

7th Argo Science Workshop

FINAL PROGRAMME



This meeting is endorsed by CLIVAR and the UN Ocean Decade



DAY 1 – Tuesday 11 October 2022

8:30	(Hall entrance - Registration Desk)		
9:00	Opening (Grand Auditorium)	B. KLEIN (BSH) Germany	In Person
Ocean Climate session (1) (Grand Auditorium) Chair: Nathalie ZILBERMAN, Moderator: Toshio SUGA			
9:30	Towards resolving the mean mesoscale upper ocean structure and circulation	S. WIJFFELS (Woods Hole) U.S.A	In Person
9:45	Three-dimensional observational estimates of mesoscale eddy kinetic energy in the global ocean	A. GRAY (University of Washington) U.S.A	In Person
10:00	Physical mechanisms driving oxygen subduction in the global ocean	E. PORTELA RODRIGUEZ (UTAS/LOPS) Australia	In Person
10:15	Flash talks		
10:30 – 11:30	Poster session (Virtual) + coffee break (VIP Room)		
11:30	Deep Eddy Kinetic Energy in the Tropical Pacific Revealed From Argo Floats	A. DELPECH, talk presented by S. CRAVATTE (IRD) France	Virtual
11:45	Combined use of Argo and Glider data to characterize the ocean: observing Meddies in the Eastern North Atlantic	L. LAMAS (Instituto Hidrográfico), Portugal	In Person
12:00	Warming-to-cooling reversal of overflow-derived water masses in the Irminger Sea during 2002-2021.	D. DESBRUYÈRES (Ifremer), France	In Person
12:15	Antarctic Bottom Water Warming and Circulation Slowdown in the Argentine Basin from Analysis of Deep Argo and Historical Shipboard Temperature Data	G. JOHNSON (NOAA/Pacific Marine Environmental Laboratory) U.S.A	In Person
12:30 – 13:30	Lunch break (VIP Room)		
Ocean Climate session (1) (Grand Auditorium) Chair: Nicolas KOLODZIEJCZYK, Moderator: Tammy MORRIS/Annie WONG			
13:30	Estimation of Horizontal Turbulent Diffusivity from Deep Argo Float Displacements	F. SÉVELLEC (LOPS-CNRS) France	Virtual
13:45	A study on cyclonic eddy-borne Argo floats in the Greater Agulhas Current System	T. MORRIS (South African Weather Service)	Virtual
14:00	A seasonal climatology of the upper ocean pycnocline	G. SÉRAZIN (LOPS-CNRS) France	In Person
14:15	Variability in the Deep Western Boundary Current of the Southwest Pacific Basin identified using Deep Argo	M. CHANDLER (Scripps Institution of Oceanography) U.S.A	In Person
14:30	Spiciness anomalies in the upper North Pacific based on Argo observations	T. WANG (Tohoku University) Japan	In Person
14:45	Flash talks		
15:00 – 16:30	Poster session (Virtual) + coffee break (VIP Room)		
16:30	Argo floats reveal the mechanisms controlling the deepening of anthropogenic carbon towards the deeper layers of the North Atlantic	R. ASSELOT (Ifremer) France	In Person
16:45	Atmospheric river impacts on the upper ocean: a study using Argo floats	D. GIGLIO (Univ. of Colorado Boulder) U.S.A	Virtual
17:00 – 18:00	Argo Town Hall - Q&A informal session	Argo experts panel	
18:00 – 19:00	Welcome Drink (VIP Room)		

DAY2 – Wednesday 12 October 2022

8:30	(Hall entrance - Registration Desk)		
Model & Satellite session (Grand Auditorium) Chair: Elisabeth REMY, Moderator: Peter OKE			
9:00	Introduction	P. OKE (CSIRO) Australia	Virtual
9:05	Unveiling the ocean dynamics at the mesoscale from Argo and satellite observations	S. SPEICH (LMD-IPSL, ENS-PSL), France	In Person
9:20	Impact of Argo observations in Ocean Operational Systems	E. REMY (Mercator Océan) France	In Person
9:35	Vertical Structure of Mesoscale Turbulence in the Azores Current System combining ARGO profiles, climatology, and altimetry	S. SILVA (IDL/FCUL) Portugal	Virtual
9:50	Observed seasonal variability of thermohaline structure and associated biological response in the Eastern Equatorial Indian Ocean using Argo profiling floats	T. BHATTACHARYA (INCOIS) India	Virtual
10:05	The Different Chlorophyll Structures in North Atlantic Cyclonic and Anticyclonic Eddies	G. QUARTLY (PML) U.K	In Person
10:20	Flash talks		
10:30 – 11:00		Poster session (Virtual) + coffee break (VIP Room)	
11:00	Experience, lessons learnt and challenges of biogeochemical model validation with BGC-Argo in the EU Marine Copernicus Service	G. COSSARINI (OGS) Italia	In Person
11:15	Can assimilating Biogeochemical-Argo data improve carbon flux estimates?	A. ROCHNER (University of Exeter) U.K	Virtual
11:30	Maximizing the integration of BGC Argo data and predicting systems	A. TERUZZI (OGS) Italia	In Person
11:45	Evaluation of biogeochemical ocean models from CMIP6 in the North Atlantic Ocean	M. MEHLMANN (Dalhousie University) Canada	In Person
12:00	Discussion time		
12:30 – 13:30		LUNCH BREAK (VIP Room)	
Ocean Climate session (2): focus on the Mediterranean Sea (Grand Auditorium) Chair: Elena MAURI, Moderator: Miguel PIECHO-SANTOS			
13:30	Heat content and temperature trends in the Mediterranean Sea as derived by Argo float data (2005 – 2020)	E. KUBIN (OGS) Italia	Virtual
13:45	Anticyclones in the Mediterranean sea have significantly deeper winter MLD and delayed maximum.	A. BARBONI (Ecole Polytechnique) France	In Person
14:00	Propagation in depth of marine heatwaves in the Mediterranean Sea as observed by the Argo network	M. JUZA (SOCIB) Spain	Virtual
14:15	Exceptionally high salinities in the Adriatic Sea since 2017 – multiplatform approach to monitoring and research	H. MIHANOVIC (IOF) Croatia	In Person
14:30	Impact of the Medicane Apollo on a cyclonic vortex of the Ionian Sea	M. MENNA (OGS) Italia	Virtual
14:45	Flash talks		

15:00 – 16:30	<i>Poster session (Virtual) + coffee break (VIP Room)</i>		
16:30	An update of North Aegean hydrography derived from autonomous profiling floats	D. KASSIS (HCMR) Greece	In Person
16:45	Characterization of the Atlantic Water and Levantine Intermediate Water in the Mediterranean Sea using 20 years of Argo data	G. FEDELE (CMCC) Italia	Virtual
17:00 – 18:00	Round Table: "Ensuring the sustainability of OneArgo programme"		
18:00 – 20:00	<i>Cocktail Reception (Mezzanine of the Gallery of Dinosaurs)</i>		

DAY 3 – Thursday 13 October 2022

8:30	(Hall entrance - Registration Desk)		
BGC session (Grand Auditorium) Chair: Emanuele ORGANELLI, Moderator: Marine FOURRIER			
9:00	Phytoplankton dynamics in the high nutrient – low chlorophyll regions: the northwestern subarctic Pacific	T. FUJIKI (JAMSTEC) Japan	In Person
9:15	Biogeochemical Argo floats reveal the evolution of subsurface biomass in South Indian Ocean eddies	STRUTTON (University of Tasmania) Australia	Virtual
9:30	Variability in the fluorescence signal in relation to phytoplankton community composition and implications for the retrieval of the chlorophyll a concentration from BGC-Argo floats	F. PETIT (LOV/SU) France	In Person
9:45	Retrieval of ocean net primary productivity from daily cycles of carbon biomass measured by profiling floats	A. STOER (Dalhousie University) Canada	In Person
10:00	Variability in Ocean Oxygen from GOBAI-O2: A Machine-Learning-Based Data Product	J. SHARP (Univ. of Washington CICOES / NOAA PMEL) U.S.A	In Person
10:15	Net community production in the Norwegian Sea estimated from nitrate fluxes using profiling floats	K.A. MORK (Inst. of Marine Research) Norway	In Person
10:30	Flash talks		
11 :00 –12 :00		Poster session (Virtual) + coffee break (VIP Room)	
12:00	Interannual variability of net community production in the Subantarctic Mode Water formation region estimated with autonomous platforms	P. TRUCCO-PIGNATA (Univ. of Southampton/NOC) U.K	Virtual
12:15	Quantifying the Biological Carbon Pump in the North Atlantic with BioGeoChemical Argo floats	M. CORNEC (NOAA-PMEL/Univ. of Washington) U.S.A	In Person
12:30	Mesoscale eddies: Potential coral bleaching drivers and relief in the Gulf of Mexico	J. Mc WHORTER (NOAA) U.S.A	In Person
12:45	Inequity in the deep: The amplified mesopelagic response to carbon accumulation	A. FASSBENDER (NOAA/PMEL) U.S.A	In Person
13:00 – 14:00		LUNCH BREAK (VIP Room)	
BGC session (Grand Auditorium) Chair: Hannah JOY-WARREN, Moderator: Henry BITTIG			
14:00	Latitudinal gradient in the flux of sinking particles driven by the phytoplankton community: a BioGeoChemical-Argo float investigation in the Southern Ocean.	L. TERRATS (LOV) France	Virtual
14:15	Using BGC-floats to observe particulate organic carbon dynamics in the southeast Pacific and southwest Atlantic Oceans	M. BIF (MBARI) U.S.A	In Person
14:30	Carbon to nitrogen uptake ratios observed across the Southern Ocean by the SOCCOM profiling float array	K. JOHNSON (MBARI) U.S.A	In Person

14:45	Role of Biology in Sustaining the Southern Ocean Carbon Sink	HUANG (NOAA Pacific Marine Environmental Laboratory) U.S.A	Virtual
15:00 – 16:30	<i>Poster session (Virtual) + coffee break (VIP Room)</i>		
16:30 – 17:00	Wrap up and concluding remarks		
17:00	<i>END OF THE WORKSHOP</i>		

POSTERS Sessions & Flash talks

ID	Speaker	Poster title		Flash talk slot
DAY 1 - Tuesday 11 October 10:30-11:30 & 15:00-16:30				
A01	JHA	Generation and Assessment of ARGO Sea Surface Temperature Climatology for the Indian Ocean Region	Virtual	10:15-10 :30
A02	RYKOVA	Feature Mapping: a method to refine ocean features in gridded products	Virtual	
A03	PAUTHENET	Four-dimensional temperature, salinity and mixed layer depth of the Gulf Stream, reconstructed from remote sensing and in situ observations with neural networks	Virtual	
A04	JONNAKUTI	Machine Learning-based approach for Delayed Mode quality control of salinity data from Argo floats.	Virtual	
A05	CHAMBERLAIN	The Performance of Present, Future, and Optimal Argo Infrastructure	In Person	
A06	LIU	Increasing Discrepancies in Salinity between Multiple Objective Analyses Since 2015	Virtual	14 :45 – 15 :00
A07	TVS	Can grounded Argo float data be used for validating bathymetry	Virtual	
A08	SIIRIÄ	Argo under-ice in the northern latitudes	In Person	
A09	BALEM	Argo floats deployed at the North Pole, will we see them again?	Virtual	
A10	WOOD/WILLIS	Ocean warming and Greenland ice loss: the case for expanding Argo to Greenland's continental shelf	In Person	
A11	CABANES	A improved Near Real Time Quality Control Tool for Argo trajectory files	Virtual	N/A
A12	GAO	Internal Wave Imprints on Temperature Fluctuations as Revealed by Rapid-Sampling Deep Profiling Floats	Virtual	
A13	HIRANO	SBE41CTD sensor pre-deployment screening in JAMSTEC	Virtual	
A14	HOSODA	Argo real-time QC procedure using signature-based neural network	In Person	
A15	KOBAYASHI	Salinity bias with negative pressure dependency caused by anisotropic deformation of CTD measuring cell under pressure examined with a dual-cylinder cell model	Virtual	
A16	PETIT	Deep through-flow in the Bight Fracture Zone and its role in the hydrological evolution of the Irminger Current	Virtual	

A17	ROGACHEV	Large Oyashio eddy drives interbasin exchange between the Sea of Okhotsk and the subpolar Pacific	Virtual	
A18	SAMBE	Classification of Argo Profiles in the Mid-latitude Northwest Pacific Ocean by Unsupervised Clustering and Their Potential Use	In Person	
A19	SATO	Performance evaluation of the optical dissolved oxygen sensor, ARO-FT, on Argo floats	Virtual	
A20	THIERRY	Assessing the extension of the argo array towards the deep ocean: an analysis of the long-term stability and accuracy of the SBE61, SBE41 and RBR CTD sensors	In Person	

ID	Speaker	Title		Flash talk slot
DAY 2 - Wednesday 12 October 10:30-11:00 & 15:00-16:30				
B01	FERNANDEZ CASTRO	Lagrangian pathways for heat, carbon and nutrients subduction with sub-antarctic mode waters	In Person	10:15-10 :30
B02	OKE	A demonstration of why only delayed-mode Argo data should be used for ocean reanalysis	Virtual	
B03	YUMRUKTEPE	BGC-Argo driven generic modeling framework for the Nordic Seas biogeochemistry	In Person	
B04	FUJII	Evaluation of Argo in the UN Ocean Decade Project SynObs	In Person	
B05	KIDO	An introduction of newly developed eddy-resolving quasi-global ocean reanalysis product -JCOPE-FGO-	Virtual	
B06	MAURI	Extremely high salinity in the water column of the South Adriatic Pit	In Person	14 :45 – 15:00
B07	TUOMI	Enhancing the monitoring of the Baltic Sea environmental state using Argo floats	In Person	
B08	LI	Improvements on the drift of dissolved oxygen sensor (ARO-FT)	In Person	
B09	ROCHA DE SOUZA	Equity, Diversity, and Inclusion: A case study using the Argo International Program	In Person	
B10	BENAVIDES	Argo in boundary currents: study cases using the VirtualFleet software	In Person	N/A
B11	DOI	Impact of BGC Argo data on state estimation by using the Estimated Ocean State for Climate Research (ESTOC)	Virtual	
B12	FROUIN	Additive varying coefficient model for estimating diffuse attenuation coefficient from satellite-derived water reflectance	Virtual	
B13	MACÉ	Calibration of an optical model using BGC-ARGO profiles	In Person	
B14	MERCHEL	Argo floats in the South Baltic Sea - five years of use	In Person	
B15	OULHEN	Reconstructing the ocean using Argo data and a data-driven method	In Person	
B16	ROUTABOUL	New satellite telemetry solutions to meet the new needs of ARGO profiling floats	In Person	
B17	SHULGA	Salinity recovery using regional bio optical products	Virtual	
B18	TRAYLOR	Assessing Integrated Satellite-Float Productivity Estimates in the NASA EXPORTS Campaigns	In Person	

ID	Speaker	Title		Flash talk slot
DAY 3 - Thursday 13 October 11:00-12:00 & 15:00-16:30				
C01	IZETT	Expanding the global coverage of gross primary production and net community production using biogeochemical profiling floats	In Person	10:30-11:00
C02	KOESTNER	A multivariable empirical algorithm for estimating particulate organic carbon concentration in marine environments from optical backscattering and chlorophyll-a measurements	In Person	
C03	GIDUGU	Estimation of Seasonal changes in Vertical distribution of phytoplankton biomass in Tropical Indian Ocean from Bio-Argo and remote sensing observations	Virtual	
C04	AHMED	Oxygen saturations of the Northwest Pacific subsurface waters using an array of Argo floats	Virtual	
C05	HONDA	Estimation of Particulate Organic Carbon Flux with BGC-Argo Backscatter data from the Western North Pacific	Virtual	
C06	JOY-WARREN	Connecting phytoplankton taxa distributions to air-sea CO ₂ fluxes in the Southern Ocean	In Person	
C07	MUNZIL	Application of Bio-Argo float in understanding denitrification in the northern Indian ocean.	Virtual	
C08	SCHMECHTIG	New method for Chlorophyll-A calibration	In Person	
C09	XU	Constraining the twilight zone remineralization rate in the South China Sea basin: insights from a multi-method intercomparison	Virtual	
C10	CORREDOR ACOSTA	Argo Float Reveals Biogeochemical Characteristics Along the Freshwater Gradient Off Western Patagonia	Virtual	N/A
C11	EVRARD	Towards a new phase for Euro-Argo programme: the contribution of Euro-Argo RISE project	In Person	
C12	FEUCHER	Subpolar gyre decadal variability explains the recent oxygenation in the Irminger Sea	In Person	
C13	FRENZEL	OneArgo toolboxes for accessing and visualizing Argo data	In Person	
C14	KOŁODZIEJCZYK	Decadal patterns of dissolved oxygen in the global ocean (2009-2018)	In Person	
C15	MAZE	"argopy": a python library to focus on Argo science	Virtual	

C16	MORRIS	Best practices for Core Argo floats: Physical handling, metadata and data considerations	Virtual
C17	ORGANELLI	Developing synergies between BGC-Argo and Earth Observation to assess the impact of ocean extremes on marine ecosystems	In Person
C18	OSBORNE	Preliminary results from a new marginal sea biogeochemical-Argo array in the Gulf of Mexico	In Person
C19	PARK	An Oxygen Mass Balance of the Labrador Sea from Biogeochemical Argo Float and Hydrographic Data	In Person
C20	RENOSH	Vertically resolved light models for the global ocean based on machine learning techniques	In Person
C21	ZHANG	Unveiling the fate of organic particles in the oligotrophic ocean	In Person

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