Session Information

Oral Sessions
Sessions are being held in the Convention Center (CC) and Marriott Marquis (MM)

Poster Sessions
Posters are on display in the following venue throughout the week: Hall A-C (Poster Hall)

Session & Paper Numbering

Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation.
Example: A21A-01 = Atmospheric Sciences, Tuesday, AM, concurrent session A, first paper in that session.

<table>
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<tr>
<th>Discipline</th>
<th>Day</th>
<th>Time</th>
<th>Session</th>
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The program is current as of 06 December 2018. An omitted abstract ID number in the presentation order indicates that the abstract has been withdrawn by the presenter from the session.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/fm18/meetingapp.cgi/Home for updates.

Monday A.M.

A11G (CC) Hall A-C (Poster Hall)
Monday 0800h

Aerosol Exchange Across the Air–Sea Interface:
Deposition and Emission I Posters (joint with B, 05)

Presiding: Cassandra Gaston, University of Miami; Amanda Frossard, University of Georgia; Katherine Mackey, University of California Irvine; Kostas Tsigaridis, Columbia University;

0800h A11G-2283 POSTER Monthly and seasonal characteristics of optical properties and direct radiative forcing of secondary marine aerosols in the East Asian sea area: Y N Choi, S K Song, Y Y So

0800h A11G-2285 POSTER Sea-state based estimation of white cap fraction: Implications for primary marine aerosol fluxes: A Raman, A Darmenov, S S Chen, M Curic, A L Trayano

0800h A11G-2286 POSTER Wet Scavenging of Inorganic and Organic Nitrogen Deposition Over the Selected Sites of Indo-Gangetic Plains: M Mishra, U C Kulshreshtha

0800h A11G-2287 POSTER Understanding airborne fertilization of oceanic ecosystems using MODIS, VIIRS and CALIPSO: L A Remer, T K Westberry, Y R Shi, H Yu, M Behrenfeld

0800h A11G-2288 POSTER ATMOSPHERIC DRY DEPOSITION FLUXES OF SELECTED AIR POLLUTANTS ONTO WATER AND LAND SURFACES IN TROPICAL AREA: N T KIM Oanh

0800h A11G-2289 POSTER Production of ice nucleating particles in a marine aerosol reference tank by the diatom Thalassiosira weissflogii: E Willbourn, S D Brooks, J Mirrieles, A Whitesell, K McFadden, J Niehaus, D C O Thornton

0800h A11G-2290 POSTER Molecular Characterization of Marine Organic Aerosols over the North Pacific Ocean: P Fu, K Kawamura


0800h A11G-2292 POSTER Contribution of Surface Active Organics to Surface Tension Depression in Seawater and their Changes Due to Photochemical Processing: W C Hudson, T Burdette, J Harris, M Serratos, K Zimmermann, W L Miller, A A Frossard

0800h A11G-2293 POSTER Evaluating Possible Linkages Between Marine Chlorophyll-a concentrations and Cloud Properties Over the Arctic Chukchi Sea: J Ceniceros, J Creamean

0800h A11G-2294 POSTER Characterization of Surface-Active Organics in Seawater and Marine Aerosol Particles: A A Frossard, T Burdette, W C Hudson


0800h A11G-2296 POSTER Contributions of Long-range Transport of Air Pollutants on the Atmospheric Deposition in Coastal Regions: J Tan, J S Fu

0800h A11G-2297 POSTER Dissolved organic matter mediated indirect photochemical formation of COS and CS2 in natural waters: kinetics and reaction mechanisms: M Modiri Gharehveran, A D Shah


0800h A11G-2299 POSTER Saharan dust inputs to western North Atlantic Ocean with three years time series: R Losno, Y Xu, C Dessert, F Monna, V Robert, C T Jessica, M Boye

0800h A11G-2300 POSTER WRF-Chem simulations of the atmospheric sea salt concentration in Japan: N Hirose, M Takebe, M Oya


0800h A11G-2303 POSTER Insights into Marine Influence on CCN in Laboratory Measurements: J Mirrieles, E Wilbourn, A Alsante, D C O Thornton, S D Brooks

0800h A11G-2304 POSTER PM10 measurement differences between a coastal and inland tropical forest site of French Guiana during 2018 desert dust season: first results: J Molinie, M L Gobinddass, A Gatineau, K Panechou-Pulcherie, T Feuillard


Monday 0800h

**Advances in Ice Sheet–Ocean Interactions: From Measurements to Climate Impacts I (joint with GC, OS)**

*Presiding: Thomas Armitage*, Jet Propulsion Laboratory; *Anna Hogg*, University of Leeds; *Paul Holland*, British Antarctic Survey; *Fiammetta Straneo*, Scripps Institution of Oceanography;

0800h **C11A-01** Seaglider and Float Observations Beneath Dotson Ice Shelf, West Antarctica: *P Dutrieux*, K A Christianson, C Lee, L Rainville, J B Girton, T W Kim, S Lee

0815h **C11A-02** Heightened Summer Melting of Petermann Gletscher’s ice shelf, Greenland: *P Washam*, A Muenchow, K W Nicholls, L Padman

0830h **C11A-03** Observations of tidally-varying ocean bottom pressure near the grounding zone of the Ross Ice Shelf: *C B Begeman*, H M Dailey, M A King, S M Tulaczyk

0845h **C11A-04** Ice Shelf Vulnerability to Increased Seasonal Upper Ocean Warming: *L Padman*, R E Bell, I Das, C Mosbeux, D F Porter, C S Siddoway, M R Siegfried, S R Springer, K J Tinto

0900h **C11A-05** High-resolution Surface and Upper Fjord Circulation of Greenland Fjords from Optical Remote Sensing: *B Altena*, A Kääb

0915h **C11A-06** The canary in Wilkes Land: Observations of unexpected marine-terminating glacier change in East Antarctica in response to the changing ocean: *C C Walker*, A S Gardner, F Paolo, J Nilsson

0930h **C11A-07** Interannual to Sub-Daily Fluctuations in Thwaites Glacier Speed Associated with Ocean Forcing and Calving: *A O Hoffman*, K A Christianson, H J Horgan, S Anandakrishnan, R B Alley, K M Larson

0945h **C11A-08** Role of melt forcing in diurnal velocity fluctuations of Helheim Glacier, East Greenland: *L A Stevens*, M Nettles, J L Davis, T T Creyts, J Kingslake

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OS11A  (CC) Salon H  Monday 0800h

**Turbidity Currents and the Morphology and Stratigraphy They Create I (joint with EP)**

*Presiding: Robert Dorrell*, University of Leeds; *Jeffrey Peacock*, University of Leeds;


0815h **OS11A-02** Settling-driven convection limits the spatial scale of deposition beneath buoyant turbid flows in lakes and the coastal ocean: *M G Wells*, S Davarpanah Jazi

0830h **OS11A-03** Field characterization of the negatively buoyant inflow of the Rhône River into Lake Geneva: *K Blanckaert*, S Thorez, U Lemmin, D A Barry

0845h **OS11A-04** Turbidity currents in Xiaolangdi reservoir, Yellow River, China: dynamics and geomorphic expression: *H Ma*, J A Nitttrouer, B J McElroy, Y Wang, A J Moodie, X Chen, X Fu, B Wu, G Parker


0930h **OS11A-07** Formation of Cyclic Steps due to Surge-Type Turbidity Currents: Flume Experiments and Numerical Simulation: *M Yokokawa*, T Iwasaki, D Shozakai, J Yamano, M Miyai

0945h **OS11A-08** Experimental Turbidity Current Onset: Breaching Front Rheology: *A Gunn*, J Daif, D J Jerolmack

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OS11B  (CC) Hall A-C (Poster Hall)  Monday 0800h

**Gas Hydrates: A Major Unconventional Energy Resource—When Will They Be Produced? Posters**

*Presiding: Kalachand Sain*, CSIR-National Geophysical Research Institute; *Richard Coffin*, Texas A&M University Corpus Christi; *Ingo Pecher*, University of Auckland;

0800h **OS11B-1415** POSTER Experimental and Computational Investigation of the CH₄ - CO₂ Replacement in sH Hydrates and Its Significance for CH₄ Recovery and CO₂ Sequestration: *Y Lee*, S Joo, S K Kwak, Y Seo
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<tr>
<td>0800h</td>
<td>OS11B-1416</td>
<td>POSTER A multi-criteria approach to social, economic and environmental assessment of gas hydrate development projects: D C Riley, H Marin-Moreno, T A Minshull, M Schaaflma</td>
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<td>0800h</td>
<td>OS11B-1417</td>
<td>POSTER The balance between gas production and formation stability of hydrate bearing sediment using simulation-optimization technology: X Xin, X Tianfu, Y Yuan, Y Xia</td>
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<td>0800h</td>
<td>OS11B-1418</td>
<td>POSTER Controlling factors for the formation of gas hydrate chimney in the Ulleung Basin, East Sea: D H Kang, J H Chun, J Y Lee</td>
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<td>0800h</td>
<td>OS11B-1419</td>
<td>POSTER Geochemical and Seismic Overview of Spatial Variation in Vertical Methane Migration off the Mahia Peninsula, New Zealand: R B Coffin, P S Rose, B Yoya, I A Pecher, G J Crutchley, J J Mountjoy</td>
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<td>0800h</td>
<td>OS11B-1422</td>
<td>POSTER Production Strategy of Oceanic Gas Hydrate Reservoirs using Various Well Configurations: J Phirani, N Choudhary</td>
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<td>0800h</td>
<td>OS11B-1423</td>
<td>POSTER Experimental Investigation on Sand Production during Non-Diagenetic Hydrate-Bearing Sediments Depressurization Production in Vertical Well with Crustal Stress: J LU, D Liang, D Li, Y Xiong, J Guan</td>
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<td>0800h</td>
<td>OS11B-1424</td>
<td>POSTER Characterization and quantification of gas-hydrates along the Krishna-Godavari and Mahanadi basins, eastern Indian margin: K Sain</td>
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<td>0800h</td>
<td>OS11B-1425</td>
<td>POSTER Effect of Fines on Shear Strength of Methane Hydrate Bearing Sands: M Hyodo</td>
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<td>0800h</td>
<td>OS11B-1426</td>
<td>POSTER Full Waveform Inversion as a tool for exploring gas hydrates systems: an example from New Zealand’s southern Hikurangi margin: A Djeffal, I A Pecher, S C Singh, G J Crutchley, J P Kaipio</td>
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<td>0800h</td>
<td>OS11B-1427</td>
<td>POSTER A Review of Constitutive Modeling of Methane Hydrate Bearing Sediments: S Uchida, J S Lin, X Gai Sr, Y Seol, J H Choi</td>
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**OS11C (CC) Hall A-C (Poster Hall)**

**Monday 0800h**

**Advances in Monitoring and Modeling of Subsea Permafrost Posters** (joint with C)

**Presiding:** Dallas Sherman, Institute of Geophysics and Planetary Physics La Jolla; Jennifer Frederick, Sandia National Laboratories; Benjamin Abbott, Brigham Young University;

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<td>0800h</td>
<td>OS11C-1429</td>
<td>POSTER Modelling submarine permafrost extent and development at the circum-Arctic scale: S Westermann, M Angelopolous, T Schneider von Deimling, F Miesner, M Grigoriev, B Juhrs, H Lantuit, P P Overduin</td>
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**OS11D (CC) Hall A-C (Poster Hall)**

**Monday 0800h**

**Advancing the Use of Multiangle Polarimetry for Ocean Color Remote Sensing Applications Posters** (joint with A, B, GC, H)

**Presiding:** Jeremy Werdell, NASA Goddard Space Flight Center; Paula Bontempi, NASA Headquarters; Bryan Franz, NASA Goddard Space Flight Center; Amir Ibrahim, NASA Goddard Space Flight Center;

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<tr>
<td>0800h</td>
<td>OS11D-1432</td>
<td>POSTER The implication of atmospheric aerosols on the underwater polarization in a coupled atmosphere-ocean system: A Ibrahim, A Gilerson, B A Franz, Z Ahmad, K D Knobelspiesse, J Werdell</td>
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<td>0800h</td>
<td>OS11D-1433</td>
<td>POSTER Atmospheric correction for coastal waters based on multi-angle polarimetric observations: M Gao, P Zhai, B A Franz, Y Hu, K D Knobelspiesse, J Werdell, A Ibrahim, F Xu, B Cairns</td>
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0800h **OS11D-1434 POSTER** Information content analysis of multi-angle, polarimetric instruments for Ocean Color remote sensing atmospheric correction: **K D Knobelspiesse**, A Ibrahim, B A Franz, S W Bailey, Z Ahmad, J M Gales, M J Garay, R C Levy

0800h **OS11D-1435 POSTER** Combining multispectral VIS-SWIR polarimetry and UV-NIR hyperspectral imagery to retrieve aerosol and ocean color properties from remote sensing: case studies for airborne RSP and GCAS observations: **J Chowdhary**, S Stammes, M Zhang, A J Scarino, A P Wasilewski, B Cairns

0800h **OS11D-1436 POSTER** Characterization of the Degree of Linear Polarization of Scattered Light for Seawater Samples of Contrasting Particle Size Distribution and Composition: **D Koestner**, D Stramski, R A Reynolds

0800h **OS11D-1437 POSTER** Characterization of the Total and Polarized Radiance from the Ocean Surface through Hyperspectral Polarimetric Imaging: **A Gilerson**, C D Carrizo, R Foster, T Harmel, A Golovin, A El-Habashi, E Herrera, T Wright

0800h **OS11D-1438 POSTER** Retrieval of Ocean Color Products From Multi-angle Polarimeter Measurements: **W Li**, Y Fan, S Stammes, N Chen, K H Stammes


0800h **OS11D-1440 POSTER** Preliminary study of the source apportionment and diversity of microplastics: taking floating microplastics in the South China Sea as an example: **T Wang**, X Zou, B Li, Y Yao, Y Li

0800h **OS11D-1441 POSTER** Spectral and Angular Polarized Light from the Ocean: **D Gray**, D B Gillis, J H Bowles, D Korwan


0800h **OS11D-1444 POSTER** Retrieving oceanic particle composition and size distribution from volume scattering function and polarization: **L Hu**, X Zhang


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**OS11E (CC) Hall A-C (Poster Hall)**

**Monday 0800h**

**Flooding on Coral Reef-Lined Coasts: Current State of Knowledge and Future Challenges Posters** (joint with B, GC, NH)

Presiding: **Curt Storlazzi**, U.S. Geological Survey; **Van Dongeren**, Deltares; **Gundula Winter**, University of Western Australia;

0800h **OS11E-1446 POSTER** A reef island developed with sea level rise in a cyclone-prone region: Dongsha Island, South China Sea: **S Y Gong**

0800h **OS11E-1447 POSTER** Topographic Features of Coral Reefs in Kiribati: Addressing Possible Trade-Offs Between Reef Resilience to Disturbance and Shoreline Protection: **H Summers**, S D Donner

0800h **OS11E-1448 POSTER** Analyzing Austral Swells in La Reunion Island Using Microseismic Noise and Ocean Bottom Data in Fringing Reef Environment: **E J Rindraharisanaona**, E Cordier, G Barruol, F R Fontaine, M Singh, A Gonzalez

0800h **OS11E-1449 POSTER** Effect of Reef Degradation on Sediment Flushing through Reef Gaps: Whitehouse, Jamaica: **C Daly**, J Nienhuis


0800h **OS11E-1451 POSTER** The influence of sea level on incident wave, infragravity wave, and non-linear low-frequency bore evolution across fringing coral reefs: **C D Storlazzi**, O M Cheriton

0800h **OS11E-1452 POSTER** Towards a global forecast for wave-induced flooding on coral reef-lined coastlines: **R T McCall**, C Nederho, E Cordier, G Barruol, F R Fontaine, M Singh, A Gonzalez

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**OS11F (CC) Hall A-C (Poster Hall)**

**Monday 0800h**

**Geologic Evolution of Continental Shelves I Posters**

Presiding: **Shannon Klotsko**, San Diego State University; **Ashley Long**, Coastal Carolina University; **Jillian Maloney**, San Diego State University; **Jenna Hill**, U.S. Geological Survey;
0800h OS11F-1453 POSTER From PaleoValleys to Drowned Reefs: Shelf Morphology as a Paleo Sea Level Indicator: A Bastos, V Quresma, D D’AGostini, P Cetto, F Vieira, G Boni, R Moura, G Amado Filho, A C Lavagnino

0800h OS11F-1454 POSTER Coarse-grained Sediment Delivery to the Inner California Borderlands from the Last Glacial Maximum to Present: E A Y Wei, M Roberts, J J Holmes, N W Driscoll

0800h OS11F-1455 POSTER Exploring the Geologic Evolution of the Shallow End Member of the Continental Shelf: J L Miselis

0800h OS11F-1456 POSTER Cross-Shelf Redistribution of Coarse Gravel and Fluvial Incision Following Shelf Exposure: Observations from the Dead Sea: H Eyal, E Dente, I Haviv, Y Enzel, T Dunne, N G Lensky

0800h OS11F-1457 POSTER A stratigraphic investigation of the Celtic Sea megaridges based on seismic and core data from the Irish-UK sectors: E Lockhart, J Scourse, D Praeg, K J J Van Landeghem, C Mellett, M H Saher, L Callard, R C Chiverrell, S Benetti, C O’Cofaigh, C Clark

0800h OS11F-1458 POSTER Exploring the interaction of autogenic and allogenic forcing on the deposition of remnant barrier sands in transgressive systems: D J Ciarletta, J Lorenzo-Trueba, A D Ashton

0800h OS11F-1459 POSTER Evaluating Tectonic Controls on Paleovalleys with a Structurally Deformed Basement: A M Long, J C Hill

0800h OS11F-1460 POSTER Shelf stratigraphy on the Northern Channel Islands platform, offshore southern California: J M Maloney, S Klotsko, H Tahiry, A Laws, A E Gusick, T Braje, D Ball

0800h OS11F-1461 POSTER Structural Controls on Paleodrainage Networks on the Continental Shelf Offshore Delmarva, U.S.A.: Implications for Modern Coastal and Shelf Edge Geomorphology: L L Brothers, D S Foster, E A Pendleton, W E Baldwin

0800h OS11F-1462 POSTER Successive Paleodrainage Networks on the Continental Shelf Offshore Delmarva, U.S.A.: Implications for Modern Coastal and Shelf Edge Geomorphology: L L Brothers, D S Foster, E A Pendleton, W E Baldwin

0800h OS11F-1463 POSTER Transient impacts of the Paleocene-Eocene Thermal Maximum on sedimentation on the Mid-Atlantic Shelf: S M Trampush, E A Hajek, J M Self-Trail

0800h OS11F-1464 POSTER Characterizing the Pleistocene Drainage Network Under the Western Mississippi Sound: D Adcock, A D Skarke

0800h OS11F-1465 POSTER What controlled Sediment Transport across the Shelf Edge during the Last Glacial Maximum? A Case Study from the Southern African Continental Margin: U Mukherjee, T E Tornqvist, G A Milne, P L Whitehouse

0800h OS11F-1466 POSTER The northeastern continental shelf of Korean peninsula in the East Sea records giant submarine landslides during the Late Quaternary: D Cukur, I K Um, J H Chun, J J Bahk, S R Kim, Y Kim, G S Kong, S Hozosal, S P Kim

0800h OS11F-1467 POSTER The role of subsidence in shelf development around volcanic ocean islands: Insights from observed morphology and modeling: R Quartau, A S Trenhaile, R Ramalho, N C Mitchell

0800h OS11F-1468 POSTER Cold-water coral mounds on the Namibian shelf: high-resolution recorders of palaeoceanographic changes: L Tamborrino, C Wienberg, J Tischack, P Wintersteller, D Hebbeln

0800h OS11F-1470 POSTER The paleocirculation of the Brazilian Equatorial Margin in the Cenozoic studied from seismic stratigraphy isopach maps: L Jovane, D P Alves, D Iacopini, J J Figueiredo

OS11G (CC) Hall A-C (Poster Hall)

Monday  0800h

Geological Constraints on Coastal Evolution and Morphodynamics Posters

**Presiding:** Carlos Loureiro, Ulster University; Andrew Green, University of KwaZulu-Natal; James Cooper, University of Ulster;

0800h OS11G-1471 POSTER Classifying degrees of paleo-oceanographic control on reef, shore platform and perched beach morphodynamics: S L Gallop, D M Kennedy, L A Naylor, J J Muñoz-Perez, C Loureiro, D W Jackson


0800h OS11G-1475 POSTER Antecedent substrate as a millennial- to centennial- scale control on barrier-island migration: J L Shawler, C J Hein, D J Ciarletta, J Lorenzo-Trueba, J E Connell, B Q Boggs

0800h OS11G-1476 POSTER How the storm-generated lag of a shoreface connected ridge system controls sediment volume partitioning between the upper and lower shoreface: A Green, C Loureiro, J A Cooper
1000h OS11G-1477 POSTER Lower shoreface seismic stratigraphy and morphology off Fire Island, New York: Evidence for lobate progradation and linear erosion: S Liu, J Goff


1000h OS11G-1480 POSTER Morphology and Sand Wave Migration in the Taiwan Strait from Seismic and Bathymetric Data Analyses.: S M Wun, C S Liu, H H Hsu, J N Wu, C C Su, Y W Lu, E Y Yang, T T Chen, C C Lin

1000h OS11G-1481 POSTER Depth-limiting resistant layers tune the shape and tidal bar pattern of Holocene alluvial estuaries: H J Pierik, J R F W Leuven, M Hijma, F Busschers, M G Kleinmans

1000h OS11G-1482 POSTER The role of tidal creeks as buffers between estuaries and their changing watersheds: M C Bost, A B Rodriguez, B A Mc Kee, C D Deaton

1000h OS11G-1483 POSTER Determining the drivers of transgression across morphological gradients of the saltmarsh-upland forest boundary: C B Miller, A B Rodriguez

1000h OS11G-1484 POSTER Investigating the Initiation of Duplexing of the Mid-Atlantic’s Chincoteague-Assateague, Virginia Barrier Island System using Vibracore and GPR Records: B Milinic, B Sutter, J Silveira Meyers, A J Oakley, S Cornell, C Bochicchio, S Moriarty

1000h OS11G-1485 POSTER Analysis of Magnetic Susceptibility Signatures of Modern Coastal Sediments and Vibracores, Assateague & Wallops Island, VA: J Silveira Meyers, S Cornell, A J Oakley, B Milinic, B Sutter

1035h C12B-02 Grounding zone depth modulates oceanic control on glacier terminus retreat along the west Antarctic Peninsula: K I Riverman, D A Sutherland, R Obermeyer, B Aguilar-Gonzalez, C F Moffat, M S Dinniman, J M Klinck II

1050h C12B-03 Concentrated basal melt under Antarctic Ice Shelves: N Gourmelen, D Goldberg, J S Greenbaum, S Kimura, K Snow

1105h C12B-04 Ice shelf shear margins and sub-ice-shelf channels: Investigating the Initiation of Pine Island Glacier: K E Alley, T Scambos, N D Holschuh, R B Alley, S F Child, M Willis, J S Hansen, D E Shean

1120h C12B-05 Elevated ambient melting and large melt intrusions at a tidewater glacier: R H Jackson, J D Nash, J M Amundson, D A Sutherland, C Kienholz, E D Skyllingstad, R J Motyka

1135h C12B-06 Estimating submarine melting around the Greenland Ice Sheet: D Slater, F Straneo

1150h C12B-07 High-resolution numerical ocean model illustrates how ice-sheet ocean interactions impact the biological pump of an Antarctic coastal polynya: P L Yager, P St-Laurent, H Oliver, R M Sherrell, S E Stammerjohn, M S Dinniman

1205h C12B-08 Time-varying freshwater fluxes from Antarctic ice shelves: S Adusumilli, H A Fricker, L Padman, M R Siegfried

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OS12A (CC) 103AB

Monday 1020h

Turbidity Currents and the Morphology and Stratigraphy They Create II (joint with EP)

Presiding: Robert Dorrell, University of Leeds; Jeffrey Peakall, University of Leeds;

1020h OS12A-01 Autogenic subaqueous mechanism for continental shelf formation associated with clinoform migration: dissolved salt, gravity-driven and wave-supported turbidity currents: T Iwasaki, G Parker

1035h OS12A-02 Computational Stratigraphy of Deepwater Sedimentary Systems: T Sun, F J Laugier, R Caldwell, A Harris, M Sullivan

1050h OS12A-03 Channel-Levees Formed by Turbidity Currents: A Kumar, T C Halsey

1105h OS12A-04 Submarine canyon-fan coevolution: Mechanism and insights from laboratory experiments: S Y J Lai, D Amblas, T P Gerber
1120h   **OS12A-05**  "What happens to a supercritical turbidity current when it travels onto a seafloor with increasingly gentle slope?"  A question by Henry Pantin.:  J T Eggenhuisen, Y Spychala, M Tilston, F Pohl

1135h   **OS12A-06**  Inverse modeling of turbidity currents by artificial neural network: application to ancient turbidites in the Otadai Formation, Boso Peninsula, Japan:  H Naruse, S Fukuda

1150h   **OS12A-07**  Thickness of quasi-equilibrium basal driving layer of turbidity current:  N Izumi, G Parker, R Luchi

1205h   **OS12A-08**  The Magnificent Henry Pantin Discovered the Magnificent Formula for Excavating Magnificent Submarine Canyons: Autosuspension and Self-Acceleration:  G Parker
Monday P.M.

ED13D  (CC) Hall A-C (Poster Hall)

Geoethics: Taking a Stand for Ethical Geoscience Research, Education, Communication, and Practice Posters

Presiding: Cindy Palinkas, University of Maryland Center for Environmental Science Horn Point Laboratory; Vincent Cronin, Baylor University; Silvia Peppoloni, National Institute of Geophysics and Volcanology; Chris Keane, American Geosciences Institute;

1340h ED13D-0773 POSTER Ethics of Nuclear Winter and Climate Intervention (Geoengineering) Research and of Making Policy Recommendations: A Robock

1340h ED13D-0774 POSTER How Ethical Violations Undermine the Integrity of Science: Analysis of a Prominent Case from the Geosciences: S C Moosavi

1340h ED13D-0775 POSTER Need For Academic Professional Ethics Training To Prepare Candidates To Take The National Association Of State Boards Of Geology (ASBOG®) National Licensing Examinations: J W Williams, R Kath

1340h ED13D-0776 POSTER On the Fundamentals of Geoethics: V S Cronin

1340h ED13D-0777 POSTER GEOETHICS IN EVERY GEOSCIENCE CLASSROOM; IT IS ABOUT TIME!: J W Geissman

1340h ED13D-0778 POSTER Scientific integrity and ethical challenges in current US federal policy: Where do we go from here?: G T Goldman, J M Carter, G Reed

1340h ED13D-0779 POSTER Teacher experiences, views and proposals: first results from a questionnaire developed in the frame of ENVRIPLUS project: G D’Addezio, M Locritani

1340h ED13D-0780 POSTER Teaching Ethics and Multicultural Norms in Geosciences: L Battalora, M Prasad

1340h ED13D-0781 POSTER Teaching Geoethics at Universidad de Chile: Impacts Within and Beyond the Classroom: T G Villaseñor, L Pinto, I Escudero, P Ramirez, M Valenzuela

GC13B  (CC) Salon A

Monday 1340h

Carbon Cycle Climate Variability: Observation, Modeling, and Data Assimilation in the Modern Data-Rich Era I (joint with A, B, OS)

Presiding: Ning Zeng, University of Maryland; Abhishek Chatterjee, NASA Goddard Space Flight Center; Andrew Jacobson, NOAA Boulder; Benjamin Poulter, NASA Goddard Space Flight Center;


1352h GC13B-02 Contrasting Interannual Atmospheric CO₂ Variabilities and Their Terrestrial Mechanisms for Two Types of El Niños: J Wang


1416h GC13B-04 Analyzing Synoptic Variations of the near Surface CO₂ Concentration in East Asia based on Hidden Markov Model: Y Wang


1440h GC13B-06 Terrestrial Carbon Cycle Responses to the West Pacific Warm Pool: M Huang, Z Wang

1452h GC13B-07 Oceanic drivers for tropical terrestrial carbon cycle and extreme: M Xu, F M Hoffman, S Mahajan, J Mao, P A Levine
1504h **GC13B-08** Bottom-up and top-down approach investigations on solar induced fluorescence for estimating the photosynthesis at ecosystem scale by both ground-based measurement and modeling: T Kato, H Kobayashi, Y Sakai, H Noda, T Muyauchi, K N Nashara, T Akitsu, S Murayama, H Muraoka


1528h **GC13B-10** Soil moisture controls on C cycle variability and drought impacts across scales: B D Stocker, J Zscheischler, T F Keenan, I C Prentice, S I Seneviratne, J Penuelas

### NH13E  (MM) Marquis 6

**Monday 1340h**

**Late Breaking contributions for the Global 2018 Hurricane, Typhoon, and Cyclone Season I** (cosponsored by JpGU: Japan GeoScience Union)

**Presiding:** Andrea Hawkes, UNC Wilmington; Guido Cervone, Pennsylvania State University Main Campus; Aubrey Miller, National Institutes of Health; Christina Bandaragoda, University of Washington;

1340h **NH13E-01** Observation and Forecasting Advancements for the 2018 Hurricane Season: L Uccellini

1400h **NH13E-02** The distinctive upper ocean conditions as observed by satellite observations during the 2018 tropical Atlantic hurricane season: G J Goni, J A Trinanes, R M Domingues, F Bringas, M Le Henaff, G R Halliwell Jr

1410h **NH13E-03** Influence of Hurricane Michael (2018) on Upper Ocean Circulation in the Gulf of Mexico: R Brokaw, S Bulusu, H L Roman-Stork, C B Trott


1430h **NH13E-05** UPPER OCEAN RESPONSE TO SUPER TYPHOON MANGKHUT FROM A PROFILING FLOAT ARRAY: S Johnston, D L Rudnick, J Moum, N Gutierrez-Brizuela

1440h **NH13E-06** Enhanced Inundation Products to Deliver Real-Time Coastal Water Level & Meteorological Data for the 2018 Tropical Season: A Miller, C R DiVeglio, P F Fanelli


1510h **NH13E-09** Rapid ocean mixing observed by an underwater glider during Typhoon Soulik over tidally dominated and highly stratified waters west of Jeju Island, Korea: H S Lim, T N Miles, S M Glenn, J T Kohut, C Watkins, J S Shin, J Y Jeong

1520h **NH13E-10** The Pacific Ocean has seen its most active hurricane season on record: S Lee, H D Kim, J Kim, S W Koo

1530h **NH13E-11** Introducing a new storm surge risk mitigation modeling framework of intermediate complexity designed to assist policymakers in identifying and optimizing combinations of risk mitigation strategies considering the multiple objectives of divergent stakeholders.: R L Ceres Jr, C E Forest, K Keller

### OS13A  (CC) 102AB

**Monday 1340h**

**Gas Hydrate–Bearing Sediments: Recent Advances in Characterization, Experiments, and Modeling I (joint with B)**

**Presiding:** Stephen Phillips, University of Texas at Austin; Xiaojing Fu, Massachusetts Institute of Technology; Yi Fang, University of Texas at Austin; Junbong Jang, U.S. Geological Survey, Woods Hole;

1340h **OS13A-01** Methane hydrate second offshore production test in eastern Nankai trough and related data acquisition programs for reservoir characterization: K Yamamoto, Y Nakatsuka, T Fujii, X Wang

1355h **OS13A-02** On-site pressure core processing for hydrate-bearing sediments at the Eastern Nankai Trough in 2018: J Yoneda, M Oshima, M Muraoka, H Minagawa, Y Jin, N Tenma, Y Nakatsuka, K Yamamoto, K Suzuki
1410h **OS13A-03** Anisotropic Methane Hydrate Critical State Model For Turbidite Hydrate Bearing Sediments: **M Zhou**, **K Soga**, **K Yamamoto**

1425h **OS13A-04** Petrophysics in the lab and the field: how can we understand and quantify gas hydrate pore-morphology and saturation?: **A Cook**, W F Waite, E Spangenberg, K U Heeschen

1440h **OS13A-05** Investigation of the hydro mechanical behaviour of gas-hydrate bearing clayey sediments from the Gulf of Guinea using in-situ geotechnical measurements: **F Taleb**, S Garziglia, N Sultan


1510h **OS13A-07** Clumped isotopic signatures of methane-dervied authigenic carbonates and gas hydrate-derived microcrystalline dolomite in the Sea of Japan: **G T Snyder**, N Zhang, K Yamada, Y Kakizaki, A Kano, N Yoshida, R Matsumoto

1525h **OS13A-08** Tracking AOM through TOC and Elemental S: Implications for Methane Charge in Gulf of Mexico Marine Sediments: **J E Johnson**, S C Phillips, D L Divins

**OS13B (CC) 103AB**

**Monday 1340h**

**Nearshore Physical Processes I**

*Presiding: Meagan Wengrove*, Oregon State University; *Greg Wilson*, Oregon State University; *Patricia Chardon-Maldonado*, University of Puerto Rico Mayaguez;

1340h **OS13B-01** On the importance and origin of very low-frequency waves in the nearshore during Hurricane Harvey: **K Anarde**, J Figlus

1355h **OS13B-02** Spectral wave predictions from STWAVE evaluated over long duration in the FRF Coastal Model Test Bed: **S Bak**, T Hesser, M A Bryant, J M Smith

1410h **OS13B-03** Modeling large waves on a low slope beach with SWASH 1D: **J W Fiedler**, P Smit, K L Brodie, J McNinich, R T Guza


1440h **OS13B-05** Observations of near bed turbulent production and dissipation on the inner shelf at Pt. Sal: **R Mieras**, C Swann, E F Braithwaite III, A M Hode, J Calantoni

1455h **OS13B-06** Spreading dynamics of small river plumes and generation of high frequency internal waves off the northeastern coast of the Black Seas: **A Osadchiev**, R Sedakov

1510h **OS13B-07** Analysis of mixing in inner shelf based on Stokes Boundary Layer theory: **H Chien**, Y Zhong, J L Chen, M Y Lin

1525h **OS13B-08** Thinking outside of the box: How data assimilative and machine learning methods can help us understand the nearshore ocean: **H T Ozkan-Haller**, G Wilson, A N Ellenson

**OS13C (CC) Hall A-C (Poster Hall)**

**Monday 1340h**

**Turbidity Currents and the Morphology and Stratigraphy They Create Posters (joint with EP)**

*Presiding: Gary Parker*, University of Illinois at Urbana Champaign; *Jim Best*, Univ. Illinois at Urbana Champaign; *Jeffrey Peakall*, University of Leeds; *Robert Dorrell*, University of Hull, HU6 7RX, UK;

1340h **OS13C-1486** POSTER Sediment Transport Due to Wave- and Current-Supported Turbidity Currents Over Erodible Bed: **S Haddadian**, C E Ozdemir


1340h **OS13C-1488** POSTER Stratification generated internal-waves determine gravity current dynamics: **R M Dorrell**

1340h **OS13C-1489** POSTER Surge propagation in debris flows: **P A Allen**, R M Dorrell, R E Thomas, O G Harlen, W D McCaffrey

1340h **OS13C-1490** POSTER Improve layer-averaged turbidity current model using density based flow-sediment-bed coupled equation system: **Y An**, Q Liu, S Yang

1340h **OS13C-1491** POSTER Effects of Density Currents on Sediment Concentrations of Water Pumped from the Dezé Reservoir: **R Zhang**, B Wu

1340h **OS13C-1492** POSTER Turbulence-Resolving Simulations of the Plunge Phenomenon in a Stratified Ambient: **F Schuch**, S Laizet, J H Silvestrini, E H Meiburg
1340h **OS13C-1494** POSTER Assessing the Character and Run-out Distances of Recent Sediment Density Flow Events from their Deposits in Monterey Submarine Canyon, Offshore California: **N Nieminski**, C K Paull, M McGann, T D Lorenson, K L Maier, S A Graham, R Gwiazda, K Anderson, E M Lundsten, M Wolfson-Schwehr

1340h **OS13C-1495** POSTER Different Features of Prolonged Deep-sea Turbidity Currents Triggered by Individual typhoon and Earthquake in the Gaoping Submarine Canyon: Y Zhang, Z Liu, Y Zhao, X Zhang

1340h **OS13C-1496** POSTER Lateral Flow Structure and Dynamics in Sinuous Submarine Channels: R W Kelly, R M Dorrell, A D Burns, W D McCaffrey

1340h **OS13C-1497** POSTER High Resolution Depositional Architecture of Modern Deep-water Sinuous Channel Inner Bend Deposits: A Comprehensive Comparison from Offshore California: C White, C K Paull, S A Graham

1340h **OS13C-1498** POSTER Prediction under chaos: The (f)utility of physics-based modeling of deepwater stratigraphy: D C J D Hoyal, R Vishnampet, H Sun, M Shringarpure

1340h **OS13C-1500** POSTER Shape analysis of mud clasts in turbidites and hybrid event beds: application of elliptic Fourier analysis with PCA to sedimentary rocks in the Pleistocene Otadai Formation, Japan: S Fukuda, H Naruse, Q Yao

1340h **OS13C-1501** POSTER Sedimentological evidences on storm-induced density bottom currents on the Sakawa fan-delta slope, Japan: K Ikehara, S Sugisaki, T Ajioka, H Katayama

1340h **OS13C-1502** POSTER The dominant control on submarine channel evolution revealed by new high-resolution time-lapse bathymetry: M S Heijnem, M A Clare, M Cartigny, P Talling, S Hage, G Lintern, C Stacey, D R Parsons, J Dix, J H Clarke

1340h **OS13C-1503** POSTER Morphodynamics of Knickpoints Active Turbidity Current Channels: M Cartigny, M S Heijnem, J H Clarke, C Stacey, S Hage, D R Parsons, P Talling, M Azpiroz, M A Clare, J T Eggenhuisen, J A Gales, J L Hizzett, J Hunt, G Lintern, S Simmons, E J Sumner, A J Vellinga, D Vendettuoli

1340h **OS13C-1504** POSTER Knickpoint Migration and Long-term Submarine Channel System Evolution within Bute Inlet, British Columbia, Canada: Y Chen, D R Parsons, M Cartigny, J H Clarke, C Stacey, S Hage, P Talling, M Azpiroz, M A Clare, J L Hizzett, J Hunt, G Lintern, E J Sumner, A J Vellinga, D Vendettuoli, S Simmons, R Williams

**OS13D (CC) Hall A-C (Poster Hall)**

**Monday 1340h**

**General Topics in Oceanography Presented in Poster Form Posters**

**Presiding:** Charles Nittrouer, University of Washington; Charles Nittrouer, University of Washington; Emily Eidam, University of North Carolina;


1340h **OS13D-1507** POSTER The global ocean warming from top to bottom: P J Durack, P J Gleckler, S G Purkey, G C Johnson

1340h **OS13D-1508** POSTER Upper-Ocean Processes Controlling the Sea Surface Temperature in the Western Gulf of Mexico: Y Zheng, M A Bourassa, D S Dukhovskoy

1340h **OS13D-1509** POSTER Recent Variability in Upper Ocean Characteristics of the Northeastern Caribbean Sea: W D Wilson, R A Watlington, T N Miles, S M Glenn

1340h **OS13D-1510** POSTER An Intuitive, Simple, and Effective Spectral Matching Algorithm for Ocean Color: R Vandermeulen, A Mannino

1340h **OS13D-1511** POSTER Inferring Ocean Velocity from Sequences of Ocean Images: C Klutse, D Nechaev, H Ngodock

1340h **OS13D-1512** POSTER Development of Satellite Oceanographic Data Quality Monitoring Systems and Services at NOAA National Centers for Environmental Information (NCEI): Y Zhang, Z Liao, H M Zhang

1340h **OS13D-1513** POSTER CMA Ocean Data Analysis System: B Xu, Z Liao, L Zhang, C Shi
OS13D-1514 POSTER Warm Deep Water Changes in the Brazilian Earth System Model Climate Projections: M Tonelli, I C Wainer, R Souza


OS13D-1516 POSTER Using GRACE to monitor the bottom currents associated with the Atlantic Meridional Overturning Circulation (AMOC): J Meyer, D P Chambers

OS13D-1517 POSTER Sea Surface Salinity Variability in the South Atlantic from Satellite and Model Data.: P D M Chiofosi, O T Sato

OS13D-1518 POSTER Spatial patterns and mechanisms of decadal variations in the AMOC inferred from high-resolution ocean model simulations: C W Boning, K Getzlaff, A Biastoch, M Scheinert, F U Schwarzkopf

OS13D-1519 POSTER Ocean-Sea Ice Coupled Three Dimensional Variational Global Ocean Data Assimilation at National Centers for Environmental Prediction.: I Rivin, Z D Garraffo, S Paturi, Y Hao, T D Spindler, J A Cummings, A Mehra

OS13D-1520 POSTER A novel temperature profile estimation technique from coastal acoustic tomography data: J H Park, Y Park, C Jeon, Y Choi, N Hirose, J E Pyo

OS13D-1521 POSTER Development of Two-Way Nesting in the Navy Coastal Ocean Model: J Yu, P Martin, C A Blain, T J Campbell

OS13D-1522 POSTER Glider observation of tidal and supertidal oscillations in Mid-Atlantic Bight shelfbreak canyons: D Gong, H Wang, J Hudson, L N Ferris

OS13D-1523 POSTER How do Tides Propagate up Rivers with a Sloping Bed?: K Kastner, S Naqshband, T Hoitink, P J Torfs, E Deleersnijder, S N Nining

OS13D-1524 POSTER A study on optimal monitoring network design in an estuarine area: J H Hwang, K Nam-Hoon

OS13D-1525 POSTER Anomalies in the Plumes of the Mississippi and Atchafalaya Rivers: Freshwater, Oceanographic and Climatic Controls: C Fitzpatrick, A Kolker, P Chu

OS13D-1526 POSTER Velocity scale for transport and mixing of buoyant particles in the oceanic mixed layer: T Chor, D Yang, C V Meneveau, M Chamecki

OS13D-1527 POSTER Global Comparison of Benthic Nepheloid Layers Based on 52 years of Nephelometer and Transmissometer Measurements: A V Mishonov, W D Gardner, M J Richardson, P Bisceye

OS13D-1528 POSTER Detection of seafloor crustal deformation from ocean bottom pressure data using amplitude correction of non-tidal components: T Inoue, T Muramoto, D Inazui, Y Ito, R Hino, K Ohta, S Suzuki


OS13D-1530 POSTER High-resolution geological structure in deep sea area obtained by new developing deep towing multi-channel streamer system: T Inoue, K Arai, Y Shin’ichiro, F Murakami, K Nishimura, T Yamazu, K Haraguchi

OS13D-1531 POSTER Mapping of the Korean Tidal Flat Using Multi-Remotely Sensed Data: J H Ryu, D J Hwang, K Kim, Y K Lee


OS13D-1533 POSTER The radiocarbon reservoir age of the eastern Arctic Ocean: C Pearce

OS13D-1534 POSTER Global Long-Term Satellite Coral Reef Temperature Anomaly Database (CoRTAD) and Applications in the Study of Marine Ecosystems: K Saha, X Zhao, H M Zhang, Y Zhang

OS13D-1535 POSTER The importance of wind in modulating Karenia brevis blooms along southwest coast of Florida: an observation-modeling synthesis: Y Li, R P Stumpf, M C Tomlinson

OS13D-1536 POSTER Predicting Grunion Migration Patterns and Spawning Areas in Response to Changes in California’s Oceans by Coupling Satellite and In Situ Data: A Jones, H Knapp, A Peacock, L Wakamatsu, B Holt

OS13D-1537 POSTER Distribution of CDW Intrusion Sites in Eastern Amundsen Sea and West Antarctic Peninsula Continental Shelves Revealed by Antarctic Seals: J M Klinck II, D P Costa, L A Huckstadt

OS13D-1538 POSTER Rolling Deck to Repository (R2R) Program Data Services for the Oceanographic Research Community: S H O’hara, R A Arko, D Clark, C L Chandler, J L Ely, V L Ferrini, K McLain, C J Olson, C Olson, C J Sellers, S R Smith, K I Stocks, L Stolp, S M Carbotte
1340h OS13E-1542 POSTER COMPARISON OF SEA LEVEL TIME-SERIES DERIVED FROM DART BOTTOM PRESSURE RECORDERS, ISLAND TIDE GAUGES, AND SATELLITE ALTIMETRIC OBSERVATIONS: G Mungov, K J Stroker, A D Sweeney, M C Eble

1340h OS13E-1543 POSTER Use of DART Data in the Assessment of GRACE-FO Solutions: M E Tamisiea, S R Rogers, S V Bettadpur, H Save

1340h OS13E-1545 POSTER Assimilating DART Data into an Upgrade of VDatum for the US West Coast: L Shi, L Tang, E P Myers III, L Huang, M Michalski, S A White

1340h OS13E-1546 POSTER Evaluation of W Phase CMT based PTWC Real-Time Tsunami Forecast Model using DART observations: Events of the last Decade: D Wang, N C Becker, S Weinstein, Z Duputel, L A Rivera, G P Hayes, B F Hirshorn, R H Bouchard, G Mungov


1340h OS13F-1551 POSTER Sensitivity of the Pine Island Glacier Ice Shelf Basal Melting to Simulated Ocean Circulation and Ice Evolution: S R Springer, S L Mack, P Dutrieux, L Padman, I R Joughin, D E Shean

1340h OS13F-1552 POSTER Towards Quantifying Multi-model Uncertainty in Antarctic Basal Melt Rate using High-resolution Regional Ocean Modeling: A Barthel, C Veneziani, N M Urban, M S Dinniman, C M Little

1340h OS13F-1553 POSTER Determining ocean tide influences on Antarctic ice shelf circulation using GFDL MOM6: C E Brayton, R Hallberg, G M Marques

1340h OS13F-1554 POSTER Exploring the Role of Surface Forcing in Weddell Sea Water Mass Production and Ice Shelf Basal Melt: J Hazel, A Stewart

1600h A14B-01 Mesocosm Studies of the Physical, Biological, and Chemical Factors Controlling the Chemical Composition of Sea Spray Aerosols: K A Prather

1615h A14B-02 Aerosol trace metal deposition dissolution and impacts on marine microorganisms and biogeochemistry: D S Hamilton, N M Mahowald, K Mackey, A R Baker, J K Moore, R Scanza, Y Zhang

1630h A14B-03 Effects of phytoplankton growth on the production of cloud condensation nuclei (CCN) and ice nucleating particles (INP): D C Thornton, S D Brooks, E Wilbourn, J Mirrieles, A Alsante, G Gold-Bouchot, K McFadden, A Whitesell

1645h A14B-04B Trace Element Cycling in the Sea Surface Microlayer from a Controlled Atmospheric Deposition Event: W M Landing, A M Ebling, T B Kelly, M Bresac, C Guieu

1700h A14B-05 Temperature and Composition Dependence of Sea Spray Aerosol Production: C D Cappa, S Forestieri, R Martinez, A Wang, J Bukacek-Frazier, T H Bertram, D Stokes
1715h **A14B-06** Particle-size effects on aerosol fractional solubility in samples from US GEOTRACES section cruises: **C S Buck**, R U Shelley, C Marsay, W M Landing

1730h **A14B-07** Arctic Sea Spray Aerosol Production and Composition in the Wintertime: **R Kirpes**, D Bonanno, N May, M W Fraud, A J Barget, R Moffett, A P Ault, K Pratt

1745h **A14B-08** Atmospheric deposition of iron from mineral aerosols to the ocean: **A Ito**, A Yamamoto, M Watanabe, M N Aita, J B W Stuut

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**OS14A (CC) 102AB**

**Monday 1600h**

**Gas Hydrate–Bearing Sediments: Recent Advances in Characterization, Experiments, and Modeling II (joint with B)**

*Presiding:* **Stephen Phillips**, University of Texas at Austin; **Xiaojing Fu**, Massachusetts Institute of Technology; **Yi Fang**, University of Texas at Austin; **Junbong Jang**, U.S. Geological Survey, Woods Hole

1600h **OS14A-01** Methane Leakage and Biogeochemical Processes of Authigenic Mineral Formation in Marine Sediments: **H Tian**, T Xu, K Bei, S Shang, Z Wei

1615h **OS14A-02** Using X-ray Computed Tomography (XCT) to Estimate Hydrate Saturation in Sediment Cores from Green Canyon 955, Gulf of Mexico: **E Oti**, A Cook, S Phillips, M E Holland, P B Flemings

1630h **OS14A-03** Investigation on Hydrate Formation in Sediments by In-situ Electrical Resistivity Monitoring and Visual Observation: **L Chen**, N Zhang, C Sun, G Chen, B Sun

1645h **OS14A-04** Experimental study of methane-hydrate formation and dissociation in sand: kinetics and gas storage capacity: **F D Benmesbah**, L Ruffine, P Clain, V Oswald, L Fourniaison, A Delahaye

1700h **OS14A-05** Clogging behavior of fines associated with gas hydrate production, from pure fines to NGHP-02 and UBGH-02 reservoir fines: **J Jung**, S C Cao, J Jang, W F Waite, J Y Lee

1715h **OS14A-06** Methane hydrate in sediment matrix and its evolution – Pore-scale visualization with phase-contrast micro CT: **L Lei**, Y Seol

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1730h **OS14A-07** Pore-Scale Visualization of Hydrate Formation and Dissociation: **G Ersland**, S Almenningen, M Lysyy, M Ferne, A Graue

1745h **OS14A-08** Pore-scale methane hydrate formation under pressure and temperature conditions of natural reservoirs: **T Dong**, J Liu, J T Gu, J F Lin, P B Flemings, P J Polito, J O’Connell

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**OS14B (CC) 103AB**

**Monday 1600h**

**Nearshore Physical Processes II**

*Presiding:* **Meagan Wengrove**, Oregon State University; **Greg Wilson**, Oregon State University; **Patricia Chardon-Maldonado**, University of Puerto Rico Mayaguez

1600h **OS14B-01** Surf Zone Hydrodynamics and Morphological Evolution Throughout Laboratory Scale Storm Events: **R P Mulligan**, R Y Marmoush, C Portch, D Benoit

1615h **OS14B-02** Modeling Bathymetric Change in a Tidally Dominated Estuary on Interannual Timescales: **T C Lippmann**, K von Krusenstiern

1630h **OS14B-03** The Impacts of Channel Connectivity on Tidally-Driven Sediment Transport and Accumulation in a Mangrove Forest: **R L McLachlan**, A S Ogston, N E Asp, A T Fricke, V J C Gomes, C Nittouer


1700h **OS14B-05** Turbulence, Mixing, and Nutrient Fluxes in Kelp Forests: Effects of Currents, Waves, and Stratification: **C Yan**, J C McWilliams, M Chamecki

1715h **OS14B-06** The Influence of Vertical Current Structure on Open-Coast Surges: **A S Tritinger**, D Resio

1730h **OS14B-07** Estimates of the Near-Surface Turbulent Kinetic Energy Dissipation Rate in a Developing Sea During Vernal Cooling: **J O’Donnell**

1745h **OS14B-08** Low Frequency Sea Level Variability in a Deltaic Mississippi River Estuary during Cold Front Season: **A R Payandeh**, D Justic, G Mariotti, H Huang
**Session Information**

**Oral Sessions**
Sessions are being held in the Convention Center (CC) and Marriott Marquis (MM)

**Poster Sessions**
Posters are on display in the following venue throughout the week: Hall A-C (Poster Hall)

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**Session & Paper Numbering**

Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation.
Example: A21A-01 = Atmospheric Sciences, Tuesday, AM, concurrent session A, first paper in that session.

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**Day** | **Time**
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1 = Monday | 1 = AM 0800–1000
2 = Tuesday | 2 = AM 1020–1220
3 = Wednesday | 3 = PM 1340–1540
4 = Thursday | 4 = PM 1600–1800
5 = Friday | 5 = PM 1815–1915

The program is current as of 06 December 2018. 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/fm18/meetingapp.cgi/Home](https://agu.confex.com/agu/fm18/meetingapp.cgi/Home) for updates.

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**Tuesday A.M.**

**C21C (CC) Hall A-C (Poster Hall)**

**Tuesday 0800h**

**Advances in Ice Sheet–Ocean Interactions: From Measurements to Climate Impacts**

**Posters (joint with GC, OS)**

**Presiding:** Thomas Armitage, Jet Propulsion Laboratory; Anna Hogg, University of Leeds; Paul Holland, British Antarctic Survey; Fiammetta Straneo, Scripps Institution of Oceanography;

0800h **C21C-1330 POSTER** A Greatly Improved 25-year Record of Ice Shelf Elevation at High Temporal and Spatial Resolution: F Paolo, J Nilsson, A S Gardner
0800h **C21C-1331** **POSTER** A Near-Uniform Sea Level and Ocean Bottom Pressure Fluctuation and its Associated Change in Ocean Temperature over the Antarctic Continental Shelf: I Fukumori, O Wang, I G Fenty

0800h **C21C-1332** **POSTER** An Updated Antarctica Coastline Extracted Automatically from Remote Sensing Data: Y Yu, F Hui, X Li, Z Chen, X Cheng

0800h **C21C-1333** **POSTER** Bathymetry Beneath the Getz Ice Shelf from IceBridge Gravity Data: Implications for Ocean-Ice Interactions: J R Cochran, K J Tinto

0800h **C21C-1334** **POSTER** Beyond J9: A 21st Century return to the Ross Ice Shelf cavity, West Antarctica: C L Hulbe, C L Stevens, G B Dunbar, A Pyne, D Mandeno, M Forbes

0800h **C21C-1335** **POSTER** Developing a coupled ice sheet-ocean model: challenges and progress with terrain-following ocean coordinates: S L Mack, D Shapero, R M Gladstone, D Gwyther, B Galton-Fenzi, I R Joughin, S R Springer, P Dutrieux, L Padman

0800h **C21C-1336** **POSTER** Direct and Indirect Contributions of the Cryosphere to Micronutrient Supply to the Open Surface Waters around Antarctica: M S Dinniman, P St-Laurent, K R Arrigo, E E Hofmann, G van Dijken

0800h **C21C-1337** **POSTER** Dynamic and Thermodynamic Renewal Processes in Greenland’s Fjords: K Zhao, A Stewart, J C McWilliams

0800h **C21C-1338** **POSTER** Dynamic small-scale morphology and mass-loss processes near the fronts of Antarctica’s large ice shelves: M K Becker, H A Fricker, L Padman, M R Siegfried, C Mosbeux, T J W Wagner

0800h **C21C-1339** **POSTER** Dynamics of the subglacial discharge plume generated in a two-layer stratified fjord (Sarqardleq, Greenland): scalings and implications of the neutral buoyancy height: E De Andres, D Slater, F Straneo

0800h **C21C-1340** **POSTER** Freshwater budgets for the ocean east of Greenland: I Le Bras, N Beaird, F Straneo

0800h **C21C-1342** **POSTER** High-frequency Forcing of Near-terminus Water Properties at LeConte Glacier, Southeast Alaska: A Hager, D Sutherland, C Kienholz, R H Jackson, J M Amundson, J D Nash, R J Motyka, W P Dryer

0800h **C21C-1343** **POSTER** Ice-shelf secondary flow counteracts growth of sub-ice-shelf channels: M Wearing, L A Stevens, P Dutrieux, J Kingslake

0800h **C21C-1344** **POSTER** Impacts on water-mass transformation from ice shelf melting over the Southern Ocean: H Jeong, X Asy-Davis, A K Turner, D Comeau, S F Price, M R Petersen, R P Abernathey

0800h **C21C-1345** **POSTER** Improving mass balance estimates of large outlet glaciers from the Greenland Ice Sheet: K K Kjeldsen, S A Khan, W T Colgan, R S Fausto

0800h **C21C-1346** **POSTER** InSAR for tide modelling in Antarctic ice-shelf grounding zones: C T Wild, O Marsh, W Rack

0800h **C21C-1347** **POSTER** New insights on Antarctic ice shelf basal channels from Reference Elevation Model of Antarctica (REMA) digital elevation models: A Chartrand, I Howat, M J Noh, M D King

0800h **C21C-1348** **POSTER** Ocean Warming Drives Increased Mass Loss at 79 North Glacier, Northeast Greenland: M R Lindeman, F Straneo, J Schaffer, L de Steur, T Kanzow

0800h **C21C-1349** **POSTER** Only skin deep? Linking sea surface temperatures with glacier discharge and deep fjord temperature change: T Snow, S Skinner, F Straneo, T A Scambos, W Abdalati

0800h **C21C-1350** **POSTER** Pathways and fates of the warm Atlantic Intermediate Water toward 79NG Glacier Northeast Greenland: Y He, I M Koszalka, M S Sprecht, C Wekerle, J Schaffer, T Kanzow

0800h **C21C-1351** **POSTER** Preliminary investigation of the interaction between Antarctic ice shelf and sea ice: X Cheng

0800h **C21C-1352** **POSTER** Sub-shelf melt parameterizations overestimate ice loss in stand-alone ice sheet modelling: L Favier, N Jourdain, N Merino, G Durand, O Gagliardini, F Gillet-Chaulet, P Mathiot, A Jenkins, M Chekki

0800h **C21C-1353** **POSTER** Sustained, Autonomous Observations Beneath Ice Shelves: C Lee, L Rainville, J I Gobat, J B Girton, P Dutrieux, K A Christianson, T W Kim, S H Lee

0800h **C21C-1354** **POSTER** Tectonic setting controls long term stability of Ross Ice Shelf: K J Tinto, R E Bell, I Das, H A Fricker, L Padman, D F Porter, C S Siddoway, M R Siegfried, S R Springer

0800h **C21C-1355** **POSTER** The bathymetric and subglacial hydrological context for basal melting of the West Ice Shelf in East Antarctica: W Wei, J S Greenbaum, N Gourmelen, C F Dow, S Bo, J Guo, T D van Ommen, J L Roberts, D A Young, D D Blankenship

0800h **GC21F-1172** POSTER Attributing the External Forcings Responsible for Near Surface Air Temperature Changes over India: **D R**, K M Achutarao, A Thanigachalam

0800h **GC21F-1173** POSTER A view of synoptic situations along with the local features leading to extremely heavy rainfall episodes occurring over Mumbai: **S Mohanty**, M Swain, K K Osuri, D Niyogi, U C Mohanty

0800h **GC21F-1174** POSTER A Legal and Climatological Survey of Recent Developments in Climate Attribution: **R M Horton**, M Burger, J Wentz

0800h **GC21F-1175** POSTER A literature review of climate change detection and attribution studies displays the scope of observable impacts: **R Andreatta**, H Cutting, C Gurney, M Thomas

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**GC21F** (CC) Hall A-C (Poster Hall)

**Tuesday 0800h**

**Attribution Science Advancements:**

Atmosphere, Cryosphere, Hydrosphere, Ocean Posters *(joint with A, C, H, OS)*

**Presiding:** Brenda Ekwurzel, Union of Concerned Scientists Washington DC; **Sarah Cooley**, Ocean Conservancy Inc.;

0800h **GC21F-1165** POSTER Attribution of Sea Ice Changes Across all Seasons Invited Paper 401612: **J C Stroeve**, D Notz

0800h **GC21F-1166** POSTER Regional Attribution of coastal processes to $\Omega$, pH, and carbon variability in Washington and Oregon waters: A modeling study: **S A Siedlecki**, P MacCready, D Pilcher, S R Alin, R A Feely, R M McCabe, B Carter, C A Deutsch, J Newton, T Klinger

0800h **GC21F-1167** POSTER The Challenge Of Ocean Acidification Attribution to Tropical Caribbean Reef Ecosystem Decline: **M Melendez Oyola**, D K Gledhill, S Busch


0800h **GC21F-1169** POSTER Attributing ocean acidification to major carbon producers: **R Licker**, B Ekwurzel, S C Doney, S R Cooley, I D Lima, R Heede, P C Frumhoff

Modeling and Uncertainty Analysis of Carbon and Water Fluxes in a Broad-leaved Korean Pine Mixed Forest based on Model-data Fusion: X Ren, H He, L Zhang, F Li, M Liu, G Yu, J Zhang

Compound specific carbon and nitrogen stable isotope analysis amino acid in whale’s earwax: F Mansouri, D Crain, Z Winfield, J M Fulton, S J T rumble, S Usenko

Constraining Canopy Carbon Simulations in Terrestrial Biosphere Models by Using the Soil Moisture Active Passive Observations: M Shi, J Liu, S Chan

NG21A  (CC) Hall A-C (Poster Hall)  

Tuesday  0800h  

Stochastic Modeling and Nonlinear Waves in Atmosphere, Ocean, Climate Dynamics, and Space Physics Posters (joint with A, C, IN, OS)  

Presiding: Aneesh Subramanian, Scripps Institution of Oceanography, Center for Western Weather and Water Extremes (CW3E); Cecile Penland, Physical Sciences Division; Yoshiharu Omura, Kyoto University; Raffaele Marino, CNRS, École Centrale de Lyon;  

0800h  NG21A-0786 POSTER Linear variation of dissipation efficiency in rotating stratified turbulence: A Pouquet, D L Rosenberg, R Marino

0800h  NG21A-0787 POSTER Experimental investigation on shoaling characteristics of internal solitary wave over a gentle slope: G Wei, Y Zhang, H Du

0800h  NG21A-0790 POSTER Dual energy transfer in geophysical flows: R Marino, P D Mininni, B Maruca, N H Godbole, D J Sundkvist


0800h  NG21A-0792 POSTER The Skewed Nature of Ensemble Forecasts: C Penland


0800h  NG21A-0794 POSTER A stochastically-perturbed-parameters Gent-McWilliams scheme based on a priori estimation of the quasi-Stokes diffusivity: I Grooms, W Kleiber


0800h  NG21A-0797 POSTER Data-driven stochastic model for the Pleistocene global temperature: Dynamical mechanism of the Middle Pleistocene transition: A M Feigin, D Mukhin, A Gavrilov, E Loskutov, J Kurths


0800h  NG21A-0800 POSTER Process-Based Evaluation of Stochastic Perturbed Parameterization Tendencies on Convective-Resolving Ensemble Forecasts of Heavy Rainfall Events in New York and Taiwan: K M Lupo, S C Yang, R D Torn

0800h  NG21A-0801 POSTER Ocean Transport Modeling to Predict and Mitigate Regional Flow-Based Hazards: S Prasad

0800h  NG21A-0802 POSTER A Multilevel Approach to Simulation of a Stochastic Shallow-Water with Rainfall System: P Townsend, O Lakkis

0800h  NG21A-0803 POSTER Can we create a one-size fits all stochastic pattern generator for different time-scales?: P J Pegion, J Whitaker

0800h  NG21A-0804 POSTER Error Models for the in situ Sea Surface Temperature, Averaged Over Space-Time Bins: A Kaplan

0800h  NG21A-0805 POSTER CanStoc: combining numerical and stochastic models for long term prediction: L Del Rio Amador, S Lovejoy, N Jajcay
NH21D (CC) Hall A-C (Poster Hall)

Tuesday 0800h

**Late Breaking contributions for the Global 2018 Hurricane, Typhoon, and Cyclone Season II Poster** (cosponsored by JpGU: Japan GeoScience Union)

Presiding: Andrea Hawkes, UNC Wilmington; Guido Cervone, Pennsylvania State University Main Campus; Aubrey Miller, National Institutes of Health; Christina Bandaragoda, University of Washington;

0800h NH21D-3529 POSTER Near Real-time Forecasting Experiment of Typhoon in the South China Sea with a High Resolution Regional Fully-coupled Model: D Wang

0800h NH21D-3530 POSTER Predictive Numerical Simulations for Deadly High Waves Caused by Hurricanes, Typhoons and Cyclones.: H D Kim, S I Aoki, J Kim, S Lee

0800h NH21D-3531 POSTER Northeastern Gulf of Mexico Coastal Ocean Response to Hurricane Michael: Y Liu, R H Weisberg, L Zheng

0800h NH21D-3533 POSTER Drone Surveys Reveal Effects of Hurricane Florence on Coastal Habitats: J T Ridge, A Seymour, K Dobroski, C Atkins-Davis, A DiGiacomo, V Pan, J Dale, E Newton, D W Johnston

0800h NH21D-3534 POSTER Observational Strategies towards Capturing Peak Wind Speeds in Land-falling Hurricanes: S Woll, M Bell, F J Masters, J Schroeder, T R McGee

0800h NH21D-3536 POSTER 1-Octanol Water Partition Coefficient as a Predictor of Liquid-Liquid Phase Separation in Mixed Organic/Inorganic Aerosol Particles: L Yang, M Kuwata

0800h NH21D-3537 POSTER Tracing Precipitation Sources of Extreme Flooding During Hurricane Florence Using Oxygen and Hydrogen Isotope Ratios and Back-Trajectory Modeling: K Schmidt-Simard, D M Surge

0800h NH21D-3538 POSTER A SPATIAL AND TEMPORAL ANALYSIS OF NUTRIENT INPUTS USING ISOTOPEs IN NORTH CAROLINA’S CAPE FEAR RIVER BASIN: C N Brown, M Mallin, A N Loh

0800h NH21D-3539 POSTER Hurricane Florence highlights opportunities for reducing flooding and nutrient pollution impacts in the Cape Fear River Watershed, North Carolina: D Schaffer-Smith, S W Myint, R L Muenich, D Tong, J E DeMeester

0800h NH21D-3540 POSTER Building Digital Infrastructure and Communities to Assess Risk of Drinking Water Hazards Caused by Hurricanes Maria and Florence: S Lucero, C Bandaragoda, L Shanley, W C Lenhardt, V Smith, M R Burchell, K Pieper, L Stillwell, S D Peckham, L Peek, J Bales, E Istanbulluoglu, J Phuong, E Faustman, G Ramirez-Toro, A Adcock, T Sauder

OS21A (CC) 102AB

Tuesday 0800h

At the Intersection of Society and Our Coasts: Advancements in Coastal Ocean Science and Applications to the Human Dimension I


0800h OS21A-01 Operationalizing Ecosystem-based Fisheries Management (EBFM): M M Brady

0815h OS21A-02 It Takes a Village: Coastal Ocean Monitoring and Forecasting – Harmful Algal Blooms are the Perfect Poster Child for Cooperative Efforts: B A Kirkpatrick, R P Stumpf, W Litaker, R D Currier, R Hardison, C Holland, A Reich, K Hubbard, A Hoeglund

0830h OS21A-03 The Olympic Coast as a Sentinel: An Integrated Social-Ecological Regional Vulnerability Assessment to Ocean Acidification: J A Newton, M R Poe, S R Alin, R A Feely, S A Siedlecki


0915h OS21A-06 Promoting living shorelines for shoreline protection: understanding potential impacts to and ecosystem trade-offs with adjacent submersed aquatic vegetation (SAV): C M Palinkas, S Lorie

0930h OS21A-07 Defining Coastal Ecosystem Mooring Configurations to Improve Nationwide Ecosystem Observing Capabilities: K Bailey, J Newton, J R Morrison, M A McManus, U Send, M Tamburri
### OS21B (CC) 103AB

**Tuesday 0800h**

**Nearshore Physical Processes III**

*Presiding: Meagan Wengrove*, Oregon State University; *Greg Wilson*, Oregon State University; *Patricia Chardon-Maldonado*, University of Puerto Rico Mayaguez;

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>0800h</td>
<td>OS21B-01</td>
<td>Internal Wave-Driven Mixing in Continental Slope Canyons</td>
<td><em>R Nazarian</em>, S Legg, M H Alford, M M Hamann, A F Waterhouse</td>
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<tr>
<td>0815h</td>
<td>OS21B-02</td>
<td>'Winds of Opportunity': the Influence of Wind on Mudflats Accretion</td>
<td><em>I Colosimo</em>, D S van Maren, M van Regteren, P L M de Vet, B C V Prooijen</td>
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<td>0830h</td>
<td>OS21B-03</td>
<td>MODEX: Using Wave-Resolving Models to Understand Observed Sand Mound Deformation</td>
<td><em>J Hopkins</em>, M A de Schipper</td>
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<td>0845h</td>
<td>OS21B-04</td>
<td>Size gradation effects on wave-induced sand transport in the nearshore</td>
<td><em>Y Rafati</em>, Z Cheng, X Yu, T J Hsu, J Calantoni</td>
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<td>0900h</td>
<td>OS21B-05</td>
<td>Adapting Laboratory Instrumentation to Observe Sand Ripple Dynamics in the Nearshore</td>
<td><em>B J Landry</em>, C C Zuniga Zamalloa, R Mieras, E F Braithwaite III, C Gray, S Griffin, J Calantoni</td>
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<td>0915h</td>
<td>OS21B-06</td>
<td>Observation of UXO mobility in the nearshore environment</td>
<td><em>D Cristaudo</em>, J A Puleo</td>
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<tr>
<td>0930h</td>
<td>OS21B-07</td>
<td>Measurement of Dynamic Pressure Gradients on the Surface of Short Cylinders</td>
<td><em>D L Foster</em>, S Gilooly, A Sarni</td>
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<tr>
<td>0945h</td>
<td>OS21B-08</td>
<td>Nearshore benthic light attenuation due to sediment transport following dam removal on the Elwha River, WA: <em>In-situ</em> observations and statistical modeling</td>
<td><em>H Glover</em>, A S Ogston, I M Miller, E Eidam, S Rubin, H Berry</td>
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0800h **OS21C-1588** *POSTER* Subpixel Variability and Quality Assessment of Satellite Sea Surface Temperature Data Using a Novel High Resolution Multistage Spectral Interpolation Technique: **S L Castro**, L A Monzon, G A Wick

0800h **OS21C-1589** *POSTER* Oceanic Iron fertilization: a bibliometric analysis of the literature based on Natural Language Processing techniques: **H Smith**, I Marinov

0800h **OS21C-1590** *POSTER* Classifying ocean profiles with machine learning algorithms: **K Tikka**, P Alenius, L Tuomi, A Westerlund

**OS21D (CC) Hall A-C (Poster Hall)**

**Tuesday 0800h**

**Land-Based Remote Sensing of the Coastal Ocean: Science and Technological Innovations I Posters**

Presiding: **Brian Emery**, University of California Santa Barbara; **Anthony Kirincich**, Woods Hole Oceanographic Inst;

0800h **OS21D-1591** *POSTER* A hybrid empirical method for wave spectra inversion from a single VHF Radar Site.: **Z Alattabi**, D Cahl, G Voulgaris

0800h **OS21D-1592** *POSTER* Implementation of an HF Radar wave-spectrum assimilation algorithm using SWAN and application for the CASPER-West Experiment: **P A Muscarella**, D T Walker, D R Lyzenga, A Reath

0800h **OS21D-1594** *POSTER* Wave Spectra and Ocean Current Measurements from a Multirotor UAV: **D Cahl**, G Voulgaris

0800h **OS21D-1595** *POSTER* Estimate of residual transport in the Fair Isle Gap: **M Marasco**, P Gleizon Sr, B Berx, B Turrell, P Gillibrand

0800h **OS21D-1596** *POSTER* Sub-tidal Surface Current Variability in the Lower Chesapeake Bay: **T G Updyke**, L P Atkinson

0800h **OS21D-1597** *POSTER* Validation and Tidal Analysis of HF Radar Derived Ocean Surface Currents along the Odisha Coast, northwestern Bay of Bengal: **S Mandal**, S Sil, A Gangopadhyay

0800h **OS21D-1598** *POSTER* Estimation of Parameter and Boundary Condition for Regional Ocean Model Systems Using the M2 Tidal Currents by Ocean Radar in the Ise Bay, JAPAN: **T Tsubono**, K Misumi, D Tsumune

0800h **OS21D-1599** *POSTER* HF Radar Observations in Palau: **C Garcia-Moreno**, T Cook, E Terrill, S Merrifield, S Celona

0800h **OS21D-1600** *POSTER* Horizontal advection critical for maintaining an Antarctic biological hotspot: **J T Kohut**, P Winsor, H Statscwich, M Oliver, E Fredj, N Cuoto, K S Bernard, W Fraser

0800h **OS21D-1601** *POSTER* Observed Frontal eddies in the Coastal Bay of Bengal using HF Radar and High-Resolution SST data: **A Pasula**, S Sil, S Mandal, A Shee, S Pramanik

0800h **OS21D-1602** *POSTER* Interpreting phytoplankton bloom development using high-frequency radar and satellite ocean color imagery: **L Washburn**, P G Matson, C Gotschalk, D Siegel, D Uglesices-Rodriquez

0800h **OS21D-1603** *POSTER* Surface Current Mapping Using a Hybrid Direction Finding Approach for Flexible Antenna Arrays: **A Kirincich**, B Emery, L Washburn, P J Flament

0800h **OS21D-1604** *POSTER* Evaluation of Alternative Detection Methods for Oceanographic HF Radars: **B M Emery**, L Washburn, A Kirincich

0800h **OS21D-1605** *POSTER* Mapping the electromagnetic (E-M) field in the vicinity of HF radar antenna arrays: **P J Flament**, A Kirincich, X Flores-vidal, I Q Fernandez, C Chavanne, L R Benjimin, V Futch


0800h **OS21D-1607** *POSTER* X-Band Radar Observations of Shoaling Nonlinear Internal Waves in Coastal California: **S Celona**, S Merrifield, T de Paolo, E Terrill, J A Colosi, F Feddersen

0800h **OS21D-1608** *POSTER* The West Coast Operational Forecast System: using HF radar surface currents for skill assessment and assimilation: **A L Kurapov**, J Xu, E P Myers III, E J Bayler

**OS21E (CC) Hall A-C (Poster Hall)**

**Tuesday 0800h**

**New Opportunities in Ocean and Earth Observing at the Seafloor Interface Posters**

(joint with NS, S)

Presiding: **Charlotte Rowe**, Los Alamos National Laboratory; **Susan Bilek**, New Mexico Institute of Mining and Technology; **Jerome Aucan**, Institut de Recherche pour le Développement (IRD); **Bruce Howe**, University of Hawaii at Manoa;

0800h **OS21E-1609** *POSTER* Assimilation of SMART cable observations to improve global ocean models: **C Irrgang**, T Weber, M Thomas
0800h **OS21E-1610 POSTER** Scientific Monitoring And Reliable Telecommunications (SMART) Cable Systems: Integration of Sensors into Telecommunications Repeaters for Climate and Disaster Mitigation: **B M Howe**, J Aucan, S Lentz

0800h **OS21E-1611 POSTER** Installation and operation of ICT seafloor cabled seismic and tsunami observation system in source region of Tohoku-oki earthquake: **M Shinohara**, T Yamada, S Sakai, H Shiobara, T Kanazawa, K Uchira

0800h **OS21E-1612 POSTER** Ground motion noises observed by Seafloor observation network for earthquakes and tsunamis along the Japan Trench (S-net): **K Uchira**, T Kunugi, K Shiomi, S Aoi, N Takahashi, N Y Chikasada, T Matsumoto, T Nakamura, M Shinohara, T Yamada, M Mochizuki, T Kanazawa

0800h **OS21E-1613 POSTER** T-phase characterization of an oceanic transform fault earthquake swarm using the Ocean Observatories Cabled Array: **E C Roland**, A M Trehu, M Lebrec

0800h **OS21E-1614 POSTER** The FOCUS project offshore Catania, Sicily (FOCUS = Fiber Optic Cable Use for Seafloor studies of earthquake hazard and deformation): **M A Gutscher**, J Y Royer, D Graindorge, S Murphy, F Klingelhoefer, C Aiken, A Cattaneo, G Barreca, L Quelet, G Riccobene, F Petersen, M Urlaub, S Krastel, F Gross, H Kopp


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**OS21F (CC) Hall A-C (Poster Hall)**

**Tuesday 0800h**

**General Chemical and Biological Oceanography Posters**

**Presiding:** Dennis Hansell, RSMAS, University of Miami; Mariana Bif, University of Miami;

0800h **OS21F-1617 POSTER** Mass Transfer Rate of Non-Spherical Particles in Turbulence using Sugar-Glass Recipe: **T Ochmke**, E A Variano

0800h **OS21F-1618 POSTER** Assessing the Legacy Effects of Climate Change on the World’s Oceans Utilizing Reversibility Scenarios: **J G John**, E Robertson, C A Stock, J P Dunne, C Jones


0800h **OS21F-1621 POSTER** Export of Dissolved Inorganic Carbon with Dense Shelf Water from the Merz and Ninnis Polynyas in East Antarctica: **M Arroyo**, E H Shadwick, B D Tilbrook

0800h **OS21F-1622 POSTER** Mechanisms of Oceanic Anthropogenic Carbon Uptake in NOAA GFDL’s CM4: **I Bociu**, J P Dunne, B Bronseler, H Guo

0800h **OS21F-1623 POSTER** Ge/Si Biogeochemistry in North Pacific Sediments: **Y Hou**, D E Hammond, W Berelson, J F Adkins, JJ Baronas, A Lunstrum

0800h **OS21F-1624 POSTER** Is the Chromium Concentration Profile in the Argentine Basin Anomalous?: **T Huang**, E A Boyle

0800h **OS21F-1625 POSTER** Latitudinal distributions of $^{234}$Th in the upper western Indian Ocean: **I Kim**, H M Lee, C Kim, S H Kim, T K Rho


0800h **OS21F-1628 POSTER** Size-dependent characterization of seabed mine tailings and its effects on the mortality rates of marine zooplanktons: **J Lee**, I SEO, K Hyeong, K W Lee, J S Park, H Yoon

0800h **OS21F-1629 POSTER** Spatial Analysis of Plankton Community and Nutrients in Coastal Environment of Mozambique: **H Kelchner**, K Reeve-Arnold, K M Schreiner, A J Wagner, K Roques, R Errera
Tuesday 0800h P21E-3385 POSTER Limited Prospect for Geological Activity at the Seafloors of Europa, Titan, and Ganymede; Enceladus OK: P K Byrne, P V Regensburger, C Klizczak, D R Bohnenstiehl, S A Hauck II, A J Dombard, D Hemingway, S Vance, M Melwani Daswani

0800h P21E-3386 POSTER The effect of MgSO₄ on serpentinization rates: Implications for the icy moons of Jupiter and Saturn: H M Lamadrid, M M Nienhuis, Z Zajacz

0800h P21E-3387 POSTER Composition of Frozen Brines in the Aqueous Na-Mg-SO₄ and Na-Mg-Cl Systems: T H Vu, M Choukroun, L Labrecque, R P Hodyss, P V Johnson


0800h P21E-3389 POSTER Interior Structures of Enceladus and Titan with Respect to Oceanic Equations of State: S Vance, K I Vega, S Tharimena, M Melwani Daswani, M P Manning, C Sotin, J M Brown, G Tobie

0800h P21E-3390 POSTER Thermal-Compositional Evolution of Europa’s Interior and Ocean Since Accretion: M Melwani Daswani, S Vance

0800h P21E-3391 POSTER Incorporating ocean impurities into Europa’s ice shell: Salty tree-rings?: S M Howell, E J Leonard

0800h P21E-3392 POSTER Freezing Water Spheres: Connecting Dynamics and Surface Features of Icy Moons: E Nathan, M Berton, H Karani, T Girona, C Huber, J W Head III, P Williard, A Denton

0800h P21E-3393 POSTER Rifting and the Elevation of Bands on Europa: L Montesi, S M Howell, R T Pappalardo


0800h P21E-3397 POSTER Gaining Insight into Surface Geologic Processes on Europa through Geologic mapping at Global and Regional Scales: D Senske, E J Leonard, D A Patthoff

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0800h P21E-1630 POSTER Spatial and Temporal Patterns of Zooplankton Diversity and Abundance in the Pacific: A G McCarthy, D C Barber, D S Goodwin

0800h P21E-1631 POSTER Population genetics and phenotypic adaptive variation of seaweed pipefish Syngnathus schlegeli at different latitudes: X Wang, Y Zhang, G Qin, Q Lin


0800h P21E-1633 POSTER Microbial Interactions Between Horseshoe Crab Eggs and Sand: A Franca, J Biddle, K Bousses, C R Harris

0800h P21E-1634 POSTER Interactions Between Predators, Diets, and the Gut Microbiome of Tropical Reef Fish: C R Harris, D L Dixson, J Biddle

0800h P21E-1635 POSTER The 17α-Ethynyl Estradiol and Progestosterone Disrupt Gonad and Brood Pouch Development and Modifies Transcription in the Male-Pregnant Seahorse: Q Lin, G Qin, B Zhang

0800h P21E-1636 POSTER The Possibility of a Scalloped Hammerhead Birthing and Nursery Habitat in Ponce Inlet, Florida: J Munsey, D Munsey, D Woodall

0800h P21E-1637 POSTER Bacteria: The Untold Story From a Sharks Mouth: K DiGirolomo, S Horikami, D Woodall, J Munsey

0800h P21E-1638 POSTER No Guts—No Glory: An Examination of Microplastic Ingestion in Local marine Fish and Birds: A Femiano, D Woodall, T Swain

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**P21E (CC) Hall A-C (Poster Hall)**

**Tuesday 0800h**

**From the Earth to the Moons: Unraveling the Geologic, Oceanographic, and Chemical Mysteries of Ice and Ocean Worlds I Posters**

(joint with C, OS)

**Presiding:** Catherine Walker, Woods Hole Oceanographic Institution; Steve Vance, Jet Propulsion Laboratory; Christopher German, Woods Hole Oceanographic Institution; Britney Schmidt, Georgia Institute of Technology Main Campus;

0800h **P21E-3399 POSTER** Investigating Detectability of Organics on Europa’s Surface: **I Mishra**, J I Lunine

0800h **P21E-3400 POSTER** Probing the interior of Icy Ocean Worlds - Full waveform modeling of Enceladus and Titan: **S Tharimena**, M P Panning, S Vance, S C Staehler, C Boehm, M van Driel, K I Vega

0800h **P21E-3401 POSTER** Habitability of Hydrocarbon Worlds: Titan and Beyond: **R M C Lopes**, M J Malaska


0800h **P21E-3405 POSTER** Performance of a broadband seismometer on Europa and implications for the detection of liquid water below its icy surface: **R Maguire**, N C Schmerr, V Lekic, T Hurford Jr


0800h **P21E-3407 POSTER** Formation of terrestrial craters on thick ice sheets: **B C Johnson**, E A Silber, E Bjønnes, K H Kjaer, S Wiggins, J A MacGregor, N K Larsen

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**OS22A (CC) 103AB**

**Tuesday 1020h**

**Biogeochemical Cycling in Estuaries, Coastal Waters, and Their Watersheds: Natural Variability, Response to Land Use and Climate Change, and Management Implications I (joint with B, GC, H)**

**Presiding: Raymond Najjar**, The Pennsylvania State University; **Ming Li**, Univ of Maryland Ctr for Env.; **Zach Easton**, Virginia Tech; **Marjorie Friedrichs**, Virginia Inst Marine Science;


1035h **OS22A-02** Ocean Circulation Causes Strong Variability in Mid-Atlantic Bight Net Community Production: **P St-Laurent**, M A M Friedrichs, Y Xiao, E E Hofmann, K Hyde, A Mannino, R Najjar, D Naveza, S R Signorini, H Tian, J Wilkin, Y Yao, J Xue

1050h **OS22A-03** Input of Anthropogenic Nitrogen Driving East China and Yellow Seas to Phosphorus Limitation: **K Lee**, J M Kim, I S Han

1105h **OS22A-04** Water quality impacts from tidal flooding in the Southern Chesapeake Bay: **A Macias-Tapia**, M R Mulholland, D Loftis


1135h **OS22A-06** The Collapse of Marshes and Loss of the Nitrogen Removal Capacity Along the Northern Gulf of Mexico Coastal Ecosystems: biogeochemical implications on the downstream estuaries: **B Mortazavi**, A Kleinhuizen

1150h **OS22A-07** Increased Dermo Disease in Chesapeake Bay Oysters Caused by Continued Warming and Nutrient Loading: **E E Hofmann**, J M Klinck II, E Powell, M A M Friedrichs, P St-Laurent, H Tian

1205h **OS22A-08** Sediment Resuspension and its Possible Link to Harmful Algal Blooms in a Shallow Micro-tidal Estuary: **S McGill**, R P Hale, M R Mulholland
Assessment, Enhancement, and Integration of Arctic Observing Systems I Posters (joint with B, C, OS)

Presiding: Roberta Pirazzini, Finnish Meteorological Institute; Andreas Ahlstrom, Geological Survey of Denmark and Greenland; Hanne Sagen, Nansen Environmental and Remote Sensing Center; Michael Tjernstrom, Stockholm University;

1340h A23G-2922 Svalbard integrated Arctic Earth Observing System (SIOS) as a node of Sustained Arctic Observing Networks (SAON): H Lihavainen, I Jennings, C E Hübner


1340h A23G-2924 POSTER The Arctic Observing Viewer: A Tool for Data Discovery, Visualization, Strategic Planning, and Decision Support for Arctic Observing: R P Cody, S A Vargas Zesati, A Kassin, W F Manley, A G Gaylord, M Barba, T Habermann, N Whitty, C E Tweedie

1340h A23G-2925 POSTER Arctic Ocean Data in the World Ocean Database: M Zweng, J R Reagan, O Baranova, I Smolyar, T Boyer, D Seidov

1340h A23G-2926 POSTER Diapycnal heat flux through the Arctic staircases: An inversion model of ITP measurements: M Duran Camejo, T Radko

1340h A23G-2927 POSTER Arctic Sea Observing Requirements Derived from Simulated Variability Pattern of Surface Height, Bottom Pressure and Hydrography: G Lyu, D Stammer, N Serra

1340h A23G-2928 POSTER Fundamental Observations Maintained by the U.S. Interagency Buoy Programme (USIABP) and International Arctic Buoy Program (IABP): J Woods, I G Rigor, E Motz, B Brasher

1340h A23G-2929 POSTER Real time monitoring of snow depth and ice thickness by SIMBA ice mass balance buoys deployed in the Arctic Ocean during 2018 field expeditions: R Pirazzini, B Cheng, R Lei, M Hoppmann, Z Liao, P Thompson, Z Tian, K Jackson, T P Vihma

High-Resolution Weather and Climate Modeling on Large Supercomputers I Posters (joint with GC, OS)

Presiding: L. Ruby Leung, Pacific Northwest National Laboratory; Malcolm Roberts, Met Office Hadley center for Climate Change; Pier Luigi Vidale, NCAS Climate; Rein Haarsma, Royal Netherlands Meteorological Institute;


1340h A23J-3004 POSTER Dual Time Stepping and Multigrid Methods for a Nonhydrostatic Model on the Cubed-Sphere: T H Yi


1340h **A23J-3007 POSTER** Evaluation of medium-range monsoon precipitation forecasts from the high-resolution NCEP-GFS (T1534) over South-East Asia: P S Bhattacharjee

1340h **A23J-3008 POSTER** Experiment and Study on High Performance AREM and Nested Grids Based on JASMIN Infrastructure: Y P Xu, Y Cheng, L Li, B Wang

1340h **A23J-3009 POSTER** Extreme Events in High Resolution and Convection Permitting Simulations: L R Leung, K Sakaguchi, Z Feng, Y Qian

1340h **A23J-3011 POSTER** I/O scalability boost for the next generation of Earth system models: IFS-XIOS integration as a case study: X Yepes-Arbores, M Acosta, G van den Oord, G Carver

1340h **A23J-3012 POSTER** Impact of Multiple High-resolution Regional Domains on the Accuracy of the Global Surface Tides: C H Jeon, M C Buijsman, A J Wallcraft, J F Shriver, P J Hogan, B K Arbic, J G Richman

1340h **A23J-3013 POSTER** Insights Into Modeling Earth’s Water Cycle From Superparameterized-E3SM Simulations: C R Jones, W Hannah, M Ovchinnikov, G Lin, B R Hillman, M R Norman, M Taylor, D C Bader, L R Leung

1340h **A23J-3014 POSTER** Introducing scientific libraries to the chemistry-climate model: Q Zhu, J Sun, A Haidar, J S Fu

1340h **A23J-3015 POSTER** Medium-Range Forecasts with the Korean Integrated Model (KIM) System: S Y Hong

1340h **A23J-3016 POSTER** Momentum and vorticity budgets of the Arabian Sea and reversing Somali Current in a 0.1° global ocean model: H Wang, J McLean, L D Talley

1340h **A23J-3017 POSTER** Ocean energy backscatter parametrizations on unstructured grids: S Juricke, M Oliver, A Kutsenko, S Danilov

1340h **A23J-3018 POSTER** Preliminary Results from a High Resolution Coupled Simulation using E3SM: M E Maltrud, P Caldwell, L Van Roekel, W Lin, Q Tang, J D Wolfe, A Mametjanov, N D Keen

1340h **A23J-3019 POSTER** Projection of Tropical Cyclone Activity in the Western North Pacific Using a Single Column Ocean Coupled Model: C Y Tu, H H Hsu, S J Lin

1340h **A23J-3020 POSTER** Simulating the Effects of Black Carbon and Dust on the South-Asian Monsoon: Experiments Using Variable-Resolution CESM: S Rahimi-Esfarjani, X Liu, C Wu, W K M Lau, H Brown, M Wu, Y Qian

1340h **A23J-3021 POSTER** Single column modeling of shallow clouds for the development of the adaptive vertical grid in E3SM-FIVE: Y Chen, T Yamaguchi, B Peter, G Feingold

1340h **A23J-3022 POSTER** The relative influence of atmospheric and oceanic model resolution on AMOC in a coupled climate model: D Sein

1340h **A23J-3023 POSTER** The role of Stochastic Physics and model resolution for the simulation of Tropical Cyclones in AGCMs: P L Vidale, M J Roberts, K Hodges, P Davini, A Weisheimer, S Corti

1340h **A23J-3024 POSTER** The Climatological Influence of Eurasian winter surface conditions on the summer circulation in the Asian continent and Indo-Pacific in the CFSv2 Seasonal Reforecasts: J L Kinter, R P Shukla, B Huang, P Dirmeyer, C S Shin, L Marx

1340h **A23J-3025 POSTER** Tropical Cyclones in High-Resolution Community Atmosphere Model version 5: Evaluation for Western North Pacific: X Wu, K A Reed, M F Wehner, J T Bacmeister, P Callaghan

1340h **A23J-3026 POSTER** Conservative High-order Transport on Overset Grids with the Multi-moment Constrained Finite Volume Method: J Gu, X Peng, Y Dai
1340h GC23G-1276 POSTER Biological Response to Ocean Macronutrient Fertilisation: T Passos

1340h GC23G-1277 POSTER Iron Fertilization Efficiency and the Number of Past and Future Regenerations of Iron in the Ocean: B Pasquier, M Holzer


1340h GC23G-1280 POSTER Nucleation Mechanisms of CO₂ Hydrate Reflected by Gas Solubility: P Zhang

1340h GC23G-1281 POSTER Offshore Carbon Dioxide Storage within Oceanic Crust: Geological and Economic Implication: C Marieni, J M Matter, D A H Teagle

1340h GC23G-1282 POSTER Carbon Dioxide Mineralization using Serpentinized Ultramafic Rocks from Newfoundland, Canada: P L Morrill, S Ryan, J Bishop, B Taylor, M McRae, S Emberley

1340h GC23G-1283 POSTER Recovery from Acid Deposition Increases Streamwater Carbon Export Potential in a Silicate-Treated Forested Watershed: L Taylor, C T Driscoll, J D Blum, D J Beerling, G H Rau

GH23A  (MM) Independence F-H

Tuesday  1340h

Climate Link to Infectious Diseases: Toward Development of Successful Early Warning Systems I  (joint with GC, OS)

Presiding: Swadhin Behera, JAMSTEC Japan Agency for Marine-Earth Science and Technology; Masahiro Hashizume, Nagasaki University; Kristie Ebi, ClimAdapt, LLC; Glenn McGregor, Durham University;


1410h GH23A-03 Challenges for Malaria Early Warning Systems in the Amazon: W K Pan, M Janko, B M Zaitchik, B Feingold, G C Recalde, C Mena, F Pizzitutti, A Berky

1425h GH23A-04 Use of Seasonal Climate Forecasts to Develop an Early Warning System for Dengue Fever Risk in Central America and the Caribbean: C Morin, K Ebi, S Sellers


1510h GH23A-07 Integrating Climate Change and Variability into Infectious Disease Decision Making: Lessons from sub-Saharan Africa.: C Quinn, T Blaine, F Zermoglio, J Colborn, K Ebi

1525h GH23A-08B Climate-based predictions of malaria outbreak probability in Limpopo, South Africa: T Ikeda, S K Behera, M Nonaka, M Hashizume, A Tsuzuki, R Maharaj, Q Mabunda, N Minakawa

OS23A  (CC) 103AB

Tuesday  1340h

Biogeochemical Cycling in Estuaries, Coastal Waters, and Their Watersheds: Natural Variability, Response to Land Use and Climate Change, and Management Implications II (joint with B, GC, H)

Presiding: Raymond Najjar, The Pennsylvania State University; Ming Li, Univ of Maryland Ctr for Env.; Zach Easton, Virginia Tech; Marjorie Friedichs, Virginia Inst Marine Science;

1340h OS23A-01 Declining oxygen in the World’s oceans and coastal waters will affect ecological processes ranging from biogeochemistry to behavior to interactions with other stressors: D Breitung

1355h OS23A-02 Vorticity and biogeochemical dynamics for the formation of hypoxia centers in the coastal transition zone off Pearl River Estuary: J Gan

1425h OS23A-04 Nutrient Exchange in Western Long Island Sound through the High Urbanized East River Tidal Strait: A Byrd, P Vlahos, M M Whitney

1440h OS23A-05 Controls on coastal hypoxia: A global synthesis: K Fennel, J M Testa

1455h OS23A-06 Intrusion of Kuroshio diminishes hypoxia conditions in Yangtze and Pearl estuaries: H K Lui, C T A Chen, W P Hou, J M Liau, W C Chou, J Lee, Y C Hsin, Y Y Choi

1510h OS23A-07 Improved Estimates of Light in Water Impacts Estuarine Biogeochemistry By Intensifying Stratification in the Chesapeake Bay: G Kim, P St-Laurent, M A M Friedrichs, A Mannino

1525h OS23A-08 A comparative study of hypoxia and acidification in two large river dominated coastal ocean systems (northern Gulf of Mexico and East China Sea): W J Cai, J Chen, B Wang, K Wang, Z Jiang, K Fennel, N N Rabalais, A Laurent, Q Li

OS23B (CC) 102AB

Tuesday 1340h

Global Developments in Seafloor Mapping: Gaining a Greater Insight into Earth Systems I (joint with IN)

Presiding: Nicole Raineault, Ocean Exploration Trust; Maria Judge, Geological Survey of Ireland; Geoffrey Lamarche, NIWA; Kim Picard, Geoscience Australia;

1340h OS23B-01 Assembling the Bathymetric Puzzle - Challenges and Opportunities in Building a Global Ocean Map: V L Ferrini

1355h OS23B-02 Using system performance to track the life cycle of a multibeam sonar.: P D Johnson, K Jerram, V L Ferrini, T Gates

1410h OS23B-03 The Global Multi-Resolution Topography Synthesis (GMRT): New Developments and Deployment in the Amazon Cloud: J J Morton, V L Ferrini, S M Carbote, E Bohl, N Shane


1440h OS23B-05 The Norwegian Seabed Mapping Programme MAREANO – Providing New Knowledge for Ecosystem-based Management and Industry: L R Bjarnadóttir, T Thorsnes

1455h OS23B-06 Mapping the Portuguese seafloor through acoustic methods (Madeira Archipelago): R Quartau, R Santos, A Rodrigues

1510h OS23B-07 The Italian Geological Mapping Project (CARG) and its Contribution to the EMODnet Geology 3 Project: A Fiorentino, L Battaglini, S D’Angelo

1525h OS23B-08 IBCSO V2.0: Progress to a new bathymetry off Antarctica: J E Arndt, B Dorschel

OS23C (CC) 101

Tuesday 1340h

Modeling of Gas Hydrate-Related Systems I (joint with B, H)

Presiding: Kehua You, University of Texas at Austin; Ewa Burwicz, GEOMAR Helmholtz Centre for Ocean Research Kiel; Yoshihiro Konno, Department of Ocean Technology, Policy, and Environment, The University of Tokyo, Japan; Michael Nole, Sandia National Labs;


1350h OS31F-1851 3D Geocellular Modeling of Heterogeneous Gas Hydrate-bearing Sediments at the 2nd Offshore Gas Production Test Site in the Eastern Nankai Trough, Japan: M Tamaki, T Fujii, K Suzuki, K Yamamoto


1420h OS31F-1854 Modelling the role of faults in fluid migration and hydrate formation on the Hikurangi Margin, New Zealand: J I T Hillman, G J Crutchley, K F Kroeger

1430h OS31F-1855 Impact of Hydrate Formation on Sediment Permeability: A Simulation Based on Improved Pore Network Model: L Wang, H Lu, L Gu

1440h OS31F-1856 Can gas associated with hydrates fracture shallow marine sediments?: H Daigle

1450h OS31F-1857 Modeling fracture propagation and seafloor gas release during seafloor warming-induced hydrate dissociation: C Stranne, M O’Regan, M Jakobsson

1500h OS31F-1858 Modeling Tectonic Uplift as a Mechanism for Destabilization of Gas Hydrate: Z F M Burton, A Hosford Scheirer, Y Seol, S A Graham
OS23D (CC) Hall A-C (Poster Hall)

Tuesday 1340h

Gas Hydrate–Bearing Sediments: Recent Advances in Characterization, Experiments, and Modeling Posters (joint with B)

Presiding: Stephen Phillips, University of Texas at Austin; Xiaojing Fu, Massachusetts Institute of Technology; Yi Fang, University of Texas at Austin; Junbong Jang, U.S. Geological Survey, Woods Hole;

1340h OS23D-1639 POSTER Nonequilibrium hydrate growth on an expanding gas-liquid interface: insights from Xenon-water experiments and phase-field modeling: X Fu, J Jimenez-Martinez, W F Waite, L Cueto-Felgueroso, J W Carey, R Juanes


1340h OS23D-1641 POSTER Pore-scale CH₄-C₂H₆ hydrate formation and dissociation under relevant pressure-temperature conditions of natural reservoirs: J F Lin, J Liu, T Dong, K Darnell, J T Gu, P J Polito, J O’Connell, P B Flemings

1340h OS23D-1642 POSTER An experimental study to improve CH₄-CO₂ replacement efficiency in hydrate-bearing sediments: J E Ryou, J Jung, J Y Lee, R I Al-Raoush, K A Alshibli

1340h OS23D-1643 POSTER Mapping the methane hydrate phase boundary using a sapphire cell: H J Waldstreicher, P B Flemings, S C Phillips, P J Polito

1340h OS23D-1644 POSTER Laboratory investigation of borehole resistivity imaging for monitoring gas hydrate recovery: C Zou, C Peng, Y Miao, Q Chen, C Liu

1340h OS23D-1645 POSTER A new method for predicting permeability of porous media based on fractal structure parameters: J Cai, Y Xia, W Wei, P Zhao

1340h OS23D-1646 POSTER Predicting the water permeability of hydrate-bearing quartzitic sands based on the fractal theory: Z Zhang, F Ning, L Liu, Z Liu, D Wang, Q Meng, C Liu, N Wu

1340h OS23D-1647 POSTER Three Phase Relative Permeability of Hydrate Bearing Sediments: Z Murphy, D Fukuyama, H Daigle, D A DiCarlo

1340h OS23D-1648 POSTER Geophysical and mechanical properties of methane hydrate-bearing unconsolidated sediments: laboratory measurements with new designed experimental apparatus: Z Yang, T He, H Lu

1340h OS23D-1649 POSTER Volume change in fine-grained sediments due to pore water salinity changes: gas hydrate-bearing sediments and pore water freshening during gas hydrate dissociation: J Jang, S C Cao, L G Boze, J Jung, W F Waite

1340h OS23D-1650 POSTER Permeability, compression behavior, and lateral stress ratio of hydrate-bearing siltstone from UT-GOM2-1 pressure core (GC 955—northern Gulf of Mexico): Initial Results: Y Fang, P B Flemings, S Phillips, H Daigle, J O’Connell, P J Polito


1340h OS23D-1652 POSTER Pressure Coring Operation at the Eastern Nankai Trough after the Second Offshore Gas Production Test: I Nishioka, Y Nakatsu, K Yamamoto

1340h OS23D-1653 POSTER Lithological features analyzed by Pressure Core and Wireline Logging Data of the 2nd Offshore Gas Production Test Site, NE-Nankai Trough, Japan: K Suzuki, T T Aung, T Fujii, M Tanaka, M Tamaki, Y Komatsu, A Fujimoto

1340h OS23D-1654 POSTER High saturation of methane hydrate in a coarse-grained reservoir in the northern Gulf of Mexico from quantitative depressurization of pressure cores: S C Phillips, P B Flemings, M E Holland, P J Schultheiss, E G Petrou, W F Waite, J Jang, H Hammon, P J Polito

1340h OS23D-1655 POSTER Modeling study on geochemical responses to the formation of natural gas hydrate in the submarine sediments: H Tian, T Xu PhD, H Zhu

1340h OS23D-1656 POSTER Persistent bottom water suboxic conditions caused by methane release events — Evidence from the South China Sea: N Li, D Feng, H Wang, D Chen
1340h **OS23D-1657** *POSTER* The Effects of X-ray CT Scanning on Microbial Communities in Sediment Cores: E M Ewton, F S Colwell, S Klasek, E K Peck, J Weist

1340h **OS23D-1658** *POSTER* Occurrences of benthic foraminiferal fossil *Rubberellaoides* sp. in gas hydrate bearing areas of the Japan Sea: T Oi, T Shimono, Y Yanagimoto, R Matsumoto, F Akiba, N Ishida, H Numanami, S Morita

1340h **OS23D-1659** *POSTER* Permanent in-situ monitoring of gas hydrates using Ocean Networks Canada's cabled NEPTUNE seafloor observatory: M Scherwath, K Moran, M Riedel, L Thomsen, M Roemer, D Chatzievangelou, T L Insua, J F Parruga, M Heesemann

### OS23E (CC) Hall A-C (Poster Hall)

**Tuesday 1340h**

**Rare Earth Elements (REEs) as Tracers of Oceanic Processes: New Insights into the Geochemical Mechanisms Behind Their Patterns and Profiles Posters** *(joint with PP)*

*Presiding:* Johan Schijf, University of Maryland Center for Environmental Science; Brian Haley, Oregon State University; Torben Stichel, Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research; Hirofumi Tazoe, Hirosaki University;

1340h **OS23E-1660** *POSTER* Cycling of REE and Nd isotopes between the Atlantic and the Celtic Sea: T Stichel, K C Crocket, R H James, J K Klar, M C Lohan, A Milne, P J Statham, M Rachel

1340h **OS23E-1661** *POSTER* Nd isotopic features in the western subarctic Pacific Ocean: H Tazoe, H Obata, T Hara, J Nishioka

1340h **OS23E-1662** *POSTER* Neodymium isotopes in the western Arctic highlight the role of sediment-water interaction in the distribution of Nd isotopes: B Duggan, H Scher, B A Haley, S L Goldstein

1340h **OS23E-1663** *POSTER* Neodymium isotopic composition distributions in the southwestern Indian Ocean and the Indian sector of the Southern Ocean: H Amakawa, T L Yu, H Tazoe, H Obata, T Gamo, Y Sano, C Y Huang, K Suzuki

1340h **OS23E-1664** *POSTER* Rare earth element distribution in the NE Atlantic: Evidence for the temporal and spatial stability of the seawater signature and the influence of benthic sources: K C Crocket, E Hill, R Abell, C Johnson, S F Gary, T Brand

1340h **OS23E-1665** *POSTER* Detailed Insights into Rare Earth Element Sources, Input, and Zonal Transport in the Tropical West Pacific: M K Behrens, K Pahnke, S E Cravatte, F Marin, C Jeandel


1340h **OS23E-1667** *POSTER* Rare Earth Element (REE) Scavenging in the Southeast Pacific Hydrothermal Plume: Implications for Interpretation of Paleo-REE Patterns in Metalliferous Sediments: R M Sherrell, J N Fitzsimmons, C R German

1340h **OS23E-1668** *POSTER* Replacement minerals formed during alteration of volcanic rocks in the ~2.7 Ga Abitibi Greenstone Belt carry rare-earth element attributes of mixed hydrothermal fluids and seawater: L A Brengman, C Fedo

1340h **OS23E-1669** *POSTER* Biological Activity of Rare Earth Elements in the Ocean: Overview and Speculation: A M Shiller

1340h **OS23E-1670** *POSTER* The influence of the source function on seawater REE patterns: J Du, B A Haley, A C Mix

1340h **OS23E-1671** *POSTER* A Quantitative Model of the Global Rare Earth Element Cycle and Implications for Variability in the REE Composition of Ancient Oceans: B D Barnes, L R Kump

1340h **OS23E-1672** *POSTER* Experimental determination of rare earth element release from dust and ash particles in surface seawater: E Hathorne, M J Hopwood, M Frank

### OS23F (CC) Hall A-C (Poster Hall)

**Tuesday 1340h**

**Air–Sea Interaction from Tropics to Extratropics: Ocean Mesoscales, Teleconnections, and Climate Predictions Posters** *(joint with A)*

*Presiding:* Hyodae Seo, Woods Hole Oceanographic Institution; Masami Nonaka, Application Laboratory, JAMSTEC; Niklas Schneider, Univ Hawaii; Larry O’Neill, Oregon State University;

1340h **OS23F-1674** *POSTER* Formation of Temperature Inversion during Different Phases of ENSO and IOD in the Bay of Bengal: A Kumari, B Mani, A Chakraborty
1340h OS23F-1675 POSTER An Assessment of Representation of Oceanic Mesoscale Eddy-Atmosphere Feedback in the Current Generation of General Circulation Models: P Yang, Z Jing, L Wu

1340h OS23F-1676 POSTER Do CMIP5 models simulate good Atlantic Nino?: Y Yang

1340h OS23F-1677 POSTER The Link Between the Mixed Layer Depth in the Seychelles-Chagos Thermocline Ridge and the Initiation of the Madden-Julian Oscillation: T Cicerone, K Pегion

1340h OS23F-1678 POSTER Decadal variability and predictability of the Indian Ocean with a coupled eddy-resolving climate model: W Zhang, B P Kirtman

1340h OS23F-1679 POSTER Variability SST Frontal Activity in Eastern Pacific Ocean and its impact on Fishery Catch and Marine Ecosystems: Y Wang, F Chai, Y Yu, Y Yuan, H R Zhang

1340h OS23F-1680 POSTER General Seasonal Phase-Locking and Persistence Barrier: Application to Tropical Pacific, North Pacific and Global Ocean.: Y Jin, Z Liu, X Rong

1340h OS23F-1682 POSTER Back to Back Cyclogenesis over Arabian Sea in 2015: Dynamics and Biogeochemistry: R Roy Chowdhury, S P Kumar, A Chakraborty

1340h OS23F-1683 POSTER Evolution of equatorial flows in the western Indian Ocean during onset of the summer monsoon: R E Todd, L Rainville, C Lee

1340h OS23F-1684 POSTER On the importance of wind stress location in driving Pacific Subtropical Cells and tropical climate: G Graffino, R Farneti, F Kucharski, F Molteni

1340h OS23F-1685 POSTER Air-sea Interactions in a High-Resolution Ocean-atmosphere Simulation: E Strobach, A Molod, A L Tranayan, W Putman, G Forget, J M Campin, C N Hill, D Menemenlis, P Heimbach

1340h OS23F-1686 POSTER A better seasonal predictability of circum-Indian Ocean region with westward shift of ENSO teleconnection: D Kang, M I Lee, Y Chikamoto

1340h OS23F-1687 POSTER SST anomalies in the northern tropical Atlantic as a negative feedback to ENSO development: I Richter, H Tokinaga, Y Kosaka, T Doi

1340h OS23F-1688 POSTER CYGNSS Surface Heat Flux Product Development: J Crespo, D J Posselt

1340h OS23F-1689 POSTER Seasonal Variations of the Diurnal Cycle and Upper-ocean Response to Wind Stress from the Tropical Atlantic Current Observations Study at 4°N, 23°W: J AChristophersen, G R Foltz, R C Perez

1340h OS23F-1690 POSTER Ozone Depletion Impact on Atlantic Ocean Variability and associated Rainfall changes: M Tonelli, P Silva Jr, I S Custodio, I C Wainer, P L D S Dias, F S R Pausata

1340h OS23F-1691 POSTER Investigating atmosphere-ocean-wave interactions and mesoscale features in atmospheric river events using a regional coupled model: R Sun, A C Subramanian, I Hoteit, A J Miller, M R Mazloff, M Ralph, B D Cornuelle

1340h OS23F-1692 POSTER Variation of Thermocline in the Tropical Indian Ocean: G Yang, X Zhao, L Liu

1340h OS23F-1693 POSTER Wind-driven and intrinsic interannual-to-decadal variability in the Kuroshio Extension: M Nonaka, H Sasaki, B Taguchi, N Schneider

1340h OS23F-1694 POSTER Coupled Modelling of Air-Sea Interaction over the Bay of Bengal during the 2018 Southwest Monsoon: T G Jensen, A Rydbeck, H W Wijesekera, M K Flatou

1340h OS23F-1695 POSTER Abrupt Fronts Embedded in Tropical Instability Waves Observed by Saildrones: M F Cronin, K A Donohue, D Zhang, R Jenkins, J Keene

1340h OS23F-1697 POSTER Impact of air-sea interaction on low-level ecosystem: focused on mesoscale eddy in the East Sea: K A Park, J C Jang, J H Lee, J E Park

OS23G (CC) Hall A-C (Poster Hall)

Tuesday 1340h

Nearshore Physical Processes IV Posters

Presiding: Meagan Wengrove, Oregon State University; Greg Wilson, Oregon State University; Patricia Chardon-Maldonado, University of Puerto Rico Mayaguez;

1340h OS23G-1698 POSTER Intermittent subharmonic edge wave excitation with random incoming waves.: X Ding, G Coco, R T Guza, R Garnier, C Whitaker, R A Dalrymple, Z Wei, B Lopez De San Roman Blanco, P Lomonaco, P Blondeaux, G Vittori

1340h OS23G-1699 POSTER Response of sediment dynamics to tidal flat reduction in Hangzhou Bay, China: L Li, T Ye, Z He, Y Xia

1340h OS23G-1700 POSTER Estimating the distribution of bed shear stress from tides and waves in an estuary.: S Cook, T C Lippmann

1340h OS23G-1701 POSTER Impact of the Bottom Drag Coefficient on Saltwater Intrusion in the Extremely Shallow North Branch of the Changjiang Estuary: J Zhu, Z Ding

1340h **OS23G-1703** POSTER Mobility of Unexploded Ordnance using Spherical Surrogates in the Swash Zone: B Gross

1340h **OS23G-1704** POSTER Morphological diffusivity of sediment: First results from the MODEX laboratory experiment: M A de Schipper, J Hopkins, M E Wengrove, I Saxoni, M G Kleinhans, N Senechal, B Castelle, R Francesca, G Russink, S McLelland

1340h **OS23G-1705** POSTER Bedform Migration and Bedload Sediment Transport in Combined Wave-Current Flows: M E Wengrove, D L Foster, T C Lippmann, M A de Schipper, J Calantoni

1340h **OS23G-1706** POSTER Wave Driven Currents and Morphology Predictions at Duck, NC: J Veeramony, A Penko, K L Edwards, M L Palmsten

1340h **OS23G-1707** POSTER Coastal bathymetry mapping by combined inversion of remotely-sensed data: H T Ozkan-Haller, A Gillespie, G Wilson

1340h **OS23G-1708** POSTER Effects of Late Holocene Morphologic Evolution on Tidal Hydrodynamics in Mobile Bay, AL: D L Passeri, C G Smith

1340h **OS23G-1709** POSTER Mapping Individual Storm Impacts on the Subaerial and Subaqueous Coastal Zone Utilizing Autonomous Surveying Platforms: S M Dohner, T Pilegard, A C Trembanis

1340h **OS23G-1710** POSTER Inlet Widening Along the Virginia Barrier Islands, Virginia, USA: J D Haluska

1340h **OS23G-1711** POSTER A numerical investigation of coastal vegetation in reducing erosion after hurricanes – Case study: Texas coastlines: S Ardani

1340h **OS23G-1712** POSTER Morphological Impacts and Vegetation-Induced Attenuation of Wind and Vessel Generated Waves: M J Larnar, R B Schaefer, J A Pulno

1340h **OS23G-1713** POSTER Turbulence-mediated Zooplankton DVM: M Tanaka, G N Ivey, Y Endo, H Yamazaki

1340h **OS23G-1714** POSTER Can alternative operations at a sewage treatment plant reduce accumulation of the effluent in an adjacent seaweed farm?: X Zhang, Y Uchiyama


1340h **OS23G-1716** POSTER Field observations of internal waves and bottom boundary layer processes along the California inner shelf: C Swann, J Simeonov, E F Braithwaite, J A Colosi, J Calantoni, R S Mieras

1340h **OS23G-1717** POSTER Immersive Coastal Hydrodynamic Simulation: P J Lynett, S Tavakkol

1340h **OS23G-1718** POSTER Infragravity Waves in A Mixed Cohort-Random Nearshore Wave Environment: J M Kaitatu, M Penugonda, J Goertz, A Sheremet

1340h **OS23G-1720** POSTER Numerical Simulation of the Transport Variability of Coastal Currents in the North Indian Ocean: R Sen, A Chakraborty

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**A24F (CC) 143A-C**

**Tuesday 1600h**

**Local Processes and Global Impact of the Indo-Pacific Maritime Continent I (joint with OS)**

**Presiding:** Samson Hagos, Pacific Northwest National Laboratory; Kunio Yoneyama, Japan Ag for Mar Ear Sci & Tec; Eric Maloney, Colorado State University; Janet Sprintall, Scripps Institution of Oceanography;

1600h **A24F-01** Barrier effect of the Maritime Continent on the MJO: Perspectives from the large-scale control and local topographic effect: X Jiang, H Su, D E Waliser

1615h **A24F-02** Ocean Processes in the Maritime Continent: recent progress and remaining challenges: S A Wijffels

1630h **A24F-03** A study of wave activities around temperature inversion layer based on intensive radiosonde observations at Bengkulu during YMC-Sumatra 2017: T Kinoshita, R Shirooka, J Suzuki, S Y Ogino, S Iwasaki, K Yoneyama, U Haryoko, D Ardiaysyah, D Alyudin

1645h **A24F-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

1700h **A24F-05** The 2018 PISTON Field Campaign: Science, Description and Early Results: S A Rutledge

1715h **A24F-06** Diurnal Cycle of Precipitation and the MJO over the Maritime Continent: “Tug of War” between the Land and Sea: A Savarin, S S Chen

1730h **A24F-07** Application of Space-based Rainfall Estimation Product for the Indonesian Fire Danger Rating System: N Nurhayati, A L Panjaitan

1745h **A24F-08** The ocean response to diurnal, intra-seasonal and seasonal atmospheric variability in the Maritime Continent and Eastern Indian Ocean regions: K J Richards, Y Jia, S M Soares, T Horii, Q Moteki, S Yoko
Assessment, Enhancement, and Integration of Arctic Observing Systems II eLightning (joint with B, C, OS)

Presiding: Roberta Pirazzini, Finnish Meteorological Institute; Andreas Ahlstrom, Geological Survey of Denmark and Greenland; Hanne Sagen, Nansen Environmental and Remote Sensing Center; Michael Tjernstrom, Stockholm University;

1600h Introductory Remarks:


1604h A24K-02 Towards a Comprehensive, Long-Term Arctic Observing System: Arctic Observing Summit 2018 Call to Action: P Schlosser, A Pope, L D Hinzman, H Eicken, E Kruemmel, J R Larsen, M S Murray, R D Sankar


1610h A24K-04 Methods for Systematically Identifying Gaps in Arctic Observations to Support Operations and Research: J Gallo, E Sylak-Glassman

1613h A24K-05 Exploitation, assessment, and gap analysis of the existing Arctic observing systems under the INTAROS project: method and first results: R Pirazzini, G David, M K H Tjernstrom, A P Ahlstrom, I Schewe, H Sagen, S Sandven

1616h A23G-2922 Svalbard integrated Arctic Earth Observing System (SIOS) as a node of Sustained Arctic Observing Networks (SAON): H Lihavainen, I Jennings, C E Hübner

1619h A24K-07 Assessment of Arctic sea ice and ocean observing systems based on INTAROS survey: S Sandven, C A Ludwigsen, H Sagen, T Hamre, R Pirazzini

1622h A24K-08 Successes and challenges of interdisciplinary ocean acidification research and monitoring in Alaska: an integrated approach for supporting the Alaskan blue economy: J N Cross, T P Hurst, R J Foy, W C Long, M Dalton, R Stone

1625h A24K-09 Arctic sea level. Satellite and in-situ observations for more than 25 years: O B Andersen, P Knudsen, C A Ludwigsen, S K Rose, M Passaro

1628h A24K-10 NERC Changing Arctic Ocean: Implications for marine biology and biogeochemistry: K C Crocket


1634h A24K-12 Ifremer/CERSAT long-term sea ice satellite datasets: F Girard-Ardhuin, J F Piolle

1637h A24K-13 Visualizing a Decade of Change in the Arctic Sea Ice Cover: S L Farrell, J E McCurry, C Jackson

1640h A24K-14 Bridging the Trenches – Ice Sheet Monitoring for the Atmosphere and Oceans in PROMICE and INTAROS: A Ahlstrom, R S Fausto, M Citterio, J Box, A Solgaard, K Mankoff, W T Colgan, R Pirazzini, A Kusk, J Dall


1646h A24K-16 Past and Current State of the Arctic Eddy Covariance Network: M Goeckede, M Pallandt, J Kumar, M Jung

1649h A24K-17 The critical gaps in surface atmospheric composition measurements in the Arctic: E Asmi, E O’Connor, R Pirazzini


1655h A24K-19 Arctic Indigenous Peoples Perspective on Enhancing an Arctic Observing Framework: R Daniel, C Behe, L Kielsen Holm, E Kruemmel, J Raymond-Yakoubian

1658h A24K-20 A Collaborative Industry and Academia Approach to Arctic Ocean Observing: J Sobin

1701h Concluding Remarks:
OS24A  (CC) 103AB
Tuesday  1600h
Biogeochemical Cycling in Estuaries, Coastal Waters, and Their Watersheds: Natural Variability, Response to Land Use and Climate Change, and Management Implications III (joint with B, GC, H)

Presiding: Raymond Najjar, The Pennsylvania State University; Ming Li, Univ of Maryland Ctr for Env.; Zach Easton, Virginia Tech; Marjorie Friedrichs, Virginia Inst Marine Science;

1600h OS24A-01 Effect of organic alkalinity on seawater buffer capacity – A numerical exploration: X Hu

1615h OS24A-02 Declining Alkalinity Sink in the Potomac River Estuary: M Herrmann, R Najjar, S M Cintrón Del Valle

1630h OS24A-03 Carbon Deposition and Burial in Estuarine Sediments of the Contiguous United States: J Hutchings, T S Bianchi, R Najjar, M Herrmann, W M Kemp

1645h OS24A-04 Seasonal differences of fluorescent dissolved organic matter in the eutrophic Neuse River Estuary, North Carolina, USA: A Hounshell, N Hall, C L Osburn, H W Paerl

1700h OS24A-05 Estuarine Dissolved Organic Carbon Flux from Space: with Application to Chesapeake and Delaware Bays: S R Signorini, A Mannino, M A M Friedrichs, P St-Laurent, J Wilkin, A Tabatabai, R Najjar, E E Hofmann, F Da, H Tian, Y Yao

1715h OS24A-06B Seasonality of Dissolved Organic Matter in Lagoon Ecosystems along the Eastern Alaskan Beaufort Sea Coast: C T Connolly, C Kellogg, K H Dunton, B C Crump, J W McClelland

1730h OS24A-07 Spatial patterns in soil biogeochemical process rates along a wetland salinity gradient: C Schutte, M W Rich, J Marton, H L Sullivan, R Bledsoe, M Dawson, B Donnelly, B J Roberts


OS24B  (CC) 102AB
Tuesday  1600h
Global Developments in Seafloor Mapping: Gaining a Greater Insight into Earth Systems II (joint with IN)

Presiding: Nicole Raineault, Ocean Exploration Trust; Maria Judge, Geological Survey of Ireland; Geoffrey Lamarche, NIWA; Kim Picard, Geoscience Australia;

1600h OS24B-01 Offshore Surveys of the Active Ocean Entry of the 2018 Lower Puna Eruption of Kilauea Volcano: Tracking Lava Delta Development: S A Soule, M Jones, L Gee, N Raineault, C R German, D S S Lim, S K Nawotniak, J Caplan-Auerbach, J Morgan, Y Shen

1615h OS24B-02 Morphologic changes in hydrothermal vent sites in the Lau Basin and their implications for the resiliency of vent fields in Back-Arc Basins: S Huang, V L Ferrini, F O Nitsche

1630h OS24B-03 Seabed Sediment Mobilisation In The Deep Ocean – An Example From The Southeastern Indian Ocean: K Picard, B B Brooke, K Fontaine


1700h OS24B-05 Auto-classification of Legacy Hydrographic Data to Aid a Regional Geologic Framework Investigation, or a ‘Ping-Once, Use-Many-Times’ Approach to Seafloor Mapping Studies Along the Delmarva Peninsula: E A Pendleton, E M Sweeney, L L Brothers

1715h OS24B-06 Seafloor mapping CSI: Utilizing ship based and robotic platforms to map and help uncover the mysteries of the USS San Diego 100 years after a U-boat attack: A C Trembanis, A Catsambis

1730h OS24B-07 Development of consistent and recordable fusion methods using bathymetry sources of differing subjective reliabilities for navigation or seafloor mapping: P A Elmore, B R Calder, G Masetti, R R Yager, F E Petry

1745h OS24B-08 Exploratory data analysis for geophysical integration of deep-sea side-scan sonar and sub-bottom profiler data: J Song, S S Kim, Y Ko
Seafloor Hydrocarbon Seepage and Venting: The Contributions and Impacts to the Hydrosphere, Atmosphere, and Seep Habitat Biosphere I

Presiding: Martin Scherwath, Ocean Networks Canada; Tamara Baumberger, NOAA Pacific Marine Environmental Laboratory; Ira Leifer, University of California, Santa Barbara; Hiroaki Watanabe, Kyushu University;

1600h OS24C-01 Observations of gas plumes in the sea areas surrounding Japan using quantitative echo sounders and multibeam sonars from 2004: C Aoyama

1615h OS24C-02 Effect of Surface layer methane hydrate production on the Ecosystem: K Nagao

1630h OS24C-03 Necessity for Japan to Have New Pipeline for Methane Hydrates Development Project and How Japan Should Rail Pipelines: A Hikita


1715h OS24C-06 Methane-driven microbial community succession in Arctic seafloor gas hydrate mounds: S Klasek, W Hong, A Portnov, M E Torres, F S Colwell

1730h OS24C-07 Gas venting along the seismically active North-Anatolian Fault Network (Sea of Marmara, Turkey): Impacts on the biological and geochemical characteristics of the seafloor: L Ruffine

1745h OS24C-08 Forecasting seafloor fluid expulsion using sparse observations of seafloor fluid expulsion anomalies (SEAFLEAs) and machine learning: B J Phrampus, W T Wood, T R Lee, J Yu
Session Information

Oral Sessions
Sessions are being held in the Convention Center (CC) and Marriott Marquis (MM)

Poster Sessions
Posters are on display in the following venue throughout the week: Hall A-C (Poster Hall)

Session & Paper Numbering

Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation.
Example: A21A-01 = Atmospheric Sciences, Tuesday, AM, concurrent session A, first paper in that session.

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The program is current as of 06 December 2018. 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/fm18/meetingapp.cgi/Home for updates.

Wednesday A.M.

GH31B (CC) Hall A-C (Poster Hall)

Wednesday 0800h

Climate Link to Infectious Diseases: Toward Development of Successful Early Warning Systems II Posters 🌟 (joint with GC, OS)

Presiding: Swadhin Behera, JAMSTEC Japan Agency for Marine-Earth Science and Technology; Masahiro Hashizume, Nagasaki University; Kristie Ebi, ClimAdapt, LLC; Glenn McGregor, Durham University;

0800h GH31B-1213 POSTER Randomness of Vibrios in the environment: M Usmani, K Brumfield, A Huq, R R Colwell, A Jutla
0800h  **GH31B-1214** POSTER Characterizing the lagged effects of temperature and precipitation on malaria risk in the Peruvian Amazon: **M Janko, G C Recalde, C Mena, B Feingold, B M Zaitchik, W K Pan**

0800h  **GH31B-1215** POSTER Simulating Environmental and Engineering Drivers of Malaria Using Historical Data from Zambia: Toward a Process-Based, Weather-Informed Forecast of Malaria: **J Reis, N DeFelice, J E Shortridge**

0800h  **GH31B-1216** POSTER Climate Drives the Seasonal and Regional Variation in Seasonality and Epidemics across the Scattered Islands of the Maldives: **A Nijamdeen, L Zubair, R Salih**

0800h  **GH31B-1217** POSTER A decadal climate shift in the southwest Indian Ocean linked to recent malaria downturn in South Africa: **S K Behera, T Ikeda, Y Morioka, V R Jayanthi, T Dooi, M Nonaka, A Tszuzuki, C Imai, Y Kim, M Hashizume, S Iwami, P Kruger, Q Mabunda, R Maharaj, N Sweijd, N Minakawa**

0800h  **GH31B-1218** POSTER Malaria prediction using weather-based time-series distributed lag nonlinear model: **M Hashizume, Y Kim, V R Jayanthi, T Dooi, Y Morioka, T Ikeda, A Tszuzuki, P Kruger, S Iwami, C F Ng, C Imai, Y Chung, R Maharaj, N Sweijd, S K Behera, N Minakawa**

0800h  **GH31B-1219** POSTER Real time 2017 West Nile virus forecast: Operational Challenges: **N DeFelice, J L Shaman**

0800h  **GH31B-1220** POSTER Fine scale biotic and abiotic effects of West Nile virus illness in humans: **J A Uelmen Jr, M Ruiz, S Karki, P Irwin**

0800h  **GH31B-1221** POSTER Seasonal malaria forecasts over South Africa using the VECTRI model: **V R Jayanthi, T Ikeda, A M Tompkins, T Dooi, S K Behera**

0800h  **GH31B-1223** POSTER The Effects of Climate Change on Tick Habitat Suitability and Potential Transmission of Lyme Disease in the South Central U.S.: **Q C Berry, A Wootten, D H Rosendahl, R A McPherson**

0800h  **GH31B-1224** POSTER Improvement of a mechanistic *Aedes albopictus* population model considering diurnal temperature fluctuation: **K Zhang**

0800h  **GH31B-1225** POSTER Environmental risk factors of Malaria distribution in the Ethiopian highlands: **A Hess, D Nekorchuk, A Mihretie, A Getinet, T Gebrehiwot, W Awoke, M C Wimberly**

0800h  **GH31B-1226** POSTER The “epidemiar” R Package: Integrating Public Health Surveillance and Environmental Monitoring Data for Early Detection and Early Warning of Infectious Disease Transmission: **D Nekorchuk, J K Davis, A Mihretie, A Getinet, T Gebrehiwot, W Awoke, M C Wimberly**

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**NH31C** (CC) Hall A-C (Poster Hall)

**Wednesday 0800h**

**Predicting Extreme Events to Build Resilience to Natural Hazards Posters** *(joint with EP, H, OS, SH)*

**Presiding:** Raymond Schmitt, Woods Hole Oceanographic Institution; Albert Kettner, University of Colorado; Michael Liemohn, University of Michigan;

0800h  **NH31C-0986** POSTER Trends in Compound Flooding in Northwestern Europe: **P Ganguli, B Merz**

0800h  **NH31C-0987** POSTER Frequency Estimation of Extreme Hydrological Events by a Subsampling Procedure Integrated with Regional Concept: **S Das**

0800h  **NH31C-0988** POSTER Downscaling of Real-Time Coastal Flooding Predictions for Decision Support: **J C Dietrich, N Tull, C Rucker, T Langan, H Mitsasova, B Blanton, J Fleming, A B Kennedy, R Luetitch**

0800h  **NH31C-0989** POSTER Time Dependent Seismic Fragility Curves for Aging RC Framed Structures: Effect of Carbonation-induced Corrosion: **Z Wen, F Geng, C Xu**

0800h  **NH31C-0990** POSTER Developing a Winter Storm Power Outage Impact Model for a Midwestern Utility: **J V Pino, S M Quiring**

0800h  **NH31C-0991** POSTER Developing Long-Term Predictions of Precipitation in the US using Sea Surface Salinity and Sea Surface Temperature and Understanding Their Relative Contributions to Skill: **A Sahasrabhojanee, C Ummenhofer, L Li, R W Schmitt**

0800h  **NH31C-0992** POSTER GFS Downscaling Using Personal Weather Stations for Heat Wave Vulnerability: **M Calovi, G Cervone, L Delle Monache, W Hu**


0800h  **NH31C-0994** POSTER Experimental Study on Behavior of Storage Water of Small Earthfill Dam just below Slope due to Inflow of Sediment: **D Shoda, H Yoshisako, K Inoue, M Konno**

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0800h **NH31C-0995** POSTER Prediction of a watersheds temporal susceptibility to debris flows using multiple hydro-meteorological variables: **D Prenner**, R Kaitna, K Mostbauer, M Hrachowitz

0800h **NH31C-0996** POSTER A Subgrid Model for Shallow Water Equations Accounting for Irregular Bathymetry: **A Begmohammadi**, D Wirasaet, T Sherman, D Bolster, A B Kennedy

0800h **NH31C-0997** POSTER Spatiotemporal Analysis of Wind Extremes in Santa Barbara County, California: **K Zigner**, L V Carvalho, C Jones, G J Duine

0800h **NH31C-0998** POSTER Improving the sub-seasonal to seasonal prediction of extreme precipitation events via co-production of knowledge.: **P Ćwik**, H Lazrus, E R Martin, R A McPherson, E Mullens, C Kuster, M Wagner

0800h **NH31C-0999** POSTER Nature and Nature-Based Coastal Protection: Towards a Real Time Coastal Protection Forecast System: **T W Miesse**, J L Garzon Hervas, C Ferreira

0800h **NH31C-1000** POSTER Landslides triggered during the 2015 Gorkha earthquake in Nepal reveal non-linearity of topographic controls: **A J West**, P Quackenbush, M K Clark, D Zekkos, G Li, D Chamlagain, M P Dahlquist

0800h **NH31C-1002** POSTER A New High Risk Rainstorm Mapping (HRRM) Visualized Platform for Flood Warning based on Regional L-moments Frequency Analysis: **Y Liao**, H Ding, B Lin

0800h **NH31C-1003** POSTER Flood-Climate Interactions and the Prospect of Generating Data of Societal Value: **O Paasche**, E W Kolstad, J Bakke, E Støren, K Engeland, L Li

0800h **NH31C-1004** POSTER Toward better simulations of hurricane winds in urban canopies: **G H Bryan**, J C Knievel, D S Nolan, B D McNoldy, J A Hlywiak, J Y Ge, E A Hendricks, R Rotunno, C M Rozoff


0800h **NH31C-1006** POSTER Comparative Assessment of Current and Future Stormwater Flooding Scenarios during Extreme Events in the Northwest Florida Basin: **M Khan**, M H Tarek, O I Abdul-Aziz

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**OS31A** (CC) 103AB

**Wednesday 0800h**

**Air–Sea Interaction from Tropics to Extratropics: Ocean Mesoscales, Teleconnections, and Climate Predictions I (joint with A)**

**Presiding: Hyodae Seo**, Woods Hole Oceanographic Institution; **Masami Nonaka**, Application Laboratory, JAMSTEC; **Niklas Schneider**, Univ Hawaii; **Larry O’Neill**, Oregon State University;

0800h **OS31A-01** Influence of the Pacific decadal variability on Arctic climate: **Y Kosaka**, B Taguchi, L Svendsen, Y Imada

0815h **OS31A-02** Improved Simulation of Atlantic Multidecadal Sea Surface Temperature Variability Increases Modeled Walker Circulation Trends Magnitude: **A F Z Levine**, M J McPhaden

0830h **OS31A-03** Impact of South Pacific Subtropical Dipole Mode on the Equatorial Pacific: **F Wang**, J Zheng, M A Alexander

0845h **OS31A-04** ENSO Forced and Internal Variability in Indo-Western Pacific Climate: **C Wang**, S P Xie, Y Kosaka

0900h **OS31A-05** Characterizing Extreme Diurnal Warming in Satellite-Derived Operational Sea Surface Temperature Products: **G A Wick**, S L Castro, D L Jackson

0915h **OS31A-06** Westerly Wind Burst (WWB)/Easterly Wind Surge (EWS)-like stochastic forcing parametrization and the effects on ENSO prediction by the SINTEX-F system: **T Doi**, S K Behera, T Yamagata

0930h **OS31A-07** Air-Sea Interaction During Dry-Air Outbreaks In The Northern Red Sea: **V V Menezes**, J T Farrar, A S Bower


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**OS31B** (CC) 102AB

**Wednesday 0800h**

**Integrated Observations and Modeling of Surface Currents, Waves, and Winds I**

**Presiding: Ana Beatriz Villas Boas**, Scripps Institution of Oceanography; **Bourassa Mark A**, Florida State University;
0800h OS31B-01 Observations of Wind-Wave Coupling in Coastal California: Equilibrium Range, Drag Coefficients, and WaveWatch III Assessment: A Ho, S Merrifield, E Terrill, A B Villas Boas, L Lenain, W K Melville

0815h OS31B-02 Impact of Stokes Drift on Measurements of Surface Currents from Drifters and HF Radar: S L Morey, N Wienders, D S Dukhovskoy, M A Bourassa

0830h OS31B-03 Lagrangian transport by breaking deep-water surface waves: N Pizzo, L Deike, W K Melville

0845h OS31B-04 Impact of Ocean Waves on Atmospheric Turbulence: A Ayet, B Chapron, J L Redelsperger, G Lapeyre, L Marie

0900h OS31B-05 Gas transfer by breaking waves: L Deike, W K Melville, B G Reichl


0930h OS31B-07 Wind-Wave-Current Coupling: Toward Integrated Earth System Modeling and Observations: S S Chen, M Curcic

OS31C (CC) 101

Wednesday 0800h

Understanding Changing Ocean Biogeochemistry I (joint with B, GC, PP)

Presiding: Galen McKinley, Lamont-Doherty Earth Observatory of Columbia University; Anastasia Romanou, NASA GISS; Matthew Long, National Center for Atm Res;

0800h OS31C-01 Synthesis and intercomparison of ocean carbon uptake in CMIP6 models: an Ocean Carbon and Biogeochemistry Workshop summary: J P Dunne, S C Doney, M C Long, G A McKinley, A Romanou

0815h OS31C-02 A Modified Marine Carbon Cycle Under RCP8.5: Implications for Ocean Carbon Storage: A J Fassbender, K B Rodgers, S Schlunegger

0830h OS31C-03 Century-Scale Changes in the Seasonality and Drivers of CO2 in CMIP5 ESMs in the Southern Ocean: P Mongwe, P M S Monteiro, M Vichi

0845h OS31C-04 Sensitivity of ocean carbon export flux projections to the choice of export depth horizon: H I Palevsky, S C Doney

0900h OS31C-05 How Did the 2017/2018 Heat Wave Over the Tasman Sea Affect Ocean Carbon Uptake and Biogeochemistry?: S E Mikaloff-Fletcher, Z M Loh, G W Brailsford, M Pinkerton, E Behrens, P B Krummel, R L Langenfelds, C S Law, R C Moss, S Nichol, A Stavert, P Sutton, B Noll, J C Turnbull

0915h OS31C-06 On the role of the Gulf Stream in the changing Atlantic nutrient circulation during the 21st century: D B Whitt

0930h OS31C-07 The Influence of Deep Convection on Biologically Driven Carbon Sequestration in the Irminger Sea: L Wanzer, H I Palevsky

0945h OS31C-08 Heavy Noble Gas Isotopes as Novel Tracers of Gas Exchange During Deepwater Formation: A M Seltzer, J P Severinghaus, F J Pavia

OS31D (CC) Hall A-C (Poster Hall)

Wednesday 0800h

Nearshore Physical Processes V Posters

Presiding: Meagan Wengrove, Oregon State University; Greg Wilson, Oregon State University; Patricia Chardon-Maldonado, University of Puerto Rico Mayaguez;

0800h OS31D-1799 POSTER A unified formulation for predicting the breaking onset of gravity water waves from deep to shallow water: validation cases using a fully nonlinear potential flow model: S T Grilli, M Derakhti, J T Kirby Jr

0800h OS31D-1800 POSTER An Analysis Of Wave Shoaling Based On Cnoidal Wave Theory: V Francis, B Ramakrishnan

0800h OS31D-1801 POSTER Generation of unusually large runup events: C Li, H T Ozkan-Haller, G Garcia-Medina, R A Holman, P Ruggiero, T Jensen, D Elson, W R Schneider

0800h OS31D-1802 POSTER A way to calculate the amplitude of internal tide and the energy transfer from surface tide to internal tide: T Du, T Du

0800h OS31D-1803 POSTER Internal hydraulic jump and turbulent mixing in the Tsugaru Strait, Japan: T Tanaka, D Hasegawa, T Okunishi, H Kaneko

0800h OS31D-1804 POSTER Influence of Stratification, Internal Waves, and Sand Waves on Seasonal M2 Tidal Current Variability: K E Brunner, K M M Lwiza

0800h OS31D-1805 POSTER A Survey of Seasonal Variations of Internal Tide in the Gulf of Maine through in-situ Observations: Z Yang, P Richardson, E P Myers III
0800h **OS31D-1806** POSTER A Study on the Processes Driving the Formation of Abnormally Cold Water in Winter in the Southern Taiwan Strait: C Y Tsai, M H Chang, Y H Cheng, W T Hsieh, T H Yang


0800h **OS31D-1808** POSTER Hydrodynamic Drivers of Dissolved Oxygen Variability Within a Highly Developed Tidal Creek in Myrtle Beach, South Carolina: D M Pastore, R N Peterson, R F Viso, D B Fribance, E E Hackett

0800h **OS31D-1809** POSTER Coastal Upwelling System off the Eastern Hainan Coast, China: S Liu, H Xu

0800h **OS31D-1810** POSTER Cross-Frontal Exchange of Water Masses at the New England Shelf Break: Preliminary Observations Using the Coastal Pioneer Array: C E Alexander, M Egbert, N Murry, R D Vaillancourt

0800h **OS31D-1811** POSTER Determination of Harmonic Parameters with Temporal Variations: An Enhanced Harmonic Analysis Algorithm and Application to Internal Tidal Currents in the South China Sea: G Jin, H Pan, Q Zhang, X Lv, Y Gao, W Zhao

0800h **OS31D-1812** POSTER A high resolution coastal ocean model of cross-shelf exchange in a complex, tidally driven system: L Conlon, H Xue, P Yund

0800h **OS31D-1813** POSTER Influence of coastal Kelvin waves and local wind on the genesis and characteristics of mesoscale eddies in the western Bay of Bengal: A TS, B K Das, K Jayanarayanan, A Chakraborty

0800h **OS31D-1814** POSTER The Process of SSC Front Recorded by a Seafloor Observatory in East China Sea: Y Zhang, D Fan, R Qin

0800h **OS31D-1816** POSTER Observations of island wake at high Rossby number: evolutions of submesoscale vortices and free shear layer: M H Chang, S Jan, C L Liu, Y H Cheng, V Mensah

0800h **OS31D-1817** POSTER On the Mechanism of Yellow Sea Warm Current and Water Exchange with the Bohai Sea: C Ma, X Ju

0800h **OS31D-1818** POSTER Submesoscale eddy formation in the Kuroshio front interacting with a cape south of Taiwan: Y H Cheng, M H Chang, S Jan, D S Ko, M Andres, T Peacock, L R Centurioni, Y J Yang

0800h **OS31D-1819** POSTER Unprecedented Cold Water along the Southern Coast of Korea in Summer 2013: J Jung, Y K Cho

0800h **OS31D-1820** POSTER Vertical Structure of the Water Column at the Virgin Islands Shelf Break and Trough: G Seijo-Ellis, D Lindo Atichati, H Salmun

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**OS31E** (CC) Hall A-C (Poster Hall)

**Wednesday 0800h**

**Integrated Observations and Modeling of Surface Currents, Waves, and Winds Posters**

**Presiding:** Ana Beatriz Villas Boas, Scripps Institution of Oceanography; Bourassa Mark A, Florida State University; Fabrice Ardhuin, LOPS;

0800h **OS31E-1821** POSTER A parameterization with a constrained potential energy conversion rate of vertical mixing due to Langmuir turbulence: B G Reichl, Q Li, A Adcroft, B Fox-Kemper, S M Griffies, R Hallberg

0800h **OS31E-1822** POSTER Field observations of surface boundary layer turbulence underneath windrows: S Zippel, T Maksym, M E Scully, P Sutherland, D Dumont

0800h **OS31E-1823** POSTER Interaction of Langmuir turbulence and inertial currents in the ocean surface boundary layer under tropical cyclones: D Wang, T Kukulka, B G Reichl, T Haru, I Ginis, P P Sullivan

0800h **OS31E-1824** POSTER Experimental verification of wave-induced Stokes drift measurement by High Frequency radars: A Dussol, C Chavanne, D Dumont

0800h **OS31E-1825** POSTER A study on Langmuir Turbulence during CASPER-East, 2015: Y Fan, Z Yu, I Savelyev

0800h **OS31E-1826** POSTER A unified formulation for predicting the breaking strength of gravity water waves from deep to shallow water: M Derakhti, J T Kirby Jr, M L Banner, S T Grilli, J Thomson

0800h **OS31E-1829** POSTER Zebra at sea: numerical modelling of the surface roughness induced by internal waves: X Hao, L Shen

0800h **OS31E-1830** POSTER Characterizing ocean ambient noise using infrasound network: A LE Pichon, M De Carlo, F Ardhuin, L Ceranna

0800h **OS31E-1831** POSTER Complex-EOF Analysis of Surface Currents Observed by Simultaneous Dual-Frequency High-Frequency Radar Network: L Wang, X Wu, X Yue, L Zhang, C Li, B Wan

0800h **OS31E-1832** POSTER an integrated global ocean currents database for ocean model skill assessments: T Boyer, L Sun
0800h **OS31E-1833** *POSTER* Update to the NOAA NCEI Blended Global Sea Surface Winds Product and Services: M Zhang, K Saha

0800h **OS31E-1834** *POSTER* Evaluating upper ocean currents simulated by the Navy Earth System Model and the Global Ocean Forecast System: L Zamudio, E J Metzger

0800h **OS31E-1835** *POSTER* Distinct influence of surface current-wind and SST-wind coupling mediated by ocean mesoscale variability: H Sco

0800h **OS31E-1836** *POSTER* Sensitivity of a Coupled Tropical Cyclone/Ocean Wave Model Using Energy Transfer Schemes For Unsteady Waves: F Drullion, S Sajjadi, L Kent

0800h **OS31E-1837** *POSTER* Implementation of the University of Miami Wave model (UMWM) into the NASA/GMAO Goddard Earth Observing System Model (GEOS): A Darmenov, S S Chen, A L Trayanov, M Curcic, A Raman, R Govindanraj

0800h **OS31E-1838** *POSTER* Improve the Wave Simulation in the Great Lakes Using a Three-way Coupled Modeling System: C Huang, P Xue

0800h **OS31E-1839** *POSTER* Obstruction Grids Impact on Wave Propagation and Run Time using the Wave Watch III Model for Two Regions: Indonesia and the Caribbean: P G Jessen, P Wittmann


0800h **OS31E-1841** *POSTER* The impact of weather model resolution on a coupled model of lake circulation: G Auger, C Watson, E M Dow, M E Henderson, H Kolar, L A Treinish

0800h **OS31E-1842** *POSTER* Investigation of Ocean Surface Wind and Wave Coupling Using CYGNSS Observations: T Wang, V U Zavorotny, J Johnson, C S Ruf, Y Yi

0800h **OS31E-1843** *POSTER* Phase-resolved Wave Simulation in the Presence Realistic Ocean Currents: T Li, L Shen

0800h **OS31E-1844** *POSTER* Idealized simulations of wave-current interactions over geophysical flows: A B Villas Boas, B D Cornuelle, S T Gille, M R Mazloff

0800h **OS31E-1845** *POSTER* Storm waves focusing and steepening in the Agulhas current: satellite observations and modeling: F Ardhuin, Y Quilfen, M Yurovskaya, B Chapron

0800h **OS31E-1847** *POSTER* Impact of a new scatterometer (SCATSat-1) winds on the Simulation of Bay of Bengal Circulation: S Pramanik, A Shee, S Mandal, S Sil

0800h **OS31E-1848** *POSTER* Ocean Surface Current Measurement by Space-borne Doppler Scatterometer: Q Bao, X Yin, M Lin, Y Zhang, X Dong

0800h **OS31E-1849** *POSTER* On the use of Satellite Corrections for a High Resolution, Partitioned Wave Hindcast of the New Zealand Coast: J Albuquerque, A Rueda, F J Mendez, G Coco, J A A Antolinez

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**OS31F (CC) Hall A-C (Poster Hall)**

**Wednesday 0800h**

**Modeling of Gas Hydrate-Related Systems Posters (joint with B, H)**

**Presiding:** Kehua You, University of Texas at Austin; Ewa Burwicz, GEOMAR Helmholtz Centre for Ocean Research Kiel; Yoshihiro Konno, Department of Ocean Technology, Policy, and Environment, The University of Tokyo, Japan; Michael Nole, Sandia National Labs;

0000h **OS31F-1851** 3D Geocellular Modeling of Heterogeneous Gas Hydrate-bearing Sediments at the 2nd Offshore Gas Production Test Site in the Eastern Nankai Trough, Japan: M Tamaki, T Fujii, K Suzuki, K Yamamoto

0000h **OS31F-1856** Can gas associated with hydrates fracture shallow marine sediments?: H Daigle


0000h **OS31F-1855** Impact of Hydrate Formation on Sediment Permeability: A Simulation Based on Improved Pore Network Model: L Wang, H Lu, L Gu

0000h **OS31F-1857** Modeling fracture propagation and seafloor gas release during seafloor warming-induced hydrate dissociation: C Stranne, M O’Regan, M Jakobsson


0000h **OS31F-1858** Modeling Tectonic Uplift as a Mechanism for Destabilization of Gas Hydrate: Z F M Burton, A Hosford Scheirer, Y Seol, S A Graham

0000h **OS31F-1854** Modelling the role of faults in fluid migration and hydrate formation on the Hikurangi Margin, New Zealand: J I T Hillman, G J Crutchley, K F Kroeger
0800h **OS31F-1859** Numerical Simulation of Gas Production in an Artificially Fractured Class III Hydrate Reservoir: S Shang, H Lu, Y Teng

0800h **OS31F-1861** Rigorous field-wide simulation of the gas hydrate deposit located in Ulleung Basin and the geomechanical responses during depressurization.: H C Yoon, J Kim, J Y Lee

0800h **OS31F-1862** POSTER Discussion on the formation models of gas hydrate deposits in Makran Accretionary Wedge: J Liao, J Gong, Y He

0800h **OS31F-1863** POSTER Reservoir Simulations for Comparative Hydrate Formation Study across Different Sites in the Gulf of Mexico: S Dhakal, I Gupta

0800h **OS31F-1864** POSTER Formation of Lithology-Dependent Hydrate Distribution by Capillary-Controlled Gas Flow Sourced from Faults: K You, P B Flemings, M Santra

0800h **OS31F-1865** POSTER Sedimentation-reaction Process in Shenhui Area and Quantitative Assessment of Controlling Factors for Local Hydrate-bearing Reservoirs: J Guan, D Liang, L Wan

0800h **OS31F-1866** POSTER THREE-DIMENSIONAL THERMOBARIC MODEL OF A GAS HYDRATE SYSTEM AT WOOLEY MOUND, NORTHERN GULF OF MEXICO: C C Knapp, A Williams, D A Terry, J H Knapp

0800h **OS31F-1867** POSTER The thermodynamic characteristics of mud diapir fluid and its influence on hydrate accumulation in Shenhui area of South China Sea: Z Wan, L Zuo, X Yang, S Zhong

0800h **OS31F-1868** POSTER Modeling of permeability in gas-hydrate-bearing sediments: Y Konno, J Yoneda, M Oshima, Y Jin

0800h **OS31F-1869** POSTER Numerical Simulation of Submarine Landslides Caused by Gas Hydrate Decomposition: M Xu, X Xu, S Chu, W Liu, S Tong

**OS31G** (CC) Hall A-C (Poster Hall)

**Wednesday 0800h**

**Global Developments in Seafloor Mapping:**

**Gaining a Greater Insight into Earth Systems III Posters (joint with IN)**

*Presiding: Nicole Raineault*, Ocean Exploration Trust; *Maria Judge*, Geological Survey of Ireland; *Geoffroy Lamarche*, NIWA; *Kim Picard*, Geoscience Australia;

0800h **OS31G-1870** POSTER EMODnet Bathymetry: an updated Digital Terrain Model at 100m resolution for the European waters: T Schmitt, D Schaap

0800h **OS31G-1871** POSTER Ireland’s National Seabed Mapping Programme INFOMAR; illuminating offshore geology and varied uses for seafloor data: M T Judge, F Sacchetti, R O’Toole, X Monteyes

0800h **OS31G-1872** POSTER AusSeabed: Collaborating to Maximise Australian Seabed Mapping Efforts: K Picard, T Whiteway, A Leplastrier, A Team


0800h **OS31G-1874** POSTER Collaboration is Key: Community-driven exploration of deep-sea habitats off the Southeastern United States in support of science and management priorities: K L Cantwell, E Lobecker, M Malik, D Wagner


0800h **OS31G-1876** POSTER Mapping the Global Ocean Floor by 2030 – Industry Perspective on Collaboration and Data Contribution: G A Mitchell, J W Beeson, J J Gharib, D Millar

0800h **OS31G-1877** POSTER Bathymetric Processing and ROV Livestream Integration for Public Outreach: T A Gillespie, S Alpert, V Gitto, Z S Proux, L Sautter

0800h **OS31G-1878** POSTER New Seafloor Bathymetry and Backscatter Mapping of the Southern California Borderland: J E Conrad, P Dartnell, N Rainault, D S Brothers, E C Roland, R Kane, L Gee, M A L Walton, E Heffron, M Saunders


0800h OS31G-1881 POSTER Global bathymetry at 15 arc seconds resolution with implications for the isostatic compensation of geological features in the MH370 survey area: B Tozer, D T Sandwell, J J Becker, B Tea, Y Freund, H Harper, J Beale, P Wessell, W H F Smith

0800h OS31G-1882 POSTER Utilization of Global Bathymetric Data to Characterize Large-Scale Bedforms in Atlantic Submarine Basins: H C Drennon, V L Ferrini, L Sautter

0800h OS31G-1883 POSTER Associating Benthic Habitats with the Geomorphology and Depositional History of Bathymetric Features on the West Florida Shelf: J L Brizzolara, J W Gray, S D Locker, M Hommeyer, S Grasty, C Lembke, S A Murawski, R Larson

OS31H (CC) Hall A-C (Poster Hall)

Wednesday 0800h

New Frontiers in the Southern Ocean’s Role in Climate: Recent Developments in Physical and Biogeochemical Observations and Modeling Posters

Presiding: Joellen Russell, University of Arizona; Lynne Talley, University of California San Diego; Stephen Riser, University of Washington;

0800h OS31H-1884 POSTER CCHDO: delivering high quality hydrographic data from the Southern Ocean and beyond: S C Digs, K I Stocks, C Berys-Gonzales, A Barna, J Kappa, L Merchant, J H Swift

0800h OS31H-1885 POSTER Decadal Variability of Southern Ocean Sea Surface Temperature and Heat Content Distributions: A Ditri, E Xiao, Y H Jo, X H Yan

0800h OS31H-1886 POSTER The Role of Southern Ocean Transports on the Global Ocean Circulation: B S Ferster, S Bulusu

0800h OS31H-1887 POSTER Southern Ocean heat uptake: distribution, pathways and timescales: K D Stewart, A M Hogg

0800h OS31H-1888 POSTER Spin-up of Southern Hemisphere Super Gyre: T Qu, I Fukumori, R A Fine

0800h OS31H-1889 POSTER Interannual variations and trend of Southern Ocean deep mixed layers and Subantarctic mode water based on Argo data: patterns and mechanisms: Y Lu, L D Talley, I Cerovecki, M R Mazloff, S T Gille

0800h OS31H-1890 POSTER Sea Surface Salinity Distribution in the Southern Ocean as Observed from Space: C Garcia-Eidell, J C Comiso, E Dinnat, L Brucker

0800h OS31H-1891 POSTER Model Bias for South Atlantic Antarctic Intermediate Water in CMIP5: C Zhu, Z Liu, S Gu

0800h OS31H-1892 POSTER Air-Sea CO₂ Fluxes in the Southern Ocean: Lessons Learned From the Comparison Between Models and SOCCOM Data: C Dufour, A R Gray, J L Sarmiento, I Frenger, S M Griffies

0800h OS31H-1893 POSTER The curious convection teleconnection question: links between Weddell Sea and Labrador Sea deep convection on multi-decadal timescales: J E San Soucie, I Marinov, B Asadieh, A Cabre, S Molodtsov

0800h OS31H-1894 POSTER Cooling and freshening of the circumpolar Southern Ocean by Antarctic ice melt: C D Rye, J Marshall, M Kelley, J E Hansen

0800h OS31H-1895 POSTER Impacts of Holocene Antarctic Ice Sheet Discharge in a Coupled Ocean-Atmosphere Model: S Smith, A Schmittner

0800h OS31H-1896 POSTER Does the Antarctic climate system response to external forcing depend on the mean state of the model?: D P Schneider, J E Kay, M R Gentry

0800h OS31H-1897 POSTER Understanding Convective Variability in Coupled Climate Models: A Gnanadesikan, C Speller, M A S Pradal

0800h OS31H-1898 POSTER Southern Ocean Storm positions and intensity estimated with seismic observations in the Ross Ice Shelf: M C Hell, S T Gille, B D Cornuelle, A J Miller, P D Bromirski, A D Crawford

0800h OS31H-1899 POSTER Internal Waves Across the Antarctic Circumpolar Current: A M Thurnherr, Y Firing, T K Chereskin, S Waterman


0800h OS31H-1901 POSTER Circumpolar Deep Water Intrusions Drive Phyoalplankton Blooms in the Amundsen Sea: M L Maclellan, J Lenaerts, N S Lovenduski

0800h OS31H-1902 POSTER Barotropic versus Baroclinic eddy saturation: N Constantinou, A M Hogg
**T31E** (CC) Hall A-C (Poster Hall)

**Wednesday 0800h**

**Geospatial Artificial Intelligence: Machine Learning in Earth Sciences Posters** *(joint with GC, IN, OS)*

**Presiding:** Orhun Aydin, ESRRI; Emily Law, CalTech JPL; Warren Wood, Naval Research Laboratory; Jens Klump, CSIRO Mineral Resources;

0800h **T31E-0360** *POSTER* Using Spatially Constrained Unsupervised Machine Learning to Objectively Derive Climate Zones of the Contiguous United States: K A Butler

0800h **T31E-0361** *POSTER* Delineation of Climate regions over Korean Peninsula Using Machine Learning Approaches: S Park, H Park, J Im, C Yoo, D Han

0800h **T31E-0362** *POSTER* Long-lead Forecast of Heatwaves in the Eastern United States using Artificial Intelligence: N Sobhani, D Del Vento, A L Fanfarillo


0800h **T31E-0364** *POSTER* Prediction of CO₂ flux using Long Short Term Memory (LSTM) Recurrent Neural Networks with data from Flux towers and OCO-2 remote sensing: P Nguyen, M Halem

0800h **T31E-0365** *POSTER* Orders-of-Magnitude Speedup in Atmospheric Chemistry Modeling through Neural Network-Based Emulation: M M Kelp, C W Tessum, J D Marshall


0800h **T31E-0367** *POSTER* Runoff Prediction using Long-Short Term Memory Model: I Demir, Z Xiang

0800h **T31E-0368** *POSTER* Fast Neural Network Emulation of a Planetary Boundary Layer Parameterization in Weather Research Forecasting Model: J Wang, P Balaparakash, V R Kotamarthi


0800h **T31E-0370** *POSTER* Machine-learning – converting geoscience data into predictive geochemical and 3D surface models.: J Wilford, K Czarnota, S Basak, L LachlanMccalman, D Steinberg, N Chhajed, R Hassan

0800h **T31E-0371** *POSTER* Using machine learning to classify landforms for minerals exploration: J F Klump, T Albrecht, I Gonzalez-Alvarez, G Smith

0800h **T31E-0372** *POSTER* Continuous monitoring of volcano-seismic signals with Recurrent Neural Networks: M Titos Luzón, A Bueno Rodriguez, L Garcia Martinez, I Álvarez Sr, C Benítez, J M Ibáñez

0800h **T31E-0373** *POSTER* Deep Learning of Geological Structures in 3-D Seismic Data: T Wrona, I Pan, R E Bell, H Fossen, R Gawthorpe

0800h **T31E-0374** *POSTER* Assign Points To Existing Clusters: An algorithm for labeling clustered point cloud datasets for predicting physical variables: S M Hendryx

**OS32A (CC) 103AB**

**Wednesday 1020h**

**Air–Sea Interaction from Tropics to Extratropics: Ocean Mesoscales, Teleconnections, and Climate Predictions II** *(joint with A)*

**Presiding:** Hyodae Seo, Woods Hole Oceanographic Institution; Masami Nonaka, Application Laboratory, JAMSTEC; Niklas Schneider, Univ Hawaii; Larry O’Neill, Oregon State University;

1020h **OS32A-01** Coherent Coupling in Climate Variability and Trends from the Tropics to Middle and High Latitudes: An Atmospheric and North Pacific Perspective: J J Wettstein

1035h **OS32A-02** The Interannual and Decadal Variability of Mesoscale Eddies: Atmospheric Forcing and Sea Level Impacts: A S Delman, T Lee, B Qiu

1050h **OS32A-03** Impact of mesoscale air-sea interaction on wind work done on oceanic mesoscale eddies: a global estimate from satellite observations: C Xu

1105h **OS32A-04** The effects of eddy-induced air-sea interaction on mesoscale eddies in the South Atlantic Ocean: X Chu, D B Chelton Jr, R P Matano, V Combes

1120h **OS32A-05** Intensive observations of imprints of the Oyashio (subarctic) front on the atmosphere in April 2013: Y Kawai, H Nishikawa, E Oka

1135h **OS32A-06** Estimates of Upwelling in the Vicinity of the Galápagos Archipelago from Glider Observations: J Jakoboski, K B Karnauskas, B Owens, R E Todd, D L Rudnick

1150h **OS32A-07** Coastal Sea Surface Temperature Variability in Northern California during Landfalling Atmospheric Rivers: M A Fish, R R Weihs, F M Ralph
1205h OS32A-08 Influence of Atmospheric Rivers on the Leeuwin Current System: T Shinoda, W Han, L Zamudio, X Feng

OS32B (CC) 102AB
Wednesday 1020h
Integrated Observations and Modeling of Surface Currents, Waves, and Winds II

Presiding: Ana Beatriz Villas Boas, Scripps Institution of Oceanography; Bourassa Mark A, Florida State University;

1020h OS32B-01 Towards global observational constraints on oceanic surface response to wind forcing: S Elipot, J M Lilly

1035h OS32B-02 Directional Spectral Properties of Wind-Generated Surface Waves across the Equilibrium-Saturation Ranges: W K Melville, L Lenain

1050h OS32B-03 First results on wave spectral properties from the CFOSAT satellite: L Delaye, D Hauser, A Lotfi, A Dalphinet, M Camara, C Dufour, F Gouillon, A Grouazel, L Hermozo, A Mouche, A Ollivier, P Schippers, C Tison, C Tourain, R Rodrigues

1105h OS32B-04 Feasibility of estimating large-scale sea surface height from surface current velocity streamfunction fields: L W O’Neill, E Rodriguez, D B Chelton Jr

1120h OS32B-05 Measuring ocean currents beyond altimetry & drifters: The Sea surface KInematics Multiscale (SKIM) mission, an ESA mission: F Ardhuin

1135h OS32B-06 Observations of Submesoscale Surface Currents and Winds with a Doppler Scatterometer: E Rodriguez, A G Wineteer

1150h OS32B-07 The Resolution Capabilities of Surface Current Vorticity and Divergence Estimates from a Future Doppler Scatterometer Satellite Mission: D B Chelton Jr, R M Samelson, J T Farrar

OS32C (MM) Marquis 6
Wednesday 1020h
Rachel Carson Lecture (Virtual Session)

Presiding: Eileen Hofmann, Old Dominion University; Robert Anderson, Lamont-Doherty Earth Obs;

1020h Introductory Remarks:

1025h OS32C-01 Larval Odyssey and Marine Population Connectivity, Now and Tomorrow: C B Paris

OS32D (CC) 101
Wednesday 1020h
Understanding Changing Ocean Biogeochemistry II (joint with B, GC, PP)

Presiding: Galen McKinley, Lamont-Doherty Earth Observatory of Columbia University; Anastasia Romanou, NASA GISS; Matthew Long, National Center for Atm Res;


1035h OS32D-02 Regional divergence of dominant modes of the air-sea CO2 flux variability: P Landschuetzer, T Ilyina, N S Lovenduski

1050h OS32D-03 Observations-constrained projections reveal early and strong deoxygenation in the interior North Atlantic: J Tjiputra, N Goris, S Lauvset, C Heinze, A Olsen, J Schwinger, R Steinfeldt

1105h OS32D-04 The importance of the equatorial current system for variability in the oxygen minimum zones: J J M Busecke, L Replanday


1135h OS32D-06 Impact of Ocean-Atmospheric Signals on the Net Community Production in the Northeast Pacific Ocean: M B Bif, L Siqueira, D A Hansell

1150h OS32D-07 Is there ”just enough” iron in the ocean? Climatic effects of the iron-microbe feedback.: J M Lauderdale, G Forget, R Braakman, S Dutkiewicz, M J Follows

1205h OS32D-08 Multicentury Global Warming and the Future of the Marine Biosphere: J K Moore

PP32A (MM) Marquis 6
Wednesday 1120h
Emiliani Lecture (Virtual Session)

Presiding: Figen Mekik, Grand Valley State University; Petra Dekens, San Francisco State University; Matthew Kirby, California State University Fullerton;

1120h Introductory Remarks:

1125h PP32A-01 Geostrophic Motion in the Ice Age Ocean: J Lynch-Stieglitz
**Wednesday P.M.**

**A33D  (CC) 152A**

**Wednesday  1340h**

High-Resolution Weather and Climate Modeling on Large Supercomputers II (joint with GC, OS)

*Presiding:* L. Ruby Leung, Pacific Northwest National Laboratory; Malcolm Roberts, Met Office Hadley center for Climate Change; Pier Luigi Vidale, NCAS Climate; Gokhan Danabasoglu, National Center for Atmospheric Research;

1340h  **A33D-01**  Sub-Seasonal to Decadal Predictability and Prediction with an Ocean Eddy Resolving Coupled Model: B P Kirtman

1355h  **A33D-02**  Sensitivity of Winter North Atlantic-European Climate to Resolved Atmosphere and Ocean Dynamics: R. Haarsma, J García-Serrano, C Prodhomme, S S Drijfhout

1410h  **A33D-03**  The Impact of Horizontal Atmospheric Resolution in Modelling Air-sea Fluxes: P Wu, M J Roberts, G Martin, P L Vidale, X Chen, T Zhou

1425h  **A33D-04**  High-Resolution Modeling using E3SM: P M Caldwell, W Lin, L Van Roekel, P A Ullrich

1440h  **A33D-05**  High-resolution climate modelling: sensitivity of climate to atmosphere and ocean resolution.: J Small


1510h  **A33D-07**  Representation of Extreme Events in High Resolution Versions of the CESM: S C Bates, N A Rosenbloom

1525h  **A33D-08**  Alleviating low cloud problem in climate and weather forecast models by adaptive vertical grid enhancement: T Yamaguchi, B Peter, G Feingold, D F Martin, Y Chen, P Schwartz, R Yoshida

**OS33A  (MM) Marquis 6**

**Wednesday  1340h**

Harald Sverdrup Lecture © (Virtual Session)

*Presiding:* Eileen Hofmann, Old Dominion University; Robert Anderson, Lamont-Doherty Earth Obs;

1340h  **OS33A-01**  The Surprising Skill of Sea Surface Salinity in Seasonal Prediction of Precipitation on Land: R W Schmitt

**OS33B  (CC) 102AB**

**Wednesday  1340h**

New Frontiers in the Southern Ocean’s Role in Climate: Recent Developments in Physical and Biogeochemical Observations and Modeling I

*Presiding:* Joellen Russell, University of Arizona; Lynne Talley, University of California San Diego; Stephen Riser, University of Washington;

1340h  **OS33B-01**  The Drake Passage Effect revisited – and this time sea-ice albedo feedbacks steal the show: M H England

1355h  **OS33B-02**  Change in future climate due to Antarctic meltwater: B Bronselaer, M Winton, S M Griffies, W J Hurlin, K B Rodgers, O V Sergienko, R J Stouffer, J L Russell

1410h  **OS33B-03**  A Previously Unrecorded Anomaly in the Southern Ocean Climate System: A Haumann, S Bartusek, J L Sarmiento

1425h  **OS33B-04**  Winter ice-ocean feedbacks in the Southern Ocean: the impact of strong storms on upper ocean stability and winter sea ice growth: E A Wilson, S Riser, E C Campbell

1440h  **OS33B-05**  Cooling and Freshening of the Southeast Pacific by Enhanced Sea Ice Export from the Ross Sea: I Cerovecki, A Meijers, M R Mazloff, S T Gille, V Tamsitt, P Holland

1455h  **OS33B-06**  Comparison of variability in air-sea heat fluxes and Subantarctic Mode Water formation from concurrent mooring observations in the Southeast Indian and Southeast Pacific: V Tamsitt, S A Josey, I Cerovecki, S Ogle, S T Gille, L D Talley, R A Weller, E W Schulz

1510h  **OS33B-07**  Intercomparison and Assessment of Southern Ocean Circulation in CMIP5 Models and the Biogeochemical Southern Ocean State Estimate using Observation-based Metrics.: R L Beadling, J L Russell, P J Goodman, R J Stouffer, M R Mazloff

1525h  **OS33B-08**  Southern Ocean Heat Uptake, Redistribution, and Storage in a Warming Climate: The Role of Meridional Overturning Circulation: W Liu, J Lu, S P Xie, A V Fedorov
Seafloor Hydrocarbon Seepage and Venting: 
The Contributions and Impacts to the 
Hydrosphere, Atmosphere, and Seep Habitat 
Biosphere Posters

Presiding: Martin Scherwath, Ocean Networks Canada; Tamara Baumberger, NOAA Pacific Marine Environmental Laboratory; Ira Leifer, University of California, Santa Barbara; Hiroaki Watanabe, Kyushu University;

1340h OS33C-1903 POSTER Even-Numbered N-alkanes Predominance in Deep-Seawater of Hydrothermal Vent Fields of Central and Southeast Indian Ridges, and North Indian Ocean: U Umoh, I Li

1340h OS33C-1904 POSTER Accoustic characters of Methane Plume and Methane Density in water culum: H Kashiwa

1340h OS33C-1905 POSTER Observation of gas plume at long and short distances by Weighing fish finder and Mulit beam echo sounder: M Yamamura

1340h OS33C-1906 POSTER Observation of the quantity of methane plumes and volume backscattering strength of Umitaka Spur in offshore Joetsu over the years.: H Okazaki

1340h OS33C-1907 POSTER Environment assessment on methane plumes using CH4 concentration measurement: R Ohama

1340h OS33C-1908 POSTER High Resolution Simulations of Oil and Gas Blowouts.: N Wienders, W K Dewar, J M Campin

1340h OS33C-1909 POSTER Dissolved Methane Distributions and Air-sea Flux from Hydrocarbon Seeps in the Lintou Promontory Seep Field, Northern South Sea: P Di, D Feng, D Chen, I R MacDonald


1340h OS33C-1911 POSTER Large-scale gas flux estimation from random ship surveys of tidally controlled dynamic bubble emissions - an example from Cascadia: M Scherwath, M Riedel, S E Dosso, M Roemer, M Heesemann, M Veloso

1340h OS33C-1912 POSTER An Expanded Inventory of Methane Seeps on the US Atlantic Margin: M W Kidiwela, A D Skarke

1340h OS33C-1913 POSTER Expanded U.S. Atlantic Margin Seep Inventory Yields Insight into Methane Dynamics: A D Skarke, C D Ruppel, M W Kidiwela, W E Baldwin, W W Danforth

1340h OS33C-1914 POSTER Timing of enhanced seepage throughout the past 50 ka from the Gulf of Mexico: D Feng, H H Roberts, D Chen


1340h OS33C-1916 POSTER Timing Methane Migration in a Tectonic Active Margin: S Lin, W C Wang, L F Fan, K L Lien, I C Hsieh

1340h OS33C-1917 POSTER Optimization of Hydrocarbon Seep Sampling Strategies through Integration of Geophysical and Geological Data with Real-Time Offshore Geochemical Analyses: P García del Real, E Kassabji, J McBee, J J Ghrib, S Hulme

Global Developments in Seafloor Mapping: Gaining a Greater Insight into Earth Systems IV Posters (joint with IN)

Presiding: Nicole Raineault, Ocean Exploration Trust; Maria Judge, Geological Survey of Ireland; Geoffroy Lamarche, NIWA; Kim Picard, Geoscience Australia;

1340h OS33D-1918 POSTER An Analysis of Bathymetric Sounding Density to Inform Ocean Mapping Strategies: J D Varner, M Westington, P D Johnson, M Sutherland, A Armstrong III, J Jencks

1340h OS33D-1919 POSTER Chart Comparison and Change Analysis for Alaskan Hydrographic Surveys: P Campion


1340h OS33D-1922 POSTER Symbiotic Autonomy for Deep Water Survey: A T Ziegied

1340h OS33D-1923 POSTER Longitudinal Reef Monitoring using Co-located Interferometric Multibeam Sonar and Optical 3D Reconstruction aboard an L3 OceanServer Iver3 AUV: H C Brown

1340h OS33D-1924 POSTER Utilizing Multibeam Sonar Water Column Data to Interpret Fish Populations and Structure Over Shallow-Water Historic Wrecks: D A Wood, J C Taylor, J Hoyt, T R Casserley, E Ebert, A Paxton

1340h OS33D-1925 POSTER My Data, Your Noise: Tube Worm Mats and Implications for Seafloor Survey Best Practices: J W Kinney, R D Flood


1340h OS33D-1927 POSTER Characterization of Five Geologic Zones within the Northern Mariana Subduction Region: S Alpert, L Sautter, E K Beutel

1340h OS33D-1928 POSTER Geomorphological Analysis of Complex Sediment Wave Bedforms off the Southeast Coast of Ireland: A E Dawson, L Sautter

1340h OS33D-1929 POSTER Unexpected Bathymetry and Habitat Features in Estuarine Environments of Georgia, USA: C R Alexander Jr, M Robinson, C Venhem


1340h OS33D-1931 POSTER Surveying Deep-Sea Coral and Sponge Communities on an Unexplored, Enigmatic Seamount Trail North of the Central Hawaiian Ridge: T F Hourigan, C Kelley

1340h OS33D-1932 POSTER Shallow Water Seafloor and Habitat Mapping in Cape Cod National Seashore: A Post-Hurricane Sandy Study: M Borrelli, T L Smith, B Legare

1340h OS33D-1933 POSTER Efficient monitoring of the Seafloor Morphological Change using Post-Sandy Lidar in South Carolina: J W Kinney, T Martin, M N Bogonko, R A Wigley

1340h OS33D-1934 POSTER Nearshore Bathymetry of Atolls in the South China Sea Estimated by Satellite Multispectral Data: P Y Tsai, K H Tseng, C Y Huang, T Yamanokuchi, T Sagawa

OS33E (CC) Hall A-C (Poster Hall)

Wednesday 1340h

At the Intersection of Society and Our Coasts: Advancements in Coastal Ocean Science and Applications to the Human Dimension Posters


1340h OS33E-1936 POSTER Know Before You Go: Rip current science, forecasting and communication at NOAA: G Dusek, M Churma, J S Im, D Atkinson, N Kurkowski, D Jones, J F Kuhn, A J Van der Westhuysen, P Santos

1340h OS33E-1937 POSTER Using Observations and Models to Develop Integrated Tidal Current Products: L A Heilman, G Dusek, C L Paternostro

1340h OS33E-1938 POSTER Rip Current Hazard and Rescue Techniques: S P Leatherman

1340h OS33E-1940 POSTER Development and Operational Testing of the Cook Inlet Operational Forecast System (CIOFS): L Shi, E P Myers III, A Zhang, C Lindley


1340h OS33E-1942 POSTER Synergistic Partnership Between Academic Researchers, 7-12 Grade Educators, and Local non-Profit Restoration Groups to Support Traditional Hawaiian Coastal Fishpond Resilience and Monitoring Efforts: B T Glazer

1340h OS33E-1943 POSTER Modeling tidal datums and spatially varying uncertainties in New York Bight, Hudson River, Long Island Sound, and Narragansett Bay: W Wu, E P Myers III
The important role of international standards in transforming maritime data into usable information for e-Navigation: methods and application: G N Seroka, E Nagel, K Hess, N Weston, J Greenlaw, J Phillips, E P Myers III, J Powell

Estimating sedimentation rates near Chesapeake Bay and Delmarva Peninsula and the associated implications for survey priorities: C Bongiovanni, T C Lippmann, A Armstrong III, B R Calder

Determining bathymetric change in a tidal inlet using satellite-based synthetic aperture radar: R P Hale, J Lucio, K F Brown

Seasonal variation in residence time of two neighboring bays with contrasting topography: M T Kwak, Y K Cho

Structure from Motion as a Tool for Recording Erosion and Evaluating Landslide Hazards: Casco Bay, ME.: N R Whiteman


Developing alternative options in Red Grouper fishery management in México: J R Garza-Perez, R A Rodriguez-Vázquez, T Brulé-Demarest, X Renán-Galindo

Future changes in carbonate chemistry in the Southern Ocean under acidification using insights from SOCCOM biogeochemical floats: N L Williams, R A Feely, L W Juranek, J L Russell, J P Dunne
1615h **OS34B-02** A new Southern Ocean carbon flux estimate from merged ship and float observations: **S M Bushinsky**, A R Gray, P Landschuetzer, C Rödenbeck, D Baker, L Resplandy, K S Johnson, M R Mazlof, J L Sarmiento

1630h **OS34B-03** Reframing the Polar Southern Ocean Carbon Cycle: **G A MacGilchrist**, A Naveira Garabato, P Brown, L Jullion, S Bacon, D C E Bakker, M Hoppema, M P Meredith, S Torres-Valdes

1645h **OS34B-04** Exploring the Southern Ocean Dissolved Inorganic Carbon (DIC) to Nitrate ratio: A hybrid profiling float and model study: **K S Johnson, M R Mazlof, A Verdy, L D Talley, J L Sarmiento**

1700h **OS34B-05** Physical drivers of phytoplankton bloom initiation in the Southern Ocean: **C Prend, S T Gille, M R Mazloff, L D Talley**

1715h **OS34B-06** Controls on summer phytoplankton blooms in a highly productive Antarctic coastal polynya: **H Oliver, P St-Laurent, R M Sherrell, P L Yager**

1730h **OS34B-07** Eddy Iron Fluxes and Its Impact on Primary Production in the Southern Ocean: **T Uchida, R P Abernathey, G A McKinley, K S Smith, D Balwada, M Levy**

1745h **OS34B-08** Response of Antarctic Sea Ice to Climate Change: Insight from a Suite of Climate Models: **J Sauvé, C Dufour, S M Griffies, M Winton**
Session Information

Oral Sessions
Sessions are being held in the Convention Center (CC) and Marriott Marquis (MM)

Poster Sessions
Posters are on display in the following venue throughout the week: Hall A-C (Poster Hall)

Session & Paper Numbering
Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation.
Example: A21A-01 = Atmospheric Sciences, Tuesday, AM, concurrent session A, first paper in that session.

<table>
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<tr>
<th>Discipline</th>
<th>Day</th>
<th>Time</th>
<th>Session</th>
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<td>AM 0800–1000</td>
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<td>PM 1815–1915</td>
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The program is current as of 06 December 2018. 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/fm18/meetingapp.cgi/Home for updates.

Thursday A.M.

B41D (CC) 150A
Thursday 0800h

Comparative Organic Geochemistry of Soils and Aquatic Sediments: A New View in the 21st Century I (joint with C, EP, H, OS)

Presiding: Thomas Bianchi, University of Florida; Elise Morrison, University of Florida; Nicholas Ward, Pacific Northwest National Laboratory; Timothy Filley, Purdue University;

0815h B41D-02 Influence of past soil erosion and burial on the reactivity of deep soil carbon: T R Filley, S J Hall, T Hou, A F Plante, M N Weintraub

0830h B41D-03 Organic geochemistry of soil organic matter with long-term nitrogen enrichment: Molecular-level insights on impacts to soil biogeochemistry: M J Simpson, J J Wang, R Bowden, K Lajtha, S Washko, S Wurzbacher

0845h B41D-04 Chemical changes during ectomycorrhizal fungal tissue decomposition in forest soils: the impacts of melanization and potential contributions to long-lived SOM: K M Schreiner, M M Ryan, J Swenson, P Kennedy, A Certano, J Gagne

0900h B41D-05 Merging Ecological Theory with Organic Geochemistry and Environmental Metabolomics: J Stegen, E B Graham, M Tfaily

0915h B41D-06 Revisiting the Reactivity of Terrestrial Organic Matter Along the Land-Sea Continuum: V Galy, J Hemingway, K E Grant, L B Childress, S Hage, S Rosengard, T I Eglinton

0930h B41D-07 Addressing the conundrum of sedimentary terrigenous organic matter burial via isotope mass balance calculations: U M Hanke, V Galy, T I Eglinton, A P McNichol, J P Donnelly, C M Reddy

0945h B41D-08 Blue Carbon Sequestration Within Northern Florida Intertidal Wetlands - Response to Climate Change and Holocene Climate Variability: D Vaughn, T S Bianchi, T Osborne, M R Shields, W Kenney

0845h NH41A-04 When Floods Hit the Road: Commute Disruption due to Coastal Flooding and Sea Level Rise in the San Francisco Bay Area: I Kasmalkar, I A Bick, K Serafin, J Suckale, L Ortolano, D Ouyang, Y Miao, A Mariwala, G Bhattacharjee, J Baker

0900h NH41A-05 Assessing and updating a probabilistic framework to predict sea-level rise impacts: E E Lentz, N G Plant, S L Zeigler, E A Pendleton, W Sweet

0915h NH41A-06 On the prediction of tropical cyclones wind wave footprint using satellite data and neural networks: L Cagigal Gil, F J Méndez Incera, A Rueda, G Coco

0930h NH41A-07 An extreme sea level indicator for the US coastline: M M Rashid, T Wahl

0945h NH41A-08 Spatially-varying Non-Stationarity in Estuarine Extreme Sea Levels: S A Talke, D A Jay, D K Ralston, P M Orton, R Familkhali

OS41A (CC) 102AB

Thursday 0800h

Physical Oceanography, Geodynamics, and Ecological Environment of the Western Pacific I

Presiding: Fan Wang, Institute of Oceanology, Chinese Academy of Sciences; Jianing Wang, Institute of Oceanology, Chinese Academy of Sciences;

0800h OS41A-01 BGC-Argo Observations and Physical-Biogeochemical Modeling in Western Pacific Ocean: F Chai, P Xiu

0815h OS41A-02 Seismic experiments investigating plate dynamics and fluid interaction of the Challenger Deep region in Southern Mariana Trench: J Lin, J Sun, M Xu, X Zeng, Z Zhou

0830h OS41A-03 The South China Sea: a backarc basin of the Neo-Tethys Ocean: W Sun, C T Lin, L P Zhang, R Q Liao, C Y Li

0845h OS41A-04 Gas hydrates associated with hydrothermal vents: X Zhang, Z Du, S Xi, L Li, Z Luan, B Wang, L Cao, C Lian, J Yan

0900h OS41A-05 Dynamics of Deep Eastern Boundary Currents: X Yang, E Tziperman, K Speer

0915h OS41A-06 Ocean current monitoring in a tropical trench: H Xu, J Tian, Q Xie

0930h OS41A-07 Vertical Structure and Evolution of an Anticyclonic Eddy in the South China Sea: Y Wu, G Flierl
0945h OS41A-08 Topographic Beta Spiral and Onshore Intrusion of the Kuroshio Current: Y Dezhou, R X Huang, B Yin, X Feng, H Chen, J Qi, L Xu, Y Shi, X Cui, G GAO, J Benthuyseen

OS41B (CC) Hall A-C (Poster Hall)

Thursday 0800h

Understanding Changing Ocean Biogeochemistry Posters (joint with B, GC, PP)

Presiding: Galen McKinley, Lamont-Doherty Earth Observatory of Columbia University; Anastasia Romanou, NASA GISS; Matthew Long, National Center for Atmos Res;

0800h OS41B-2000 POSTER Ocean carbon variability and change constrained by seawater pCO2 time series observations: A J Sutton

0800h OS41B-2001 POSTER The CO2 system in the U.S. coastal waters: Internal consistency of marine carbonate system measurements: M I García-Ibáñez, Y Xu, R A Easley, W J Cai

0800h OS41B-2002 POSTER Survey and contextualization of various physiological effects of past, present and future pCO2 on fish: A Barth, J P Dunne


0800h OS41B-2004 POSTER The Responses of Seawater Carbonate Chemistry and Productivity to a Simulated OMZ Upwelling Event in the Coastal Upwelling Area off Peru: S Chen, L T Bach, K Schulz, E von der Esch, C Sforne, U Riebesell

0800h OS41B-2006 POSTER Dynamics of dissolved organic carbon in the Chukchi Sea: J Jung, S Y Ha, Y Lee, E J Yang, K H Shin, S H Kang

0800h OS41B-2007 POSTER Future Drivers of Strong Climate-Carbon Feedbacks in the North Atlantic: S Ridge, G A McKinley, M C Long


0800h OS41B-2009 POSTER Influence of Ocean Acidification and Climate Change on the Biogeochemistry in the Gulf of Alaska: A regional modeling study: C Hauri, K Hedstrom, C Schultz, J Beamer, S L Danielson, S C Doney, D Hill, C A Stock

0800h OS41B-2010 POSTER A Meridionally Averaged Model of Eastern Boundary Upwelling Systems: An Ecosystem Overview: J E Moscoso, D Bianchi, A Stewart

0800h OS41B-2011 POSTER Seasonal Variability Analysis of Sea Water pCO2 Over North Western Indian Ocean: L K, A Mishra, R Bharti, C Mahanta

0800h OS41B-2012 POSTER The role of wind induced shear in northern Arabian Sea mixing under global warming: V Praveen, V Valsala, A M Ravindran, S Balasubramanian

0800h OS41B-2013 POSTER Net sea-air CO2 flux and pCO2 variability in Bay of Bengal: Observation from moored buoy: A Dixit, L Krishna, C Mahanta

0800h OS41B-2014 POSTER Quantifying the effect of physical and biological pumps on oceanic carbon uptake under long-term global warming: A Yamamoto, A Abe-Ouchi, Y Yamazaki

0800h OS41B-2015 POSTER Understanding why long-term climate change impacts on the ocean requires analysis of physical mechanisms operating on biological ecosystem structure: A A Bahl, A Ganadesikan, M A S Pradal

0800h OS41B-2016 POSTER Linking phytoplankton ecology and phytoplankton types with ocean carbon and physics: lessons from satellite data and CMIP5 models: I Marinov, P Sharma, C A Hogan, F Shen, B Asadieh, A Cabre

0800h OS41B-2017 POSTER Global surface ocean pH from 1770 to 2100: L Jiang, B Carter, R A Feely, S Lauvset, A Olsen

0800h OS41B-2018 POSTER Coccolithophore calcium carbonate export in an acidified ocean: A Johnson, N S Lovenduski, K M Krumhardt

0800h OS41B-2019 POSTER In-Situ Calcite Dissolution Rates Across a Transect of the N. Pacific and a Comparison with the Dissolution Mechanisms and Temperature Dependence Determined in the Lab: J Naviaux, A Subhas, D Dong, N Rollins, W Berelson, S Liu, R Byrne, J F Adkins

0800h OS41B-2020 POSTER Establishing a baseline of the annual variability of pteropod shell thickness in the Cariaco Basin: R L Oakes, T J Bralower, J A Sessa

0800h OS41B-2021 POSTER Role of Phytoplankton Functional Groups on Biogeochemical changes: R Shunmugapandi, A B Inamdar, S S Gedam

0800h OS41B-2022 POSTER Placeholder Title for Robert Brown: R A Brown
OS41C  (CC) Hall A-C (Poster Hall)
Thursday  0800h
Biogeochemical Cycling in Estuaries, Coastal Waters, and Their Watersheds: Natural Variability, Response to Land Use and Climate Change, and Management Implications IV

Posters (joint with B, GC, H)

Presiding: Raymond Najjar, The Pennsylvania State University; Ming Li, Univ of Maryland Ctr for Env.; Zach Easton, Virginia Tech; Marjorie Friedrichs, Virginia Inst Marine Science;

0800h  OS41C-2023 POSTER Short-term biogeochemical variability in two subtropical estuaries: R Najjar, H Briceno, C Hu, M Herrmann, B Boyer, D C English, J Absten

0800h  OS41C-2025 POSTER Water Quality Impairments in the Lower Chesapeake Bay: Hot Spots and Hot Times: M R Mulholland, M A Echevarria, P W Bernhardt, K Filippino, L M Blumen, A Macias-Tapia, E Perez Vega, I R Flefel

0800h  OS41C-2026 POSTER Red tide detection from high-resolution optical image using neural network method: M S Lee, K A PARK, J E Park, J Chae

0800h  OS41C-2027 POSTER Understanding Environmental Controls on Cyclodinium polykrikoides Blooms in the Lower Chesapeake Bay: L B Davis, E E Hofmann, J M Klinck II, M R Mulholland, A Meza

0800h  OS41C-2028 POSTER Spatiotemporal Variability of Water Quality Parameters in the St. Lucie Estuary Basins, Florida: A M Moncada, A M Melesse

0800h  OS41C-2029 POSTER Observations of Sediment Transport at a Tidal Wetland Restoration Site: Prime Hook National Wildlife Refuge, Delaware: K Runion, C K Sommerfield, C F Moffat

0800h  OS41C-2030 POSTER Understanding Marine Aggregate Disruption Dynamics with Novel In-Situ Breakup Measurements: M Rau, S G Ackleson

0800h  OS41C-2031 POSTER The Changing Nature of Suspended Solids in Chesapeake Bay and Its Relationship to Trends in Water Clarity: C T Friedrichs, J S Turner, M A M Friedrichs, J Keisman, R R Murphy

0800h  OS41C-2032 POSTER Effects of Shoreline Erosion and Organic Matter Sinking Rates on Chesapeake Bay Water Clarity: J S Turner, M A M Friedrichs, C T Friedrichs, P St-Laurent

0800h  OS41C-2033 POSTER Warner Waters Welcome Increased Nutrient Loading: Linking Effects of Future Climate Change to Chesapeake Bay Hypoxia: K Hinson, M A M Friedrichs, G Bhart, M Herrmann, R Najjar, H Tian, Y Yao, P St-Laurent

0800h  OS41C-2034 POSTER Modeling study on the physical and biogeochemical controls of Chesapeake Bay hypoxia from interannual to decadal time scales: W Ni, M Li

0800h  OS41C-2035 POSTER Impact of Future Warming on the Chesapeake Bay Carbonate System: Air-sea CO2 Exchange vs. Biogeochemical Processes: F Da, M A M Friedrichs, P St-Laurent, E H Shadwick

0800h  OS41C-2036 POSTER Seasonal Variability of Carbonate Chemistry in the Chesapeake Bay: J R Friedman, E H Shadwick, M A M Friedrichs, R Najjar

0800h  OS41C-2037 POSTER A Bay-wide Self-regulated pH Buffer Mechanism in Response to Eutrophication and Acidification in Chesapeake Bay: J Su, W J Cai, J M Testa, M Li

0800h  OS41C-2038 POSTER Temporal variations of surface pCO2 and sea-air CO2 fluxes during a year in the southern coastal water of Korea: S H Choi, Y G Park, D G Kim, H S Min

0800h  OS41C-2039 POSTER Greenhouse Gas Production in Disturbed, Restored, and Reference Estuaries along a Salinity Gradient in Oregon, USA: M Schultz, L Brophy, S D Bridgham

0800h  OS41C-2040 POSTER Degradation Rates of Natural Organic Matter in Long Island Sound: O Strieleanu, A Byrd, A Staniec, P Vlahos

0800h  OS41C-2041 POSTER The carbon cycle in Long Island Sound: J C Varekamp, M A Altabet, C Warren, E Thomas

0800h  OS41C-2042 POSTER Resolving Shifting Nitrogen Budgets of the Long Island Sound Estuary: P Vlahos, M M Whitney, J R Mullaney, J Morrison, C Menniti

OS41D  (CC) Hall A-C (Poster Hall)
Thursday  0800h
Coastal Altimetry: Retrieval, Applications, and Assimilation in Models Posters (joint with G)

Presiding: Jérôme Benveniste, European Space Agency/ESA-ESRIN; Cheinway Hwang, National Chiao Tung University; Stefano Vignudelli, Consiglio Nazionale Delle Ricerche; Vassiliki Kourafalou, Univ of Miami;
0800h **OS41D-2043** POSTER Coastal gravity: the roles of geodetic altimetry missions, waveform retracking and shipborne gravity and sea surface heights: C Hwang, C C Cheng, C S Chi

0800h **OS41D-2044** POSTER Coastal sea level changes during the last decade along the coasts of West Africa: A A Cazenave, F Birol, F Marti, M Passaro, F Leger, F Nino, J Benveniste

0800h **OS41D-2045** POSTER Effects of Suspended Sediment Matter’s Input by High Riverine Discharge on Surface River Plume and Vertical Water Exchange: a Simulation Study for the Tango Bay, Japan: Y Hoshiba, Y Matsumura, H Hasumi, S Itoh, S Nakada

0800h **OS41D-2046** POSTER Influence of InSAR altimetry errors on relative height of ocean surface and marine gravity computing: X Wan, J Peng, S Tian

0800h **OS41D-2047** POSTER Mississippi River Plume Dynamics Using Coastal Altimetry Data and Modeling: V Kourafalou, I Androulidakis

0800h **OS41D-2048** POSTER Physical and Biological Implications of Eddy Signatures in the Benguela and California Current Regions: S Baker-Yeboah, D Byrne, E W Leuliette, P M DiGiacomo

0800h **OS41D-2049** POSTER Preliminary Results of Marine Gravity Anomaly Determination from Altimetry Data for Regional Geoid Modelling in Indonesia: K Prijatna, D D Wijaya, B Bramanto

0800h **OS41D-2050** POSTER Reproduction of coastal sea-level variations around Japan using a nested 2-km resolution model: K Sakamoto, H Tsujino, H Nakano, S L Urakawa, G Yamanaka, T Toyoda, N Hirose, N Usui

0800h **OS41D-2051** POSTER SAR Altimetry Processing on Demand Service for Cryosat-2 and Sentinel-3 at ESA G-POD: SARvatore: J Benveniste, S Dinardo, G Sabatino, M Restano, A Ambrozo

0800h **OS41D-2052** POSTER Toward a New Multi-Mission Altimetry Product at High Rate for Coastal Application, Combining the ALES Reprocessing, the X-TRACK Editing Algorithms and a Dedicated Set of Correction.: F Leger, F Birol, F Nino, M Passaro, A A Cazenave, F Marti, M Ablain

0800h **OS41D-2053** POSTER Using satellite gravimetry and altimetry to detect the water diversion fingerprints in the Danjiangkou Reservoir: N Chao, G Chen

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**OS41E** (CC) Hall A-C (Poster Hall)

**Thursday 0800h**

**Indo-Pacific Ocean Circulation and the Environmental and Climatic Impacts Posters**

**Presiding:** Hui Zhou, Institute of Oceanology, CAS; Huijie Xue, University of Maine; William Dewar, Florida State Univ; Jin-Song von Storch, Max Planck Institute for Meteorology;

0800h **OS41E-2056** POSTER Acoustic Tomography Measurement of Internal Tides in Bali Strait: C Zhang, F Syamsudin, A Kaneko, X H Zhu

0800h **OS41E-2057** POSTER Characteristics of current in the Savu Strait measured by a subsurface mooring: J Wang, X Li, Y Li, Z Wang, D Surinati, C Corvianawatite, D Dirhamsyah, Z Arifin, D Yuan

0800h **OS41E-2058** POSTER Roles of tropical SST patterns during two types of ENSO in modulating wintertime rainfall over southern China: K Xu, W Wang, C Y Tam

0800h **OS41E-2059** POSTER The observed variations of the North Equatorial Countercurrent during the two types of El Niño in the Pacific Ocean: H Zhou, S Tan, H Liu, W Yang, Y Li, D Yuan

0800h **OS41E-2060** POSTER Distinct mechanisms of decadal subsurface heat content variations in the eastern and western Indian Ocean modulated by tropical Pacific SST: X Jin, Y O Kwon, C Ummenhofer, H Seo, Y Kosaka, J S Wright

0800h **OS41E-2061** POSTER CMIP5 model biases in the climatological mean state of the western Pacific warm pool: Y Yang, F Wang, J Zheng

0800h **OS41E-2062** POSTER Why has the subsurface Equatorial Pacific cooled in a warming world?: D E Lee, R Seager, N Henderson, M A Cane, A Kaplan

0800h **OS41E-2063** POSTER Significant Cooling in the Deep Philippine Sea during the recent Global Warming Hiatus: S Tan, D Yuan, H Zhou

0800h **OS41E-2064** POSTER Intraseasonal variability of the Equatorial Undercurrent in the Indian Ocean: G Chen, W Han, Y Li, D Wang, Q Xie, J Yao

0800h **OS41E-2066** POSTER Equatorial Pacific 1000-dbar Velocity and Isotherm Displacements from Argo Data: Beyond the Mean and Seasonal Cycle: H M Zanowski, G C Johnson

0800h **OS41E-2067** POSTER Quantifying the relative accuracy of different vertical velocity diagnostic methods in the South China Sea using a 1/48 degree MITgcm model output: S F Haque, F Primeau, H Lin
0800h OS41E-2068 POSTER Kuroshio intrusion in Luzon Strait in a quasi-global eddy-resolving ocean and air-sea coupled model: Q Yang, H Liu, P Lin

0800h OS41E-2069 POSTER Topography-induced shear instabilities in the Kuroshio: X Yu, J L Chen, M H Chang, Y J Yang, S Jan

0800h OS41E-2070 POSTER An optimized vertical mixing parameterization for its improved ocean and coupled simulations in the tropical Pacific: Y Zhu, R H Zhang

0800h OS41E-2071 POSTER Development of an Inter-basin Pacific-Indian Ocean Model: The Indonesian Throughflow (ITF) and the Circulation in the Banda Sea: L Liang, H Xue

0800h OS41E-2073 POSTER Dynamics of eddy generation in the central Bay of Bengal: X Cheng, J P McCreary Jr, B Qiu, Y DU, X Chen

0800h OS41E-2074 POSTER Poleward shift of the Pacific North Equatorial Current Bifurcation: H Guo, Z Chen

0800h OS41E-2075 POSTER Drivers and Hemispheric Asymmetry of the Pacific Shallow Meridional Overturning Circulation: M Zeller, S McGregor, P Spence

0800h OS41E-2076 POSTER The Application of the HM2000 Profiling Float in the western Pacific Ocean study: J Xiong, D Wang, L Zhang, C Ren, D Yuan

0800h OS41E-2077 POSTER Chinese HM2000 profiling float: An introduction and its perspectives: D Yuan, X WU, Z Liu, D Wang, S LU

0800h OS41F-2079 POSTER The development of a coupled data assimilation system using only surface pressure observations: potential for decadal climate prediction initialization: X Yang, T L Delworth, F J Zeng, W Cooke, L Zhang

0800h OS41F-2080 POSTER Efficient Parallel Implementation of Off-line and On-line Ensemble Data Assimilation Interfaces for MOM6: M Harrison, F Lu, A J Rosati, A Adcroft, T C Sluka

0800h OS41F-2081 POSTER Variable-resolution ocean model improves physics at reduced computational cost: K L Rosa, M R Petersen, L Van Roekel, X Asay-Davis, D Jaganathan


0800h OS41F-2083 POSTER Assessing the impact of assimilating atmospheric data on the ocean state estimation and climate forecast in an ensemble coupled data assimilation system: S Wu, Z Liu, S Zhang, R L Jacob, X Rong, Y Liu, F Lu

0800h OS41F-2084 POSTER Operational Ocean Reanalysis at NCEP: Upgrading from 1 degree MOM3 GODAS to ¼ degree MOM6 Hybrid-GODAS: Y Xue, T C Sluka, S Penny, J Carton, H C Lee

0800h OS41F-2085 POSTER The DOE E3SM coupled model version 1: Ocean Mean State biases and Historical Transient Variability: L P Van Roekel, J C Golaz, M E Maltrud, A K Turner, J D Wolfe, S R Brus

0800h OS41F-2086 POSTER Assimilation of satellite sea surface temperature data for a coupled ocean-atmosphere model: Q Tang, D Sidorenko, L Nerger

P41B (CC) 207A

Thursday 0800h

From the Earth to the Moons: Unraveling the Geologic, Oceanographic, and Chemical Mysteries of Ice and Ocean Worlds II (joint with C, OS)

Presiding: Catherine Walker, NASA Jet Propulsion Laboratory; Steve Vance, Jet Propulsion Laboratory; Christopher German, Woods Hole Oceanographic Institution; Britney Schmidt, Georgia Institute of Technology Main Campus;

0800h P41B-01 Convective Dynamics of Icy Ocean Worlds: K M Soderlund

0815h P41B-02 Layer formation in Europa’s subsurface ocean by double-diffusive convection: T Wong, U Hansen, T Wiesehöfer, W B McKinnon

0830h P41B-03 Downward oxidant transport through Europa’s ice shell in porosity waves: M A Hesse, S Vance, J Jordan

0845h P41B-04 Melt Transport through Ammonia-Rich Ice Shells: Implications for the Evolution of Triton: N P Hammond, E M Parmentier, A Barr

0900h P41B-05 Not so Solid: The Effects of Multiphase Reactive Transport Processes on the Spatiotemporal and Physicochemical Properties of Europa’s Ice Shell: J Buffio, B E Schmidt, C C Walker, C Huber

0915h P41B-06 The pH and Salinity of Ocean Worlds: when high-pressure ice separates the ocean from the rocky interior: A Levi, D D Sasselov

0930h P41B-07 The Plausibility of Silicate Volcanism on Europa’s Seafloor: C M Elder, M T Bland

0945h P41B-08 The Formation of Cryovolcanic Domes on Europa & Implications for Cryolava Rheology: L C Quick, L S Glaze, S A Fagents, K A Nunez, R A Beyer, L M Prockter

T41F (CC) Hall A-C (Poster Hall)

Thursday 0800h

Seafloor Geodesy: Measuring Deformation of the Seabed II Posters (joint with A, G)

Presiding: Martin Heesemann, Ocean Networks Canada; Kelin Wang, Geological Survey of Canada; Yusaku Ohta, Tohoku University; Matthew Cook, University of California, San Diego;

0800h T41F-0359 POSTER Northern Cascadia Subduction Zone Observatory: M Heesemann, K Wang, C D Chadwell, E Davis, K Moran, E Nissen, M Scherwath, Y Jiang

0800h T41F-0360 POSTER Development of seafloor real-time geodetic observatories in the Nankai Trough seismogenic zone for slow slip event detection.: E Araki, T Kimura, Y Machida, M A Zumberge, S Kodaira

0800h T41F-0361 POSTER Experiment of acoustic ranging from GNSS buoy for continuous seafloor crustal deformation measurement: K Tadokoro, N Kinugasa, T Kato, Y Terada

0800h T41F-0362 POSTER Development of analysis method for ocean bottom crustal deformation by continuous observation using marine GNSS buoy: N Kinugasa, K Tadokoro, Y Terada, T Kato, A Futamura

0800h T41F-0363 POSTER Effect of tidal internal wave on GNSS-Acoustic positioning: M Kido, R Matsui

0800h T41F-0364 POSTER The Underwater Precise Positioning Strategy of the combined GNSS and acoustic technology: Y Liu, G Chen, Y Liu, W Zhang

0800h T41F-0365 POSTER Multiparameter techniques for seafloor vertical deformation assessment in the Campi Flegrei volcanic area: G Iannaccone, S Guardato, G P Donnarumma, P De Martino, F Chierici, A La Rocca, G Macedonio, L Beranzoli

0800h T41F-0366 POSTER Ground motion and its ocean bottom amplification in subduction zones: Y Ito, Y Kaneko, S C Webb, L M Wallace, R Hino

0800h T41F-0367 POSTER APT: An easily deployed low-power tool for measuring acceleration, pressure, and temperature with wide dynamic range and bandwidth: J J Farrugia, E E Davis, M Heesemann, G Johnson, J M Paros, J M Leconte, S Coleman

0800h T41F-0368 POSTER Quantitative assessment of the “A-0-A” method based on the laboratory experiments: toward the accurate long-term OBP sensor drift estimation: Y Nishimagi, Y Ohta, R Hino, S Suzuki, M Sato, H Kajikawa, T Kobata

0800h T41F-0369 POSTER Reducing ‘Noise’ in Ocean Bottom Pressure Measurements in the Cascadia Subduction Zone: B He, D R Watts, K L Tracey, K A Donohue, M Wei
OS42A  (CC) 102AB
Thursday  1020h

**Physical Oceanography, Geodynamics, and Ecological Environment of the Western Pacific II**

_Presiding: Fan Wang_, Institute of Oceanology, Chinese Academy of Sciences; _Jianing Wang_, Institute of Oceanology, Chinese Academy of Sciences;

1020h **OS42A-01** Comparative Study of Trophic and Elemental Characteristics of Zooplankton in Deep (500-3500 m) and Shallow (0-200 m) Layers in the Western Tropical Pacific Ocean: _C Li_, L Chen

1035h **OS42A-02** Seamount megabenthic communities: Isolated or connected?: _K Xu_, Y Li, X Wu, J Zhang, Y Xu

1050h **OS42A-03** Phylogenetic position of Alvinocarididae (Crustacea: Decapoda: Caridea): New insights into the origin and evolutionary history of the hydrothermal vent alvinocarid shrimps: _Z Sha_

1105h **OS42A-04** Geodynamics of subducting plate faulting, fluid penetration and mantle serpentinization at the Western Pacific and global trenches: _F Zhang_, J Lin, Z Zhou

1120h **OS42A-05** Enhancement of interisland coral connectivity by the Kuroshio across the Nansei Archipelago, the East China Sea: _Y Uchiyama_, S Odani, M Kashima, Y Kamidaira, S Mitarai

1135h **OS42A-06** The “seamount effect” of phytoplankton in the tropical western Pacific Ocean: _X X Sun_, S Dai

1205h **OS42A-07** Vertical Distribution of Planktonic Ciliates in the Oceanic and Slope Areas of the Western Pacific Ocean: _W Zhang_

1205h **OS42A-08** A tale of two successors, interactions of _Bathymodiola platifrons_ and its methanotrophic endosymbionts give rise to the successful colonization in the deep-sea chemosynthetic extreme environments: _M Wang_, C Li, S Song

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P42B  (CC) 207A
Thursday  1020h

**From the Earth to the Moons: Unraveling the Geologic, Oceanographic, and Chemical Mysteries of Ice and Ocean Worlds III (joint with C, OS)**

_Presiding: Catherine Walker_, Woods Hole Oceanographic Institution; _Steve Vance_, Jet Propulsion Laboratory; _Christopher German_, Woods Hole Oceanographic Institution; _Britney Schmidt_, Georgia Institute of Technology Main Campus;

1020h **P42B-01** 200,000 KB Under The Sea: Combining High-speed Underwater Communications and Biogeochemical Sensors/Samplers for Deep-Sea Autonomous Exploration: _P R Girguis_, D Hoer, N Farr, S D Wankel, A Michel

1035h **P42B-02** Ocean World and Martian Subglacial Lake Exploration Technology: How close are we to Viable Flight Vehicles?: _W Stone_, K Richmond, B Hogan, V L Siegel, C Flesher, J Harman, L Lindzey, N Tanner


1120h **P42B-05** Reassessing the surface roughness of Europa using Galileo stereo images.: _G Steinbrügge_, J R Voigt, A Stark, B Giese, D M Schroeder, M Haynes, D A Young, C Grima, H Hussmann, D D Blankenship

1135h **P42B-06** Detection of Gravity Anomalies on Europa using Line-of-sight Gravity Profiles: _J H Roberts_, S Vance, A Ganse

1150h **P42B-07** On the genesis and detectability of organic chemistry in hypervelocity impact ice spectra.: _Z Ulibarri_, T Munsat, B Abel, R Dee, M Horanyi, D James, S Kempf, Z Kupihar, Z Sternovsky

1205h **P42B-08** Forming Ridges on Icy Satellites: Insights from Physical Analogue Modeling: _E J Leonard_, R T Pappalardo, A Yin
Thursday P.M.

A43C (CC) 146B

Extratropical and High-Latitude Storms, Teleconnections, Extreme Weather, and the Changing Polar Climate I (cosponsored by AMS: American Meteorological Society) (joint with C, GC, H, OS)

Presiding: Xiangdong Zhang, University of Alaska Fairbanks; Kent Moore, Univ Toronto; James Overland, NOAA Seattle;

1340h A43C-01 Blocking statistics in a varying climate: lessons from a ‘traffic jam’ model with aperiodic forcing: N Nakamura, A Paradise, C B Rocha, P Barpanda

1355h A43C-02 Dynamics of Arctic cyclones from a climate system perspective: A Solomon, O P G Persson, M Shupe, G de Boer, J M Intrieri

1410h A43C-03 Evaluating Indices of Blocking Anticyclones in terms of their Relations with Surface Hot Extremes: P W Chan, P Hassanzadeh, Z Kuang

1425h A43C-04 Investigating Wintertime Continental Cooling and Links with the “Warm Arctic/Cold Continents” Pattern: N C Johnson, X Yang, M Bushuk


1455h A43C-06 Probing the drivers of the Northern Hemispheric response to Arctic sea ice loss: P J Kushner, R Blackport, S E Hay

1510h A43C-07 The Arctic-midlatitude weather linkage: A potential vorticity barrier perspective: L Dehai

1525h A43C-08 The role of vortex weakening on Antarctic Peninsula cooling in recent decades: S J Kim, H Kwon, H Choi, B M Kim

A43O (CC) Hall A-C (Poster Hall)

Thursday 1340h

Local Processes and Global Impact of the Indo-Pacific Maritime Continent II Posters (joint with OS)

Presiding: Samson Hagos, Pacific Northwest National Laboratory; Kunio Yoneyama, Japan Ag for Mar Ear Sci & Tec; Eric Maloney, Colorado State University; Janet Sprintall, Scripps Institution of Oceanography;


1340h A43O-3331 POSTER Comparison of precipitation diurnal cycle observed in the coastal waters of Sumatra Island during two field campaigns in austral summer: Pre-YMC 2015 and YMC-Sumatra 2017: S Yoko, S Mori, F Syamsudin, U Haryoko, N Nurhayati, B Geng, M Katsumata, K Yoneyama

1340h A43O-3332 POSTER Convective activities over the southwestern coastal land of Sumatra island, Indonesia, during the Pre-YMC 2015 and YMC-Sumatra 2017 campaigns: S Mori, J I Hamada, P Wu, R Shirooka, S Yoko, K Yoneyama, U Haryoko, R Sulistyorwati, F Syamsudin

1340h A43O-3333 POSTER Diurnal Cycles of Convection Modulated by the Boreal Summer Intraseasonal Oscillation in the South China Sea Region: W Xu, S A Rutledge, K Chudler, T J Lang

1340h A43O-3334 POSTER Diurnal variation of convection over the Maritime Continent and its interaction with MJO: WRF numerical simulations with data assimilation at a cloud permitting scale: Z Pu, C Zhang

1340h A43O-3335 POSTER Diurnal variations of water vapor and precipitation around Maritime Continent during the YMC campaign period: M Fujita, S Mori, M Katsumata, S Yoko, K Yoneyama

1340h A43O-3336 POSTER Everything You Always Wanted to Know About the Banda Sea but Were Afraid to Ask: C Zhang

1340h A43O-3337 POSTER Impacts of the tropical Pacific cold tongue mode on ENSO diversity under global warming: Y Li, J Li, W Zhang, Q Chen, J Feng

1340h A43O-3338 POSTER Intraseasonal Variability in the diurnal cycle of precipitation in the Philippines: M B Natoli, E D Maloney

1340h A43O-3339 POSTER Investigating the characteristics and dynamics of rainfall in Singapore using a GPS-derived proxy to precipitable water.: N Z Wong, L Feng, E Hill

1340h A43O-3340 POSTER Malay Archipelago forest loss to cash crops and urban contributes to weaken the Asian summer monsoon: an atmospheric modeling study: S M Huang, L Y Oey
1340h A43O-3341 POSTER Mixed-Rossby Gravity Waves Observed in YMC-Sumatra 2017 and Their Impacts on the MJO: D Takasuka, S Masaki, S Yokoi

1340h A43O-3343 POSTER Possible Role of the Diurnal Cycle of Land Convection in the Barrier Effect on the MJO by the Maritime Continent: J Ling, C Zhang

1340h A43O-3344 POSTER Quality control of radiosonde observations obtained during the YMC campaign period: K Yoneyama, J Suzuki, M Fujita, U Haryoko, N Nurhayati, E O Cayanan, C Iglesia, R Shirooka, S Yokoi, T Kinoshita

1340h A43O-3345 POSTER Seasonal and Intraseasonal Ocean Variability in the Indonesian Seas from the High Resolution Ocean Reanalysis: M C Nieva Tamasiunas, T Shinoda, L Zamudio

1340h A43O-3346 POSTER Seasonal Variability of Sea Surface Temperature Gradients in the South Coast of Sri Lanka: G Pan, D Wang, T Gamage


1340h A43O-3348 POSTER The disruption of MJO propagation across the Maritime Continent: S M Hagos, C D Burleyson, C Zhang

1340h A43O-3349 POSTER The Diurnal Cycle of Column Water Vapor over Sumatra: G Torri, D K Adams, K Zhiming

1340h A43O-3350 POSTER The Importance of Topography to the Luzon Diurnal Cycle During a BSISO Event: E D Maloney, E M Riley Dellaripa, S M Saleeby, B A Toms, S C van den Heever

1340h A43O-3351 POSTER The NOAA Climate Variability and Predictability (CVP) Program Contributions to YMC and PISTON - Observing and Understanding Processes Affecting the Maritime Continent Region: S E Lucas

1340h A43O-3352 POSTER The Structure, Evolution, and Dynamics of Nocturnal Convective System in Sumatera, Indonesia: A Wandala, N Nurhayati, I S Faalih

1340h A43O-3353 POSTER Tropical synoptic-scale wave disturbances propagating across the Maritime Continent-Australian monsoon region.: Y Fukutomi

B43K (CC) Hall A-C (Poster Hall)
Thursday 1340h

Comparative Organic Geochemistry of Soils and Aquatic Sediments: A New View in the 21st Century II Posters (join with C, EP, H, OS)

Presiding: Thomas Bianchi, University of Florida; Elise Morrison, University of Florida; Nicholas Ward, Pacific Northwest National Laboratory; Timothy Filley, Purdue University;


1340h B43K-2980 POSTER Naturally-occurring bacteriogenic iron oxides as an unaccounted for component of aqueous carbon cycling: T D Sowers, K L Holder, E K Coward, D L Sparks


1340h B43K-2982 POSTER Organic carbon sorting by turbidity currents: a Bouma Sequence for geochemists: S Hage, V Galy, M Cartigny, S Açikalin, M A Clare, D R Gröcke, R G Hilton, J Hunt, G Lintern, D R Parsons, C Stacey, E J Sumner, P Talling

1340h B43K-2983 POSTER Disentangled Temperature Effects on Leaf Wax n-alkane Traits and Carbon Isotopic Composition from the Interferences of Phylogeny and Precipitation: M Shi, J Wang, W Guoan

1340h B43K-2984 POSTER Spectroscopic characterization of permafrost natural organic matter composition and reactivity from a sub-Arctic discontinuous region: K Gagne, J Guerard

1340h B43K-2985 POSTER Distribution and Source of Branched GDGTs in Surface Sediments from the Yangtze River Estuary to East China Sea: Y Chen, Z Cheng, W Xie, F Zheng, C Zhang

1340h B43K-2986 POSTER Assessment of carbon sources and microbial activities by carbon isotopic compositions of amino acids in sediments: Y F Cheng, P L Wang, L H Lin

1340h B43K-2987 POSTER Application of stable isotope ratio of n-alkanes for quantitative evaluation in mixing experiments using soil and algae sources; Implication for source fingerprinting in aquatic environments: H B Choi
1340h **B43K-2988 POSTER** Metal Accumulation in Biofilms on Stream Sediments Downstream of Abandoned Coal Mines near Taebaek, South Korea: **S J Yoon**, I H Oh, B C Yu, S J Cho

**G43E (CC) Hall A-C (Poster Hall)**

**Thursday 1340h**

**Integration of GNSS into Water Level Observation Networks: Priorities, Technologies, and Benefits I Posters**

*Presiding:* Nicole Kinsman, NOAA National Geodetic Survey; Adrià Schneck, NOAA Center for Operational Oceanographic Products and Services; Michael Craymer, Natural Resources Canada; Médéric Gravelle, LIENSs;

1340h **G43E-0741 POSTER** Vertical Motion and Control Network Stability Insights from Extended and Simultaneous GNSS Observation Campaigns at Five Tide Stations in Alaska: **N Kinsman**, N Wardwell, E Oppegard

1340h **G43E-0742 POSTER** Canada’s Height Modernization Project: Integrating a Single Common Vertical Datum (Canadian Geodetic Vertical Datum 2013) into the National Hydrometric Monitoring Network: **D Stiff**, J Wilcox, A Pietroniro

1340h **G43E-0744 POSTER** Incorporation of GNSS-based Vertical Control at Center for Operational Products and Services (CO-OPS) National Water Level Observation Network (NWLON) Stations: **A Schneck**

1340h **G43E-0745 POSTER** AccuTrace: A Sub-Centimeter Vertical Level Positioning System: **S Khanafseh**


1340h **G43E-0747 POSTER** Improving the Coastal Mean Dynamic Topography by Combining the Geodetic Approach from GNSS at Tide Gauges and Satellite Altimetry: **M Gravelle**, O B Andersen, R J Bingham, L Fenoglio-Marc, C W Hughes, P Knudsen, K Nielsen, S Padilla Polo


1340h **G43E-0749 POSTER** Annual dynamic sea level variations in the Red Sea observed with GNSS: **A O Alothman**, M S Bos, R M S Fernandes

1340h **G43E-0750 POSTER** Water level monitoring in different regions of the U.S. using GNSS-Reflectometry: **J Park**, S Kim, N Wardell

1340h **G43E-0751B POSTER** Modelling tropospheric delays in ground-based GNSS reflectometry – a sensitivity analysis: **T Nikolaidou**, M C Santos, F Geremia-Nievinski

1340h **G43E-0752 POSTER** GPS Tide Gauge on the Coast of Mississippi Pearl River: **U C Nwankwo**

**GH43C (CC) Hall A-C (Poster Hall)**

**Ocean Health, Environmental Hazards, and Social Justice: Information and Communication for Resilience and Sustainability of Geohealth Posters** (cosponsored by JpGU: Japan GeoScience Union) (joint with B, GC, OS, SI)

*Presiding:* Kalpana Chaudhari, Institute For Sustainable Development and Research, ISDR, India; Maria Cerreta, “Planning and Sustainable Design of the Port Areas”, The University of Naples ‘Federico II’; PT Karule, YCCE, Nagpur; Jennifer Whytlaw, Rutgers University New Brunswick;

1340h **GH43C-1468 POSTER** Exploring Integration of Physical Environment Factors into Community Health Planning: **J L Whytlaw**, J Herb, K Lowrie, A Jain

1340h **GH43C-1470 POSTER** Photochemical Dissolution and Degradation of Industrial Crude Oil and Natural Seep Oil in Seawater: **K Snyder**, N Mladenov, E Hoh

1340h **GH43C-1471 POSTER** Technology Justice and Communication of Flood Early Warnings: **M Budimir**, S Brown, A A Sneddon

1340h **GH43C-1472 POSTER** Photodegradation and toxicity assessment of the nonionic surfactant Triton X-100: **Y Seong HO**, J Eun Hea, Y Dong Jin

1340h **GH43C-1473 POSTER** Microplastics in surface sediments of South African beaches: **S S lakshmi Jeyakumar Jr**

1340h **GH43C-1474 POSTER** On the way to the Gyre: Modeling Impacts of Moving Plastic Debris on Marine Life: **O Aydin**
<table>
<thead>
<tr>
<th>Time</th>
<th>Poster ID</th>
<th>Title</th>
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<tbody>
<tr>
<td>1340h</td>
<td>NH43E-1089</td>
<td>POSTER Development of real-time tsunami prediction system using ocean-floor network system and its future plan: N Takahashi, K Imai, K Sueki, R Obayashi, K Emoto, T Tanabe, T Baba, Y Kaneda</td>
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<tr>
<td>1340h</td>
<td>NH43E-1090</td>
<td>POSTER Speeding up and boosting tsunami warning in Chile: M Fuentes, S Arriola, S Riquelme, B Delouis, J A Campos</td>
</tr>
<tr>
<td>1340h</td>
<td>NH43E-1091</td>
<td>POSTER Automatic finite earthquake source inversion using real-time GNSS and teleseismic data for tsunami early warning: K Chen, Z Liu, Y T Song</td>
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<tr>
<td>1340h</td>
<td>NH43E-1092</td>
<td>POSTER Towards tsunami-safer communities in the New Zealand: Evaluating real events, exercises, drills and awareness programs.: D M Johnston</td>
</tr>
<tr>
<td>1340h</td>
<td>NH43E-1093</td>
<td>POSTER Tsunami Data Assimilation of OOS data around New Zealand: Y Wang, T Maeda, K Satake, M Heidarzadeh, H Su, A F Sheehan, A R Gusman</td>
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<td>1340h</td>
<td>NH43E-1094</td>
<td>POSTER Ensemble Kalman Filter Outperforms Optimal Interpolation in Tsunami Waveform Assimilation: Y Yang, E M Dunham, G Barnier, M Almquist</td>
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<tr>
<td>1340h</td>
<td>NH43E-1095</td>
<td>POSTER Modeling the Potential Tsunami Effects on Patong Beach, Phuket, Thailand: K Veeranuntawet, P Pananont, K Furlong</td>
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<td>1340h</td>
<td>NH43E-1096</td>
<td>POSTER Large eddy simulation of tsunami-induced turbulent coherent structures in a 3D wave basin: Y Kim, N Kalligeris, T J Hsu, P J Lynett</td>
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<tr>
<td>1340h</td>
<td>NH43E-1097</td>
<td>POSTER Seismogeodesy for Local Tsunami Warnings: Case Studies from the Mexico Subduction Zone: D Golriz, D Goldberg, Y Bock, X Perez-Campos, S K Singh</td>
</tr>
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<td>1340h</td>
<td>NH43E-1099</td>
<td>POSTER Comparison of initial-analysis performance of earthquake early warning using observations near epicenters: E H Hwang, M Park, D I Seo, E Jo, D Lee, J Lee</td>
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<td>1340h</td>
<td>NH43E-1100</td>
<td>POSTER Determination of geotechnical and rheological properties of clay-rich soils in the Ullung Basin, East Sea: S W Jeong</td>
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**Presiding:** Y Tony Song, Jet Propulsion Laboratory; Sergio Barrientos, Universidad de Chile; Kenji Satake, University of Tokyo;

OS43A-02 Waveform Filtering and Modification for SAR Altimetry Missions in Coastal Areas: K H Tseng, W H Ma, C Y Kuo, C K Shum

OS43A-03 The Preliminary Gravity Field Derived From HY-2A Altimetry over the Taiwan Strait: Q Liu, K Xu, M Jiang

OS43A-04 An Evaluation of Fully Focused SAR Altimetry for Coastal Applications: A Egido, D C Vandemark, H Feng

OS43A-05 Application of fully-focused SAR altimetry to the Wadden Sea: M Kleinherenbrink, M Naeije, C Slobbe, P Hoogeboom

OS43A-06 Retrieving altimeter data in the nearshore region by waveform decontaminating and retracking techniques: a case study in the Black Sea: H Wang, Y Chu, X Zou

OS43A-07 Integrating recent SAR, SARin and Ka band altimetry for improved mean sea surface determination in the coastal zone.: O B Andersen

OS43A-08 Improved Retrieval Methods for Sentinel-3 SAR Altimetry over Coastal and Open Ocean and recommendations for implementation: ESA SCOOP Project Results: L Fenoglio-Marc, D Cotton, J Benveniste, T Moreau, E Varona, C Gommenginger, M Cancet, M Naeije, J Fernandez, A G Shaw, M Restano, A Ambrozio

OS43B (CC) Hall A-C (Poster Hall)

Thursday 1340h

Temporal Variability in Oceanic Mesoscale Activity, from Seasonal to Multidecadal Records Posters  (joint with A, GC)

Presiding: Andrew Delman, Jet Propulsion Laboratory, California Institute of Technology; Angel Amores, Mediterranean Institute for Advanced Studies; Julius Busecke, Princeton University;

OS43B-02 A Stable Gulf Stream in the Past Two Decades: L Chi, C Wolfe, S Hameed

OS43B-03 Accelerated sea level changes along the United States East Coast during 2010-2015: R M Domingues, G J Goni, M O Baringer, D Volkov

OS43B-04 River-discharge effects on United States Atlantic and Gulf coast sea-level changes: C G Picuch, A Kemp, K Bittermann, R M Ponte, C M Little, S E Engelhart, S J Lentz

OS43B-05 On Two Types of Impacts of Hurricanes on Coastal Sea Level and Flooding: Direct Storm Surges Versus Remote Influence Through Disruption of the Gulf Stream Flow: T Ezer

OS43B-06 Assessing the uncertainties in the historical reconstructions of steric sea level changes: J Pfeffer, P Tregoning, A P Purcell, S Zheng, M Sambridge

OS43B-07 Downscaling Regional Sea Level Change Projections in the North Atlantic: A Koehl, F Siegismund, D Stammer

OS43B-08 Uncovering Long-term Regional Trends in the Satellite Altimeter Record: B Hamlington, J Fasullo, R S Nerem

OS43B-09 Improved elevation data more than doubles estimates of global coastal vulnerability to sea level rise: S A Kulp, B Strauss

OS43B-10 A hybrid reconstruction of 20th century regional and global sea level change: S Dangendorf, C Hay, F M Calafat, M Marcos

OS43B-13 A hybrid reconstruction of 20th century regional and global sea level change: S Dangendorf, C Hay, F M Calafat, M Marcos

OS43C-2092 POSTER Decadal Variability of the Eighteen Degree Water derived from the Northwest Atlantic Regional Climatology: A V Mishonov, D Seidov, J R Reagan, A R Parsons

OS43C-2093 POSTER Regional Ocean Climatologies with Mesoscale Resolution derived from the World Ocean Database: D Seidov, A V Mishonov, J R Reagan, O Baranova, T Boyer, S L Cross, A R Parsons, K W Weathers

OS43C-2094 POSTER Quantifying Isopycnal Heave Using Dynamic Depth Warping: M V Chung, G Gebbie, P J Huybers

OS43C-2098 POSTER Study of Primary Productivity and Chlorophyll variations in the north Indian Ocean using global biogeochemical model simulations and observations: C Kalyani Devasena, M K Sharada, P S Swathi


OS43C-2101 POSTER Travelling eddies in the South China Sea - multi-decadal statistics and large-sale conditioning: H von Storch, M Zhang, S Tang, X Chen, D Wang

OS43C-2104 POSTER Volume and transport of eddy-trapped mode water in the eastern subtropical North Pacific: Z Yang, Y Luo

OS43C-2105 POSTER California Undercurrent eddy characteristics identified from a Lagrangian drifter: P C Chu

OS43D-2107 POSTER Numerical simulation of the Kuroshio intrusion into the South China Sea by a passive tracer: T Liu

OS43D-2108 POSTER 3-D Thermohaline Structure of Mesoscale Eddies in the Mid-latitude Frontal Zone Revealed by Satellite and In Situ Observations: R Hu, X Lin, L Yu

OS43D-2109 POSTER Analysis on 3D structures of oceanic mesoscale eddies in the North Pacific by using a velocity-based eddy detection algorithm: N Okada, Y Uchiyama, C Dong

OS43D-2110 POSTER Application of DNA barcoding to deep-sea amphipods around cobalt-rich ferromanganese crusts and a selection of candidate species for connectivity analysis: A Iguchi, M Nishijima, Y Yoshioka, A Miyagi, R Miwa, A Suzuki, Y Tanaka, T Matsui, Y Igarashi, N Okamoto

OS43D-2111 POSTER Biogeographic patterns of microbial eukaryotes from surface water to abyssal sediment in the Western Pacific Ocean: F Zhao, K Xu, P Huang, T Zhou

OS43D-2112 POSTER Deep Ocean Dynamics and Their Connection with Upper Ocean Features: J Wang

OS43D-2113 POSTER Decadal variability of the Mindanao Current during 1960-2010: J Duan, F Wang, Y Li

OS43D-2114 POSTER Effect of remote tidal mixing on the Pacific meridional overturning circulation: T Kawasaki, H Hasumi

OS43D-2115 POSTER In situ detections of laser Raman spectroscopy to the rocks from deep-sea hydrothermal area and cold seep area: S Xi, X Zhang, Z Luan, Z Du, L Li, B Wang, C Lian, C Li, J Yan

OS43D-2116 POSTER In situ Quantitative Detection of Fluids Erupting from the Cold Seep Vents and Laying in the Chemosynthetic Communities in the South China Sea using Raman spectroscopy: Z Du, X Zhang, Z Luan, M Wang, L Cao, S Xi, L Li, B Wang, C Lian, C Li, J Yan

OS43D-2117 POSTER Investigating the Transport Pathway of Mysterious Deep Cesium from Fukushima: E Cedarholm, I Rypina, A M Macdonald, S Yoshida

OS43D-2119 POSTER Multi-azimuth exploration of the physicochemical environment around a cold seep in the South China Sea-- from sparse to luxuriant: L Cao, X Zhang, C Li, C Lian, Z Du, M Wang, L Li, S Xi, B Wang

OS43D (CC) Hall A-C (Poster Hall)

Thursday 1340h

Physical Oceanography, Geodynamics, and Ecological Environment of the Western Pacific Posters

Presiding: Fan Wang, Institute of Oceanology, Chinese Academy of Sciences; Jianing Wang, Institute of Oceanology, Chinese Academy of Sciences;

OS43D-2106 POSTER From Coast Sea to Deep Ocean: Center for Ocean Mega-Science, Chinese Academy of Sciences: F Wang
1340h OS43D-2120 POSTER In situ quantitative Raman detection of dissolved CO$_2$, CH$_4$ and SO$_4^{2-}$ in Okinawa Trough hydrothermal vent fluids: L Li, X Zhang, Z Luan, Z Du, S Xi, B Wang, L Cao, C Lian, C Li, J Yan

1340h OS43D-2121 POSTER Numerical Study of Flow Passing Through the Caiwei Seamounts, Deep Seamounts in the Northwest Pacific Ocean: X Jiang, C Dong, C Wang, D Xu

1340h OS43D-2122 POSTER Nutrients Characteristics in Three Seamount Areas of the Tropical Western Pacific Ocean: Q Wang, J Ma, J Song, X Li

1340h OS43D-2123 POSTER Ocean hydrography and its sedimentary effects in the Yap seamount (Y3) sea area of the Western Pacific in autumn 2014: Z Wang, X SHI, W GAO

1340h OS43D-2124 POSTER Seasonal and Interannual Variations in the Two-way Intrusions of the Kuroshio and Shelf Water in Southern East China Sea: P Qi

1340h OS43D-2125 POSTER The 2017 Kuroshio large meander and sporadic Kuroshio-water intrusion reproduced by a new operational system for monitoring and forecasting coastal and open ocean states around Japan: N Hirose, N Usui, K Sakamoto, H Tsujino, G Yamanaka, H Nakano, S L Urakawa, T Toyoda, Y Fujii, N Kohno

1340h OS43D-2127 POSTER The Influence of Aerosol Optical Thickness and Mesoscale Eddies on Chlorophyll-a: X Zhang, Y Xu

1340h OS43D-2128 POSTER Tropical Meridional Overturning Circulation Observed by Subsurface Moorings in the Western Pacific: L Song, Y Li, J Wang, F Wang

1340h OS43D-2129 POSTER Variabilities of Temperature and Current in the East China Sea Related to the Variability of the Kuroshio in the Southern East China Sea: H S Min, C Hwang

1340h OS43D-2130 POSTER Vertical eddy heat flux beneath the sea surface: G Chen, X D Shang, Y Qi, L Yu

1340h OS43D-2131 POSTER Volume and Transport of Eddy-trapped Mode Water South of Kuroshio Extension: F Shi, Y Luo, L Xu

1340h OS43D-2132 POSTER Water exchange between Kuroshio and East China Sea shelf from a whole stream tracing method: Y Liu

OS43E (CC) Hall A-C (Poster Hall)

Thursday 1340h

Unprecedented Bering Sea Ice Extent and Impacts to Marine Ecosystems and Western Alaskan Communities Posters (joint with C, GH)

Presiding: Emily Osborne, NOAA Climate Program Office; Molly McCammon, Alaska Ocean Observing System; Olivia Lee, University of Alaska Fairbanks;

1340h OS43E-2133 POSTER It's all different now. Implications of the unprecedented Bering Sea conditions and where we go from here.: A Holman, M McCammon, E Osborne, G Sheffield, R Thoman

1340h OS43E-2134 POSTER Causes of Sea ice Extremes in the Pacific Arctic During Winter and Spring 2018: M Wang, J E Overland, P J Stabeno

1340h OS43E-2136 POSTER The Seasonal Cycle on the Southeast Bering Sea shelf: Three Years of Observations from an Innovative Prawler (Profiling Crawler) Mooring: C A Ladd, S W Bell, C W Mordy, P J Stabeno

1340h OS43E-2137 POSTER Analysis of Meltpond Distribution on Sea Ice across a Distributed Biological Observatory in the Pacific Arctic Region using MODIS Satellite Imagery, 2000–2018: L Young, K E Frey

1340h OS43E-2138 POSTER The Changing Oxygen Isotope Composition of the Bering Sea Contribution to the Arctic Ocean Upper Halocline Provides an Independent Opportunity for Constraining an Increasing Freshwater Flux Through Bering Strait: L W Cooper, C Magen, J M Grebmeier

1340h OS43E-2139 POSTER Light transmittance through the ocean water column following record low sea ice extents across a Distributed Biological Observatory in the Pacific Arctic Region: K E Frey, M I Santiago, L N C Young, J M Grebmeier, L W Cooper

1340h OS43E-2140 POSTER Biomarkers used to determine past and present impacts of declining sea ice on Pacific Arctic food webs: C Wegner, L Cooper, J M Grebmeier, T A Brown

1340h OS43E-2141 POSTER Changes in Population Dynamics of a Key Food Web Component, the Bivalve Macoma calcarea in the Northern Bering Sea from 1998-2015 and its Relation to Rapidly Changing Environmental Parameters: C Goethel, J M Grebmeier, L W Cooper
1340h OS43F-2142 POSTER Survival and Breeding Response of a Sea-ice Obligate Seabird Following the Unprecedented Low Extent of Winter Ice in the Bering Sea: G Divoky, D C Douglas, C Barbraud

OS43F (CC) Hall A-C (Poster Hall)
Thursday 1340h
Biogeochemical Cycling in Estuaries, Coastal Waters, and Their Watersheds: Natural Variability, Response to Land Use and Climate Change, and Management Implications V Posters (joint with B, GC, H)

Presiding: Raymond Najjar, The Pennsylvania State University; Ming Li, Univ of Maryland Ctr for Env.; Zach Easton, Virginia Tech; Marjorie Friedrichs, Virginia Inst Marine Science;

1340h OS43F-2144 POSTER Changes of Zhe-Min Coastal Water in the Taiwan Strait in Winter during Past Thirty Years: C Zhang, Y Huang, W Ding

1340h OS43F-2145 POSTER Chlorophyll and Nutrient Dynamics In San Francisco Bay: A Model Study: F Chai, Z Wang, R C Dugdale, Y J Zhang, Y Chao

1340h OS43F-2146 POSTER Terrestrial Organic Matter as a Subsidy to the Lower Aquatic Food Web in Estuarine Habitats: J Harfmann, T Kurobe, B A Bergamaschi, S Teh, P Hernes

1340h OS43F-2147 POSTER Which factors contribute to zooplankton congregation over Stellwagen Bank?: X Zhai, G Flierl, J J McCarthy

1340h OS43F-2148 POSTER A simple box model of nutrient fluxes in the St. Lawrence Estuary: M Jutras, A Mucci, B Sundby, C Dufour

1340h OS43F-2150 POSTER Modern biogenic and diatom surface sediment distributions in Monterey Bay, California: V Schwartz, J A Addison, J A Barron, J A Carlin, A J Wagner

1340h OS43F-2152 POSTER Agricultural Conservation Practices Can Help Mitigate the Impact of Climate Change: M B Wagena, Z M Easton

1340h OS43F-2154 POSTER Response of mangrove soil respiration to climate change: M Arnaud, A J Baird, P J Morris, H Dang

1340h OS43F-2156 POSTER A Unique Whole Ecosystem Manipulation of Estuarine Dissolved Oxygen and Biogeochemistry: L Harris, J M Testa, L Lapham, A Heyes

1340h OS43F-2157 POSTER Towards predicting the “largest” Louisiana hypoxic area: an analysis of a coupled physical-biogeochemistry model results from 1985 - 2018: Y Feng, S F DiMarco, K Balaguru, H Xue

1340h OS43F-2158 POSTER Explaining the lingering bomb carbon observed in the surface ocean: K J Sparrow, J Chanton

1340h OS43F-2159 POSTER Integrating dissolved oxygen from ocean observing systems for ecosystem and variability studies: H E Garcia, T Boyer, J R Reagan

1340h OS43F-2160 POSTER Phyttoplankton Biomass, Primary Production and Chemoautotrophic Production of the Western Black Sea in April 2003: J W Murray, D Ediger, A Yilmaz

V43G (CC) Hall A-C (Poster Hall)
Thursday 1340h
New Insights into Oceanic Spreading Centers from Seafloor Observatories Posters (joint with B, OS, S, T)

Presiding: Christian Baillard, School of Oceanography, University of Washington; Thibaut Barreyre, K.G.J. Centre for Deep Sea Research, University of Bergen; Marjolaine Matabos, IFREMER; David Butterfield, University of Washington, NOAA/PMEL;

1340h V43G-0194 POSTER Geological-geochemical exploration methods for hydrothermal deposits prospecting in the Southwest Indian Mid-Ocean Ridge: X Su, S Lv, H Li, C Tao

1340h V43G-0195 POSTER High-resolution magnetic exploration of Longqi hydrothermal field (49.6°E) on SWIR: W Tao, C Tao, M Tivey, J J University, Z Jinhui

1340h V43G-0196 POSTER In situ primary production in Mid-Ocean Ridges hydrothermal plumes: insights from biogeochemical modelling: C Cathalot, A Perhirin, F Chever, G Roullet, J Gula, A Godfroy, E Roussel, P M Sarradin


1340h V43G-0198 POSTER Hydrothermal plumes along the East Pacific Rise, 1.9°N-6.1°S: Plume distribution and relationship to the apparent magmatic budget: S Chen, C Tao
1340h V43G-0199 POSTER Geochemical Diversity of Lavas from the 8°20’N Seamount Chain Provides Insights into Seamount Evolution from a Heterogeneous Mantle: E M Conrad, M R Perfit, M Anderson, V D Wanless, D J Fornari, P M Gregg

1340h V43G-0200 POSTER Off-Axis Seamount Chain Lavas at 8°20’N Reveal a Spatially Complex, Heterogeneous Mantle Near the East Pacific Rise: V D Wanless, M Anderson, M R Perfit, P M Gregg, D J Fornari, E E McCully, W J Ridley

1340h V43G-0201 POSTER Transition from rifting to seafloor spreading behind the tip of the westward propagating Cocos-Nazca spreading center: D K Smith, E M Klein, H Schouten, R Parnell-Turner, J R Cann, C Dunham, G Alodia, I Blasco, B W Wernette, D Zawadzki, E Latypova, S Afshar, S Curry

1340h V43G-0202 POSTER Initial rifting to seafloor spreading: geochemical and petrologic variations in basalts from the Cocos-Nazca Spreading Center: B W Wernette, E M Klein, D K Smith, H Schouten, R Parnell-Turner, J R Cann, D Zawadzki, S Curry, I Blasco, C Dunham, S Afshar, G Alodia, E Latypova

1340h V43G-0203 POSTER A Comparison of Viral Populations Inhabiting Atlantic and Pacific Oceanic Crustal Fluids: O D Nigro, B J Tully, S Jungbluth, J A Huber, M S Rappe, G Steward


1340h V43G-0205 POSTER Near seafloor dynamics of mid-ocean ridge hydrothermal flows and formation of diffuse vents at the Lucky Strike hydrothermal field, mid-Atlantic ridge.: B Wheeler, M Cannat, F J Fontaine, V Chavagnac

1340h V43G-0206 POSTER In-situ and Acoustic Observations of Hydrothermal Discharge at ASHES Vent Field: preliminary results from an OOI Cabled Array Case Study: K G Bemis, G Xu, L N Germanovich, D R Jackson, A N Ivakin, A Marburg

1340h V43G-0207 POSTER Melt Supply Variations at Slow-Spreading Ridges Control Mode of Upper Crustal Construction: Constraints from Distribution of Volcanic Facies along the Lucky Strike Segment (Mid-Atlantic Ridge): C Gini, J Escartin

1340h V43G-0208 POSTER Morphological characteristics of off-axis volcanism in the vicinity of the easternmost segment of the Australian-Antarctic Ridge: H Choi, S S Kim, S H Park

1340h V43G-0209 POSTER S-Wave Anisotropy under Axial Seamount: C Baillard, W S D Wilcock, M Tolstoy, F Waldhauser

1340h V43G-0210 POSTER New seismic observations of multi-level magma sills beneath the axis of the Juan de Fuca Ridge: S M Carbotte, M Marjanovic, J P Canales, M R Nedimovic


1340h V43G-0212 POSTER Magmatic Source Estimates at Axial Seamount for the 2015 Eruption From Seafloor Deformation and Seismic Data: W Hefner, S L Nooner, W Chadwick, D W Caress, D R Bohnenstiehl, J B Paduan, D A Clague

1340h V43G-0213 POSTER Seismo-Tectonic Monitoring of the Endeavour Ridge Segment: Recent and Future Expansion of Ocean Networks Canada's NEPTUNE Observatory on the Juan de Fuca Ridge: J J Farrugia, M Heesemann, W S D Wilcock, C Baillard, L A Coogan, S F Mihaly, M Scherwath

1340h V43G-0214 POSTER Current Dynamics over a Mid-Ocean Ridge: Observations from Cabled ADCPs at the Endeavour Segment of the Juan de Fuca Ridge: S F Mihaly, M Wang, R Thomson


1340h V43G-0216 POSTER New Long-Term Subseafloor Pressure Records from the IODP Expedition 336 CORKs at North Pond, Western Flank of the Mid-Atlantic Ridge: K Becker, C G Wheat, H W Villinger, E Davis

1340h V43G-0217 POSTER Relationships between Na-Ca exchange, reaction temperature, and Sr isotopes in deepsea hydrothermal fluids: N J Pester, S T Brown, M A Antonelli, D J DePaolo

OS43G  (MM) Marquis 5

Thursday  1440h

The William S. and Careyln Y. Reeburgh Lecture  (Virtual Session)

Presiding: Eileen Hofmann, Old Dominion University; Robert Anderson, Lamont-Doherty Earth Obs;

1440h Introductory Remarks:
A44F (CC) 152B
Thursday 1600h

Role of Ocean–Atmosphere Interaction in Regional Climate Variability and Change I (cosponsored by AMS: American Meteorological Society, EGU: European Geosciences Union) (joint with GC, OS)

**Presiding:** Shoshiro Minobe, Hokkaido University; Matthew Collins, University of Exeter; Shang-Ping Xie, Scripps Institution of Oceanography;

1600h **A44F-01** Distinct tropical climate response to subpolar energy perturbations from the Northern or Southern Hemisphere: S M Kang, S P Xie, Y Shin, B Xiang, M F Stuecker, M Hawcroft, Y T Hwang

1615h **A44F-02** Remote Responses of Atmospheric and Oceanic Heat Transports to Climate Forcing: Compensation Mode and Collaboration Mode: Z Liu, C He, F Lu

1630h **A44F-03** Space and Time-scales of air-sea interaction: where does the ocean-force the heat fluxes?: J Small, F Bryan, S Bishop, R A Tomas

1645h **A44F-04** Observational evidence of European summer weather patterns predictable from spring: A Osso, R Sutton, L Shaffrey, B Dong

1700h **A44F-05** Regional atmospheric hydrological cycle responses to the Red Sea evaporation: O G Zolina, A Dufour, S Gulev, G Stenchikov

1715h **A44F-06** Relative role of turbulent and radiative fluxes in the North Atlantic Ocean heat budget variability on long-time scales: S Gulev

1730h **A44F-07** North Atlantic and Southern Ocean Heat Uptake: Structure and Model Uncertainty: J R Shi, L D Talley, S P Xie

1745h **A44F-08** Do the modern AMOC and PMOC form a natural climate seesaw?: A Hu, G A Meehl, G Strand, N A Rosenbloom

OS44A (CC) 101
Thursday 1600h

Improvements in Synoptic, Subseasonal to Seasonal, and Decadal Projections Through Next-Generation Ocean Model Developments, Observations, and Coupled Data Assimilation I (joint with A, IN)

**Presiding:** Jessie Carman, NOAA Office of Oceanic and Atmospheric Research; Luke Van Roekel, Los Alamos National Laboratory; Santha Akella, Global Modeling and Assimilation Office (GMAO), NASA Goddard Space Flight Center; Bradford Johnson, Trivector Services/NOAA OAR;

1600h **OS44A-01** Revisiting Ice / Ocean Coupling Strategies for Stability, Efficiency, and Physical Consistency: R Hallberg, A Adcroft

1615h **OS44A-02** NCEP’s Hybrid-GODAS: A Path towards an Operational “Strongly Coupled” Ocean/Ice/Wave Data Assimilation System: T C Sluka, S Penny

1630h **OS44A-03** Evaluating the extended range ocean forecast in the NRL Coupled Atmosphere-Ocean-Sea Ice Forecast System: J G Richman, J F Shriver, E J Metzger, J D Dykes, L Zamudio, P J Hogan

1645h **OS44A-04** The Importance of Better-represented Tropical Atmosphere in Climate Models on Extratropical Seasonal Climate Predictability: F J Zeng, X Yang, T L Delworth

1700h **OS44A-05** Stability of strongly and weakly coupled data assimilation: error correlation cut-off: E Kalnay, T Yoshida

1730h **OS44A-07** Sea ice data assimilation in SODA3 reanalysis.: G A Chepurin, J Carton, L Chen

1745h **OS44A-08** Initialization for seasonal-to-decadal prediction in GFDL’s SPEAR system using coupled data assimilation: F Lu, A J Rosati, M Harrison, T L Delworth, W Cooke

OS44B (CC) 102AB
Thursday 1600h

Sea Level Change and Coastal Impacts and Flooding II (joint with C, C, G, G, PP, PP, SI, SI)

**Presiding:** Emily Smith, NOAA Washington DC; Detlef Stammer, University of Hamburg; Philip Thompson, JIMAR, University of Hawaii; Kathleen White, US Army Corps of Engineers;
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Code</th>
<th>Title</th>
<th>Authors/Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1600h</td>
<td>OS44B-01</td>
<td>Sea Level Rise, Pending Decisions, and Questions from the Carolinas:</td>
<td>K Dow</td>
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<td>1615h</td>
<td>OS44B-02</td>
<td>Coastal Flooding Risks on the Rise:</td>
<td>M Ghanbari, M Arabi,</td>
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<tr>
<td>1625h</td>
<td>OS44B-03</td>
<td>CoSMoS: a comprehensive assessment of coastal hazards due to climate change:</td>
<td>L H Erikson, P</td>
</tr>
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<td>1635h</td>
<td>OS44B-04</td>
<td>Said the planner to the scientist, “Why mitigate, when we can adapt?” : Assessing future flood damages of coastal cities to reduce risk from sea-level rise and storm surges.</td>
<td>L P Jackson, T Wahl, S Jevrejeva</td>
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<tr>
<td>1645h</td>
<td>Q &amp; A</td>
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<tr>
<td>1650h</td>
<td>OS44B-05</td>
<td>A multiple methods vertical land movement analysis to support sea level rise planning for Washington State:</td>
<td>I M Miller, T Newton, R J Weldon, G S Mauger, D A Schmidt, E Grossman, H Morgan</td>
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<tr>
<td>1700h</td>
<td>OS44B-06</td>
<td>Groundwater responses to future sea level rise in California:</td>
<td>K M Befus, P Barnard, D Hoover, P W Swarzenski, K D Kroeger, C Voss</td>
</tr>
<tr>
<td>1710h</td>
<td>OS44B-07</td>
<td>Comparison of Sea Level Rise and Storm Surge Modeling in Three Coastal National Parks to Facilitate Adaptation Strategies.:</td>
<td>R E Lewis</td>
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<td>1720h</td>
<td>Q &amp; A</td>
<td></td>
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<tr>
<td>1725h</td>
<td>OS44B-08</td>
<td>Small Pacific and Indian Ocean Islands among first hit by Sea-level Rise: R V D Wal, T Frederikse, E Lambert, M K Buchanan, R E Kopp, M Oppenheimer, D Rasmussen</td>
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<td>1735h</td>
<td>OS44B-09</td>
<td>Regional Sea Level Changes in the Ganges-Brahmaputra Delta Since 1970s: M Becker, F Papa, M Karpytchev, A S Islam, S Calmant</td>
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<td>1745h</td>
<td>OS44B-10</td>
<td>Sea level rise in the Samoan islands escalated by viscoelastic relaxation after the 2009 Samoa-Tonga earthquake: S C Han, J M Sauber, F F Pollitz, R D Ray</td>
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**T44C (MM) Liberty N-P**

**Thursday 1600h**

**Seafloor Geodesy: Measuring Deformation of the Seabed**

*Presiding: Martin Heeemanner, Ocean Networks Canada; Kelin Wang, Geological Survey of Canada; Yusaku Ohta, Tohoku University; Matthew Cook, University of California, San Diego;*

1600h **T44C-01** Temporal variation of seafloor movement fields along the Nankai Trough suggested by the GNSS-A: Y Yokota, T Ishikawa

1615h **T44C-02** Expansion of GPS-Acoustic Arrays offshore the Cascadia and Alaska Subduction Zones: C D Chadwell, D A Schmidt, S C Webb, S L Nooner, T L Ericksen, B A Brooks, J H Foster

1630h **T44C-03** Recent progresses in GNSS-Acoustic positioning technique and results in the off-Tohoku region, Japan: F Tomita, C Honsho, M Kido

1645h **T44C-04** Direct path ranging on seafloor: measuring precise and continuous horizontal movement: R Yamamoto, M Kido, R Hino

1700h **T44C-05** Seafloor geodesy calibration from sidescan sonar surveys of the Ayu Trough: J B DeSanto, D T Sandwell, C D Chadwell


1730h **T44C-07** A mobile pressure gauge for calibrating pressure sensors on the seafloor with a resolution less than 1 hPa: Y Machida, S Nishida, T Kimura, E Araki

1745h **T44C-08** Calibrated pressure measurements for seafloor geodesy: M J Cook, G S Sasagawa, M A Zumberge
Session & Paper Numbering

Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation. Example: A21A-01 = Atmospheric Sciences, Tuesday, AM, concurrent session A, first paper in that session.

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
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<tbody>
<tr>
<td>1 = Monday</td>
<td>1 = AM 0800–1000</td>
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<tr>
<td>2 = Tuesday</td>
<td>2 = AM 1020–1220</td>
</tr>
<tr>
<td>3 = Wednesday</td>
<td>3 = PM 1340–1540</td>
</tr>
<tr>
<td>4 = Thursday</td>
<td>4 = PM 1600–1800</td>
</tr>
<tr>
<td>5 = Friday</td>
<td>5 = PM 1815–1915</td>
</tr>
</tbody>
</table>

The program is current as of 06 December 2018. 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/fm18/meetingapp.cgi/Home for updates.

Friday A.M.

A51E  (CC) 152B

Friday 0800h

Role of Ocean–Atmosphere Interaction in Regional Climate Variability and Change II

(cosponsored by AMS: American Meteorological Society, EGU: European Geosciences Union) (joint with GC, OS)

Presiding: Shang-Ping Xie, Scripps Institution of Oceanography; Olga Zolina, Laboratoire de glaciologie et géophysique de l'environnement; Matthew Collins, University of Exeter;

0800h A51E-01 Interdecadal variability of the extratropical ENSO teleconnection in boreal summer. C O'Reilly, T Woollings, L Zanna, A Weisheimer
0815h A51E-02 Interannual oscillatory modes in the CESM model and the NCEP-NCAR reanalysis: regional and global: M Ghil, Y Feliks, J Small

0830h A51E-03 Inherent Century-Scale Variability in Tropical Pacific SSTs and their Influence on Western US Hydroclimate: C Evans, T Ault, B Benton, S Coats, C Carillo, M J Sullivan

0845h A51E-04 A new coupling mechanism between Southeast Indian Ocean and tropical Pacific: L Zhang, W Han

0900h A51E-05 Revisiting the ENSO influence on the Atlantic Nino: H Tokinaga, I Richter, Y Kosaka

0915h A51E-06 Westward Wind Changes over the Tropical and Mid-latitude Pacific in the Past Three Decades Driven by the Inter-basin Teleconnections: X Li

0930h A51E-07 The Dominant Role of the Atmospheric Component of Coupled Models in ENSO Amplitude Simulations: L Li

0945h A51E-08 Forced atmospheric modes on interannual and decadal timescales in a large AGCM ensemble dataset: S Minobe, D W J Thompson

A51I (CC) Hall A-C (Poster Hall)

Friday 0800h

Extratropical and High-Latitude Storms, Teleconnections, Extreme Weather, and the Changing Polar Climate II Posters (cosponsored by AMS: American Meteorological Society) (joint with C, GC, H, OS)

Presiding: Xiangdong Zhang, University of Alaska Fairbanks; Kent Moore, Univ Toronto; James Overland, NOAA Seattle;

0800h A51I-2264 POSTER A Predictability Study of a Polar Low Linked to a Tropopause Polar Vortex: K Biernat, L F Bosart, D Keyser, S M Cavallo

0800h A51I-2265 POSTER Analysis of Cold Air Outbreaks across the Globe: E T Smith

0800h A51I-2267 POSTER Atmospheric Rivers Drive Flood Damages in the Western United States: T Corringham, A Gershunov, D R Cayan, M Ralph

0800h A51I-2268 POSTER Change in Extreme Arctic Cyclone Intensity under Arctic Warming Amplification using a Large Member Ensemble Model Experiment: M E Hori, K Oshima

0800h A51I-2269 POSTER Deep Convolutional Neural Networks For Polar Mesocyclones Detection Over Southern Ocean: P S Verezemskaya, N Tilinina, S Gulev, M Krinitskiy

0800h A51I-2270 POSTER Global Climatology and Reanalysis Comparison of Bomb Cyclones: R Adams

0800h A51I-2271 POSTER Improved probabilistic 21st century projections of heat waves over the Korean Peninsula and sea surface temperature over East Asian Marginal Seas by considering uncertainties: J Shin, R Olson, S I An

0800h A51I-2272 POSTER Interdecadal Shift of the Northern Hemisphere Storm Track under Global Warming Hiatus and Its Possible Mechanism: F Huang, G Wang, H Wang, C Zheng, Y Chen

0800h A51I-2273 POSTER Linkages Between Tropopause Polar Vortices and the Great Arctic Cyclone of August 2012: D Keyser, K Biernat, L F Bosart, S M Cavallo

0800h A51I-2274 POSTER Low-frequency Teleconnection Patterns associated with the Summer Consecutive Extreme Rainfall in Central-Eastern China: J Lu

0800h A51I-2275 POSTER Predictability Characteristics of Intense High-Latitude Cyclones: J D Doyle, C M Amerault, M G Fearon, P Finocchio

0800h A51I-2277 POSTER Seasonal prediction using uncoupled CICE ice model and its sensitivity to initial conditions: S Sun, A Solomon

0800h A51I-2278 POSTER Stratosphere-Troposphere Interactions in Intense and Long-lasting Arctic Storms: J Zhang, W Tao, L Peng, J H Kim, Y Fu, X Zhang

0800h A51I-2279 POSTER The Contributions of Tropopause Polar Vortices and Remnant Tropical Moisture from Tropical Storm Alberto to the Development of Two Intense Arctic Cyclones in June 2018: L F Bosart, K Biernat, D Keyser, S M Cavallo

0800h A51I-2280 POSTER The Decadal Variability of East Asian Upper-level Jets and its Association with East Asian Winter Monsoon: J Yin

0800h A51I-2281 POSTER The impact of autumn versus winter Arctic sea-ice loss on the winter atmospheric circulation: R Blackport, J Screen

0800h A51I-2282 POSTER The synoptic-scale potential vorticity intrusion over the Northeastern China during winter and its influence on surface air temperature: T Zhu, J Mao

0800h A51I-2283 POSTER Using Stability Indices to Evaluate the Potential for Arctic Convective Weather under Future Climates: B J Fisel, W J Gutowski Jr, K Blomberg
B51E  (CC) Hall A-C (Poster Hall)
Friday  0800h
Carbon Feedbacks in Earth’s Climate System: Beyond Emergent Patterns and Toward Mechanistic Processes to Reduce Future Climate Uncertainty Posters

Presiding: Ashley Ballantyne, University of Montana; Abhishek Chatterjee, NASA Goddard Space Flight Center; Benjamin Poulter, NASA Goddard Space Flight Center; Laure Resplandy, Princeton University;

0800h  B51E-1983 POSTER How do water and temperature shape the interannual variability of the land carbon sink?: M Jung, M Reichstein
0800h  B51E-1986 POSTER Leaf Area Index amplifies modelled carbon-concentration feedback—a model-data synthesis study: Q Li, X Lu, Y Luo
0800h  B51E-1988 POSTER Global Water Scaling of Ecosystem Carbon Cycle Feedback to Climate Warming: S Niu, Q Quan, D Tian, Y Luo, T Crowther
0800h  B51E-1989 POSTER PHOTOSYNTHETIC PHOTON FLUX DENSITY IN A HIGH-ELEVATION, SUBALPINE CONIFER FOREST: L Laffea, R Chen, S Onley
0800h  B51E-1991 POSTER Insights on carbon cycle dynamics using spatially resolved Northern Hemisphere CO2 variations from seasonal to multi-decadal timescales: X Lin, G Keppel-Aleks, B M Rogers, L Birch

0800h  B51E-1992 POSTER Mathematical modeling of ecosystem carbon storage capacity under typhoon disturbance in a subtropical evergreen broadleaf forest.: J Ping, X Sun, E Weng, X Wang, J Xia
0800h  B51E-1993 POSTER Atmospheric Carbon Invasion In The Southern California Current: High Resolution Record For The Past Century: J C Herguera, Y V Contreras Pacheco, J G Quintanilla-Terminel
0800h  B51E-1994 POSTER Underestimated Ecosystem Carbon Turnover Time and Sequestration under the Steady State Assumption: a Perspective From Long-term data Assimilation: H He, R Ge, X Ren, L Zhang, G Yu, L Smallman, T Zhou, S Y Yu, Y Luo
0800h  B51E-1995 POSTER Sensitivity of carbon cycle inter-annual variability to terrestrial water storage: models vs observations: V Humphrey, J Zscheischler, P Ciais, L Gudmundsson, S Sitch, S I Seneviratne
0800h  B51E-1996 POSTER Carbon cycle feedbacks from tropical forest restoration in an Earth System Model: A Koch, S L Lewis, C M Brierley
0800h  B51E-1997 POSTER Evaluating the impacts of climate change on forest demography and carbon cycling in boreal forests: K Yu, W Anderregg, J Levine, T Pugh, A Esquivel-Muelbert, A Ballantyne, R A Hember, C Peng, T Crowther

C51D  (CC) Hall A-C (Poster Hall)
Friday  0800h
Forty Years of Eyes on the Planet: An Uninterrupted Record of Earth Remote Sensing with Satellite Passive Microwave Instruments Posters

Presiding: Walter Meier, National Snow and Ice Data Center; Carl Mears, Remote Sensing Systems; Ralph Ferraro, NOAA/NESDIS; Thomas Wilheit, Texas A & M Univ;

0800h  C51D-1078 POSTER Investigating the Relationship between Land Surface Temperature and Satellite-Based Freeze/Thaw Products: J M Johnston, V Maggioni, P Houser
0800h  C51D-1080 POSTER A 31+ Year Data Record of Intercalibrated Brightness Temperatures from Satellite Passive Microwave Sensors Developed for Global Precipitation Retrievals: W K Berg
0800h  C51D-1081 POSTER Spatial and temporal trends in melt season lengths for Antarctic Peninsula ice shelves from 1978-2018 from passive microwave measurements: A C Johnson, M A Fahnestock, R Hock
0800h **C51D-1082 POSTER** Removing ice volume scattering from SSM/I TB for ice surface temperature retrieval: B J Sohn, S M Lee, H Shi

0800h **C51D-1083 POSTER** Estimate wind and rain rate inside tropical cyclone using space-borne C- and X-band passive microwave radiometer measurements: X Yin, Q Bao

0800h **C51D-1084 POSTER** Thirty-year Arctic sea ice temperature record from FCDR SSM/I and SSMIS brightness temperature: S M Lee, B J Sohn, C Kummerow

0800h **C51D-1085 POSTER** A 40-year Sea Ice Product Standardized by AMSR Series Passive Microwave Radiometers: M Seki, M Hori, K Naoki, M Kachi, K Imaoka

0800h **C51D-1086 POSTER** Highlights of Scientific Research Over Oceans Using Microwave Radiometers: W T Liu, X Xie

0800h **C51D-1087 POSTER** CREATING A CONSISTENT OCEANIC MULTI-DECADAL INTERCALIBRATED TRMM-GPM CONSTELLATION DATA RECORD: W L Jones, R Chen

0800h **C51D-1088 POSTER** Ocean Surface State Parameter Estimates Using CRTM: C D Rowley, J C May

0800h **C51D-1090 POSTER** Understanding AMSR-2 Brightness Temperatures Characterizations over U.S.A in the Presence/Absence of Radio Frequency Interference Contaminations: D P Yan, W Li, N Chen, Y Fan

0800h **C51D-1091 POSTER** Comparisons of Microwave Sounder Calibration and Precipitation Long-Term Trends from AMSU-B, MHS, and ATMS: R Kroodsma

0800h **C51D-1092 POSTER** Passive microwave precipitation measurements for tropical cyclones based on a priori databases including various cloud microphysics schemes: J S Kim, D B Shin, Y Choi, M Joh

0800h **C51D-1093 POSTER** Cloud Tolerant Observations of the Diurnal Land Surface Temperature and Their Utility for Soil Moisture and Evaporation Retrieval: T R Holmes, C Hain

0800h **C51D-1095 POSTER** Estimating the uncertainty of sea ice extents in the forty-year passive microwave climate record: W Meier, J S Stewart

0800h **C51D-1096 POSTER** Regional Variability of Arctic Sea Ice Seasonal Change Climate Indicators from a Passive Microwave Climate Data Record: M Steele, A C Bliss, G Peng, W Meier, S Dickinson

0800h **C51D-1097 POSTER** The Scaling Relationship Between Tropospheric Temperature and Total Column Water Vapor Measured by Passive Microwave Satellite Sensors.: C A Mears, F J Wentz

0800h **C51D-1098 POSTER** Three Decades of Air-Sea Essential Climate Variables (AS-ECV) from Satellite Microwave Radiometers: K F Wentz, F J Wentz, C A Mears, L Ricciardulli, T Meissner

0800h **C51D-1099 POSTER** The need for the measurement response function (MRF) for optimal deconvolution of AMSR-E SSTS: B Boussidi, P C Cornillon, G Puggioni

0800h **C51D-1100 POSTER** A Next Generation Microwave Instrument for Cold Water Salinity Measurement: S Misra, I Ramos, C Felten, J Bosch-Lluis, S T Brown, S H Yueh, B Latham, T Lee

0800h **C51D-1101 POSTER** Temporal Variability of Arctic Sea Ice Melt and Freeze Season Climate Indicators Using a Satellite Passive Microwave Climate Data Record: G Peng, M Steele, A C Bliss, W Meier, S Dickinson

0800h **C51D-1102 POSTER** A 38+ year record of Arctic sea ice melt onset from satellite passive microwave observations: A C Bliss, M R Anderson

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**GC51M (CC) Hall A-C (Poster Hall)**

**Friday 0800h**


**Presiding: Paul Durack,** Lawrence Livermore National Laboratory; **Nadya Vinogradova Shiffer,** NASA Headquarters; **John Reager,** NASA Jet Propulsion Laboratory; **Remy Roca,** CNRS;

0800h **GC51M-0945 POSTER** Barrier Layer in the Western Pacific Ocean during extreme El Niños: Observations and Mechanism: X Zhang, L Zeng

0800h **GC51M-0946 POSTER** Evidence of an Eastern Equatorial Pacific Zonal El Niño Salinity Current: A J Clarke, X Zhang, S Van Gorder

0800h **GC51M-0947 POSTER** Estimation of Freshwater Fluxes from the Arctic Ocean using SMAP and CFS Salinity: R E Nichols, S Bulusu

0800h **GC51M-0948 POSTER** Impact of Satellite Sea Surface Salinity Observations on ENSO Predictions from the GMAO S2S Forecast System: E C Hackert, R M Kovach, J Marshak, A Borovikov, A Molod, G Vernières

0800h **GC51M-0949 POSTER** Examining the Pattern of Salinity Change at Upper Pacific Ocean during the Argo Period: L Guancheng, C Liying
0800h **GC51M-0950 POSTER** Atmospheric Redistribution of Freshwater and Near-Surface Salinity Variability over the North Atlantic Ocean: **J R Reagan**, D Seidov, T Boyer

0800h **GC51M-0951 POSTER** Real-Time Monitoring of Sub-Seasonal Variations of Sea-surface Salinity and Freshwater Flux: **L Ren**, P Xie, Y Xue, A Kumar, T Boyer, E J Baylyer

0800h **GC51M-0952 POSTER** SMAP Salinity Observations detect Indian Monsoon Intraseasonal Oscillations: **S Bulusu**

0800h **GC51M-0953 POSTER** The ocean can act as a rain gauge for tropical precipitation: **J Carton**, G A Chepurin, L Chen, S Grodsky


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**GC51O (CC) Hall A-C (Poster Hall)**

**Friday 0800h**

**Causes, Consequences, and Predictability of Polar Change Posters (joint with A, C, H, OS)**

**Presiding:** Wieslaw Maslowski, Naval Postgraduate School; **Renu Joseph**, US Department of Energy; **Wilbert Weijer**, Los Alamos National Laboratory; **Hansi Singh**, University of Washington Seattle Campus;


0800h **GC51O-0969 POSTER** A new Sea Ice Prediction Portal for year-round S2S sea ice forecasts: **N E Wayand**, C M Birz, E Blanchard-Wrigglesworth

0800h **GC51O-0970 POSTER** Will Sea-Ice Decline Bring the Arctic Nations Closer Together?: **P DeRepentigny**, B Tremblay, R Newton, S L Pirman, A Jahn

0800h **GC51O-0971 POSTER** A Bayesian Categorical Regression Model for Probabilistic Predictions of Minimum Sea Ice: **S Horvath**, B Rajagopolan, J Stroeve, W Kleiber

0800h **GC51O-0972 POSTER** Data-adaptive harmonic decomposition and stochastic prediction of regional Arctic sea ice extent: **D A Kondrashov**, M Chekroun, M Ghil

0800h **GC51O-0973 POSTER** On the Potential Role of Arctic Cirrus Clouds in Predicting Anomalous Mid-latitude Weather and Climate: **D L Mitchell**, J Mejia, A Garnier, F Hosseinpour

0800h **GC51O-0974 POSTER** Quantifying the Arctic Local Radiative Feedbacks Based on Observed Short-term Climate Variations: **H Wang**, R Zhang, Q Fu, A G Pendergrass, P J Rasch

0800h **GC51O-0975 POSTER** Enhanced Cold-Region/Cold-Season Warming and its Implications to Permafrost Degradation: **T Zhang**, K Wang

0800h **GC51O-0976 POSTER** Quantifying local versus remote sources of polar predictability: **E Blanchard-Wrigglesworth**, A Donohoe

0800h **GC51O-0977 POSTER** Modulation of Arctic Sea Ice Loss by Atmospheric Teleconnections from Atlantic Multi-Decadal Variability: **G Danabasoglu**, F S Castruccio, Y Ruprich-Robert, S G Yeager, R Msadek, T L Delworth

0800h **GC51O-0978 POSTER** The Key Role of Sea Ice Concentration Changes on Arctic Warming and on the CMIP5 Intermodel Arctic Warming Spread: **S Sejas**, P C Taylor

0800h **GC51O-0979 POSTER** Improving Arctic Climate Projections Using Regional Arctic System Model for Dynamical Downscaling: **W Maslowski**, S Kamal, R Osinski, Y Lee, A Roberts, J J Cassano, M W Seefeldt, X Wu

0800h **GC51O-0980 POSTER** The Chukchi Sea in a changing environment: A synthesis of modeling and observations: **C Hauri**, K Hedstrom, S L Danielson, S C Doney, A M McDowell, C Schultz

0800h **GC51O-0981 POSTER** Nonlinear response of nutrient dynamics and biological production to climate warming in the Beaufort Gyre: **M Jin**

0800h **GC51O-0982 POSTER** Characterizing the Transport Pathways and Storage of Freshwater in the Western Arctic Ocean Through a HYCOM-Based Drifter Study: **M M Faulkner**, D Gong

0800h **GC51O-0983 POSTER** Variability of freshwater fluxes in the Arctic Ocean and Subpolar North Atlantic from numerical experiments: **D S Dukhovskoy**, A Y Proshutinsky, B Mark A

0800h **GC51O-0985 POSTER** Response of North Pacific and North Atlantic decadal variability to weak global warming: **S Wu**, Z Liu
OS51A  (CC) 102AB
Friday  0800h
Surface Water and Ocean Topography (SWOT) Mission: Oceanography, Hydrology, and Their Interaction at the Estuaries I  (joint with H)

Presiding: Lee-Lueng Fu, Jet Propulsion Laboratory; Tamlin Pavelsky, University of North Carolina; Jean-Francois Cretaux, CNES French National Center for Space Studies; Rosemary Morrow, CNES French National Center for Space Studies;

0800h OS51A-01 What Will SWOT Measure in World’s Deltas and Estuaries?: M Simard, B Laignel, M W Denbina, T Van der Stocken, K Liu, A Soloy, J T Minear, T Pavelsky, A Christensen

0815h OS51A-02 Assessing the Potential of the Surface Water and Ocean Topography Mission for Reservoir Monitoring in the Mekong River Basin: M Bonnema, F Hossain

0830h OS51A-03 Mapping temporal changes in water surface elevation and storage across Arctic-Boreal rivers, lakes and wetlands with AirSWOT airborne interferometric synthetic aperture radar images: L H Pitcher, L C Smith, T Pavelsky, J V Payne, S W Cooley, S Topp

0845h OS51A-04 How Well Will the Surface Water and Ocean Topography Mission Measure Water Surface Heights and Slopes in Complex Terrain?: R P M Frasson, M T Durand, T Pavelsky, C W Chen, B A Williams, A Fore, X Yang

0900h OS51A-05 River discharge estimation in ungauged basins using multi-missions variational data assimilation: H Oubanas, I Gejadze, P O Malaterre, F Billaud, A Domenechetti, M J Tourian, M T Durand

0915h OS51A-06 Toward spatiotemporally continuous global discharge estimation by synthesizing SWOT-like observations, high-resolution terrain analysis, and hydrologic modeling: P Lin, M Pan, M T Durand, R P M Frasson, D Yamazaki, C K Fisher, H Beck, Y Yang, E F Wood

0930h OS51A-07 A first estimate of the expected distribution of SWOT river discharge accuracy: M T Durand, R P M Frasson, S Tuozzolo, C J Gleason, P A Garambois, P O Malaterre

0945h OS51A-08 Combining big-data remote sensing, AMHG, and river routing to estimate daily discharge over an entire river network: a SWOT’ template: C J Gleason, M Hagemann, E Beighley, G H Allen, T Pavelsky

OS51B  (CC) 101
Friday  0800h
Temporal Variability in Oceanic Mesoscale Activity, from Seasonal to Multidecadal Records I  (joint with A, GC)

Presiding: Andrew Delman, Jet Propulsion Laboratory, California Institute of Technology; Angel Amores, Mediterranean Institute for Advanced Studies; Julius Busecke, Princeton University;

0800h OS51B-01 Asymmetry variabilities of mesoscale eddy activity alongside the Kuroshio Extension: M Ding, P Lin, H Liu, A Hu

0815h OS51B-02 The Western Alboran Gyre: an Eulerian Analysis of its Properties and their Budgets: G Brett, L J Pratt, I Rypina

0830h OS51B-03 Transient Enhancement and Decoupling of Carbon and Opal Export in Cyclonic Eddies: M Dai, K Zhou, P Xiu, L Wang, J Hu, C R Benitez-Nelson

0845h OS51B-04 Global Changes in Mesoscale Eddy Kinetic Energy under Greenhouse Warming: R P Abernathey, S M Griffies, J Small

0900h OS51B-05 Resolving Mesoscale Dynamics in a Global Ocean: D Iovino, S Masina, P G Fogli

0915h OS51B-06B Role and Variability of Mesoscale and Submesoscale Dynamics along the West Coast of Greenland: F Tagklis, A Bracco, R M Castelao, T Ito, H Luo

0930h OS51B-07 Structure and Formation of Anticyclonic Eddies in the Iceland Basin: J Zhao, A S Bower, J Yang, X Lin, C Zhou

0945h OS51B-08B Kuroshio Variability and its Relationship with Mesoscale Eddies in the southern East China Sea: H Na, H S Min, D G Kim, J H Park, C Jeon, H Nakamura, A Nishina, X H Zhu

OS51C  (CC) Hall A-C (Poster Hall)
Friday  0800h
Coastal Response to Extreme Events: Fidelity of Model Predictions of Surge, Inundation, and Morphodynamics Posters  (joint with GC, NH)

Presiding: Jayaram Veeramony, Naval Research Lab; Ap Van Dongeren, Deltares; Maitane Olabarrieta, University of Florida; Stephanie Smallegan, Virginia Tech;
0800h OS51C-1263 POSTER Examining the role of ensembles in storm surge prediction: K L Edwards, J Veeramony, D Metzger

0800h OS51C-1265 POSTER Application of Machine Learning Methods in Estimation of Coastal Storm Surge: A Al Kajbaf, M Bensi

0800h OS51C-1266 POSTER Extreme coastal response modeling in changing wave climates: J A A Antolínez, S Caires, R T McCaff, F J Mendez, D J Walstra, J Yoo

0800h OS51C-1267 POSTER Fate of cohesive sediments in a marsh-dominated estuary: X Zhang, S Fagherazzi, N Leonardi

0800h OS51C-1268 POSTER How Important are Marsh Properties for Assessing Flood Mitigation Benefits: A Santiago Tate, J Suckale, C Ferreira, S Maldonado, G A M de Almeida, T W Miesse

0800h OS51C-1269 POSTER In-situ Hydrodynamic and Morphodynamic Measurements During Extreme Storm Events: S Borrell, J A Puleo

0800h OS51C-1270 POSTER Influence of Shoals on Spatial Variability of Storm Surge: S S Schoenauer, C A Blain

0800h OS51C-1271 POSTER Mangrove forests as an attenuator of tides and storm surge: contrasting case studies from New Zealand: K R Bryan, J Montgomery, J C Mullarney, E M Horstman

0800h OS51C-1272 POSTER Numerical modeling of the influence of tides on beach morphodynamics: V H Hewageegana, A Canestrelli

0800h OS51C-1273 POSTER Sediment Dispersion from the Coast to the Continental Slope in the Southeastern Beaufort Sea: L Guo, Y Wu, H Niu, M Li, F Ding

0800h OS51C-1274 POSTER Storm surge simulation of Maryland Coastal Bays: A case study of Hurricane Sandy: X Kang, M Xia

0800h OS51D-1275 POSTER On the Observational Network Needed to Support Modeling Architecture Necessary for Coastal and Inland Flooding Prognostication: P T Gayes, L J Pietrafesa, S Bao, J Hallstrom, D Stirling

0800h OS51D-1276 POSTER THE ROLE OF WAVE TO A SHALLOW BAY SOTRM SURGE MODELING: M Xia, M Mao

0800h OS51D-1278 POSTER A New Approach to Hindcast and Forecast Storm Surges and Tides—The Virtual Tide Gauges (VTGs): Z Xu


0800h OS51D-1280 POSTER The Tampa Bay Coastal Ocean Model (TBCOM) Performance for Hurricane Irma: J Chen, R H Weisberg, Y Liu, L Zheng

0800h OS51D-1281 POSTER Simulation of Storm surge, Wind-wave, and Coastal Inundation in the East China Sea during Typhoon Chan-hom in 2015: S Li

0800h OS51D-1283 POSTER Study of Storm Surge Trends in Typhoon-prone Coastal Areas Based on Observations And Surge-wave Coupled Simulations: X Feng

0800h OS51D-1284 POSTER Parameterization of Key Physical Processes in Storm Surge Models in the East China Sea: J Zhang, D Chu, X Jiao, S Qian

0800h OS51D-1285 POSTER Tidal mixing and its impact on storm surge in Bohai Sea: Z Deng Sr

0800h OS51D-1286 POSTER Morphological responses of a long-shore channel-shoal system in a mixed energy coast to a major storm: C Kuang, H Liang, J Gu

0800h OS51D-1287 POSTER Preliminary attempt to parameterize storm wave-induced seabed liquefaction into modeling of silty sediment transport: S Zhang, Y Jia, Y Zhang, H Shan

0800h OS51D-1288 POSTER Numerical simulation of storm-tide inundation under sea-level rise during Middle Holocene in the coastal plain of Hangzhou Bay, East China: S Wang, Z Wang, J Ge

0800h OS51D-1289 POSTER Long-term Migration of Typical Sand Ridges of the Subei Bank Observed by Spaceborne SAR: S Zhang, Q Xu, Y Cheng

0800h OS51D-1290 POSTER Considering the Impact of Observation Error Correlation in Ensemble Square-root Kalman Filter: J Wang

0800h OS51D-1291 POSTER Seasonal response of river plume to freshwater discharge in river-dominated ocean margins: a multi-salinity products analysis and inter-regional comparison: Y Feng, D Menemenlis
**OS51E** (CC) Hall A-C (Poster Hall)

**Friday 0800h**

**Sea Level Change and Coastal Impacts and Flooding Posters** *(joint with C, C, G, G, PP, PP, SI, SI)*

*Presiding: Emily Smith*, NOAA Washington DC; *Detlef Stammer*, University of Hamburg; *Philip Thompson*, JIMAR, University of Hawaii; *Kathleen White*, US Army Corps of Engineers;

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**0800h OS51E-1292 POSTER** A Global Reanalysis of Nodal Modulation on High Tidal levels from Hourly Tide Gauge Records: *D Peng*, E Hill, A J Meltzner, A D Switzer

**0800h OS51E-1293 POSTER** Bias Correction for CMIP5 Wind Forcing: Implications for Projections of 21st Century Sea Level around Japan: *G Yamanaka*, S Nishikawa, T Wamatsuru, H Ishizaki, H Tsujino, H Nakano, T Toyoda, S L Urakawa, K Sakamoto, Y Tanaka

**0800h OS51E-1294 POSTER** Centennial-scale Sea Level Variability in Past-1000-Year Model Runs: *M L Carson*, A Koehl, D Stammer

**0800h OS51E-1295 POSTER** Simulating sea-level rise impacts on shoreline change along a wave-dominated embayed beach with the LX-Shore model: *G Le Cozannet*, A Robinet, D Idier, B Castelle

**0800h OS51E-1296 POSTER** Glacier elevation and mass change of mountain glaciers outside the polar regions, derived from TanDEM-X InSAR data and SRTM C-Band between 2000 and 2011-15: *T Seehaus*, P Malz, D Farías, M Braun, C Sommer

**0800h OS51E-1297 POSTER** Subseasonal Predictability of Sea Level in the Hawaiian Islands: *H Yoon*, P R Thompson, M Merrifield, J T Potemra, B Qiu

**0800h OS51E-1298 POSTER** SEA LEVEL VARIABILITY ALONG THE GULF OF GUINEA FROM CMEMS: *K G F Eitel*, J E Nilsen, O M Johannessen

**0800h OS51E-1299 POSTER** Similarity and Difference in Interannual Sea-Level Variations Between the Nova Scotia and New York Coasts: *N Chen*

**0800h OS51E-1300 POSTER** Meridional asymmetry in recent Pacific sea surface height trends: *P R. Thompson*, C G Piecuch, M Merrifield

**0800h OS51E-1301 POSTER** DFG Special Priority Program (SPP-1889) Regional Sea Level Change and Society (‘SeaLevel’): *E Tzortzi*, D Stammer

**0800h OS51E-1302 POSTER** Long Term Sea Level Rises until 2300 when Limiting Global Warming to below 1.5 degrees C: *T Suzuki*

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**0800h OS51E-1303 POSTER** A Convergence of Coastal Forcings Leads to A Quintupling of Flood Events at the Seaward End Of The Mississippi River Delta: The Roles of Climate Change, Subsidence and Coastal Construction: *A Kolker*


**0800h OS51E-1305 POSTER** Monitoring coastal subsidence in Miami-Dade county, Florida, using Sentinel-1 InSAR time series and GPS observations.: *T Oliver-Cabrera*, S Wdowinski

**0800h OS51E-1307 POSTER** Probabilistic Scenarios of Mean Sea Level Change in Finland: *M Nordman*, H Pellikka, U Leijala, M M Johansson, M Bilker-Koivula

**0800h OS51E-1308 POSTER** Sensitivity Of Sea Level Response In FAFMIP Experiments To Model Resolution: *S Ojha*, A Köhl, H Haak, J H Jungclaus, D Stammer

**0800h OS51E-1309 POSTER** Integrating ambiguity and decision-makers’ risk perception within probabilistic assessments of future coastal flooding: an extra-probabilistic approach: *G Le Cozannet*, J Rohmer, J C Manceau


**0800h OS51E-1312 POSTER** Underestimated wave contribution to sea level change and rise at the coast: *G Le Cozannet*, A Melet, B Meyssignac, R Almar

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**OS51F** (CC) Hall A-C (Poster Hall)

**Friday 0800h**

**Geological and Geophysical Characterization of Marine Gas Hydrate Reservoirs Posters** *(joint with EP)*

*Presiding: Manasij Santra*, University of Texas at Austin; *Ann Cook*, Ohio State University Main Campus; *Alexey Portnov*, The Ohio State University; *Stefan Bünz*, University of Tromso;

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0800h **OS51F-1314** POSTER 3D thermo-baric modeling of the gas hydrate stability zone of central Spitsbergen, Arctic Norway: **K Senger**, P Betlem, A J Hodson

0800h **OS51F-1315** POSTER The differences between the measured heat flow and BSR heat flow in the Shenhu gas hydrate drilling area, northern South China Sea: **M Dong**, J Zhang

0800h **OS51F-1316** POSTER Combining Seismic Attributes and Thermal Modeling to Study Fluid Flow Processes and Gas Hydrate Prospectivity beneath Anticlinal Ridges Off SW Taiwan: **P Kunath**, W C Chi, C Berndt, C S Liu

0800h **OS51F-1317** POSTER Electrical characterization of methane hydrate with coexisting brine: **R Lu**, L A Stern, W L Du Frané, J C Pinkston, J J Roberts, S Constable

0800h **OS51F-1318** POSTER Broadband Reprocessing of Legacy Seismic Data for Hydrate Prospected Area: Examples from Tokaioki-Kumanonada, Offshore Japan: **A Fujimoto**

0800h **OS51F-1320** POSTER Estimation of gas hydrate saturation from rock physics modeling and seismic inversion in the Ulleung Basin, East Sea.: **B Yi**, N K Kang, D G Yoo, J Y Lee, Y Yoon, G H Lee


0800h **OS51F-1322** POSTER Analysis of fracture/fault filled gas hydrate deposits in the Vestnesa Ridge: **S Singhroha**, S Bünz, M Chapman, X Wu, S Chand, A A Plaza-Faverola

0800h **OS51F-1323** POSTER Assessment of Natural Gas Hydrate Petroleum System in western Irish offshore: **S Roy**, M D Max, J Walsh

0800h **OS51F-1324** POSTER Channel-levee hosted hydrate accumulation controlled by a faulted anticline: Green Canyon, Gulf of Mexico: **M Santra**, P B Flemings, M Heidari

0800h **OS51F-1325** POSTER Fine-grained turbidites associated with gas hydrates in the Shenhu Area, northern continental slope of the South China Sea: **M Su**, H Jiang, N Wu, Z Sha, J Liang, Z Kuang, J Liu, X Cong, R Yang, Y Wang

0800h **OS51F-1326** POSTER Underexplored gas hydrate reservoirs associated with salt diapirism and turbidite deposition in the Northern Gulf of Mexico: **A Portnov**, A Cook, U Majumdar, D E Sawyer

0800h **OS51F-1327** POSTER Fluid Flow and BSR Distribution off Oregon: **L D Perkins**, S Yelisetti, D Ghosal

0800h **OS51F-1328** POSTER Gas Hydrate Dynamics at Ultra-Slow Spreading Ridges in the Fram Strait, Offshore Western Svalbard: **S Bünz**, S Vadakkepuliyambatta, A A Plaza-Faverola, K A Waghorn, M Waage, R Romeyn


0800h **OS51F-1330** POSTER Controls on Methane Emissions in Glaciated Margins: **S Vadakkepuliyambatta**, S Bünz, A A Plaza-Faverola, H Patton, J Petersen, K Dittmers

0800h **OS51F-1331** POSTER Pore morphology, permeability, and constraints on gas hydrate accumulation in sediments from the Tuaheni Landslide Complex, NZ: **M Nole**, H Daigle, B Dugan, M B Clennell, M Paganoni, P Barnes, I A Pecher, L LeVay, I Expedition 372 Scientists, I Expedition 375 Scientists

0800h **OS51F-1332** POSTER Porosity anomalies revealed by LWD show the sediment displacement by the formation and growth of gas hydrate in fine sediments in gas chimney structures, the eastern margin of Japan Sea: **M Tanahashi**, S Morita, R Matsumoto

**U51A** (CC) 202A

**Friday 0800h**

**New Models of Citizen Science for the Next Century of AGU: Approaches to Enable Meaningful Engagement with Evidence and the Scientific Process (Virtual Session)** *(joint with ED, EP, P, PA)*

*Presiding: John McLaughlin*, Organization Not Listed; *Lin Chambers*, NASA Langley Research Center; *Caren Cooper*, North Carolina Museum of Natural Sciences;

0800h Introduction to session and mini-panel 1: Studying areas where you don’t live:

0802h **U51A-01** Engaging Citizen Scientists in Ocean Exploration with Ocean Video Lab: **V L Ferrini**, N Pawlenko, J J Morton

0812h **U51A-02** JunoCam: Citizen scientists populate Juno’s virtual imaging team: **C J Hansen**, S J Bolton, E Jensen, G Eichstädt, J Rogers, J Froio
0822h Q&A mini-panel 1:

0828h Introduction to mini-panel 2: Collaborative and co-created projects:

0830h **U51A-03** THE POWER OF COLLABORATIVE AND COMMUNITY-DRIVEN RESEARCH IN IMPROVING ENVIRONMENTAL HEALTH OUTCOMES: **S Wilson**

0840h **U51A-04** From the spark to the fire, reflections on five years of public participation in aurora research: **E MacDonald, C Ratzlaff**

0850h **U51A-05** CitSci.org: Helping people do meaningful science of relevance to them by engaging with evidence and the scientific process: **S J Lynn, G Newman**

0900h Q&A mini-panel 2:

0908h Introduction to mini-panel 3: Leveraging with different partners and networks:

0910h **U51A-06** Accelerating Innovation through Partnerships: The Citizen Science Consortium Model: **A Bowser, A Long**

0920h **U51A-07** Credit where credit’s due: Ensuring the provenance and long-term value of citizen scientists’ contributions to biodiversity monitoring through direct, transparent links to uses of FAIR and open data: **K Copas, D Hobern, D Noesgaard**

0930h **U51A-08** Deep Roots and Broad Branches: Connecting Insights from Different Traditions, Disciplines, and Approaches to Advance the Field: **J Shirk**

0940h **U51A-09** Linking Projects To Cooperatively Maximize Volunteer Sustainability and Learning: **D Cavalier**

0950h Q&A mini-panel 3:

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**OS52A (CC) 103AB**

**Friday 1020h**

**Beyond Constant Eddy Diffusivities: Estimation, Implementation, Impacts, and New Approaches to the Parameterization of Lateral Mixing in Ocean Models I**

*Presiding: Inga Koszalka, GEOMAR Helmholtz Centre for Ocean Research Kiel; K. Shafer Smith, New York University; Anand Gnanadesikan, Johns Hopkins University; Baylor Fox-Kemper, Brown University;*

0920h **OS52A-01** An update on eddy diffusivity in the global ocean from Argo observations: **S T Cole**

0935h **OS52A-02** Anisotropic wave-vortex decomposition of ship-track and Lagrangian tracer data: **O Buhler**

0950h **OS52A-03** Bayesian inference of ocean diffusivity from Lagrangian particle data: **Y K Ying, J R Maddison, J Vanneste**

1005h **OS52A-04** Comparison of a higher-order eddy closure and a stochastic parameterization: **A Adcroft, L Zanna, M Harrison**

1020h **OS52A-05** Global Redi and Gent-McWilliams diffusivities from Surface drifters, Argo floats and RAFOS floats: **D Balwada, C J Roach, K Speer**
1135h OS52A-06 Impacts of lateral mixing parameterization on physical and biogeochemical climate sensitivity: M A S Pradal, A Gnanadesikan, A A Bahl

1205h OS52A-08 Overcoming The Limited Spatial Resolution Of Ocean Models; The Horizontal Residual Mean: T J McDougall, Y Li

OS52B (CC) 102AB

Friday 1020h

Surface Water and Ocean Topography (SWOT) Mission: Oceanography, Hydrology, and Their Interaction at the Estuaries II (joint with H)

Presiding: Lee-Lueng Fu, Jet Propulsion Laboratory; Rosemary Morrow, CNES French National Center for Space Studies; Jean-Francois Cretaux, CNES French National Center for Space Studies; Tamlin Pavelsky, University of North Carolina;

1020h OS52B-01 The SWOT satellite in the estuaries and coastal zones: B Laignel

1035h OS52B-02 On the spatial resolution of the future SWOT SSH measurements: J Wang, L L Fu, H S Torres, S Chen, B Qiu, D Menemenlis

1050h OS52B-03 Evidence of Altimetric SSH slope changes potentially induced by IGW: O Vergara, R Morrow, M I Pujol, G Dibarboure, C Ubelmann

1105h OS52B-04 Reconstructing 3-Dimensional Upper Ocean Circulation based on SWOT high-resolution SSH measurements: B Qiu, S Chen, J Wang, L L Fu, P Klein, D Menemenlis

1120h OS52B-05 High-frequency and high-wavenumber variability in the California Current: Evaluating model requirements for SWOT assimilation: S T Gille, M R Mazlof, J Wang, T K Chereskin, D Menemenlis, M Passaro, C B Rocha

1135h OS52B-06 Exploiting the synergy between future SWOT altimetry and doppler current observations to reconstruct the Ocean surface dynamics: C Ubelmann, G Dibarboure, M H Rio

1150h OS52B-07 Detecting Non-stationary Internal Tides in the California Current System: A Case Study for SWOT: L Kachelein, B D Cornuelle, S T Gille, F Lyard, M R Mazlof, E J Terrill

1205h OS52B-08 Surface Water and Ocean Topography mission retrievals in the ice-covered polar oceans: T W K Armitage, R Kwok
1340h A53L-2644 POSTER Global Warming, New Energy Balance, Ocean-Atmosphere Interaction in Regional Climate Variability and Extreme Meteorological Phenomena: M S Karrouk

1340h A53L-2645 POSTER Diagnosing Energy Transfer in an Idealized, North-Atlantic, Ocean-Atmosphere Model: P Martin, B K Arbic, A M Hogg, A E Kiss, J R Munroe, W K Dewar, J Blundell

1340h A53L-2646 POSTER A dipole structure in spring rainfall anomalies between Northeast and Southeast Asia associated with ENSO and PDO: C K Park, D S R Park, C H Ho, J Kim, S J Jeong, B M Kim

1340h A53L-2647 POSTER Asymmetric Tropical Ocean Responses to ENSO: In Observations and CMIP5 Models: S He, J Y Yu, S Yang, S W Fang

1340h A53L-2648 POSTER Spatiotemporal Variability of the Tropical Dynamical Warm Pool: D C Cruz Sanabria, C D Hoyos Ortiz, P J Webster

1340h A53L-2649 POSTER Ocean chlorophyll-induced heating feedback on climate variability in the tropical Pacific, as revealed using NCAR CESM: R H Zhang

1340h A53L-2650 POSTER An Extreme Negative Indian Ocean Dipole Event in 2016: Dynamics and Predictability: H L Ren, B Lu

1340h A53L-2651 POSTER Distinct Winter Patterns of Tropical Pacific Convection Anomaly and the Associated Extratropical Wave Trains in Observations and AMIP5: W Chen

1340h A53L-2652 POSTER Seasonal Evolutions of ENSO Teleconnections and Impacts on North America: B T Jong, M Ting, R Seager

1340h A53L-2653 POSTER The Strengthening of the Amazonian Precipitation in the Wet Season Driven by the Tropical SSTs Forcing: X Wang, L Xichen, J Zhu, C A S T Tanajura

1340h A53L-2654 POSTER Year-to-year Variability of Summer Surface Air Temperature over Central India: Z Q Zhou, R Zhang, S P Xie

1340h A53L-2655 POSTER Coral Reefs as a Source of Marine Biogenic Aerosol and the Implications for Local Climate: R Jackson, A J Gabric, R A Cropp

1340h A53L-2656 POSTER Seasonality and Co-variability of Sea Surface Temperature Front and South boundary of Low-Cloud Cover in the mid-latitude North Pacific: N Takahashi, T Hayasaka, B Qiu, T Suga, R Yamaguchi

1340h A53L-2657 POSTER Ocean-Atmosphere Interaction Processes in the Midlatitude North Pacific and the Impact of Seasonal Atmospheric Background: J Fang

1340h A53L-2658 POSTER Physical Mechanisms of Surface Wind Variability at Incheon Airport: H J Park, K Y Kim, W Choi

1340h A53L-2659 POSTER A regional atmosphere-ocean coupled model for East Asian climate.: U Byun, E C Chang

1340h A53L-2661 POSTER Differences in eastern North Pacific stratification and the impact on maximum mixed layer depth in CMIP5 models: P Old, S L Hautala, L Thompson

1340h A53L-2662 POSTER Evaluation of OAFlux datasets based on in situ air-sea flux tower observations over the Yongxing Islands in 2016: F Zhou, R Zhang, R Shi, Y He, Y Xing, J Chen, Q Xie, D Wang

1340h A53L-2663 POSTER Enhanced climatic variability over California post-1950: A synthesis of observed and reconstructed trends and possible explanations: D Zamora-Rayas, V Trouet, B Black, P van der Sleen

1340h A53L-2664 POSTER North Pacific Subtropical Mode Water Variability Controlled by the Atlantic Multidecadal Oscillation: B Wu, X Lin, L Yu

1340h A53L-2665 POSTER The climate change impact on the Eastern Atlantic coastal low-level wind jets: P M M Soares, D C A Lima, R M Cardoso, A Semedo, W Cabos, D Sein

1340h A53L-2666 POSTER Comparisons of different AMO indexes and their global impacts: M Ding, P Lin, H Liu, A Hu

1340h A53L-2669 POSTER Modelling impacts of extreme Caspian Sea area change on hydroclimatic processes: S A Koriche, S D Nandini, M Prange, J S Singarayer, K Arpe, H L Cloke, M Schulz, P Bakker, S Leroy


C53B (CC) Salon G

Friday 1340h

Forty Years of Eyes on the Planet: An Uninterrupted Record of Earth Remote Sensing with Satellite Passive Microwave Instruments I

Presiding: Walter Meier, National Snow and Ice Data Center; Carl Mears, Remote Sensing Systems; Ralph Ferraro, NOAA/NESDIS; Thomas Wilheit, Texas A & M Univ;


1355h C53B-02 Lessons Learned in Building Long-Term Multi-Satellite Global Precipitation Records: E Nelkin, G J Huffman, D T Bolvin, J Tan

1410h C53B-03B A New State of Arctic Sea Ice Age and Motion: M A Tschudi, W Meier, J S Stewart

1425h C53B-04 Development of a Long-term Consistent Satellite Record of Soil Moisture: S Chan, R Bindlish

1440h C53B-05 Towards More Accurate Snow Water Equivalent Products Based on Passive Microwave Retrievals: L Mudryk, C Derksen, K Luojus, R Brown

1455h C53B-06 Anomalies and Trends in the Sea Ice Cover from 40 years of Passive Microwave Data: J C Comiso, W Meier, T Markus

1515h C53B-07 Satellite Observation and Climate Model Simulation of Global Warming Process: C Z Zou

1535h Discussion:

GC53A (CC) Salon C

Friday 1340h

Causes, Consequences, and Predictability of Polar Change I (joint with A, C, H, OS)

Presiding: Wieslaw Maslowski, Naval Postgraduate School; Renu Joseph, US Department of Energy; Wilbert Weijer, Los Alamos National Laboratory; Hansi Singh, University of Washington Seattle Campus;

1340h GC53A-01 Challenges and Recent Progress in Understanding High Latitude Climate Change: P J Rasch, O A Garuba, B Kravitz, H A Singh, H Wang, Y Yang

1355h GC53A-02 Observing and Modeling Ocean – Ice Interactions during the Multidisciplinary drifting Observatory for the Study of Arctic Climate Program: D K Perovich

1410h GC53A-03 Toward Understanding the Arctic/Midlatitude Weather Linkage Controversy: J E Overland, M Wang, I Dehai

1425h GC53A-04 The effect of ENSO on Arctic Sea Ice and Its Prediction: C Bitz, R P Clancy, E Blanchard-Wrigglesworth

1440h GC53A-05 Atmospheric Response to Current and Future Arctic Sea ice loss and the Impacts on the Mid-latitudes in CESM-LE: A Elders, K Pegion

1455h GC53A-06 The Role of Atmospheric Teleconnections and Local Forcings in Predicting Greenland Ice Sheet Surface Mass Loss: L C Andrews, R I Cullather, A Molod

1510h GC53A-07 Providing Greenland and Antarctic ice sheet models with a usable ocean forcing from the climate models: observations, theory, models and compromises: F Straneo

1525h GC53A-08 Decadal variability and predictability in the Southern Ocean - implications for interpreting recent observed trends: L Zhang, T L Delworth, W Cooke, X Yang

OS53A (CC) 102AB

Friday 1340h

Coastal Response to Extreme Events: Fidelity of Model Predictions of Surge, Inundation, and Morphodynamics I (joint with GC, NH)

Presiding: Jayaram Veeramony, Naval Research Lab; Ap Van Dongeren, Deltares; Maitane Olabarrieta, University of Florida; Stephanie Smallegan, University of South Alabama;
OS53A-01 Morphodynamic Modelling during Hurricane Sandy: a Discussion of Controlling Parameters and Model Sensitivity: M A van der Lugt, A Van Dongeren, M Van Ormondt, E Quartaert, R T McCall

OS53A-02 Investigations of Morphological Changes During Hurricane Sandy Using a Coupled Modeling System: J C Warner, M Olabarrieta, C R Sherwood, C Hegermiller, T S Kalra

OS53A-03 Assessing extreme storm risk using a fully-nonlinear phase resolving wave model combined with an erosion model: A R Grilli, S T Grilli, G Westcott, T Inkley, F Shi, J T Kirby Jr

OS53A-04 An open-source numerical modeling tool for wave-scale and turbulence/grain-scale coastal processes: Y Rafati, T J Hsu, Y Kim, Z Cheng, J Chauchat, J Calantoni

OS53A-05 Response of Coastal Waves and Surge to Interaction between Hurricane Matthew and the Gulf Stream: C Hegermiller, J C Warner, M Olabarrieta, C R Sherwood

OS53A-06 The Northern Bering Sea: An Ecosystem in Transition: J M Grebmeier, L W Cooper, K E Frey

OS53B (CC) 101

Friday 1340h

Unprecedented Bering Sea Ice Extent and Impacts to Marine Ecosystems and Western Alaskan Communities I (joint with C, GH)

Presiding: Emily Osborne, NOAA Climate Program Office; Molly McCammon, Alaska Ocean Observing System; Olivia Lee, University of Alaska Fairbanks;

OS53B-01 A Transitioning Ecosystem: Food for Thought in the Northern Bering Sea / Bering Strait Region: G Sheffield, R Stimmelmayr

OS53B-02 An assessment of arctic observing based on the historically low sea ice coverage of the Bering Sea in winter 2017–18: M L Druckenmiller, H Eicken, J A Francis, H Huntington, O A Lee

OS53B-03 The impact of anomalous low sea-extent in 2018 upon oceanographic and sea-ice conditions in the Bering-Chukchi region: K R Wood, S R Jayne, C A Ladd, M Wang, C Mordy

OS53B-04 How the Absence of Sea Ice Altered the Physical Oceanography of the Northern Bering Sea: P J Stabeno, C A Ladd, C Mordy, R M McCabe


OS53B-06 On the Thermal and Sea Ice Conditions of the Bering-Chukchi Continental Shelf: S L Danielson

OS53C (CC) Hall A-C (Poster Hall)

Friday 1340h

Surface Water and Ocean Topography (SWOT) Mission: Oceanography, Hydrology, and Their Interaction at the Estuaries Posters (joint with H)

Presiding: Lee-Lueng Fu, Jet Propulsion Laboratory; Rosemary Morrow, CNES French National Center for Space Studies; Jean-Francois Cretaux, CNES French National Center for Space Studies; Tamlin Pavelsky, University of North Carolina;

OS53C-1333 POSTER Combining Satellite Measurements with Hydraulic Models to Improve Flood Prediction in Built Environments: V Ramaswamy, P A Garambois, S Biancamaria, F Saleh

OS53C-1334 POSTER A curve-fitting approach to river bathymetry estimation using SWOT data: J Schaperow, D Li, S A Margulis, D P Lettenmaier

OS53C-1335 POSTER ASSIMILATION OF SYNTHETIC SWOT OBSERVATIONS TO IMPROVE GLOBAL RIVER BATHMETRY USING LOCAL ENSEMBLE TRANSFORM KALMAN FILTER: M Revel, D Yamazaki, S Kanae

OS53C-1336 POSTER A Multibaseline-InSAR-based Water Level Estimation Method for Mekong River: H Yu, H Lee, C H Chang

OS53C-1337 POSTER Accuracy analysis of SWOT reservoir storage-elevation estimates: A Mehran, D Li, R Wei, E Clark, O Mazdiyasni, M T Durand, D P Lettenmaier

OS53C-1339 POSTER Evaluation of lake products generated by LOCNES using SWOT hydrology simulator data: T Yuan, Y Sheng

OS53C-1340 POSTER Inference of complex river channels parameters and distributed discharges from historical altimetric time series and forthcoming SWOT data: K Larnier, P A Garambois, L Pujol, P Finaud-Guyot, A Samine Montazem, J Monnier, S Biancamaria, S Calmant

OS53C-1341 POSTER Discharge and Bathymetry Estimations of Rivers from SWOT Like Data: theHierarchical Variational Discharge Inference (HIVDI) Algorithm.: K Larnier, J Monnier, P A Garambois

OS53C-1342 POSTER Enhancing Discharge Interpolation for SWOT: M Pan, Y Yang, C K Fisher, P Lin, M Turmon, J Hobbs, C M Emery, J T Reager II, C H David, E F Wood

OS53C-1343 POSTER A simple discharge algorithm integrator and its application on the Ohio River system: S Tuozzolo, M T Durand

OS53C-1344 POSTER Relating Runoff Error Covariance to Streamflow Errors in a Large-Scale River System: M Turmon, C H David, J Hobbs, C M Emery, J T Reager II, J S Famiglietti

OS53C-1345 POSTER Enhancing the SWOT A Priori Global River Database: E H Altenau, T Pavelsky, G H Allen, D Yamazaki, M T Durand, R P M Frasson, X Yang, C Lion, E Beighley

OS53C-1346 POSTER Integrating lateral inflows into Surface Water and Ocean Topography (SWOT) Mission river discharges algorithms: C Nickles, E Beighley, M T Durand, C H David, H Lee

OS53C-1347 POSTER Anticipated improvements to in-river DEMs from the Surface Water and Ocean Topography mission: T Langhorst, T Pavelsky, R P M Frasson, R Wei, A Domeneghetti, E H Altenau, M T Durand, J T Minear, K W Wegmann, M Fuller


OS53C-1349 POSTER Surface Water Detection and Elevation Retrieval from AirSWOT Airborne Ka-band Radar Interferometry: J V Fayne, L C Smith, L H Pitcher, E D Kyzivat, M Harlan, C J Gleason

OS53C-1350 POSTER Hydrologic fields from assimilation of in situ, multiple remote sensing or future SWOT observation: R C D Paiva, S Wongchuig, V A Siqueira, W Collichson, S Biancamaria, A Paris, M Parrens, A Al-Bitar, F Papa

OS53C-1351 POSTER Evolution of water-surface elevation and liftoff at the river mouth: Implications for SWOT discharge measurements: R Branch, A Horner-Devine, N Kumar, A R Poggioli

OS53C-1352 POSTER The Use and Users of SWOT Mission Information Products: M M Srinivasan, A Andral, F Hossain, E Beighley

OS53C-1353 POSTER Inferring the Partition of Ocean Motions into Balanced Motions and Internal Gravity Waves using Satellite Altimeters: H S Torres, O Vergara, C Ubelmann, P Klein, D Menemenlis

OS53C-1354 POSTER Mapping Internal Tides using Synthetic SWOT Measurements: Z Zhao, J Wang, L L Fu, S Chen, B Qiu, D Menemenlis

OS53C-1355 POSTER Observing System Simulation Experiments with a Multiscale Data Assimilation Methodology for Validation of Sea Surface Heights from the SWOT Satellite: Z Li, J Wang, L L Fu

OS53C-1356 POSTER Estimating High resolution Global Surface Currents with Machine Learning: A Sinha, R Abernathey

OS53C-1357 POSTER Mesoscale and Submesoscale Structures in the Arabian Sea using Sea Surface Height: C B Trott, S Bulusu

OS53C-1358 POSTER Tracer subduction and energy cycles in an idealized ACC model, and the potential for measuring energy transfers from space: D Balwada, T Uchida, K S Smith, R P Abernathey

OS53D (CC) Hall A-C (Poster Hall)

Friday 1340h

Beyond Constant Eddy Diffusivities: Estimation, Implementation, Impacts, and New Approaches to the Parameterization of Lateral Mixing in Ocean Models Posters

Presiding: Inga Koszalka, GEOMAR Helmholtz Centre for Ocean Research Kiel; K. Shafer Smith, New York University; Baylor Fox-Kemper, Brown University; Anand Gnanadesikan, Johns Hopkins Univ-EPS;
1340h **OS53D-1359** *POSTER* Toward a parameterization of eddy mixing across continental slopes: **Y Wang**, A Stewart

1340h **OS53D-1360** *POSTER* The Impact of Topography and Eddy Parameterization on the Simulated Southern Ocean Response to Changes in Surface Wind Stress: **H Kong**, M Jansen

1340h **OS53D-1361** *POSTER Title:* The Impact of Southern Ocean Eddies on the Ventilation Tracer in Changing Climate: **A Riaz**

1340h **OS53D-1362** *POSTER* Can Lagrangian tracking simulate tracer spreading in a high-resolution Ocean General Circulation Model?: **I M Koszalka**, P Wagner, S Ruhs, F U Schwarzkopf, A Biastoch

1340h **OS53D-1363** *POSTER* Eddy Diffusivity Estimates from Lagrangian Trajectories Simulated with Ocean Models and Surface Drifter Data — A Case Study for the Greater Agulhas System: **I M Koszalka**, S Ruhs, V Zhurbas, J Durgadoo, A Biastoch

1340h **OS53D-1364** *POSTER* Clustering of floating particles due to submesoscale dynamics: a simulation study for the Gulf of Finland, Baltic Sea: **G Vili**, V Zhurbas, U Lips, J Laanemets

1340h **OS53D-1365** *POSTER* Statistical parameterization of surface lateral diffusivity from satellite data: **A Nummelin**, T W N Haine

1340h **OS53D-1366** *POSTER* Dynamically-connected tracer and buoyancy mixing coefficients in eddy parameterization schemes: **K S Smith**, D Balwada

1340h **OS53D-1367** *POSTER* Estimates of surface horizontal diffusivity based on submesoscale observations of surface currents and passive tracer: **S Y Kim**, E A Lee, H Kim

1340h **OS53D-1368** *POSTER* Energizing Turbulence Closures in Ocean Models: **I Zanna**, L Mana, J Anstey, A Adcroft, J Kjellsson, S D Bachman

1340h **OS53D-1369** *POSTER* Evolution of small-scale horizontal variability over the continental shelf: **S Kenah**, A Kirincich

1340h **OS53D-1370** *POSTER* Exploring the Depth-differentiation Hypothesis for the Deep-water Coral Callogorgia delta in the Northern Gulf of Mexico: **G Liu**, A Bracco, A Quattrini, S Herrera

1340h **OS53D-1371** *POSTER* Freshwater Lenses in the Near-Surface Layer of the Ocean Laterally Spreading as Gravity Currents: **A Soloviev**, C Dean

1340h **OS53D-1373** *POSTER* Is the Eddy-driven Velocity Different for Different Tracers?: **J S von Storch**, E Hertwig

1340h **OS53D-1374** *POSTER* Modeling the Effects of Mesoscale Eddies on Large-scale Circulation, Mixing and Tracer Distributions in a Global Ocean Circulation Model: **N F Cohen**, A Schmittner

1340h **OS53D-1375** *POSTER* To mix, or not to mix, that is the question: analysis of heat and carbon uptake across different resolutions in GFDL’s OMIP and OMIP-BGC simulations: **J P Krasting**, A Adcroft, J P Dunne, S M Griffies, J G John, M Winton

1340h **OS53D-1376** *POSTER* Non-local mixing: **T Lutz**, A Souza, C Doering, G Flierl, G Wagner

1340h **OS53D-1377** *POSTER* Multiple Dynamic Zones in Mesoscale Oceanic Eddies: **C Dong**

1340h **OS53D-1378** *POSTER* Observed enhancement of turbulent mixing in the cycloic eddy: **Y Zhang**, X Chen, C Dong, G Wei

1340h **OS53D-1379** *POSTER* Parameterization of Wave-induced Mixing Using Large Eddy Simulations (LES): **H Wang**, C Dong, X Gao, B Fox-Kemper

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**GC54B** (CC) Salon A

**Friday 1600h**


**Presiding:** Paul Durack, Lawrence Livermore National Laboratory; Nadya Vinogradova Shiffer, NASA Headquarters; John Reager, NASA Jet Propulsion Laboratory; Remy Roca, CNRS;

1600h Introductory Remarks:

1603h **GC54B-01** Terrestrial hydroclimatology and climate change: **P Greve**

1616h **GC54B-02** Ocean salinity, a key parameter to study the linkages of the oceans with the terrestrial water cycle: **S Fournier**

1629h **GC54B-03** Rising Temperatures Increase Importance of Oceanic Evaporation as a Source for Continental Precipitation: **K Findell**, B R Lintner, P Keys, R van der Ent, A M Berg, J P Krasting

1642h **GC54B-04** A tracer study to reveal pathways and ocean influences of global riverine freshwater: **Q Sun**, M M Whitney, F Bryan, Y H Tseng

1655h **GC54B-05** Linking oceanic and terrestrial water balances during Indian summer monsoon: **X Xie**, W T Liu

1708h **GC54B-06** Maritime Continent Water Cycle Regulates Low-latitude Chokepoint of Global Ocean Circulation: **T Lee**, S Fournier, A L Gordon, J Sprintall
1721h GC54B-07 Observations of turbulence within rain-formed fresh lenses as part of SPURS-2: S Iyer, K Drushka

1734h GC54B-08 Salinification of the Atlantic Subtropical Central Water under the Expanding Tropics: L Yu

1747h GC54B-09 Linking anthropogenic activities and sediment starvation to observed salt intrusion trends in the multi-channel estuarine system of the Mekong Delta, Vietnam: S Eslami Arab, M van der Vetg, H Kernkamp, P Hoekstra, D Do Duc, T Tran Quang, N Nguyen Trung

OS54A (CC) 103AB
Friday 1600h
Geological and Geophysical Characterization of Marine Gas Hydrate Reservoirs I (joint with EP)

Presiding: Manasij Santra, University of Texas at Austin; Ann Cook, Ohio State University Main Campus; Alexey Portnov, The Ohio State University; Stefan Bünz, University of Tromso;

1600h OS54A-01 Geological and glaciological control on an Arctic Ocean gas hydrate reservoir.: P Serov, M Waage, S Vadakkepuliyambatta, H Patton, A Portnov, J Mienert, S Bünz, S Vadakkepuliyambatta, A Hubbard


1630h OS54A-03 Complex BSR patterns related to gas composition, migrating fluids, and canyon dynamics in the Pearl River Mouth Basin, South China Sea: X Wang, Y Guo, C D Ruppel


1700h OS54A-05 Using velocity pull up to identify and quantify gas hydrates in the Gulf of Mexico: Are Mississippi Fan turbidites frozen?: A S Madof

1715h OS54A-06 Marine Controlled Source Electromagnetic Gas Hydrate Studies in the Danube Delta, Western Black Sea: K Schwalenberg, R A S Gehrmann, D Rippe, S Duan, S Hölz, A Dannowski, T Zander, J Bialas, M Riedel, G Bohrmann, M Haackel

1745h OS54A-08 Quantifying Methane Hydrate in the Gulf of Mexico Using Controlled Source Electromagnetic Methods.: P Kannberg, S Constable

OS54B (CC) 102AB
Friday 1600h
Improved Observational and Modeling Skills to Understand the Hurricane and Winter Storm Induced Surge and Meteotsunami I

Presiding: Meng Xia, University of Maryland Eastern Shore; Edward Myers, NOAA; Chunyan Li, Louisiana State University; Alex Sheremet, University of Florida;

1600h OS54B-01 Recent progress in the modeling and detection of meteotsunamis and storm surges: S T Grilli, J T Kirby Jr, C A Guérin

1615h OS54B-02B Numerical and observational studies of summer circulation dynamics and particle trajectories during storm events in Lake Michigan: M Mao, M Xia

1630h OS54B-03 Meteotsunamis in the Gulf of Mexico and Eastern United States During Hurricane Seasons 2016-2017: M Olabarrieta, L SHI, D S Nolan

1645h OS54B-04 Observations and modelling of ocean waves from the January 2018 nor’easten bomb: H Shen, B Toulany Dr, J Gemmrich, W Perrie, S Lehner

1700h OS54B-05 Developing Skill Assessment and Performance Metrics for the National Ocean Service’s Operational Storm Surge Model Forecasting Systems.: S V Vinogradov, E P Myers III, Y Funakoshi, J Calzada, S Moghimi

1715h OS54B-06 Modeling Architecture Necessary for Prognostications of Coastal and Inland Flooding: S Bao, L J Pietrafesa, P T Gayes, J Hallstrom, D Stirling

1730h OS54B-07 Modeling storm tide and inundation in the Greater New York City during Hurricane Sandy (2012): Z Liu, H V C Wang, Y J Zhang, L Magnusson

1745h OS54B-08 Response of sea level to tide, wind forcing and river discharge in the Kitimat Fjord System: S Shan, C G Hannah, Y Wu