

Ocean Sciences Meeting 2022

Media Tipsheets

Climate change and heat | Ocean life | Ocean economy | Ocean noise | Pollution
Ocean circulation | Remote sensing | Storms | Wildfires | Grab bag

Climate change and heat

Global and regional sea level rise scenarios for the United States: Updated mean projections and extreme water level probabilities along the U.S. coastline

Session: OC03 Towards understanding coastal sea-level variability and change (Oral)

28 February 2022, 12:30-1:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/6820>

Quantify carbon export through sinking deltaic systems

Session: CB03 The carbon cycle across the land-ocean continuum: scientific advances and insights for blue carbon policy (Oral)

28 February 2022, 12:30-1:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/4574>

High-resolution projections of extreme sea level changes along the coasts of western Europe

Session: OC03 Towards understanding coastal sea-level variability and change (Oral)

28 February 2022, 2:30-3:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/3907>

Relative sea level and its extremes at the Venetian coast: processes and projections

Session: OC03 Towards understanding coastal sea-level variability and change (Oral)

28 February 2022, 3:30-4:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/7252>

Recent changes in Arctic Ocean primary production

Session: HL03 Ecosystem processes and structure in a changing Arctic

28 February 2022, 3:30-4:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/6883>

Glacier contribution to sea-level rise in the 21st century and beyond

Session: OC05 Sea level in a warming world: global changes and large-scale processes (Oral)

28 February 2022, 5:00-6:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5419>

Rise and fall of ice production in the Arctic Ocean's ice factories

Session: HL10 Arctic Ocean changes and processes (Oral)

1 March 2022, 9:00-10:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5853>

Late Holocene shifts in Indian summer monsoon rainfall from Central Nepal stalagmites and coupled climate model simulations

Session: OC11 Advancing Paleoclimate Studies of Global Change: Novel Proxies, Methods, and Insights (Oral)

1 March 2022, 9:00-10:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/4801>

Prolonged marine heatwaves in the Arctic: 1982-2020

Session: HL10 Arctic Ocean changes and processes (Oral)

1 March 2022, 10:00-11:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/1147>

Dynamical downscaling reveals benefits of climate refugia to the future of the great barrier reef

Session: OC09 Seasonal-to-decadal forecasting of the marine environment (Oral)

3 March 2022, 12:30-1:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5151>

A century of observed temperature change in the Indian Ocean

Session: OC06 Indian Ocean intraseasonal-to-interdecadal variability and its role in regional and global climate (Poster)

3 March 2022, 7:00-9:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/3268>

Increasing severity of marine cold and heat extremes along the Southeast US coast inner shelf

Session: OC18 Marine Climate Extremes: PART 2 Regional Downscaling & Climate Projections (Oral)

4 March 2022, 3:30-4:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/3245>

Ocean life

Geothermal warm springs are incubators for deep-sea octopus reproduction

Session: DS03 Discovering the Unknown Ocean: NOAA Ocean Exploration 2001 – 2021 (Oral)

28 February, 11:30-12:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/4495>

Experimental reef communities persist under future ocean acidification and warming

Session: CB12 Coastal Acidification in a Multistressor Ocean (Oral)

28 February 2022, 6:00-7:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/7848>

Are you krilling me? How humpback whales are impacting a rapidly warming West Antarctic peninsula

Session: ED01 Student Symposium

1 March 2022, 2:30-3:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/4355>

Cenozoic evolution and extinction of megatooth sharks through the lens of stable isotope ratios

Session: OC13 Dynamic linkages between paleoceanography, paleoecology and tectonic evolution across the Cenozoic (Oral)

1 March 2022, 3:30-4:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/7400>

Ecological impacts of jellyfish in the Puget Sound, WA

Session: ME06 The Fragile Food Web: Dynamics and impacts of gelatinous zooplankton and other understudied organisms (Oral)

2 March 2022, 9:00-10:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/1281>

Ecosystem impacts of moon jelly (*Aurelia labiata*) aggregations in Puget Sound, Washington

Session: ME06 The Fragile Food Web: Dynamics and impacts of gelatinous zooplankton and other understudied organisms

2 March 2022, 9:00-11:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/1441>

Energetic trade-off between jellyfish swimming cost and foraging performance controlled by pause duration

Session: PI02 Ecological Fluid Mechanics - Interactions among Organisms and their Fluid Environment (Oral)

2 March 2022, 9:00-10:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/6336>

Comparison of nutrient solubility and bioavailability in volcanic ash and mineral dust

Session: AI07 Where water and atmosphere come together, biogeochemistry connects climate, ecosystem and public health (Poster)

2 March 2022, 7:00-9:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/1236>

First documented killer whale (*Orcinus orca*) predation event in the Caribbean: successful hunt of a humpback whale (*Megaptera novaeangliae*) calf recorded simultaneously from a helicopter, a small vessel, and two CATS tags

Session: OT04 Leveraging Existing Marine Platforms for Ocean Observing: Engaging Commercial and Professional Sectors on Local, Regional, and Global Scales (Oral)

3 March 2022, 11:30-12:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/3187>

Benthic community resilience to an earthquake-triggered turbidity flow in Kaikura Canyon, Aotearoa New Zealand

Session: DS01 Deep-sea ecosystem response to physical disturbances (Oral)

3 March 2022, 6:00-7:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5265>

In search of bioluminescent milky seas from space

Session: OB04 Small bugs with a big impact: linking plankton ecology with ecosystem processes (Oral)

4 March 2022, 5:00-6:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/6998>

Oceanographic anomalies coinciding with humpback whale super-group occurrences in the Southern Benguela

Session: ME01 From nutrients and phytoplankton to fish: understanding the mechanisms shaping energy and mass flux in marine food webs (Oral)

4 March 2022, 5:00-6:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/1932>

Ocean economy

Offshore wind in the Central California Coast: resource variation and potential impact on commercial fisheries

Session: OP04 Marine Renewable Energy: Resource Characterization, Bio-physical interactions, and Societal Impacts

28 February, 6:00-7:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/2775>

Effect of acute acidification conditions on embryos and larvae of American lobsters

CB12 Coastal Acidification in a Multistressor Ocean (Oral)

1 March 2022, 9:00-11:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/4265>

Reaching the 'Last Mile' with simplified marine weather messages

Session: OT01 Connecting ocean science, conservation and management needs and solutions through emerging technologies and approaches

1 March 2022, 3:30-4:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/3709>

Science-industry collaboration to enhance American lobster value in live storage by manipulating temperature and ion concentration

Session: FF01 The Growing Need of Public-Private Partnerships in Advancing Climate-Ready Fisheries

1 March 2022, 7:00-9:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/8485>

Opportunities and challenges for livelihood resilience in Mexican small-scale fisheries

Session: ME10 Evaluating changing ocean conditions for marine social-ecological systems including applications for fisheries, aquaculture, and ecosystem-based management (Oral)

3 March 2022, 6:00-7:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/6259>

Views for restart of coastal nuclear stations in Japan aiming at energy balance and national reduction of CO₂ exposure: Defending against tsunami inundation by collapse-free embankments

Session: CB15 Application of Remote Sensing to Societally Important Regions: Coastal, Estuarine, Tropical and Polar Waters (Oral)

3 March 2022, 7:00-9:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/1535>

Ocean noise

Ambient underwater noise and ocean surface waves at Station Papa

Session: AI03 Fluxes and Physical Processes Near the Air-Sea Interface: Observations and Modeling
28 February 2022, 2:30-3:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/4890>

An acoustic ecosystem indicator: Patterns in song reveal blue whales tune life history transitions to oceanographic conditions

Session: PI06 Marine Animals as Ecosystem Indicators (Oral)
1 March 2022, 9:00-10:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/1606>

Soundscape and environmental monitoring within a salt marsh-tidal creek, Bald Head Island, North Carolina

Session: ME09 Exploring and Characterizing Deep and Coastal Ocean Soundscapes
1 March 2022, 7:00-8:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/2278>

Sound of silence? Not on USVI coral reefs: Complex patterns of boat noise and human activity surrounding the Covid “shutdown”

Session: ME09 Exploring and Characterizing Deep and Coastal Ocean Soundscapes (Oral)
4 March 2022, 10:00-11:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/3794>

Northeast Pacific Ocean sound levels during the COVID-19 pandemic: 2018-2020

Session: ME09 Exploring and Characterizing Deep and Coastal Ocean Soundscapes
4 March 2022, 10:00-11:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/972>

Consequences of the anthropogenic soundscape: Underwater noise-induced hearing loss in aquatic turtles

Session: ME09 Exploring and Characterizing Deep and Coastal Ocean Soundscapes (Oral)
4 March 2022, 12:30-1:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/6640>

Pollution

Incidence of microplastics in Northern Anchovies (*Engralis mordax*) off central California

Session: OS07 Environmental indicators of plastic pollution in the North Pacific

1 March 2022, 7:00-9:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/4729>

Drifting polystyrene as source of new global contamination in the ocean

Session: CT04 Chemical methods to understand marine plastic pollution quantities, sources, transport, fate, impacts, and solutions

2 March 2022, 9:00-10:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/1226>

Septic system–groundwater–surface water interactions in aging waterfront communities contribute to harmful algal blooms in southwest Florida

Session: CB02 Submarine groundwater discharge – a global phenomenon with local effects (Oral)

2 March 2022, 3:30-4:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/4419>

Deployment strategies for DinoSHIELD: A slow-release natural algicide for the management of harmful algal blooms

Session: OC25 Oceans and Human Health: Climate Change, Food Safety, and Emerging Contaminants

2 March 2022, 7:00-9:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/852>

Disposable COVID-19 face masks are an underpinned threat for marine ecosystems

Session: OB03 Ecological and biogeochemical effects of plastic pollution in the marine environment; from local to global scale (Oral)

3 March 2022, 6:00-7:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5744>

Assessing human exposure to methylmercury from seafood consumption using a global model

Session: CT02 Anthropogenic contaminants in nearshore and offshore environments: Occurrence, Distribution, Fate and Bioaccumulation (Poster)

3 March 2022, 9:00-11:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/1922>

Anthropogenic contamination in United States nearshore waters: Impacts of urbanization and coastal flooding over the last 20 years

Session: CT02 Anthropogenic contaminants in nearshore and offshore environments: Occurrence, Distribution, Fate and Bioaccumulation (Poster)

3 March 2022, 9:00-11:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/2966>

Yessotoxin production and aerosolization during the unprecedented red tide of 2020 in Southern California

Session: AI07 Where water and atmosphere come together, biogeochemistry connects climate, ecosystem and public health (Oral)

4 March 2022, 9:00-10:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/8841>

A multi-indicator approach to identifying sewage pollution hotspots along the Hilo, Hawai'i, shoreline

Session: CB05 Advancing Water Quality Monitoring and Forecasting in Coastal and Inland Waters (Oral)

4 March 2022, 10:00-11:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/1529>

Do pinelands protect an estuary from harmful algal blooms?

Session: CB05 Advancing Water Quality Monitoring and Forecasting in Coastal and Inland Waters (Oral)

4 March 2022, 11:30 am -12:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5169>

UV filters – Their anthropogenic fingerprint in the Pearl River Delta and occurrence in the northern South China Sea

Session: CT02 Anthropogenic contaminants in nearshore and offshore environments: Occurrence, Distribution, Fate and Bioaccumulation (Oral)

4 March 2022, 12:30-1:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/2159>

The silence of the clams: Forestry registered pesticides as multiple stressors on adult soft-shell clams

Session: CT02 Anthropogenic contaminants in nearshore and offshore environments: Occurrence, Distribution, Fate and Bioaccumulation (Oral)

4 March 2022, 12:30-1:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/8071>

Ocean circulation

Revisit the relationship between Atlantic Meridional Overturning Circulation and North Atlantic Cold Blob in the past century

Session: AI01 Air-Sea Interaction and Climate Variability in the Atlantic Ocean: Observations, Modeling, and Theories (Oral)

28 February 2022, 10:00-11:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/2486>

Atmosphere-coupling dampens the North Atlantic's response to enhanced Greenland meltwater runoff

Session: AI05 The role of ocean-atmosphere dynamics in global climate (Oral)

1 March 2022, 5:00-6:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/4526>

Visualization of the 2021 Atlantic hurricane season 3-dimensional tropical cyclone observations from the imaging wind and rain airborne profiler (IWRAP)

Session: AI02 Under the Weather: Using Active and Passive Microwave Observations to Study Atmosphere-Ocean Interactions (Oral)

3 March 2022, 12:30-1:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5863>

Inter-ocean water transport through the atmosphere

Session: AI05 The role of ocean-atmosphere dynamics in global climate

3 March 2022, 7:00-9:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5495>

Remote sensing

GLIMR: Capturing the trifecta of high spectral + spatial + temporal observations of ocean color

Session: CB04 PACE, GLIMR and SBG: Synergy across Future NASA Missions for Hyperspectral Remote Sensing of Coastal and Inland Waters

3 March 2022, 10:00-11:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/2693>

The Rotorua lakes in Aotearoa New Zealand as a radiometric test bed for hyperspectral remote imagers

Session: CB04 PACE, GLIMR and SBG: Synergy across Future NASA Missions for Hyperspectral Remote Sensing of Coastal and Inland Waters (Oral)

3 March 2022, 12:30 - 1:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/8667>

Observing San Francisco Bay plume from space

Session: CP10 Buoyancy-Driven Flows in estuaries, continental shelves and polar regions (Poster)

3 March 2022, 7:00-9:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/6669>

Remote sensing-derived primary production time series in 250 of the world's largest lakes

Session: CB05 Advancing Water Quality Monitoring and Forecasting in Coastal and Inland Waters

4 March 2022, 12:30-1:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/6256>

Ocean Sciences Meeting 2022—Storms tipsheet

A climatological analysis of tropical cyclone frequency in the Arabian Sea and Bay of Bengal – 1891-2020

Session: AI06 Tropical Cyclone-Ocean Interactions: From Weather to Climate (Poster)
2 March 2022, 9:00-11:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/895>

Atlantic hurricane measurements from Saildrones

AI06 Tropical Cyclone-Ocean Interactions: From Weather to Climate (Oral)
2 March 2022, 10:00-11:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/7053>

Why has the 2017 Kuroshio large meander lasted so long?

Session: AI04 Extratropical climate variability and change associated with air-sea interactions (Poster)

2 March 2022, 7:00-9:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5383>

Glider observation of the western subtropical North Pacific in typhoon season 2021

Session: AI04 Extratropical climate variability and change associated with air-sea interactions (Poster)

2 March 2022, 7:00-9:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/8694>

Arctic Stratospheric Polar Vortex over the last 60 years: Intensification, stretching and displacement

Session: AI05 The role of ocean-atmosphere dynamics in global climate (Oral)

2 March 2022, 7:00-9:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/3049>

Future weakening of the AMOC reduces North Atlantic hurricane extremes

Session: AI06 Tropical Cyclone-Ocean Interactions: From Weather to Climate (Oral)

3 March 2022, 10:00-11:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/871>

Observed global increases in tropical cyclone-induced ocean cooling and primary production

Session: AI06 Tropical Cyclone-Ocean Interactions: From Weather to Climate

3 March 2022, 9:00-10:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/2189>

Synchronization of the Gulf Stream and Kuroshio

Session: AI04 Extratropical climate variability and change associated with air-sea interactions (Oral)

3 March 2022, 6:00-7:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/1926>

Developing an early warning system for meteotsunamis along the eastern Yellow Sea coast

Session: AI04 Extratropical climate variability and change associated with air-sea interactions (Oral)

3 March 2022, 6:00-7:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5013>

Wildfires

Darkened skies from wildfire smoke, extreme heat trigger hypoxia in the San Francisco estuary

Session: CB06 Going to the extreme: Biogeochemical responses of coastal ecosystems to storms and fires (Oral)

1 Mar 2022, 5:00-6:00 pm EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5018>

Widespread phytoplankton blooms triggered by 2019–2020 Australian wildfires

Session: CB06 Going to the extreme: Biogeochemical responses of coastal ecosystems to storms and fires (Oral)

1 Mar 2022, 5:00-6:00 pm EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5425>

Ocean grab bag

Robotic surveys of submerged cultural resources

Session: DS03 Discovering the Unknown Ocean: NOAA Ocean Exploration 2001 – 2021 (Oral)

28 February 2022, 9:00-10:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/8933>

Quantification of the mobility and burial of variable density munitions under single event forcing

Session: CP03 Nearshore Processes (Oral)

28 February 2022, 3:30-4:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/3602>

Geomorphology of the Tasmantid seamounts, guyots and carbonate reefs

Session: DS02 Wonder and Discovery in the Great Barrier Reef, Coral Sea, and Beyond: New Research and Exploration from Australia

28 February 2022, 6:00-7:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/4949>

Sharkskin-inspired surfaces for turbulent drag reduction

Session: DS07 Advancing Ocean Exploration Technology (Oral)

1 March 2022, 10:00-11:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/1256>

Investigating the use of submarine groundwater discharge by ancient communities on Rapa Nui (Easter Island)

Session: CB02 Submarine groundwater discharge – a global phenomenon with local effects (Oral)

2 March 2022, 3:30-4:30 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/7533>

Visual anemometree: Using deep learning to predict wind speeds from videoclips of swaying trees in nature

Session: OT08 Emerging Technologies and Algorithms for Inland, Coastal, and Oceanic Remote Sensing (Oral)

2 March 2022, 5:00-6:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/4267>

Wave gliders observing the hydrothermal plume offshore Kīlauea Volcano, HI

Session: CP08 Autonomous and Remotely-Operated System-Based Characterization of Nearshore and Riverine Environments

3 March 2022, 10:00-11:00 AM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/7713>

Ocean Womxn: A program designed to identify and overcome barriers to the recruitment, retention, and success of Black womxn oceanography postgraduate students at the University of Cape Town

Session: ED08 Addressing Barriers to Minoritized Scholars Entering Internship, Fellowship, and Graduate Programs in the Ocean Sciences (Oral)

3 March 2022, 5:00-6:00 PM EST

<https://osm2022.secure-platform.com/a/gallery/rounds/3/details/5587>