



Session Information

Oral Sessions
*Sessions are being held in the **Convention Center (CC)***

Poster Sessions
*The eLightning Theater is located in Hall C-D (Poster Hall).
 Posters are on display in the following venue throughout the week:
Hall C-D (Poster Hall)*

Session & Paper Numbering

Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation.
 Example: **AI21A-01** = Air-Sea Interactions, Tuesday, AM, concurrent session AI, first paper in that session.

AI	2	1	A	- 01
Discipline	Day	Time	Session	Sequence in Session
Day		Time		
1 = Monday		1 = AM 0800-1000		
2 = Tuesday		2 = AM 1030-1230		
3 = Wednesday		3 = PM 1245-1345 / 1400-1600		
4 = Thursday		4 = PM 1600-1800		
5 = Friday		5 = PM 1830-2030		

The program is current as of 04 February 2020. An omitted abstract ID number in the presentation order indicates that the abstract has been withdrawn by the presenter from the session. Please refer to the online program at <https://agu.confex.com/agu/osm20/meetingapp.cgi/Home> for updates.

Wednesday A.M.

AIR-SEA INTERACTIONS

AI31A 14A, Mezzanine
Wednesday 0800h
Fluxes and Physical Processes Near the Air-Sea Interface: Observations and Modeling
(Cosponsored by the AMS Committee on Air-Sea Interaction) | (joint with CP, IS, PS)

Moderators: **Nathan Laxague**, Columbia University of New York City; **David Richter**, University of Notre Dame

- 0800h **AI31A-01** Effects of time-variant wind input on nonlinear broadband wave field: **X Hao**, L Shen
- 0815h **AI31A-02** A comprehensive laboratory investigation of Langmuir turbulence forced by a range of wind and wave conditions: **I B Savelyev**, M P Buckley, B K Haus
- 0830h **AI31A-03** Turbulence and Near-Surface Coherent Structures in Laboratory-Scale Wind-Wave Simulations: **S Matt**, I B Savelyev, A Tejada-Martinez, M P Buckley
- 0845h **AI31A-04** Wind turbulence over surface waves under misaligned wind-wave conditions: **N Husain**, T Hara, P P Sullivan
- 0900h **AI31A-05** Field observations of coupled wind-wave dynamics using PIV: **M P Buckley**, J Horstmann
- 0915h **AI31A-06** Observations of Surface Wave Modulation Processes in the Vicinity of Atmospheric Fronts: a CIGoM Contribution: **F J Ocampo-Torres**, P Osuna, N G Rascle, H Garcia-Nava, C F Herrera-Vazquez, D S Pelaez-Zapata, L Robles-Diaz, G M Diaz-Mendez
- 0930h **AI31A-07** A Spectral Perspective on the Local Interaction between Wind and Waves: **A Ayet**, B Chapron, G G Katul, J L Redelsperger, G Lapeyre, L Marie
- 0945h **AI31A-08** Wave-Current Interactions at Meso and Submesoscales: Insights from Idealized Numerical Simulations: **A B Villas Boas**, F Arduin, B D Cornuelle, S T Gille, M R Mazloff

 COASTAL AND ESTUARINE PROCESSES

CP31A 10, UL

Wednesday 0800h

Human Populations and Influences in the Coastal Zone: Effects on Ocean and Human Health (OHH) III (*joint with MM, SI*)

Moderators: **Frederick Tyson**, National Institute of Environmental Health Sciences; **Henrietta Edmonds**, National Science Foundation

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- 0800h **CP31A-01** Developing a Predictive Understanding of Harmful Cyanobacteria Growth, Toxins Production and Comparative Toxicity across Environmental Gradients: **B Brooks**, J T Scott, S C James
- 0815h **CP31A-02** Does Age Increase Sensitivity to the Neuropathological Effects of the HAB Toxin Domoic Acid?: **D Marcinek**, A Hendrix, K A Lefebvre
- 0830h **CP31A-03** *Pseudo-nitzschia* bloom dynamics in the Gulf of Maine: 2012-2016: **S Clark**, K Hubbard, D M Anderson, D J McGillicuddy Jr, D K Ralston, D W Townsend
- 0845h **CP31A-04** Early life exposure and microcystin toxicity: Effects on liver health and metabolic reprogramming: **S Chatterjee**
- 0900h **CP31A-05** Use of a novel ovary-on-a-chip to screen for female reproductive toxicity of microcystins: **S Xiao**, J Xu, Y Wang, B Brooks, S Chatterjee, G Scott
- 0915h **CP31A-06** Biological-Physical Modeling to Predict the Dynamics of a Pathogenic Bacterium, *Vibrio Vulnificus*, in an Urbanized Estuary in Hawai'i: **J Bullington**, G Steward, M A McManus, A B Neuheimer, B T Glazer, O D Nigro, B Powell, C Nelson
- 0930h **CP31A-07** Microbiomes of pathogenic vibrio species elucidate environmental and planktonic associations: **R Diner**, A Rabines, H Zheng, J A Steele, J F Griffith, A E Allen
- 0945h **CP31A-08** Prevalence of pathogenic *V. parahaemolyticus* and *V. vulnificus* in oysters harvested in Newport Bay California: **E Cooksey**, A Zimmer-Faust, R E Diner, J A Steele, J F Griffith, M Verhougstraete

CP31B 9, UL

Wednesday 0800h

Impacts of Microplastics on Marine Organisms and Ecosystem Health III (*joint with ME, OC*)

Moderators: **Elise Granek**, Portland State University; **Susanne Brander**, Oregon State University

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- 0800h **CP31B-01** Sampling and QA/QC, or how many blanks do I need?: A guide for scientists investigating the occurrence of microplastics across matrices: **S M Brander**, V C Renick, M Foley, C L Steele, M Woo, A Lusher, S Carr, P Helm, C Box, S Cherniak, R C Andrews, C M Rochman
- 0810h **CP31B-02** Accurate quantification and transport estimation of suspended atmospheric microplastics in megacities: Implications for human health: **D Li**, K Liu
- 0820h **CP31B-03** Microplastic particle impacts to the marine food web: Fish tissue analysis for the presence of plastic additives & persistent organic pollutants (POPs) and the extraction/identification of microplastics from the stomachs of freshwater and marine fish: **H Allen**, W Robberson, A M Cook, J Wagner, S Ghosal, Z M Wang
- 0840h **CP31B-05** Characterization of Microplastics at a Large Wastewater Treatment Plant: **V Park**, P Gedalanga, V C Renick
- 0850h **CP31B-06** Encounter rates between forage fishes and marine microplastics in the Southern California Bight: **N Bowlin**, J Chavarry, K L Lavender Law, A D Barton, M D Ohman, A Choy
- 0900h **CP31B-07** Plastics and microfibers in the environment: **S J Royer**, D D Deheyn
- 0910h **CP31B-08** Polymer specific or core plastisphere? Using microscopy and DNA based analyses to assess microbial colonization of microplastics in the Caribbean Sea: **K Dudek**, B N Cruz, B Polidoro, S Neuer
- 0920h **CP31B-09** Quantitative analysis of high commercial value Australian seafood for selected plastics: **F Ribeiro**, E D Okoffo, S O'Brien, S Fraissinet-Tachet, J W O'Brien, M Gallen, S Kaserzon, J Mueller, T Galloway, K Thomas
- 0930h **CP31B-11** The Estrogenic Potentiality of Hydrophobic Organic Pollutants Contaminating Microplastics.: **M Capriotti**, P Cocci, L Bracchetti, G Caprioli, G Mosconi, L Quassinti, F A Palermo
- 0940h **CP31B-12** Variability of microplastics in estuarine systems and consequences for organism studies: **J Brandes**, D Sanders

CP31C 8, UL

Wednesday 0800h

Nearshore Processes VI

Moderators: Jenna Brown, USGS; Christie Hegermiller, Woods Hole Oceanographic Institution

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- 0800h **CP31C-01** Exploring Impact of Wave Climate Characterization on Drift-Aligned Gravel Barrier Evolution Using a Vector-Based Coastal Evolution Model: **B T Phillips**, J M Brown, M D Hurst, A J Plater
- 0815h **CP31C-02** Isolating time scales of drivers and shoreline response to predict shoreline changes.: **J K Montaño Muñoz**, G Coco, L Cagigal, A Rueda, F J Mendez, K R Bryan
- 0830h **CP31C-03** Behavioral Modes of Shoreline-Sandbar Coupling on a Single-Barred Beach in Baja California: **A Ruiz De Alegria-Arzaburu**, J A Vidal-Ruiz
- 0845h **CP31C-04** Assessing Storm Impact on a Stretch of Coast of Puerto Rico using Morphodynamic Modeling: **P G Rivera Casillas**, P Chardon-Maldonado
- 0900h **CP31C-05** Real-time high-resolution forecasting of the coastal ocean during a hurricane: **A Rey**, R P Mulligan
- 0915h **CP31C-06** Beach response, shoreline water levels, and surf-zone hydrodynamics measured during Hurricane Dorian in Duck, NC: **K L Brodie**, P Dickhudt, N Cohn, B Raubenheimer, B L Bruder, N Spore, L Gorrell, I Conery, S Elgar
- 0930h **CP31C-07** Modelling Cross-Shore and Alongshore Transport on a Meso-Tidal Beach: **C R Sherwood**, A Aretxabaleta, J C Warner, T S Kalra
- 0945h **CP31C-08** Modelling of hurricane impacts on US barrier islands: **A Van Dongeren**, M A van der Lugt, E Quataert, M Van Ormondt, C R Sherwood, J A Brown
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CHEMICAL TRACERS, ORGANIC MATTER AND TRACE ELEMENTS

CT31A 5B, UL

Wednesday 0800h

Controls on Trace Metal Biogeochemistry and Physicochemical Speciation in Seawater I (joint with CP, OB)

Moderators: Hannah Whitby, Université de Bretagne Occidentale; Randelle Bundy, University of Washington Seattle

- 0800h **CT31A-01** Iron supply from the Mid Atlantic Ridge to the North Atlantic ocean: **M C Lohan**, A J M Lough, D Gonzalez Santana, A Tagliabue, J Resing
- 0815h **CT31A-02** Characterizing organic ligands in hydrothermal plumes along the Mid-Atlantic Ridge: **C L Hoffman**, A J M Lough, M C Lohan, A Tagliabue, J A Resing, R M Bundy
- 0830h **CT31A-03** Using shipboard incubations to assess the cycling of iron (Fe) and Fe-binding ligands in hydrothermal vent plumes along the mid Atlantic Ridge: **T Mellett**, A J M Lough, M C Lohan, A Tagliabue, K N Buck
- 0845h **CT31A-04** Complete characterization of the physicochemical speciation of hydrothermal dissolved iron, as revealed by iron isotopes: Southern East Pacific Rise (GEOTRACES GP16): **J Steffen**, B A Summers, T M Conway, R M Sherrell, J N Fitzsimmons
- 0900h **CT31A-05** Redox cycling controls iron inputs to the interior of the eastern tropical Pacific from the Mexican continental margin: **J W Moffett**, K M Bolster, P S John, S C Yang
- 0915h **CT31A-06** Differential behavior of metal sulfides in hydrothermal plumes and diffuse flows: **E R Estes**, D Berti, A Findlay, M F Hochella Jr, M Yucel, G W Luther III
- 0930h **CT31A-07** Manganese complexation at hydrothermal vents: **V Oldham**, T J Shaw, A Thibault de Chanvalon, B M Tebo, G W Luther III
- 0945h **CT31A-08** Determination of Ambient Dissolved Chemical Speciation via Kinetics and Pseudovoltammetry: **G W Luther III**
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EDUCATION, OUTREACH AND POLICY

ED31A 11B, UL

Wednesday 0800h

Undergraduate Student Research: A Multidisciplinary Session I

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- 0800h **ED31A-01** Maternal size effect on larval growth, development, and respiration rates in the American lobster (*Homarus americanus*): **D Baughman**, G Andrews, M Niemisto, A Ascher, R Wahle, D Fields
- 0815h **ED31A-02** When DNA Fails Us: The Morphological Investigation of Marine Mammal Hair: **B Matthews**, P Schwenke
- 0830h **ED31A-03** Parasites of juvenile Pacific salmonids as Metrics of Diet and Habitat Use in the Nearshore Pacific Ocean: **D Stephens**, K Jacobson, J Menkel

- 0845h **ED31A-04** Insights into black-footed albatross bycatch in US west coast fisheries using Bayesian models: **A Wuest**, J Jannot, T Good
- 0900h **ED31A-05** Temporal and Spatial Diversity of Cryptophytes in San Diego Coastal Waters: **T Rammel**, M Nagarkar, I Moreno, B Palenik
- 0915h **ED31A-06** Calibrating Seasonal Cycles of Marine Primary Production in California Coastal Ecosystems as a Tool for Paleo-reconstructions of Food Web Dynamics: **L Teague**, N L Vokhshoori, M McCarthy
- 0930h **ED31A-07** Nitrous Oxide on the Texas-Louisiana Continental Shelf: No Laughing Matter: **M Shugart**, S A Yvon-Lewis, D Gonzales, J Dedrick, H Adams
- 0945h **ED31A-08** Sea the Value: Economics of Wildlife Ecotourism in La Jolla Cove: **L Olmo**, J A Seminoff

ED31B Poster Hall C-D; eLightning Theater

Wednesday 0800h

Engaging Students Globally in Marine Science Research and Conservation I eLightning (*joint with CP, SI*)

Moderators: **Analisa Duran**, Florida International University, Center for Coastal Oceans Research; **Thomas Potts**, University of Mount Union

ED31B-01 *eLIGHTNING Science, Youth, and Government: A Powerful Alliance for Change*: **D Peebler**, A Clark

ED31B-02 *eLIGHTNING* Implementing Sustainable Development Goal no.14-Life below Water using Information Technology for Empowering Students for Conserving Marine and Coastal Biodiversity.: **S Chaudhari**

ED31B-03 *eLIGHTNING* The Science Summer Camp - Why Less is More.: **E King**

ED31B-04 *eLIGHTNING* A nationwide citizen science project on plastic litter - using rivers to enhance ocean literacy: **K Knickmeier**, T Kiessling, K Kruse, D Brennecke, M Thiel, I Parchmann

ED31B-05 *eLIGHTNING* Extracurricular contributions for increase the interest for marine science topics in school students: presentation of different approaches and their assessment.: **S Merlino**, M Locritani, E Mioni, M Bianucci

ED31B-06 *eLIGHTNING* Model education-research partnership program encourages students to bridge gaps among ocean science, policy, and conservation for remote ocean regions: **K Whittaker**, P Hoagland, A Govindarajan, K Gjerde, H Harden-Davies, A N Siuda, P Joyce

ED31B-07 *eLIGHTNING* Integrating local knowledge into an at-sea undergraduate research experience to survey seabirds and marine mammals in the changing Arctic: **K Montenegro**, T Millstone, M Otokiak, G K Porter, H Morin, R Ludkin, B Loose, A Denton, K M Boswell

ED31B-09 *eLIGHTNING* The Challenge of Developing Arctic Curriculum for Classroom Use – Connecting Students and Scientists: **P Bartlett-Browne**, L Cooper, J M Grebmeier

ED31B-10 *eLIGHTNING* Ocean science in action: communicating cutting edge advances in marine research and technology via Massive Online Open Courses: **Z Jacobs**, K Popova, L Cox, D Gill

ED31B-11 *eLIGHTNING* Twelve years of Future Ocean school programs – from schoolbooks to international digital media – a success story: **K Knickmeier**, K Kruse, D Brennecke, J Krüger, T Kiessling, F Balzereit

ED31B-12 *eLIGHTNING* Florida International University's Aquarius Academy: A behind-the-scenes look into the challenges, successes and continual growth of an ocean education and conservation program.: **T Potts**, A Duran

HIGH LATITUDE ENVIRONMENTS

HE31A 1B, UL

Wednesday 0800h

Changing Biogeochemical Fluxes, Biodiversity, and Ecological Processes in the Polar Seas, with Special Emphasis on the Coastal Arctic and Sustaining an Integrated Arctic Ocean Observing System II (*joint with CP, IS, ME*)

Moderators: **Maria Tzortziou**, City University of New York; **Atsushi Matsuoka**, Universite Laval; **Bruce Howe**, University of Hawaii at Manoa; **Ilka Peeken**, Alfred-Wegener-Institut

0800h **HE31A-01** Directly Measuring Physical and Biogeochemical Proxies of the Kuparuk and Sagavanirktok Rivers during the Spring Freshet, in Adjacent Ice-covered Coastal Arctic Waters: **S R Laney**, S R Okkonen, K Longnecker, L A Catipovic

0815h **HE31A-02** Dissolved Organic Matter in Alaskan Coastal Waters: Dynamics of Riverine Discharge Effects on the Quantity and Quality of CDOM and DOC: **M G Novak**, P Hernes, A Mannino, R G Spencer, M Tzortziou

- 0830h **HE31A-03** Variability and degradation of colored dissolved organic matter along the Yukon River-plume-coastal ocean continuum: **B Grunert**, M Tzortziou, A Menendez, P Neale, P J Hernes, A Mannino, R G Spencer
- 0845h **HE31A-04** Delivery of terrigenous nutrients from rivers and coastal erosion sustain up to one third of Arctic Ocean Net Primary Production: **R Lauerwald**, J Terhaar, P A G Regnier, N Gruber, L Bopp
- 0900h **HE31A-05** Remote Sensing of Coastal Waters in the North Slope of Alaska: **W Moses**, S Ackleson
- 0915h **HE31A-06** CAATEX Expedition to the North Pole: **H Sagen**, E Storheim, F Geyer, P F Worcester, A Beszczynska-Möller, S Sandven, A Kjøl, N Hughes
- 0930h **HE31A-07** INTAROS: Integrated Arctic observation system development under Horizon 2020: **S Sandven**, H Sagen
- 0945h **HE31A-08** Coordinating Observations of Arctic Change: A Model for the Greater Arctic Region: **C Janzen**, M McCammon

HE31B 11A, UL

Wednesday 0800h

Variability of High-Latitude Ocean/Sea Ice/Atmosphere Interactions and Associated Convection in a Changing Climate I (*joint with AI, PC, PL*)

Moderators: **Carmela Veneziani**, Los Alamos National Laboratory; **Carolina Dufour**, Princeton University

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- 0800h **HE31B-01** Changes in Overturning Circulation under Arctic Sea Ice Retreat in EC-Earth: **A Bretones**, K H Nisancioglu, M F Jensen, M Ilıcak
- 0815h **HE31B-02** Near-term and Large-scale Coupled Climate System Responses to Arctic Sea-ice Loss: **A Simon**, G Gastineau, C Frankignoul, F Codron
- 0830h **HE31B-03** Role of atmospheric feedbacks in the ocean's response to enhanced Greenland Ice Sheet-melting: **T Martin**, J Harlass, A Biastoch, K B Matthes
- 0845h **HE31B-04** Ensemble Global Warming Simulations with Idealized Antarctic Meltwater Input: **M Latif**, W Park
- 0900h **HE31B-05** Decadal sea-ice variability over the Weddell Sea in a coupled GCM: **Y Morioka**, L Zhang, T L Delworth, S K Behera
- 0915h **HE31B-06** On the role of the Antarctic Slope Front on the occurrence of the Weddell Sea polynya under climate change: **J Lockwood**, C O Dufour, S Griffies, M Winton
- 0930h **HE31B-07** High latitude controls on ocean heat uptake efficiency: **E R Newsom**, L Zanna, S Khatiwala

- 0945h **HE31B-08** Pathways and time scales of ocean heat uptake and high-latitude ventilation: **A Marzocchi**, A J G Nurser, L Clement, E McDonagh

OCEAN OBSERVATORIES, INSTRUMENTATION AND SENSING TECHNOLOGIES

IS31A 14B, Mezzanine

Wednesday 0800h

Advancing Technologies for the Future of Deep-Ocean Exploration I (*joint with OD, SI*)

Moderators: **Katherine Bell**, Ocean Exploration Trust; **Kakani Katija**, Monterey Bay Aquarium Research Institute

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- 0800h **IS31A-08** Evaluating Planning and Remote Science Operations for Ocean Exploration Using Exploration Ground Data Systems (xGDS): **D Lees**, T Cohen, M C Deans, D S S Lim
- 0815h **IS31A-07** The *MiniROV*: A Multidisciplinary Research and Development Tool for Deep-Sea Exploration: **A Sherman**, K Katija, M Risi, S Rock, P Roberts, D Graves
- 0830h **IS31A-03** UVP6: a new low power, low cost and deep ocean rated imaging sensor for automatic quantification of particles and plankton from autonomous platforms: **M Picheral**, E Abidi, F Berry, J Coindat, D Brousseau, F Dias, S Fevre, L Guidi, J O Irisson, L Legendre, F Lombard, A Manzanera, L Mortier, L Navarro, L Picheral, L Stemmann, S Thibault, T Tixier
- 0845h **IS31A-02** Deep sea biodiversity hotspots: Time series image data acquisition from challenging ecosystems with affordable open source hardware and software.: **A Purser**, U Hoge, J Lemburg, F Wenzhofer, S Dreutter, B Dorschel, Y Bodur, E Schiller, J Greinert, T Soltwedel
- 0900h **IS31A-06** What's Out There? Recovering Underwater Scenes Using Computer Vision: **T Treibitz**, D Levy, Y Goldfracht, N Pearl, D Akkaynak
- 0915h **IS31A-05** Towards an open, underwater image repository (*FathomNet*) for automated detection and classification of midwater and benthic targets using machine learning: **B Woodward**, K Katija, B Schlining, L Lundsten, K Barnard, K L C Bell
- 0930h **IS31A-01** My Deep Sea, My Backyard: Building Deep Sea Capacity in Big Ocean Developing States: **K L C Bell**, R Rotjan, D Amon, B Kennedy, B Phillips, A Turchik

0945h **IS31A-04** Drawing the Ocean Closer: How Deep-Ocean Dropcams and an Art-Integrated Exploration Approach Provide Windows and Mirrors into the Deep Sea: **J Giddens**, A Turchik, A Friedlander, B Henning, W Goodell, B Woodward, L Marsh, B Tate, E Berkenpas, C Shepard, J Elfadl

MARINE ECOLOGY AND BIODIVERSITY

ME31A 7A, UL

Wednesday 0800h

Using Satellite Remote Sensing and in Situ Data to Evaluate Marine Biodiversity and Ecosystems I (*joint with IS, OB, SI*)

Moderators: **Maury Estes**, University of Alabama in Huntsville; **Frank Muller-Karger**, University of South Florida Tampa

0800h **ME31A-01** Understanding changing pelagic biodiversity in a dynamic ocean: Effect of basin scale forcing on seascape-assemblage relationships: **M T Kavanaugh**, J L Fisher, J A Trinanes, E Montes, W Klajbor, J M Grebmeier, K Iken, F Chavez, D Siegel, F E Muller-Karger

0815h **ME31A-02** Dynamic satellite seascapes as a biogeographic framework for understanding phytoplankton phenology of the Florida Keys National Marine Sanctuary, USA: **E Montes**, A Djurhuus, F E Muller-Karger, D B Otis, C R Kelble, M T Kavanaugh

0830h **ME31A-03** Spatial and interannual variability of seascape and micronekton assemblage associations in the California Current Ecosystem: **W Klajbor**, M T Kavanaugh, L Ciannelli, C Harvey, J A Santora, J C Field

0845h **ME31A-04** Comparing the efficiency of biodiversity monitoring programs: **G Hernan**, A Dubel, A Rassweiler

0900h **ME31A-05** Choosing an efficient portfolio of sampling strategies for monitoring marine biodiversity: **A Rassweiler**, G Hernan, A Dubel

0915h **ME31A-06** Seasonal Patterns in Protist Diversity Across Depths in the Santa Barbara Channel: **P G Matson**, D Catlett, C A Carlson, T S Lankiewicz, D Siegel, E Wear, D Iglesias-Rodriguez

0930h **ME31A-07** Integrating high-throughput sequencing observations into remotely sensed phytoplankton functional type determinations: **D Catlett**, D Siegel, C A Carlson, P G Matson, E Wear, D Iglesias-Rodriguez

0945h **ME31A-08** Policy implications for remotely sensed pelagic habitats: **J F Tweddle**, M T Kavanaugh

MICROBIOLOGY AND MOLECULAR ECOLOGY

MM31A 2, UL

Wednesday 0800h

Microbial Genomics to Improve Predictive Understanding of Disturbance in the Global Ocean System I (*joint with CP, ME, OB*)

0800h **MM31A-01** The Crude-Oil Microbiome Webserver: An Interactive, Searchable (Meta-)Genome Repository That Expands The Catalogued Diversity Of Crude-Oil-Associated Microbes: **S Karthikeyan**, L M Rodriguez-R, P Heritier-Robbins, M H Huettel, J E Kostka, K Konstantinidis

0815h **MM31A-02** Comparative genomics of isolates obtained during the Deepwater Horizon Disaster - metabolic plasticity and nutrient acquisition.: **R Karns**, T Gutierrez, S B Joye

0830h **MM31A-03** Comparison of microbial growth and community structure in response to different crude oils with varying photoreactivity: **W H Jeffrey**, M Ederington-Hagy, L Nigro, A L Simmering, E L Headrick

0845h **MM31A-04** Comparative metaproteomics to assess environmental changes: The combined effects of oil, sunlight and dispersant on marine microbial communities: **S Matallana Surget**, L Nigro, L Waidner, J Werner, P Lebaron, W H Jeffrey

0915h **MM31A-06** Sampling After the Storm: Combining Phytoplankton Imagery, Genomics and Physical Data to Assess Community Structure After a Hurricane: **D Henrichs**, C C Gaonkar, L Campbell

0945h **MM31A-08** Prokaryote Community and Physicochemical Shifts due to Storm Induced Terrestrial Runoff in Subtropical Coastal Ecosystems: **A Ares**, M M Brisbin, K Sato, J P Martin Diaz, Y Iinuma, S Mitarai

OCEAN BIOLOGY AND BIOGEOCHEMISTRY

OB31A 3, UL**Wednesday 0800h****Biological Hot Spots in the Deep Sea: Natural Variability and Adaptation to Changing Oceans I***(joint with ME, PC, PI)***Moderators:** **Furu Mienis**, Royal Netherlands Institute for Sea Research; **Andrew Davies**, University of Rhode Island

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- 0800h **OB31A-01** Synaphobranchid Swarms at Seamount Summits: Biological Hotspots in the Abyssal Ocean: **A B Leitner**, J Drazen, C R Smith, J M Durden
- 0815h **OB31A-02** Benthic and Near-Bottom-Water Bacteria and Archaea on Abyssal Plains and Seamounts of the Western Clarion-Clipperton Zone: A Comparison of Community Structure and Functional Potential: **E Wear**, C R Smith, J Drazen, M Church
- 0830h **OB31A-03** A Community Consensus on Designating Vulnerable Marine Ecosystems from Imagery: **A Baco-Taylor**, R Ross, F Althaus, A Bridges, S Brix, A Colaço, M R Clark, C Du Preez, M L Franken, G Gonzalez-Mirelis, E Kenchington, L A Levin, D Lindsay, T Molodtsova, N Morgan, T Morato, B E Mejia-Mercado, D O'Sullivan, K Olu, T Pearman, D Price, K Robert, A A Rowden, J Taylor, L Victorero, L Watling, A Williams, C Yesson
- 0845h **OB31A-04** A Mechanistic Modelling Approach to Predict Cold-Water Coral Biomass Based on Organic Matter and Hydrodynamics: **E de Froe**, C Mohn, K Soetaert, A van der Kaaden, D van Oevelen
- 0900h **OB31A-05** Biogeochemical regimes in the oceanic Southeastern United States: Deep-sea black corals and exported primary production: **J Schiff**, E B Roark, N Prouty
- 0915h **OB31A-06** The silicon cycle in the aggregations of a deep-water hexactinellid sponge: **M Maldonado**, M López-Acosta, L Beazley, B Casault, E Kenchington
- 0930h **OB31A-07** Exploring the Interactions between Geologic and Biologic Processes in the Poorly Known Submarine Canyons Off Cape Hatteras, U.S. Atlantic Margin: **J D Chaytor**, A W Demopoulos, M S Nizinski, B D Andrews, R Gasbarro, E E Cordes

- 0945h **OB31A-08** Structure of Deep-sea Food Webs at Two Submarine Canyons and Adjacent Slope Habitats: from Trophic Niches to Isoscapes: **A W Demopoulos**, J McClain-Counts, J R Bourque, J D Chaytor, S Brooke, S W Ross, B J Smith, F Mienis
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OB31B 4, UL**Wednesday 0800h****Marine Sediments: Fluxes, Fauna, and Forecasting I****Moderators:** **Heili Lowman**, University of California Santa Barbara; **Tina Treude**, GEOMAR Helmholtz Centre for Ocean Research Kiel

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- 0800h **OB31B-01** The effect of anthropogenically induced sediment disturbances on carbon mineralisation pathways in coastal sediments: **S van de Velde**, F J R Meysman
- 0815h **OB31B-02** Diversity of benthic diatoms inhabiting on/in the sediment of mangroves in Indonesia: **A L L Nafisyah**, A Hagiwara, Y Sakuno, E D Masithah, K Koike
- 0830h **OB31B-03** Evidence of Changes in Sedimentation Rate and Sediment Fabric in a Low Oxygen Setting: Santa Monica Basin, CA: **N J Kemnitz**, W Berelson, D E Hammond, T Treude
- 0845h **OB31B-04** Scaling-up ecosystem functions of marine soft sediments combining field data and drone imagery.: **S Schenone**, S F Thrush
- 0900h **OB31B-05** Environmental constraints of microbial carbon dynamics in hydrothermally impacted sediments of the Guaymas Basin: **S B Joye**, A Montgomery, G Zhuang, K Hunter, A Teske
- 0915h **OB31B-06** Sequestration of Methane by Symbiotic Deep-Sea Annelids: Ancient and Future Implications of Redefining the Seep Influence: **S Goffredi**, E Tilic, L A Levin, G W Rouse, E E Cordes, V J Orphan
- 0930h **OB31B-07** Living with the Toxic Legacy of DDT, Floods Accelerating the Pathway from Catchments to the Coast: **N Deering**, S Albert, M Dupes, C Wilson, J Rudd, A R Grinham
- 0945h **OB31B-08** In Situ Techniques for Measuring Carbonate Chemistry in Deep-Sea Pore Waters: **J E Pittman**, N Rollins, J F Adkins, W Berelson

OCEAN MODELING

OM31A 5A, UL

Wednesday 0800h

Advances in Ocean Data Assimilation, Forecasting, and Reanalysis III (*joint with IS, PL, PS*)

Moderators: **Ibrahim Hoteit**, King Abdullah University of Science and Technology; **Zhijin Li**, NASA Jet Propulsion Laboratory; **Aneesh Subramanian**, University of Colorado at Boulder

0800h **OM31A-01** A Comparison of Twin MOM6 and HYCOM Eddy-Resolving Global Ocean Simulations: **E Chassignet**, A J Wallcraft, R Hallberg

0815h **OM31A-02** DRP-4DVar-based Coupled Data Assimilation for Decadal Climate Prediction: **B Wang**, Y He

0830h **OM31A-03** Evaluation of a multi-resolution data assimilation system: **A Srinivasan**, M Iskandarani, E Chassignet

0845h **OM31A-04** Real-time Ocean Monitoring at the Joint Center for Satellite Data Assimilation: a Testbed for Ice/Ocean Data Assimilation Development and Evaluation.: **T C Sluka**, G Vernires, R Mahajan

0915h **OM31A-06** Real Time Ocean-Sea Ice coupled Three Dimensional Variational Global Data Assimilation at National Centers for Environmental Prediction.: **Z D Garraffo**, J A Cummings, H C Kim, S Paturi, Y Hao, T D Spindler, D Iredell, I Rivin, A Mehra

0945h **OM31A-08** Towards Strongly Coupled Data Assimilation for Subseasonal-to-Seasonal (S2S) Prediction: **S G Penny**

0800h **PC31A-01** Super model approach to reduce model bias and enhance climate prediction: **N S Keenlyside**, F Counillon, M L Shen, S Koski, M Devilliers, A K Gupta, G S Duane

0815h **PC31A-02** Was the 2015 Subpolar North Atlantic Cold Blob Predictable?: **E Maroon**, S G Yeager, G Danabasoglu

0830h **PC31A-03** CMIP5 Model-analog Seasonal Forecast Skill: a Metric for Model Evaluation of ENSO: **H Ding**, M Newman, M A Alexander, A T Wittenberg

0845h **PC31A-04** How important is the Equatorial Undercurrent for biogeochemistry and global climate predictions?: **J J M Busecke**, L Resplandy, J P Dunne

0900h **PC31A-05** Potential predictability of key marine biogeochemical fields: what can be learnt from cross-generation model comparison?: **R Seferian**, E Sanchez-Gomez, L Batté

0915h **PC31A-06** Potential Predictability Limits of the Global Carbon Cycle: **A Spring**, T Ilyina

0930h **PC31A-07** Seasonal-to-interannual prediction of U.S. coastal marine ecosystems: Forecast methods, mechanisms of predictability, and priority developments: **M Jacox**, M A Alexander, S Siedlecki, K Chen, Y O Kwon, S Brodie, I Ortiz, D Tommasi, M J Widlansky, D Barrie, A Capotondi, W Cheng, E Di Lorenzo, C A Edwards, J Fiechter, P S Fratantoni, E L Hazen, A J Hermann, A Kumar, A J Miller, D Pirhalla, M Pozo Buil, S Ray, S C Sheridan, A Subramanian, P R Thompson, L H Thorne, H Annamalai, S J Bograd, R Griffis, H Kim, A Mariotti, M Merrifield, R R Rykaczewski

0945h **PC31A-08** Winter influences on Summer Hypoxia Variability: **S Siedlecki**, P MacCready, R M McCabe, N Banas, K A Davis, S N Giddings, B R Hales, J A Barth, S M Durski

PAST, PRESENT AND FUTURE CLIMATE

PC31A 1A, UL

Wednesday 0800h

Near-Term Prediction of the Ocean: Physics, Biogeochemistry, and Ecosystems I (*joint with OC, OM, PI*)

Moderators: **Filippa Fransner**; **Hongmei Li**, Max Planck Institute for Meteorology

PHYSICAL-BIOLOGICAL INTERACTIONS

PI31A 7B, UL

Wednesday 0800h

Water Mass Variability in Eastern Boundary Upwelling Systems: Climate Drivers and Ecosystem Impacts I (*joint with PC, PL*)

Moderators: **Mercedes Pozo Buil**, Georgia Institute of Technology Main Campus; **Melanie Fewings**, Oregon State University

- 0800h **PI31A-01** Climate drivers of variability within and across the major Eastern Boundary Upwelling Systems: **G Bonino**, E Di Lorenzo, S Masina, D Iovino
- 0815h **PI31A-02** Momentum and climate governors of the California Undercurrent transport: **R Chen**, J C McWilliams, L Renault, F Kessouri
- 0830h **PI31A-03** Circulation patterns estimated by an inverse model in Cabo Verde Frontal Zone: **N Burgoa**, F Machin, A A Rodriguez-Santana, Á Marrero-Díaz, A Martínez-Marrero
- 0845h **PI31A-04** A Lagrangian study of the contribution of the Canary coastal upwelling to the open North Atlantic nitrogen budget: **D Hailegeorgis**, Z Lachkar, C Rieper, N Gruber
- 0900h **PI31A-05** Composite Response of the California Current System to ENSO in the ROMS-NEMURO: **N Cordero Quiros**, A J Miller, E Curchitser, R Dussin, Y Pan, L A Balitaan
- 0915h **PI31A-06** Is EBUS shelf hypoxia imported or home-grown? Observations from northern California: **K Hewett**, J L Largier
- 0930h **PI31A-07** Volume and heat budgets in the coastal California Current System: **K D Zaba**, D L Rudnick, B D Cornuelle, G Gopalakrishnan, M R Mazloff
- 0945h **PI31A-08** Temporal Variability of the Dissolved Oxygen in the Southern California Current System: **N L Oliva**, J M Martin Hernandez-Ayon, J A Valencia Gasti, R Durazo, E Santamaria-del-Angel, T R Baumgartner

PHYSICAL OCEANOGRAPHY: MESOSCALE AND LARGER

PL31A 15A, Mezzanine

Wednesday 0800h

Tropical Indo-Pacific Ocean Circulation and Climate Variations I (*joint with AI*)

Moderators: **Jing Wang**, Institute of Oceanology, Chinese Academy of Sciences; **Janet Sprintall**, University of California San Diego

- 0800h **PL31A-01** Intraseasonal equatorial Kelvin waves in the Indian Ocean and their propagation into the Indonesian Seas: **M J McPhaden**, K Pujiana
- 0815h **PL31A-02** Direct observations of the Indonesian Throughflow in Timor and Ombai Straits 2011-2015: **S A Wijffels**, B Pena-Molino, B Sloyan, C R Steinberg

- 0830h **PL31A-03** The role of the Indonesian Throughflow in the latest ENSO events: **D Yuan**, X Li, Z Wang, J Wang, X Hu, Y Yang, Y Li, X Zhao, C Corvianawatie, A K Wardana, D Surinati, A Purwandana, M F A Ismail, P Avianto, D Dirhamsyah, Z Arifin
- 0845h **PL31A-04** Unprecedented Response of Indonesian Throughflow to Anomalous Indo-Pacific Climatic Forcing in 2016: **K Pujiana**, M J McPhaden, A L Gordon, A M Napitu
- 0900h **PL31A-05** How rain and wind regulate the seasonal heartbeat of the Indonesian Throughflow: **T Lee**, S Fournier, A L Gordon, J Sprintall, X Xie
- 0915h **PL31A-06** Interannual to Decadal Response of Makassar Strait Throughflow Vertical Profile to Indo-Pacific Forcing: **M Li**, A L Gordon, L K Gruenburg, J Wei, S Yang
- 0930h **PL31A-07** Recent Seasonal Dynamical Ocean over Western of Maritime Continent Before Intensive Observation Period of Equatorial Line Observations (ELO): **F Alfahmi**, N F Riama, A W Byantoro, J A I Paski
- 0945h **PL31A-08** Understanding Indo-Pacific oceanic exchange through the Indonesian Throughflow since the late 1800s – a synthesis of coral $\delta^{18}\text{O}$ and high-resolution ocean models: **S A Murty**, C Ummenhofer, M Scheinert, E Behrens, A Biastoch, C W Boning

PHYSICAL OCEANOGRAPHY: MESOSCALE AND SMALLER

PS31A 15B, Mezzanine

Wednesday 0800h

Physical Processes Governing the Distribution and Transport of Dispersed Particles in the Ocean I (*joint with CP, IS, PL*)

Moderators: **Kara Lavender Law**, Sea Education Association; **Michelle DiBenedetto**, Stanford Earth Sciences; **Nimish Pujara**, University of California Berkeley

- 0800h **PS31A-01** Floating Debris Accumulation in the North Pacific “Garbage Patch”, Studied with a Suite of Lagrangian Instruments: **N A Maximenko**, L R Centurioni, M Crowley, L Haram, J Hafner, A Shcherbina, G Ruiz, J T Carlton, C Murray
- 0815h **PS31A-02** Vertical Distribution of Particles in Upper-Ocean Turbulence: Laboratory Modelling of Plastic Pollution: **M Poulain-Zarcos**, A ter Halle, M Mercier

- 0830h **PS31A-03** Eddy Induced, Cross-Shelf Transport of Drifting Objects or Actively Swimming Organisms: **L J Pratt**, I Rypina, S Entner, D Cherian, A Anderson
- 0845h **PS31A-04** A model investigation of the influence of submesoscale frontal dynamics on dispersal trajectories of near-surface, passive larvae around the Monterey Peninsula: **A B Lowe**, C A Edwards
- 0900h **PS31A-05** Plastic Transport in Coastal Seas: Lagrangian Tracking of Microplastics in the Nearshore and Evaluation of Beaching.: **C Jongedijk**, J M Alsina, E van Sebille, M Reeuwijk, van
- 0915h **PS31A-06** Importance of Vertical Mixing for Modeling the Horizontal Drift of Oil Spills: Simulations with the Open Source Oil Spill Model OpenOil: **K F Dagestad**, J Röhrs, L R Hole, T Nordam, J Skancke
- 0930h **PS31A-07** Numerical Modeling of Particles in the Ocean: **A L Dissanayake**, J Gros, B Wang, A Burd, P D Yapa

- 0945h **PS31A-08** Mean Horizontal Transport of Buoyant Material by Turbulent Jets in the Upper Ocean: **T Kukulka**

PLENARIES

6A-F, UL

Wednesday 1030h

Ocean Sciences Meeting 2020 Award Plenary

- 1030h AGU Sverdrup Award Lecture: The Arctic Ocean Unraveled: Anticipating an ice-free Future (Mary-Louise Timmermans): **M L Timmermans**
- 1100h ASLO A. C. Redfield Lifetime Achievement Award (Sybil Seitzinger): **S Seitzinger**
- 1130h ASLO Raymond L. Lindeman Award: Dissolved Organic Carbon Leaching from Plastics and its Impact on Microbes in the Ocean (Cristina Romera-Castillo): **C Romera-Castillo**
- 1200h TOS Mary Sears Medal (Jane Lubchenco): **J Lubchenco**

Wednesday P.M.

AIR-SEA INTERACTIONS

AI33A 14A, Mezzanine

Wednesday 1400h

Fluxes and Physical Processes Near the Air-Sea Interface: Observations and Modeling (Cosponsored by the AMS Committee on Air-Sea Interaction) II (*joint with CP, IS, PS*)

Moderators: **Damien Josset**, US Naval Research Laboratory; **Melanie Fewings**, Oregon State University; **Michael Twardowski**, Harbor Branch Oceanographic Institute

- 1400h **AI33A-01** The Growing Awareness of the Various Roles Bubbles Play in Air-Sea Exchange: **E C Monahan**, P Vlahos, A Staniec
- 1415h **AI33A-02** Unpicking the details of deep bubble plumes in stormy conditions: bubble populations and plume spatial distributions measured in the North Atlantic during the HiWINGS expedition.: **H Czerski**, A Matei, S Gunn, I M Brooks, R Al-Lashi
- 1430h **AI33A-03** Entrained bubble populations and their influence on the turbulence, dissipation, and stress beneath breaking and non-breaking waves: **A W Smith**, B K Haus, R Stanley

- 1445h **AI33A-04** Modeling the effects of sea spray on surface wind stress under hurricane conditions: **R Richardson**, M A Bourassa, S L Morey
- 1500h **AI33A-05** Turbulent transport of spray droplets in the vicinity of moving surface waves: **D H Richter**, A Dempsey, P P Sullivan
- 1515h **AI33A-06** Effects of Sea Spray on Air-Sea Fluxes and the Wave Boundary Layer in High Winds: **B W Barr**, S Chen
- 1530h **AI33A-07** An experimental study of the effects of wind on spray droplets generated by raindrop impact onto water surface: **X Liu**, C Liu, J H Duncan
- 1545h **AI33A-08** Air-Sea interaction of methane and nitrous oxide in shallow brackish inshore waters of the Baltic Sea: **M Lundevall Zara**, V Bruchert

COASTAL AND ESTUARINE PROCESSES

CP33A 9, UL

Wednesday 1400h

Interdisciplinary Approaches for Understanding Coastal Ocean Carbon and Biogeochemical Processes and Budgets I (*joint with OB, OC, OM*)

Moderators: **Holger Brix**, Helmholtz-Zentrum Geesthacht; **Raymond Najjar**, The Pennsylvania State University

- 1400h **CP33A-01** Factors influencing pH and pCO₂ variability in seagrass and adjacent nearshore habitats across climate zones: **A T Lowe**, A Reynolds, R Collin, W Miller
- 1415h **CP33A-02** Glider-Based Observations Reveal Seasonal pH and Aragonite Saturation State Variability in Coastal U.S. Mid-Atlantic Shellfishery Management Zones: **E Wright-Fairbanks**, G Saba, B Chen, W J Cai, T N Miles
- 1430h **CP33A-03** Empirical Models for Estimating the Carbonate System Off the Northeastern US from Basic Hydrographic Data: An MLR Approach: **K McGarry**, S Siedlecki, S R Alin, J Salisbury II
- 1445h **CP33A-04** The northern European shelf as increasing net sink for CO₂: **M Becker**, A Olsen, A Fransson, P Landschuetzer, A Omar, G J Rehder, C Rödenbeck, I Skjelvan
- 1500h **CP33A-05** Intertidal regions changing coastal alkalinity: The Wadden Sea-North Sea tidally coupled bioreactor: **Y G Voynova**, W Petersen, M Gehrung, S Aßmann, A King
- 1515h **CP33A-06** Organic Alkalinity Distributions and Characteristics in Two Gulf of Maine Estuaries: **C W Hunt**, R H Byrne, X Liu, J Salisbury II
- 1530h **CP33A-07** Shell Day- regional collaboration and citizen science further understanding of coastal acidification: **C Bastidas**, P R Gassett, J E Rheuban, K O'Brien-Clayton, M Liebman, C W Hunt, E J Turner, E Stancioff, E Silva
- 1545h **CP33A-08** Carbon and Nitrogen balances of the Long Island Sound Estuary: **P Vlahos**, M M Whitney, J R Mullaney, C Menniti, J Morrison

CP33B 10, UL

Wednesday 1400h

Processes and Management of Altered Estuaries and Deltas in the Era of Anthropocene I (joint with ME, MG)

Moderators: Guan-hong Lee, Inha University; Joe Carlin, California State University, Fullerton

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- 1400h **CP33B-01** Human Development Drives Global Estuary and Delta Loss: **N Schieder**, G H Lee, T C Jo, T M Dellapenna
- 1415h **CP33B-02** Climate and Human Induced Regime Shift of Suspended Sediment Concentration in the Yangtze Estuary: **D Fan**, B Jiang
- 1445h **CP33B-04** Along-channel Variation of Sediment Flux Mechanisms in a Shallow, Macrotidal Estuary with an Estuarine Dam: Geum Estuary, Korea: **S M Figueroa**, G H Lee

- 1515h **CP33B-06** What Happens when a Slow-moving Tropical Cyclone hits a Heavily Industrialized Delta/Estuary with Subsidence Enhanced Legacy Contaminant Accumulation: Impact of Hurricane Harvey on Galveston Bay, Northern Gulf of Mexico: **T M Dellapenna**, V Bartlett, J Du, K Park, M E Al Mukaimi, A H Knap, M Bell
- 1530h **CP33B-07** Tidal elevation and land use impact early development in a restored Pacific Northwest tidal wetland: **C Janousek**, S Bailey, L Brophy
- 1545h **CP33B-08** Developing a Web-GIS Based Integrated Management System to Support Restoring Estuarine Circulation of the Geumgang Estuary in South Korea: **C H Lee**

CP33C 8, UL

Wednesday 1400h

The Inner Shelf: Impacts of Interconnected Processes I (joint with IS, OM, PS)

Moderators: Emily Lemagie; Melissa Moulton, Applied Physics Laboratory University of Washington

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- 1400h **CP33C-01** Submesoscale Dynamics over the Continental Shelf: Drivers and Implications for Across-Shelf Exchange: **A Kirincich**, P J Flament, V Futch
- 1415h **CP33C-02** Diapycnal mixing and turbulence dissipation over the Inner Shelf.: **J Becherer**, J Moum, J A Colosi, J A Lerczak, J A MacKinnon, J McSweeney, A Palóczy, A F Waterhouse
- 1430h **CP33C-03** Along-coast Variability of Internal Wave Energy on the Inner Shelf: **J McSweeney**, J A Lerczak, J A Barth, J A MacKinnon, A F Waterhouse, N Kumar, J Moum, J Becherer, J A Colosi
- 1445h **CP33C-04** Spatiotemporal variations of cross-shelf exchanges in the Gulf of Maine: **H Xue**, Z Wang, D Li, A Thomas, P Yund
- 1500h **CP33C-05** Spatio-temporal variability of cross-shelf transport in Mississippi Bight: **M K Cambazoglu**, J D Wiggert, M S Dinniman, B N Armstrong
- 1515h **CP33C-06** Observations of nonlinear momentum fluxes over the inner shelf: **T Connolly**, S J Lentz
- 1530h **CP33C-07** Transport and Mixing by Shoaling Waves of Elevation: **N L Jones**, G N Ivey, M Rayson, C Bluteau, S M Kelly
- 1545h **CP33C-08** Transient Rip-Current Exchange Across the Inner-Shelf Modulated by Diurnal Heating/Cooling.: **D J Grimes**, F Feddersen, N Kumar, S N Giddings

CHEMICAL TRACERS, ORGANIC MATTER AND TRACE ELEMENTS

CT33A 5B, UL

Wednesday 1400h

Controls on Trace Metal Biogeochemistry and Physicochemical Speciation in Seawater II (*joint with CP, OB*)

Moderators: **Emily Estes**, University of Delaware;
Veronique Oldham, University of Rhode Island

- 1400h **CT33A-01** Trace Metal Behavior and Size Fractionation Along the River Water – Seawater Mixing Gradient in the Amazon River Estuary and Plume: **A Koschinsky**, L de Carvalho, M Gledhill, A Hollister, C H Krause, A B Schneider, I Velasquez
- 1415h **CT33A-02** Contrasting behaviours of dissolved organic-iron, aluminium and phosphorus fractions in the Amazon Estuary: **M Gledhill**, A Hollister
- 1430h **CT33A-03** Dissolved Concentrations and Organic Speciation of Cu in the Amazon River Estuary and Mixing Plume: **A Hollister**, M Gledhill, A Koschinsky
- 1445h **CT33A-04** Organic Copper Speciation in the North Pacific: **L Babcock-Adams**, J LI, M Acker, L Valentin-Alvarado, R M Bundy, D Repeta
- 1500h **CT33A-05** Evidence for the Production of Copper-complexing Ligands by Marine Phytoplankton in the Canadian Arctic and Subarctic NE Pacific: **R L Nixon**, A Ross, J George, S L Jackson, J T Cullen
- 1515h **CT33A-06** The Organic Ties of Iron - *Organic Iron speciation related to humic substances and microbial interactions*: **H Slagter**, L M Laglera, M Gledhill, C P D Brussaard, C Sukekava, L J Gerringa
- 1530h **CT33A-07** Biogeochemical speciation of cryospheric trace metals at the seawater-surface interface of the Arctic Ocean: **L Jensen**, N T Lanning, R M Sherrell, J N Fitzsimmons
- 1545h **CT33A-08** Biogeochemical controls on the mercury cycle in the Arctic Ocean: **A T Schartup**, L E Heimbuerger-Boavida, A Soerensen, J Sonke, E M Sunderland

EDUCATION, OUTREACH AND POLICY

ED33A 14B, Mezzanine

Wednesday 1400h

Changing the Culture: Preparing a Diverse and Inclusive Ocean Sciences Workforce I (*joint with SI*)

Moderators: **Lisa White**, University of California Berkeley; **Corey Garza**, California State University, Monterey Bay; **Sharon Cooper**, Lamont Doherty Earth Observatory; **Jonathan Lewis**, Indiana University of Pennsylvania Main Campus; **Sonya Legg**, Princeton University; **Mona Behl**, Texas A & M University College Station

- 1400h **ED33A-01** Understanding Experiences of Women in Marine Science: Results of an initial pilot study: **L Williams**, T Dalton
- 1415h **ED33A-02** Exciting interest in physics and geophysics among young women of color through the medium of dance.: **L J Pratt**, F C Solomon, T Wright, S Vandana, M Steele, D Champion
- 1430h **ED33A-03** Sea(ing) a Change in the Demographics of Oceanographic Research in South Africa: **K Altieri**, I J Ansorge, F Sarah, J Hermes
- 1445h **ED33A-04** Python and Open-Source Software for Developing Countries: A Catalyst for Change: **P Martin**, C E Buckingham, B K Arbic
- 1500h **ED33A-05** A place-based, oceanography summer bridge course as part of an academic and curricular pathway from 2YCs to a 4YC for Native Hawaiian and other underrepresented students in the geosciences: **M Guidry**, R Alegado, M A McManus, A C Castillo-Trujillo, H H Kane, M Hatta, V Sindorf, K K Mayfield, M Grand
- 1515h **ED33A-06** Increasing Undergraduate Participation in the Geosciences Through the Partnership of University Housing and Academics: **W Jones**, C R Benitez-Nelson, K McNeal
- 1530h **ED33A-07** Embedded in an Oceanographic Research Lab: A Partnership with a K-12 Teacher to Bring Diversity to Ocean Sciences.: **S Strong**, A Michel, J Fenwick
- 1545h **ED33A-08** Ocean Discovery Institute's Scientist-in-Residence Program: A model of how science mentorship can prepare underrepresented minority students for careers in ocean science: **J Barkan**, C Martinez, J G John

HIGH LATITUDE ENVIRONMENTS

HE33A 11A, UL

Wednesday 1400h

Variability of High-Latitude Ocean/Sea Ice/Atmosphere Interactions and Associated Convection in a Changing Climate II (*joint with AI, PC, PL*)

Moderators: **Kent Moore**, University of Toronto; **Kjetil Våge**, Bjerknes Centre for Climate Research

- 1400h **HE33A-01** On the effect of a mid-ocean ridge on the sensitivity of dense water formation and marginal sea dynamics to atmospheric forcing: A conceptual model of the Nordic Seas: **S L Ypma**, M A Spall, E Lambert, S Georgiou, J Pietrzak, C A Katsman
- 1415h **HE33A-02** Tracing overflow water from the origin in the Nordic Seas to the Greenland-Scotland Ridge: **A Brakstad**, K Våge, G Gebbie, E Jeansson
- 1430h **HE33A-03** Lagrangian Perspective on the Origins of Denmark Strait Overflow: **A Saberi**, T W N Haine, R Gelderloos, F de Jong, H H Furey, A S Bower
- 1445h **HE33A-04** Sub-Mesoscale Modelling of the Labrador Sea: **C W Pennelly**, P G Myers
- 1500h **HE33A-05** The value of sustained ocean observations for sea-ice predictions in the Barents Sea: **M Bushuk**, X Yang, M Winton, R Msadek, M Harrison, A J Rosati, R Gudgel
- 1515h **HE33A-06** Mesoscale and Submesoscale Sea Ice-Ocean Interactions in the Arctic Ocean: **G Manucharyan**, A F Thompson
- 1530h **HE33A-07** Response of submesoscale fronts to storms in the Antarctic marginal ice zone: **S Swart**, M du Plessis, L C Biddle, S A Nicholson, A F Thompson, I S Giddy, M Mohrmann, T Linders
- 1545h **HE33A-08** Linkage of the Physical Environments in the Northern Antarctic Peninsula Region to the Southern Annular Mode and the Implications for Marine Ecosystem Production: **E E Hofmann**, Z Zhang, M S Dinniman, C Reiss, W O Smith Jr, M Zhou

MARINE ECOLOGY AND BIODIVERSITY

ME33A 7B, UL

Wednesday 1400h

From Microbes to Mammals: Using Environmental DNA Sequencing to Advance Marine Biomonitoring and Management I (*joint with CP*)

Moderators: **Holly Bik**, University of California Riverside; **Susanna Theroux**, Southern California Coastal Water Research Project

- 1400h **ME33A-01** Investigating Patterns of Larval Fish Community Dynamics Over the Past Two Decades Using a Novel Application of Environmental DNA Metabarcoding: **Z Gold**, D Kacev, P H Barber, K D Goodwin, L Thompson, A Thompson
- 1415h **ME33A-02** Biofilm Assemblages in Early Stage Biofouling from Temperate Marine Sites in Australia, Investigated with eDNA Metabarcoding: **J Shimeta**, S Tyrrell, M Carve, R Van Gelderen, R Moore, T T H Van
- 1430h **ME33A-03** Designing Environmental DNA Biotic Surveys for the Deep Seafloor: **E Goetze**, O Laroche, O Kersten, C R Smith
- 1445h **ME33A-04** Exploration of eDNA Analysis to Assess Endangered Sea Turtles: **K Harper**, K D Goodwin, L Harper, E LaCasella, A Frey, P H Dutton
- 1500h **ME33A-05** Feeding Habits and Novel Prey of Larval Fishes in the San Francisco Estuary as Revealed by Gut DNA Metabarcoding: **M J Jungbluth**, W Kimmerer
- 1515h **ME33A-06** Rules of thumb for zooplankton taxonomic assignment using metabarcoding: **P Pappalardo**, K Hanson, A Collins, M Boyle, K Osborn
- 1530h **ME33A-07** Species Composition and Diversity Patterns across the Salish Sea: Multiple Targeted Metabarcoding Analyses of Zooplankton and eDNA in Relation to Chemical Conditions: **C A Stepien**, J E Keister, C Paight, E Slikas, E L Norton
- 1545h **ME33A-08** Uncovering a Decade of Ecological Change in Monterey Bay Through eDNA Metabarcoding: **K Pitz**, D Northcott, R Michisaki, K Walz, F Chavez

ME33B 7A, UL**Wednesday 1400h****Using Satellite Remote Sensing and in Situ Data to Evaluate Marine Biodiversity and Ecosystems II** (*joint with IS, OB, SI*)**Moderators:** **Gabrielle Canonico**, U.S. Integrated Ocean Observing System; **Frank Muller-Karger**, University of South Florida Tampa

- 1400h **ME33B-01** Fore-C: Ecological forecasts of coral disease to create opportunities for timely, effective management: **M Donahue**, J Caldwell, S F Heron, A Greene, E F Geiger, G Liu, J L De La Cour, T D Ainsworth, W Leggat, T Moriarty, L J Raymundo, C M Eakin
- 1415h **ME33B-02** Predicting depth-varying thermal stress on corals in the tropical Pacific using ocean surface variables and in situ temperature observations: **T A Schramek**, M Merrifield, P Colin, B D Cornuelle, G Gopalakrishnan, S Rowley, E Terrill
- 1430h **ME33B-03** Satellites, Servers, and Spatial Overlay: A multifaceted workflow for investigating spatial determinants of Coral Bleaching Trends across the Pacific: **R Neuhausler**, L Larsen, C M Eakin
- 1445h **ME33B-04** EVALUATING IN SITU AND SATELLITE-BASED SEA SURFACE TEMPERATURES AND CORAL-SYMBIONT COMMUNITY DYNAMICS IN LA PARGUERA, PUERTO RICO: **A M Gomez**, K McDonald, K Shein, S DeVries, M Carlo, R Armstrong, W J Hernandez, R Cuning
- 1500h **ME33B-05** NeMO-Net – The Neural Multi-Modal Observation & Training Network for Global Coral Reef Assessment: **V Chirayath**, A S X Li, J L Torres-Perez, M Segal-Rosenhaimer, S Purkis, J van den Bergh
- 1515h **ME33B-06** CEOS Ocean Variable Enabling Research & Applications for GEO (COVERAGE): Implementation of a Prototype Big Data Platform Providing Enhanced Access to Inter-agency Satellite Data Products in Support of MBON: **V M Tsontos**, E J Lindstrom, J Vazquez, T Huang, M Chin
- 1530h **ME33B-07** Remotely Sensing Phytoplankton Size Structure in the Red Sea: **J A Gittings Sr**, R J W Brewin, D E Raitsos, M Kheireddine, M Ouhssain, B H Jones, I Hoteit
- 1545h **ME33B-08** Anticipating Illegal Maritime Activities from Anomalous Multiscale Fleet Behaviors Measured from Space: **J R Watson**, J Woodil

OCEAN BIOLOGY AND BIOGEOCHEMISTRY**OB33A 3, UL****Wednesday 1400h****From the Twilight Zone to the Troposphere: Ocean Optics Applications to Biogeochemical Cycling in and Through the Surface Ocean I** (*joint with AI, IS, PI*)**Moderators:** **Norman Nelson**, University of California Santa Cruz; **Margaret Estapa**, Skidmore College

- 1400h **OB33A-01** What can polarized oceanographic lidar reveal about ocean particle assemblages? Insights from a mesoscale coccolithophore bloom.: **B Collister**, R C Zimmerman, V J Hill, C I Sukenik, W M Balch
- 1415h **OB33A-02** Multi-Year Seasonal Trends between Sea Ice, Chlorophyll Concentration, and Clean Marine Aerosol Optical Depth in the Bellingshausen Sea: **S Dasarathy**, J Kar, J L Tackett, S D Rodier, X Lu, M Vaughan, T Toth, C R Trepte, J S Bowman
- 1430h **OB33A-03** An Evaluation of Optically-Derived Estimates of Phytoplankton Productivity and Carbon Flux in the North Pacific and North Atlantic Oceans: **J Fox**, K Halsey, M Behrenfeld, J Graff, N Haentjens, A Chase, G Bourdin, L Karp-Boss, E Boss, S J Kramer
- 1445h **OB33A-04** Diurnal Rhythms in Optical Observations from a Profiling Wirewalker to Estimate Productivity During EXPORTS: **M Feen**, M Omand
- 1500h **OB33A-05** Evaluating holotomography as a new way to measure the refractive index of phytoplankton: **C Poulin**, X Zhang
- 1515h **OB33A-06** Modeling Phytoplankton Pigments on Global to Local Scales Using Hyperspectral Optics: **S J Kramer**, D Siegel
- 1530h **OB33A-07** Production and respiration rates estimated from in situ diel measurements of O₂/Ar and particle concentrations and in vitro measurements of ¹⁴C and ¹⁸O across a trophic gradient in the North Pacific: **F Henderikx Freitas**, P Quay, A E White
- 1545h **OB33A-08** Biogeochemically-contrasting phytoplankton populations of the Eastern and Western Subarctic Atlantic: **T Westberry**, S Doney, M Behrenfeld

OB33B 2, UL**Wednesday 1400h****Life, Material Transport, and Element Cycling in the Hadal Realm I** (*joint with IS, ME, MM*)**Moderators: Ronnie Glud**, Southern Danish University;
Doug Bartlett, University of California, San Diego

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- 1400h **OB33B-01** Deposition and early diagenesis of organic material in Hadal trenches.: **R N Glud**, B Thamdrup, M Zabel, M Larsen, A Glud, H Sanei, R Turnewitsch, K Oguri, A J Jamieson, H A Stewart, A A Rowden, F Wenzhofer
- 1415h **OB33B-02** Controls on microbial community composition in hadal trench sediments: **C Schaubberger**, B Thamdrup, M Middelboe, B Trouche, S Arnaud Haond, L Maignien, R N Glud
- 1430h **OB33B-03** Comparisons of Microbial Life in the Kermadec and Mariana Trenches: **D Bartlett**
- 1445h **OB33B-04** Pressure-Retaining Sampler and High-Pressure Systems to Study Deep-Sea Microbes Under *In Situ* Conditions: **M Garel**, P Bonin, S Martini, S Guasco, M Roumagnac, N Bhairy, F Armougom, C Tamburini
- 1500h **OB33B-05** Response of Epipelagic Marine Microorganisms to High Hydrostatic Pressure: “Marine Snow” Experiments in a Rotating Pressure Tank: **P Stief**, M Larsen, R N Glud
- 1515h **OB33B-06** Distribution and Drivers of Benthic Biodiversity in Hadal and Abyssal Realms through eDNA based Inventories: **C de Vargas**, S Arnaud Haond, M I Brandt, B Trouche, N Henry, A Atteia, J Poulain, P Wincker, M Zabel, F Wenzhofer, R N Glud, D Zeppilli
- 1530h **OB33B-07** Ecology of meiofauna of the Atacama Trench – bathymetric variation and comparison with the less productive Kermadec Trench: **D Zeppilli**, M Shimabukuro, D Leduc, M Zabel, R N Glud, F Wenzhofer
- 1545h **OB33B-08** Hadal Bait-Attending Fish of the Atacama Trench (Western South America) Including New Snailfish (Liparidae) Species: **T Linley**, M E Gerringer, A Scott-Murray, J Weston, H Ritchie, A J Jamieson

OB33C Poster Hall C-D; eLightning Theater**Wednesday 1400h****The Role of Plankton Physiology and Ecology for Ocean Biogeochemistry I eLightning** (*joint with ME, PC*)**Moderators: Friederike Prowe**, GEOMAR Helmholtz Centre for Ocean Research Kiel; **Judith Hauck**, Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research

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- OB33C-01 eLIGHTNING** Influence of microbial and molecular diversity on the storage of marine dissolved organic matter: Insights from a modelling perspective: **S Lennartz**, A Mentges, B Blasius, C A Deutsch, D P Keller, A Oschlies, C Feenders, T Dittmar
- OB33C-02 eLIGHTNING** Dissolved Organic Carbon Accumulation and Export Potential in the Western North Atlantic: **N Baetge**, J Graff, M Behrenfeld, C A Carlson
- OB33C-03 eLIGHTNING** Phospholipid turnover rates suggest that bacterial growth rates in the open ocean are systematically underestimated: **K J Popendorf**, M Koblížek, B A Van Mooy
- OB33C-04 eLIGHTNING** Tracking single cells undergoing vertical migrations: Connecting Cell Biology to Ocean Ecology: **M Prakash**, D Krishnamurthy, D Mion, A G Larson, H Li, E Li
- OB33C-05 eLIGHTNING** Uncoupling of Seasonal Variations between Phytoplankton Chlorophyll *a* and Production in the East China Sea: **X Liu**, E Laws, Y Xie, L Wang, L Lin, B Huang
- OB33C-06 eLIGHTNING** Modeling photosynthesis and the exudation of DOM in the subtropical oceans: **Z Wu**, M Follows, S Dutkiewicz
- OB33C-07 eLIGHTNING** The biogeography of subsurface chlorophyll maxima in the Southern Ocean: **K A Baldry**, N A Hill, P G Stratton, P W Boyd
- OB33C-08 eLIGHTNING** Spatial variability of iron and light co-limitation in the Southern Ocean during the Austral summer.: **C R Vives**, C Schallenberg, P W Boyd, J Llort, P G Stratton
- OB33C-09 eLIGHTNING** Assessment of phytoplankton community composition and cobalamin nutritional status using protein abundance measurements on the Scotian Shelf and Slope: **E Rowland**, T Kitching, E Devred, J LaRoche, E M Bertrand
- OB33C-10 eLIGHTNING** Biogeochemical Implications Of Diel Changes In Migratory Copepod Physiology: **A E Maas**, L Blanco-Bercial, N McNamara-Bordewick, B L Nunn, E Timmins-Schiffman, A M Tarrant

OB33C-11 *eLIGHTNING* A trait-based approach to describe the elemental stoichiometry of marine phytoplankton and the regulation of the biological pump: **G Hagstrom**, S Levin, C Garcia, G L Britten, F Primeau, W Wang, A Martiny

OCEAN CHANGE: ACIDIFICATION AND HYPOXIA

OC33A 11B, UL

Wednesday 1400h

The Evolving Ocean Carbon Sink: Processes and Impacts I (*joint with AI, OB, PC*)

Moderators: **Wolfgang Koeve**, GEOMAR Helmholtz Centre for Ocean Research Kiel; **Nicole Lovenduski**, University of Colorado

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- 1400h **OC33A-01** Seasonal Marine Carbon System Processes in an Arctic Coastal Landfast Sea Ice Environment Using an Innovative Underwater Sensor Platform: **P Duke**, B Else, L A Miller, A R Sastri, S Gonski, S Jones, S Marriott, R K Dewey, H Thomas
- 1415h **OC33A-02** Observing recent trends in the carbon cycle of the Northeast Pacific: **A C Franco**, D Ianson, T Ross
- 1430h **OC33A-03** Multi-decadal variability of anthropogenic and natural carbon in central Labrador Sea: **L Raimondi**, D T S Tanhua, K Azetsu-Scott, I Yashayaev, D Wallace
- 1445h **OC33A-04** The imprint of the Amazon River on the air-sea CO₂ flux in the Tropical North Atlantic Ocean: key drivers and spatiotemporal variability: **D Louchard**, N Gruber, M Munnich
- 1500h **OC33A-05** How is the Ocean Carbon Reservoir Filled?: **X Davila**, G Gebbie, A Brakstad, S Lauvset, A Olsen
- 1515h **OC33A-06** Decadal variability of the ocean carbon sink: **T J DeVries**, C Le Quere, O Andrews, J Hauck, T Ilyina, P Landschutzer, A Lenton, I D Lima, M Nowicki, J Schwinger, R Séférian
- 1530h **OC33A-07** Forced mechanisms of decadal variability in the ocean carbon sink: **G A McKinley**, A R Fay, Y Eddebbar, L Gloege, N S Lovenduski
- 1545h **OC33A-08** Air-Sea Disequilibrium Enhances Glacial Ocean Carbon Storage: **S Khatiwala**, A Schmittner, J Muglia

OCEAN MODELING

OM33A 5A, UL

Wednesday 1400h

Advances in Ocean Data Assimilation, Forecasting, and Reanalysis IV (*joint with IS, PL, PS*)

Moderators: **Ibrahim Hoteit**, King Abdullah University of Science and Technology; **Zhijin Li**, NASA Jet Propulsion Laboratory; **Aneesh Subramanian**, University of Colorado at Boulder

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- 1400h **OM33A-01** GFDL's SPEAR prediction system: MOM6 initialization and bias correction with data assimilation: **F Lu**, A J Rosati, M Harrison, T L Delworth, W Cooke, L Jia
- 1415h **OM33A-02** Addressing Uncertainties in Global Ocean Ensembles: **P G Thoppil**, P J Hogan, O M Smedstad, C D Rowley
- 1430h **OM33A-03** Gaussian approximations in data assimilation: **M Morzfeld**, D Hodyss
- 1445h **OM33A-04** Generalized Four-Dimensional Variational Data Assimilation for Ocean Modeling: **M Carrier**, H Ngodock, O M Smedstad, I Souopgui
- 1500h **OM33A-05** Using dual numbers for automatic differentiation of complex functions -- a simple way to create data assimilation code for coupled models.: **J P Mattern**, C A Edwards, C N Hill
- 1515h **OM33A-06** MPAS-Ocean and the AOT Algorithm: A Novel Data Assimilation Technique Applied to Ocean Models: **E Carlson**, L Van Roekel, H C Godinez, M R Petersen
- 1530h **OM33A-07** A polynomial chaos framework for probabilistic predictions of storm surge events: **M Iskandarani**, C Dawson, P Sochala, C Chen
- 1545h **OM33A-08** Non-localized particle flow filters for ocean data assimilation: **P J van Leeuwen**, M A Pulido, C C Hu

OM33B 4, UL

Wednesday 1400h

Inland-Coastal Model Coupling Using a Community-Based Approach I (*joint with CP*)

Moderators: **Patrick Burke**; **Trey Flowers**, NOAA/NWS Office of Water Prediction, National Water Center

- 1400h **OM33B-01** A flexible infrastructure for coastal ocean and inland hydrology models coupling: **S Moghimi**, E P Myers III, S V Vinogradov, B Trimble, Y J Zhang, F Ye, J Calzada, A J Van der Westhuysen, Y Funakoshi, R Bakhtyar, K Maitaria, P Velissariou, A Abdolali, D Rosen, C Lemmen
- 1415h **OM33B-02** Characterizing Compound Coastal-Riverine Behavior along the U.S. East Coast using a Coupled Hydrologic-Hydrodynamic Model: **R Bakhtyar**, K Maitaria, P Velissariou, B Trimble, T Flowers, S Moghimi, A Abdolali, H Mashriqui, A J Van der Westhuysen, G R Aggett, E P Clark
- 1430h **OM33B-03** Coupled hydrological-hydrodynamic large-scale simulation: **W Huang**, Y J Zhang, F Ye, H Yu, S Moghimi, E P Myers III
- 1445h **OM33B-04** Effect of model setup complexity on hydraulic simulations in low-gradient watersheds: Application in the Vermilion River Basin, south Louisiana.: **E H Habib**, H Saad, R Miller
- 1500h **OM33B-05** Integrating WRF Hydro into the Coupled Ocean-Atmosphere-Wave-Sediment Transport (COAWST) Modeling System: Application to Hurricane Florence (2018): **J C Warner**, J B Zambon, R He, Z Defne, C Hegermiller
- 1515h **OM33B-06** Modeling Compound Flooding from Hurricane Florence Using ADCIRC: **B O Blanton**, J Ratcliff, Y Feng, R Luettich
- 1530h **OM33B-07** Integrated Coastal Urban Flood Modeling, Applications, Lessons Learned, Future Directions: **T C Massey**, C Downer, N R Pradhan, A Tavakoly, D Loney, A S Tritinger
- 1545h **OM33B-08** Networking solutions to data-model coupling at the land-sea interface: **A Myers-Pigg**, N D Ward, J Tagestad, J Stegen, D E Butman, C A Geffen, V Bailey
- 1400h **PC33A-01** Glacial overturning circulation structure and Agulhas Leakage from Nd isotope and K/Ar measurements in the Cape Basin: **S Hines**, A M Franzese, C N Mwinde, S L Goldstein, C D Charles, I R Hall, S R Hemming
- 1415h **PC33A-02** Role of Antarctic sea ice on deep ocean circulation and ventilation in glacial-interglacial climates: **S O Gregorio**, L P Nadeau, R M Ferrari, J M Lauderdale
- 1430h **PC33A-03** Multiple proxies needed to reconstruct the Atlantic Water Masses and AMOC during the Last Glacial Maximum: **Z Liu**, S Gu, D Oppo, J Lynch-Stieglitz, A Jahn, J Zhang, L Wu
- 1445h **PC33A-04** Warming or cooling: North Atlantic subsurface temperature response controlled by effective freshwater input in Heinrich events: **Z Liu**, C He, J Zhu, J Zhang, S Gu, B L Otto-Bliesner, E C Brady, C Zhu, Y Jin, J Sun
- 1500h **PC33A-05** North Atlantic radiocarbon constraints on ocean circulation over the last deglaciation: **A Burke**, J W B Rae, R Greenop, P J Reimer, T Heaton
- 1515h **PC33A-06** Indo-Pacific Control on Ocean Overturning Across Climates: **E R Newsom**, J F Adkins, E Galbraith, A F Thompson
- 1530h **PC33A-07** Mechanisms and Impacts of a Partial AMOC Recovery Under Enhanced Freshwater Forcing: **M D Thomas**, A V Fedorov
- 1545h **PC33A-08** Air-sea interaction amplifies the AMOC response to global warming: **O A Garuba**, W Weijer, P J Rasch

PHYSICAL OCEANOGRAPHY: MESOSCALE AND LARGER

PL33A 15A, Mezzanine

Wednesday 1400h

Tropical Indo-Pacific Ocean Circulation and Climate Variations II (*joint with AI*)

Moderators: **Jing Wang**, Institute of Oceanology, Chinese Academy of Sciences; **William Dewar**, Florida State University

- 1400h **PL33A-01** Increased variability of eastern Pacific El Niño under greenhouse warming: **W Cai**, G Wang, A Santoso, L Wu, B Dewitte, K Takahashi, M J McPhaden
- 1415h **PL33A-02** Equatorward Western Boundary Transport From the South Pacific: Glider Observations, Dynamics, and Consequences: **W S Kessler**, H G Hristova, R E Davis

PAST, PRESENT AND FUTURE CLIMATE

PC33A 1A, UL

Wednesday 1400h

Long-Term Changes of the Deep-Ocean Overturning Circulation: Past and Future I (*joint with HE, OM, PL*)

Moderators: **Wei Liu**, Yale University; **Malte Jansen**, The University of Chicago

- 1430h **PL33A-03** Expansion of the Indo-Pacific warm pool and the Madden Julian Oscillation (MJO): **R M Koll**, P Dasgupta, M J McPhaden, T Suematsu, C Zhang, D Kim
- 1445h **PL33A-04** Subseasonal to interannual flow variability at the southern entrance of the Solomon Sea by end-point moorings and bottom pressure observations: **U Send**, A Anutaliya, J Sprintall, J McClean, M J Lankhorst, J Koelling
- 1500h **PL33A-05** Dynamics of Gap-leaping Western Boundary Currents with Throughflow Forcing: **C W McMahan**, J Kuehl
- 1515h **PL33A-06** Dancing with ENSO: A decade of volume transport in the western tropical North Pacific from a numerical state estimate: **M Schonau**, D L Rudnick, G Gopalakrishnan, B D Cornuelle, B Qiu
- 1530h **PL33A-07** Imprint of Intrinsic Oceanic Variability on Interannual Variability in the Southwest Tropical Pacific: **S E Cravatte**, G Serazin, C Menkes, T Penduff
- 1545h **PL33A-08** Observed Deep-reaching Signatures of the Madden-Julian Oscillation in the Ocean Circulation of the Western Tropical Pacific: **L Song**, Y Li, C Liu, F Wang, J Wang

PHYSICAL OCEANOGRAPHY: MESOSCALE AND SMALLER

PS33A 15B, Mezzanine

Wednesday 1400h

Physical Processes Governing the Distribution and Transport of Dispersed Particles in the Ocean II (joint with CP, IS, PL)

Moderators: **Stefano Aliani**, Institute of Marine Sciences CNR; **Tracy Mandel**, Stanford University; **Erik van Sebille**, Universiteit Utrecht

- 1400h **PS33A-01** Global Plastic Waste Input into the Ocean between 1990-2015: **C Laufkotter**, K Lang, V Onink, M Vogt
- 1415h **PS33A-02** The increased Stokes drift of inertial, finite-size floating plastic: **R Calvert**, C Whittaker, A Raby, A G L Borthwick, M L McAllister, T van den Bremer
- 1430h **PS33A-03** Oil spill scenarios in the western gulf of Mexico: **P Perez-Brunius**, J Sheinbaum, M J Olascoaga, F J Beron-Vera, P Miron, K Kotzakoulakis, J A Lara, J Rodriguez Outerelo, P García-Carrillo, J Zavala-Hidalgo, S N Estrada-Allis, J M Azevedo Correia de Souza, J Jouanno, A Maslo

- 1445h **PS33A-04** Transport of Microparticles and Microplastics in San Francisco Bay and Adjacent National Marine Sanctuaries: **R Holleman**, M Sedlak, R Sutton, C M Rochman
- 1500h **PS33A-05** Modeling the Influence of Turbulent Vertical Mixing and Polymer Density on Microplastic Distribution and Deposition in Lake Erie: **J Daily**, M J Hoffman
- 1515h **PS33A-06** Inverse modelling of microplastics sources and sinks in the Mediterranean by assimilating observational data and Lagrangian models: **M Kaandorp**, E van Sebille
- 1530h **PS33A-07** Wave effects on the dispersal of buoyant particles: **M DiBenedetto**, J R Koseff, N T Ouellette
- 1545h **PS33A-08** Modelling the accumulation and transport of microplastics by Arctic sea ice: **M A Morales Maqueda**, A Mountford

TUTORIAL TALKS

TT33A 1B, UL

Wednesday 1400h

Biogeochemical and Ecological Impacts of Boundary Currents in the Indian Ocean (joint with CP, PI)

TT33B 1B, UL

Wednesday 1430h

The Primary Importance of Secondary Circulation in Estuaries (joint with CP, PS)

TT33C 1B, UL

Wednesday 1500h

What Sets the Marine Nitrogen Inventory? (joint with NC, OB, PC)

TT33D 1B, UL

Wednesday 1530h

A Movable Feast: The Role of Microbes in the Response to the Deepwater Horizon Oil Spill in the Gulf of Mexico (joint with ME, MM, OB)

AIR-SEA INTERACTIONS

AI34A Poster Hall C-D**Wednesday 1600h**
**Fluxes and Physical Processes Near the Air-Sea Interface: Observations and Modeling
(Cosponsored by the AMS Committee on Air-Sea Interaction) V Posters (joint with CP, IS, PS)**
Moderators: David Ortiz-Suslow, Naval Postgraduate School; **Melanie Fewings**, Oregon State University

AI34A-2341 *POSTER* Improvement of Coupled Model Skills Through Bias Corrections with Additional Surface Boundary Layer Considerations: **S Gremes-Cordero**, C D Rowley, W E Rogers, Y Fan, J R Bidlot, L Cavaleri

AI34A-2342 *POSTER* Inner Shelf SPAR Buoy for Atmospheric Fluxes: **V Chamberlain**, J MacMahan, E B Thornton, T P Stanton, N J Williams, R Lind, P Jessen

AI34A-2343 *POSTER* Investigation of Sea-to-Air Transfer in Lakes: Testing HAB Particle Aerosolization Tank Methodology: **R Leibensperger III**, C Gaston, K J Pependorf, B K Haus, L E Brand, M Curcic, A Ortiz, M Sheridan

AI34A-2344 *POSTER* Measurements of whitecaps from ocean color and linkages to subsurface physics: **A Cifuentes-Lorenzen**, K L Randolph

AI34A-2345 *POSTER* Measuring ocean surface velocities with the KuROS and KaRADOC airborne near-nadir Doppler radars: a multi-scale analysis in preparation of the SKIM mission.: **L Marie**, F Collard, F Nouguier, D Hauser, F Boy, S Méric, C Peureux, B Chapron, A C Martin, P Dubois, C Donlon, T G D Casal, G Monnier, F Ardhuin

AI34A-2346 *POSTER* Measuring Turbulent Stress and TKE Profiles in the OSBL using an Autonomous Underwater Vehicle.: **A Fisher**, N Nidzieko

AI34A-2347 *POSTER* Microwave Remote Sensing of Ocean Surface Roughness, Whitecap Coverage, and Surface Wind Stress: Global Coverage and Extreme Conditions: **P A Hwang**

AI34A-2349 *POSTER* Observations of Bubble Plumes at Convergent Estuarine Fronts Leading to Enhanced Oxygenation and Degraded Acoustic Communications: **C L McNeil**, A Y Shcherbina, T M Litchendorf

AI34A-2350 *POSTER* Observations of mean and wave orbital flows in the upper centimeters of the ocean surface layer: **N Laxague**, C J Zappa

AI34A-2351 *POSTER* Ocean Surface Wave Effects on Explosive Cyclone with Atmosphere-Ocean-Wave Coupled Model: **Y Kita**, T Waseda

AI34A-2352 *POSTER* On the retrieval of bubble properties from space lidar and their impact on acoustic transmission loss: **D B Josset**, D W Wang, I Savelyev, M D Anguelova, R S Keiffer, J P Fabre

AI34A-2354 *POSTER* Radiometric observations of whitecaps at high spatial resolution: **M D Anguelova**

AI34A-2355 *POSTER* Recent advancement on NOAA NCEI Surface Marine Datasets and Services: **H M Zhang**, E Freeman, B Huang, C Liu, K Saha, T M Smith, S E Stevens, Z Wang, Y Zhang, X Zhao

AI34A-2356 *POSTER* Recent Updates on Coupled Atmosphere-Ocean-Ice-Wave Model at NOAA EMC: **J Meixner**, D Worthen, B Li, J Wang, L B Stefanova, A Mehra, S Saha, V Tallapragada, B G Reichl, S Griffies, A Adcroft, R Hallberg

AI34A-2357 *POSTER* Scaling the Bubble Penetration Depth in the Open Ocean during the Southern Ocean Gas Exchange Experiment 2008: **A Cifuentes-Lorenzen**, C J Zappa, K L Randolph, J Edson

AI34A-2358 *POSTER* Sea surface current effects on the growth of wind wave in laboratory experiment: **C Tanaka**, N Suzuki, N Takagaki, Y I Troitskaya, S Komori, A Kandaurov, M Vdovin, M Konda

AI34A-2359 *POSTER* Sea Surface Temperature and Air-Sea Interaction in the Mediterranean Region: Direct measurements, satellite estimates and model based assessments: **S Marullo**, A di Sarra, V Artale, M Bellacicco, J Pitarch, D Sferlazzo, C Yang, G Pace, R Santoleri

AI34A-2361 *POSTER* Shipboard Remote Sensing of Whitecap Lifetime: **H Potter**

AI34A-2362 *POSTER* The dissipation of energy beneath non-breaking waves.: **D Bogucki**, B K Haus, M barzegar Paiin Lamouki, M Shao

AI34A-2363 *POSTER* The Effects of Sea Spray on Oil Transport During High Wind Conditions: **G M Rivera Santiago**, W M Drennan, H Dai, B K Haus

AI34A-2364 *POSTER* The Impact of Ocean Surface Currents on Global Eddy Kinetic Energy via the Wind Stress Formulation: **Z Yu**, E J Metzger

AI34A-2365 *POSTER* The Response of the Boundary Layer to Weak Forcing: **M barzegar Paiin Lamouki**, D Bogucki, B K Haus, M Shao

AI34A-2367 *POSTER* Wave-wind interactions: Exploring swell wave influence on wind direction: **S T Gille**, M M Carranza, A B Villas Boas, M Konopliv

AI34B Poster Hall C-D

Wednesday 1600h

Wave Breaking in Ocean-Atmosphere Exchanges II Posters (*joint with OM, PS*)

Moderators: **Luc Deike**, Princeton University; **Ana Beatriz Villas Boas**, Scripps Institution of Oceanography

AI34B-2368 *POSTER* An Eulerian model for sea spray transport and evaporation: **F Veron**, L Mieussens

AI34B-2369 *POSTER* Bubble and droplet size distributions in breaking waves: **W Mostert**, S Popinet, L Deike

AI34B-2370 *POSTER* Bubble Entrainment and Distributions under Breaking Waves: **Q Gao**, G B Deane, L Shen

AI34B-2371 *POSTER* Combining laboratory experiments and ocean observations of breaking waves to estimate whitecap coverage with a spectral wave model: **A H Callaghan**, J Biblot

AI34B-2372 *POSTER* Estimating Bubble Plume Dynamics in Breaking Waves using the Thermal Signature of the Residual Foam: **C Chickadel**, N Masnadi, A T Jessup

AI34B-2373 *POSTER* Lagrangian transport by breaking deep-water surface waves: **N Pizzo**, L Deike, L Lenain, W K Melville

AI34B-2374 *POSTER* Measurement method of the wind stress at high wind speeds in laboratory experiments: **T Onishi**, N Takagaki, N Suzuki

AI34B-2375 *POSTER* Measuring and predicting sea floor pressure waves (Longuet-Higgins): **J Ayers**, K Richter, P F Wang

AI34B-2376 *POSTER* Modulation of sea surface roughness by oceanic fronts: The observed quadrupolar principle: **N Rascle**, B Chapron, F Nogueur, F Collard, F J Ocampo-Torres

AI34B-2377 *POSTER* Momentum flux budget across the air-water interface under strongly forced wind conditions: **K Yousefi**, F Veron, M P Buckley

AI34B-2378 *POSTER* Open Ocean Swell Dispersion from Moving Wind Fetches: **M C Hell**, A Ayet, B Chapron, S T Gille, L Baratgin

AI34B-2379 *POSTER* Parameterizing Thermodynamic Feedback of Sea Spray at the Air-Sea Interface: A small-scale perspective via Direct Numerical Simulations: **D H Richter**, T Peng

AI34B-2381 *POSTER* Sea Spray Generation by Collective Bubble Bursting: **B Néel**, L Deike

AI34B-2382 *POSTER* Stereo Video Observations of Breaking Waves in Storm Conditions: **M Malila**, J Thomson, O Breivik, B Scanlon, B Ward, A Benetazzo, F Bergamasco

AI34B-2383 *POSTER* Suppression of CO₂ efflux by gas bubbles under a hurricane: **J Liang**, E A D'Asaro, C L McNeil, Y Fan, R R Harcourt, B Yang, S R Emerson, P P Sullivan

AI34B-2384 *POSTER* Surface Tension Measurements of Seawater and its Organic Components: **H Valentine**, E McMahon

AI34B-2385 *POSTER* The Seasonal Cycle of Significant Wave Height: Local vs. Remote Forcing: **L Colosi**, A B Villas Boas, S T Gille

AI34B-2386 *POSTER* Transportation of Spume Droplets Produced from Breaking Mechanical Waves in the Presence of Wind: **R Jaquette**, F Veron

AI34B-2387 *POSTER* Typhoon observations from the surface buoys in the western North Pacific subtropical ocean: **K F Chang**, Y J Yang, M H Chang, S Jan, C Y Yang

AI34B-2388 *POSTER* West Coast Model-Observation Biases of Remotely-Forced Swell: **A Ho**, S Merrifield, E Terrill, J Behrens, R E Jensen, T Hesser

COASTAL AND ESTUARINE PROCESSES

CP34A Poster Hall C-D; eLightning Theater

Wednesday 1600h

Interdisciplinary Approaches for Understanding Coastal Ocean Carbon and Biogeochemical Processes and Budgets V eLightning (*joint with OB, OC, OM*)

Moderators: **Sophie Chu**, NOAA Pacific Marine Environmental Laboratory; **Holger Brix**, Helmholtz-Zentrum Geesthacht; **Raymond Najjar**, The Pennsylvania State University

CP34A-01 *eLIGHTNING* Accuracy of CO₂ System Calculations Improved with New Spectrophotometric K₂ Model for Seawater: **K M Schockman**, R Byrne

CP34A-02 *eLIGHTNING* Modelling Chemical Speciation in Seawater pH Buffers, Standard Seawater and Other Natural Waters: Applications and Uncertainties: **M P Humphreys**, A G Dickson, D R Turner, S L Clegg

CP34A-03 *eLIGHTNING* Quantifying the Impact of Nutrient Reductions on Dissolved Oxygen in the Chesapeake Bay: Has the Bay Become More Resilient?: **L T Frankel**, P St-Laurent, A J Bever, M A M Friedrichs

CP34A-05 *eLIGHTNING* A thirty-year retrospective analysis of Chesapeake Bay warming: **K Hinson**, P St-Laurent, M A M Friedrichs, R Najjar

CP34A-06 *eLIGHTNING* The role of off-shore advection for open ocean export in the Mauritanian upwelling region: **S Swoboda**, A Chennu, H Marchant, S Ahmerkamp, K Schwalfenberg, J H Hehemann, H Buck-Wiese, M H Iversen

CP34A-08 *eLIGHTNING* Biogeochemistry of the Mahaweli River, Sri Lanka: **E Shipley**, P Vlahos, R Chandrajith, P Wijerathna, S Senarathne

CP34A-09 *eLIGHTNING* Spatial variability of partial pressure of CO₂ in two subtropical estuarine channels with distinct levels of eutrophication (São Paulo, Brazil): **A B L Cavalcante**, B O Sutti, B C Pegoraro, V G Chiozzini, E D S Braga

CP34A-10 *eLIGHTNING* Seawater Carbonate Chemistry at the Flower Garden Banks National Marine Sanctuary in the Northwestern Gulf of Mexico Following Hurricane Harvey: **S Smith**, K E F Shamberger, L Barrett, M Hooper, J B Sylvan, A Correa, L Z Santiago-Vazquez, S W Davies

CP34A-12 *eLIGHTNING* Ocean Acidification and Carbonate System Geochemistry in the Arabian Gulf: **J W Murray**, C Izumi, J Al-Thani, O Yigiterhan, I S Al-Ansari, P Vethamony, C F Sorino, D Anderson

CP34B Poster Hall C-D

Wednesday 1600h

Human Populations and Influences in the Coastal Zone: Effects on Ocean and Human Health (OHH) V Posters (*joint with MM, SI*)

Moderators: **Henrietta Edmonds**, National Science Foundation; **Frederick Tyson**, National Institute of Environmental Health Sciences

CP34B-1223 *POSTER* A persistent benthic *Lyngbya wollei* bloom in Lake Wateree SC: toxin, inventories, and fates.: **G Scott**, J Ferry, M L Smith, S P Putnam, T Metz, T J Shaw

CP34B-1224 *POSTER* DEVELOPMENT OF AN INTEGRATED COMMUNITY ENGAGEMENT STRATEGY FOR OCEAN AND HUMAN HEALTH ISSUES ASSOCIATED WITH HABs, MICROBES AND CONTAMINANTS OF EMERGING CONCERN: **D E Porter**, G Scott, G Bullerjahn, D Friedman, H Kelsey, M Parsons, M Richlen, P A Sandifer, J Stegeman, H Triezenberg

CP34B-1225 *POSTER* Elucidating the final step of domoic acid biosynthesis: **M Thukral**, A E Allen, S McKinnie, B S Moore, J Manera

CP34B-1226 *POSTER* HARMFUL ALGAL BLOOM SPECIES ASSOCIATED WITH HYPOXIA IN LONG ISLAND SOUND (NY) DURING SUMMER, 2019: **D Greenfield**

CP34B-1227 *POSTER* Marine and Freshwater Algal Toxins Co-occur at the Land-Sea Interface in Coastal California: **M Roethler**, M D A Howard, D A Caron, R M Kudela, K Negrey, A O Tatters, J Smith

CP34B-1228 *POSTER* Nutrient dynamics of emergent Harmful Algal Bloom species of concern in Maryland's coastal ocean waters: **M Ross**, J Wolny, D Taillie, C Wazniak, J M O'Neil

CP34B-1229 *POSTER* Progress Toward Understanding HAB Climate Response Through Intensive In Situ Observation of *Alexandrium catenella* : **A D Fischer**, M Brosnahan, D K Ralston, D M Anderson

CP34B-1230 *POSTER* Relationship between microcystin and nutrients during harmful algal blooms in South Florida waterways: **S L Ufer**, D Documet, M Vibhute, L Blume, C Burrue, K B Lanpher, H Plaas, M Sheridan, C Wan, L E Brand, C Gaston, K J Popendorf

CP34B-1231 *POSTER* Understanding and Regulating Recreation During Cyanobacteria Blooms in a Coastal Urban River: A Case Study from the Charles River, Boston: **L L Kumpf**, M Rome, T Faber

CP34B-1232 *POSTER* *Pseudo-nitzschia* in the Indian River Lagoon: an Emerging Threat for Florida: **S Schreiber**, J M Sullivan, M McFarland, N Dickens, D Hanisak

CP34B-1233 *POSTER* From research to application: case studies from the University of Southern California (USC) Sea Grant's Urban Ocean Program: **M Schulhof**, P M Grifman, L E Duguay

CP34B-1234 *POSTER* Increasing ocean food sustainability and resilience by combining academic research and industrial approaches.: **S Nuzhdin**, N D Churches

CP34B-1235 *POSTER* Microcystin and BMAA toxicity compared to bloom density in South Florida cyanobacterial harmful algal blooms: **D Documet**, M Vibhute, S L Ufer, L Blume, C Burrueal, K B Lanpher, H Plaas, M Sheridan, C Wan, L E Brand, C Gaston, K J Popendorf

CP34C Poster Hall C-D

Wednesday 1600h

Nearshore Processes IX Posters

Moderators: **Sylvia Rodriguez-Abudo**, University of Puerto Rico Mayaguez; **Jenna Brown**, USGS

CP34C-1237 *POSTER* FJORD BASIN WATER EXCHANGE IN SILL NORWEGIAN FJORDS: **I A Johnsen**, M S Myksvoll

CP34C-1238 *POSTER* A field and numerical investigation of wave influences on river-mouth depositional process: **Y C Huang**, J L Chen, C H Pao, H E Chen, C L Tsai

CP34C-1239 *POSTER* Coastal Warm Water Events Observed Using a Vertical Profiler: **Y G Park**, D G Kim, S Seo, J Noh, H S Min

CP34C-1240 *POSTER* Global Regression Modelling of Fresh Submarine Groundwater Discharge (FSGD) Using Multivariable Analysis of Aquifer Characteristics: **M A Henry**, N Dimova, N Moosdorf, G S Nearing

CP34C-1241 *POSTER* Estuarine phosphorus transformation, retention and bioavailability: an example from the southern Baltic Sea: **H Osterholz**, L Rönspieß, O Dellwig, X Lange, T Leipe, G Nausch, D E Schulz-Bull

CP34C-1242 *POSTER* Estuarine salt-plug induced by a freshwater pulse from the inner shelf: **B Juarez**, A Valle-Levinson, C Li

CP34C-1243 *POSTER* Algal Wrack Community Composition and Succession on a Sandy Beach in San Diego, CA: **M Palomares**, D M Talley

CP34C-1244 *POSTER* Fate and Transport of *Enterococcus spp.* at a Tropical Sandy Beach: **P Vargas**, S Rodriguez-Abudo, P G Rivera Casillas, P Chardon-Maldonado

CP34C-1245 *POSTER* Hydrodynamic Simulations in Support of Beach Water Quality Assessments at a Tropical Beach with Fringing Reefs: **D P FrankGilchrist**, S Rodriguez-Abudo

CP34C-1246 *POSTER* A Numerical Study of Water Exchange Processes in the Dongsha Atoll: **Y C Hsin**, S M Chen, S N Chen, W T Tsai

CP34C-1247 *POSTER* Changes in coastal lithodynamical processes of semi-enclosed seas under changing climate: the case of Lithuania: **I Sakurova**, V Kondrat, E Baltranaite, T Dabuleviciene, L Kelpsaite-Rimkiene, T Soomere

CP34C-1248 *POSTER* Sandy beach evolution under the climate change and increasing anthropogenic pressure: Eastern Baltic Sea case: **V Kondrat**, I Sakurova, E Baltranaite, T Dabuleviciene, L Kelpsaite-Rimkiene

CP34C-1249 *POSTER* Short-term analysis on shoreline morphological changes due to coastal structures: **T K**, A K Mr

CP34C-1250 *POSTER* Natural and Nature-Based Coastal Defenses: Closing the Gap on the Potential Protection from Marshes in the US East Coast: **T W Miesse**, A de Souza de Lima, J L Garzon Hervas, C Ferreira

CP34C-1251 *POSTER* Wave Driven Channel Accretion Rates in the Littoral Zone: **B Kendrick-Holmes**, A Wargula, D A Bryant

CP34C-1252 *POSTER* Using Temperature to Infer Real-time Changes in Beach Bathymetry - Fiber Optics in the Nearshore: **J Smith**, M E Wengrove, C Walter, J S Selker, F Selker

CP34C-1253 *POSTER* Predicting nearshore sandbar migration using XBeach: **T J Hsu**, Y Rafati, A Van Dongeren, E Quataert

CP34C-1254 *POSTER* Spatiotemporal Analysis of Cuspate Features within the Shoreface-To-Shelf Transition Zone, Grand Strand, South Carolina: **C Boyce**, P T Gayes

CP34C-1255 *POSTER* Observations of Water Content and Fluid Pressure within the Interior of an Eroding Beach Dune: **H Bond**, M E Wengrove, J A Puleo, R A Feagin, B Montoya

CP34C-1256 *POSTER* Observations and modeling of wave overtopping at Imperial Beach, California: **C Henderson**, M A Merrifield, J W Fiedler, B C Ludka, A Young, R T Guza

CP34C-1257 *POSTER* Observations of Tides, Waves, and Erosion on a Low-lying Barrier Island During Hurricane Nate: **B M Webb**, J Coogan, S M Smallegan, J A Puleo

CP34C-1258 *POSTER* Observations of Nearshore Hydrodynamics and Morphodynamics During Storm and Recovery Periods on a Low-Wave Energy Beach on the Florida Gulf Coast: **J A Brown**, J W Long, J J Birchler, K S Doran

CP34C-1260 *POSTER* Nearshore circulation and sediment transport at a barrier island breach during Hurricane Matthew (2016): **C Hegermiller**, J C Warner, M Olabarrieta, C R Sherwood

CP34C-1261 *POSTER* Impact of Hurricane Barry (2019) on the inner shelf circulation and exchange flow of Barataria Bay: **C Li**, W Huang, B Milan, M D Miner, A Sheremet, I Y Georgiou, K Xu, K Maiti, J Wang, M Li

CP34C-1262 *POSTER* Uncertainty in Phase-Resolving Numerical Modeling of Coastal Flooding and Erosion: **J Rutten**, A Torres-Freyermuth, J A Puleo

CP34C-1264 *POSTER* Using Ensembles to Predict Storm Surge During Hurricane Michael and Hurricane Maria.: **J Veeramony**, K L Edwards

CP34D Poster Hall C-D

Wednesday 1600h

Connections Between Coral Reef State, Physical Processes, and Coastlines II Posters (*joint with IS, MG, SI*)

Moderators: **Ap Van Dongeren**, Deltares; **Curt Storlazzi**, USGS California Water Science Center Sacramento

CP34D-1265 *POSTER* Corals' Response to Rising Sea Surface Temperatures for the Past 200 years across the Central and Western Pacific: **C P Carvajal**, P S Kench, C H Stirling, O M Knebel

CP34D-1266 *POSTER* Extreme differences: Oceanographic conditions control upward growth of reefs through El Niño low mean sea level in Palau: **P Colin**, T A Schramek

CP34D-1267 *POSTER* Mapping Spatiotemporal Changes in Eilat Coral Reef Over the Last Seven Decades Using Historical and Current-day Aerial Images: **Y Lehahn**, E Topel

CP34D-1268 *POSTER* Modelling the Physiological, Biogeochemical and Physical Processes Controlling the Interaction of Corals with Their Environment: **D Disa**, M Munnich, N Gruber

CP34D-1269 *POSTER* Flow Over Acropora on a Barrier Reef in Koror, Palau: **B Hale**, S G Monismith, M Lindhart

CP34D-1270 *POSTER* *In situ* observations of wave transformation and infragravity bore development across reef flats of varying geomorphology: **O M Cheriton**, C D Storlazzi, K J Rosenberger

CP34D-1271 *POSTER* Nonlinear Tide and Wave Setup Interactions on Reefs with Observations from Ofu, American Samoa: **M Lindhart**, J Rogers, S A Maticka, C B Woodson, S G Monismith

CP34D-1272 *POSTER* Superinertial tidal enhancement and cross-reef flushing at islands: **K H Brink**

CP34D-1273 *POSTER* Circulation in a Tidally-Flushed Atoll Lagoon: **S R Merrigan**, K A Davis, G R Pawlak, G Sinnott

CP34D-1274 *POSTER* Dynamics of flow on a wide reef flat at Dongsha Atoll: **E C Reid**, K A Davis, S J Lentz

CP34D-1276 *POSTER* Relating Offshore Wave Conditions to Incident Waves and Shoreline Water Levels at Ipan, Guam during Extreme Events.: **A Lange**, J M Becker, M Merrifield, J Behrens, E J Terrill

CP34D-1278 *POSTER* On the importance of grain density to modeling bedload transport of carbonate sediment on coral reefs: **K J Rosenberger**, C D Storlazzi, O M Cheriton, A W M Pomeroy, J Hansen, M Cuttler

CP34D-1279 *POSTER* Processes that drive of shoreline change in fringing reef systems: **A W M Pomeroy**, A van Rooijen

CP34E Poster Hall C-D

Wednesday 1600h

The Inner Shelf: Impacts of Interconnected Processes III Posters (*joint with IS, OM, PS*)

Moderators: **Melissa Moulton**, Applied Physics Laboratory University of Washington; **Jacqueline McSweeney**, Oregon State University

CP34E-1280 *POSTER* Experimental investigation of shelf flow crossing over a strait: **J Kuehl**, V Sheremet

CP34E-1281 *POSTER* An analysis, in temperature space, of the cross-shore heat flux by internal waves in shallow coastal water: **J A Lerczak**

CP34E-1282 *POSTER* Diurnal along and cross-shelf transports variability in the Gulf of Mexico.: **J Nieblas**, J Zavala-Hidalgo, O Calderon-Bustamante, R González-Santamaría

CP34E-1283 *POSTER* Effects of remote storms on cross-shelf exchange at Matanzas Inlet, FL: **G Leavitt**, J C Warner, C Hegermiller, M Olabarrieta, C Rojas

CP34E-1284 *POSTER* Horizontal temperature length scales on the inner shelf due to breaking internal waves: **C C Chickadel**, M Moulton, J M Thomson, A F Waterhouse, J A MacKinnon, J Moum, J Becherer

CP34E-1285 *POSTER* Inner Shelf Diurnal Temperature Variability Hot Spot: **M Gough**, J MacMahan, M Kovatch, F Feddersen, J A Colosi, J A Barth, J A Lerczak, A F Waterhouse, J A MacKinnon, J Calantoni

CP34E-1286 *POSTER* Observations of the variability of turbulent dissipation the inner shelf: **A F Waterhouse**, J A MacKinnon, A Palocz Jr, J Moum, J Becherer, J M Thomson, S Haney, J A Colosi

CP34E-1287 *POSTER* Particle transport in the mid-Atlantic bight: **G P Gerbi**, C Mundi, J Wilson, E J Hunter, H L Fuchs, R J Chant

CP34E-1288 *POSTER* Role of continental shelf waves on the westward shift of the Yellow Sea Warm Current and their generation based on numerical model experiments: **Y J Tak**, Y K Cho, S Nam

CP34E-1290 *POSTER* The Effect of Inner Shelf Processes on Surface Drifter Trajectories and Dispersion: **M S Spydell**, F Feddersen, J MacMahan, J Thomson, M Kovatch, M Moulton

CP34E-1291 *POSTER* Typhoon-induced variation of semidiurnal internal tides along the southeastern coast of Korea: **J Y Chae**, C Jeon, P Kim, N Hirose, J H Park

CP34F-1296 *POSTER* Validating Fluorescence As An Optical Proxy For Fluvial DOC Contributed By The Spring Freshet In The Sagavanirktok And Kuparuk Rivers (Northern Alaska): **L Catipovic**, K Longnecker, S R Laney

CP34F-1297 *POSTER* What controls DOM composition variability in marsh-dominated estuaries?: **R Martineac**, P M Medeiros

CP34F-1298 *POSTER* Sample Preservation and Sample Treatment in Stable Isotope Analysis: Implications for Studying the Coastal Carbon Cycle: **M Silberberger**, K Kozirowska-Makuch, K Kuliński, M Kedra

CP34F-1299 *POSTER* Characterization and quantification of mangrove-derived extractable carbon: **C M Jaraula**, K L Bejasa

CP34F-1300 *POSTER* Degradation of Terrigenous Organic Matter from Tropical Peatlands and Coastal Ocean Acidification in Southeast Asia: **Y Zhou**, P Martin, R Nichols, K Chang, N Kaushal

CP34F-1301 *POSTER* Environmental Changes Associated with Organic Matter Loading Deduced from Sedimentary Deposits of a Coastal Lagoon in Boracay Island, Philippines: **M V Rañada**, K L Bejasa, A Bautista VII, C M Jaraula

CP34F-1302 *POSTER* Lignin phenol-based evidence of rapid 8 cm sediment deposition from a hurricane flooding event in continental margin San Blas Basin, Mexico: **E Bush**, J A Neibauer, G A Raemhild, L J B Barbara, M E Duffy, J Adams, K K Homolka, J D Carriquiry, R G Keil

CP34F-1303 *POSTER* Wildfire Ash Promotes Growth of Santa Barbara Channel Phytoplankton Communities Under Low Nutrient Conditions: **T M Ladd**, A Ramirez Negron, S M Kim, D Iglesias-Rodriguez

CP34F-1304 *POSTER* Seasonal changes in cross-shelf transport of dissolved inorganic carbon across the Louisiana shelf.: **M Anderson**, K Maiti, Z G Xue

CP34F Poster Hall C-D

Wednesday 1600h

The Transformation and Fate of Carbon at the Land-Ocean Interface and Beyond II Posters

(joint with CT, OB)

Moderators: **Michael Seidel**, University of Oldenburg;
Nicholas Ward, Pacific Northwest National Laboratory

CP34F-1292 *POSTER* Isotopic composition of oceanic dissolved black carbon reveals non-riverine source: **S Wagner**, J Brandes, R G Spencer, K Ma, S Rosengard, J M S Moura, A Stubbins

CP34F-1293 *POSTER* Tracking cupric oxide-derived compounds across high and low latitude oceans: **L Leonard**, C G Fichot, R H Benner, K Kaiser

CP34F-1294 *POSTER* Ocean Negative Carbon Emissions(ONCE)—an International Program Initiative: **N Jiao**, B Rinkevich, C Robinson, C Suttle, C L Abbate, D Wallace, D A Hutchins, H Claustre, H Thomas, J H Hyun, J P Gattuso, L Legendre, L Guidi, L Polimene, M Koblížek, P Y Tishchenko, P H Kaartokallio, R H Benner, R Nagappa, Y Yamashita

CP34F-1295 *POSTER* Effect on the Chemical and Isotopic Composition of Marine Dissolved Organic Matter by Adsorption to Deep Sea Sediment.: **N Hauksson**, C B Lewis, E R M Druffel

CHEMICAL TRACERS, ORGANIC MATTER AND TRACE ELEMENTS

CT34A Poster Hall C-D

Wednesday 1600h

Biogeochemistry of Dissolved Organic Matter and Dissolved Organic Matter-Microbe Interactions III Posters (joint with MM, OB)

Moderators: **Sasha Wagner**, Rensselaer Polytechnic Institute; **Sinikka Lennartz**, ICBM, University of Oldenburg

CT34A-0945 *POSTER* Determination of the Size Distribution of Dissolved Organic Matter by Diffusion-Ordered Nuclear Magnetic Resonance Spectroscopy (DOSY): **B N Granzow**, C Johnson, D Repeta

CT34A-0946 *POSTER* Improved mass accuracy and isotope confirmation through alignment of FT-ICR-MS data of complex natural mixtures.: **J Merder**, J A Freund, U Feudel, J Niggemann, G A Singer, T Dittmar

CT34A-0947 *POSTER* Developing correction factors for in-situ fluorescence index (FI) sensors: **P Regier**, J S Horsburgh

CT34A-0948 *POSTER* Isotopic Measurements of Solid-Phase Extracted Dissolved Organic Matter in the Eastern Pacific Ocean: **C B Lewis**, B Walker, E R M Druffel

CT34A-0949 *POSTER* Hydrological management shifts dissolved organic matter chemistry in the world's largest reservoir: **D He**, K Wang, Y Pang, Y Sun, C He, P Li, S Xiao, S Quan

CT34A-0950 *POSTER* Consistent Fine Scale Changes in Dissolved Organic Matter Composition with Depth at the Bermuda Atlantic Time Series Station (BATS): **M Gonsior**, L Powers, N Hertkorn, P Schmitt-Kopplin, M Lahm

CT34A-0951 *POSTER* Temporal and Spatial Variability of Dissolved Organic Matter Chemistry in the Northern Barents Sea Using UPLC-ESI-HRMS: **M Digernes**, M V Ardelan, A Asimakopoulos

CT34A-0952 *POSTER* CHARACTERIZATION AND PHOTOREACTIVITY OF CHROMOPHORIC MARINE-DISSOLVED ORGANIC MATTER: **D Gonzales**, M R C Alves, D Dang, K A Prather, V H Grassian

CT34A-0953 *POSTER* Analyzing A High-Resolution Depth Profile of Fluorescent Dissolved Organic Matter to Better Understand the Relationships and Distribution of Marine Chromophoric and Fluorescent Dissolved Organic Matter: **M Lahm**, L Powers, M Gonsior

CT34A-0954 *POSTER* Characterization of the Semi-Labile Polysaccharide Fraction of Marine Dissolved Organic Matter: **D Repeta**, B N Granzow

CT34A-0955 *POSTER* Detailed Molecular Formula Compositions of Complex Dissolved Organic Matter Mixtures from Diverse Environments Obtained by Fourier Transform - Orbitrap Elite Mass Spectrometry: **A Ijaz**, M Khaksari, S K Schum, L R Mazzoleni

CT34A-0956 *POSTER* Characterizing dissolved organic matter by thermal slicing ramped pyrolysis gas chromatography mass spectrometry: **Z Liu**, J O'Connor, K Lu, L Guo

CT34A-0957 *POSTER* Concentrations and Reactivities of Refractory Carboxyl-rich Alicyclic Molecules (CRAM) in Contrasting Natural Waters: **M Weiser**, K Kaiser, C G Fichot

CT34A-0958 *POSTER* Radiocarbon in Dissolved Organic Carbon and Inorganic Carbon in the Pacific Ocean: **E R M Druffel**, S Griffin, N Wang, C B Lewis, N Garcia, N Hauksson, A P McNichol, R M Key, B Walker

CT34B Poster Hall C-D

Wednesday 1600h

Controls on Trace Metal Biogeochemistry and Physicochemical Speciation in Seawater IV Posters (*joint with CP, OB*)

Moderators: **Emily Estes**, University of Delaware;
Veronique Oldham, University of Rhode Island

CT34B-0959 *POSTER* Distribution of Anaerobic Iron Oxidation in Oxygen Deficient Zones Measured Using Stable Isotope Incubations: **K M Bolster**, J W Moffett

CT34B-0960 *POSTER* Iron sources and cycling in the Peruvian oxygen minimum zone assessed using iron isotopes: **I Rapp**, M Sieber, F Scholz, M J Hopwood, T M Conway, R C Xie, M Frank, D Vance, E P Achterberg

CT34B-0961 *POSTER* Predicting Iron(III) Speciation in the Peruvian Upwelling Region: **K Zhu**, M Gledhill, M J Hopwood, J E Groenemberg, A Engel, E P Achterberg

CT34B-0962 *POSTER* A novel competitive ligand equilibration-cathodic stripping voltammetry (CLE-CSV) procedure for the fast and ultrasensitive iron speciation in seawater with tenfold sample size reduction: **F Sanvito**, L M Laglera, D Monticelli

CT34B-0963 *POSTER* Spatial Variations of Siderophores in the North Pacific Ocean: **J W Park**, N Hawco, P Pinedo-Gonzalez, P S John, F Ribalet, E V Armbrust, R M Bundy

CT34B-0964 *POSTER* Distributions of natural organic Fe-binding ligands in the eastern and western subarctic Pacific: **Y Kondo**, Y Sunahara, J Nishioka, H Obata, S Takeda

CT34B-0965 *POSTER* Investigating seasonal trends in dissolved iron-binding organic ligands in the BATS region of the North Atlantic Ocean: **S Caprara**, B M Sohst, R Johnson, D Ohnemus, A Tagliabue, B S Twining, P Sedwick, K N Buck

CT34B-0967 *POSTER* Fe(II) biogeochemistry in a changing ocean: **J M Santana-Casiano**, M González-Dávila, A G González, N Pérez-Almeida, G Samperio-Ramos, C Santana-González, D González-Santana, M L Arreguin

CT34B-0968 *POSTER* Glacial and hydrothermal sources of dissolved iron(II) in Southern Ocean waters surrounding Heard and McDonald Islands: **T Holmes**, K Wuttig, Z Chase, C Schallenberg, P van der Merwe, A Townsend, A R Bowie

CT34B-0969 *POSTER* Iron-rich Plumes from Erupting Submarine Volcanoes: **J A Resing**, N J Buck, S L Walker, T Baumberger, E T Baker, J E Lupton, D A Butterfield

CT34B-0970 *POSTER* Examining the Importance of Shallow Hydrothermal Sources for Iron Delivery to the Surface Ocean in the Mariana Back-Arc: **S M Michael**, J Resing, T Baumberger, N J Buck, F Lacan, C Pradoux, P Sedwick, B M Sohst, C M Wilkinson

CT34B-0971 *POSTER* Estimates of chemical fluxes from Daikoku Seamount - a shallow, erupting, submarine volcano on the Mariana Arc.: **N J Buck**, J Resing, T Baumberger, D A Butterfield, E T Baker, S L Walker, C M Wilkinson

CT34B-0972 *POSTER* Role of Colloids in Controlling Mobilization and Transport of Trace Metals during the Formation of Deep Sea Sediment Plumes: **K Schmidt**, T Brengelmann, S Paul, E P Achterberg

CT34B-0973 *POSTER* Exploring Organic Metal-binding Ligands at the Lost City Hydrothermal Field: **S Gunnells**, C L Hoffman, M C Lohan, A Tagliabue, A J M Lough, J Resing, S Q Lang, R M Bundy

CT34B-0974 *POSTER* The transport of metal-binding humic substances and dissolved iron from a hydrothermal vent site (TAG, North Atlantic): **H Whitby**, D Gonzalez Santana, M Cheize, A Gourain, T Holmes, Y Germain, C Cathalot, E Pelleter, Y Fouquet, G Sarthou, H Planquette

CT34B-0975 *POSTER* Coastal Contamination by Mining Tailings: Unusual Minor Role of Humic Substances to Soluble and Dissolved Iron Distribution: **C M Longhini**, L Mahieu, F Sá, S M van den Berg, P Salaun, R Neto

EDUCATION, OUTREACH AND POLICY

ED34A Poster Hall C-D

Wednesday 1600h

Engaging Students Globally in Marine Science Research and Conservation II Posters (*joint with CP, SI*)

Moderators: **Paruthumootil Jacob Philip**, Institute For Sustainable Development and Research, ISDR, India; **Somita Chaudhari**, Vidyalankar Institute Of Technology

ED34A-3636 *POSTER* Digital vs. Traditional Learning: Mitigating Marshes Against Sea Level Rise: **S Letourneau**

ED34A-3637 *POSTER* Challenges and Opportunities in Marine Education Through Information Technology: **V Yavalkar**, B Narkhede, V C

ED34A-3638 *POSTER* Empowering Student and Academic Communities For Coastal Cleaning and Beach Sweeping programs along Arabian Sea Using Information and Communication Technologies.: **S Chaudhari**

ED34A-3639 *POSTER* Evaluation of a Commercial Equipment Award Program: **A Smerdon**, A Riso

ED34A-3640 *POSTER* Inspiring conservation efforts with meaningful opportunity through Stanford: **N Batista**

ED34A-3641 *POSTER* Introducing *Oligotrophic*, a Board Game Designed as an Interactive Learning Experience in Microbial Ecology and Biogeochemistry, a Tool for Science Communication, and Curriculum for Elementary through High School Teachers.: **C Suffridge**, Q L Washburn, J Well, S Noell, S S Wolf, C P Lee, L M Bolanos, S J Giovannoni

ED34A-3642 *POSTER* Positively planktonic partnerships: establishing symbiotic relationships between universities and elementary schools: **K Kelly**, D Kast

ED34A-3643 *POSTER* SCOPE: A Volunteer STEM Outreach Program Connecting Communities to Research at Scripps Institution of Oceanography: **K Mullane**, B Rasina, W Wolfe

ED34B Poster Hall C-D

Wednesday 1600h

K-12 Youth Sessions: K-12 Youth Ocean Science Research Presentations I Posters

ED34B-3644 *POSTER* The Effect of the Height of Garden Bean Plants after being Watered with Nitrogen, Phosphorus, and a Complete Fertilizer: **N T Archambault**, H Conlon, R Mitchell

ED34B-3645 *POSTER* Photo-Oxidative Degradation Effect On Common Plastics In The Ocean: **D Hart**, S Lefoley, L Hart, T O'Neill

ED34B-3646 *POSTER* Protecting Threatened, Endangered to Florida or at Risk Winter Shorebirds: **S Jones**, L Long, S Riddle

ED34B-3647 *POSTER* Studying Monarchs: **J Brown**, G Stallworth, J Foster

ED34B-3648 *POSTER* The Benefits of Being a Youth Scientist and Presenting at Professional Science Conferences: **J Brown**, Z Chase, R Prim

ED34B-3649 *POSTER* The Effect of Ultraviolet Light on the Photodegradation Rate of Three Different Types of Plastic on Beaches: **C Reardon**, S Bouley

ED34B-3650 *POSTER* The Effect of UVB Radiation on Phytoplankton's Ability to Photosynthesize: **J Castellano**

ED34B-3651 *POSTER* Effect of Ionizing Radiation on *Volvox carterii*: **E Mueller**

ED34B-3652 *POSTER* How Water Quality In Mission Bay Park Impacts The Southern Pacific Seahorse.: **E Otterson**, S A Walters, S Poli, F Wells, C Cota, G Semmens, K Axman, J Grigolite

ED34B-3653 *POSTER* The Effect of Differently Trafficked Areas on the Stress of Feeder Fish Measured by the Amount of Ammonia (ppm) Released by the Fish: **J Highcove**, L Bellavia

ED34B-3654 *POSTER* The Effect of the Height of Garden Bean Plants after being Watered with Nitrogen, Phosphorus, and a Complete Fertilizer: **H Conlon**, N Archambault, R Mitchell

ED34B-3655 *POSTER* Building baselines: Evaluating plant communities on the islands of Bahía de los Ángeles, Baja California, Mexico: **G Kouekabakilaho**, J Barkan, B Hewett, D M Talley

ED34B-3656 *POSTER* Nurdle Patrol at Saint Stanislaus: **D West**

ED34B-3657 *POSTER* The Effects of Different Coastal Substrates on the Filtration of Surface Runoff into Bodies of Water: **A Durfee**, P LaCroix, J Lague

ED34B-3658 *POSTER* Saint Stanislaus Oyster Gardening Program: **J Thriffiley**

ED34B-3659 *POSTER* The Effects of Endocrine-Disrupting Chemicals on Crayfish in a Freshwater Ecosystem: **M Lodes**

ED34B-3660 *POSTER* Plastic Leftovers: Escambia and Santa Rosa Counties, FL: **A Sessions**, R Prim, A Reed

ED34B-3661 *POSTER* Jellyfish, The Indicators of the Ocean: **Z Chase**, A Salvidar, A D Dixon, E D Porter

ED34B-3662 *POSTER* Impact of Water Quality Variables on Plankton in the Monterey Bay: **W Nichols**

ED43B-3663 *POSTER* Our Roads, are Large Thermoelectric Power Generator!: **I Weiss**, N Weiss

ED34B-3664 *POSTER* Observing Interactions Between Marine Snow and Tethered and Free-swimming Copepods: **H Martinez**, J C Prairie, T Drake, C Briseño-Avena

ED34C Poster Hall C-D

Wednesday 1600h

Undergraduate Marine Science Research: Producing Quality Science Through Independent and Course-Based Research Activities Throughout the Academic Year I Posters

Moderators: **Emily Bockmon**, California Polytechnic State University San Luis Obispo; **Michele LaVigne**, Bowdoin College

ED34C-3665 *POSTER* Experience, engage, empower: Utilizing course-based coastal undergraduate research while developing content knowledge and research skills.: **K Takagi**, J Deemy

ED34C-3666 *POSTER* Integrating interdisciplinary research and experiential learning in undergraduate courses: **N Reyns**, E M Cathcart

ED34C-3667 *POSTER* Turning field-based course data into undergraduate research projects, capstone experiences and long-term ecology publications.: **M A Boudrias**

ED34C-3668 *POSTER* Southern California Ecosystems Research Program: A year-round program fostering undergraduate marine ecology research: **J Burnaford**, W J Hoese

ED34C-3669 *POSTER* Lessons Learned from a Course-based Undergraduate Research Experience on the Ecological Impacts of Microplastic Pollution in Estuaries with Contrasting Levels of Urbanization: **R G Asch**, H Vance-Chalcraft

ED34C-3670 *POSTER* Linking Marine Science with Biology Education using Course-based Undergraduate Research Experiences (CURE) in a Sea Anemone Model System: **J J Lunden**, M E Kelly, R Hoang

ED34C-3671 POSTER Societal Applications of Artificial Intelligence (AI), Machine Learning (ML), Big Data Management (BDM) for Management of Marine And Coastal Hazards: Case study for Under Graduate Research Project.: **S Patil**, P De Toro, M Cerreta

ED34C-3672 POSTER Macronutrient Inputs in Humboldt Bay: Collaborative Oceanographic Field Work and Research within the 2019 Senior Capstone Project at Humboldt State University, California: **R Floyd**, O Borisovaite, A K Bowley, J R Burr, J R Cupp, J Davey, C Dressler, C E Figueroa, R Freiburger, D M Hernandez, W J Kernkamp, M M Rayburn, W Warren, T B Barriquand, C Cass

ED34C-3673 POSTER Undergraduate independent study research and coursework: from course credit to a proceedings at the 2019 Georgia Water Resources Conference: **J Deemy**, K Takagi

ED34C-3674 POSTER Structuring undergraduate research to scale up participation: Our Project in Hawaii's Intertidal (OPIHI): **J Philippoff**, F F La Valle, P Nichols

ED34C-3675 POSTER Water Quality and Digital Data Sharing: An Interdisciplinary Project-Based Research Course: **L G Adams**, J Aguirre, M S Patel, G Fatoyinbo, C Johnson, R Spruiell, W Kaiser, F D Littig

ED34C-3676 POSTER Mentoring undergraduate students in independent publishable research: **J C Prairie**

ED34C-3677 POSTER Training and management strategies for undergraduate marine science research: **E E Bockmon**

ED34D Poster Hall C-D

Wednesday 1600h

Undergraduate Student Research: A Multidisciplinary Session III Posters

ED34D-3678 POSTER A Mark-Recapture Study: Measuring Growth and Respiration of a Freshwater Mussel in Massachusetts, USA: **C Aulden**, J P Ludlam

ED34D-3679 POSTER Evaluation of the Surf Zone as a Nursery Habitat for Juvenile Fishes in San Diego: **B Field**, S Searcy

ED34D-3680 POSTER *The Northwest Passage Project (NPP): An Interdisciplinary Approach to Arctic Science and Communication*: **K Estes**, M Kim, J Strock, Z Kerrigan, Y Boleaga, A Nodal, T Rivera, E Schulze, A D'Angelo, B Loose, H Morin, A Denton, K M Boswell, L Fernandez, M Tzortziou

ED34D-3681 POSTER Microplastics in the Sediments of Shelves and Basins offshore of Southern California: **R Sarner**, S C Gray

ED34D-3682 POSTER Determining Patterns in *Nereocystis luetkeana* Distribution in Puget Sound Through Local Ecological Knowledge and Gray Literature: **M Beaudry**, D Oster, D Tonnes

ED34D-3683 POSTER From Student Researcher to Mentor: Assessing the Health of the Nashua River in Massachusetts: **C Anderson**, E S Gordon, J P Ludlam, D Welsh, J Huang, E Downs, E Clark, B Levy

ED34D-3684 POSTER Impacts of Climate Change on Intertidal Communities: Effects of Elevated Temperature and Predator Exposure on *Chthamalus fissus*: **E Bushnell**, N Reynolds

ED34D-3686 POSTER The Re-Acquisition of Shrimp Black Gill Infections by Penaeid Shrimp; Oceanic or Estuarine Sources?: **A Rivera**, T L Walters, S R Zuidema, M R Kendrick, P R Kingsley-Smith, M E Frischer

ED34D-3687 POSTER Population Characteristics of Quagga Mussels on Different Locations of a Shipwreck: **M Ryther**, C Aguilar, R L Cuhel

ED34D-3688 POSTER STEMSEAS as a Conduit for Furthering Science Communication and Academic Careers: **S Shaner**, L D White, S K Cooper

ED34D-3689 POSTER Innovative undergraduate research experiences to study Arctic water column chemistry and greenhouse gas flux: **N VanKeersbilck**, A D'Angelo, C Garcia-Eidell, F Crable, S Umar, H Raziuddin, T Ewa, B Loose, H Morin, D Gong, M A Gonzalez-Meler, A Denton

ED34D-3690 POSTER Role of Nutrient Limitation in Structuring Phytoplankton Communities: **V Klotz**, B Ramcharitar, E K Strobe, C Thomas, J Montoya, A Subramaniam

ED34D-3692 POSTER The Effects of Environmental Changes in the Northern Gulf of Alaska on the Synthesis of Lipid in *N.flemingeri* and *N.plumchrus* from 2018 to 2019: **A Hernandez**, R R Hopcroft

ED34D-3693 POSTER DNA Barcoding of San Francisco Estuary Zooplankton: **A Katla**, M J Jungbluth

ED34D-3694 POSTER Determination of an Appropriate Approach to the Cleaning Methodology of Formalin Preserved Diatom Samples from the Northern California Coast: **N Kristan**, C Cass

ED34D-3695 POSTER Spatial and Temporal Patterns of Zooplankton Species in the Gulf of Alaska as Revealed by Image Analysis: **K Mayer**, C Clarke-Hopcroft, R R Hopcroft

ED34D-3696 POSTER Spatial and Temporal Abundance of *Synechococcus* Clades in the San Diego Bay: **G Meza**, B Palenik, M Wang, M Nagarkar

ED34D-3697 *POSTER* Phytoplankton Distribution in the Mediterranean Sea based on Ocean Color Data: **M J Ricci**, N Mayot, N Record

ED34D-3698 *POSTER* Identifying Redox Potentials used by Microbes within Crustal Fluid of the Juan de Fuca Ridge Flank: **K Smith**, A Booker, B Orcutt

ED34D-3699 *POSTER* Exploring Sources of Error and Correction Methods for the Fluorometric Quantification of Phytoplankton: **R So**, A Ryack, Y Xie, Y Li

HIGH LATITUDE ENVIRONMENTS

HE34A Poster Hall C-D

Wednesday 1600h

Changing Biogeochemical Fluxes, Biodiversity, and Ecological Processes in the Polar Seas, with Special Emphasis on the Coastal Arctic and Sustaining an Integrated Arctic Ocean

Observing System III Posters (*joint with CP, IS, ME, OB, OM, PI*)

Moderators: Maria Vernet, Scripps Institution of Oceanography; Agnieszka Beszczynska-Moeller, Institute of Oceanology Polish Academy of Sciences

HE34A-1978 *POSTER* Using High Resolution Satellite Imagery to Determine Light Availability and Primary Production Under a Melting Ice Pack: **A Abbott**

HE34A-1979 *POSTER* Impacts of sea ice change on the Southern Ocean ecosystem in a warming climate: **S Wang**, N Jeffery

HE34A-1980 *POSTER* The role of sea ice biota for the ecosystem in the northwestern Weddell Sea: **I Peeken**, S Arndt, T Krumpen, C Haas

HE34A-1981 *POSTER* Modeling the Impact of Climate Variability in the Sea Ice and Biogeochemistry of the West Antarctic Peninsula: **C Schultz**, S Doney, W G Zhang

HE34A-1982 *POSTER* Variability in Diatom Abundance and Diversity Determined by Sea Ice Dynamics: **M Vernet**, W A Kozlowski, B J Pan, A Cusick, M Mascioni, I A Garibotti

HE34A-1983 *POSTER* Observation of prolonged ice algae bloom in drifting Arctic pack ice from autonomous buoy.: **V J Hill**, M Steele, B Light

HE34A-1986 *POSTER* Seasonal and Interannual Variability in Sedimentation Patterns of Carbonate Shell Bearing Organisms in the Fram Strait and the Central Arctic Ocean: **S Ramondenc**, E M Nothig, M H Iversen, C Lalande, I Salter, E Bauerfeind

HE34A-1987 *POSTER* Under-ice phytoplankton blooms in the central Arctic Ocean: Insights from the first biogeochemical IAOOS platform drift in 2017: **E Boles**, C Provost, V Garcon, Z Koenig, C Bertosio, M Athanase, N Sennechael

HE34A-1988 *POSTER* Korean Research Activity on Arctic Sea Ice Monitoring using KOMPSAT-series Satellite: **H C Kim**

HE34A-1989 *POSTER* Demonstration of a long-range autonomous underwater vehicle for rapid response to oil spills in under-ice environments: **A Kukulya**, B Hobson, B Kieft, J G Bellingham, R N Conmy, D Gomez-Ibanez

HE34A-1990 *POSTER* Enhancement of ocean and sea ice *in situ* observations in the Arctic under the Horizon2020 project INTAROS: **A Beszczynska-Möller**, H Sagen, P Voss, M Sejr, T Soltwedel, T Johannessen, M N Houssais, A Rogge, I Allan, F Nilsen, A Renner, L H Smedsrud, N Roden, J P Gattuso, L Chauvaud, C Marec, B Cheng, A King, C Provost, M Babin, M Sørensen

HE34B Poster Hall C-D

Wednesday 1600h

Changing Biogeochemical Fluxes, Biodiversity, and Ecological Processes in the Polar Seas, with Special Emphasis on the Coastal Arctic and Sustaining an Integrated Arctic Ocean

Observing System IV Posters (*joint with IS, ME, OM*)

Moderators: Blake Clark, NASA Goddard Space Flight Center & USRA; Hanne Sagen, Nansen Environmental and Remote Sensing Center

HE34B-1991 *POSTER* A Continuous Time Series of Observations Between the North Pole and Fram Strait Since 2011 From the Ice-T (Ice Thickness) Buoy: **F Vivier**, A Lourenco, D Dausse, T Lebrun, F Bonnefoy, A Weill

HE34B-1992 *POSTER* Acoustics in an integrated Arctic Ocean Observing System in Fram Strait: **E Storheim**, H Sagen, F Geyer, B D Dushaw, P F Worcester, M A Dzieciuch

HE34B-1993 *POSTER* Ice Sensing Algorithms for Argo floats in the European Arctic: **I M Angel Benavides**, K Latarius, B A Klein, R Cancouët, N Poffa, T Purokoski

HE34B-1994 *POSTER* Arctic Biogeochemical and Optical Properties of Suspended Particles from River Deltas to Coastal Seas: **A Mannino**, M Novak, S A Freeman, B Clark, P J Hernes, R G Spencer, M Tzortziou, J W McClelland

HE34B-1996 *POSTER* Biodegradation of Yukon River delta dissolved organic matter is marginally enhanced by nutrient enrichment: **B Clark**, A Mannino

HE34B-1997 *POSTER* Carbon Dynamics and Quality along the Elson Lagoon coastline in Arctic Alaska: **M Tzortziou**, B Grunert, C E Tweedie, A Menendez, S M Escarzaga, J I Goes, P J Hernes, R G Spencer, A Mannino

HE34B-1998 *POSTER* Coastal ocean inorganic carbon cycling is influenced by cycles and seasonal variations in inland waters: a case study from Cambridge Bay (Iqaluktuuttiaq), Nunavut, Canada: **S Jones**, P Duke, A Cranch, M M M Ahmed, S Marriott, F Emingak, B Else

HE34B-1999 *POSTER* High organic carbon mineralization rates in sediments of the Ryder and Petermann fjords – effects of subglacial meltwater runoff from the northern Greenland icesheet?: **V Bruchert**, J Fredriksson, A Ulfso, C Stranne, J Nilsson, A C Mix, B T Reilly, L A Mayer, M Jakobsson

HE34B-2000 *POSTER* Linking Organic Carbon Sources with Meiobenthic Abundance and Diversity Across the Coastal Shelf of the Mackenzie Delta: **R McMahan**, Z Taveras, P Neubert, H R Harvey

HE34B-2001 *POSTER* Preliminary Results of River and Stream Chemistry and Heat from the U.S. Naval Academy (USNA) Polar Science & Technology Program (PS&TP) Alaska North Slope Material Flux Study: **S G Gallaher**, J P Smith

HE34B-2002 *POSTER* Quantifying the fate of organic matter produced during an under-ice bloom using a 1-D Ecosystem model: **C Payne**, L Bianucci, G van Dijken, K R Arrigo

HE34B-2003 *POSTER* Radiocarbon and stable carbon isotopes to discern age and migration pathways of methane (CH₄) from lakes in the Mackenzie River Delta, Northwest Territories, Canada: **H McIntosh Marcek**, A P McNichol, S Dallimore, L Lesack, B Orcutt, C G Wheat, J Chanton, L Lapham

HE34B-2004 *POSTER* The radium isotope quartet as tracers of sediment-water interaction and cross-shelf transport in the Chukchi and Beaufort Seas during autumn freeze-up: **J S Dabrowski**, M A Charette, R S Pickart

HE34C Poster Hall C-D

Wednesday 1600h

Ecosystem Structure and Processes in a Changing Arctic IV Posters (*joint with ME, OB, PI*)

Moderators: **Lee Cooper**, University of Maryland Center for Environmental Science; **Jacqueline Grebmeier**, University of Maryland Center for Environmental Science Chesapeake; **Seth Danielson**, UAF

HE34C-2005 *POSTER* Ice, Keels and Changing Seasons in the Chukchi Sea near Icy Cape, Alaska: **M E Sullivan**, P J Stabeno, C A Ladd

HE34C-2006 *POSTER* Impacts of Short-Term Wind Events on Chukchi Hydrography and Sea Ice Retreat: **K Lu**, S L Danielson, T Weingartner

HE34C-2007 *POSTER* Heat over the Pacific Arctic Continental Shelves: Recent Changes in Content, Surface Fluxes and Throughput: **S L Danielson**

HE34C-2008 *POSTER* Interannual Variability in Stratification, Nutrients, and Water Mass Structure in the Chukchi Sea: **C A Ladd**, C W Mordy, P J Stabeno

HE34C-2009 *POSTER* Linking Offshore Oceanography to Alaskan Lagoon Dynamics: **T Hennon**, S L Danielson, T Jones

HE34C-2010 *POSTER* Mean and Time Dependent Circulation of the Eastern Chukchi Sea from Moored Timeseries in 2013-14: **B Ovall**, F Tian, R S Pickart, P Lin, P J Stabeno, T Weingartner, M Itoh, T Kikuchi, E L Dobbins, S W Bell, R A Woodgate, Z Wang

HE34C-2011 *POSTER* Water Mass Evolution and Circulation of the Northeastern Chukchi Sea in Summer: Implications for Nutrient Distributions: **L McRaven**, P Lin, R S Pickart, K R Arrigo, F Bahr, K E Lowry, D A Stockwell, C W Mordy

HE34C-2012 *POSTER* An observational description of currents over the Chukchi Sea continental slope: **R M McCabe**, P J Stabeno, E D Cokelet, D Zhang

HE34C-2013 *POSTER* Light transmittance and potential solar heating of the ocean water column following record low sea ice extents across the Distributed Biological Observatory in the Pacific Arctic Region: **K E Frey**, B Light, A R Neeley, L Cooper, J M Grebmeier

HE34C-2014 *POSTER* The changing physical and biological drivers for the benthic biological hotspot regions in the northern Bering and Chukchi continental shelf: **R Ji**, Z Feng, C J Ashjian, J Zhang, R G Campbell, J M Grebmeier

HE34C-2015 *POSTER* Multi-element Oceanic and Atmospheric Summer Isoscape of the Canadian Arctic Archipelago and Implications for Biogeochemical Cycling: **F Crable**, C Garcia-Eidell, S Umar, A W Bellagamba, S Kadej, M Malone, B Loose, B Thornton, M A Gonzalez-Meler, M B Berkelhammer, A King

HE34C-2016 *POSTER* Distribution of nitrogen fixation in the coastal Alaskan Arctic: **R E Sipler**, D A Bronk, K A Turk-Kubo, K J Harding, Q N Roberts, M K Rogener, B Stanley, J Spackeen, E Z Norton, S B Joye, J Zehr

HE34C-2017 *POSTER* Seasonal and Interannual Variability of Nitrate in the Eastern Chukchi Sea: Transport and Winter Replenishment: **C Mordy**, S W Bell, E D Cokelet, C A Ladd, G T Lebon, P Proctor, P J Stabeno, D Strausz, E Wisegarver, K R Wood

HE34C-2018 *POSTER* Microbial uptake of dissolved organic nitrogen along the coastal Alaskan Arctic: **B Stanley**, R E Sipler, Q N Roberts, J Spackeen, E Z Norton, D A Bronk

HE34C-2019 *POSTER* N₂O dynamics during the summer of 2017 in the Western Arctic Ocean (from the Bering Strait to the Chukchi Borderland): Spatial distribution, Controlling factors, and Air-Sea flux: **S Kim**, S H Kang, E J Yang, K T Park, S M Eom, H R Kim, J M Heo, I N Kim

HE34C-2020 *POSTER* Multi-model intercomparison of the pan-Arctic ice-algal productivity on seasonal, interannual, and decadal timescales: **E Watanabe**, M Jin, H Hayashida, J Zhang, N Steiner

HE34C-2021 *POSTER* Coupling Organic Composition with Metaproteomics to Track the Functional Responses of Arctic Ocean Microbiomes to Carbon Inputs: **H R Harvey**, M Mikan, B L Nunn, E Timmins-Schiffman, M Riffle, I Salter, W S Noble

HE34C-2022 *POSTER* Inferring the Metabolic Diversity and Ecological Function of Non-Photosynthetic Diazotrophs in the Context of their Associated Microbial Communities Along a Latitudinal Transect in the Canadian Arctic Gateway: **J LaRoche**, B M Robicneau, J Tolman, D P Fonseca Batista, D Desai, M T Maldonado

HE34C-2023 *POSTER* Seasonal dependency of Arctic marine phytoplankton response under greenhouse warming in CMIP5 earth system models: **H G Lim**, J S Kug, C A Stock, J P Dunne

HE34C-2024 *POSTER* Bathyal and abyssal ecological changes indicate increased seasonal organic carbon fluxes following glacial retreat: **C L Belanger**, S Sharon, C Payne

HE34D Poster Hall C-D

Wednesday 1600h

Ice-Ocean Interactions and Circulation Around the Antarctic Margins IV Posters (*joint with OM, PL, PS*)

Moderators: **Matthew England**, University of New South Wales; **Andrew Thompson**, California Institute of Technology

HE34D-2025 *POSTER* Antarctic Bottom Water outflow from the western Ross Sea: preliminary results from the Ross Sea Outflow Experiment: **M Bowen**, D Fernandez, A Forcen-Vazquez

HE34D-2026 *POSTER* Antarctic Glacial Melt as a Driver of Recent Southern Ocean Climate Trends: **C D Rye**, J C Marshall, M Kelley, G L Russell, L Nazarenko, G A Schmidt, J E Hansen

HE34D-2027 *POSTER* Automated Weddell Sea iceberg tracking with a machine learning approach applied to SAR imagery: **M Barbat**, T Rackow, C Wesche, H H Hellmer, M M Mata

HE34D-2028 *POSTER* Direct Numerical Simulations of freezing under a sloping ice-face.: **M Mondal**, B K Galton-Fenzi, P Heil, B Gayen

HE34D-2029 *POSTER* Direct numerical simulations of ice melting in a turbulent ocean: **L A Couston**

HE34D-2030 *POSTER* Historical Variability of Circumpolar Deep Water in the Bellingshausen Sea, Antarctica: **C LoBuglio**, L M Schulze Chretien, A F Thompson, K Speer

HE34D-2031 *POSTER* In search of the perfect wave: Variability of marine-terminating glacier response along the Wilkes Land Coast to diverse oceanographic conditions: **C C Walker**, A S Gardner

HE34D-2032 *POSTER* Influence of Antarctic Slope Current variability on modified Circumpolar Deep Water Intrusions in Prydz Bay, East Antarctica: **R Xia**, Z Wang, A Stewart, C Liu, C Cheng

HE34D-2033 *POSTER* Localized Basal Melting Near the Ross Ice Shelf Front: Interplay of Bathymetry, Ocean Heat Fluxes, and Ice Damage History: **D F Porter**, K J Tinto, R E Bell, S R Springer, L Padman, H A Fricker, C Mosbeux, I Das

HE34D-2034 *POSTER* Melting and Freezing Beneath Larsen C Ice Shelf: **L Harrison**, P Holland, K J Heywood, K W Nicholls

HE34D-2035 *POSTER* Modeling Circumpolar Deep Water intrusion onto the Bellingshausen Sea continental shelf: **S Hyogo**, Y Nakayama

HE34D-2036 *POSTER* Modeling the Vertical Structure of Ice Shelf-Ocean Boundary Current under Supercooled Condition with Suspended Frazil Ice Processes: **C Cheng**, A Jenkins, Z Wang, C Liu

HE34D-2037 *POSTER* Modelling an Ice-Shelf—Ocean Boundary Layer with a General Circulation Model: **R Patmore**, P Holland, C A Vreugdenhil

HE34D-2038 *POSTER* Next Generation Estimates of Antarctic Ice Shelf Melt Rates: **F Paolo**, J Nilsson, A S Gardner

HE34D-2039 *POSTER* Observations of sub-monthly melt rate variability at the Filchner-Ronne Ice Shelf: **I Vankova**, K W Nicholls

HE34D-2040 *POSTER* Ocean-driven glacial melt estimation time series using salinity and oxygen isotopes in Pine Island Bay, West Antarctica: **A N Hennig**, D Mucciarone, R B Dunbar

HE34D-2042 *POSTER* Onset and Energetics of Double-Diffusive Convection in the Ice Shelf/Ocean Boundary Layer: **L Middleton**, C A Vreugdenhil, P Holland, J R Taylor

HE34E Poster Hall C-D

Wednesday 1600h

Variability of High-Latitude Ocean/Sea Ice/Atmosphere Interactions and Associated Convection in a Changing Climate III Posters

(joint with AI, PC, PL)

Moderators: **Carolina Dufour**, Princeton University;
Kent Moore, University of Toronto

HE34E-2044 *POSTER* Recent Variability in the Arctic Ocean and Subarctic Seas: **R E Nichols**, S Bulusu, A Arguez

HE34E-2045 *POSTER* 'The dominant spatial patterns of Barents Sea ice variance': **E Efstathiou**, T Eldevik, M Årthun

HE34E-2046 *POSTER* Variability and trends of sea ice production in the Arctic polynyas from the Regional Arctic System Model: **Y Lee**, W Maslowski, R Osinski, J L Clement Kinney, A Craig

HE34E-2047 *POSTER* The Linkage between the Winter-Spring Arctic Oscillation and the Precipitation over the Western and the Central China: **Y Zhou**

HE34E-2048 *POSTER* Patterns of the Deep convection in the Nordic Seas: **A M Fedorov**, I Bashmachnikov, T V Belonenko

HE34E-2049 *POSTER* The North Icelandic Jet is fed by transformation of Atlantic Waters on the Icelandic shelf: **P G Myers**, Y Garcia Quintana, N Grivault, X Hu

HE34E-2050 *POSTER* Dynamics of Convection and Submesoscale Eddy Formation Under Sea Ice Leads: **K Cohanin**, K Zhao, A Stewart

HE34E-2051 *POSTER* The Asymmetric Climate Response in Arctic and Antarctic to Remote Ocean Thermal Forcing: **M Liu**, Y Luo, F Liu

HE34E-2052 *POSTER* Impact of Antarctic meltwater forcing on East Asian climate under greenhouse warming: **J H Oh**, W Park, E K Jin, H G Lim, K M Noh, J S Kug

HE34E-2053 *POSTER* Impact of model resolution on North Atlantic heat transport and Arctic sea ice: **D Iovino**, D Docquier, J P Grist, M J Roberts, C Roberts, T Semmler, L Ponsoni, F E Massonnet, D Sidorenko, D Sein, A Bellucci, T Fichet

HE34E-2054 *POSTER* Spatial and temporal variability of the subduction rates in the Southern Ocean using CMIP models: **L Almeida**, M M Mata, M R Mazloff

HE34E-2055 *POSTER* Open-Ocean Convection in the Weddell Sea in a High-Resolution Earth System Model: **P K Kurtakoti**, C Veneziani, A Stoessel, W Weijer, M E Maltrud

HE34E-2056 *POSTER* Southern Ocean mean state and internal variability responses to sea ice albedo perturbations: **L Zhang**, T L Delworth, W Cooke

HE34E-2057 *POSTER* Arctic Ocean Mass Variability From 2003 to 2019 Using GRACE and GRACE-FO Ocean Bottom Pressure Measurements.: **C Peralta Ferriz**, J Morison, J A Bonin

HE34E-2059 *POSTER* Relative Roles of Buoyancy and Wind Forcing in Southern Ocean Climate Change: **J R Shi**, L D Talley, S P Xie, W Liu, S T Gille

HE34E-2060 *POSTER* The Southern Ocean Response to Momentum and Buoyancy Forcing Anomalies: **R Farneti**

HE34E-2061 *POSTER* The Observed Seasonal Cycle of Submesoscale Processes in the Antarctic Marginal Ice Zone and Linkages with Sea Ice Cover: **L C Biddle**, S Swart, M du Plessis

HE34E-2062 *POSTER* Four decades of dense water formation in the Iceland Sea: **K Våge**, S Semper, H Valdimarsson, S Jonsson, K Moore, R S Pickart

HE34E-2063 *POSTER* Wave climate bias reduction by ocean, sea ice, and iceberg coupling within Earth System Modeling: **S Brus**, P J Wolfram Jr

HE34E-2064 *POSTER* Damped multidecadal stratosphere/troposphere/Ocean-coupled oscillation as framework for northern hemisphere climate variability: **N E Omrani**, N S Keenlyside, K Matthes, D Zanchettin, J Jungclaus

HE34E-2065 *POSTER* Fixing a Labrador Sea Bias in a fully coupled model: **L Conlon**, L Van Roekel, A Roberts, Q Li, K Hoch, K L Rosa, J Wolfe, S R Brus

HE34E-2066 *POSTER* Causal Interactions Between Southern Ocean Polynyas and High-Latitude Atmosphere-Ocean Variability: **W Weijer**, Z Kaufman, N Feldl, C Veneziani

HE34E-2067 *POSTER* Variability of convection processes in the Nordic Seas from a high-resolution coupled Earth System Model: **C Veneziani**, M W Seefeldt, J J Cassano, W Weijer

OCEAN OBSERVATORIES, INSTRUMENTATION AND SENSING TECHNOLOGIES

IS34A Poster Hall C-D

Wednesday 1600h

Advancing Technologies for the Future of Deep-Ocean Exploration II Posters (*joint with OD, SI*)

Moderators: **Randi Rotjan**, University of Massachusetts Boston; **Brennan Phillips**, University of Rhode Island

IS34A-3338 *POSTER* The use of VAWT to reduce the cost of Offshore wind Energy: **B Augier**, C Matoug, B Paillard, A Tassin, G Maurice, S Barre

IS34A-3339 *POSTER* The Use of Open Source Scripting to Reduce Autonomous System Complexity and Cost: **C Collett**, A Rowe

IS34A-3340 *POSTER* Ocean of Things: Affordable Maritime Sensors with Scalable Analysis: **J Waterston**

IS34A-3341 *POSTER* Towards the Autonomous Search for Life in the Deep Ocean: **R Littlefield**

IS34A-3342 *POSTER* Triton Labs: Introducing high accuracy, low ecological footprint Lagrangian instruments: **M Filippi**, E C Browne

IS34A-3343 *POSTER* Design and Construction of the battery driven Hybrid-ROV *RAY_6000* and its vertical Launch And Recovery System (LARS) - lessons learned, mayor drawbacks, initial results of the long way from concept to prototype.: **G Meinecke**, V Ratmeyer

IS34A-3344 *POSTER* BathyBot – a Deep-sea Crawler to See the Unseen in the NW Mediterranean Sea: **S Martini**, C Tamburini, C Gojak, J Aguzzi, A Arnaubec, L Barnes-Davin, K Bernardet, V Bertin, O Bocquet, B Bombed, P Chevaldonne, P Coyle, V Ciausiu, P Cuny, X Durrieu De Madron, M Garel, L Le direach, E Rouanet, C Grenz, Z Hafidi, P Lamare, C Laus, D Lefevre, N Le Bris, K Mahiouz, S Marini, M Matabos, C Militon, D Nerini, T Perez, L Picheral, M Picheral, R Piasco, C Rabouille, J Sarrazin, D Thibault, L Thomsen

IS34A-3345 *POSTER* Unmanned systems real-time data acquisition and analysis framework: **A Trahan**, B J Landry, K T Holland, S P Bateman, A Seyfarth, S Bascle, R Bickett

IS34A-3346 *POSTER* *HROV Ariane – a reversible optical tether controlled vehicle for observation and intervention down to 2500m depth*: **J Opderbecke**, L Brignone, E Raugel

IS34A-3347 *POSTER* Persistent Power for Next-Generation Ocean Observing: **T Dillon**, B L Polagye, B Maurer

IS34A-3348 *POSTER* Towards the development of a small optically tethered underwater vehicle (OTV) for minimally invasive ocean-floor observations: **A Kausche**, R Bachmayer

IS34A-3350 *POSTER* Under Ice with the NUI hybrid ROV: **A Bowen**, M Jakuba, C R German

IS34A-3351 *POSTER* Quality Assessment and Enhancement of Crowdsourced Video Annotations: **C Ruby**, M Cromwell, S T Gottfried, M Malik

IS34A-3352 *POSTER* MINIONS: Small, cheap, Lagrangian floats for measurement of the biological carbon pump: **J T Sugar**, M Omand, A Adams, K Katija, A Z Wang, K Buesseler, D Yoerger, I Cetinic, H T Rossby

IS34A-3353 *POSTER* The Deep-Sea Coral Observatory (DiSCO) Project: **S Y Litvin**, J P Barry, C Lovera, C A Boch, E J Burton, A P DeVogelaere, D Graves, T P Guilderson, A S Kahn, K Katija, C D Kacey, C King, L Kuhn, P McGill, A Sherman

IS34A-3354 *POSTER* Advances in Understanding and Reporting Oxidation-Reduction Potential (ORP) Anomalies in the Exploration and Characterization of Active Seafloor Chemosynthetic Systems: **S L Walker**

IS34B Poster Hall C-D

Wednesday 1600h

Best Practices for Building a Global Ocean Observing System Responsive to Societal Needs by Linking Basin-Scale Efforts Around the Globe I Posters (*joint with ED, PS, SI*)

Moderators: **Andréane Bastien**, St. Lawrence Global Observatory; **Tarron Lamont**, Department of Environmental Affairs

IS34B-3356 POSTER 30 years since WOCE: an updated hydrographic field manual for the 21st century: **J Gum**, S Becker, M T Miller, A Barna, K Jackson, J H Swift

IS34B-3357 POSTER A prototype for remote monitoring of ocean heat content: **D S Trossman**, R Tyler

IS34B-3358 POSTER The Ocean Tracking Network: Strategies and infrastructure to document the movements, habitat use and survival of valued aquatic species.: **F G Whoriskey**

IS34B-3359 POSTER Seismic ocean thermometry: **J Callies**, W Wu, Z Zhan, S Ni

IS34B-3360 POSTER Generating Climate Data Records of Satellite-Derived Sea-Surface Temperature: **P J Minnett**, M Izaguirre, G Szczodrak, K A Kilpatrick, E Williams

IS34B-3361 POSTER The Best Practices behind the implementation of the Canadian Integrated Ocean Observing System: from governance to multidisciplinary open data access to meet user needs: **B Covey**, A S Ste-Marie

IS34B-3362 POSTER Towards a Basin-scale Observing Network for Monitoring Upper-ocean Mass and Temperature Variability: **M Chandler**, J Sprintall, N V Zilberman

IS34B-3363 POSTER The Second String: A Proposal to Improve Argo Salinity Data from CTDs with Onboard Dynamic Corrections: **K I Martini**, D J Murphy

IS34B-3364 POSTER Rolling Deck to Repository (R2R): Information Management for Research Vessels: **K I Stocks**, S H O'hara, R A Arko, C L Chandler, D Clark, J L Elya, V L Ferrini, K McLain, C J Olson, C J Sellers, S R Smith, L Stolp, S M Carbotte

IS34B-3365 POSTER IndOOS-2: A Roadmap to Better Observations of the Rapidly Warming Indian Ocean: **L M Beal**, J Vialard, R M Koll

IS34B-3366 POSTER Data federation in a large international satellite project: **E M Armstrong**, J F Piollé

IS34B-3367 POSTER Improving the collection, coordination, and delivery of information on California Current Large Marine Ecosystem conditions for societal needs: **A Harper**, C Anderson, J Newton, B Block, S J Bograd, G Canonico, F Chavez, D P Costa, R J Miller, F Muller-Karger, J M Price, H Ruhl, W W Turner, M J Weise, B Woodward

IS34C Poster Hall C-D

Wednesday 1600h

Sustained Ocean Observing: From Events to Assessing Long-Term Ecosystem Patterns II Posters (*joint with CP, OB, PL*)

Moderators: **Michael Lomas**, Bigelow Lab for Ocean Sciences; **Richard Dewey**, University of Victoria; **John Trowbridge**, Woods Hole Oceanographic Institution

IS34C-3368 POSTER 25 years of operations at the European Station For Time-series in the Ocean, Canary Islands (ESTOC). Insights from events to long-term variability signals: **A Cianca**, M Villagarcia, E Delory, C Barrera, L Cardona Díaz, M J Rueda, O Llinas

IS34C-3369 POSTER Atmospheric and Offshore Forcing of Temperature and Salinity Variability at the Irminger Sea OOI station: **C Aghili**, A Kumar

IS34C-3370 POSTER Disentangling human-induced x natural sediment resuspension events in Barkley Canyon, NE Pacific, using cabled observatory, mooring and vessel AIS data: **F Cabrera De Leo**, G Garner, P Puig, S Paradis

IS34C-3371 POSTER Drivers and implications of the recent increase in surface silicate-to-nitrate availability in the southern Drake Passage: **D R Munro**, N M Freeman, J Sprintall, M R Mazloff, S G Purkey

IS34C-3372 POSTER Long-term acoustics monitoring of zooplankton dynamics in Saanich inlet (British Columbia, Canada): **R K Dewey**, L Guan, A R Sastri, C H Haieh, K Juniper

IS34C-3373 POSTER Long-term Observations of HF Radar Along West Coast of Canada: **M Wang**, R K Dewey, S F Mihaly, M G Morley, K Bartlett

IS34C-3374 POSTER NOAA's Ocean Acidification Observing Network: Assessing U.S. Vulnerability to Ocean Acidification: **E H Ombres**, D K Gledhill

IS34C-3375 POSTER Observing Systems for Ecosystem Understanding and Operational Decision Support: **S A Ruberg**, T H Johengen, A J Vander Woude

IS34C-3377 POSTER Temporal Variations of Inorganic Carbon Pools and Air-Sea CO₂ Fluxes in the North Pacific Subtropical Gyre Evaluated from 30 Years of Sustained Field Observations: **J E Dore**, D W Sadler, A E White, D M Karl

IS34C-3378 POSTER Underwater Gliders Used to Enhance a Monitoring Program on the Scotian Shelf: **D Hebert**, M Belzile, C Layton, C Richards

IS34C-3379 POSTER What factors determine the temporal long-term changes in pigment-based coccolithophores in the North Pacific subtropical gyre?: **J E Yoon**, I N Kim

IS34D Poster Hall C-D

Wednesday 1600h

The Tropical Pacific Observing System: Meeting the Needs of Researchers and Stakeholders II Posters (joint with OB, PL)

Moderators: **Shelby Brunner**, NOAA Ocean and Atmospheric Research; **Janet Sprintall**, University of California San Diego; **Meghan Cronin**, NOAA Pacific Marine Environmental Laboratory; **Adrienne Sutton**, NOAA Pacific Marine Environmental Laboratory

IS34D-3380 POSTER On the Origin of TPOS and the First Observation of an Equatorial Ocean Kelvin Wave: **D Halpern**

IS34D-3381 POSTER Characterization of Kelvin Waves in the Equatorial Pacific: **A Rydbeck**, T G Jensen, M K Flatau

IS34D-3382 POSTER Horizontal, Vertical and Temporal Structure of Vertical Mixing Modulated by Tropical Instability Waves: **D A Cherian**, D B Whitt, S D Bachman, R C Lien, R Holmes, W Large

IS34D-3383 POSTER Diurnal cycle metrics for validating NWP and climate models and understanding air-sea interaction in the Tropical Pacific: **D Zhang**, M F Cronin, W S Kessler

IS34D-3384 POSTER How the Public Private Partnership between NOAA's Pacific Marine Environmental Laboratory and Saildrone is addressing the Engineering Challenges of Surface In Situ Observations in the Tropical Pacific: **S de Halleux**, R Jenkins, N Cohen

IS34D-3385 POSTER Autonomous Direct Covariance Atmospheric Flux and Oceanic Current Systems: An Enhanced Flux Mooring for TPOS: **J Edson**, J T Farrar, M F Cronin, W S Kessler, C W Fairall, K Grissom

IS34D-3386 POSTER Observing Indonesian Seas : Challenges, applications and ways forward: **A Suryo**, N F Riama, R Effendi, B E Pratama, Y D Haryanto

IS34D-3387 POSTER Ocean variability at intermediate depths in the western equatorial Pacific derived from TRITON buoy data: **Y Kashino**, T Hasegawa, F Syamsudin, I Ueki

IS34D-3388 POSTER The Warm pool eastward extension associated with the MJO events occurred prior to the Onset of El Niño event 2018: **Y R Jauregui**, S S Chen

IS34D-3389 POSTER The NOAA Climate Variability and Predictability (CVP) Program - "Pre-Field Modeling Studies in Support of TPOS Process Studies, a Component of TPOS 2020": **S E Lucas**

IS34D-3390 POSTER State estimates and analysis of the Tropical Pacific Ocean from 2010 to 2018: **B D Cornuelle**, A Verdy, M R Mazloff

IS34D-3391 POSTER The Distribution and Dynamics of Surface Layer Divergence in the Eastern Equatorial Pacific: **F Bryan**, A L Deppenmeier, W S Kessler, L Thompson

MARINE ECOLOGY AND BIODIVERSITY

ME34A Poster Hall C-D

Wednesday 1600h

Biologging Ecology and Oceanography: Integrative Approaches to Animal-Borne Observations in a Changing Ocean II Posters (joint with IS, OB)

Moderators: **Amy Kukulya**, Woods Hole Oceanographic Institution; **Lauran Brewster**, Florida Atlantic University

ME34A-0152 POSTER What is the site fidelity of a dead fish? And how would you prove it?: **A N Cramer**, S Katz

ME34A-0154 POSTER Associated organisms inhabiting the calcareous sponge *Clathrina lutea* in La Parguera, Puerto Rico: **J Garcia-Hernandez**, N M Hammerman, J J Cruz-Motta, N V Schizas

ME34A-0155 POSTER Depth and Movement Patterns of the Blacktip Shark at a Migrational Terminus: **R Stolee**, S Kajjura, M Porter

ME34A-0156 POSTER Estimating mechanical work during bottlenose dolphin swimming using biologging tags, tracking data, sensor fusion, and estimation: **K A Shorter**, D Zhang, J Gabaldon, J Rocho-Levine, J van der Hoop, M Moore

ME34A-0157 *POSTER* North Atlantic Right Whale Foraging Ecology and Its Role in Mediating Human-caused Mortality: **M Baumgartner**, F W Wenzel, N S L Lysiak, M R Patrician

ME34A-0158 *POSTER* Quantify Foraging Success of Northern Fur Seals in Relation to Fine-scale Prey Availability: Preliminary Findings from Sailables and Seal-borne Sensors: **C Kuhn**, J Sterling, A De Robertis, M Levine, B Birkemeier, M McCormley, C W Mordy, H M Tabisola, C Meinig

ME34A-0159 *POSTER* Scaling of Lunge Feeding Kinematics in Baleen Whales: **D Cade**, W Gough, J Potvin, S Kahane-Rapport, J A Goldbogen

ME34A-0160 *POSTER* The Physics of Whale Movement: Drag and Thrust Production to Measure Whale Propulsive Efficiency: **H Smith**, W Gough, J A Goldbogen, M Savoca, M Czapanskiy, F Fish, J Potvin, K Bierlich, J Kennedy

ME34B Poster Hall C-D

Wednesday 1600h

Exploring and Characterizing Deep and Coastal Ocean Soundscapes II Posters (*joint with OB, PI*)

Moderators: **Adrienne Copeland**, NOAA Ocean and Atmospheric Research; **Robert Dziak**, NOAA Newport

ME34B-0161 *POSTER* Acoustic indices' 3D maps of benthic biophony reflect the health status of coral reefs: demonstration in the Philippines through a coupling with photogrammetry: **J Lossent**, F Tradieu, C Gervaise, F Holon, J Deter, T Pavy, M Santo, P Boissery

ME34B-0162 *POSTER* Baseline Soundscape Analysis of a Humpback Whale Breeding Ground before Port Construction in the Gulf of Tribugá: **K Seger**, L V Huertas-Amaya, M P Ray-Baquero, T Caero, C E Perazio, N Botero-Acosta, A Luna-Acosta, J Boyle, K D Heaney

ME34B-0163 *POSTER* Development of a Call Catalog to Support Automated Acoustic Data Processing Techniques for Coral Reef Soundscapes: **S W Ricci**, D R Bohnenstiehl, D Eggleston, J Stanley, T Rowell

ME34B-0164 *POSTER* Estimating Sampling Areas for Passive Acoustic Recorders: **T Margolina**, J Joseph, S Baumann-Pickering, B Southall, L Hatch

ME34B-0165 *POSTER* Gulf of Mexico Stones deep water ocean soundscape project: the first passive acoustic deployment of the Gulf Research Program of the National Academies of Sciences, Engineering and Medicine.: **C Pyc**, K A Kowarski, E E Maxner, C R McPherson

ME34B-0166 *POSTER* Long-term Variability in Spinner Dolphin Acoustic Activity Measured at Two Resting Bays off Oahu, Hawaii: **M McElligott**, M Lammers

ME34B-0167 *POSTER* Modern approaches to ocean soundscape modeling: **K Heaney**

ME34B-0168 *POSTER* Passive acoustic monitoring reveals seasonal trends and primary contributors to the low frequency ambient soundscape of the Cordell Bank National Marine Sanctuary: **S Haver**, Z Rand, L Hatch, D Lipski, R P Dziak, J Gedamke, J Haxel, S A Heppell, J Jahncke, M McKenna, D Mellinger, W Oestreich, L Roche, J P Ryan, S M Van Parijs

ME34B-0169 *POSTER* Response of acoustic complexity and entropy indices to changes in call rate and call type within marine soundscapes: **D R Bohnenstiehl**, R P Lyon, O Caretti, S W Ricci, D Eggleston

ME34B-0170 *POSTER* Seasonal variation of the global low-frequency ocean soundscape from 25 years of NOAA-PMEL hydrophone deployments: **R P Dziak**, T Lau, H Matsumoto, D Mellinger, J Haxel, S Haver, D R Bohnenstiehl, J Gedamke, L Hatch, W S Lee, M McKenna, J Perrot, J Y Royer, D K Smith

ME34B-0171 *POSTER* Underwater Soundscape of Cambridge Bay: **J Bedard**, S Vagle, S E Dosso, R K Dewey, M G Morley

ME34C Poster Hall C-D

Wednesday 1600h

From Microbes to Mammals: Using Environmental DNA Sequencing to Advance Marine Biomonitoring and Management II Posters (*joint with CP*)

Moderators: **Holly Bik**, University of California Riverside; **Susanna Theroux**, Southern California Coastal Water Research Project

ME34C-0172 *POSTER* Autonomous Long-Term High-Frequency Sampling of Marine Microbes: **A Rabines**, R Marin III, C C James, C A Scholin, J M Birch, L A Zeigler, A E Allen

ME34C-0173 *POSTER* Comparison of Advanced Methodologies for Phytoplankton Community Analysis: **E Pierce**, A Marchetti, A Schnetzer, O Torano, L Whitehouse, J Lin

ME34C-0175 *POSTER* eDNA and GeoChip: New Tools Linking Microbial Communities to Biogeochemical Functions in Eutrophic Estuarine Sediment: **T Moore**, P Fong

ME34C-0176 POSTER In-situ Autonomous Acquisition and Preservation of Environmental DNA Using the Environmental Sample Processor: **K Yamahara**, C M Preston, J M Birch, R Marin III, N Truelove, Y Zhang, K D Goodwin, F Chavez, C A Scholin

ME34C-0177 POSTER Assessing eDNA Degradation Rates in Deepwater Marine Environments to Determine Persistence Controls and Viability for Species Identifications: **S Ambrose**, M Galaska, A M Weinnig, A Hallaj, E E Cordes, C McFadden, A Quattrini, J McDermott, S Herrera

ME34C-0178 POSTER Understanding the Correlation Between the Molecular Quantitative Analysis and the Amount of Total Carbon in Phytoplankton Survey: **A Y Jeon**, J H Lee, S Y Yoon, K D Park, C K Kang, H W Kim

ME34C-0179 POSTER A COMPARISON OF ZOOPLANKTON METHODS: MORPHOLOGICAL IDENTIFICATION VS. GENETIC METABARCODING: **C Fitzgerald**, J J Pierson, L V Plough

ME34C-0180 POSTER Method for quantifying sxtA4 gene from *Alexandrium minutum* using chip-based digital PCR (dPCR) for estimation toxin level which causing paralytic shellfish poisoning: **J Park**, J I Hwang, E Y Yoon, S J Moon, J R Rho

ME34C-0182 POSTER Fine Scale Depth Variation of eDNA Signatures: Informing Nearshore Coastal Marine Protected Area Monitoring: **K Monuki**, Z Gold, P H Barber

ME34C-0183 POSTER Genomic analysis of microbial community structures in the Ross Sea during austral summer: **J H Lee**, S R Lee, H Park, H S La, J H Kim, H W Kim

ME34C-0184 POSTER Geographic Differences in the Gut Microbiome of the Eastern Oyster *Crassostrea virginica*: **L Nigro**, E J Ward

ME34C-0185 POSTER Metabarcoding from Microbes to Mammals: Comprehensive Bioassessment on a Global Scale: **Z G Compson**, G A C Singer, B McClenaghan, N A Fahner, J G Barnes, A McCarthy, M Hajibabaei

ME34C-0186 POSTER Seasonal dynamics of marine dinoflagellates community in the Korean coastal waters using metagenomics analysis (NGS, Next Generation Sequencing): **J I Hwang**, J Park, E J Kim, J H Hyung

ME34C-0187 POSTER The distribution and diversity of diatoms in a coastal upwelling biome: **R H Lampe**, A Rabines, G Ralf, A Schulberg, H Zheng, K D Goodwin, L A Zeigler, A E Allen

ME34C-0188 POSTER Use of Environmental DNA Metabarcoding to Trace Deep-Sea Cephalopod Distribution and Biodiversity in the Eastern Tropical Atlantic: **V Merten**, T Bayer, D de Jonge, O Puebla, T B Reusch, H J T Hoving

ME34D Poster Hall C-D

Wednesday 1600h

Using Satellite Remote Sensing and in Situ Data to Evaluate Marine Biodiversity and Ecosystems III Posters (joint with IS, OB, SI)

Moderators: Maury Estes, University of Alabama in Huntsville; **Gabrielle Canonico**, U.S. Integrated Ocean Observing System

ME34D-0189 POSTER Cross-platform Ecosystem Assessment Through Characterization of Prey Habitat Suitability and Predator Occurrence off Newport, Oregon: **L Ferguson**

ME34D-0190 POSTER From Satellite to the Benthos: Multidisciplinary Approaches to Estimate the Effects of Climate Change Across Marine Habitats at a LTER Site.: **A C Mazzuco**, L E D O Gomes Sr, G Coppo Sr, F A Gabriel, P S Stelzer, G Donadia, J Bernardino, D Yepes-Gaurisas, A F Bernardino

ME34D-0191 POSTER Monitoring and evaluating the status of NEOM's marine ecosystem from space: **N Papagiannopoulos**, D E Raitos, G Krokos, J A Gittings Sr, V P Papadopoulos, A Pavlidou, N Selmes, R J W Brewin, I Hoteit

ME34D-0192 POSTER Improving quantitative laboratory analysis of phycobiliproteins to provide high quality validation data for ocean color remote sensing algorithms: **C J Kenemer**, C Thomas, A R Neeley, A Mannino

ME34D-0193 POSTER Linking Functional Genes and Satellite-derived Optical Signatures of Marine Autotrophic Biodiversity: **S Roy**, B B Ward

ME34D-0194 POSTER Physical and biological community characteristics of planktonic veliger patches in the southern Mid-Atlantic Bight: **H Wood**, A C Hagemeyer, A T Greer, B Penta, J C Lehrter

ME34D-0195 POSTER Precision Assessment of the HPLC Phytoplankton Pigment Dataset Analyzed by NASA to Quantify Global Variability in Support of Ocean Color Remote Sensing: **C Thomas**, J E Chaves, A Mannino

ME34D-0196 *POSTER* Reconstruction of Ocean Color Data Using Machine Learning Techniques in Polar Regions: Focusing on Off Cape Hallett, Ross Sea: **J Park**, J H Kim, H C Kim, B G Kim, D Bae, Y H Jo, N Jo, S Lee

ME34D-0197 *POSTER* Trophic regimes of the Red Sea: a satellite analysis: **M Ouhssain**, M Kheireddine, N Mayot, B H Jones

ME34D-0198 *POSTER* Uncertainty analysis of gap filled satellite-based primary production in the Ross Sea: **D Bae**, Y H Jo, J Park

ME34D-0199 *POSTER* Capturing Illegal Fishing Effort in the Patagonia Shelf: **A Woodill**, M T Kavanaugh, J R Watson

ME34D-0200 *POSTER* Application of GOCI to the mapping of phytoplankton size structure around Korean peninsula: **J Choi**, R J W Brewin, J H Noh, X Sun

ME34D-0201 *POSTER* Integration of remote sensing and *in situ* data to determine environmental drivers and ecological effects of *Noctiluca* blooms in Australian waters: **L Wakamatsu**, C Bolch, A M Fischer

ME34D-0202 *POSTER* Assessing Coastal Sustainability using Remote Sensing in the Northern Gulf of Mexico with Implications for the American Horseshoe Crab: **A Heublein**, M G Estes Jr

ME34D-0203 *POSTER* Mapping the Intertidal Zone Using Multispectral Imagery Retrieved by Unmanned Aerial Vehicles in the Northwest Coast of Portugal: **D Borges**, I Azevedo, I Sousa Pinto, J A Gonçalves

ME34D-0204 *POSTER* Evaluation of Seascapes and their Relationship to Epipelagic Biodiversity and Ecosystem Services within the California Current: **I D Schroeder**, J A Santora, S J Bograd, E L Hazen, J C Field, M A Cimino, F Chavez

ME34D-0206 *POSTER* Sustainable Management of Fisheries in the African West Coast Based on EO Data: **M Gonçalves SR**, R Martins, J Brito SR, P Obatola SR

ME34D-0207 *POSTER* Towards understanding how UV exposure influences "Zostera marina" seagrass habitat suitability in coastal New England.: **O Cronin-Golomb**, C G Fichot

ME34E-0208 *POSTER* Abundance and Distributions of Gelatinous Zooplankton in the Northern Gulf of Alaska: **H M Mendoza Islas**, R R Hopcroft

ME34E-0209 *POSTER* Fluctuations in climate and hydrological regime induce pluriannual to decadal-long changes of phytoplankton community in a coastal ecosystem (Adriatic Sea): **P Mozetic**, B Petelin, J Francé, V Flander-Putrlé, K Klun, M Licer, V Malacic

ME34E-0210 *POSTER* Winter Algal Blooms in Abu Dhabi Waters: Definition, Mechanisms and Link to Eutrophication: **R Anbiah**, R Thankamony, A A AlRaisi, P Perumal, S A Al Hosani

ME34E-0211 *POSTER* Modeling Phytoplankton Community Changes in the Cariaco Basin, Venezuela: **B Post**, E Acevedo-Trejos, A D Barton, A Merico

ME34E-0212 *POSTER* Nutrient dynamics and their influence in the Northern Gulf of Alaska: **A Aguilar-Islas**, M R Kaufman, S Strom

ME34E-0213 *POSTER* Seasonal and Interannual Variability of Phytoplankton Abundance and Community Composition on the Central Coast of California: **A Barth**, R K Walter, I Robbin, A Pasulka

ME34E-0214 *POSTER* Changes in the nekton community structure of the Northern Humboldt Current System under ENSO scenarios: **P Galloso**, P Legendre, G M Correa

ME34E-0215 *POSTER* Population resilience of the copepod *Oithona similis* to climatic variability: egg production, mortality, and vertical habitat partitioning: **L Cornwell**, A Atkinson, H S Findlay, C N Lewis, J Bruun, A Hirst, E Fileman, A McEvoy, G Tarran, T J Smyth, C Castellani

ME34E-0216 *POSTER* Primary Succession and Seasonal Cycles on Submerged Recruitment Tiles In Monterey Bay: **A Morrison**, C Reilly, L Marrack

ME34E-0217 *POSTER* Philippines PIRE Project: Population Genetics and Conservation of *Atherinomorus duodecimalis*: **M Kenton**, K Carpenter

ME34E-0218 *POSTER* Foundation species and biodiversity support and stabilize kelp forest ecosystems: **R J Miller**, T Lamy, M Castorani, A C Stier, A Rassweiler, K D Lafferty, D Reed

ME34E-0219 *POSTER* Unique Colonization Time Series Reveals Long-Term Successional Changes in the Functional Traits of a Deep-Sea Hydrothermal Vent Invertebrate Community: **L Dykman**, S Beaulieu, S W Mills, A Solow, L S Mullineaux

ME34E-0220 *POSTER* Habitat Monitoring and Marine Protection of Habitat-Forming Bryozoa, Otago, New Zealand: **H Mello**, A M Smith, A Wood, E Tidey, D Gordon

ME34E Poster Hall C-D

Wednesday 1600h

What Are Long-Term Observations Teaching Us About Resilience of Marine Ecosystems? I

Posters (joint with OM, PC, PI)

Moderators: **Ana Aguilar-Islas**, University of Arkansas;
Russell Hopcroft, Univ Alaska

ME34E-0221 *POSTER* Using Long-term Monitoring to Assess if Humpback Whales in the Gulf of Alaska are Really in Hot Water: **J Straley**, R M Suryan, J R Moran, E M Chenoweth, M Arimitsu, C M Gabriele, J L Neilson

ME34E-0222 *POSTER* Shifting Trophic Structure of Rocky Shores in the Gulf of Maine: Implications for Resilience of Coastal Ecosystems in a Changing Climate: **S R Dudgeon**, P S Petraitis

MARINE GEOLOGY AND SEDIMENTOLOGY

MG34A Poster Hall C-D

Wednesday 1600h

Cohesive Sediment Transport Processes II

Posters (joint with CP, PI)

Moderators: Andrew Manning, HR Wallingford; **Xiao Yu**, University of Florida

MG34A-2198 *POSTER* Dynamic resuspension behaviors of microphytobenthos and cohesive sediment in shallow tidal channel: **H K Ha**, H J Ha, J S Khim, B O Kwon

MG34A-2199 *POSTER* An Eulerian-Lagrangian model framework for cohesive sediment transport in turbulent flows: **X Yu**, M Yu, S Balachandar, A J Manning, A J Mehta

MG34A-2200 *POSTER* Acoustic observations of Kelvin-Helmholtz billows on an estuarine lutocline: **J Tu**, D Fan, Q Lian, Z Liu, W Liu, A Kaminski, W Smyth

MG34A-2201 *POSTER* Cohesive Sediment Erosion in a Shallow, Wave- and Current-driven Flow: **G Egan**, M Cowherd, F Spada, K Scheu, A J Manning, C A Jones, G Chang, O B Fringer, S G Monismith

MG34A-2202 *POSTER* Effect of pre-shearing on the steady and dynamic rheological properties of marine sediments: **A J Manning**, A Shakeel, A Kirichek, C Chassagne

MG34A-2203 *POSTER* Exploratory Statistical Analysis of Controls on Sediment Bed Erodibility in a Partially-Mixed Estuary: **C Wright**, G Massey, C T Friedrichs

MG34A-2205 *POSTER* Flocculation depositional properties of freshly eroded aggregates: **A J Manning**, N Gratiot, C Legout, H Michallet, V Wendling

MG34A-2206 *POSTER* Improvement and Validation of Image Processing Methods for Flocc Size, Settling Velocity, and Density.: **K Fall**, J Smith, C T Friedrichs, G Massey

MG34A-2208 *POSTER* Variability of particle characteristics in a wave- and current-driven estuarine environment: **G Chang**, G Egan, F Spada, C A Jones, A J Manning, S G Monismith, O B Fringer

MG34A-2209 *POSTER* Wave Phase-Decomposed Near-Bed Currents and Turbulence on the Shoals of South San Francisco Bay: **M Cowherd**, G Egan, S G Monismith, O B Fringer

MG34A-2210 *POSTER* Wind-Wave Resuspension, a Controlling Mechanism for Cohesive Sediment Transport within a Shallow Coastal Embayment: **R Beecroft**, R Cossu, A R Grinham, P Maxwell

MICROBIOLOGY AND MOLECULAR ECOLOGY

MM34A Poster Hall C-D

Wednesday 1600h

Living on the Edge: Ecotones as Aquatic Transition Zones for Microbial Communities Posters (joint with OB)

Moderators: Sergio Morales, University of Otago; **Federico Baltar**, University of Vienna

MM34A-0324 *POSTER* Characterization of Microbial Communities on Natural and Transplanted Congener Macroalgae Across the Intertidal Stress Gradient: **K Capistrant-Fossa**, C Quigley, H G Morrison, L Johnson, V Hertzberg, A Morozov, S Brawley

MM34A-0325 *POSTER* Dynamic Definition of Habitat Types in the Tropical Atlantic Ocean: **A Subramaniam**, S C Weber, A Fernández-Carrera, B Ramcharitar, J Montoya

MM34A-0326 *POSTER* Microbial Ecotones in the Oregon Coast System: **M Steinman**, B Pickett, S Ward, A Thompson

MM34A-0327 *POSTER* Niche Partitioning Between Coastal and Offshore Shelf Waters Results in Differential Expression of Alkane and PAH Catabolic Pathways: **S Doyle**, G Lin, M Morales-McDevitt, T Wade, A Quigg, J B Sylvan

MM34A-0328 *POSTER* Seasonal dynamics show diverse prokaryotic community linkages between surface and deep ocean water: **J Wenley**, K I Currie, B Thomson, F Baltar, S Morales

MM34A-0329 *POSTER* Rhodopsin-Containing Microorganisms Thrive in High Nutrient Low Chlorophyll (HNLC) Sub-Antarctic Waters: **B Hassanzadeh**, B Thomson, F Deans, S Morales, S A Sanudo-Wilhelmy, F Baltar, L Gomez-Consarnau

MM34A-0330 *POSTER* Spatial and Temporal Variations in *Synechococcus* Microdiversity in the Southern California Coastal Ecosystem: **B Palenik**, M Nagarkar, M Wang, B Valencia-Ramirez

MM34A-0331 *POSTER* Within New Zealand fjords depth and location influence prokaryotic and eukaryotic microbial community composition, but two sources of organic matter shape microbial activity: **S P Tobias-Hünefeldt**, S Wing, F Baltar, N Espinel-Velasco, S Morales

MM34A-0332 *POSTER* Understanding the Community Composition of Deep Sea Iron-Oxidizing Bacteria, Zetaproteobacteria, in the Estuary of Charleston, SC: **A Enriquez**, H Fullerton

MM34B Poster Hall C-D

Wednesday 1600h

Microbial Genomics to Improve Predictive Understanding of Disturbance in the Global Ocean System II Posters (*joint with CP, ME, OB*)

Moderators: **Joel Kostka**, Georgia Institute of Technology; **Samantha Joye**, University of Georgia; **Casey Hubert**, Newcastle University; **Rita Colwell**, University of Maryland College Park

MM34B-0333 *POSTER* Microbial Community Analysis of Recently Deposited Marine Oil Snow in the Gulf of Mexico Between 2010 to 2018: **R Karns**, J R Westrich, S B Joye

MM34B-0334 *POSTER* Predicting Optimal Growth Rate of Marine Bacteria with Genetic Signatures of Cold Adaptation: **A Gentilhomme**, E Collins

MM34B-0335 *POSTER* Quantification of Bathyarchaeota in Enriched Delaware Sediments: **M Bowen**, L Schopflin, J Biddle

MM34B-0336 *POSTER* From Genomics to Physiology: Identification and Characterization of Discovered *Cyclobacterium marinum* (07MW18): **A Hines**

OCEAN BIOLOGY AND BIOGEOCHEMISTRY

OB34A Poster Hall C-D

Wednesday 1600h

Biological Hot Spots in the Deep Sea: Natural Variability and Adaptation to Changing Oceans II Posters (*joint with ME, PC, PI*)

Moderators: **Furu Mienis**, Royal Netherlands Institute for Sea Research; **Andrew Davies**, University of Rhode Island

OB34A-0546 *POSTER* A role for predation in mediating the population dynamics of deep-sea corals?: **S Y Litvin**, J P Barry, C A Boch, K R Buck, E J Burton, A P DeVogelaere, A S Kahn, C King, L Kuhnz, C Lovera, T P Guilderson, P Whaling

OB34A-0547 *POSTER* Forests of the Deep: High-density deep-sea coral and sponge communities in the Central and Western Pacific: **T F Hourigan**, C Kelley, R McGuinn, S Bingo, V C Moriwake, M Putts, M F Parke, K Elliott

OB34A-0548 *POSTER* Infaunal Communities Associated with Deep-Sea Coral Habitats in the Western Atlantic: **J R Bourque**, A W Demopoulos, J Quigley, J D Chaytor, E E Cordes

OB34A-0549 *POSTER* Assessing deep-sea marine metazoan and bacterial community structure in cold-seep, canyon, and cold-water coral reef habitats using high-throughput sequencing of DNA extracted from water samples: **A Aunins**, C Morrison, C Kellogg

OB34A-0550 *POSTER* Changes in bacterial communities inhabiting massive sulfide deposits on the Juan de Fuca Ridge across a ~10 My transects.: **A Ziegler**

OB34A-0552 *POSTER* Environmental DNA surveys of metazoan diversity across seamounts and abyssal plains in the western Clarion Clipperton Zone: **E Goetze**, O Laroche, O Kersten, C R Smith

OB34A-0553 *POSTER* Microbial communities of the deep seafloor sediment and manganese nodules from the Clarion-Clipperton Zone of the Eastern Pacific Ocean: **J M Otte**

OB34A-0554 *POSTER* Kuroshio flow – seamount interaction effects on the spatial and temporal variability of the microbial community structure: **C Acabado**, C C Chen, M H Chang

OB34A-0555 *POSTER* Whittard Canyon: a pathway and sink for organic carbon: **F Mienis**, S Ledin, M Lavaley, G Duineveld

OB34A-0556 *POSTER* Environmental factors drive megabenthic faunal distributions patterns on the East and West wall of Whittard Canyon: **S Ledin**, G Duineveld, M Lavaley, G J Reichart, F Mienis

OB34A-0557 *POSTER* Exploring the impact of historic shipwrecks on microbial biogeography and sediment geochemistry in the deep Gulf of Mexico.: **J Hampel**, R L Mugge, R Moseley, A Ray, L J Hamdan

OB34A-0558 *POSTER* How shipwrecks shape microbial biodiversity and biogeography across deep-sea sediments: **L J Hamdan**, J Hampel, R Moseley, R L Mugge, A Ray, T R Lee, W T Wood

OB34A-0559 *POSTER* Fine-Scale Natural Variability of Community Distribution on a Low Temperature Discharge Outcrop of a Ridge Flank Hydrothermal System: **A M Hartwell**, J Dijkstra

OB34A-0560 *POSTER* Why can nematode-prokaryotic symbioses be associated with deep-sea hotspots?: **J Ingels**, D Zeppilli

OB34A-0561 *POSTER* Microbial Diversity of Deep-sea Sponges - an Ecological Perspective across Scales: **K Busch**, B M Slaby, H T Rapp, T S Consortium, U Hentschel

OB34A-0562 *POSTER* Sponges as primary producers of a deep sea sponge ground?: **U Hanz**, M van der Meer, P Riekenberg, M Bart, E Wurz, A de Kluijver, H T Rapp, G J Reichart, F Mienis

OB34A-0563 *POSTER* Microbial intact polar and core lipids in hydrothermal chimneys of the Iheya North Hydrothermal Field in the Mid-Okinawa Trough: **S Horai**, H Naraoka

OB34A-0564 *POSTER* Spatio-temporal anthropogenic footprints on ecosystem drivers of the interior North Atlantic: **J Tjiputra**, L Bertini

OB34B-0566 *POSTER* Future Directions of the Integrating Climate and Ecosystems Dynamics (ICED) in the Southern Ocean Programme: **N Johnston**, E J Murphy, R Cavanagh, R G J Bellerby, D P Costa, E E Hofmann, W O Smith Jr, J C Xavier

OB34B-0567 *POSTER* Microbial control of ocean carbon and biogeochemical cycling in a changing polar ocean: Insights from ecosystem modeling of the West Antarctic Peninsula: **H Kim**, Y W Luo, H W Ducklow, O Schofield, D K Steinberg, S Doney

OB34B-0568 *POSTER* Protist community structure and diversity at the West Antarctic Peninsula in austral fall – reconciling metabarcoding, microscopy and pigment analyses: **P M Wenta**, C Plum, D Bahlburg, K Metfies, M Monti, T H Badewien, S D Moorthi

OB34B-0569 *POSTER* Spatial Variability of Microbial Communities in the Ross Sea, Antarctica: **B Klein**, E L Headrick, L Nigro, P Neale, W H Jeffrey

OB34B-0570 *POSTER* Quantifying Particulate Organic Carbon Concentrations and Flux in the Southwestern Ross Sea Using Autonomous Glider Data: **M Meyer**, W O Smith Jr, R M Jones

OB34B-0571 *POSTER* Processes Driving Carbon and Oxygen Fluxes in the High Latitude Southern Ocean Determined from Biogeochemical-Argo Floats: **J Sauve**, A R Gray, S Riser, S M Bushinsky

OB34B-0572 *POSTER* Zonal asymmetries in Southern Ocean primary productivity and carbon uptake: **C Prend**, A R Gray, T Uchida, I Rosso, S T Gille, L D Talley

OB34B-0573 *POSTER* Size Does Matter: Biological Drivers of Particulate Organic Carbon Export on the West Antarctic Peninsula: **R C Trinh**, H W Ducklow

OB34B-0574 *POSTER* Influence of the diatom assemblage structure on the export of C and Si around the Kerguelen plateau: **A Lafond**, K Leblanc, B Queguiner, V Cornet, J Legras

OB34B-0575 *POSTER* Southern Ocean annual net community production using combined biogeochemical mass balances on profiling floats: **S M Bushinsky**, L Arteaga, A R Gray, J L Sarmiento

OB34B-0576 *POSTER* ‘We still say that NASA satellite algorithms under-estimate chlorophyll in the Southern Ocean’: **P G Stratton**, R Johnson, K Baldry, G Liniger

OB34B-0577 *POSTER* Autonomous Biogeochemical Floats Link Huge Southern Ocean Phytoplankton Bloom to Maud Rise Polynya: **L von Berg**, C Prend, E C Campbell, M R Mazloff, L D Talley, S T Gille

OB34B Poster Hall C-D

Wednesday 1600h

Complexity, Connectivity, and Change in Southern Ocean Food Webs II Posters (*joint with AI, ME, PI*)

Moderators: Eugene Murphy, British Antarctic Survey;
Eileen Hofmann, Old Dominion University

OB34B-0578 *POSTER* Stratification Control of Phytoplankton Bloom in Circum-Antarctic Coastal Polynyas: Data Analysis and Modeling: **Y Li**, R Ji, W G Zhang

OB34B-0579 *POSTER* Summer Phytoplankton Growth at Maxwell Bay, West Antarctic Peninsula: Role of Physical Forcings: **V Carrera**, A M Pinones, F J Tapia, E Alarcón, J Höfer, E J Yang, J L Iriarte

OB34C Poster Hall C-D

Wednesday 1600h

From the Twilight Zone to the Troposphere: Ocean Optics Applications to Biogeochemical Cycling in and Through the Surface Ocean III Posters (joint with AI, IS, PI)

Moderators: Jason Graff, Oregon State University;
Ivona Cetinic, NASA Goddard Institute for Space
Studies

OB34C-0580 *POSTER* Subpolar CDOM: Insights from the NAAMES and EXPORTS campaigns in the North Atlantic and North Pacific: **N B Nelson**, J Allen, K Yamamoto

OB34C-0581 *POSTER* Relationships between phytoplankton specific properties and multi-spectral particulate backscattering: **J Graff**, T Westberry, N Haentjens, L Karp-Boss, E Boss, M Behrenfeld

OB34C-0582 *POSTER* Assessing the Effects of Particle Size and Composition on Light Scattering Through Measurements of Size-Fractionated Seawater Samples: **D Koestner**, D Stramski, R A Reynolds

OB34C-0583 *POSTER* Comparison of an Absorption-based and a Backscattering-based Algorithm for the Retrieval of the Particle Size Distribution: **E Kochetkova**, T S Kostadinov, S Roy, I Marinov

OB34C-0584 *POSTER* The RSP-MAPP algorithm: Coupled ocean/aerosol products retrieved during the NASA NAAMES campaign by the NASA RSP polarimeter with comparison to collocated LaRC HSRL lidar ocean/aerosol measurements: **S Stamnes**, B Cairns, J Chowdhary, C A Hostetler, R A Ferrare, S P Burton, X Liu, J W Hair, J Allen, A J Scarino, Y Hu, P K Lange, I Cetinic

OB34C-0586 *POSTER* Observations from an Airborne Two-Wavelength Ocean Profiling High Spectral Resolution Lidar in the Atlantic and Pacific Oceans and South China Sea: **C A Hostetler**, J W Hair, D B Harper, A L Cook, R J Hare, J A Smith, K A Powell, A J Scarino, M Behrenfeld, E Boss, D Siegel, R A Ferrare

OB34C-0587 *POSTER* Evaluating multi-sensor agreement of satellite particulate backscatter retrievals by validation against in-water measurements: **J P Scott**, L I W McKinna, J Werdell

OB34C-0588 *POSTER* In situ observations of turbulence-induced disruption of marine particle aggregates and associated backscatter in the upper ocean and implications for remote sensing of particle size: **S G Ackleson**, M Rau

OB34C-0590 *POSTER* Is our understanding of particles near the ocean surface distorted by the narrow lens of ocean optics measurements?: **E Davies**, D McKee, S L Basedow

OB34C-0591 *POSTER* Optically derived size distribution of particles from 20 nm to 20 mm in North Pacific Ocean: **X Zhang**, Y Xiong, L Hu, Y Huot, D Gray

OB34C-0592 *POSTER* Retrieval of the Particle Size Distribution Using Coated Spheres Modeling: **T S Kostadinov**, E Kochetkova, S Bernard, X Zhang, L Robertson-Lain

OB34C-0593 *POSTER* Significant contribution of submicron particles to the volume scattering functions in the open ocean: **L Hu**, X Zhang, Y Xiong

OB34D Poster Hall C-D

Wednesday 1600h

Life, Material Transport, and Element Cycling in the Hadal Realm II Posters (joint with IS, ME, MM)

Moderators: Ronnie Glud, Southern Danish University;
Doug Bartlett, University of California, San Diego

OB34D-0594 *POSTER* Autonomous hadal benthic lander for in situ tracer incubations and sediment recovery to study benthic community activities: **F Wenzhofer**, J Lemburg, M Larsen, B Thamdrup, R N Glud

OB34D-0595 *POSTER* Benthic nitrogen cycling in hadal trenches: High rates and large contributions from anammox: **R N Glud**, B Thamdrup, C Schaubberger, M Larsen, A Glud, F Wenzhofer

OB34D-0597 *POSTER* Plankton Respiration in the Ultradeep Waters over the Atacama Trench: Implications for Particulate Organic Carbon Sequestration: **I Fernandez-Urruzola**, O Ulloa, W Schneider, R N Glud, X Li, R Escribano

OB34D-0598 *POSTER* Food Web Structure in the Mariana and Kermadec Trenches from Stable Isotope Analysis: **A Tokuda**, M Geringer, B N Popp, N Wallsgrove, E Grammatopoulou, D Mayor, J Drazen

OB34D-0599 *POSTER* High Benthic Transfer Rates with Low Concentrations of Organic Carbon – No Contradiction in the Atacama Trench: **P C Chuang**, M Zabel, E Okuma, M Elvert, M Kölling

OB34D-0603 *POSTER* Rust in the Abyss: Investigating the Effects of High Hydrostatic Pressure on Microbially Influenced Corrosion.: **F Lauro**, L E Doyle, P Rajala, E Marsili, J Hinks, M Seita, S A Rice

OB34D-0605 *POSTER* Tracking Environmental Change of the Hadal Zone of the Yap Trench: from Variations of Biogeochemical Parameters in the Sediment and Seawater: **H Ding**, Y Huang, C Guo, J Niu, G Li, C Sun, G Yang

OB34E Poster Hall C-D

Wednesday 1600h

Linking the Biology, Geochemistry, and Circulation of the Gulf of Mexico V Posters (*joint with CT, CP, MM*)

Moderators: **Alan Shiller**, University of Southern Mississippi; **Juan Carlos Herguera**, CICESE Center for Scientific Research and Higher Education

OB34E-0606 *POSTER* A Decadal Study of Ocean Acidification Conditions in Coastal Waters of the Gulf of Mexico: **L Barbero**, D Pierrot, R H Wanninkhof

OB34E-0607 *POSTER* ¹³C Suess Effect in the Gulf of Mexico Deep Waters: **G Quintanilla**, J C Herguera

OB34E-0608 *POSTER* A New Characterization of the Upper Waters of the central Gulf of México based on Water Mass Hydrographic and Biogeochemical Characteristics: **G Cervantes**, J M Martin Hernandez-Ayon, A Zirino, S Z Herzka, V F Camacho-Ibar, I Montes, J Sudre, J Delgado

OB34E-0609 *POSTER* An examination of niche separation in two primary *Trichodesmium* clades along the West Florida Shelf: **K Confesor**, C Selden, K Powell, A N Knapp, K N Buck, D Chappell, L Donahue

OB34E-0610 *POSTER* Relationships between Respiration Rates of Marine Microbial Communities and Physical Oceanographic Conditions of Gulf of Mexico (GM): **D Rodriguez Escobar**, J Villegas-Mendoza, M C Ruiz-de la Torre, E Gómez-Ocampo

OB34E-0611 *POSTER* Characterization of dissolved organic matter in the Southern Gulf of Mexico: **S Mohan**, R M W Amon, S Tenison, G Zinsmeyer, B Daniels, A Todd, K Kaiser, S Z Herzka, J C Herguera

OB34E-0612 *POSTER* Control of Mesoscale Eddies on the Vertical Nitrate Distribution and the Nitracline Shape and Depth in Open Ocean Waters of the Gulf of Mexico: **J Velasquez**, V F Camacho-Ibar, E Lee, A Valencia, A Trasviña-Castro

OB34E-0613 *POSTER* Effect of Mesoscale Eddies on the Vertical Distribution of Dissolved Inorganic Nutrients in Open Waters of the Gulf of Mexico during a Warm and a Cold Season: **E Lee**, V F Camacho-Ibar, J Velasquez, A Valencia

OB34E-0614 *POSTER* Mesoscale Drives Inorganic Nutrient Dynamics in Two Areas of the Mexican Off-Shore of the Gulf of Mexico: **V F Camacho-Ibar**, C Hakspiel, A Valencia

OB34E-0615 *POSTER* Effect of Caribbean Water Incursion into the Gulf of Mexico derived from Absolute Dynamic Topography, Satellite Data, and Remotely – sensed Chlorophyll-*a*: **J M Martin Hernandez-Ayon**, J Delgado, J Sudre, S Tanahara, I Montes, A Zirino

OB34E-0616 *POSTER* Groundwater Discharge to a River Delta Driven by the Mississippi River Stage: **J E Cable**, J Kim, K Telfeyan, K H Johannesson, A Kolker

OB34E-0617 *POSTER* Do Sediment Iron Concentrations Affect the Rate of Hydrocarbon Degradation?: **M Quinan**, M Martinez-Colon, C Aepli, J S Beckler

OB34E-0618 *POSTER* The Carbonate System in the Yucatan Platform in the Gulf of México: **L Barranco-Servin**, J M Martin Hernandez-Ayon, J Herrera-Silveira, D Pech, I Marino-Tapia, J C Herguera

OB34E-0619 *POSTER* Pico-Phytoplankton Dynamics during Contrasting Seasonal Conditions in Two Regions of Gulf of Mexico: **L Linacre**, R L Lara, U Mirabal-Gómez, C Bazán-Guzmán

OB34E-0620 *POSTER* Environmental vulnerability and risk assessment of the marine ecosystem of the Gulf of Mexico and the Caribbean Sea to oil spills: **L E Saldaña-Ruiz**, P Perez-Brunius, O Sosa-Nishizaki, Z Ramírez-Mendoza, A Fajardo-Yamamoto, M C García-Aguilar, M R Ramírez-León, A E Romo-Curiel, K Kotzakoulakis, J Rodriguez Outerelo, J Olascoaga, F J Beron-Vera, P Miron, J Jouanno, J Sheinbaum

OB34E-0621 *POSTER* Seasonal Variability of the Alongshore Flow over the Continental Slope and Shelf of the Western Gulf of Mexico: **G Rojo de Anda**, P Perez-Brunius, S Z Herzka, M Lopez, E Pallas Sanz

OB34E-0622 *POSTER* Sensitivity of satellite-derived zooplankton grazing rates and biomass to input parameters: **N Chaichitshrani**, V Coles, T Shropshire, M R Stukel, G Silsbe

OB34E-0623 *POSTER* Tracing the dispersion of the Coatzacoalcos river plume in the Gulf of Mexico: a numerical experiment: **A Ruiz Angulo**, J Martínez Moreno Sr, K Ramos-Musalem, E R Olvera-Prado, J Zavala-Hidalgo

OB34F Poster Hall C-D

Wednesday 1600h

Marine Sediments: Fluxes, Fauna, and Forecasting II Posters (*joint with ME, MG, PI*)

Moderators: **Heili Lowman**, University of California Santa Barbara; **Tina Treude**, GEOMAR Helmholtz Centre for Ocean Research Kiel

OB34F-0624 *POSTER* Determination of Sediment Impacts Due to Exploratory Oil Operations Using Likelihood Based Statistics.: **K Whitehead**, D Nielsen, B Sackmann, M Macrander, D Preziosi

OB34F-0625 *POSTER* Investigating Benthic Marine Sediments near Giant Kelp Forests as a Nutrient Source to the Overlying Water Column: **H Lowman**

OB34F-0627 *POSTER* Another Skate, Another dollar: Correlations Between Substrate and Geofom on Benthic Fauna in the New York Bight: **M W Sautter II**, B Williams

OB34F-0628 *POSTER* Coupling of sulfur, nitrogen and carbon biogeochemistry in oxygen minimum zone sediments covered by giant sulfur bacteria mats (Santa Barbara Basin, California): **T Treude**, D W Valentine Jr, K Gosselin, F Janssen, F Kinnaman, S Krause, N Liu, X Peng, Q Qin, D Robinson, J Tarn, F Wenzhofer, D J Yousavich

OB34F-0629 *POSTER* Diversity and Environmental Tolerance of Benthic Diatoms Occurring in the Tidal Flat of Seto Inland Sea, Japan: **A Hagiwara**, A L L Nafisyah, D Tanaka, K Koike

OB34F-0630 *POSTER* Determining the role of benthic diatoms in ecosystem primary production in the Damariscotta River Estuary: **E Burris**, J J Rich, S O'Neill, C K Algar

OB34F-0631 *POSTER* Benthic Foraminiferal Mediated Denitrification as the Major Nitrogen Sink in a Semi-Enclosed Estuary: **S Rakshit**, A Dale, M Armstrong, C K Algar

OB34F-0632 *POSTER* The Effect of Radium Partitioning on Hydrothermal Fluid Flow Determination across Guaymas Basin: **C Kollman**, R N Peterson, A Teske, L Peterson

OB34F-0633 *POSTER* A Biogeochemical Model Tuned to Quantify Benthic Iron and Sulfur Cycling on the Oregon Shelf and Slope: **A Chan**, C E Reimers

OB34F-0634 *POSTER* MACROBENTHIC FAUNA IN DEAD-END CANALS OF THE MARYLAND COASTAL BAYS, USA: **K Krieg**, A Morales-Nunez, P Chigbu

OB34G Poster Hall C-D

Wednesday 1600h

Structure, Function, and Biogeochemical Role of Plankton Communities in the Nutrient-Limited Open Ocean III Posters (*joint with CT, ME, MM, MM, NC, NC*)

Moderators: **Tatiana Rynearson**, University of Rhode Island; **Bethany Jenkins**, University of Rhode Island

OB34G-0635 *POSTER* Come Rain or Shine: Depth, Not Season, Shapes Protistan Community Structure in the NPSG: **G Ollison**, D A Caron

OB34G-0636 *POSTER* Comparing the Bioavailability of a Natural and Synthetic Iron Source: Do Past Experiments Accurately Model Diatom Growth in Response to Episodic Iron Addition?: **C Mazur**, S Strom, A Aguilar-Islas

OB34G-0637 *POSTER* Effects of CO₂ and light on the diatom *Phaeodactylum tricornutum* under iron-limited conditions: **Y Ye**, H Hong, D Shi

OB34G-0638 *POSTER* From nutrient deplete to replete: phytoplankton community composition from the oligotrophic open ocean to eutrophic coastal waters: **S Setta**, B D Jenkins, S Dyhrman, T A Rynearson

OB34G-0639 *POSTER* Nutrient Limitation Induce Photoinhibition in a Planktonic Diatom *Skeletonema costatum*: **R Yano**, S Ohara, K Koike

OB34G-0640 *POSTER* Determining Fe-limited remodeling of chloroplasts in the Subarctic Pacific through "Meta-Plastid" Analyses: **K M Gomes**, S Lerch, K N Buck, M A Brzezinski, B D Jenkins

OB34G-0641 *POSTER* Diel gene expression patterns in an iron-limited phytoplankton community: **W Gong**, O Torano, G Sharpe, A Niebergall, N Cassar, S M Gifford, A Marchetti

OB34G-0642 *POSTER* Light Sensing in Open Ocean Eukaryotic Plankton: **S Coesel**, R D Groussman, B P Durham, R Morales, F Ribalet, E V Armbrust

OB34G-0643 *POSTER* Phytoplankton Community Composition and Taxon-Specific Growth and Microzooplankton Grazing Rates in Subantarctic HNLC Waters Under Contrasting Mixing and Iron Limiting Conditions: **A Gutierrez-Rodriguez**, M Latasa, A Cristi-Martínez, P Gourvil, K Safi, D Marie, A Lopes dos Santos, D Vaultot, S D Nodder

OB34G-0644 *POSTER* Quantifying microzooplankton communities along open ocean salinity gradients: **S Grimm**, M Spodek, A R Juhl, A Subramaniam, M E Dueker

OB34H Poster Hall C-D

Wednesday 1600h

The Role of Plankton Physiology and Ecology for Ocean Biogeochemistry II Posters (*joint with ME, PC*)

Moderators: Stephanie Dutkiewicz, Massachusetts Institute of Technology; **Friederike Prowe**, GEOMAR Helmholtz Centre for Ocean Research Kiel

OB34H-0645 *POSTER* Impact of Photoacclimatory Status and Community Structure on the Bio-optical Properties of Marine Phytoplankton: **S Phongphattarawat**, H A Bouman, Q Zhang

OB34H-0646 *POSTER* A novel bio-optical model that allows incorporation of traditional plankton and remote sensing methods and observations and improves the assessment of biogeochemical processes: **J Skerratt**, M Soja-Wozniak, M E Baird, M Mongin, K Wild-Allen, B Robson, N Margvelashvili

OB34H-0647 *POSTER* NADPH-dependent extracellular superoxide production is vital to photophysiology in the marine diatom *Thalassiosira oceanica*: **S Plummer**, C Hansel, P F Andeer, M A Saito, M R McIlvin

OB34H-0648 *POSTER* Unique photoprotection strategies by diatoms from ecologically distinct light environments: **N Fisher**, D J Suggett, K Halsey

OB34H-0649 *POSTER* Temperature But Not CO₂ Stimulates Growth in Southern Ocean Phytoplankton Over a Range of Light and Fe Conditions: **S Andrew**, R F Strzepek, M J Ellwood

OB34H-0650 *POSTER* Interactive Effects of Iron, Vitamin B12 and UV Light on Phytoplankton in the Amundsen Sea: **G R DiTullio**, N L Schanke, F Bolinesi, L Lees, R Casotti, P A Lee, M A Saito, O Mangoni

OB34H-0651 *POSTER* Physiological flexibility of phytoplankton impacts modeled chlorophyll and primary production across the North Pacific: **Y Sasai**, S L Smith, E Siswanto, H Sasaki, M Nonaka

OB34H-0652 *POSTER* Field observations and physical-biogeochemical modelling suggest low silicon affinity for Antarctic fast ice diatoms: **S Lim**, S Moreau, M Vancoppenolle, F Deman, A Roukaerts, K Meiners, J Janssens, D Lannuzel

OB34H-0653 *POSTER* C: N: P OF THE PRASINOPHYTE *CHLOROPICON* UNDER NITROGEN STARVATION: **V Ebenezer**, R Hu, S Sharpe, Z Finkel

OB34H-0654 *POSTER* How sensitive is the growth and elemental composition of the widespread Arctic diatom *Chaetoceros gelidus* to changing environmental conditions?: **N Schiffrine**, J E Tremblay, M Babin

OB34H-0655 *POSTER* Underestimated role of the specialized metabolism in microalgae species dynamics using the toxic benthic dinoflagellate *Ostreopsis cf. ovata* as a model.: **E Ternon**, A S Pavaux, C Jauzein, M P Gémin, A Peltekis, B Bailleul, R Lemée, O P Thomas

OB34H-0656 *POSTER* Assessing the influence of Subantarctic calcification on the global distribution of alkalinity: **K M Krumhardt**, M C Long, K T Lindsay, M Levy

OB34H-0657 *POSTER* Information exchange among marine microbes via the reactive oxygen species hydrogen peroxide, with potential community reorganization effects: **K Bright**, S Strom

OB34H-0659 *POSTER* Patterns and Scales of Phytoplankton Variability in the Coastal Waters of West Florida Shelf.: **S Chakraborty**, V J Lovko

OB34H-0660 *POSTER* Annual Variability of Particulate and Dissolved Primary Production in the Subtropical Coastal NW Pacific: **T Y Chen**, Y X Lan

OB34H-0661 *POSTER* New Phytoplankton Communities Revealed in Coastal Antarctica Using a Citizen Science Approach: **A Cusick**, M Mascioni, G O Almandoz, M Vernet

OCEAN CHANGE: ACIDIFICATION AND HYPOXIA

OC34A Poster Hall C-D

Wednesday 1600h

The Evolving Ocean Carbon Sink: Processes and Impacts III Posters (*joint with AI, OB, PC*)

Moderators: **Nicole Lovenduski**, University of Colorado; **Wolfgang Koeve**, GEOMAR Helmholtz Centre for Ocean Research Kiel

OC34A-1450 POSTER A neural network-based monthly climatology of oceanic dissolved inorganic carbon in the upper 2000 m: **L Keppler**, P Landschuetzer, S Lauvset, N Gruber, I Stemmler

OC34A-1452 POSTER A Synthetic Ensemble for Air-Sea CO₂ Flux Observations: **H Olivarez**, N S Lovenduski, R X Brady, K A McKinnon, P Landschuetzer, G A McKinley

OC34A-1453 POSTER Carbon Fluxes in the North Western European Shelf: Trends, Variability and Drivers: **Y Artioli**, J Blackford, M Butenschon, J Clark, G Galli, J Harle, J T Holt, G Lessin, S van Leeuwen, J van der Molen, T Silva, C G Mayorga Adame, J Tinker, S Wakelin, J I Allen

OC34A-1454 POSTER Climate change impacts on nutrient and export production (EP) distributions: **Y Liu**, J K Moore

OC34A-1455 POSTER Dissolved Inorganic Carbon Dynamics of the Eastern Arabian Sea: **S Naik**, G V M Gupta, G D Rao, V R Rao, M V R Murthy

OC34A-1456 POSTER Drivers of Observed Excess Alkalinity in the Upper Water Column: **A Coggins**, P R Halloran, A J Watson, S Khatiwala, M Salter

OC34A-1457 POSTER Seasonal variability and drivers of air-sea CO₂ exchange in the Arabian Sea: **A de Verneil**, Z Lachkar, K S Smith, M Levy

OC34A-1458 POSTER Physical and Biological Controls of the Drake Passage pCO₂ Variability: **A Jersild**, T Ito

OC34A-1459 POSTER Hurricanes enhance the ocean's biological carbon pump: **R Pedrosa Pamies**, M H Conte, J Weber, R J Johnson

OC34A-1460 POSTER Evaluating the biological carbon pump in a water mass transformation framework: **G A MacGilchrist**, S Griffies, J P Dunne, J L Sarmiento

OC34A-1461 POSTER Resolving for Mineralogy in the Marine CaCO₃ Pump: The Contribution of Bony Fishes: **M Salter**, C T Perry

OC34A-1462 POSTER Natural modulations of the ocean carbon sink: **E Liao**, L Resplandy, J Liu, K W Bowman

OC34A-1463 POSTER Evaluation of air-sea CO₂ fluxes in the ocean-ecosystem model FESOM-REcoM and in the Global Carbon Budget Models: **J Hauck**, V Schourup-Kristensen, Ö Gürses, H Ewen, M Zeising

OC34A-1464 POSTER Southern Ocean carbon release from sluggish deep waters: **H Chen**, A Haumann, L D Talley, K S Johnson, J L Sarmiento

OC34A-1465 POSTER Considering the Influence of Clouds on Preindustrial Southern-Ocean Carbon Uptake: **M R Gentry**, J E Kay, N S Lovenduski, P P Mongwe, D P Schneider

OC34A-1466 POSTER Observation-based Evaluation of Results from the Southern Ocean Model Intercomparison Project: **J L Russell**, B Bronselaer, M Winton, J L Sarmiento

OC34A-1467 POSTER Ocean Carbon Uptake Under Aggressive Emission Mitigation: **S Ridge**, G A McKinley

OC34A-1468 POSTER Decoupling of projected oceanic uptake of carbon and heat in the 21st century in a high carbon emission pathway: **E Shadwick**, E Mortenson, A Lenton, T W Trull, X Zhang, M Chamberlain

OC34A-1469 POSTER Mid- and High-Latitude Influences on Carbon Uptake and Ocean Acidification in GFDL CM4 and ESM4: **J P Krasting**, M De Palma, J P Dunne

OC34A-1470 POSTER Emergent Multi-model Constraints Suggest Greater Arctic Ocean Anthropogenic Carbon Uptake and Coincident Acidification than Previously Projected: **J Terhaar**, L Kwiatkowski, L Bopp

OC34A-1471 POSTER Projected change in the carbon budget of the Southern Ocean due to altered large-scale ocean circulation patterns in a warming climate.: **R L Beadling**, J L Russell

OC34A-1473 POSTER Coupling of Surface Ocean Heat and Carbon Perturbations Over the Subtropical Cells under 21st Century Climate Change: **K B Rodgers**, M Ishii, T L Froelicher, S Schlunegger, O Aumont, K Toyama, R Slater

OC34A-1474 POSTER Stoichiometric buffering of organic carbon export in the future and during last glacial period: **K Matsumoto**, T Tanioka

OC34A-1475 *POSTER* Understanding the Last Millennium Ocean Carbon Cycle with a GFDL Earth System Model: **L T Sentman**, R Rutberg, J P Dunne

OC34A-1476 *POSTER* A revised Earth system model-based analysis of glacial-interglacial changes in ocean $\delta^{13}\text{C}$: **M Ödalen**, C Peterson, A Ridgwell, K I C Oliver, P J Valdes

OC34A-1477 *POSTER* Secular Changes to the Biological Carbon Pump and its Interrelation with Past Extinction Events: **D Hülse**

OCEAN DATA MANAGEMENT

OD34A Poster Hall C-D

Wednesday 1600h

Creating Data Synchronicity Across Ocean Microbiome Research I Posters (*joint with ME, MM, OB*)

Moderators: **Elisha Wood-Charlson**, Lawrence Berkeley National Laboratory; **Bonnie Hurwitz**, University of Arizona

OD34A-3436 *POSTER* High Throughput Culturing of Coral Associated Microorganisms: **N Varona**, R Peixoto, A J Hallock, G Jopsin, M Villancio-Wolter, D Coil, J Eisen

OD34A-3437 *POSTER* Planet Microbe: An Ontology-Enriched Cyberinfrastructure System for FAIR Marine ‘Omics Data: **K Blumberg**, A Ponsero, M D Bomhoff, E M Wood-Charlson, P L Buttigieg, B L Hurwitz

OD34A-3439 *POSTER* State-of-the-art Labs Meet State-of-the-art FAIR Data Practices: **B J Tully**

OD34A-3440 *POSTER* Towards a FAIR-compliant ocean and environmental genome database: **S Jungbluth**, B J Tully, A P Arkin, E M Wood-Charlson

OD34B Poster Hall C-D

Wednesday 1600h

Data Science for Modern Oceanography: Statistics, Machine Learning, Visualization, and More III Posters (*joint with OB, OM, PL*)

Moderators: **Alison Gray**, University of Washington; **Mikael Kuusela**, Carnegie Mellon University

OD34B-3441 *POSTER* Statistics for Mapping Ocean Heat Content with Argo Floats: Modeling and Uncertainty Quantification: **M Kuusela**, D Giglio, A Mondal, M Stein

OD34B-3443 *POSTER* Disentangling Complex Flows by Blurring the Data: **H Aluie**, M W Hecht, M E Maltrud, S Rai, M Sadek, B A Storer, G Vallis

OD34B-3444 *POSTER* Data-driven stochastic parameterization of multi-scale flow interactions in ocean models: **D A Kondrashov**, E Ryzhov, P S Berloff, A Niraj

OD34B-3445 *POSTER* Extracting Regional and Seasonal Trends of Multiscale Energetics in the Global Ocean: **B A Storer**, H Aluie

OD34B-3446 *POSTER* Resolving the Short-term Persistence of Oceanographic Measurements from an Autonomous Underwater Vehicle in the Central Red Sea, October 2017: **M F Campbell Jr**, B H Jones

OD34B-3448 *POSTER* Reconstructing Subsurface Ocean Temperature and Salinity by the Reduced Space Objective Analysis With Dynamical Constraints: **A Kaplan**, Y Kushnir, M A Cane

OD34B-3450 *POSTER* Characterization of Physical and Biogeochemical Variability around the Kerguelen Plateau and across the Southern Ocean Frontal Zones: A Machine Learning Approach: **M R Mazloff**, I Rosso, L D Talley, S G Purkey, N M Freeman, G Maze

OD34B-3451 *POSTER* Extracting nutrient - ocean state relationships from oceanic biogeochemistry simulations for macroalgae mariculture: **Z Cao**, P J Wolfram Jr, M E Maltrud, R X Brady

OD34B-3452 *POSTER* Machine Learning (ML) enabled forecasts derived from Carbon, Silicate, and Nitrogen Ecosystem (CoSiNE) model generated climatology: **C Wood**, R W Gould Jr, B Penta, S deRada, S McCarthy, G P Behm

OD34B-3453 *POSTER* Long-term trends in ocean chlorophyll: update from a Bayesian hierarchical space-time model: **C Beaulieu**, M Hammond, S Henson, S K Sahu

OD34B-3454 *POSTER* Responses of Marine Phytoplankton Communities to Environmental Changes: New Insights From a Niche Classification Scheme: **W Xiao**, E A Laws, Y Xie, L Wang, X Liu, J Chen, B Chen, B Huang

OD34B-3455 *POSTER* Predicting Shape of Dives of Southern Elephant Seals Using Regression Tree Models: **M Godard**, C Manté, C Guinet, D Nerini

OD34B-3456 *POSTER* Deep Learning Algorithm Forecasts Shellfish Toxicity at Site Scales in Coastal Maine: **I Grasso**, S D Archer, C Burnell, K Kanwit, B Tupper, N Record

OD34C Poster Hall C-D**Wednesday 1600h****Measurement to Manuscript: Innovative Approaches to Biogeochemical Data Management I Posters** (*joint with AI, OB, SI*)**Moderators:** **Stephen Diggs**, University of California San Diego; **Kevin O'Brien**, University of Washington Seattle**OD34C-3457 POSTER** What If We Reconsidered How We Ask Scientists to Share Their Data: When FAIR Meets Crowd-Sourcing and Nudge Theory: **M Smit**, A Ianta, A MacNeill**OD34C-3458 POSTER** CCHDO: Tall Tales from decades of reuniting global repeat hydrographic data: **S C Diggs**, K I Stocks, C Berys-Gonzales, A Barna, J Kappa, L Merchant, J H Swift**OD34C-3459 POSTER** Embedding FAIR Data Principles into operational data flow: **B Pfeil**, S Jones, K O'Brien, E F Burger, J F Henriksen, M K Karlsen**OD34C-3460 POSTER** *Data Analysis and Visualization Workflows for the Easy Integration of Satellite and In-situ Biogeochemical Data via the PolarWatch ERDDAP Data Server:* **J P Sevadjian**, C Wilson, D H Robinson**OD34C-3461 POSTER** Role of NASA-SeaBASS repository for the legacy of the EXPORTS field biogeochemical measurements: **I Cetinic**, I Soto Ramos, C W Proctor, S E Craig**OD34C-3462 POSTER** Evolving the Data Management Workflow of GLODAP: **K O'Brien**, B Pfeil, S Jones, E F Burger, S C Diggs, J F Henriksen, K M Smith, L Kamb**OD34C-3463 POSTER** Streamlining Oceanic Biogeochemical Dataset Assembly in Support of Global Data Products: **E F Burger**, K O'Brien, L Kamb, K M Smith, R Schweitzer, B Pfeil, S Jones**OD34C-3464 POSTER** QuinCe: An online tool for processing and quality control of surface ocean CO₂ measurements: **S Jones**, J F Henriksen, M K Karlsen**OD34C-3465 POSTER** Collect once, re-use multiple times: Data archiving at NOAA's National Centers for Environmental Information: **L Jackson**, K Weathers, K Larsen, D W Collins**OD34D Poster Hall C-D****Wednesday 1600h****New Information Systems Tools for Implementing Autonomous Multisource, Multipoint Observing Systems II Posters** (*joint with ME, OB, PS*)**Moderators:** **Robert Heitsenrether**, NOAA Center for Operational Oceanographic Products and Services; **Sarah Webster**, University of Washington**OD34D-3466 POSTER** Cross-Domain command and communications synergies towards more effective cooperative missions: **J T Borges de Sousa**, P Dias, M Incze, K Lima, M Costa, M Ribeiro, J Baghdady, B Jones, N Hafner, A Z Trimble, M Edwards, R Andrade**OD34D-3467 POSTER** A submesoscale cyclonic eddy observed with autonomous vehicles in synergy with ship and satellite measurements: **J T Borges de Sousa**, A M Santos Ferreira, J C B da Silva, R Mendes**OD34D-3468 POSTER** Autonomous Path Planning to Optimally Harvest Dynamic Fields: **M Doshi**, M Bhabra, P F J Lermusiaux**OD34D-3469 POSTER** Complementary Ocean Data Collection using Heterogeneous Sensor Platforms: **T Mo-Bjorkelund**, P Norgren, T O Fossum, M Ludvisen**OD34D-3470 POSTER** A Flexible, Automated, Processing and Decision System to Support Ocean Color Satellite Vicarious Calibration Using Hyperspectral Radiometric Instrumentation on Autonomous Profiling Floats.: **A Barnard**, E Boss, R Frouin, M R Mazloff**OD34D-3471 POSTER** QARTOD - Prospects for Real-Time Quality Control Manuals, How to Create Them, and a Vision for Advanced Implementation: **M Bushnell**, K Bailey, J A Bosch, E F Burger, J Dorton, R Heitsenrether, J King, S McArthur, M Tamburri, J Thomas, C Waldmann**OD34D-3472 POSTER** NASA's AIST Program funds technology for the next decade: **M M Little**

OCEAN MODELING

OM34A Poster Hall C-D**Wednesday 1600h**
**Advances in Ocean Data Assimilation,
Forecasting, and Reanalysis VI Posters** (*joint with
IS, PL, PS*)

Moderators: **Ibrahim Hoteit**, King Abdullah University of Science and Technology; **Mohamed Iskandarani**, University of Miami; **Zhijin Li**, NASA Jet Propulsion Laboratory; **Aneesh Subramanian**, University of Colorado at Boulder

OM34A-3144 *POSTER* Improved Vorticity Balance in Gridded Altimetry Data from Multiple Satellites: **X Jiang**, L Liu, Z Li, X Wang, C Dong

OM34A-3146 *POSTER* Lagrangian Data Assimilation of Surface Drifters using the Local Ensemble Transform Kalman Filter: **L Sun**, S Penny

OM34A-3147 *POSTER* Lagrangian Tracking in Stochastic Fields with Application to an Ensemble of Velocity Fields in the Red Sea: **I Hoteit**, S El Mohtar, O M Knio, L Issa, I Lakkis

OM34A-3151 *POSTER* New Developments in the New Zealand Ocean Operational Forecast System – The Moana Project.: **J M Azevedo Correia de Souza**, P Couto, M Roughan

OM34A-3152 *POSTER* New high-resolution Southwest North Atlantic Regional Climatology: **A V Mishonov**, D Seidov, O Baranova, K Weathers

OM34A-3153 *POSTER* Obstruction Grids Impact on Wave Propagation and WW3 Run Time for Two Regions: Indonesia and the Caribbean.: **P G Jessen**

OM34A-3154 *POSTER* Ocean Bathymetry Detection from Surface Wave Measurement: **J Wu**, L Shen

OM34A-3155 *POSTER* Ocean currents in the Navy Earth System Prediction Capability: **L Zamudio**, E J Metzger

OM34A-3156 *POSTER* Ocean Ensemble Forecast Skill of the US Navy's Extended-Range Global Prediction System: **C D Rowley**, P G Thoppil, P J Hogan, N Barton, C A Reynolds

OM34A-3157 *POSTER* Offshore Operations Risk Assessment Technology Using Metocean Ensemble Forecasts Results: **C C Yen**, H W Chang

OM34A-3158 *POSTER* On the Use of Atmospheric Ensembles to Generate Physical-biogeochemical Ocean Model Uncertainties: **S S Sofianos**, J Karagiorgos, V Vervatis, B Lemieux-Dudon, P De Mey-Frémaux, N K Ayoub

OM34A-3159 *POSTER* Performance evaluation of a Wavewatch III-based wave forecasting system for Mexico.: **A T Hernandez Siade**, O Gómez Ramos, J Zavala-Hidalgo

OM34A-3160 *POSTER* Residual prediction to improve the meteorological based sea surface temperature forecasts using ANN: **K Patil**, M Iiyama

OM34A-3161 *POSTER* Seamless and cross-scale modelling of the ocean: from regional to shelf-coastal and urban scale: **I Federico**, I Barletta, G Verri, F Montagna, S Causio, G Coppini, E Di Lorenzo, N Pinardi

OM34A-3162 *POSTER* Sensitivity analysis of WaveWatch III in Indonesian seas: **R Effendi**, A Suryo, N F Riama

OM34A-3163 *POSTER* Stochastic trajectory predictions from ADCP velocity measurements: **S Ameli**, T Peacock, S Shadden

OM34A-3164 *POSTER* The CMEMS Mediterranean and Black Sea analysis and forecasting physical systems: description and skill assessment: **G Coppini**, E Clementi, S Ciliberti, J Pistoia, E Jansen, D Delrosso, R Escudier, M Drudi, A Grandi, R Lecci, S Cretí, F Palermo, V Lyubartsev, L Stefanizzi, L Lima, A C Goglio, E Peneva, M Ilıcak, S Masina, N Pinardi

OM34A-3165 *POSTER* Verification of the Environment and Climate Change Canada (ECCC) Global Ensemble Wave Prediction System: **P Timko**, N Bernier, S Peel, B Pouliot, G Smith

OM34A-3166 *POSTER* Waves Evaluation of a Coupled Wave-Circulation Model for US Navy FNMOC COAMPS Op-Test: **P S Gay**

OM34B Poster Hall C-D**Wednesday 1600h**
**Inland-Coastal Model Coupling Using a
Community-Based Approach II Posters** (*joint with
CP*)

Moderators: **Rick Luettich**, University of North Carolina at Chapel Hill; **Ehab Meselhe**, Tulane University

OM34B-3167 *POSTER* Analysis and Evaluation of Flooding Predictions in the Transition Zone Using a State of the Art Coupled Hydrologic/Hydrodynamic Modeling System: **P Velissariou**, R Bakhtyar, H Mashriqui, K Maitaria, B Trimble, A Abdolali, S Moghimi, A J Van der Westhuysen, G R Aggett, T Flowers

OM34B-3168 *POSTER* Applying a multi-scale decoupled modeling approach to evaluation of New Orleans flood defenses.: **J H Collins III**, M E Agnew, M C Halso, C E Kees, A Dimakopoulos, D A Fertitta, M Sklia

OM34B-3169 *POSTER* Influence of Forcing Conditions on Total Water Level Prediction and Spatiotemporal Patterns in Delaware Bay, USA: **D F Munoz Pauta**, D Yin, J Tian, R Bakhtyar, K Mandli, C Ferreira

OM34B-3171 *POSTER* Precipitation impacts on lake ice and water temperature in the North American Great Lakes: **A Fujisaki-Manome**, E J Anderson, J Kessler, P Chu, J Wang, A Gronewold

OM34B-3172 *POSTER* Real-Time Total Water Forecasts for the National Capital Region and the Chesapeake Bay: **C Ferreira**, A Khalid, T W Miesse, S Sumi, G D A Coelho, A de Souza de Lima

OM34B-3173 *POSTER* Simulating Coupled Surge and River Flow and its Influence on Compound Inundation in an Idealized Test Case: **Y Feng**, B Blanton, R Luettich, J Ratcliff

OM34B-3174 *POSTER* The Delta-X Framework: A Reality Check for Hydrodynamic, Sediment Transport and Ecogeomorphic Models: **M Simard**, M W Denbina, K A Wright, D Jensen

OM34B-3175 *POSTER* The Tampa Bay Coastal Ocean Model Nowcast/Forecast System with Ecological Applications: **J Chen**, R H Weisberg, Y Liu, L Zheng, J Law

OM34B-3176 *POSTER* Wave-driven effects and geomorphic controls on bay-shelf exchange in a back-barrier estuary: **A Aretxabaleta**, J C Warner, N K Ganju

PAST, PRESENT AND FUTURE CLIMATE

PC34A Poster Hall C-D

Wednesday 1600h

Near-Term Prediction of the Ocean: Physics, Biogeochemistry, and Ecosystems II Posters
(joint with OC, OM, PI)

Moderators: **Hongmei Li**, Max Planck Institute for Meteorology; **Filippa Fransner**

PC34A-1804 *POSTER* Improving the near-term estimate of air-sea CO₂ exchange by merging models and observations with machine learning: **L Gloege**, G A McKinley, M Yan, T Zheng

PC34A-1805 *POSTER* Estuarine forecasts at weather to subseasonal scales: **A Ross**, C A Stock, K W Dixon, M A M Friedrichs, R R Hood, M Li, K Pegion, V S Saba, G A Vecchi

PC34A-1806 *POSTER* Evaluation of Ocean Forecast within GloSea5 with Multivariable Integrated Evaluation Index: **J Wie**, H Lee, B K Moon, H Park, P H Chang, J Lee, Y Kim

PC34A-1807 *POSTER* Exploring sources of error in decadal predictions of the Pacific surface and sub-surface ocean: **D Faggiani Dias**, S G Yeager, A J Miller

PC34A-1809 *POSTER* Linear Inverse Model Approach to Forecasting Regional Dissolved Oxygen: **T Ito**, D Sun

PC34A-1810 *POSTER* New monthly ocean operational system: **C Dubois**, M Clavier, G Ruggiero

PC34A-1811 *POSTER* Potential predictability of marine ecosystem drivers: **T L Froelicher**, L Ramseyer, C Raible, K B Rodgers

PC34A-1812 *POSTER* Predictability in California Current System: the role of the North Pacific forcing and the asymmetric response to La Niña vs El Niño: **T Xu**, Y Zhao, E Di Lorenzo, K A Haas

PC34A-1813 *POSTER* Near-term predictions of ocean biogeochemistry in the Community Earth System Model: **N S Lovenduski**, S G Yeager, R X Brady, K M Krumhardt

PC34A-1814 *POSTER* Reconstruction and prediction of the ocean carbon sink variations: **H Li**, T Ilyina, W A Müller, P Landschuetzer

PC34B Poster Hall C-D

Wednesday 1600h

**Long-Term Changes of the Deep-Ocean
Overturning Circulation: Past and Future II
Posters (joint with HE, OM, PL)**

Moderators: Wei Liu, Yale University; Malte Jansen, The University of Chicago

PC34B-1815 POSTER Connecting Atmospheric Dynamics to Abyssal Ocean Geometry on Paleoclimate Time Scales: **D E Amrhein**, L Thompson

PC34B-1816 POSTER Deep Water Dynamics in the Cape Basin during the Mid Pleistocene Transition: **M Passacantando**, S Hines, S R Hemming

PC34B-1817 POSTER Deglacial CO₂ changes in the northwest Pacific (Shatsky Rise): **Y Huh**, S Bang, J O Kang

PC34B-1819 POSTER Sedimentary Records of Deep Water Export From the Arctic to the North Atlantic Ocean: **L E Kipp**, M Kienast, J F McManus

PC34B-1820 POSTER Investigating the Return Pathways of North Atlantic Deep Water Using ECCO4 Reanalysis Data: **T Monkman**

PC34B-1823 POSTER The role of wind strength and vertical mixing on the AMOC stability and carbon uptake during LGM and HS1 events.: **M P Goes**, L M Goes, A C Clement

PC34B-1824 POSTER An Update on the Thermohaline Sea Level Rise Commitment to Global Warming: **M Hieronymus**

PC34B-1826 POSTER The Evolving AMOC Multidecadal Variability in a Warming Climate.: **X Ma**, W Liu, C Chen, J Cheng, G Huang, X Li

PC34B-1827 POSTER The Effects of Ozone Change on Southern Ocean MOC, Heat Uptake and Storage: **S Li**, W Liu

PC34C Poster Hall C-D

Wednesday 1600h

**Near-Term Prediction of the Ocean: Physics,
Biogeochemistry, and Ecosystems III Posters
(joint with OC, OM, PI)**

Moderators: Hongmei Li, Max Planck Institute for Meteorology; Filippa Fransner

PC34C-1829 POSTER An Assessment of Seasonal Forecasts for the Bering Sea Cold Pool: **K Kearney**, A J Hermann, W Cheng, K Aydin

PC34C-1832 POSTER Near-term Ocean Dynamics and Biogeochemical Interactions in the North-Baltic Sea System: A Model Validation: **I Ruvalcaba Baroni**, E Almroth-Rosell, L Axell, C Dieterich, M Gröger, J Hieronymus, I Wählström, S Fredriksson, L Arneborg

PC34C-1833 POSTER Predictability of critical metabolic index in an initialized global marine biogeochemistry prediction system: **J Y Park**, C A Stock, J P Dunne, X Yang, A J Rosati

PC34C-1834 POSTER Prediction skill in the Subpolar North Atlantic and Nordic Seas in the Norwegian Climate Prediction Model (NorCPM): **L G Passos**, H R Langehaug, M Årthun, T Eldevik

PC34C-1836 POSTER Wind-Stress Induced Multi-Year Predictability of Subpolar North Atlantic Sea Surface Temperature: **A Reintges**, M H Bordbar, W Park, M Latif

PC34C-1837 POSTER Predictability of variations in the ocean and land carbon sinks in a multi-model framework: **T Ilyina**, H Li, A Spring, P Friedlingstein, N S Lovenduski, L Bopp, M O Chikamoto, J P Dunne, J Y Park, R Séférian, S G Yeager

PC34C-1838 POSTER Ocean Biogeochemical Predictions - Initialization and Sources of Predictability: **F Fransner**, F Counillon, I Bethke, J Tjiputra, A Samuelsen, A Nummelin, A Olsen

**PHYSICAL-BIOLOGICAL
INTERACTIONS**

PI34A Poster Hall C-D

Wednesday 1600h

**Water Mass Variability in Eastern Boundary
Upwelling Systems: Climate Drivers and
Ecosystem Impacts II Posters (joint with PC, PL)**

Moderators: Mercedes Pozo Buil, Georgia Institute of Technology Main Campus; Melanie Fewings, Oregon State University

PI34A-2500 POSTER A Climatology of Chlorophyll Fluorescence in the California Current Region: **G P Castelao**, D L Rudnick

PI34A-2501 *POSTER* An inter-EBUS comparison of zonal patterns of phytoplankton diversity with a Meridionally Averaged Model of Eastern Boundary Upwelling Systems (MAMEBUS): **J Moscoso**, A Stewart, D Bianchi, J C McWilliams

PI34A-2502 *POSTER* Anomalous Coastal Poleward Flow in Southern California and the Regional Impacts of this Prior to and during the 2014 Marine Heatwave and 2015-16 El Niño: **C F Lowcher**, U Send, M J Lankhorst

PI34A-2503 *POSTER* ARIOS: An Acidification Ocean Data Base in the Galician Upwelling Ecosystem: **F F Pérez**, D Broullón, M Doval, X A Padin, F Fraga

PI34A-2504 *POSTER* Basin-scale water biogeochemistry and stratification changes are decisive factors in the response of the California Current System to climate change: **E M Howard**, C A Deutsch, H Frenzel, L Renault, J C McWilliams, D Bianchi, F Kessouri

PI34A-2505 *POSTER* Development of hypoxic waters in multi-basin coastal waters of a large lake: **R Valipour**, L F León, R R Yerubandi

PI34A-2506 *POSTER* Dynamics of the bottom boundary and nepheloid layers in a coastal upwelling system (NW Iberia): **C G Castro**, N Villaceros-Robineau, D Zúñiga, B Barreiro-González, F Alonso-Perez, F de la Granda, M Frójan, C A Collins, E D Barton

PI34A-2507 *POSTER* Evaluation of the historical and future biogeochemical boundary conditions from earth system models for the California Current System: **J D L Deauna**, A E Yankovsky, R R Rykaczewski

PI34A-2508 *POSTER* Long-term subsurface dissolved oxygen trend in the NW Iberian coastal upwelling system (NE Atlantic): **C G Castro**, D Zúñiga, R F Sanchez Leal, N Villaceros-Robineau

PI34A-2509 *POSTER* Ocean Acidification Variability in the California Current: **B Green**, N S Lovenduski, R X Brady, A J Sutton

PI34A-2510 *POSTER* Response of the California Current Ecosystem to Mitigation of Carbon Dioxide: **J G John**, C A Stock, R R Rykaczewski, E Drenkard, J Y Luo, J P Dunne

PI34A-2511 *POSTER* Seasonal-to-Interannual Drivers of Bottom Temperature Conditions in the Northern California Current System: **S Ray**, S Siedlecki, M A Alexander, A J Hermann, N A Bond

PI34A-2513 *POSTER* Biogeochemical evolution of mesoscale subsurface eddies off central Chile: **L O Ortiz**, O Pizarro, B Dewitte, M Cornejo, M Pizarro-Koch

PHYSICAL OCEANOGRAPHY: MESOSCALE AND LARGER

PL34A Poster Hall C-D

Wednesday 1600h

Atlantic Ocean Variability in a Changing Climate: Observations, Modeling, and Theories V Posters (*joint with AI, HE, PC*)

Moderators: Laifang Li, Duke University; Dian Putrasahan, Max Planck Institute for Meteorology

PL34A-2698 *POSTER* Using Ocean Heat and Carbon Timeseries to Understand the Relationship Between Emissions and Warming – a Case Study with the Subtropical North Atlantic: **K E Turner**, A Katavouta, R G Williams

PL34A-2700 *POSTER* Robust Sub-decadal Variability in the North Atlantic region: **T Martin**, A Reintges, M Latif

PL34A-2701 *POSTER* Surface predictor of overturning circulation and heat content change in the subpolar North Atlantic: **H Mercier**, D Desbruyères, G Maze, N Danialt

PL34A-2702 *POSTER* Moving beyond the monolithic Atlantic Multidecadal Variability: **M W Buckley**, A C Clement

PL34A-2704 *POSTER* Atlantic heat uptake and redistribution as a response to air-sea heat flux perturbations: **M Aengenheyster**, L Zanna, J M Gregory

PL34A-2705 *POSTER* The role of heat, momentum, and freshwater fluxes in tropical meridional gradient variability: **T Kataoka**, T Suzuki, H Tatebe

PL34A-2706 *POSTER* A Physically-Motivated Method for Attributing Heat Transport in the Subtropical North Atlantic: **S Jiang**, C S Jones, R Abernathey

PL34A-2707 *POSTER* Leading decadal variability and climate linkages in a gridded dataset of North Atlantic extratropical surface temperature, salinity, and density from 1896–2018: **A R Friedman**, L Chafik, G P Reverdin, N P Holliday, G C Hegerl

PL34A-2708 *POSTER* A Machine Learning Approach to Constrain Ocean Warming in the Atlantic since 1945.: **A Bagnell**, T J DeVries

PL34A-2709 *POSTER* Identifying the Time Scale, Pattern, and Mechanisms Underlying North Atlantic Decadal Variability: **M Årthun**, R Jnglin Wills, H Johnson

PL34A-2710 *POSTER* Subpolar North Atlantic cooling forced by increased storminess: **L Li**, M S Lozier, F Li

PL34A-2711 *POSTER* Local and remote causes of the recent North Atlantic cold anomaly: an adjoint sensitivity study: **D Jones**, S A Josey, B Sinha, G Forget

PL34A-2712 *POSTER* Examining the Dynamic Sea Level Response to Surface Heat Flux Perturbations: **A Todd**, L Zanna, J M Gregory

PL34A-2713 *POSTER* Impacts of the East Atlantic pattern on the interannual sea level variability along the U.S. eastern seaboard: **C E Germaineaud**, M P Goes, S K Lee, D Volkov, R M Domingues, C Schmid, G J Goni, M O Baringer

PL34A-2714 *POSTER* Meridional Heat and Salinity Budgets of the Sargasso Sea Inferred from Two Decades of Ocean Time-series and Transect Observations: **R J Johnson**, N R Bates, M W Lomas, S Stevens, P Lethaby, Z Anderson, F Pacheco, A Knap

PL34B Poster Hall C-D

Wednesday 1600h

Tropical Indo-Pacific Ocean Circulation and Climate Variations III Posters (*joint with A1*)

Moderators: **Jing Wang**, Institute of Oceanology, Chinese Academy of Sciences; **William Dewar**, Florida State University

PL34B-2715 *POSTER* Teleconnection of equatorial convection between Boreal Winter Monsoon with MJO and the interaction of Indo-Western Pacific Ocean over Maritime Continent: **K R Pratama**, N F Riama, E L Siadari

PL34B-2716 *POSTER* The Ocean Barrier Layer in the Eastern Indian Ocean as a Predictor for Rainfall over the Indonesian-Australian Region: **D Ivanova**, J McClean, J Sprintall, R Chen

PL34B-2717 *POSTER* Climate Variability in the Tropical Oceans Simulated by a Coupled GCM--CAS FGOALS3: **Y Yu**

PL34B-2718 *POSTER* Driving Mechanism of Regional Sea Level Changes in the Marginal Seas of Southeast Asia on Interannual to Decadal Time Scales: **P Wagner**, C W Boning, M Scheinert

PL34B-2719 *POSTER* Meridional asymmetry in recent Pacific sea surface height trends: **F Schloesser**, P R Thompson, C G Piecuch

PL34B-2720 *POSTER* Subsurface variations in the Maluku Channel of the Indonesian seas observed by an underwater glider in the winter of 2018-2019: **Z Wang**, D Yuan, J M Mamujaja, F Pangalila

PL34B-2721 *POSTER* Contrasting Isotopic Signatures of Recent Extreme El Nino Events: **S Stevenson**, B Powell, K Cobb, M Merrifield, G O'Connor

PL34B-2722 *POSTER* Impact of the tropical Indian Ocean basin mode on the Central-Pacific type of ENSO at the lag time of one year: **X Zhao**, D Yuan, G Yang

PL34B-2723 *POSTER* Diabatic Contribution of Warm Water Volume Variability Over ENSO Events: **M F Huguenin**, R Holmes, M H England

PL34B-2724 *POSTER* Interannual Variability of the Australian Summer Monsoon Sustained through Wind-Evaporation Feedback in the Tropical Southeastern Indian Ocean: **S Sekizawa**, H Nakamura, Y Kosaka

PL34B-2725 *POSTER* ENSO Transition Complexity and Its Underlying Dynamics in CMIP6 Models: **S W Fang**, J Y Yu

PL34B-2726 *POSTER* See-Saw in the Indo-Pacific Oceanic Mass: **A Balkies BAI M**, B Rohith, F Durand, P Arya, R R Bourdallé-Badie SR, L Testut, S Puthiyamadam, V Ballu, O de Viron, S S C Shenoi

PL34B-2727 *POSTER* How significant was the 1877–78 El Niño?: **B Huang**, M L L'Heureux, Z Z Hu, V M Mehta, X Yin, H M Zhang

PL34B-2728 *POSTER* Subsurface oceanography in southern East China Sea: spatiotemporal characteristics of salinity and temperature on isopycnal surfaces: **P Qi**

PL34B-2729 *POSTER* Assessing the Local Effects of El Niño on the OMZ-core in the Pacific off Central Mexico: **A Márquez-Artavia**, L Sanchez Velasco, A Tamayo

PL34B-2730 *POSTER* Impacts of different types of ENSO events on thermocline variability in the southern tropical Indian Ocean: **G Yang**, L Liu, X Zhao

PL34B-2731 *POSTER* Mechanisms of future changes in equatorial upwelling: CMIP5 inter-model analysis: **S Minobe**, M Terada, C A Deutsch

PL34B-2732 *POSTER* Quantifying the importance of interannual, interdecadal and multidecadal climate natural variabilities in the modulation of global warming rates: **M Wei**, F Qiao, Y Guo, J Deng, Z Song, Q Shu, X Yang

PL34B-2733 *POSTER* Oceanic response to Atmospheric Convectively Coupled Kelvin Wave events: **M V C Azaneu**, A J Matthews, D B Baranowski

PL34B-2735 *POSTER* The North Pacific pacemaker effect on historical ENSO and its mechanisms: **D J Amaya**, Y Kosaka, W Zhou, Y Zhang, S P Xie, A J Miller

PL34B-2736 *POSTER* Water Exchange between the Western Equatorial Pacific Ocean and the South China Sea using coral geochemistry and ROMS: **N Goodkin**, D Samanta, R D P Ramos, K B Karnauskas

PL34B-2737 *POSTER* The role of ocean–atmosphere coupling in the 2017 extreme coastal El Niño: **Q Peng**, S P Xie, D Wang, X T Zheng, H Zhang

PL34B-2738 *POSTER* The Fate of Surface Freshwater Entering the Indonesian Seas: **S Kida**, K J Richards, H Sasaki

PL34B-2739 *POSTER* A seasonal footprinting mode in the southern Indian Ocean leading to the Indian Ocean Dipole event: **L Zhang**, Y DU, W Cai, Z Chen, T Tozuka, J Y Yu

PL34B-2740 *POSTER* Basin-wide sea level coherency in the tropical Indian Ocean driven by Madden-Julian Oscillation: **B Rohith**, P Arya, F Durand, L Testut, A Balkies BAI M, R Ssvs, S S C Sheno, S Prerna

PL34B-2741 *POSTER* Coastal upwelling events, salinity stratification and barrier layer observed along the southwestern coast of Sumatra: **T Horii**, I Ueki, K Ando

PL34B-2742 *POSTER* Impacts of the Indonesian Throughflow on Heat and Salt balances of the upper South Indian Ocean: **Y Zhang**, S Hu, M Feng, Y DU, H E Phillips, N L Bindoff, M J McPhaden, J Sprintall, F Wang, D Hu, Q Xie, F Chai

PL34B-2743 *POSTER* Moored Observations of the Savu Strait Currents in the Indonesian Seas: **J Wang**, D Yuan, X Li, Y Li, Z Wang, X Hu, X Zhao, C Corvianawatie, D Surinati

PL34B-2744 *POSTER* Numerical study on multidecadal changes of upper ocean thermal condition in the South China Sea: **T L Chiang**, Y C Hsin, C R Wu

PL34B-2745 *POSTER* Seasonal and Interannual Variability in Cross-Indian ITF Plume Propagation: **L K Gruenburg**, A L Gordon

PL34B-2746 *POSTER* The setup and decadal variability of thermocline depth in the South China Sea: **F Xu**, J Sun, R X Huang

PL34B-2747 *POSTER* Tidal Mixing Effects on Sea Surface Temperatures, Diurnal Rainfall and the Madden-Julian Oscillation in the Maritime Continent: **H Seo**, J Steffen

PL34B-2748 *POSTER* Vertical profile of Makassar Throughflow: **J Wei**, P Malanotte-Rizzoli, A L Gordon, G Q Jiang

PL34B-2749 *POSTER* The Kuroshio Loop Current west of Luzon Strait observed by the long-term South China Sea Mooring Array.: **Z Sun**, Z Zhang, B Qiu, X Huang, C Zhou, W Zhao, J Tian

PHYSICAL OCEANOGRAPHY: MESOSCALE AND SMALLER

PS34A Poster Hall C-D

Wednesday 1600h

Boundary Currents and Shelf/Deep-Ocean Exchange IV Posters (*joint with CP, PI, PL*)

Moderators: **Robert Todd**, Woods Hole Oceanographic Institution; **Amandine Schaeffer**, University of New South Wales

PS34A-2887 *POSTER* The impact of meso and submesoscale frontal eddies on cross-shelf transport in the Gulf Stream and Agulhas Current: **J Gula**, P Tedesco, C Menesguen, P Penven, M Krug

PS34A-2888 *POSTER* The importance of topographically-induced submesoscale processes on cross-shelf transport: **P Calil**, F Telles, A Fernandes

PS34A-2889 *POSTER* Estimate of the shelf residence time using a 2-km resolution Japanese coastal model: **K Sakamoto**, H Tsujino, H Nakano, S Urakawa, T Toyoda, G Yamanaka

PS34A-2890 *POSTER* On the Vorticity Balance of the On-shelf Kuroshio Intrusion Northeast of Taiwan: **X Liu**, D P Wang, D Chen, C Dong, T Liu

PS34A-2891 *POSTER* A Study on Taiwan Island-Trapped Circulation: **C Y Lu**, C R Ho, Q Zheng

PS34A-2892 *POSTER* Clockwise propagation of coastally trapped waves around the Korean peninsula: **K Lee**, S Nam

PS34A-2893 *POSTER* *Bottom boundary layer instability couples equatorward western-boundary currents to the shelf circulation:* **J M Pringle**

PS34A-2894 *POSTER* Temporal Patterns in Temperature, Salinity, Density, and Current Velocity from a Multi-Sensor Mooring on the Continental Slope near Cape Hatteras, N.C.: **S Abidari**, A Kaltenberg

PS34A-2895 *POSTER* Contrasting the influence of the Gulf Stream on shelf-deep ocean exchange events at the Middle Atlantic Bight and the South Atlantic Bight near Cape Hatteras: **M Andres**

PS34A-2896 *POSTER* Shelf export at Cape Hatteras Observed in high resolution HF-radar surface currents and mooring data.: **D K Savidge**, M Muglia, H Seim, C R Edwards, S Haines, N Desimone, B B Hefner, G Matthias

PS34A-2897 *POSTER* Signatures and pathways of subsurface Gulf Stream water intrusions and fresh water lenses on the shelf to the north of Cape Hatteras: **J W Book**, A E Rice, J Osborne

PS34A-2898 *POSTER* Variability of Shelfbreak Currents North of Cape Hatteras: **G Gawarkiewicz**, F Bahr, B Hogue, M Andres, R E Todd, H Seim, S Haines, J Bane, M Muglia, C R Edwards, D K Savidge

PS34A-2899 *POSTER* Shelf-deep ocean exchange at Cape Hatteras from two years of underwater glider observations: **R E Todd**

PS34A-2900 *POSTER* Modeling Mid-Atlantic Bight Cold Pool Warming Rates: **W S Brown**, R P Arena

PS34A-2901 *POSTER* Quantifying Shelf-Basin Exchange at Submarine Canyons in the southern Middle Atlantic Bight using data from Underwater Glider Surveys and Numerical Modeling Experiments: **H Wang**, D Gong, H Yu, Y J Zhang, C K Harris, M A M Friedrichs, T N Miles, J Hudson

PS34A-2902 *POSTER* Vertical structure of the Hatteras and Gulf Stream fronts near Cape Hatteras, NC: **C R Edwards**, H Seim, D K Savidge, L Han, G Gawarkiewicz

PS34A-2903 *POSTER* Variations in the Mass Field Over 1.5 Years at a Persistent Convergent Shelf Front: **H Seim**, C R Edwards, D K Savidge, S Haines, L Han, J Bane, G Gawarkiewicz

PS34A-2904 *POSTER* Judicious pairing of redundant radials from nested radar systems to optimize radar surface current mapping at Cape Hatteras: **B B Hefner**, S Haines, C R Edwards, D K Savidge

PS34A-2905 *POSTER* Interannual variability of the Shelfbreak Jet on the New Jersey Shelf as inferred from CMV Oleander observations: **J S T Forsyth**, M Andres, G Gawarkiewicz

PS34A-2906 *POSTER* Local wind and open-ocean forcing of circulations on the Northwest Atlantic shelves: **J Yang**, K Chen

PS34A-2907 *POSTER* Long-term SST Variability on the Northwest Atlantic Continental Shelf and Slope: **Z Chen**, Y O Kwon, K Chen, P S Fratantoni, G Gawarkiewicz, T M Joyce

PS34A-2908 *POSTER* Spatial and Temporal Variability of the Mediterranean Overflow Current West of Gibraltar: Preliminary Results of INPULSE 201907 Cruise.: **R F Sanchez Leal**, D Roque Atienza, M Bruno Mejías, F J Hernández Molina, L M Fernández Salas, S Sammartino

PS34A-2909 *POSTER* The Canary intermediate poleward undercurrent: not another poleward flow in an eastern upwelling boundary: **P Vélez-Belchí**, V Caínzos, M Casanova-Masjoan, M D Pérez-Hernández, A Hernandez-Guerra, E Romero

PS34A-2910 *POSTER* The Dynamics of Deep Ocean Eastern Boundary Currents: **X Yang**, E Tziperman, K Speer

PS34A-2911 *POSTER* High-resolution glider and remote sensing observations reveal the annual physical and biogeochemical variability of the central Red Sea: **B H Jones**, N Zarokanellos

PS34A-2912 *POSTER* Southern Australia Current System based on a gridded hydrography and a high-resolution model: **H E Phillips**, E Duran, R Furue, P Spence, N L Bindoff

PS34A-2913 *POSTER* The Mediterranean Sea Overturning Circulation: **P Cessi**, N Pinardi, F Borile, C Wolfe

PS34A-2914 *POSTER* The Burdwood Bank Circulation: **R P Matano**, E D Palma, V Combes

PS34A-2915 *POSTER* Offshore Spreading of River Discharge in the Japan Sea: Glider Surveys and Numerical Experiments: **T Wagawa**, Y Igeta, K Sakamoto, M Kuga

PS34A-2916 *POSTER* Relation between Lee-eddy Generation behind a Peninsula and Spatiotemporal Perturbation of the Coastal-current found in Wakasa Bay, Japan: **Y Igeta**, S Abe, A Kaneda, K Fukudome, Y Kunmaki, A E Yankovsky

PS34A-2917 *POSTER* Mooring Observations of the current system southeast of Miyakojima Island: **R Zhao**, X H Zhu, H Nakamura, J H Park

PS34A-2918 *POSTER* Variability of surface current derived by HF-Radar in the east coast of Korea: **Y T Son**, S T Jang

PS34A-2919 *POSTER* A Census of Gulf Stream Warm and Cold Core Rings (1980-2017): **A Silver**, A Gangopadhyay, N S Etige, G Gawarkiewicz, J J Bisagni, M Monim, J Clark

PS34A-2920 *POSTER* Topographic controls on the Loop Current System variability: **N Ntaganou**, V Kourafalou, M Le Henaff, I Androulidakis

PS34A-2921 *POSTER* A Theoretical Study of the Vitória Eddy Genesis: **D C Napolitano**, C B Rocha, I C Da Silveira, I T Simoes-Sousa, G Flierl

PS34A-2922 *POSTER* Water exchange between the Gulf of Maine and open ocean induced by Gulf Stream warm core rings: **J Du**, W G Zhang, Y Li

PS34A-2923 *POSTER* Cross-Sensor Analysis of Physical and Biological Implications of Eddy Signatures in the Benguela and California Current Regions: **S Baker-Yeboah**, D A Byrne, E W Leuliette, P M DiGiacomo

PS34A-2924 *POSTER* Why is there an eddy gap in the Northern California Current System?: **D Hypolite**, J C McWilliams, P Damien, F Kessouri, L Renault

PS34B Poster Hall C-D

Wednesday 1600h

Interactions Between Internal Waves and Mesoscale/Submesoscale Currents: Physics and Impacts on Ocean Energetics and Mixing III Posters (joint with OM, PL)

Moderators: Stephanie Waterman, University of British Columbia; **Caitlin Whalen**, Applied Physics Laboratory University of Washington

PS34B-2926 *POSTER* Instabilities and Turbulence Observed within Large Internal Solitary Waves in the South China Sea: **M H Chang**, Y H Cheng, Y J Yang, S Jan, S R Ramp, D B Reeder, W T Hsieh, D S Ko, H J Shao, R S Tseng

PS34B-2927 *POSTER* Observed Three-dimensional Structure of Internal Solitary Waves in the Northern South China Sea: **Y Yang**, X Huang, W Zhao, J Tian

PS34B-2928 *POSTER* Observations of different effects of an anti-cyclonic eddy on internal solitary waves in the South China Sea: **J Xu**, Y He, Z Chen, J Xie, Y WU, S Cai

PS34B-2929 *POSTER* Propagation Speeds of Shoaling Internal Solitary Waves in the South China Sea: A satellite Investigation and Theoretical Interpretation: **Y H Cheng**, M H Chang, D S Ko, Y J Yang, S Jan

PS34B-2930 *POSTER* Horizontal maximum velocity of internal solitary waves estimated from glider vertical motions east of Dongsha Atoll, South China Sea: **S Jan**, K C C Yang, M H Chang, Y J Yang, J Wang, S Ramp, D B Reeder, D S Ko

PS34B-2931 *POSTER* The Interaction of a Mode-1 Internal Solitary Wave with a Step and the Generation of Mode-2 Waves: **Z Liu**, R Grimshaw, E R Johnson

PS34B-2932 *POSTER* Capturing the incipient breaking of a convectively unstable internal solitary wave of depression shoaling in the South China Sea: **G Rivera**, P Diamessis

PS34B-2933 *POSTER* Modulation of Tidal Currents on Shoaling Internal Solitary Waves: **X Bai**, K G Lamb, J Hu, Z Liu

PS34B-2934 *POSTER* A high accuracy/resolution spectral element method for the simulation of shoaling non-linear internal waves of depression over realistic bathymetry: **T Diamantopoulos**, S M Joshi, G Rivera, K Rowe, G Thomsen, P Diamessis

PS34B-2935 *POSTER* Role of thermocline properties on mode-2 nonlinear internal wave formation on a continental shelf: **M Rayson**, Y Gong, N L Jones, G N Ivey

PS34B-2936 *POSTER* Hindering effects of tides on the intrusion of the Gulf of Aden Intermediate water: **D Guo**, F Yao, P Zhan, G Krokos, I Hoteit

PS34B-2937 *POSTER* How Realistic is the Internal Tide Energy Decay in a Global Ocean Model?: **M C Buijsman**, J K Ansong, B K Arbic, M Green, J G Richman, J F Shriver, G Stephenson, C Vic, A J Wallcraft, A F Waterhouse, C B Whalen, Z Zhao

PS34B-2938 *POSTER* Ocean observations show cyclonic eddies intensify internal tides off eastern Australia: **E Queiroz**, M Roughan, C G Kerry, S R Keating

PS34B-2939 *POSTER* Scattering of Internal Waves by (Cyclo)geostrophic Turbulence: **J Uncu**, N Grisouard

PS34B-2940 *POSTER* Role of mesoscale eddies in modulating the internal tide: observation results in the northern South China Sea: **X Huang**, W Zhao, J Tian, C Zhou, Z Zhang, Y Yang

PS34B-2941 *POSTER* Estimating Four-Dimensional Internal Wave Spectrum in the Northern South China Sea: **H Sun**, W Zhao, Q Yang, S Cai, X Liang, J Tian

PS34B-2942 *POSTER* Low wavenumber hump in the internal wave energy spectra observed in the Antarctic Circumpolar Current region: **A Takahashi**, T Hibiya

PS34B-2943 *POSTER* Internal Waves and Mixing Over the Southwest Indian Ridge: **T B Barriquand**, J A MacKinnon

PS34B-2944 *POSTER* Observations of coastal and open water internal wave generation in Lake Superior: **E Green**, S M Kelly, J D Nash, J A Austin, A J Lucas

PS34B-2945 *POSTER* Internal wave turbulent mixing variability in the Antarctic Circumpolar Current estimated from fine-scale observations in Drake Passage: **M O Gutierrez-Villanueva**, T K Chereskin, J Sprintall

PS34B-2946 *POSTER* Observations of internal wave enhancements in an area of strong mesoscale variability in the southwestern East Sea (Japan Sea): **S Noh**, S Nam

PS34B-2947 *POSTER* Near-inertial wave generation and dissipation in realistically forced HYCOM simulations: **K Raja**, M C Buijsman, S M Kelly, J F Shriver, B K Arbic, J G Richman

PS34B-2949 *POSTER* Poleward-propagating near-inertial waves enabled by the western boundary current: **C Jeon**, J H Park, H Nakamura, A Nishina, X H Zhu, D G Kim, H S Min, S K Kang, H Na, N Hirose

PS34B-2951 *POSTER* Spatial and temporal variations of near-inertial currents in the deep Gulf of Mexico: **Y Zhu**, X Liang

PS34B-2952 *POSTER* Global Estimates of the Energy Transfer From the Wind to the Ocean, With Emphasis on Near-Inertial Oscillations: **M M Flexas**, A F Thompson, H S Torres, P Klein, J T Farrar, H Zhang, D Menemenlis

PS34B-2953 *POSTER* Balanced and unbalanced flow in a two-layer shallow water model forced by a wind-driven slab layer: **D Straub**, Y Chen, L P Nadeau

PS34B-2954 *POSTER* On the Frequency-Wavenumber Characteristics of Balanced Motions and Internal Gravity Waves in Eastern Boundary Currents: **C A Perez Quintana**, H S Torres, J Gomez-Valdes

PS34B-2955 *POSTER* Stratification Anomalies in the Ocean Interior: **B Avila**, M A Sundermeyer, M P Lelong, E L Kunze, J J Early, C J Wortham

PS34B-2956 *POSTER* Super-inertial internal waves trapped in a vortex: **K Ito**, T Nakamura

PS34B-2957 *POSTER* Submesoscale horizontal structure of upper-ocean velocity and density: **S Khani**, J B Girton, E L Kunze, J Mickett, J T Farrar

PS34B-2958 *POSTER* Submesoscale horizontal wavenumber spectra from the upper Eastern North Pacific: **A Vladoiu**, R C Lien, E L Kunze

PS34B-2960 *POSTER* Anisotropic Helmholtz Decomposition of Lagrangian Tracer Data and its Dynamical Implications: **H Wang**, O Buhler

PS34B-2961 *POSTER* Ageostrophic dynamics of deep submesoscale fronts and their interaction with internal gravity waves: **L Siegelman**, P Klein, H S Torres, D Menemenlis, A F Thompson

PS34C-2962 *POSTER* Directional Wavenumber Spectrum of Internal Wave SSH Variance from Single Mooring Measurements: **W Wu**, C B Rocha, J T Farrar

PS34C-2963 *POSTER* Directional Surface Wave Spectra from Point Measurements of Height and Slope: **W J Plant**, M A Donelan

PS34C-2964 *POSTER* Impact of tides on North and Equatorial Atlantic HYCOM simulations from 1/12° to 1/50°: **E Chassignet**, X Xu, A J Wallcraft

PS34C-2965 *POSTER* Sea level anomalies using altimetry, model and tide gauges along the African coasts in the Eastern Tropical Atlantic Ocean: inter-comparison and temporal variability: **I Dadou**, H Dieng, F Leger, Y Morel, J Jouanno, F Lyard, D Allain

PS34C-2966 *POSTER* Observations of the transition scale from balanced to unbalanced motions in the eastern tropical Pacific from historical ship data: **S M Soares**, S T Gille, T K Chereskin, E Firing, J M Hummon, C B Rocha

PS34C-2967 *POSTER* Tropical Upper Ocean Unbalanced Motions: Their Observed Characteristics and Implication for the SWOT Mission: **B Qiu**, S Chen, P Klein

PS34C-2968 *POSTER* The Ocean Mesoscale Regime of the Reduced-Gravity Quasi-Geostrophic Model: **R M Samelson**, D B Chelton Jr, M Schlax

PS34C-2969 *POSTER* Seasonality and spatial dependence of meso- and submesoscale ocean currents from along-track altimetry data: **A Lawrence**, J Callies

PS34C-2971 *POSTER* Recent advancements on the characterization of sub-mesoscale variability using satellite altimetry: **O Vergara**, R Morrow, M I Pujol, C Ubelmann, G Dibarboure, Y Faugere

PS34C-2972 *POSTER* An Approach to Empirical Mapping of Incoherent Internal Tides for SWOT: **S Erofeeva**, G D Egbert

PS34C-2973 *POSTER* Airborne Ocean Topography Measurements in Support of the SWOT Mission: **N Statom**, L Lenain, W K Melville

PS34C-2974 *POSTER* Analysis of High-resolution Sea-surface Measurements from Orbiting Satellites: **T M Chin**, E M Armstrong, D Menemenlis, V M Tsontos, J Vazquez

PS34C-2975 *POSTER* Assessing the impact of along-track altimetry data on ocean state estimation in the SWOT Cal/Val region off the California coast via data assimilation: **Z Li**, J Wang, M Archer, L L Fu

PS34C-2976 *POSTER* High Spatial Resolution Mesoscale Oceanic Variability from Non-repeat Satellite Altimetry: **Y Yu**, D T Sandwell, S T Gille

PS34C Poster Hall C-D

Wednesday 1600h

Observing the Ocean Surface Topography at High Resolution: Opportunities and Challenges for the Future SWOT Mission II Posters (*joint with IS, PI, PL*)

Moderators: **J. Thomas Farrar**, Woods Hole Oceanographic Institution; **Lee-Lueng Fu**, Jet Propulsion Laboratory

PS34C-2977 *POSTER* Leveraging surface drifters tracks for the identification of high frequency signatures in future wide-swath altimetric data: **Z Caspar-Cohen**, A Ponte, X Yu, N Lahaye, S Le Gentil

PS34C-2978 *POSTER* Multiscale Data Assimilation for SWOT Ocean Application: **J Wang**, Z Li, L L Fu

PS34C-2979 *POSTER* Reconstructing the Ocean Interior from High-Resolution Sea Surface Information: **L Liu**, H Xue, H Sasaki

PS34C-2981 *POSTER* Seasonality and Amplification of the Sea Surface Signature of Internal Tides: **J Gula**, N Lahaye, G Roullet

PS34D Poster Hall C-D

Wednesday 1600h

Physical Processes Governing the Distribution and Transport of Dispersed Particles in the Ocean III Posters (*joint with CP, IS, PL*)

Moderators: **Kara Lavender Law**, Sea Education Association; **Tracy Mandel**, Stanford University; **Erik van Sebille**, Universiteit Utrecht

PS34D-2983 *POSTER* PDE-Based Transport Maps for Inertial Particles in Dynamic Marine Environments: **C Kulkarni**, M Doshi, P F J Lermusiaux

PS34D-2984 *POSTER* Observation and quantification of inertial effects on the drift of floating objects at the ocean surface: **M J Olascoaga**, F J Beron-Vera, G J Goni, R Lumkin, P Miron, N F Putman, J A Trinanes

PS34D-2985 *POSTER* Sources and Sinks of Microplastics in the Norwegian Atlantic Current: **M Huserbråten**

PS34D-2986 *POSTER* What is needed to close the modelled global budget of ocean plastic debris?: **D Lobelle**, E van Sebille

PS34D-2987 *POSTER* Hindcast of eddy field in the Southeastern Baltic Sea and rotation of synthetic floating particles in submesoscale cyclonic and anticyclonic eddies: **G Väli**, V Zhurbas, N Kuzmina, O Lavrova, A Kostianoy

PS34D-2989 *POSTER* Numerical Modelling of Jellyfish Movements in an Irish Fjord: **M A B Sayeed**, F O'Donncha, T Doyle, R Atan, M Hartnett, S Nash

PS34D-2990 *POSTER* Exploring the Slope Sea as the Potential Major Spawning Ground for Atlantic Bluefin Tuna: **M Dotzel**, I Rypina, L J Pratt, C Hernandez, J Llopiz

PS34D-2991 *POSTER* Oil Particle Aggregation Model for the Gulf of Mexico Continental Shelf: Scenario Testing: **C K Harris**, L Cui, D S Dukhovskoy

PS34D-2992 *POSTER* Retention of oil droplets rising in a stratified fluid: **T Mandel**, D Z Zhou, L Waldrop, M Theillard, D Kleckner, S Khatri

PS34D-2995 *POSTER* Transport of microplastic fibres in waves: the effects of fibre length and wave properties: **G Every**, N Pujara

PS34E Poster Hall C-D

Wednesday 1600h

Vertical Transport: Pathways from the Surface to the Interior IV Posters (*joint with OB, PI, PL*)

Moderators: **Daniel Rudnick**, Scripps Institution of Oceanography; **Dhruv Balwada**, Courant Institute of Mathematical Sciences

PS34E-2996 *POSTER* The impacts of interior ocean mixing on preformed property, remineralization ratio, and carbonate mineral cycling estimates: **B Carter**, S Lauvset, R A Feely, A Olsen, T J DeVries, R E Sonnerup

PS34E-2997 *POSTER* Partitioning Ocean Warming at the Mixed Layer Base: **L Clement**, E McDonagh, A Marzocchi, A J G Nurser

PS34E-2998 *POSTER* Ventilation by Submesoscale Motions in the Southern Ocean: Integrated Glider and Float Observations: **A F Thompson**, L Dove, A R Gray, D Balwada, C A Deutsch, L Siegelman, K Christensen

PS34E-2999 *POSTER* Vertical structure of eddies and related vertical eddy heat and carbon transport.: **S Groeskamp**, J H LaCasce, T J McDougall

PS34E-3000 *POSTER* Stratifying of the Global Ocean due to temperature and salinity changes: **L Guancheng**, C Lijing, J Zhu

PS34E-3001 *POSTER* Alleviation of hypoxia by biologically generated mixing from aggregations of centimeter-scale swimmers: **I Houghton**, J Dabiri

PS34E-3002 *POSTER* Water Mass Transformation in θ/S Coordinates: an Illustration in the Southern Ocean: **B Johnson**, J Willison, R He

PS34E-3003 *POSTER* Scale-free Vertical Tracking Microscopy: Towards Bridging Scales in Biological Oceanography: **D Krishnamurthy**, H Li, F B du Rey, P Cambournac, A G Larson, E Li, M Prakash

PS34E-3004 *POSTER* Vertical Redistributions of the Global Oceanic Heat and Salt Contents: **X Liang**

PS34E-3005 *POSTER* Detection of the 2012 Havre submarine eruption plume using Argo floats and implications for vertical ocean mixing by submarine eruptions: **T Mittal**, B G Delbridge

PS34E-3006 *POSTER* Characterizing the spatial and temporal scales of convective cells during radiatively-driven convection in a deep lake: **J A Austin**, C Hill, G Weber, K Weiss, A D Scotti, S G Llewellyn Smith

PS34E-3007 *POSTER* Numerical Simulations of Radiatively Driven Convection in a Freshwater Lake During Spring and Early Summer: **A D Scotti**, Z Taebel, J A Austin, S G Llewellyn Smith

PS34E-3008 *POSTER* Vertical Transport in Strain-Vorticity Space: **Q Xiao**, D Balwada, K S Smith, T Uchida, R Abernathy

PS34E-3009 *POSTER* On dynamics of vertical eddy heat transport: **P Yang**, Z Jing, B Sun, L Wu

SOCIAL-OCEAN SCIENCE INTERACTIONS AND SDGS

SI34A Poster Hall C-D

Wednesday 1600h

Ocean Visions: Finding Ocean-Based Solutions to Society's Greatest Global Challenges III

Posters (joint with ED, IS, PC)

Moderators: Allison Miller, Schmidt Ocean Institute;
Charles Greene, Cornell University

SI34A-1609 *POSTER* Connected to the oceans: Supporting ocean literacy & public engagement: **A Meyer**, R Kelly, K Evans

SI34A-1610 *POSTER* The New Independent Scientist: A Case Study for Cultivating a Path Outside of Academia: **S Sharuga**, C Tuohy, E Tuohy

SI34A-1611 *POSTER* Bringing fishermen, stakeholders, managers, and scientists together to develop an ecosystem based risk assessment for fisheries: Lessons learned and hope for the future: **E Ramanujam**, J Samhoury, J J Bizzarro, H Carter, K Sayce, S Shen

SI34A-1612 *POSTER* A Case Study in Implementing the Lean Launch Methodology for Environmental Startups out of Academia: **G Nero**

SI34A-1613 *POSTER* Citizen science: a key component in assessing the geographical distribution of microfibers in the environment.: **S J Royer**, D D Deheyn

SI34A-1614 *POSTER* The Moana Project: Crowd Sourcing Ocean Data Collection Through the Seafood Sector to Improve Ocean Models, Supporting the Blue Economy.: **M Roughan**, J M Azevedo Correia de Souza, J Jakoboski

SI34A-1615 *POSTER* In the business of dirty oceans: The emergence of business models for marine plastic management: **H Dijkstra**, P van Beukering, R Brouwer

SI34A-1616 *POSTER* Did the Thomas Fire Fuel a Phytoplankton Community Shift in the Santa Barbara Channel?: **S J Kramer**, K Bisson, A D Fischer

SI34A-1617 *POSTER* Ecological responses to eco-engineering from micro- to macro- scales and implications for ecosystem function in urban coastal areas: **M Mayer Pinto**, A Bugnot Dr, E Johnston Prof, J Potts Dr, T Glasby Dr, L Airolidi Prof, M Vozzo Dr, M Bishop A/Pr, K Dafforn

SI34A-1618 *POSTER* Forecasting the ecological legacy of aging offshore oil and gas platforms: **E Meyer-Gutbrod**, M Love, D M Schroeder, R J Miller

SI34A-1619 *POSTER* From Grants to Invoices: a Sustainable Model for Fishing Gear Recycling: **S Sharuga**, N Baker

SI34A-1621 *POSTER* Letters to a Pre-Scientist: Using Snail Mail to Broaden Student Awareness of What Scientists Look Like and Do at Work: **S Sharuga**, L Madden

SI34A-1622 *POSTER* Magnifying curiosity: Democratizing scientific tools for the masses to enable community based solutions for societal challenges: **M Prakash**, J Cybulski

SI34A-1624 *POSTER* MODELING OFFSHORE MACROALGAL FARMING AS A CONTRIBUTOR TO ENERGY SECURITY: **K A Davis**, C Frieder, M Chamecki, J C McWilliams, M Sutula, R M Kudela, J Infante, Y Chao, F Kessouri, D Dauhajre, M L McPHERSON

SI34A-1625 *POSTER* Ocean-based mitigation of climate change warrants experimental evaluation because many "natural" terrestrial mitigation options are risky and may prove temporary: **J Crusius**

SI34A-1626 *POSTER* Remote Sensing of Plastic Near the Surface Ocean: An Experimental Study: **K Parker**, N Taylor, R M Kudela

SI34A-1627 *POSTER* Replicating whiting events: testing a process for carbon sequestration using algae, sunlight, nutrients, and calcium-rich water: **E W North**, A Place, G Silsbe, Y Li, J C Cornwell, J Schijf, M Gonsior, A Heyes, S Hunsicker, K H Kilbourne, G Franchi, K Vijayaragavan, Y Y Lee, J Veenhof, F Galasso, J Trommatter, M S Owens, J Blair

SI34A-1628 *POSTER* Should we eat them or conserved them? Setting an improved approach for shark fisheries management in Mexico: **O Sosa-Nishizaki**

SI34A-1629 *POSTER* Simulating Deep Oil Spills Beyond the Gulf of Mexico: **C B B Paris**, A C Vaz, N Perlin, R Faillietaz, I Berenshtein, Z M Aman, S A Murawski

SI34A-1630 *POSTER* The Oceans and Carbon Dioxide: Duplicating Hydrothermal Vents and Other Ocean Systems to Manufacture Complex Hydrocarbons from Industrial CO₂ Emissions: **G Rajen**

SI34A-1631 *POSTER* The Water Is Coming: Mitigating The Rising Sea Levels Through Artificial Installations and Artificial Islands: **N N Musau**

SI34A-1632 *POSTER* Providing ocean surface current data in support of Ocean Challenges, Climate Action and Life Below Water: applications of the SKIM proposal for a first space-borne Doppler Wave and Current Scatterometer: **F Arduin**, C Donlon, J Shutler, P Brandt, E van Sebille, M H Rio, A Battaglia, F Collard, G Engen, P Lopez Dekker, A C Martin, D Stammer, M Tsamados, E Rodriguez, B Rommen, T G D Casal, G Ressler, G Dibarboure, F Boy, P Dubois, F Soulat, C Ubelmann, B Chapron, L Gaultier, F Nougier, J M Delouis, G Monnier, S Méric, C Peureux, M Accensi, V Onink, P Delandmeter, E de Witte, M Sues, P Bensi, C Maes, S E Cravatte

SI34A-1633 *POSTER* Developing Solar Powered Uncrewed Surface Vehicles (USVs) for Ocean Data Collection: **S Sharuga**, J Angus

SI34A-1634 *POSTER* Bridging the Gap between Ocean Policy Indicators and Ocean Observing Requirements: Integrating Science and Implementation: **S Hartman**

SI34B Poster Hall C-D

Wednesday 1600h

Ocean-Based Solutions to Address Local to Global Human Impacts II Posters (*joint with ED, OB, PC*)

Moderators: **Lydia Kapsenberg**, Institute of Marine Sciences of Barcelona; **Hayley Carter**, California Ocean Science Trust

SI34B-1636 *POSTER* Effects of Rossby Wave Energy Propagation on Precipitation Anomalies in the Yangtze River Valley: **T Xiao**, C Wang, R Jin, Y Ningle

SI34B-1639 *POSTER* Benefits of Large Reserves to Fisheries: the case of Papahānaumokuākea Marine National Monument: **A C Vaz**, C B B Paris, C Kelley, K J Richards

SI34B-1640 *POSTER* Breaking Coastal Hypoxia: Destratification of Gulf of Mexico Deadzone Through Artificially Enhancing Oxygen Transport Downwards to Maintain Marine Fauna: **V Thipparthi**, L J Thibodeaux, D W Constant

SI34B-1641 *POSTER* Coral Reef Arks: An Innovative Solution for Mitigation of Coral Reef Damage: **J Baer**, F Rohwer, A C Hartmann

SI34B-1642 *POSTER* Effect of Artificial Upwelling on Preventing Coral Bleaching During Times of Thermal Stress: Strategies for Survival in a Warming Ocean: **M Harris**, Y Sawall, M Lebrato, M Wall, E Feng

SI34B-1643 *POSTER* Impact of water recycling on wastewater effluent plumes in drought-stricken regions in ocean acidification and hypoxia contexts: **M Ho**, F Kessouri, M Sutula, D Bianchi, J C McWilliams, M J Molemaker, T Gallien, G L Robertson

SI34B-1644 *POSTER* In the Lafayette River, a tributary of the lower Chesapeake Bay, one of the species of dinoflagellates responsible for HABs is *Margalefidinium polykrikoides* (formerly *Cochlodinium polykrikoides*). To determine which form nitrogen stimulates the growth of dinoflagellates, nutrient enrichment bioassays were conducted.: **A R Belknap**, M R Mulholland

SI34B-1645 *POSTER* Island Refugia and the Catalina Dynamic Ocean Chemistry Program: **C Gelpi**

SI34B-1646 *POSTER* Motivating governments to proactively respond to the impacts of ocean acidification by charting a course of action for sustaining coastal communities and livelihoods.: **J Turner**

SI34B-1647 *POSTER* New directions in ocean attribution science – tying acidification and other changes to specific emission sources: **R Licker**, B Ekwurzel, S Doney, S R Cooley, I D Lima, R Heede, P C Frumhoff

SI34B-1648 *POSTER* Next generation ocean iron fertilization: Are there hotspots in the Southern Ocean that could sustain long-term removal of atmospheric CO₂?: **L T Bach**, V Tamsitt, K Baldry, P W Boyd

SI34B-1650 *POSTER* Oregon's Ocean Acidification and Hypoxia Action Plan and on-the-water management adaptation to ocean change: **C Braby**, J A Barth, C Regula-Whitefield

SI34B-1651 *POSTER* POTENTIAL OF MARITIME TRANSPORT IN THE MEDITERRANEAN SEA FOR OCEAN LIMING AND CO₂ REMOVAL: **S Caserini**, D Pagano, F Campo, G Cappello, M Grosso

SI34B-1652 *POSTER* Potential Shell Hash Mitigation of Coastal Acidification for Juvenile Oysters Reared in Upwellers: **C Wilhelm**, N Price, M White, T Houston, R Smith, B Honisch, C Bohlen

SI34B-1653 *POSTER* Reef and wild fishery conservation through exploiting satellite remote sensing of the marine carbonate system: **N Gruber**, J Shutler, P Land, H S Findlay, Y Quilfen, E Autret, J F Piollé, T Holding, I Ashton, R Sabia, D Fernandez-Prieto

SI34B-1655 *POSTER* Seagrass ecosystems buffer low pH in coastal areas: **A M Ricart**, M Ward, T M Hill, B Gaylord, E Sanford, K Kroeker, S Merolla, P Shukla, Y Takeshita

SI34B-1656 *POSTER* Source Apportionment of Perfluoroalkyl sSubstances in Sediments of the Western Arctic and Bering Sea: Implications for Transport Pathway and Wildlife Exposure: **Y Lin**, J J Jiang, M Cai

SI34B-1657 *POSTER* State-Level Action on Ocean Acidification: States Care More than You Think: **M McCutcheon**, S R Cooley, R Ono

SI34B-1658 *POSTER* The Effects of Temperature, Body Size, and Oxygen Variation on the Future Habitable Range of Pacific Red Abalone (*Haliotis rufescens*): **H Deres**, T H Boag, R G Stockey, F Micheli, C A Deutsch, E A Sperling