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# **2019 Ocean Surface Topography Science Team Meeting**

## ***Convene Chicago***

***16 West Adams Street, Chicago, IL 60603***

**Monday, October 21 2019 - Friday, October 25 2019**

The 2019 Ocean Surface Topography Meeting will occur 21-25 October 2019 and will include a variety of science and technical splinters. These will include a special splinter on the Future of Altimetry (chaired by the Project Scientists), a splinter on Coastal Altimetry, and a splinter on the recently launched CFOSAT. In anticipation of the launch of Jason-CS/Sentinel-6A approximately 1 year after this meeting, abstracts that support this upcoming mission are highly encouraged.

**Event's program**

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## List of event's sessions

### Monday, October 21 2019

09:00 - 12:35

OSTST Opening Plenary Session  
The Forum

14:00 - 15:45

Science Keynotes Session  
The Forum

16:15 - 18:00

Science I: Climate data records for understanding the causes of global and regional sea level variability and change  
The Forum

### Tuesday, October 22 2019

09:00 - 12:30

Instrument Processing: Measurement and Retracking  
The Forum

09:00 - 12:30

Precision Orbit Determination  
The Monroe Hub

14:00 - 15:45

Instrument Processing: Propagation, Wind Speed and Sea State Bias  
The Forum

14:00 - 15:45

Outreach, Education and Altimetric Data Services  
The Monroe Hub

16:15 - 18:00

Poster session (part 1) and Cocktail  
The Gallery

### Wednesday, October 23 2019

09:00 - 10:30

Application development for Operations  
The Monroe Hub

09:00 - 12:30

Regional and Global CAL/VAL for Assembling a Climate Data Record  
The Forum

11:00 - 12:30

Coastal Altimetry  
The Monroe Hub

14:00 - 15:45

Quantifying Errors and Uncertainties in Altimetry data  
The Monroe Hub

14:00 - 15:45

Science II: Large Scale Ocean Circulation Variability and Change  
The Forum

16:15 - 18:00

Science III: Mesoscale and sub-mesoscale oceanography  
The Forum

19:00 - 22:00

Conference Dinner

## **Thursday, October 24 2019**

09:00 - 10:30

The Geoid, Mean Sea Surfaces and Mean Dynamic Topography  
The Monroe Hub

09:00 - 10:30

Tides, internal tides and high-frequency processes  
The Forum

11:00 - 12:30

CFOSAT  
The Monroe Hub

11:00 - 12:30

The Future of Altimetry  
The Forum

14:00 - 15:45

Poster session (part 2)  
The Gallery

16:15 - 18:00

Science IV: Altimetry for Cryosphere and Hydrology  
The Forum

## **Friday, October 25 2019**

09:00 - 12:30

OSTST Closing Plenary Session  
The Forum

# October 2019

Mon 21

Tue 22

Wed 23

Thu 24

Fri 25

all-day  
W43

OSTST 2019 Convenes Chicago 16 West Adams St, Chicago, IL 60603, United States

|       |   |       |  |       |  |       |   |       |  |
|-------|---|-------|--|-------|--|-------|---|-------|--|
| 08:00 | Registration and Presentation upload  | 08:00 | Registration and Presentation upload   | 08:00 | Registration and Presentation upload   | 08:00 | Registration and Presentation upload  | 08:00 | Registration and Presentation upload   |
| 09:00 | OSTST Opening Plenary Session<br>The Forum  | 09:00 | Instrument Processing<br>(part I): Measurement<br>and Retracking<br>The Forum                      | 09:00 | Precision Orbit<br>Determination (part I)<br>The Monroe Hub                    | 09:00 | Application<br>development for Near<br>Real-Time Operations<br>The Monroe Hub       | 09:00 | The Geoid, Mean Sea<br>Surfaces and Mean<br>Dynamic Topography<br>The Monroe Hub |
| 10:00 |   |       |  |       |  |       |   |       | 09:00  |
| 10:30 | Coffee break  | 10:30 | Coffee break   | 10:30 | Coffee break   | 10:30 | Coffee break  | 10:30 | Coffee break   |
| 11:00 | OSTST Opening Plenary Session (cont)<br>The Forum   | 11:00 | Precision Orbit<br>Determination (part II)<br>The Monroe Hub                                       | 11:00 | Instrument Processing<br>(part II): Measurement<br>and Retracking<br>The Forum | 11:00 | Coastal altimetry<br>The Monroe Hub   | 11:00 | The future of altimetry<br>The Forum   |
| 12:00 |   |       |  |       |  |       |   |       | 11:00  |
| 12:30 | Lunch   | 12:30 | Lunch  | 12:30 | Lunch  | 12:30 | Lunch   | 12:30 | Lunch  |
| 13:00 |   |       |  |       |  |       |   |       |  |
| 14:00 | Science keynotes<br>The Forum   | 14:00 | Instrument Processing<br>(part III): Propagation,<br>Wind Speed and Sea<br>State Bias<br>The Forum | 14:00 | Outreach, Education &<br>Altimetric Data Service<br>The Monroe Hub             | 14:00 | Science II: Large Scale<br>Ocean Circulation<br>Variability and Change<br>The Forum | 14:00 | Poster session part II<br>The Gallery  |
| 15:00 |   |       |  |       |  |       |   |       |  |
| 15:45 | Coffee break  | 15:45 | Coffee break   | 15:45 | Coffee break   | 15:45 | Coffee break  | 15:45 | Coffee break   |
| 16:00 | Science I: Climate data records for understanding<br>the causes of global and regional sea level<br>variability and change<br>The Forum | 16:15 | Poster session (part I) and Cocktail<br>The Gallery  | 16:15 | Science III: Mesoscale and sub-mesoscale<br>oceanography<br>The Forum          | 16:15 | Science IV: Altimetry for Cryosphere and<br>Hydrology<br>The Forum                  | 16:15 | CFOSat splinter TBC<br>The Monroe Hub  |
| 17:00 |   |       |  |       |  |       |   |       |  |
| 18:00 |   |       |  |       |  |       |   |       |  |
| 19:00 |   |       |  | 19:00 | Conference Dinner<br>Petterinos's Restaurant                                   |       |   |       |  |
| 20:00 |   |       |  |       |  |       |   |       |  |
| 21:00 |   |       |  |       |  |       |   |       |  |
| 22:00 |   |       |  |       |  |       |   |       |  |

## Programme at a Glance

## Oral sessions

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Monday, October 21 2019

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08:00 - 09:00: Registration and Presentation upload

### OSTST Opening Plenary Session

**Session chairs:** Pascal Bonnefond, Craig Donlon, Eric Leuliette, Remko Scharroo, Josh Willis  
(Mon, Oct 21 2019, 09:00 - 12:35)

#### The Forum

09:00 - 09:05:

[Welcoming remarks and meeting overview](#)

Josh Willis (JPL, United States)

09:05 - 09:30:

[NASA/CNES/EUMETSAT/NOAA/ESA program status](#)

Program Managers (NASA/CNES/EUMETSAT/NOAA/ESA, )

09:30 - 09:45:

[Jason-2 mission overview](#)

Christophe Maréchal (CNES, France)

09:45 - 10:00:

[Jason-3 mission overview](#)

Christophe Maréchal (CNES, France)

10:00 - 10:15:

[SARAL/AltiKa mission overview](#)

Nadège Queruel (CNES, France)

10:15 - 10:30:

[Sentinel-3 mission overview](#)

Craig Donlon (ESA/ESTEC, Netherlands)

10:30 - 11:00: Coffee break

11:00 - 11:15:

[CFOSAT: A new satellite for the observation of wind and waves](#)

Cédric Tourain (CNES, France)

11:15 - 11:30:

[Sentinel-6/Jason-CS news and developments](#)

Pierrick Vuilleumier (ESA/ESTEC, Netherlands), John Loving (NOAA, United States), François Parisot (EUMETSAT, Germany), Parag Vaze (NASA/JPL, United States), Gilles Tavernier (CNES, France)

11:30 - 11:45:

[SWOT status](#)

Lee-Lueng Fu (JPL, United States), Rosemary Morrow (LEGOS, France)

11:45 - 12:00:

[Topics to be discussed in the splinters](#)

Eric Leuliette (NOAA, United States)

12:00 - 12:20: Keynote/invited

[How accurate is accurate enough?](#)

Benoit Meyssignac (CNES/LEGOS, France)

12:20 - 12:35: Keynote/invited

[Engaging the Public in Addressing Climate Change](#)

Patricia Ward (Museum of Science and Industry, Chicago, United States)

12:35 - 14:00: Lunch

## Science Keynotes Session

**Session chairs:** Pascal Bonnefond, Craig Donlon, Eric Leuliette, Remko Scharroo, Josh Willis  
(Mon, Oct 21 2019, 14:00 - 15:45)

### The Forum

#### 14:00 - 14:25: Keynote/invited

[Does the large-scale ocean circulation drive coastal sea level changes in the North Atlantic?](#)

Denis Volkov (NOAA-AOML/University of Miami, United States), Sang-Ki Lee (NOAA-AOML, USA), Ricardo Domingues (NOAA-AOML / University of Miami, USA), Marlos Goes (NOAA-AOML / University of Miami, USA)

#### 14:25 - 14:50: Keynote/invited

[Marine heat waves in eastern boundary upwelling systems: the roles of oceanic advection, wind, and air-sea heat fluxes in the Benguela system, and contrasts to other systems](#)

Melanie R. Fewings (Oregon State University - College of Earth, Ocean, and Atmospheric Sciences, United States), P. Ted Strub (Oregon State University - College of Earth, Ocean, and Atmospheric Sciences, United States), Craig Risien (Oregon State University - College of Earth, Ocean, and Atmospheric Sciences, United States), Corinne James (Oregon State University - College of Earth, Ocean, and Atmospheric Sciences, United States), Carlos Moffat (University of Delaware - School of Marine Science and Policy, United States), Kevin S. Brown (Oregon State University - Department of Pharmaceutical Sciences and School of Chemical, Biological, and Environmental Engineering, United States)

#### 14:50 - 15:15: Keynote/invited

[Surface Films: Is it possible to detect them using Ku/C band sigmaO relationship](#)

Jean Tournadre (IFREMER, France), Douglas Vandemark (University New Hampshire, USA)

#### 15:15 - 15:40: Keynote/invited

[Sea Level Anomaly from a multi-altimeter combination in the ice covered Southern Ocean](#)

Matthis Auger (CLS, France), Pierre Prandi (CLS, France), Jean-Baptiste Sallée (LOCEAN, France), Amandine Guillot (CNES, France), Gerald Dibarboure (CNES, France), Yannice Faugère (CLS, France)

#### 15:45 - 16:15: Coffee break

## Science I: Climate data records for understanding the causes of global and regional sea level variability and change

**Session chairs:** Benjamin Hamlington, Benoit Meyssignac  
(Mon, Oct 21 2019, 16:15 - 18:00)

### The Forum

#### 16:15 - 16:30:

[Estimation and impact of Sentinel-3a GMSL drift on climate-driven studies](#)

Michael Ablain (Magellium, France), Rémi Jugier (Magellium, France), Meyssignac Benoit (CNES/LEGOS, France), Matthias Raynal (CLS, France), Sylvie Labroue (CLS, France)

#### 16:30 - 16:45:

[Uncertainty in Satellite estimate of Regional Mean Sea Level trends](#)

Pierre Prandi (CLS, France), Benoît Meyssignac (CNES/LEGOS, France), Jean-François Legeais (CLS, France), Yannice Faugère (CLS, France), Michael Ablain (Magellium, France), Jérôme Benveniste (ESA, Italy)

#### 16:45 - 17:00:

[Contributions of atmospheric forcing and chaotic ocean variability to global and regional sea level changes over 1993-2015](#)

William Llovel (LEGOS (CNRS/CNES/IRD/UPS), France), Benoit Meyssignac (LEGOS, France), Nicolas Kolodziejczyk (LOPS, France), Thierry Penduff (IGE, France), Jean-Marc Molines (IGE, France)

**17:00 - 17:15:**

[Why sea-level swings in the Pacific](#)

Y. Tony Song (JPL/NASA, United States)

**17:15 - 17:30:**

[Validating Arctic Sea Level Change in the GRACE-era](#)

Carsten Ludwigsen (DTU, Denmark)

**17:30 - 17:45:**

[Extrapolating Satellite Data Records for Short-Term Sea Level Projections](#)

Robert Steven Nerem (University of Colorado, United States), John Fasullo (NCAR, United States), Benjamin Hamlington (Jet Propulsion Laboratory, United States), Thomas Harvey (University of Colorado, United States), Surendra Adhikari (Jet Propulsion Laboratory, United States)

**17:45 - 18:00:**

[Discussion](#)

**08:00 - 09:00: Registration and Presentation upload**

## **Instrument Processing: Measurement and Retracking**

**Session chairs:** Francois Boy, Phil Callahan, Robert Cullen, Jean-Damien Desjonquieres, Alejandro Egido, Marco Fornari, Cristina Martin-Puig, Walter H.F. Smith  
(Tue, Oct 22 2019, 09:00 - 12:30)

### **The Forum**

**09:00 - 09:15:**

[TOPEX Data Reprocessing using a Numerical Retracking Approach](#)

Jean-Damien DESJONQUERES (NASA Jet Propulsion Laboratory, United States), Matthieu TALPE (NASA Jet Propulsion Laboratory, United States), Philip CALLAHAN (NASA Jet Propulsion Laboratory, United States), Shailen DESAI (NASA Jet Propulsion Laboratory, United States), Joshua WILLIS (NASA Jet Propulsion Laboratory, United States)

**09:15 - 09:30:**

[Sentinel-3A, Jason-3 and AltiKa instrumental drifts and their impacts on geophysical estimates](#)

Jean-Christophe Poisson (CLS, France), Fanny Piras (CLS, France), Matthias Raynal (CLS, France), Emeline Cadier (CLS, France), Pierre Thibaut (CLS, France), François Boy (CNES, France), Nicolas Picot (CNES, France), Franck Borde (ESA, Netherlands)

**09:30 - 09:45:**

[On the Effect of Surface Motion in SAR Altimeter Observations of the Open Ocean](#)

Alejandro Egido (NOAA / GST Inc., United States), Chris Ray (St Mary, USA)

**09:45 - 10:00:**

[An Investigation of the Impact of Vertical Water Particle Motions on Fully-Focused SAR](#)

#### Altimetry

Christopher Buchhaupt (Uni Bonn, Germany), Luciana Fenoglio (Uni Bonn, Germany), Jürgen Kusche (Uni Bonn, Germany)

**10:00 - 10:15:**

[Impact of the ocean waves motion on the Delay/Doppler altimeters measurements](#)

Laïba Amarouche (CLS, France), Ngan Tran (CLS, France), Damien Herrera (CLS, FRANCE), Charles-Antoine Guerin (MIO, France), Pierre Dubois (CLS, France), Jérémie Aublanc (CLS, France), François Boy (CNES, France)

**10:15 - 10:30:**

[Reducing the high-frequency noise in Jason-3 and Sentinel-3A SWH data](#)

Ngan Tran (CLS, France), Pierre Thibaut (CLS, France), Gérald Dibarbouré (CNES, France), François Boy (CNES, France), Nicolas Picot (CNES, France), Doug Vandemark (UNH, USA)

**10:30 - 11:00: Coffee break**

**11:00 - 11:15:**

[Sentinel-3A and Sentinel-3B Tandem Phase Evaluation of the Surface Topography Mission](#)

#### Sea State Products

Chris Banks (National Oceanography Centre, United Kingdom), Christine Gommenginger (National Oceanography Centre, UK), Francisco Mir Calafat (National Oceanography Centre, United Kingdom), Helen Snaith (British Oceanographic Data Centre, UK), Nadim Dayoub (National Oceanography Centre, United Kingdom), Matthew Hammond (National Oceanography Centre, United Kingdom)



**11:15 - 11:30:**

[First SAR altimeter tandem phase: a unique opportunity to better characterize open ocean SAR altimetry signals with unfocused and focused processing](#)

Pierre Rieu (CLS, France), Thomas Moreau (CLS, France), Matthias Raynal (CLS, France), Pierre Thibaut (CLS, France), Craig Donlon (ESA, The Netherlands), Franck Borde (ESA, The Netherlands), François Boy (CNES, France), Nicolas Picot (CNES, France), Sébastien Clerc (ACRI-ST, France)

**11:30 - 11:45:**

[Sea-ice freeboard and sea level from altimetry using fast and robust 2 dimensional retracker](#)

Sara Fleury (LEGOS, France), Antoine Laforge (LEGOS, France), Florent Garnier (LEGOS, France), Salvatore Dinardo (He Space, Germany), Giovanni Sabatino (ESA, Italy), Jérôme Benveniste (jerome.Benveniste@esa.int, Italy)

**11:45 - 12:00:**

[Improved Retrieval Methods for Sentinel-3 SAR Altimetry over Coastal and Open Ocean and recommendations for implementation: ESA SCOOP Project Results](#)

David Cotton (Satellite Oceanographic Consultants Ltd, United Kingdom), Thomas Moreau (CLS, France), Eduard Makhoul (isardSAT, Spain), Christine Gommenginger (National Oceanography Centre, UK), Mathilde Cancet (Noveltis, France), Luciana Fenoglio-Marc (University of Bonn, Germany), Marc Naeije (TU Delft, Netherlands), M Joana Fernandes (University of Porto, Portugal), Andrew Shaw (SKYMAT, UK), Marco Restano (SERC / ESRIN, Italy), Américo Ambrózio (DEIMOS / ESRIN, Italy), Jérôme Benveniste (ESA-ESRIN, Italy)

**12:00 - 12:30:**

[Discussion](#)

## Precision Orbit Determination

**Session chairs:** Sean Bruinsma, Alexandre Couhert, Frank Lemoine  
(Tue, Oct 22 2019, 09:00 - 12:30)

### The Monroe Hub

**09:00 - 09:15:**

[CNES POE-F precise orbit performances for the current altimeter missions](#)

John Moyard (CNES, France), Alexandre Couhert (CNES, France), Flavien Mercier (CNES, France), Sabine Houry (CNES, France), Hanane Ait Lakbir (CSSI, France), Clément Masson (CSSI, France)

**09:15 - 09:30:**

[Improved orbit time series for the TOPEX and Jason missions from 1992-2019.](#)

Frank Lemoine (NASA GSFC, United States), Nikita Zelensky (ESSIC, University of Maryland, USA), Alexandre Belli (Universities Space Research Association (USRA) @ NASA GSFC, USA), Brian Beckley (SGT Inc., U.S.A.), Douglas Chinn (SGT Inc., USA), Despina Pavlis (ESSIC, University of Maryland, USA)

**09:30 - 09:45:**

[Performance of the Jason-2 and Jason-3 GPS Receivers and Resulting GPS-Based Precise Orbit Determination Solutions](#)

Shailen Desai (Jet Propulsion Laboratory, United States), Willy Bertiger (Jet Propulsion Laboratory, United States), Bruce Haines (Jet Propulsion Laboratory, United States), Da Kuang (Jet Propulsion Laboratory, United States), Aurore Sibois (Jet Propulsion Laboratory, United States)

**09:45 - 10:00:**

[Copernicus POD Service - Model updates and validation of Sentinel-3 orbit determination](#)

Heike Peter (PosiTim, Germany), Emilio J. Calero (GMV AD, Spain), Jaime Fernández (GMV AD, Spain), Pierre Féménias (ESA/ESRIN, Italy)

**10:00 - 10:15:**

[Precise Orbit Determination of DORIS satellites by CNES/CLS IDS Analysis Center in the frame of the next ITRF](#)

Hugues Capdeville (CLS, France)

**10:15 - 10:30:**

[Discussion](#)

**10:30 - 11:00: Coffee break**

**11:00 - 11:15:**

[Performance of dynamic and ambiguity-fixed LEO orbits in SLR validation and network calibration](#)

Daniel Arnold (Astronomical Institute of the University of Bern, Switzerland), Adrian Jäggi (Astronomical Institute of the University of Bern, Switzerland), Stefan Schaer (Astronomical Institute of the University of Bern, Switzerland), Ulrich Meyer (Astronomical Institute of the University of Bern, Switzerland), Linda Geisser (Astronomical Institute of the University of Bern, Switzerland)

**11:15 - 11:30:**

[Analysis of Altimetry satellites SLR residuals](#)

Flavien Mercier (CNES, France), Alexandre Couhert (CNES, France), John Moyard (CNES, France)

**11:30 - 11:45:**

[An analytical method to propagate errors in the Altimeter system: from space to Earth \(orbit, reference frame and mean sea level\)](#)

Pierre EXERTIER (CNRS-GRGS, France), Pascal BONNEFOND (Observatoire de Paris, SYRTE - GRGS, France), Ngoc Dung LUONG (University of Civil Engineering, Ha Noi, Viet Nam)

**11:45 - 12:00:**

[Impact of satellite yaw attitude regime on in-flight calibration of low-Earth orbiter GPS antenna phase center](#)

Aurore E. Sibois (Jet Propulsion Laboratory, California Institute of Technology, United States), Shailen D. Desai (Jet Propulsion Laboratory, California Institute of Technology, United States)

**12:00 - 12:15:**

[Impact of nominal and measured satellite attitude on SLR- and DORIS-derived orbits of Jason satellites and altimetry results](#)

Sergei Rudenko (Deutsches Geodätisches Forschungsinstitut, Technische Universität München (DGFI-TUM), Germany), Julian Zeitlhöfler (DGFI-TUM, Germany), Mathis Bloßfeld (DGFI-TUM, Germany), Denise Dettmering (DGFI-TUM, Germany)

**12:15 - 12:30:**

[Discussion](#)

**12:30 - 14:00: Lunch**

## **Instrument Processing: Propagation, Wind Speed and Sea State Bias**

**Session chairs:** Shannon Brown, Estelle Obligis  
(Tue, Oct 22 2019, 14:00 - 15:45)

### **The Forum**

**14:00 - 14:15:**

[Inspecting Jason-3 and Sentinel-3 WPD over their first 3 years of mission](#)

M. Joana Fernandes (Universidade do Porto, Faculdade de Ciências; CIIMAR, Portugal), Clara Lázaro (Universidade do Porto, Faculdade de Ciências; CIIMAR, Portugal), Telmo Vieira (Universidade do Porto, Faculdade de Ciências; CIIMAR, Portugal), Nelson Pires (Universidade do Porto, Faculdade de Ciências; CIIMAR, Portugal), Eliana Vieira (Universidade do Porto, Faculdade de Ciências, Portugal)

**14:15 - 14:30:**

[Altimeter 1D-Var Tropospheric Correction for Sentinel-3](#)

Ralf Bennartz (Vanderbilt University, United States), Bruno Picard (Fluctus SAS, France), Frank Fell (Informus GmbH, Deutschland), Estelle Obligis (Eumetsat, Deutschland)

**14:30 - 14:45:**

[Modelling the vertical dependence of the Wet Path Delay: application in satellite altimetry over coastal and inland waters](#)

Telmo Vieira (Universidade do Porto, Faculdade de Ciências; Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR), Portugal), M. Joana Fernandes (Universidade do Porto, Faculdade de Ciências; Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR), Portugal), Clara Lázaro (Universidade do Porto, Faculdade de Ciências; Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR), Portugal), Nelson Pires (Universidade do Porto, Faculdade de Ciências; Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR), Portugal)

**14:45 - 15:00:**

[Performances and stability assessment of Sentinel3 Microwave radiometers](#)

Marie-Laure Frery (CLS, France), Mathilde Siméon (CLS, France), Pierre Féménias (ESA, Italy)

**15:00 - 15:15:**

[High Resolution Microwave Radiometer \(HRMR\) on Sentinel-6](#)

Shannon Brown (JPL, United States), Tanvir Islam (JPL, United States), Pekka Kangaslahti (JPL, United States), Isaac Ramos (JPL, United States), Sharmila Padmanabhan (JPL, United States)

**15:15 - 15:30:**

[Next-generation radiometer instruments, algorithms, and uncertainties due to 24 GHz 5G interference](#)

Tanvir Islam (NASA JPL, United States), Shannon Brown (NASA JPL, United States), Sidharth Misra (NASA JPL, United States)

**15:30 - 15:45:**

[Discussion](#)

## Outreach, Education and Altimetric Data Services

**Session chairs:** Jessica Hausman, Vinca Rosmorduc, Margaret Srinivasan  
(Tue, Oct 22 2019, 14:00 - 15:45)

### The Monroe Hub

**14:00 - 14:15:**

[The Latest Updates at PO.DAAC](#)

Jessica Hausman (JPL, United States)

**14:15 - 14:30:**

[Some cool things we do with ERDDAP](#)

John Wilkin (Rutgers University, United States)

**14:30 - 14:45:**

[Ocean and Climate Change Education Using Fiction](#)

LuAnne Thompson (University of Washington, United States), Kathie Kelly (Self, United States)

**14:45 - 15:00:**

[Citizen science and volunteers in floateco project](#)

Nikolai Maximenko (IPRC/SOEST, University of Hawaii, United States), Linsey Haram (Smithsonian Environmental Research Center, United States), Mary Crowley (Ocean Voyages Institute, United States), Jan Hafner (IPRC/SOEST, University of Hawaii, United States), Gregory Ruiz (Smithsonian Environmental Research Center, United States), James Carlton (Williams College, United States), Luca Centurioni (Scripps Institution of Oceanography, United States), Andrey Shcherbina (Applied Physics Laboratory, University of Washington, United States), Cathryn C Murray (Fisheries and Oceans Canada, Canada)

**15:00 - 15:15:**

[Argonautica, altimetry from kindergarten to engineering school](#)

Danielle De Staerke (CNES, France), Vinca Rosmorduc (CLS, France)

**15:15 - 15:30:**

[Outreach & data services showcases](#)

**15:30 - 15:45:**

[Discussion](#)

**15:45 - 16:15: Coffee break**

## **Poster session (part 1) and Cocktail**

**Session chairs: all**

(Tue, Oct 22 2019, 16:15 - 18:00)

### **The Gallery**

See list of [Posters](#) (from page 25)

08:00 - 09:00: Registration and Presentation upload

## Application development for Operations

**Session chairs:** Deirdre Byrne, Gerald Dibarboure, Gregg Jacobs, Carolina Nogueira Loddo  
(Wed, Oct 23 2019, 09:00 - 10:30)

### The Monroe Hub

09:00 - 09:15:

[The Copernicus marine service wave reanalysis : WAVERYS](#)

Lotfi Aouf (Division Marine et Océanographie Météo-France, France), Stephane Law-Chune (Mercator-Ocean international, France), Alice Dalphinnet (Meteo-France, France), Yann Drillet (Mercator-ocean international, France)

09:15 - 09:30:

[Water-Watch: a New Phase of the Operational Monitoring of Lakes, Wetlands, and River Reaches for Natural Hazards and Regional Security](#)

Charon Birkett (University of Maryland, United States), Martina Ricko (KBR, USA), Hunter Yang (KBR, USA), Brian Beckley (KBR, USA)

09:30 - 09:45:

[Utilization of Satellite Altimetry Data in Monitoring Intraseasonal Oscillations in the Indian Ocean](#)

Subrahmanyam Bulusu (University of South Carolina, United States), Heather Roman-Stork (University of South Carolina, Columbia, USA), Corinne Trott (University of South Carolina, Columbia, USA)

09:45 - 10:00:

[Toward Higher resolution Level3 altimeter products for Assimilation Systems](#)

Marie Isabelle Pujol (CLS, France), Yannice Faugère (CLS, France), Mounir Benkiran (MOI, France), Oscar Vergara (CLS, France), Gérald Dibarboure (CNES, France)

10:00 - 10:15:

[Collaborative Design of Real-Time Displays of Forecast Fields for Targeted End-Users](#)

Ted Strub (Oregon State University, United States)

10:15 - 10:30:

[Discussion](#)

## Regional and Global CAL/VAL for Assembling a Climate Data Record

**Session chairs:** Pascal Bonnefond, Shailen Desai, Luisella Giulicchi, Bruce Haines, Eric Leuliette, Nicolas Picot  
(Wed, Oct 23 2019, 09:00 - 12:30)

### The Forum

09:00 - 09:15:

[Corsica: A 20+ Years Multi-Mission Absolute Altimeter Calibration Site](#)

Pascal Bonnefond (Observatoire de Paris - SYRTE, France), Pierre Exertier (GET, France), Olivier Laurain (Géoazur, France), Thierry Guinle (CNES, France), Pierre Féménias (ESA/ESRIN, Italy)

09:15 - 09:30:

[The Harvest Experiment: New Results From the Platform and Moored GPS Buoys](#)

Bruce Haines (Jet Propulsion Laboratory, California Institute of Technology, United States), Shailen Desai (Jet Propulsion Laboratory, California Institute of Technology, United States), Adam Dodge (University of Colorado, CCAR, United States), Christian Meinig (NOAA PMEL, United States), Bob Leben (University of Colorado, CCAR, United States), Michael Shannon (University of Colorado, CCAR, United States), Scott Stalin (NOAA PMEL, United States)

**09:30 - 09:45:**

[Updated absolute altimeter bias results from Bass Strait, Australia](#)

Christopher Watson (University of Tasmania, Australia), Benoit Legresy (CSIRO, Australia), Jack Beardsley (Integrated Marine Observing System, Australia), Arthur Zhou (University of Tasmania, Australia), Matt King (University of Tasmania, Australia)

**09:45 - 10:00:**

[Current Results from Multi-mission Calibrations at the Permanent Facility for Altimetry Calibration in west Crete, Greece attaining Fiducial Reference Measurement Standards](#)

Stelios Mertikas (Technical University of Crete, Greece), Craig Donlon (European Space Agency, The Netherlands), Pierre Féménias (European Space Agency, Italy), Demetris Galanakis (Space Geomatica, Greece), Ilias N. Tziavos (Aristotle University of Thessaloniki, Greece), George Vergos (Aristotle University of Thessaloniki, Greece), Thierry Guinle (CNES, France), Pierrick Vuilleumier (European Space Agency, The Netherlands), Mingsen Lin (National Satellite Ocean Application Service, China), Ge Chen (Ocean University of China, China), Achilles Tripolitsiotis (Space Geomatica, Greece), Xenofon Fratzis (Technical University of Crete, Greece)

**10:00 - 10:15:**

[Comparisons of Jason-3 and Sentinel-3A and tide gauges](#)

Eric Leuliette (NOAA, United States), Amanda Plagge (NOAA/Global Science and Technology, Inc., USA)

**10:15 - 10:30:**

[Discussion](#)

**10:30 - 11:00: Coffee break**

**11:00 - 11:15:**

[Global Calibration and Validation of Reprocessed TOPEX Data](#)

Matthieu Talpe (Jet Propulsion Laboratory, United States), Jean-Damien Desjonquères (Jet Propulsion Laboratory, USA), Shailen Desai (Jet Propulsion Laboratory, USA), Bruce Haines (Jet Propulsion Laboratory, USA), Philip Callahan (Jet Propulsion Laboratory, USA), Josh Willis (Jet Propulsion Laboratory, USA)

**11:15 - 11:30:**

[The first three years of Sentinel-3 altimetry – Reprocessing 2019](#)

Remko Scharroo (EUMETSAT, Germany), Bruno Lucas (EUMETSAT, Germany), Salvatore Dinardo (HE Space Operations GmbH, Germany), Carolina Nogueira Loddó (EUMETSAT, Germany)

**11:30 - 11:45:**

[Performance of the altimetry constellation: contribution of HY2B mission](#)

Sylvie Labroue (CLS, France), Matthias Raynal (CLS, France), Hélène Roinard (CLS, France), Ghita Jettou (CLS, France), Emeline Cadier (CLS, France), François Bignalet Cazalet (CNES, France), Nicolas Picot (CNES, France)

**11:45 - 12:00:**

[Global Quality Assessment of SARAL/AltiKa's reprocessed GDR-F dataset](#)

GHITA JETTOU (CLS, France), Manon Rousseau (CLS, France), Annabelle Ollivier (CLS, France), Nadège Queruel (CLS, France), François Bignalet-Cazalet (CNES, France), Nicolas Picot (CNES, France)

**12:00 - 12:15:**

[Evaluation and exploitation of CryoSat ocean products for oceanographic studies](#)

Chris Banks (National Oceanography Centre, United Kingdom), Francisco Mir Calafat (National Oceanography Centre, United Kingdom), Helen Snaith (British Oceanographic Data Centre, United Kingdom), Christine Gommenginger (National Oceanography Centre, United Kingdom), Andrew Shaw (SKYMAT Ltd., UK), Paolo Cipollini (Telespazio VEGA UK for ESA, UK), Nadim Dayoub (National Oceanography Centre, United Kingdom), Jérôme Bouffard (ESA, Italy), Marco Meloni (Serco for ESA, Italy)

**12:15 - 12:30:**

[Discussion](#)

## Coastal Altimetry

**Session chairs:** Mathilde Cancet and Ted Strub (Florence Birol and Marcello Passaro helped shape the session)

(Wed, Oct 23 2019, 11:00 - 12:30)

### The Monroe Hub

**11:00 - 11:15:**

[Coastal sea level trends and extremes from Delay-Doppler altimetry](#)

Luciana Fenoglio (University of Bonn, Germany), Salvatore Dinardo (HeSpace, Darmstadt, Germany), Christopher Buchhaupt (University of Bonn, Germany), Bernd Uebbing (University of Bonn, Germany), Johanna Staneva (Helmholz Zentrum Geesthacht, Germany), Jürgen Kusche (University of Bonn, Germany), Jérôme Benveniste (ESA-ESRIN, Italy)

**11:15 - 11:30:**

[Assessment of Sentinel-3A and Sentinel-3B altimeter data in the Coastal Zone](#)

Nadim Dayoub (National Oceanography Centre, United Kingdom), Chris Banks (National Oceanography Centre, UK), Christine Gommenginger (National Oceanography Centre, United Kingdom), Andrew Shaw (SKYMAT Ltd, UK), Helen Snaith (National Oceanography Centre, United Kingdom)

**11:30 - 11:45:**

[Baltic+ SEAL: Building a Sea Level Product for Climate Research in a Region Featuring Jagged Coastline and Sea-ice Coverage](#)

Felix L. Müller (Deutsches Geodätisches Forschungsinstitut der Technischen Universität München (DGFI-TUM), Germany), Marcello Passaro (DGFI-TUM, Germany), Ole B. Andersen (DTU SPACE National Space Institute, Denmark), Denise Dettmering (DGFI-TUM, Germany), Jacob L. Høyer (Danish Meteorological Institute, Denmark), Milla Johansson (Finnish Meteorological Institute, Finland), Kristine Skovgaard Madsen (Danish Meteorological Institute, Denmark), Eero Rinne (Finnish Meteorological Institute, Finland), Rory Scarrott (MaREI Centre for Marine and Renewable Energy, Environmental Research Institute, University College Cork, Ireland), Christian Schwatke (DGFI-TUM, Germany), Florian Seitz (DGFI-TUM, Germany), Eimear Tuohy (MaREI Centre for Marine and Renewable Energy, Environmental Research Institute, University College Cork, Ireland), Laura Tuomi (Finnish Meteorological Institute, Finland), Americo Ambrozio (DEIMOS, c/o ESA-ESRIN, Italy), Marco Restano (SERCO, c/o ESA-ESRIN, Italy), Jérôme Benveniste (European Space Agency (ESA-ESRIN), Italy)

**11:45 - 12:00:**

[Volume Transport from In-situ and Altimetry Data Over a Wide Continental Shelf.](#)

Loreley Lago (Centro de Investigaciones del Mar y la Atmósfera (CIMA- CONICET - UBA), Argentina), Martin Saraceno (Centro de Investigaciones del Mar y la Atmósfera (CIMA- CONICET - UBA), Argentina), Alberto Piola (Servicio de Hidrografía Naval Argentina (SHN), Argentina), Guillermina Paniagua (Centro de Investigaciones del Mar y la Atmósfera (CIMA- CONICET - UBA), Argentina), Christine Provost (Laboratoire LOCEAN- IPSL, Sorbonne Université, France)

**12:00 - 12:15:**

[Combining coastal altimetry and in situ observations to improve Meridional Overturning Circulation estimates: focus on the Southwestern Atlantic](#)

Matthieu Le Henaff (Univ. of Miami/CIMAS - NOAA/AOML, United States), Marion Kersale (Univ. of Miami/CIMAS - NOAA/AOML, United States), Christopher Meinen (NOAA/AOML, United States), Renellys Perez (NOAA/AOML, United States), Maria Paz Chidichimo (Servicio de Hidrografía Naval / Instituto Franco-Argentino sobre Estudios de Clima y sus Impactos, Consejo Nacional de Investigaciones Científicas y Técnicas, Argentina), Marcello Passaro (Deutsches Geodätisches Forschungsinstitut - TUM, Germany), Christian Schwatke (Deutsches Geodätisches Forschungsinstitut - TUM, Germany), Florence Birol (LEGOS, France), Yannice Faugere (CLS, France)

**12:15 - 12:30:**

[Discussion](#)

**12:30 - 14:00: Lunch**

## Quantifying Errors and Uncertainties in Altimetry data

**Session chairs:** Michael Ablain, Joel Dorandeu, Remko Scharroo  
(Wed, Oct 23 2019, 14:00 - 15:45)

### The Monroe Hub

**14:00 - 14:18:**

[Uncertainties in sea ice thickness products from altimetry. Towards new methods](#)

garnier florent (LEGOS, France), sara Fleury (LEGOS, FRANCE), Tanguy Jacober (LEGOS, FRANCE), Antoine Laforge (LEGOS, FRANCE), Frédérique rémy (LEGOS, FRANCE), benoit meyssignac (LEGOS, FRANCE)

**14:18 - 14:36:**

[A new way to assess and represent the error budget for any altimeter mission](#)

Pierre Thibaut (CLS, France), Jean Christophe Poisson (CLS, France), Marine Lievin (CLS, France), Laiba Amarouche (CLS, France), Michael Ablain (Magellium, France), Michel Tsamados (UCL, United Kingdom), Robert Cullen (ESA, The Netherlands)

**14:36 - 14:54:**

[Harmonizing the Jason-1, Jason-2, Jason-3 Time Series of Altimeter Rain Flags](#)

Matthieu Talpe (Jet Propulsion Laboratory, United States), Jean-Damien Desjonquères (Jet Propulsion Laboratory, USA), Shailen Desai (Jet Propulsion Laboratory, USA), Bruce Haines (Jet Propulsion Laboratory, USA)

**14:54 - 15:12:**

[Lessons learned from Sentinel SARM missions in preparation of Jason-CS](#)

Matthias Raynal (CLS, France), Emeline Cadier (CLS, France), Sylvie Labroue (CLS, France), Thomas Moreau (CLS, France), Pierre Féménias (ESA/ESRIN, Italy), François Boy (CNES, France), Nicolas Picot (CNES, France), Remko Scharroo (EUMETSAT, Germany), Franck Borde (ESA/ESTEC, Netherlands)

**15:12 - 15:30:**

[Improving the DAC de-aliasing model by combining with sub-monthly GRACE gravity data](#)

Jennifer Bonin (University of South Florida, United States), Himanshu Save (University of Texas at Austin, United States), Nadege Pie (University of Texas at Austin, United States)

**15:30 - 15:45:**

[Discussion](#)

## Science II: Large Scale Ocean Circulation Variability and Change

**Session chairs:** Thierry Penduff, LuAnne Thompson  
(Wed, Oct 23 2019, 14:00 - 15:45)

### The Forum

**14:00 - 14:15:**

[Surface and Upper Ocean Circulation from the combined use of in situ and space borne observations](#)

Sandrine Mulet (CLS, France), Nathalie Verbrugge (CLS, France), Hélène Etienne (CLS, France), Eric Greiner (CLS, France), Stéphanie Guinehut (CLS, France)

**14:15 - 14:30:**

[Volume transport and modes of variations of the Malvinas Current at 44.7°S from satellite altimetry and current-meter velocities](#)

Martin Saraceno (Universidad de Buenos Aires, Argentina), Ramiro Ferrari (CONICET-UBA, Argentina), Guillermina Paniagua (CONICET-UBA, Argentina), Loreley Lago (CONICET-UBA, Argentina), Alberto Piola (SHN-CONICET-UBA, Argentina), Christine Provost (UPMC-IPSL-LOCEAN, France), Camila Artana (UPMC-IPSL-LOCEAN, Argentina)



**14:30 - 14:45:**

[The Malvinas Current at the Confluence with the Brazil Current: inferences from 25 years of Mercator Ocean reanalysis.](#)

Camila Artana (UMPC LOCEAN, France), Christine Provost (Laboratoire LOCEAN-IPSL, Sorbonne Université, (UPMC, Université Paris 6), CNRS, IRD, MNHN, Paris, France), Jean-Michel Lellouche (MERCATOR-OCEAN, Parc Technologique du Canal, Ramonville St. Agne, France), Rio MArîe H el ene (ESRIN-ESA European Space Agency, Largo Galileo Galilei, 2 00044 FRASCATI, RM, Italy), Ramiro Ferrari (DCAO/FCEN/UBA, CIMA/CONICET-UBA and UMI IFAECI-3351, Buenos Aires, Argentina), Nathalie Senn echeal (Laboratoire LOCEAN-IPSL, Sorbonne Universit e, (UPMC, Universit e Paris 6), CNRS, IRD, MNHN, Paris, France)

**14:45 - 15:00:**

[Causes for the intense interannual upwelling events in the tropical Indian Ocean](#)

Weiqing Han (The University of Colorado, United States)

**15:00 - 15:15:**

[Remote Forcing of the Benguela Current System](#)

Ted Strub (Oregon State University, United States), Ricardo Matano (Oregon State University, United States), Melanie Fewings (Oregon State University, United States), Corinne James (Oregon State University, United States), Vincent Combes (Oregon State University, United States)

**15:15 - 15:30:**

[Attenuating the ocean chaotic variability in altimetric observations: from band-pass filtering to machine learning](#)

Thierry Penduff (CNRS - IGE, France), Mickael Lalande (IGE, France), Redouane Lguensat (IGE, France), Sally Close (IGE, France), Sabrina Speich (LMD-ENS, France)

**15:30 - 15:45:**

[Discussion](#)

**15:45 - 16:15: Coffee break**

## Science III: Mesoscale and sub-mesoscale oceanography

**Session chairs:** Cl ement Ubelmann and Jinbo Wang (Lee-Lueng Fu and Rosemary Morrow helped shape the session)

(Wed, Oct 23 2019, 16:15 - 18:00)

### The Forum

**16:15 - 16:30:**

[High-wavenumber variability in the California Current: Evaluating sub-100-km scales with high-resolution altimetry, ADCP, and model output](#)

Teresa Chereskin (Scripps Institution of Oceanography, United States), Sarah Gille (Scripps Institution of Oceanography, United States), Matthew Mazloff (Scripps Institution of Oceanography, United States), Bruce Cornuelle (Scripps Institution of Oceanography, United States), Jinbo Wang (Jet Propulsion Laboratory, United States), Dimitris Menemenlis (Jet Propulsion Laboratory, United States), Marcello Passaro (Deutsches Geod atisches Forschungsinstitut der Technischen Universit at M unchen, Germany), Christian Schwatke (Deutsches Geod atisches Forschungsinstitut der Technischen Universit at M unchen, Germany), Cesar Rocha (Woods Hole Oceanographic Institution, United States)

**16:30 - 16:45:**

[Constrained scales in ocean forecasting](#)

Gregg Jacobs (Naval Research Laboratory, United States), Joseph D'Addezio (Naval Research Laboratory, USA), Brent Bartels (Perspecta, USA), Pete Spence (Perspecta, USA), Max Yaremchuk (Naval Research Laboratory, USA), Bob Helber (Naval Research Laboratory, USA), Scott Smith (Naval Research Laboratory, USA), Clark Rowley (Naval Research Laboratory, USA)

**16:45 - 17:00:**

[The ocean mesoscale regime of the reduced-gravity quasi-geostrophic model](#)

Roger Samelson (Oregon State University, United States), Dudley Chelton (Oregon State University, USA), Michael Schlax (Oregon State University, USA)

**17:00 - 17:15:**

[SWOT-ACC, Satellite and ship-based investigation of mesoscale-submesoscale interactions in the Antarctic Circumpolar Current.](#)

Benoit LEGRESY (CSIRO, Australia), Helen PHILLIPS (University of Tasmania, IMAS, Australia), Kurt POLZIN (WHOI, United States), Nathan BINDOFF (University of Tasmania, IMAS, Australia), Clement AUGER (CSIRO, Australia)

**17:15 - 17:30:**

[Nonlinear short-term SSH evolution during the 2015/16 El Nino event in the tropical western Pacific](#)

Bo Qiu (University of Hawaii at Manoa, United States), Shuiming Chen (University of Hawaii at Manoa, USA), Brian Powell (University of Hawaii at Manoa, USA), Patrick Colin (Coral Reef Research Foundation, Palau), Dan Rudnick (Scripps Institution of Oceanography, USA), Martha Schonau (Scripps Institution of Oceanography, USA)

**17:30 - 17:45:**

[Synergetic use of altimetry and surface drifters to increase resolution and accuracy of sea level anomaly and geostrophic current maps in the Gulf of Mexico](#)

Sandrine Mulet (CLS, France), H el ene Etienne (CLS, France), Maxime Ballarotta (CLS, France), Yannice Faugere (CLS, France), G erald Dibarboure (CNES, France), Nicolas Picot (CNES, France)

**17:45 - 18:00:**

[Discussion](#)

**19:00 - 22:00: Conference Dinner at [Petterinos's Restaurant](#) (150 N. Dearborn Chicago, Ill 606061)**

08:00 - 09:00: Registration and Presentation upload

## The Geoid, Mean Sea Surfaces and Mean Dynamic Topography

**Session chairs:** Ole B. Andersen, Yannice Faugere  
(Thu, Oct 24 2019, 09:00 - 10:30)

### The Monroe Hub

**09:00 - 09:15:**

[Marine Gravity from the first two cycles of the Jason-2 LRO extension of Life mission](#)  
Ole Baltazar Andersen (Dr, Denmark), Adili Abulatitijiang (DTU Space, Denmark)

**09:15 - 09:30:**

[ESA's new satellite-only gravity field model via the direct approach \(DIR-R6\)](#)  
Sean Bruinsma (CNES, France)

**09:30 - 09:45:**

[New CNES-CLS18 Mean Dynamic Topography of the global ocean from altimetry, gravity and in-situ data](#)  
Sandrine Mulet (CLS, France), Marie-Hélène Rio (ESA, Italy), Hélène Etienne (CLS, France), Nicolas Picot (CNES, France), Gérald Dibarboure (CNES, France)

**09:45 - 10:00:**

[A new combined mean dynamic topography model – DTUHH19MDT](#)  
Per Knudsen (DTU Space, Denmark), Ole Andersen (DTU Space, Denmark), Nikolai Maximenko (University of Hawaii at Manoa, USA), Jan Hafner (University of Hawaii at Manoa, USA)

**10:00 - 10:15:**

[Improvements and limitations of recent mean sea surface models: importance for Sentinel-3.](#)  
Marie Isabelle Pujol (CLS, France), Yannice Faugère (CLS, France), Gérald Dibarboure (CNES, France), Nicolas Picot (CNES, France)

**10:15 - 10:30:**

[Discussion](#)

## Tides, internal tides and high-frequency processes

**Session chairs:** Loren Carrere, Florent Lyard, Richard Ray  
(Thu, Oct 24 2019, 09:00 - 10:30)

### The Forum

**09:00 - 09:15:**

[Impact of internal tide correction on the DUACS maps accuracy](#)  
Yannice Faugere (CLS Space Oceanography Division, France), Clement Ubelmann (CLS, France), Loren Carrere (CLS, France), Chloe Durand (CLS, France), Gerald Dibarboure (CNES, France)

**09:15 - 09:30:**

[Progress towards GOT5: high latitudes and minor constituents](#)  
Richard Ray (NASA/GSFC, United States)

**09:30 - 09:45:**

[Internal tides fate and energy budget off the Amazonian shelf](#)  
Florent Lyard (CNRS/LEGOS, France), Loren Carrere (CLS, France), Michel Tchilibou (LEGOS, France), Jerome Chanut (MERCATOR-OCEAN, France), Simon Barbot (LEGOS/CLS, France)

**09:45 - 10:00:**

[Decomposition of the multimodal multidirectional M2 internal tide field](#)

Zhongxiang Zhao (University of Washington, United States), Jinbo Wang (Jet Propulsion Laboratory, California Institute of Technology, United States), Dimitris Menemenlis (Jet Propulsion Laboratory, California Institute of Technology, United States), Lee-Lueng Fu (Jet Propulsion Laboratory, California Institute of Technology, United States), Shuiming Chen (University of Hawaii at Manoa, United States), Bo Qiu (University of Hawaii at Manoa, United States)

**10:00 - 10:15:**

[Comparison of global and regional internal tide and gravity wave models with observations](#)

Brian Arbic (University of Michigan, United States)

**10:15 - 10:30:**

[Discussion](#)

**10:30 - 11:00: Coffee break**

## CFOSAT

**Session chairs:** Lotfi Aouf, Danièle Hauser, Doug Vandemark  
(Thu, Oct 24 2019, 11:00 - 12:30)

### The Monroe Hub

**11:00 - 11:20:**

[CFOSAT: New wind and wave observations from the nadir and near-nadir SWIM Ku-Band instrument](#)

Daniele HAUSER (CNRS, France), lotfi Aouf (Meteo-France, France), Bertrand Chapron (Ifremer-Lops, France), Fabrice Collard (Ocean Data Lab, France), Alice Dalphinnet (Meteo-France, France), Lauriane Delaye (Acri-ST, France), Christophe Dufour (CNRS-Latmos, France), Flavien Gouillon (CNES, France), Antoine Grouazel (Ifremer-Lops, France), Gilles Guitton (Ocean Data Lab, France), Laura Hermozo (CNES, France), Jean-Michel Lachiver (CNES, France), Alexey Mironov (ocean data lab, France), Alexis Mouche (Ifremer-Lops, France), Frederic Nouguier (Ifremer-Lops, France), Annabelle Ollivier (CLS, France), Raquel Rodriguez (CNES, France), Patricia Schippers (ACRI-ST, France), Céline Tison (CNES, France), Cedric Tourain (CNES, France)

**11:20 - 11:40:**

[Performance analysis of the SWIM ground-segment solution for retracking nadir echos](#)

Annabelle Ollivier (cls, France), Fanny Piras (cls, France), Maeva Dalila (cls, France), Gautier Dekeyne (cls, France), Cedric Tourain (cnes, France), Jean Michel Lachiver (cnes, France), Alice Dalphinnet (MeteoFrance, France)

**11:40 - 12:00:**

[Rain flags for SWIM on-board CFOSAT: methods and assessment](#)

Bruno PICARD (Fluctus SAS, France), Mathilde Siméon (CLS, France), Jean-Christophe Poisson (CLS, France), Jean-Alexis Daguzé (CLS, France), Victor Gressani (IFREMER, France), Annabelle Ollivier (CLS, France), Cédric Tourain (CNES, France)

**12:00 - 12:20:**

[The assimilation of CFOSAT wave data in the wave model MFWAM : Ready for operational use ?](#)

Lotfi Aouf (Division Marine et Océanographie Météo-France, France), Alice Dalphinnet (Meteo-France, France), Daniele Hauser (CNRS/LATMOS, France), Bertrand Chapron (IFREMER, France), cedric tourain (CNES, France)

**12:20 - 12:30:**

[Discussion](#)

## The Future of Altimetry

**Session chairs:** Pascal Bonnefond, Craig Donlon, Eric Leuliette, Remko Scharroo, Josh Willis  
(Thu, Oct 24 2019, 11:00 - 12:30)

### The Forum

**11:00 - 11:15:**

[The altimeter product suite for Sentinel-6/Jason-CS mission](#)

Remko Scharroo (EUMETSAT, Germany), Carolina Nogueira Loddo (EUMETSAT, Germany), Cristina Martin-Puig (EUMETSAT, Germany), Bruno Lucas (EUMETSAT, Germany)

**11:15 - 11:30:**

[Overview and Status of the Copernicus Polar Ice and Snow Topography Altimeter \(CRISTAL\)](#)

#### [Mission](#)

Michael Kern (European Space Agency, Netherlands), Robert Cullen (ESA, Netherlands), Tania Casal (ESA, Netherlands), Tommaso Parrinello (ESA, Italy), Michael Ludwig (ESA, Netherlands), Gerhard Ressler (ESA, Netherlands), Patricia Marcos (ESA, Netherlands), Ignacio Navas Traver (ESA, Netherlands), Claudine Verlinden Verdier (ESA, Netherlands), Antonio Gabriele (ESA, Netherlands), Arnaud Lecuyot (ESA, Netherlands), Mark Drinkwater (ESA, Netherlands), Jerome Bouffard (ESA, Italy), Cristina Martin-Puig (EUMETSAT, Germany), Ole Andersen (DTU Space, Denmark), Annett Bartsch (BGEOS, Austria), Sinead Farrell (University of Maryland, USA), Sara Fleury (LEGOS, France), Simon Gascoin (CNRS, France), Amandine Guillot (CNES, France), Angelika Humbert (AWI, Germany), Eero Rinne (FMI, Finland), Andrew Shepherd (University of Leeds, UK), Michiel van den Broeke (Utrecht University, Netherlands), John Yackel (University of Calgary, Canada)

**11:30 - 11:45:**

[Observing the Ocean Surface Topography at High Resolution by the Surface Water and Ocean Topography \(SWOT\) Mission](#)

Lee-Lueng Fu (JPL - CalTech, United States), Rosemary Morrow (LEGOS/OMP CNRS/CNES/IRD/University Toulouse, France)

**11:45 - 12:00:**

[Perspectives for Surface Current reconstruction combining future high-resolution Altimetry and Doppler current data : application to the SKIM concept](#)

Clement Ubelmann (CLS, France), Gerald Dibarboure (CNES, France), Fabrice Arduin (CNRS/LOPS, France), Lucile Gaultier (ODL, France), Yannice Faugere (CLS, France)

**12:00 - 12:15:**

[First Results of Grazing Angle GNSS-R Altimetry from Sea Ice and Ocean Surfaces Using the Spire CubeSat Constellation](#)

Dallas Masters (Spire Global, Inc., United States), Vu Nguyen (Spire Global, Inc., United States), Takayuki Yuasa (Spire Global Singapore PTE Ltd., Singapore), Oleguer Nogués-Correig (Spire Global UK Ltd., UK), Linus Tan (Spire Global Singapore PTE Ltd., Singapore), Timothy Duly (Spire Global, Inc., USA)

**12:15 - 12:30:**

[Discussion](#)

**12:30 - 14:00: Lunch**

## Poster session (part 2)

**Session chairs: all**

(Thu, Oct 24 2019, 14:00 - 15:45)

### The Gallery

See list of [Posters](#) (from page 25)

**15:45 - 16:15: Coffee break**

## Science IV: Altimetry for Cryosphere and Hydrology

**Session chairs:** Jérôme Bouffard, Sinead Farrell and Karina Nielsen (Charon Birkett and Jean-Francois Crétaux helped shape the session)  
(Thu, Oct 24 2019, 16:15 - 18:00)

### The Forum

**16:15 - 16:30:**

[Assessment of ICESat-2 Performance over the Arctic Ocean During its First Year in Orbit](#)

Sinead Farrell (University of Maryland, United States), Kyle Duncan (University of Maryland, USA), Ellen Buckley (University of Maryland, United States), Marissa Dattler (University of Maryland, United States), John Kuhn (NOAA Laboratory for Satellite Altimetry, United States), Laurence Connor (NOAA Laboratory for Satellite Altimetry, United States), Eric Leuliette (NOAA Laboratory for Satellite Altimetry, USA)

**16:30 - 16:45:**

[Sentinel-3 LAND Altimetry products and intended evolutions](#)

Pierre Femenias (ESA, Italy), Sylvie Labroue (CLS, France), Matthias Raynal (CLS, France), Jouzeau Arnaud (CLS, France), Nicolas Taburet (CLS, France), Graham Quartly (PML, UK), Alan Muir (MSSL, UK), McMillan Malcolm (CPOM - Univ of Lancaster, UK)

**16:45 - 17:00:**

[River levels from multi-mission satellite altimetry, a statistical approach](#)

Karina Nielsen (DTU Space, Denmark), Angelica Tarpanelli (Research Institute for Geo-Hydrological Protection, Italy), Elena Zakharova (Institute of Water Problem, RAS, Moscow, Russia), Jérôme Benveniste (European Space Agency, Italy)

**17:00 - 17:15:**

[Status and evolutions of ESA CryoSat data products](#)

Jerome Bouffard (European Space Agency - ESA, Italy), Marco Meloni (SERCO c/o ESA, Italy), Tommaso Parrinello (ESA, Italy)

**17:15 - 17:30:**

[Snow depth on sea ice from altimetry for 2013-2018 Arctic and Austral winters](#)

Sara Fleury (LEGOS/CTOH, France), Florent Garnier (LEGOS/CTOH, France), Frédérique Rémy (LEGOS, France), Florence Birol (LEGOS/CTOH, France), Jérôme Bouffard (ESA, Italy)

**17:30 - 17:45:**

[Delivering the Lake Essential Climate Variables - an update from ESA CCI Lakes](#)

Jean-François Crétaux (LEGOS, France), Simis Stefan (PML, United Kingdom), Calmettes Beatriz (CLS, France), Merchant Chris (University of Reading, United Kingdom), Duguay Claude (H2O Geomatics, Canada), Giardino Claudia (CNR, Italy), Coulon Bruno (CLS, France), Hervé Yesou (SERTIT, France), Eirik Malnes (NORUT, Norway), Pablo Blanco (TRE-ALTAMIRA, Spain)

**17:45 - 18:00:**

[Discussion](#)

08:00 - 09:00: Registration and Presentation upload

## OSTST Closing Plenary Session

**Session chairs:** Pascal Bonnefond, Craig Donlon, Eric Leuliette, Remko Scharroo, Josh Willis  
(Fri, Oct 25 2019, 09:00 - 12:30)

### The Forum

09:00 - 11:40:

[Splinters meeting summaries](#)

09:00 - 09:10:

[Application development for Operations summary](#)

09:10 - 09:20:

[Instrument processing \(Propagation, Wind Speed and Sea State Bias\) summary](#)

09:20 - 09:30:

[Instrument processing \(Measurement and retracking\) summary](#)

09:30 - 09:40:

[Outreach, Education & Altimetric data services summary](#)

09:40 - 09:50:

[Precision Orbit Determination summary](#)

09:50 - 10:00:

[Quantifying Errors and Uncertainties in Altimetry Data summary](#)

10:00 - 10:10:

[Regional and Global CAL/VAL for Assembling a Climate Data Record summary](#)

10:10 - 10:20:

[The Geoid Mean Sea Surfaces and Mean Dynamic Topography summary](#)

10:20 - 10:30:

[Tides, internal tides and high-frequency processes summary](#)

10:30 - 11:00: Coffee break

11:00 - 11:20:

[Science Results from Satellite Altimetry summary](#)

11:20 - 11:30:

[CFOSAT summary](#)

11:30 - 11:40:

[The Future of Altimetry summary](#)

11:40 - 11:50:

[Status of TOPEX Reprocessing](#)

Shailen Desai (JPL, United States)

11:50 - 12:00:

[Jason/GDR status and plans](#)

Nicolas Picot (CNES, France)

12:00 - 12:05:

[OST Constellation User Requirements Document](#)

Estelle Obligis (EUMETSAT, Germany), Remko Scharroo (EUMETSAT, Germany), Annick Sylvestre-Baron (CNES, France)

12:05 - 12:30:

[Discussion, summary and recommendations](#)

12:30 - 14:00: Lunch



## Posters

### Science I: Climate data records for understanding the causes of global and regional sea level variability and change

Session chairs: Benjamin Hamlington, Benoit Meyssignac

Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery

Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery

**SC1\_001** - [Impact of 2014-2016 El Niño on the South Indian Ocean heat content: local versus remote forcing](#)

Denis Volkov (NOAA-AOML / University of Miami), Denis Volkov (NOAA-AOML/University of Miami), Michael Rudko (NOAA-AOML/University of Miami), Sang-Ki Lee (NOAA-AOML), Hong Zhang (UCLA)

**SC1\_002** - [Investigating vertical land motion and potential systematic errors in altimetry using a filter-based estimation approach](#)

Mohammad-Hadi Rezvani (Discipline of Geography and Spatial Sciences, University of Tasmania), Chris Watson (Discipline of Geography and Spatial Sciences, University of Tasmania), Matt King (Discipline of Geography and Spatial Sciences, University of Tasmania), Benoit Legresy (CSIRO Marine and Atmospheric Research)

**SC1\_003** - [Investigating sea state trends and variability with new climate-quality satellite altimeter products](#)

Ben Timmermans (National Oceanography Centre (UK)), Christine Gommenginger (National Oceanography Centre (UK))

**SC1\_004** - [Observational constraint on greenhouse gas and aerosol contributions to global ocean heat content changes](#)

Benoit Meyssignac (CNES/LEGOS), Elodie Charles (CLS), Aurelien Ribes (CNRM, Météo-France)

**SC1\_005** - [Investigating Regional Sea Level Budget Closure During the Altimeter Era](#)

Thomas Harvey (University of Colorado Boulder), Ben Hamlington (NASA Jet Propulsion Laboratory), Steve Nerem (University of Colorado Boulder), Thomas Frederikse (NASA Jet Propulsion Laboratory)

**SC1\_006** - [Extended Global Mean Sea Level Budget Study](#)

Hamlington Benjamin (NASA Jet Propulsion Laboratory), J.T. Reager (NASA JPL), Hrishu Chandanpurkar (NASA JPL)

## Instrument Processing: Measurement and Retracking

**Session chairs:** Francois Boy, Phil Callahan, Robert Cullen, Jean-Damien Desjonquieres, Alejandro Egido, Marco Fornari, Cristina Martin-Puig, Walter H.F. Smith

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**IPM\_001** - [Applying the pulse-pair processing to high PRF nadir altimeter data: sensitivities to geophysical parameters and possible applications](#)

Pierre Rieu (CLS), François Soulat (CLS), Thomas Moreau (CLS), François Boy (CNES)

**IPM\_002** - [Exploring the potential of Sentinel-3 fully-focused SAR altimeter range data for enhanced detection of coastal currents along the Northwestern Atlantic Shelf](#)

Hui Feng (University of New Hampshire), Alejandro Egido (NOAA – Laboratory for Satellite Altimetry), Doug Vandemark (University of New Hampshire)

**IPM\_003** - [Evaluation of FF-SAR Altimetry Observations over the Open Ocean](#)

Alejandro Egido (NOAA / GST Inc.), Furqan Ahmed (NOAA / GST Inc.)

**IPM\_004** - [Impact of the Sentinel-3A SRAL PTR Evolution on the L2 Marine Measurements](#)

Salvatore Dinardo (He Space), Michele Scagliola (ARESYS), Lisa Rechia (ARESYS)

**IPM\_005** - [ICESat-2 Altimetry of the Open Ocean](#)

James Morison (Polar Science Center APL/Univ. of Wash.), Suzanne Dickinson (Polar Science Center APL/Univ. of Wash.), David Hancock (NASA Goddard Space Flight Center), Leeanne Roberts (NASA Goddard Space Flight Center), John Robbins (john.w.robbs@nasa.gov)

## Precision Orbit Determination

Session chairs: Sean Bruinsma, Alexandre Couhert, Frank Lemoine

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**POD\_001** - [Single-receiver ambiguity resolution for Sentinel-3 Precise Orbit Determination at the Copernicus POD Service](#)

Emilio Calero (GMV AD), Heike Peter (PosiTim UG), Jaime Fernández (GMV AD), Pierre Féménias (ESA/ESRIN)

**POD\_002** - [Status of precise orbit determination of altimetry satellites at DGFI-TUM](#)

Sergei Rudenko (Deutsches Geodätisches Forschungsinstitut, Technische Universität München (DGFI-TUM)), Mathis Bloßfeld (DGFI-TUM), Julian Zeitlhöfler (DGFI-TUM)

**POD\_003** - [Performance of the Sentinel-3 A and B GPS Receivers and associated GPS-Based Orbit Solutions](#)

Aurore Sibois (Jet Propulsion Laboratory, California Institute of Technology), Shailen D. Desai (Jet Propulsion Laboratory, California Institute of Technology), Bruce J. Haines (Jet Propulsion Laboratory, California Institute of Technology)

# Instrument Processing: Propagation, Wind Speed and Sea State Bias

Session chairs: Shannon Brown, Estelle Obligis

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**IPC\_001 - [Analysis of surface wind speed from Jason-3 and Sentinel-3A in the Peru-Chile EBUS](#)**

Orlando Astudillo (CEAZA), Boris Dewitte (LEGOS), Abderrahim Bentamy (LOPS), Frédéric Frappart (LEGOS)

**IPC\_002 - [Sea state bias for retracked TOPEX altimeter data](#)**

Hui Feng (University of New Hampshire), Doug Vandemark (University of New Hampshire), Ngan Tran (CLS/Space Oceanography Division), Desai Shailen (JPL)

**IPC\_003 - [Understanding the level of error within sea state bias models](#)**

Alexa Putnam (University of Colorado, Colorado Center for Astrodynamics Research), Shailen Desai (Jet Propulsion Laboratory), Robert Steven Nerem (University of Colorado, Colorado Center for Astrodynamics Research)

**IPC\_004 - [A new side-lobe correction for Sentinel-3A Microwave Radiometer: definition and assessment](#)**

Mathilde Siméon (CLS), Marie-laure Frery (ClS), Franck Borde (ESA), Christophe Goldstein (CNES)

**IPC\_005 - [From ERA-Interim to ERA5: impact of the latest ECMWF reanalysis in the computation of radar altimeter Wet Path Delays](#)**

Telmo Vieira (Universidade do Porto, Faculdade de Ciências; Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR)), M. Joana Fernandes (Universidade do Porto, Faculdade de Ciências; Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR)), Clara Lázaro (Universidade do Porto, Faculdade de Ciências; Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR)), Nelson Pires (Universidade do Porto, Faculdade de Ciências; Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR))

**IPC\_006 - [Small scales variability of the wet tropospheric correction](#)**

Marie-Laure Frery (CLS), Bruno Picard (Fluctus SAS), Francois Soulat (CLS), Nicolas Picot (CNES), Gérald Dibarboure (CNES), Nathalie Steunou (CNES)

**IPC\_007 - [Side-by-side evaluation of Ku- and Ka-band sea state bias variability using Jason-3 and AltiKa data](#)**

Doug Vandemark (Univ. of New Hampshire), Hui Feng (Univ. of New Hampshire), Ngan Tran (CLS), Bertrand Chapron (IFREMER)

# Outreach, Education and Altimetric Data Services

Session chairs: Jessica Hausman, Vinca Rosmorduc, Margaret Srinivasan

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**ODS\_001 - [Outreaching hydrology from space & SWOT \(updates\)](#)**

Vinca Rosmorduc (CLS), Nicolas Picot (CNES)

**ODS\_002 - [RUS: Research and User Support for Sentinel Products](#)**

Simon Boitard (NOVELTIS), Mathilde Cancet (NOVELTIS), Eric Jeansou (NOVELTIS), Florian Poustomis (NOVELTIS), Eric Guzzonato (CS SI), Jordi Farres (ESA)

**ODS\_003 - [Exploring ocean eddy characteristics through the DynEd atlas](#)**

Yannice Faugere (CLS Space Oceanography Division), Antoine Delepouille (CLS), Nicolas Granier (CLS), Alexandre Stegner (LMD), Briac Levu (LMD)

**ODS\_004 - [TUDaBo: a G-POD service for SAR and RDSAR Products](#)**

Luciana Fenoglio (University of Bonn), Christopher Buchhaupt (University of Bonn)

**ODS\_005 - [PO.DAAC's Redesigned Web Portal](#)**

Jessica Hausman (JPL), Sandra Cosic (Raytheon)

**ODS\_006 - [PO.DAAC in the Cloud: Data Services and Access](#)**

Jessica Hausman (JPL), Michael Gangl (JPL), Michelle Gierach (JPL), Catalina Oaida (Raytheon), Suresh Vannan (JPL)

**ODS\_007 - [The ESA CCI Knowledge Exchange: explaining climate from space with altimetry and other EO data](#)**

Stephen Plummer (ESA Climate Office), Ed Pechorro (ESA Climate Office), Paul Fisher (ESA Climate Office), Paolo Cipollini (ESA Climate Office)

**ODS\_008 - [Aviso+ products & services: what's new?](#)**

Laurent Soudarin (CLS), Françoise Mertz (CLS), Vinca Rosmorduc (CLS), Catherine Schgounn (CLS), Caroline Mercier (Akka), Thierry Guinle (CNES), Florence Birol (LEGOS/CTOH)

**ODS\_009 - [Feedback loops in product development for Sentinel-3 and Sentinel-6 altimeter missions](#)**

Remko Scharroo (EUMETSAT), Carolina Nogueira Loddo (EUMETSAT), Cristina Martin-Puig (EUMETSAT), Bruno Lucas (EUMETSAT), Estelle Obligis (EUMETSAT)

**ODS\_010 - [Altimetry Applications Program Status](#)**

Margaret Srinivasan (Jet Propulsion Laboratory, California Institute of Technology), Gary Geller (Jet Propulsion Laboratory, California Institute of Technology), Adeline Gicquel-Brodtko (Jet Propulsion Laboratory, California Institute of Technology)

**ODS\_011 - [SAR and SARin Altimetry Processing on Demand for Cryosat-2 and Sentinel-3 at ESA G-POD](#)**

Jérôme Benveniste (ESA/ESRIN), Salvatore Dinardo (He Space/EUMETSAT), Giovanni Sabatino (Progressive Systems/ESRIN), Marco Restano (SERCO c/o ESA/ESRIN), Américo Ambrózio (DEIMOS/ESRIN)

**ODS\_012 - [The BRAT and GUT Couple: Broadview Radar Altimetry and GOCE User Toolboxes](#)**

Jérôme Benveniste (ESA/ESRIN), Américo Ambrózio (DEIMOS/ESRIN), Marco Restano (SERCO c/o ESA/ESRIN)

**ODS\_013 - [NOAA CoastWatch/OceanWatch Altimetry Products](#)**

Jessica Burns (GST/NOAA), John Kuhn (NOAA), Eric Leuliette (NOAA)

**ODS\_014 - [Homogeneous along-track sea level anomalies \(Level-2+\) data set for all altimetry missions](#)**

Sabine Philipps (CLS), Marine Lievin (CLS), Isabelino Denis (CNES), Thierry Guinle (CNES), Carolina Nogueira Loddo (EUMETSAT)

**ODS\_015 - [CTOH altimetry products for ocean, ice and continental surfaces applications](#)**

Sara Fleury (LEGOS), Florence Birol (LEGOS), Fabien Blarel (LEGOS), Fabien Leger (LEGOS), Fernando Nino (LEGOS), Frederic Frappart (LEGOS), Denis Blumstein (CNES), Rosemary Morrow (LEGOS/CTOH)

## Application development for Operations

Session chairs: Deirdre Byrne, Gerald Dibarboure, Gregg Jacobs, Carolina Nogueira Loddo

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**APOP\_001 - [Multi-Scale Assimilation of Simulated SWOT Observations](#)**

Joseph D'Addezio (Naval Research Laboratory), Innocent Souopgui (University of New Orleans), Clark Rowley (Naval Research Laboratory), Scott Smith (Naval Research Laboratory), Gregg Jacobs (Naval Research Laboratory), Robert Helber (Naval Research Laboratory), Max Yaremchuk (Naval Research Laboratory)

**APOP\_002 - [Wave Model Confidence Index: A metocean decision support tool.](#)**

Chafih Skandrani (NOVELTIS), Eric Munesa (NOVELTIS), Léo Grignon (NOVELTIS)

**APOP\_003 - [CMEMS Level-3 Near-Real-Time Significant Wave Height and Spectral Parameters derived from altimetry and SAR measurements](#)**

Elodie Charles (CLS), Romain Husson (CLS), Alexis Mouche (IFREMER), Nicolas Taburet (CLS), Guillaume Dodet (IFREMER)

**APOP\_004 - [Assimilation of high frequency altimeter wave data in regional wave model for the french coastal areas](#)**

Alice Dalphinnet (Météo-France), Celia Louarn (Météo-France), Lotfi Aouf (Météo-France), Annabelle Ollivier (CLS), Salvatore Dinardo (He Space)

**APOP\_005 - [Maximizing the impact of altimetry measurements in data assimilation with a high resolution model](#)**

Zhijin Li (JPL), Wang Jinbo (JPL), Archer matthew (JPL), Fu Lee-Lueng (JPL)

**APOP\_006 - [Impact of altimetry observations in the Mercator Ocean real time monitoring and forecasting systems](#)**

Elisabeth Remy (Mercator Ocean International), Mathieu Hamon (Mercator Ocean International), Mounir Benkiran (Mercator Ocean International)

**APOP\_007 - [Improving DUACS Sea Level products with CFOSAT and HY2B](#)**

Yannice Faugere (CLS Space Oceanography Division), Isabelle Pujol (CLS), Guillaume Taburet (CLS), Annabelle Ollivier (CLS), Gerald Dibarboure (CNES), Nicolas Picot (CNES)

**APOP\_008 - [NOAA's Jason Products](#)**

David Donahue (NOAA/NESDIS), Deirdre Byrne (NOAA/NESDIS), Richardson Donald (Columbus Technology), Yongsheng Zhang (NOAA/NESDIS/NCEI)

**APOP\_009 - [Jason-2 and Jason-3 Near-Real Time Products Latency over the Past Year](#)**

Donald Richardson (Columbus Technology), David Donahue (NOAA/NESDIS)

**APOP\_010 - [Satellite altimeter observations of extreme winds and waves, and special editing required for Jason-2 Geodetic Mission data](#)**

Walter Smith (NOAA Lab for Satellite Altimetry), Frances Achorn (NOAA Ocean Prediction Center), Alejandro Egido (NOAA Laboratory for Satellite Altimetry), Eric Leuliette (NOAA Laboratory for Satellite Altimetry), Graham Quartly (Plymouth Marine Laboratory), Joseph Sienkiewicz (NOAA Ocean Prediction Center)

**APOP\_011 - [New Developments for NOAA's operational upper Ocean Heat Content product suite](#)**

Deirdre Byrne (NOAA), Eileen Maturi (NOAA), Jessica Burns (NOAA), Eric Leuliette (NOAA)

**APOP\_012 - [A REAL-TIME PRODUCT TO HELP OCEAN CLEANUP OPERATIONS](#)**

Nikolai Maximenko (IPRC/SOEST, University of Hawaii), Jan Hafner (IPRC/SOEST, University of Hawaii)

# Regional and Global CAL/VAL for Assembling a Climate Data Record

**Session chairs:** Pascal Bonnefond, Shailen Desai, Luisella Giulicchi, Bruce Haines, Eric Leuliette, Nicolas Picot

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**CVL\_001 - [Regional in situ CalVal of Sentinel-3 altimeter range at non-dedicated sites](#)**

Mathilde Cancet (NOVELTIS), Pascal Bonnefond (OBSPM/SYRTE), Christopher Watson (University of Tasmania), Bruce Haines (NASA/JPL), Florent Lyard (LEGOS/OMP/CNRS), Olivier Laurain (OCA/GEOAZUR), Pierre Féménias (ESA/ESRIN)

**CVL\_002 - [CWPIES, a shallow water current, waves and pressure inverted echo sounder for higher resolution satellite altimetry calibration and validation.](#)**

Benoit LEGRESY (CSIRO), Christopher WATSON (University of Tasmania), Sam CARENTZ (CSIRO)

**CVL\_003 - [In Situ Measurements for Satellite Altimeter Calibration and Validation using LiDAR Systems](#)**

Adam Dodge (University of Colorado Boulder), Robert Leben (University of Colorado Boulder), Michael Shannon (University of Colorado Boulder), Bruce Haines (NASA Jet Propulsion Laboratory)

**CVL\_004 - [Round robin assessment of radar altimeter LRM and SAR retracking algorithms for significant wave height.](#)**

Florian Schlembach (Technische Universität München), Marcello Passaro (Deutsches Geodätisches Forschungsinstitut, Technische Universität München), Graham Quartly (Plymouth Marine Laboratory (PML)), Francesco Nencioli (Plymouth Marine Laboratory (PML)), Andrey Kurekin (Plymouth Marine Laboratory (PML)), Guillaume Dodet (Laboratoire d'Océanographie Physique et Spatiale (LOPS), CNRS, IRD, Ifremer, IUEM, Univ. Brest), Jean François Piollé (Laboratoire d'Océanographie Physique et Spatiale (LOPS), CNRS, IRD, Ifremer, IUEM, Univ. Brest), Paolo Cipolini (Telespazio VEGA UK for ESA Climate Office, ESA-ECSAT), Christian Schwatke (Deutsches Geodätisches Forschungsinstitut, Technische Universität München (DGFI-TUM)), Denise Dettmering (Deutsches Geodätisches Forschungsinstitut, Technische Universität München (DGFI-TUM)), Florian Seitz (Deutsches Geodätisches Forschungsinstitut, Technische Universität München (DGFI-TUM)), Craig Donlon (European Space Agency, ESA-ESTEC/EOP-SME)

**CVL\_005 - [Improving Conventional Altimetry SSH observability: Global assessment of SSH datasets derived from innovative LRM retrackers](#)**

Matthias Raynal (CLS), Hélène Roinard (CLS), Emeline Cadier (CLS), Sylvie Labroue (CLS), Pierre Thibault (CLS), Fanny Piras (CLS), Nicolas Picot (CNES), François Boy (CNES)

**CVL\_006 - [Assessment of Sentinel-3A/B ocean data sets: Recent results of DGFI-TUM's multi-mission cross-calibration](#)**

Denise Dettmering (Deutsches Geodätisches Forschungsinstitut der Technischen Universität München (DGFI-TUM)), Christian Schwatke (DGFI-TUM)

**CVL\_007 - [Results from Independent and Inter-Satellite Calibration and Validation of Jason-3 and Jason-2](#)**

Matthieu Talpe (Jet Propulsion Laboratory), Jean-Damien Desjonquères (Jet Propulsion Laboratory), Shailen Desai (Jet Propulsion Laboratory), Bruce Haines (Jet Propulsion Laboratory)

**CVL\_008 - [Jason-2 mission performance](#)**

Hélène Roinard (CLS), Laure MICHAUD (CLS), François BIGNALET-CAZALET (CNES), Nicolas PICOT (CNES)

**CVL\_009 - [Jason-3 mission performance towards GDR-F](#)**

Hélène Roinard (CLS), Laure MICHAUD (CLS), Marine LIEVIN (CLS), François BIGNALET-CAZALET (CNES), Nicolas PICOT (CNES)

**CVL\_010 - [Assessment of the last TOPEX SideB reprocessing](#)**

Hélène Roinard (CLS), Laure MICHAUD (CLS), François BIGNALET-CAZALET (CNES), Nicolas PICOT (CNES)

**CVL\_011 - [CryoSat-2 Long-term Ocean Data Analysis and validation](#)**

Marc Naeije (TU Delft), Ernst Schrama (TU Delft), Jerome Bouffard (ESRIN-ESA)

**CVL\_012 - [The Altimeter Sea Level Climate Data Record in the Copernicus Climate Service \(C3S\)](#)**

Jean-Francois Legeais (CLS), Guillaume Taburet (CLS), Pierre Prandi (CLS), Antoine Delepoule (CLS), Yannice Faugere (CLS), Isabelle Pujol (CLS)

## Coastal Altimetry

**Session chairs:** Mathilde Cancet and Ted Strub (Florence Birol and Marcello Passaro helped shape the session)

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**COAST\_001 - [A RIP-based SAR Retracker and its application in North East Atlantic with Sentinel-3](#)**

Salvatore Dinardo (HeSPACE), Luciana Fenoglio-Marc (University of Bonn), Matthias Becker (TU Darmstadt), Remko Scharroo (EUMETSAT), Maria Joana Fernandes (University of Porto), Joanna Staneva (Helmholz Zentrum Geesthacht), Jérôme Benveniste (ESA)

**COAST\_002 - [The new generation of high-resolution X-TRACK/ALES regional altimetry product](#)**

Fabien LEGER (LEGOS / CTOH), Florence Birol (LEGOS / CTOH), Fernando Niño (LEGOS / CTOH), Marcello Passaro (DGFI-TUM), Christian Schwatke (DGFI-TUM)

**COAST\_003 - [Spaceborne coastal altimetry for monitoring slope current intrusion events into the Gulf of Lion](#)**

Daniele Casella (ISAC-CNR), Marco Meloni (Serco-ESA), Anne Petrenko (MIO - Institut Méditerranéen d), Andrea M. Doglioli (MIO - Institut Méditerranéen d), Jerome Bouffard (ESA-ESRIN)

**COAST\_004 - [Sea level anomalies using altimetry, model and tide gauge along the African coasts in the Eastern Tropical Atlantic Ocean: inter-comparison and temporal variability](#)**

Habib Boubacar Dieng (LEGOS: CNRS/CNES/IRD/UT3-PS), Isabelle Dadou (LEGOS: CNRS/CNES/IRD/UT3-PS), Fabien Léger (LEGOS: CNRS/CNES/IRD/UT3-PS), Julien Jouanno (LEGOS: CNRS/CNES/IRD/UT3-PS), Yves Morel (LEGOS: CNRS/CNES/IRD/UT3-PS)

**COAST\_005 - [Variability of Coastal circulation in the Gulf of Guinea using altimetry data](#)**

Kouacou BOSSON (Felix Houphouet-Boigny University, Cote d'Ivoire/ LOCEAN/IPSL Université Pierre et Marie Curie, France), Sabine ARNAULT (LOCEAN/IPSL Université Pierre et Marie Curie), Aman ANGORA (Felix Houphouet-Boigny University, Cote d'Ivoire), Elisée TOUALY (Felix Houphouet-Boigny University, Cote d'Ivoire)

**COAST\_006 - [A new coastal tidal model for Australia](#)**

Madeleine Cahill (CSIRO), Mike Herzfeld (CSIRO), Mark Hemer (CSIRO), David Griffin (CSIRO), Benoit Legresy (CSIRO)

**COAST\_007 - [Improvements in the Validation Techniques Applied to Tide Gauge and Altimetry Observations of Coastal Sea Level Rates](#)**

Andrew Shaw (SKYMAT Ltd), Francisco Mir Calafat (National Oceanography Centre), Chris Banks (National Oceanography Centre), Nadim Dayoub (National Oceanography Centre), Christine Gommenginger (National Oceanography Centre), Jérôme Benveniste (ESA-ESRIN)



## Quantifying Errors and Uncertainties in Altimetry data

Session chairs: Michael Ablain, Joel Dorandeu, Remko Scharroo

Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery

Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery

**ERR\_001** - [On denoising satellite altimeter measurements for high-resolution geophysical signal analysis](#)

Yves Quilfen (IFREMER), Bertrand Chapron (IFREMER)

**ERR\_002** - [Daily harmonics of ionospheric Total Electron Content and implications for single-frequency altimeters](#)

Richard Ray (NASA/GSFC)

## Science II: Large Scale Ocean Circulation Variability and Change

Session chairs: Thierry Penduff, LuAnne Thompson

Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery

Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery

**SC2\_001** - [Using observations of SSH, SST and air-sea turbulent flux of heat to find the depth of the ocean that interact with the atmosphere](#)

LuAnne Thompson (University of Washington), Cristian Proitosescu (University of Washington)

**SC2\_002** - [Twenty-five years of Mercator ocean reanalysis GLORYS12 at Drake Passage: performance and volume transport.](#)

Camila Artana (UMPC LOCEAN), Ramiro Ferrari (CIMA/CONICET-UBA and UMI IFAECI-3351, Buenos Aires), Clément Bricaud (MERCATOR-OCEAN, Parc Technologique du Canal, Ramonville St. Agne), Jean-Michel Lellouche (MERCATOR-OCEAN, Parc Technologique du Canal, Ramonville St. Agne), Giles Garric (MERCATOR-OCEAN, Parc Technologique du Canal, Ramonville St. Agne), Nathalie Sennécahel (Laboratoire LOCEAN-IPSL, Sorbonne Université, (UPMC, Université Paris 6), CNRS, IRD, MNHN, Paris), Jae Hak Lee (KIOST, Korea Institute of Science and Technology), Young-Hyang Park (Laboratoire LOCEAN-IPSL, Sorbonne Université, (UPMC, Université Paris 6), CNRS, IRD, MNHN, Paris), Christine Provost (Laboratoire LOCEAN-IPSL, Sorbonne Université, (UPMC, Université Paris 6), CNRS, IRD, MNHN, Paris)

**SC2\_003** - [Salinity advection and Rossby waves in northern Indian Ocean](#)

Xiaosu Xie (Jet Propulsion Laboratory), W Timothy Liu (Jet Propulsion Laboratory)

**SC2\_004** - [Observations of the Antarctic Circumpolar Current over the Udintsev Fracture Zone, the narrowest choke point in the Southern Ocean](#)

Young-Hyang Park (Laboratoire LOCEAN-IPSL, Sorbonne Université (UPMC, Univ. Paris 6)-CNRS-IRD-MNHN), T. Park (Korea Polar Research Institute), T.-W Kim (Korea Polar Research Institute), S.-H. Lee (Korea Polar Research Institute), C.-S. Hong (Korea Institute of Ocean Science and Technology), J.-H. Lee (Korea Institute of Ocean Science and Technology), M.H. Rio (Collect Localisation Satellites), I. Pujol (Collect Localisation Satellites), M. Ballarotta (Collect Localisation Satellites), I. Durand (Laboratoire LOCEAN-IPSL, Sorbonne Université (UPMC, Univ. Paris 6)-CNRS-IRD-MNHN), C. Provost (Laboratoire LOCEAN-IPSL, Sorbonne Université (UPMC, Univ. Paris 6)-CNRS-IRD-MNHN)

**SC2\_005** - [Forcings of the west African coastal upwelling by ocean and atmosphere intraseasonal waves](#)

alban lazar (LOCEAN-IPSL-UPMC), Badara Sane (LPAOSF-ESP, UCAD), Malick Wade (UGB)

**SC2\_006** - [A western tropical Atlantic dynamics analysis using statistics and satellite data](#)

Sabine Arnault (LOCEAN UMR CNRS/IRD/UPMC/MNHN), François Kaly (Laboratoire de Traitement de l'Information (LTI)), Sylvie Thiria (LOCEAN UMR CNRS/IRD/UPMC/MNHN)

**SC2\_007** - [Effect of regional water cycle on meridional sea level gradient along the Makassar Strait](#)

Tong Lee (JPL), Severine Fouriner (JPL), Arnold Gordon (Columbia University), Janet Sprintall (University of California San Diego), Jacqueline Boutin (Sorbonne University)

## Science III: Mesoscale and sub-mesoscale oceanography

**Session chairs:** Clément Ubelmann and Jinbo Wang (Lee-Lueng Fu and Rosemary Morrow helped shape the session)

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**SC3\_001 - [Nonlocal effects of an unstable ocean current](#)**

Tom Farrar (Woods Hole Oceanographic Institution), Theodore Durland (Oregon State University), Steven Jayne (Woods Hole Oceanographic Institution), James Price (Woods Hole Oceanographic Institution)

**SC3\_002 - [On the Agulhas Bank Circulation](#)**

Ricardo Matano (CEOAS, Oregon State University), Vincent Combes (CEOAS, Oregon State University), P. Ted Strub (CEOAS, Oregon State University)

**SC3\_003 - [Forced vs Intrinsic variability of the Agulhas Bank circulation](#)**

vincent combes (Oregon State University), Ricardo Matano (Oregon State University), Ted Strub (Oregon State University)

**SC3\_004 - [Understanding Regional Trends in Southern Ocean Eddy Kinetic Energy](#)**

Don Chambers (University of South Florida), Yang Zhang (University of South Florida), Xinfeng Liang (University of South Florida)

**SC3\_005 - [PRELIMINARY RESULTS OF FLOATECO: EXPERIMENTAL STUDY OF PHYSICAL AND BIOLOGICAL PROCESSES MAINTAINING THE FLOATING PELAGIC ECOSYSTEM](#)**

Nikolai Maximenko (IPRC/SOEST, University of Hawaii), Luca Centurioni (Scripps Institution of Oceanography), Andrey Shcherbina (Applied Physics Laboratory, University of Washington), Gregory Ruiz (Smithsonian Environmental Research Center), Linsey Haram (Smithsonian Environmental Research Center), Mary Crowley (Ocean Voyages Institute), James Carlton (Williams College), Cathryn C Murray (Fisheries and Oceans Canada), Jan Halfner (IPRC/SOEST, University of Hawaii)

**SC3\_006 - [Particle dispersion in a multiple migrating quasi-zonal jet regime: A case study in the eastern North Pacific](#)**

Oleg Melnichenko (University of Hawaii)

**SC3\_007 - [High-wavenumber variability in the eastern tropical Pacific from ADCP, altimetry, and a high-resolution numerical model](#)**

Saulo Soares (Scripps Institution of Oceanography UCSD), Teresa Chereskin (Scripps Institution of Oceanography UCSD), Sarah Gille (Scripps Institution of Oceanography UCSD)

**SC3\_008 - [Monitoring open sea and coastal ocean dynamics in the Baltic Sea and North East Atlantic](#)**

Luciana Fenoglio (University of Bonn), Johanna Staneva (Helmholtz-Zentrum Geesthach), Johannes Karstensen (GEOMAR), Antonio Bonaduce (Helmholtz-Zentrum Geesthach), Hermann Bange (GEOMAR), Sebastian Grayek (Helmholtz-Zentrum Geesthach), Jürgen Kusche (University of Bonn)

**SC3\_009 - [Analysis of Second-Order Transverse Structure Functions of Velocity in the Southern Ocean](#)**

Don Chambers (University of South Florida), Jessica Caggiano (University of South Florida), Boris Galperin (University of South Florida), Greg King (University of South Florida)

**SC3\_010 - [A New NRT Mesoscale Eddy Trajectory Atlas on AVISO](#)**

Antoine Delepouille (cls), Yannice Faugere (CLS), Evan Mason (APL, UW; IMEDEA, CSIC)

**SC3\_011 - [Improvements of Sentinel-3A altimetry data in the retrieval of sea level variability in the coastal region of the European Seas](#)**

Antonio Sánchez Román (IMEDEA (CSIC-UIB)), Yannice Faugère (CLS, Toulouse), Isabelle Pujol (CLS, Toulouse), Guillaume Taburet (CLS, Toulouse), Marta Marcos (IMEDEA (CSIC-UIB)), Ananda Pascual (IMEDEA (CSIC-UIB))

**SC3\_012 - [Meso to sub-mesoscale variability observed by Sentinel-3A](#)**

Oscar Vergara (CLS), Rosemary Morrow (LEGOS), Isabelle Pujol (CLS), Gérald Dibarbouré (CNES), Clément Ubelmann (CLS)

**SC3\_013 - [Spectral content of nadir altimetry at regional scales: a case study in the Bay of Biscay and New Caledonia region](#)**

Mei-Ling Dabat (LEGOS), Nadia Ayoub (LEGOS), Lionel Gourdeau (LEGOS), Frederic Marin (LEGOS), Fabien Léger (LEGOS), Isabelle Pujol (CLS), Rosemary Morrow (LEGOS)

**SC3\_014 - [High-Resolution Maps of Sea Surface Height: A new method applied to the California Current system](#)**

Matthew Archer (JPL), Zhijin Li (JPL), Lee-Lueng Fu (JPL)

**SC3\_015** - [Multiscale Data Assimilation for SWOT Ocean Application](#)

Jinbo Wang (JPL), Zhijin Li (JPL), Lee-Lueng Fu (JPL)

**SC3\_016** - [Nested data assimilative modeling of submesoscale variability at the Mid Atlantic Bight Pioneer Coastal Array](#)

John Wilkin (Rutgers University), Andrew Moore (University of California Santa Cruz), Julia Levin (Rutgers University), Hernan Arango (Rutgers University)

# The Geoid, Mean Sea Surfaces and Mean Dynamic Topography

Session chairs: Ole B. Andersen, Yannice Faugere

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**GEO\_001** - [GOCE User Toolbox and Tutorial](#)

Per Knudsen (DTU Space), Jerome Benveniste (ESA)

**GEO\_002** - [NEW CNES CLS 2019 MEAN SEA SURFACE: FIRST VALIDATION.](#)

Philippe Schaeffer (CLS), Isabelle Pujol (CLS), Yannice Faugere (CLS), Quentin Dagneaux (CELAD), Gerald Dibarboure (CNES), Nicolas Picot (CNES)

**GEO\_003** - [THE NEW CNES-CLS 2019 MARINE GRAVITY ANOMALY MODEL: FIRST VALIDATION IN THE MEDITERRANEAN.](#)

Philippe Schaeffer (CLS), Sean Bruinsma (CNES), Frank Reinquin (CNES)

**GEO\_004** - [Geomed2: High-Resolution Geoid Models of the Mediterranean](#)

Sean Bruinsma (CNES)

# Tides, internal tides and high-frequency processes

Session chairs: Loren Carrere, Florent Lyard, Richard Ray

Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery

Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery

**TID\_001** - [Bathymetry improvement and tidal modeling in the North East Atlantic Ocean and in the Mediterranean Sea](#)

Mathilde Cancet (NOVELTIS), Florence Toubanc (NOVELTIS), Florent Lyard (LEGOS/OMP/CNRS), Gérald Dibarboure (CNES), Nicolas Picot (CNES), Thierry Guinle (CNES)

**TID\_002** - [Coastal tides and sea level variations at high latitudes from GNSS-R and satellite altimetry](#)

Ole Baltazar Andersen (Prof), Karina Nielsen (DTU Space), Simon Williams (NOC Liverpool), Michael Kern (ESA ESTEC)

**TID\_003** - [The effect of horizontal resolution and wave drag on tidal baroclinic mode waves in realistic global ocean simulations](#)

Maarten Buijsman (Division of Marine Science, The University of Southern Mississippi, Stennis Space Center, MS), Brian Arbic (Department of Earth and Environmental Sciences, University of Michigan, Ann Arbor, MI), Jay Shriver (Oceanography Division, Naval Research Laboratory, Stennis Space Center, MS), Gordon Stephenson (Division of Marine Science, The University of Southern Mississippi, Stennis Space Center, MS), Zhongxiang Zhao (Applied Physics Laboratory, University of Washington, Seattle, WA)

**TID\_004** - [Using Complex-Demodulation to Identify Non-Phase-Locked Tides from Reference-Mission Altimetry](#)

Edward Zaron (Portland State University)

**TID\_005** - [De-aliasing of tidal signals using wide-swath sun synchronous orbits](#)

Loren Carrere (CLS), Florent Lyard (LEGOS), Clement Busche (CLS), Mathilde Cancet (NOVELTIS), Nicolas Picot (CNES)

**TID\_006** - [Last TUGO model simulations and perspectives of evolution of the Dynamic Atmospheric Correction for altimetry](#)

Loren Carrere (CLS), Damien Allain (CLS/LEGOS), Florent Lyard (LEGOS), Yannice Faugere (cls), Nicolas Picot (CNES)

**TID\_007** - [Mapping Internal Tides from Satellite Altimetry without Blind Spots](#)

Zhongxiang Zhao (University of Washington)

**TID\_008** - [Temporal variability of the mode-1 M2 internal tide](#)

Zhongxiang Zhao (University of Washington), Peter Rhines (School of Oceanography, University of Washington)

# CFOSAT

Session chairs: Lotfi Aouf, Danièle Hauser, Doug Vandemark

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**CFOSAT\_001 - [Initial Analysis of CFOSAT SCAT and SWIM Data using Relative and Cross Calibration Technique.](#)**

Suchandra Bhowmick (Space application centre isro), Seemanth M (Space application centre), Rashmi Sharma (Space application centre isro)

**CFOSAT\_002 - [First results of multi-incidence radar at Ku-band analysis over land surfaces](#)**

Frédéric Frappart (Observatoire Midi-Pyrénées), Fabien Blarel (LEGOS), Eric Mougin (GET), Philippe Paillou (LAB), Fabrice Papa (LEGOS), Catherine Prigent (LERMA), Frédérique Rémy (LEGOS), Jean-Pierre Wigneron (ISPA), Mehrez Zribi (CESBIO)

**CFOSAT\_003 - [Combined wave and wind products based on CFOSAT multi-instrument observations](#)**

Alexey Mironov (OceanDataLab), Yves Quilfen (LOPS, IFREMER), Jean-Francois Piolle (LOPS, IFREMER), Gilles Guitton (OceanDataLab), Fabrice Collard (OceanDataLab), Antoine Grouazel (LOPS, IFREMER), Frederic Nouguier (LOPS, IFREMER), Alexis Mouche (LOPS, IFREMER), Bertrand Chapron (LOPS, IFREMER)

**CFOSAT\_004 - [Validation of CFOSAT data in the German Bight and Baltic Sea](#)**

Luciana Fenoglio (University of Bonn), Christopher Buchhaupt (University of Bonn), Jürgen Kusche (University of Bonn)

# The Future of Altimetry

**Session chairs:** Pascal Bonnefond, Craig Donlon, Eric Leuliette, Remko Scharroo, Josh Willis

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**FOA\_001 - [Standardization for Time and Coordinates in Satellite Altimetry](#)**

Stelios Mertikas (Technical University of Crete), Craig Donlon (European Space Agency), Demetrios Matsakis (Formerly with the US Naval Observatory, Time Reference), Constantin Mavrocordatos (European Space Agency), Zuheir Altamimi (IGN (National Geographic Institute) Geodesy Research Laboratory), Costas Kokolakis (Technical University of Crete), Achilles Tripolitsiotis (Space Geomatica)

**FOA\_002 - [Effect of spatio-temporal sampling of altimeter observations in the north Indian Ocean: A synthetic study using ocean model and SWOT simulator](#)**

Neeraj Agarwal (ISRO), Aditya Chaudhary (ISRO), Rashmi Sharma (ISRO), Raj Kumar (ISRO)

**FOA\_003 - [MISSION REQUIREMENTS FOR KU/KA-BAND SIGNALS OF OPPORTUNITY ALTIMETRY](#)**

James Garrison (Purdue University)

**FOA\_004 - [WiSA: a Wide Swath Altimetry Mission for Operational Oceanography and Hydrology - A good candidate for of Copernicus-NG Sentinel 3-Top Program](#)**

Cecile CHEYMOL (CNES), Sophie Coutin-Faye (CNES), Pierre-Yves Le Traon (Mercator-Ocean), Sylvain Biancamaria (CNRS/LEGOS)

**FOA\_005 - [SMASH: a Constellation of Small Altimetry Satellites Dedicated to Hydrology](#)**

Denis BLUMSTEIN (CNES/LEGOS), Alexandre Guérin (CNES), Alain Lamy (CNES), Alexandre Couhert (CNES), Alexandre Piquereau (CNES), Baptiste Palacin (CNES), Florian Rouzies (CNES), Alain Mallet (CNES), Sylvain Biancamaria (LEGOS), Sophie Le Gac (CNES), Thierry Amiot (CNES), Eric Boussarie (CNES), Philippe Maisongrande (CNES), Selma Cherchali (CNES), Sophie Coutin-Faye (CNES)

**FOA\_006 - [Altimetry over inland waters: current achievements thanks to the Open-Loop Tracking Command \(OLTC\) and perspectives for future missions](#)**

Sophie Le Gac (CNES), Denis Blumstein (CNES/LEGOS), Léa Lasson (LEGOS/OceanNext), Simon Boitard (NOVELTIS), Lionel Zawadzki (CLS), Maxime Vayre (CLS), Nicolas Taburet (CLS), François Boy (CNES), Amandine Guillot (CNES), Etienne Berthier (LEGOS/Univ.Toulouse/CNES/CNRS/IRD), Liam Taylor (School of Geography, University of Leeds), Pierre Féménias (ESA/ESRIN), Nicolas Picot (CNES)

**FOA\_007 - [Combining Fully Focused and Swath Processing for Glacier applications](#)**

Albert Garcia-Mondejar (isardSAT Ltd.), Ferran Gibert (isardSAT), Mònica Roca (isardSAT), Michele Scagliola (ARESYS s.r.l.), Lisa Recchia (ARESYS s.r.l.), Noel Gourmelen (University of Edinburgh)



## Others (poster only)

**Session chairs:** Pascal Bonnefond, Craig Donlon, Eric Leuliette, Remko Scharroo, Josh Willis

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**OTH\_001 - [ALTIS: a new tool for processing along-track altimetry data](#)**

Fabien Blarel (LEGOS), Frédéric Frappart (LEGOS), Vincent Marieu (EPOC), Fernando Niño (LEGOS), Denis Blumstein (LEGOS)

**OTH\_002 - [Monitoring marine litter with ocean current products in the North Atlantic Ocean](#)**

Muriel Lux (NOVELTIS), Etienne Sahuc (NOVELTIS), Mathilde Cancet (NOVELTIS), Matthieu Denisselle (NOVELTIS)

**OTH\_003 - [Operational ocean data assimilation/prediction system for the western North Pacific at JMA](#)**

Kotaro Mine (Japan Meteorological Agency), Mikitoshi Hirabara (Japan Meteorological Agency), Hiroaki Asai (Japan Meteorological Agency), Hiromu Kobayashi (Japan Meteorological Agency), Toshiyuki Sakurai (Japan Meteorological Agency)

**OTH\_004 - [Fundamental Data Records For Altimetry: a reprocessing of ERS-1, ERS-2 and ENVISAT altimeter and radiometer dataset oriented towards dedicated Level 1 and Level 2+ products](#)**

Pierre Thibaut (CLS), Andrew Shepherd (University of Leeds), Malcolm McMillan (University of Lancaster), Eero Rinne (FMI), Frank Fell (Informus), Florence Birol (Legos), Sara Fleury (Legos), Angelica Tarpanelli (CNR/IRPI), Emma Woolliams (NPL), Mathilde Cancet (Noveltis), Pierre Féménias (ESA/ESRIN)

## Science IV: Altimetry for Cryosphere and Hydrology

**Session chairs:** Jérôme Bouffard, Sinead Farrell and Karina Nielsen (Charon Birkett and Jean-Francois Crétaux helped shape the session)

**Tue, Oct 22 2019, 16:15 - 18:00 - The Gallery**

**Thu, Oct 24 2019, 14:00 - 15:45 - The Gallery**

**SC4\_001 - [Quality Assessment of the new CryoSat Ice Baseline-D over the Cryosphere](#)**

Marco Meloni (Serco c/o ESA), Jerome Bouffard (ESA), Tommaso Parrinello (ESA)

**SC4\_002 - [An interactive website for enhancing the Open-Loop Tracking Command \(OLTC\) of conventional altimeters for inland waters observation](#)**

Sophie Le Gac (CNES), François Boy (CNES), Denis Blumstein (CNES/LEGOS), Sylvain Biancamaria (LEGOS/Univ. Toulouse/CNES/CNRS/IRD), Jean-François Crétaux (LEGOS/Univ. Toulouse/CNES/CNRS/IRD), Stéphane Calmant (IRD), Simon Boitard (NOVELTIS), Franck Borde (ESA/ESTEC), Pierre Féménias (ESA/ESRIN)

**SC4\_003 - [Performance of the Sentinel-3 STM constellation over Inland Waters](#)**

Nicolas TABURET (CLS), Matthias Raynal (CLS), Labroue Sylvie (CLS), Manon Rousseau (CLS), Maxime Vayre (CLS), Lionel Zawadzki (CLS), Pierre Féménias (ESA-ESRIN)

**SC4\_004 - [Sea ice thickness estimates impact temperature and heat flux estimates in the Arctic Ocean](#)**

James Carton (University of Maryland), Gennady Chepurin (University of Maryland)

**SC4\_005 - [Validation of Lake Water Level from altimetry with in-situ measurements.](#)**

Beatriz CALMETTES (CLS), Crétaux Jean-François (LEGOS), Vuglinsky Valery (Hidrolare), Zawadzki Lionel (CLS)

**SC4\_006 - [Validation of the database of hydrology targets for DEM onboard altimeters \(Jason3, Sentinel-3A and Sentinel-3B\)](#)**

Léa Lasso (Ocean Next, LEGOS), Denis Blumstein (Centre National d'Etudes Spatiales, LEGOS), Sylvain Biancamaria (LEGOS), Jean-François Crétaux (Centre National d'Etudes Spatiales, LEGOS), Stéphane Calmant (LEGOS), Sophie Le Gac (Centre National d'Etudes Spatiales), François Boy (Centre National d'Etudes Spatiales), Nicolas Picot (Centre National d'Etudes Spatiales)

**SC4\_007 - [A remotely-sensed/modeling approach to monitor the the hydro-climatology of the Ogooué River Basin](#)**

Sakaros Bogning (LEGOS), Frédéric Frappart (LEGOS), Adrien Paris (CLS), Fabien Blarel (LEGOS), Fernando Niño (LEGOS), Stéphane Saux-Picard (CNRM), Pauline Lanet (CNRM), Frédérique Seyler (ESPACE-DEV), Gil Mahé (IRD), Raphaël Onguéné (Université de Douala), Jean-Pierre Bricquet (IRD), Jacques Etame (Université de Douala), Marie-Claire Paiz (TNC), Jean-Jacques Braun (GET)

**SC4\_008 - [Assimilating SWOT virtual discharge and water levels into a large scale hydrological model](#)**

Vanessa Pedinotti (Magellium), Rémi Jugier (Magellium), Michaël Ablain (Magellium), Marielle Gosset (GET), Cécile Dardel (GET), Sylvain Biancamaria (LEGOS), Nicolas Picot (CNES), Alice Andral (CNES), Sly Correa Wongchuig (Federal University of Rio Grande do Sul, Institute of Hydraulic Research)

**SC4\_009 - [Parabola and horizontal line detection in inland water radargrams](#)**

Léa Lasso (Ocean Next, LEGOS), Denis Blumstein (Centre National d'Etudes Spatiales, LEGOS)

**SC4\_010 - [Enhancing the Sea Ice Thickness and Freeboard Record With Combined Sentinel-3A, Sentinel-3B and CryoSat Observations.](#)**

Isobel Lawrence (University College London), Michel Tsamados (University College London), Stroeve Julienne (University College London), Alan Muir (University College London), Thomas Armitage (JPL), Pierre Féménias (ESA)

**SC4\_011 - [Towards homogeneous multi-mission altimeter processing in sea ice regions for retrieving SLA and sea ice parameters](#)**

Jean-Christophe Poisson (CLS), Fanny Piras (CLS), Maël Smessaert (CLS), Pierre Thibaut (CLS), Amandine Guillot (CNES), François Boy (CNES), Nicolas Picot (CNES), Jérôme Bouffard (ESA), Pierre Féménias (ESA)

**SC4\_012 - [Water level retrieval from Delay Doppler altimetry](#)**

Luciana Fenoglio (University of Bonn), Salvatore Dinardo (HeSpace, Darmstadt), Bernd Uebbing (University of Bonn), Jürgen Kusche (University of Bonn), Jérôme Benveniste (ESA-ESRIN)

**SC4\_013 - [Are global models correctly estimating water storage in major river basins? A comparison of remote sensed river channel storage and global model data](#)**

Steve Coss (Ohio State University Main Campus), Augusto Getirana (NASA Goddard), Mike Durand (Ohio State University, Byrd Polar and Climate Research Center)

**SC4\_014 - [The ICESat-2 Mission: Global Geolocated Photons, and Surface-Specific Data Products](#)**

Thomas Neumann (NASA Goddard Space Flight Center), Nathan Kurtz (NASA Goddard Space Flight Center), Anthony Martino (NASA Goddard Space Flight Center), Lori Magruder (University of Texas at Austin, Applied Research Lab)

**SC4\_015 - [NRT, open-licensed and high-frequency hydrological variables time series in Tropical Basins from operational satellite altimetry](#)**

Adrien Paris (CLS), Stéphane Calmant (LEGOS, IFCWS, IISc, Bangalore), Johary Andriambelosom (Institut et Observatoire de Géophysique d'Antananarivo (IOGA), Université d'Antananarivo), Ayan Fleischmann (IPH-UFRGS, Porto Alegre), Cecile Dardel (GET, Université de Toulouse, CNRS, IRD, UPS, Toulouse), Marielle Gosset (GET, Université de Toulouse, CNRS, IRD, UPS, Toulouse), Daniel Medeiros Moreira (CPRM, Rio de Janeiro), Vinicius Siqueira (IPH-UFRGS, Porto Alegre), Thiago Santos (RHASA-UEA, Manaus), Sakaros Bogning (Département de Sciences de la Terre, Université de Douala, BP 24 157 Douala), Taina Conchy (RHASA-UEA, Manaus), Rodrigo Cauduro Dias de Paiva (IPH-UFRGS, Porto Alegre), Walter Collischonn (IPH-UFRGS, Porto Alegre), Joecila Santos da Silva (RHASA-UEA, Manaus), Maxime Vayre (CLS, Ramonville St Agne)

**SC4\_016 - [CryoSat-2 for enhanced sea-ice thickness and ocean observations in Antarctica CryoSat+ Antarctica](#)**

Michel Tsamados (CPOM, Earth Sciences, UCL), Baker Steve (MSSL), Shepherd Andrew (CPOM, University of Leeds), Fleury Sara (LEGOS), Thibaut Pierre (CLS), Andersen Ole (DTU), Roca Monica (isardSAT), Jérôme Bouffard (ESA)

**SC4\_017 - [Arctic Altimetric Sea Level Cross-Validation of IceSat-2, SARAL/AltiKa, Sentinel-3 and CryoSat-2](#)**

Carsten Ludwigsen (DTU)

**SC4\_018 - [G-REALM: Investigating the Jason-3 and Sentinel-3A Data Sets for the Next Phase of Operational Lake and Reservoir Monitoring](#)**

Martina Ricko (KBR/NASA-GSFC, Greenbelt, MD), Charon Birkett (ESSIC, University of Maryland, College Park, MD), Xu Yang (KBR/NASA-GSFC, Greenbelt, MD), Brian Beckley (KBR/NASA-GSFC, Greenbelt, MD), Curt Reynolds (USDA/FAS, Washington, DC), Elias Deeb (ERDC/USACE, Hanover, NH)

**SC4\_019 - [SPICE: Sentinel-3 Performance Improvement for Ice Sheets](#)**

McMillan Malcolm (Lancaster University), Roger Escola (isardSAT), Jeremie Aublanc (CLS), Thibaut Pierre (CLS), Marco Restano (ESA), Americo Ambrozio (ESA), Jerome Benveniste (ESA)

**SC4\_020 - [Sentinel-3 Hydrologic Altimetry Processor prototypE \(SHAPE\): Project achievements](#)**

Nicolas Bercher (ALONG-TRACK), Pierre Fabry (ALONG-TRACK), Albert García-Mondéjar (isardSAT Ltd), Joana Fernandes (University of Porto / Science Faculty), David Gustafsson (SMHI), Marco Restano (Serco/ESRIN), Américo Ambrózio (Deimos/ESRIN), Jérôme Benveniste (ESA/ESRIN)

**SC4\_021 - [Quality Status of the CryoSat Data Products](#)**

Erica Webb (Telespazio VEGA UK Ltd), Amanda Hall (Telespazio VEGA UK Ltd), Ben Wright (Telespazio VEGA UK Ltd), Marco Meloni (SERCO c/o ESA/ESRIN), Jerome Bouffard (ESA/ESRIN), Tommaso Parrinello (ESA/ESRIN), Steven Baker (UCL/MSSL), David Brockley (UCL/MSSL)