>Emerging patterns of microbial diversity at deep-sea vents:</td>
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<td>Spatial and Temporal Dynamics of Microbial Communities Inhabiting</td>
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<td>Diffuse-Flow Hydrothermal Vents at 9° N on the East Pacific Rise:</td>
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<td>1345h</td>
<td>Subsurface microbial observatories to investigate the deep</td>
<td>K J Edwards, W Bach, J P Cowen, A Fisher, P R Girguis, B T Glazer,</td>
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<td>ocean crust biosphere – development, testing, and future:</td>
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<td>Microbial inhabitants of basalt-hosted fluids of the deep ocean:</td>
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<td>Correlating Community Dynamics and Microbial protein expression</td>
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<td>With Changes In Hydrothermal Chemistry At The Juan De Fuca Ridge</td>
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<td>using Biological Osmotic Sampling Systems (BOSS):</td>
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<td>P R Girguis, J Robidart, C G Wheat</td>
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#### COS3C PB254 Friday 1300h

**New Discoveries Enabled by Sustained Ocean Observing Systems II** (joint with BO, PO, GO, CO)

*Presiding:* G R Pawlak, University of Hawaii; M Roughan, UNSW; S R Ramp, CeNCOOS

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<td>Research on the Cabled Oceanal Observatory VENUS (Invited):</td>
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<td>An overview of science and operations at the Monterey Accelerated</td>
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<td>Research System (MARS) (Invited): E H Raymond, S Etchemendy, C Dawe,</td>
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<td>Live Data from the Coast to the Deep Sea:</td>
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<td>Seafloor Sediment Observatory on a Cable and a Shoestring:</td>
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<td>Advanced Ocean floor Network system for mega thrust Earthquakes and</td>
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<td>Tsunamis south western Japan. (DONET1andDONET2):</td>
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<td>Y Kaneda, K Kawaguchi</td>
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<td>Seasonal variability of Monsoon-driven hypoxia along the northern</td>
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<td>S F Dimarco, L Belabbassi, M Stoessel, K Duvall, L al-Kharusi, S A</td>
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<td>Stryker, A E Jochens, M K Howard</td>
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<td>Real-Time Observations of the Tidally Driven pH Signal at the MARS</td>
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<td>Cabled Observatory in Monterey Bay: T Maughan, E T Peltzer</td>
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<td>Monitoring gas hydrate stability conditions at a deep sea cold seep:</td>
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<td>R Chapman, L Thomsen, M Hofbauer</td>
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#### COS3D PB252 Friday 1300h

**Southern Ocean Dynamics, Biogeochemistry, and Air-Sea Exchange IV**

*Presiding:* P G Strutton, Oregon State University; T Ito, Colorado State University

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<td>Subantarctic Zone of the Southern Ocean: N Cassar, M L Bender,</td>
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<td>P J DiFiore, B D Tilbrook, S Wright, A R Bowie, K Petrov</td>
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<td>1315h</td>
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<td>primary productivity of the Southern Ocean (Invited):</td>
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<td>P W Boyd, K R Arrigo</td>
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1330h  **IT53D-03** Diffusion and dispersion at the Antarctic Peninsula with application to sedimentary sources of iron to the Southern Ocean: **K J Heywood**, M Wedley, M Bandet, A F Thompson, T D Jackel, S Thorpe, A Renner

1345h  **IT53D-04** Modeling circulation and Fe transport in Antarctic Peninsula, Drake Passage, and Scotia Sea: **M Jiang**, M A Charette, C I Measures, M Zhou

1400h  **IT53D-05** Theory and Observations of Ekman Flux in the Chlorophyll Distribution Downstream of South Georgia: **H Venables**, M P Meredith

1415h  **IT53D-06** OCEAN DYNAMICS, BIOGEOCHEMISTRY AND AIR-SEA INTERACTIONS IN THE SOUTHERN OCEAN SOUTH OF AFRICA: RESULTS FROM THE IPY BONUS-GOODHOPE TRANSEC: **S Speich**, M Arhan, F Dehairs, M Sirc, M Boye

1430h  **IT53D-07** Atmospheric pCO2 Sensitivity to the Solubility Pump: **F W Primeau**, T J DeVries

1445h  **IT53D-08** BIogenic Gas Distributions in Antarctic Coastal Waters: Biophysical Driving Forces and Ecophysiological Implications: **P D Tortell**, C Gueguen, C D Payne, M C Long, S Trimborn, B Rost, K R Arrigo, G R DiTullio

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**Marine Policy**

**MP53A E141**  
**Friday**  
**1300h**  
Coastal Ocean Science Solutions: Research Leading to Management Tools and the Development of Ocean Policy II (joint with IT)

*Presiding:* **R L Waters**, Washington Sea Grant; **R A Moll**, California Sea Grant; **L E Duguay**, University of Southern California; **F C Moser**, University of Maryland

1300h  **MP53A-01** How Does Fisheries Science Support Marine Resource Policy and Management?: **E D Houde**

1315h  **MP53A-02** Inquiry in a Culture of Consensus: Science and Management for the Chesapeake Bay: **W Matuszewski**

1330h  **MP53A-03** Using Ecosystem Service Models to Inform Marine Spatial Planning on the West Coast of Vancouver Island, Canada: **J Toff**, A Guerry, M Ruckelshaus, A Day, K Arkema, G Guenuen, C Kim, M Papenfus, Y Qi, H Tallis

1345h  **MP53A-04** The role of larval sampling on the evaluation of marine fish status and fisheries management: **A R Thompson**, W Watson, K Stierhoff, R Vetter

1400h  **MP53A-05** Tracking Habitat Restoration in the Pacific Northwest: Turning Data Synthesis into Federal Reporting Requirements: **S L Katz**, K Barnas

1415h  **MP53A-06** MPA Monitoring – Catching the science up with policy: **E Whiteman**, C Recchia


1445h  **MP53A-08** Science to Action: Lessons from Marine Conservation Science around the World: **L B Karrer**, **S Troeng**

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**Physical Oceanography**

**PO53A D136**  
**Friday**  
**1300h**  
Arctic and Subarctic Ocean Variability: Observations, Models, Perspectives IV (joint with BO, ED, MT, IT, GO, CO)

*Presiding:* **I Yashayaev**, Bedford Institute of Oceanography; **S Levitus**, NODC

1300h  **PO53A-01** A feedback between the Bering Strait and ice age climate (Invited): **A Hu**, G A Meehl, B L Otto-Bliesner, C Waelbroeck, W Han, M Loutre, K Lambeck, J X Mitrovica, N A Rosenbloom

1315h  **PO53A-02** Identification, characterization and change of the near-surface temperature maximum in the Canada Basin, 1993-2008: **J M Jackson**, E Carmack, F McLaughlin, S E Allen

1330h  **PO53A-03** WITHDRAWN

1345h  **PO53A-04** Did changes in the subpolar North Atlantic trigger the acceleration of glaciers in Greenland?: **G S Hamilton**, **F Straneo**, D A Sutherland, L A Stearns

1400h  **PO53A-05** Assessing the formation and propagation of Labrador Sea Water in the subpolar North Atlantic (Invited): **D Kieke**

1415h  **PO53A-06** Model study of atmospheric and ocean interannual variability in the sub-polar North Atlantic Ocean: **E K Demirov**, J Zhu, I Yashayaev, Y Zhang, M Cooke, C Pike-Thankray

1430h  **PO53A-07** Freshwater Transport and Deep Convection in the Labrador Sea: **T P McGeethan**, W Maslowski

1445h  **PO53A-08** Transport variability and spreading paths of the North Atlantic Subpolar Gyre: **A Stroeh**, M Rhein, C Mertens, D Kieke

**PO53B E143**  
**Friday**  
**1300h**  
Mixing Processes and Buoyant Flows: Plumes and the Coastal Ocean III

*Presiding:* **D G MacDonald**, UMass Dartmouth; **R D Hetland**, Texas A&M University; **A R Horner-Devine**, University of Washington

1300h  **PO53B-01** Wave dynamics of a supercritical river plume (Invited): **V Vlasenko**, N Stashchuk

1315h  **PO53B-02** A Mechanism for TKE Enhancement via Lateral Spreading in a Near Field River Plume: **F Chen**, D G MacDonald

1330h  **PO53B-03** The Effect of Lateral Spreading on A Laboratory-Scale River Plume: **Y Yuan**, A R Horner-Devine

1345h  **PO53B-04** Biological Thin Layers in the Columbia River Plume Region: **D A Jay**, K Leffler, J D Nash, J O Peterson, S A Talke, A R Horner-Devine, J Pan

1400h  **PO53B-05** Estuary-Shelf Exchange Pathways for the Long Island Sound: **M M Whitney**

1415h  **PO53B-06** On the role of tidal and wind driven straining in the Rhine ROF: **J Pietrzak**, G de Boer

1430h  **PO53B-07** Dynamics of the Columbia River tidal plume front: **L Kilcher**, J D Nash, J N Moum

1445h  **PO53B-08** High resolution simulation of high Reynolds number mixing in a 2D gravity current under variable forcing: **S Matt**, M Iskandarani, K D Leaman
PO53C D135 Friday 1300h
Physical Processes on Coral Reefs and Their Role in Reef Dynamics II (joint with BO, IT, GO, ED, CO)

Presiding: C D Storlazzi, U.S. Geological Survey; C J Hearn, Working Science Consultancies, LLC; S G Monismith, Stanford University

1300h PO53C-01 Wave and current observations on a Pacific Island fringing reef (Invited): M A Merrifield, A N Pequignet, J M Becker
1315h PO53C-02 Observations of Wave Driven Dispersion in Coral Reefs: L M Walter, J L Hench, S G Monismith
1330h PO53C-03 Two-Dimensional Modeling of Nonlinear Wave Propagation over Fringing Reefs: T Martz, A Sheremet, J M Smith
1345h PO53C-04 Observations of runup on the North Shore of Oahu: J M Becker, B A Brooks, T L Erickson, C Kontoes, M A Merrifield, A N Pequignet

1400h PO53C-05 Ocean-shelf exchange through a barrier reef: Berau shelf, Indonesia: M Van Der Vegt, A Tarya, T Hoitink
1415h PO53C-06 Effects of Large Amplitude Internal Waves on the Trophic State of Corals: C Roder, S Khokiatwong, C Richter
1430h PO53C-07 The Role of Eddy inside “Wallace Line” regions using High Resolution Nutrient-Ocean Circulation Coupled Model: A R Kartadikaria, K Nadaoka, Y Miyazawa
1445h PO53C-08 The importance of episodic circulation to sedimentation patterns and distribution of benthic habitats in a fringing coral reef embayment: R K Hocke, C D Storlazzi, P V Ridd

PO53D PB256 Friday 1300h
Results From 17 Years of Satellite Altimetry III

Presiding: L Fu, Jet Propulsion Lab; J K Willis, Jet Propulsion Laboratory; R A Morrow, Observatorio Midi Pyrenees

1300h PO53D-01 Ocean striations and role of satellite altimetry in their detection (Invited): N A Maximenko, O Melnichenko, P P Niiler, N Schneider, J Hafner, E Di Lorenzo
1315h PO53D-02 On eddy propagation and the anisotropy of ocean surface kinetic energy: B Conley, H Aime, P Timko, D Furnival, J Hirschi, R B Scott, B K Arbic, D B Chelton
1330h PO53D-03 Eddy response to Southern Ocean climate modes: R A Morrow, M Ward, S Pasquet, A Hogg
1345h PO53D-04 Analyzing the generation mechanism of North Brazil Current Rings from 16 years of satellite altimetry: G P Castelao, W E Johns
1400h PO53D-05 The Surface Water and Ocean Topography (SWOT) Mission (Invited): E Rodriguez
1415h PO53D-06 Synergy Between Glider and Coastal Altimetry: Examples Along Envisat, Jason-1 and Jason-2 Tracks: A Pascual, J Bouffard, S Ruiz, Y Faugère, G Larnicol, J Tintore
1430h PO53D-07 Alongtrack Altimeter SSH Fields as Indicators of Seasonal Coastal Upwelling: P T Strub, C James, S Dewey
1445h PO53D-08 Low-Frequency Variability Patterns in Coastal Sea Level from Tide Gauges and Altimetry: S V Vinogradov, R M Ponte

PO53E PB251 Friday 1300h
Submesoscales: From Space to the Ocean Interior IV

Presiding: A Bracco, Georgia Tech; K Smith, New York University

1300h PO53E-01 High resolution remote sensing synergy in studies of mesoscale and submesoscale dynamics (Invited): B Chapron
1315h PO53E-02 Reduction of the wind-work on the general circulation by forced symmetric instability: L N Thomas, S Sankaranarayanan
1330h PO53E-03 Observing Oceanic Submesoscales With Wide-Swath Altimetry Based on Radar Interferometry: L Fu, R A Morrow
1345h PO53E-04 Toward a practical characterization of submesoscale oceanic regimes: X Capet, J Isern-Fontanet, F Colas, P Klein, B Chapron
1415h PO53E-06 Vertical Velocities Combining Glider and Altimetry Data: a Case of an Intense Density Front in the Eastern Alboran Sea: S Ruiz, A Pascual, B Garau, M Pujol, J Tintore
1430h PO53E-07 Aerial and in situ Measurements of Submesoscale Eddies, Fronts, and Filaments: B Baschek, M J Molemaker
1445h PO53E-08 Properties of coupled interior-surface quasigeostrophic turbulence: G Roullet, J C McWilliams

PO53F E146 Friday 1300h
Western Tropical Pacific: Capturing and Understanding Its Variability II

Presiding: K Ando, Japan Agey Mar Sci & Tech; D Yuan, Institute of Oceanology, Chinese Academy of Sciences

1300h PO53F-01 The Western Pacific Warm Pool and its Role in Climate – Research Progress and Challenges (Invited): R Lukas
1330h PO53F-02 Introduction to the Northwestern Pacific Ocean Circulation and Climate Experiment (NPOCE) Program: D Hu, F Wang, L Wu
1345h PO53F-03 DIRECT MEASUREMENTS OF INTERMEDIATE AND UPPER OCEAN CURRENTS IN THE WESTERN TROPICAL PACIFIC: P Dutrieux, E Firing, K J Richards, J M Hummon, Y Kashino
1415h PO53F-05 Long-term Variability of Currents moored at the northern boundary of NEC in the northwestern Pacific Ocean: D L Jeon, E Kim, C Shin
1430h PO53F-06 Glider observations of the North Equatorial Current and the Mindanao Current: D L Rudnick
1445h PO53F-07 Coastal upwelling along the north coast of Papua New Guinea and SST cooling over the Pacific warm pool before the 2002/03 El Niño onset: T Hasegawa, K Ando, K Mizuno, R Lukas

Biological Oceanography

BO54A PB255 Friday 1530h
The Next 25 Years: Unanswered Questions in Zooplankton Ecology III

Presiding: G Paffenhofer, Skidaway Institute of Oceanography; B F Sherr, Oregon State University; E Sherr, Oregon State University

1530h BO54A-01 Phagotrophic protists in the sea: research directions: B F Sherr, E Sherr
1600h BO54A-02 Iron deficiency in food makes unhappy copepods: X Chen, N Fisher, S Baines
1615h BO54A-03 Abundance and distribution of Calanus nauplii in Disko bay, Western Greenland, with special emphasis on early development of C. hyperboreus: S Jung-Madsen, T G Nielsen, P Grønkjær, B W Hansen
1650h IT54A-04 Carbon cycling within the lower trophic levels of the Southeastern Bering Sea: primary production and particulate organic carbon export: B Moran, M W Lomas, R P Kelly, K Iken, R Gradinger, J T Mathis

1630h IT54A-05 Seasonal and spatial trends in sedimentary oxygen consumption rates on the Bering Sea shelf: H Whitney, A Devol, D Shull

1645h IT54A-06 Simulating lower trophic level ecosystem dynamics in the Bering Sea: G A Gibson, K Hedstrom, E N Curchitser, A J Hermann

1700h IT54A-07 Albatrosses As Upper Trophic Level Indicators Of Change In The Bering Sea: K Kuletz, M Renner, J F Piatt, E A Labunski, G L Hunt, Jr

1715h IT54A-08 The Oscillating Control Hypothesis: Reassessment in view of new information from the eastern Bering Sea: G L Hunt, L B Eisner, E Farley, J Moss, J M Napp

IT54B E145 Friday 1530h Hydrogeology, Geochemistry, and Microbial Ecology at Hydrothermal Sites and Subseafloor Observatories III (joint with BO, MT, GO, CO)

Presiding: B Govenar, Woods Hole Oceanographic Institution; R A Reves-Sohn, Woods Hole Oceanographic Institution

1530h IT54B-01 Geochemical cycling at convergent margins; results from pore fluids and hydrogeochemical observatories (Invited): M Kastner, E A Solomon

1545h IT54B-02 Short term variability of chloride and gas content constrain phase separation at the Main Endeavour Field: B A Love, M D Lilley, D A Butterfield, J E Lupton, E J Olson

1600h IT54B-03 Exploring the Links Between Geochemical and Biological Processes in Deep-sea Hydrothermal Systems Using Numerical Models (Invited): T McCollom

1615h IT54B-04 Understanding the Interrelationship Between Fluids and Earthquakes: The Role of Subseafloor Hydrogeologic Observatories in NaniTroSEIZE (Invited): E Screaton, D M Saffer

1630h IT54B-05 Seafloor Uplift at Hole 857D, Middle Valley, Northern Juan de Fuca Ridge: K E Ingebritsen, K Becker, E E Davis, C G Wheat

1645h IT54B-06 Hydrothermal Heat Discharge in the Cascade Range, Northwestern United States (Invited): S Ingebritsen, R H Mariner

1700h IT54B-07 New evidence for hydrothermal-flow induced ground deformation at deep-sea vent fields and terrestrial geysers: R A Reves-Sohn, S Hurwitz, M J Johnston, J Vandemeulebrouck
1530h IT54C-05 An observation-based current and mass field climatology for the US South Atlantic Bight: H Seim, L Leonard, M Fletcher, D K Savidge

1645h IT54C-06 Evaluating the Connectivity Potential Between Marine Protected Areas Using CODAR High-Frequency Radar: B C Zelenke, M Moline, D E Wendt, G B Crawford, N Garfield, B H Jones, J L Largier, J D Paduan, S R Ramp, E J Terrill, L Washburn

1700h IT54C-07 Seasonal wind-driven transport and mixing on the Mid-Atlantic Bight: D Gong, S M Glenn, J T Kohut, J Wilkin

1715h IT54C-08 Results from a Real-time Environmental Ocean Observing System on a Wind Farm Platform in the Texas Hypoxic Zone: R L Mullins, S F Dimarco, M K Howard, N L Guinasso, J N Walpert

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**IT54D PB252 Friday 1530h Southern Ocean Dynamics, Biogeochemistry, and Air-Sea Exchange V (joint with BO, PO, PA, CO)**

**Presiding:** P G Strutton, Oregon State University; D T Ho, University of Hawaii

1530h IT54D-01 The Response of Southern Ocean CO$_2$ Fluxes to Increased Wind Stress: A Multi-Resolution Modeling Study (Invited): N S Lovenduski, T Ito

1545h IT54D-02 Length scales of turbulent heat fluxes in the Southern Ocean: S T Gille, C Jiang, J Sprintall, M Kanamitsu, K Yoshimura

1600h IT54D-03 A Universal Wind Speed/Gas Exchange Relationship: Similarities Between Air-Sea Gas Exchange in the Southern Ocean and the Global Ocean: D T Ho, R H Wanninkhof, P Schlosser, K Sullivvan


1630h IT54D-05 DMS flux and gas transfer during the Southern Ocean Gas Exchange Experiment (SO-GASEX): B Bloemquist, B J Huebert, C W Fairall, S Archer, M Yang


1715h IT54D-08 Light scattering by wind-wave induced bubble plumes in the Southern Ocean and their significance to remote sensing reflectance: K L Randolph, H M Dierssen, M S Twardowski, S Freeman

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**MP54A E141 Friday 1530h Coastal Ocean Science Solutions: Research Leading to Management Tools and the Development of Ocean Policy III (joint with IT)**

**Presiding:** R L Waters, Washington Sea Grant; R A Moll, California Sea Grant; L E Duguy, University of Southern California; F C Moser, University of Maryland

1530h MP54A-01 Microbial contamination of the coastal zone: experience linking research to policy (Invited): J Fuhrman, B H Jones, J Griffith, R Noble, J A Steele

1545h MP54A-02 Observation to prediction of harmful algal blooms on the Texas coast: automated analysis from Imaging FlowCytobot provides early warning for successful response: L Campbell, R J Olson, H M Sosis, E Buskey

1600h MP54A-03 Science in Regional Ocean Management: The West Coast Governors’ Agreement on Ocean Health (Invited): J H Keys

1615h MP54A-04 Prioritizing Science for Ocean and Coastal Management: Examples from the California Ocean Protection Council and Ocean Science Trust: A Mace, D Pietri

1630h MP54A-05 Great Lakes Restoration: How science is translated to management decisions, outreach and science policy and how those strategies are evaluated: S E Boehme, E K Hincheley Malloy, J M Adams, B K Miller, J Schardt

1645h MP54A-06 Balancing stakeholder needs: The Washington Geoduck Aquaculture Research Program: R L Waters, G R VanBlaricom, B Vadopalas, P McDonald, M Horwith

1700h MP54A-07 Long-Form Fishing Community Profiles: A Useful Tool for Improved Policy and Management?: C L Package, B Tilt, F D Conway

1715h MP54A-08 Livelihood capitals reveal hindering factors on the resilience of coastal communities to hydro-meteorological events in Honduras: A Rivera Sosa, M D Delgado

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**Physical Oceanography**

**PO54A D136 Friday 1530h Arctic and Subarctic Ocean Variability: Observations, Models, Perspectives V (joint with BO, ED, IT, GO, CO)**

**Presiding:** I Yashayaev, Bedford Institute of Oceanography; S Levitus, NODC

1530h PO54A-01 Nordic Overflows and Mixing (Invited): D R Quadfasel

1555h PO54A-02 The Deep Western Boundary Current at Cape Farewell: Results from a Moored Current Meter Array: S Bacon, P Saunders

1610h PO54A-03 Transfer of Arctic and Subarctic climate signals to the deep and abyssal layers of the North Atlantic Ocean: I Yashayaev, F de Jong, S Dye, J Fischer, D Kieke, D Quadfasel, A Sarafanov, H M Van Aken

1625h PO54A-04 Circulation of the Northern Overflow Water in the Subpolar North Atlantic: X Xu, W J Schmitz, H E Hurlburt, E Chassignet, P J Hogan

1640h PO54A-05 Some remarks concerning the observed variability in the DWBC transport south of Cape Cod on Line W: T M Joyce, J M Toole, R G Curry, B Pena-Molino

1655h PO54A-06 Meridional eddy transports of heat and freshwater in a 1/12° numerical model of the North Atlantic: A M Treguier, D Pietri

1700h PO54A-07 WITHDRAWN

**PO54B PB253 Friday 1530h Lagrangian Predictability and Data Assimilation II (joint with IT)**

**Presiding:** A Griffa, RSMAS, University of Miami; M E Fiadeiro, Office Naval Research

1530h PO54B-01 “Lagrangian drifter verification of satellite sea level anomaly mapping”: P Niiler

1545h PO54B-02 RELATIVE DISPERSION FROM VHF RADAR MEASUREMENTS IN THE GULF OF LA SPEZIA: A C Haza, T M Oszokusmen, A Griffa, A J Molcard, P M Poulain, G Peggion

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1600h PO54B-03 Evidence of persistent transport barriers in the Southern Ocean: M G Brown, F J Beron-Vera, M J Olascoaga, H Kocak

1615h PO54B-04 The Effects of Eulerian Data Assimilation on Lagrangian Predictions in Operational Ocean Models: M S Toner

1630h PO54B-05 Lagrangian Coherent Structures: When are they Helpful? (Invited): L J Pratt, I I Rypina

1645h PO54B-06 Lagrangian drifter assimilation in the Mediterranean Forecasting System: J A Nilsson, S Dobricic, V Taipallier, P M Poulain, N Pinardi

1700h PO54B-07 Ensemble Analysis of Predicted Trajectory Uncertainty in an Operational Naval Model of the Western Pacific Ocean: B L Lipphardt, H S Huntley, A D Kirwan, P J Hogan

1715h PO54B-08 Exploiting Lagrangian dynamics to optimize data assimilation (Invited): C K Jones

PO54C E143 Friday 1530h

Mixing Processes and Buoyant Flows: Plumes and the Coastal Ocean IV

Presiding: D G MacDonald, UMass Dartmouth; R D Hetland, Texas A&M University; A R Horner-Devine, University of Washington

1530h PO54C-01 Circulation and mixing at the nose of a coastal gravity current. (Invited): R Chant

1545h PO54C-02 Pulsed stratification, freshwater pumping and internal mixing in the Liverpool Bay ROFS: M R Palmer, J Polton

1600h PO54C-03 Effects of Asymmetric Strained Stratification on currents turbulence and sediment transport: A J Souza, A Lane, K F Betteridge

1615h PO54C-04 Convective instability and its implication to settling of fine sediment off river plume: X Yu, P J Snyder, J Chen, T Hsu

1630h PO54C-05 The influence of ambient shelffront currents on exchange of salt near the mouth of the Merrimack River estuary: S Chen, J A Lerczak, W R Geyer, D K Ralston

1645h PO54C-06 Factors controlling river plume behavior in low Coriolis region: A Tarya, T Hoitink, M Van Der Vegt

1700h PO54C-07 Thermohaline and Flow Variability Associated with Intense Submarine Groundwater Discharges (SGD) in the Coastal Ocean: I Marino-Tapia, C E Enriquez, A Valle-Levinson, I Vera

1715h PO54C-08 Modeling the effects of buoyancy and winds on circulation under landfast ice: J Kasper, T Weingartner

PO54D PB251 Friday 1530h

The Ocean's Role in Natural and Anthropogenic Climate Variability II (joint with BO, IT, GO, CO)

Presiding: J Carton, Univ of Maryland; B Giese, Texas A&M

1530h PO54D-01 Long-term changes in the hydrography of the Arctic Ocean over the past 100 years (Invited): M Steele

1545h PO54D-02 Indian Ocean Sea Level change associate with changes of climate in the past few decades: W Han, G A Meehl, A Hu, L L Trenary, J Wang

1600h PO54D-03 Role of the Atlantic Warm Pool in Climate and Hurricanes on Intertropical, Multidecadal and Global Warming Timescales: C Wang, S Lee, D B Enfield

1615h PO54D-04 Trends and Decadal Variability in SODA 1890-2005: B Giese, H F Seidel, J Carton

1630h PO54D-05 Predictability of Extreme ENSO Epochs in the CM2.1 Global Coupled GCM: A T Wittenberg

1645h PO54D-06 WITHDRAWN

1700h PO54D-07 Physical Trends at Station ALOHA in the North Pacific Subtropical Gyre: F E Santiago-Mandujano, R Lukas, S DeCarlo, P J Lethaby, J Snyder, E Firing, R Bidigare, M J Church, J E Dore, D M Karl, M R Landry, R M Letelier

1715h PO54D-08 Impact of Bathythermograph Temperature Bias models on an Ocean Reanalysis: G A Chepurin, J Carton, B Giese, S Levitus, T Boyer, H F Seidel

PO54E D135 Friday 1530h

Physical Processes on Coral Reefs and Their Role in Reef Dynamics III (joint with BO, IT, GO, ED, CO)

Presiding: C D Storlazzi, U.S. Geological Survey; C J Hearn, Working Science Consultancies, LLC; S G Monismith, Stanford University

1530h PO54E-01 Coupling hydrodynamics and biogeochemistry in a Red Sea coral reef: the significance of benthic consumption of phytoplankton and zooplankton (Invited): A Genin


1600h PO54E-03 SOLAR WARMING OF THE SEAFLOOR ON A FRINGING REEF: J R Wells, J P Fram, G R Pavlak

1615h PO54E-04 A new multi-colors multi-layer gypsum coating technique: T Mass, U M Shavit, A Genin

1630h PO54E-05 Sponge excurrent jets and plumes: spatial structure and environmental factors: J L Hench, N L Lindquist, P J Gibson, B N Popp, C S Martens

1645h PO54E-06 AUV-BASED BED-ROUGHNESS MAPPING OVER A TROPICAL REEF: S Jaramillo, G R Pavlak

1700h PO54E-07 Wave and current flow over broad-banded roughness: G R Pavlak, M Bandet, K Rajagopalan

1715h PO54E-08 CRiSS: Bringing Realtime Coral Reef Modeling of Hydrodynamic and Biogeochemical Processes to our Desktops: C J Hearn

PO54F PB256 Friday 1530h

Quantifying the Sea Surface Temperature Error Budget II (joint with IT)

Presiding: P C Cornillon, Univ Rhode Island; C L Gentemann, Remote Sensing Systems; E J Lindstrom, NASA Headquarters; E maturi, NOAA/NESDIS

1530h PO54F-01 An Overview of the SST Error Budget: Current Status and the Future (Invited): P J Minnett

1545h PO54F-02 Climate and Weather Demands on SST Accuracy (Invited): R W Reynolds

1600h PO54F-03 Clear-Sky Retrieval Biases In The Pathfinder SST Record: A Harris, J Mittaz, E maturi

1615h PO54F-04 Errors in Microwave SSTs: M Brewer, C L Gentemann

1630h PO54F-05 Implementation and evaluation of quality control for in situ SST for use in satellite Cal/Val: F Xu, A Ignatov

1645h PO54F-06 Intercomparison of the uncertainty in diurnal warming estimates from physical mixed layer models: G A Wick, C J Merchant, S Castro, A Harris, C Clayson, C L Gentemann, Y Kawai

1700h PO54F-07 Estimation of analysis errors in satellite-based, high-resolution SST maps: T M Chin, J Vazquez, E Armstrong, A Mariano, E H Ryan, G Jedlovec, F LaFontaine, J Shafer

1715h PO54F-08 Applications of Remotely Sensed High-resolution SST Data to Representing Tropical Instability Wave (TIWs)-induced Wind Response: R Zhang
Western Tropical Pacific: Capturing and Understanding Its Variability III

Presiding: K Ando, Japan Agcy Mar Sci & Tech; D Wang, SCSIO, Chinese Academy of Sciences

1530h  PO54G-01 SPICE (Southwest Pacific ocean circulation and Climate Experiment): early results and future plans (Invited): S Cravatte, A S Ganachaud, W S Kessler, G B Brassington

1545h  PO54G-02 Glider observations of the equatorward western boundary current in the Solomon Sea: W S Kessler, R E Davis, L Gourdeau

1600h  PO54G-03 Barrier Layer Variability in the Western Pacific Warm Pool from 2000-2007: T C Delcroix, C Bosc, C Maes

1615h  PO54G-04 Interannual variability of the South Pacific Convergence Zone and implications for the southwest Pacific Ocean region: E M Vincent, M Lengaigne, C Menkes, P Marchesiello, G Madec

1630h  PO54G-05 Forcing of the Indian Ocean Dipole on the Interannual Variations of the Tropical Pacific Ocean. Part I: Roles of the Indonesian Throughflow: D Yuan, J Wang, Y Luan, W Zheng, Y Yu

1645h  PO54G-06 Forcing of the Indian Ocean Dipole on the Interannual Variations of the Tropical Pacific Ocean - Part II: Roles of the Air-Sea Interaction: Y Yu, Y Luan, W Zheng, D Yuan

1700h  PO54G-07 Changes of Pacific STCs under Global Warming: Y Luo

1715h  PO54G-08 Teleconnected Influence of the North Atlantic Sea Surface Temperature on the El Niño behavior: D Wang