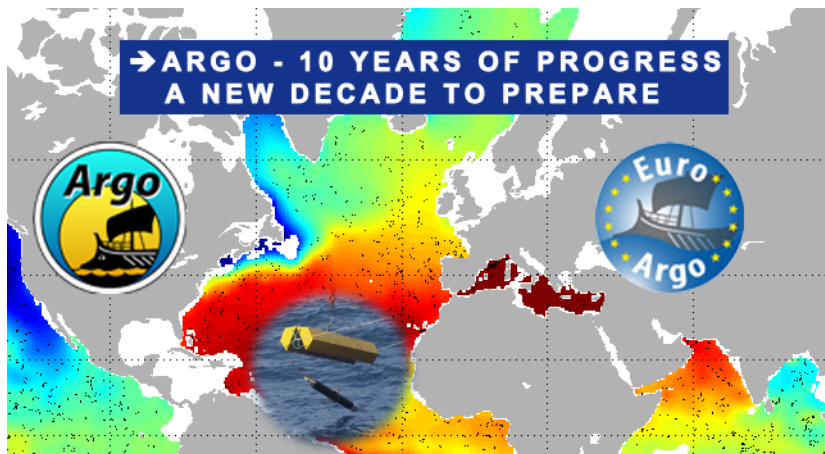


# 4th Argo Science Workshop

## Agenda



**Venice Convention Centre  
Palazzo del Casinò  
Venice-Lido, Italy**

**September 27-29, 2012**

## Introduction

The theme of the Argo workshop is to celebrate 10 years of progress for Argo and to prepare the next decade and new challenges for Argo. The 2.5 day workshop includes both oral and poster presentations. The workshop programme includes a review of Argo achievements in ocean and climate research (e.g. heat and salt budget, large scale seasonal and interannual variability and ocean circulation, mesoscale variability, marginal seas, ocean analysis and forecasting) and float technology and science discussions on the development on the new phase of Argo for the next decade (sustaining Argo and developing extension towards biogeochemistry, deep ocean and polar regions).

The general objectives of the Workshop are (i) to stimulate more research using Argo data, especially in combination with altimetry, (ii) to entrain young scientists into the Argo community (iii) to strengthen communications between the Argo and altimetry groups (iv) to further increase the visibility of the Argo Program (v) to broaden the discussion of Argo's future evolution.

### **Scientific committee:**

D. Roemmich, Scripps, USA  
S. Wijffels, CSIRO, Australia  
P.Y. Le Traon, Ifremer/Mercator-Océan, France  
B. Owens, WHOI, USA  
P.M. Poulain, O.G.S, Italy  
S. Pouliquen, Ifremer, France  
T. Suga, JAMSTEC/Tohoku University, Japan

### **Organizing committee:**

P.Y. Le Traon, Ifremer/Mercator-Océan, France  
P.M. Poulain, O.G.S, Italy  
S. Pouliquen, Ifremer, France  
E. Mamaca, Ifremer, France  
F. Loubrieu, Ifremer, France

For further information, do not hesitate to contact us.

*Argo Venice Workshop Secretariat*

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## Session Overview and Detailed Agenda

Thursday 27 <sup>th</sup> September 2012		
Time	Item	Speaker
<b>Session A: OPENING</b> <span style="float: right;"><i>(Sala delle Feste)</i></span> <b>Chair: Pierre-Marie POULAIN (O.G.S)</b>		
08:45	GOOS and Argo	<b>A. Fischer</b> , Head of GOOS Project Office
09:00	European strategy for pan-European and global research infrastructures	<b>P. Froissard</b> , DG Research & Innovation, European Commission Director
09:15	A Decade of Argo: Achievements and Future Challenges	<b>S. Wijffels</b> , CSIRO, Australia
09:35	The long term contribution of Europe to Argo	<b>P.Y. Le Traon</b> , Ifremer, France
09:55	Understanding the Argo Data Management System	<b>S. Pouliquen</b> , Ifremer, France
<b>Session B: SEA LEVEL AND ARGO</b> <span style="float: right;"><i>(Sala delle Feste)</i></span> <b>Chair: Pierre-Marie POULAIN (O.G.S)</b>		
10:15	The physical processes underlying interannual variations in global mean sea level as revealed by Argo and their representation in ocean models	<b>R. Bingham</b> , Newcastle University, UK
10:35	The role of Argo steric sea level within the global sea level budget	<b>K. von Schuckmann</b> , DT-INSU, France
10:55	A global view of steric and sea surface height variability, 2004 - 2011	<b>D. Roemmich</b> , Institution of Oceanography, UCSD, U.S.A.
11:15 – 11:45 Coffee Break		
<b>Session B: SEA LEVEL AND ARGO</b> <span style="float: right;"><i>(Sala delle Feste)</i></span> <b>Chair: Toshio SUGA (JAMSTEC/Tohoku Univ.)</b>		
11:45	The relationships between Argo Steric Height and AVISO Sea Surface Height.	<b>P. Sutton</b> , NIWA, New Zealand
12:05	Understanding the annual cycle in sea surface height.	<b>D. Giglio</b> , Scripps Institution of Oceanography, U.S.A.
12:25	Steric and Barotropic Modes of Sea Level Variability in the North Atlantic	<b>S. Eselborn</b> , GFZ, Helmholtz Centre Potsdam, Germany
12:45 – 14:00 Lunch		
<b>Session C: HEAT AND SALT BUDGET -</b> <span style="float: right;"><i>(Sala delle Feste)</i></span> <b>Chair: Toshio SUGA (JAMSTEC/Tohoku Univ.)</b>		
14:00	Ocean heat and salt calculations using Argo data at NODC	<b>T. Boyer</b> , National Oceanographic Data Center, U.S.A.
14:20	Estimation of Fresh and Salt Water Transports in the Indian Ocean	<b>S. Bulusu</b> , University of South Carolina, U.S.A.

<b>Thursday 27<sup>th</sup> September 2012</b>		
<b>Time</b>	<b>Item</b>	<b>Speaker</b>
14:40	Detecting the average footprint of tropical cyclone induced ocean thermal changes based on Argo data	<b>L. Cheng</b> , Institute of Atmospheric Physics, Chinese Academy of Sciences, China
15:00	Oceanic fluxes and storage of freshwater in the North Atlantic	<b>B. King</b> , National Oceanography Centre, UK
<b>15:20 – 15:40 Coffee Break</b>		
<b>Session C: HEAT AND SALT BUDGET -</b>		<b>(Sala delle Feste)</b>
<b>Chair: Susan WIJFFELS (CSIRO)</b>		
15:40	Argo-based estimates of the oceanic heat content variability: impact of the array's geometry	<b>M. Juza</b> , SOCIB, Spain
16:00	Monitoring the Ocean from observations	<b>S. Guinehut</b> , CLS, Space Oceanography Division, France
<b>Session D: MOC and LARGE SCALE CIRCULATION</b>		<b>(Sala delle Feste)</b>
<b>Chair: Susan WIJFFELS (CSIRO)</b>		
16:20	MOC, Heat Content and Air-sea Interaction during the MOC slow-down in 2009	<b>N. Wells</b> , University of Southampton; UK
16:40	Estimating the residual overturning circulation	<b>P. Cessi</b> , Scripps Institution of Oceanography, U.S.A.
17:00	Meridional transport in the South Pacific: Assessing ENSO and SAM related variability	<b>N. Zilberman</b> , Scripps Institution of Oceanography, U.S.A.

Friday 28 <sup>th</sup> September 2012		
Time	Item	Speaker
<b>Session D: MOC and LARGE SCALE CIRCULATION</b>		<i>(Sala delle Feste)</i>
<b>Chair: Sylvie POULIQUEN (IFREMER)</b>		
09:00	Use of ARGO floats to study the ocean dynamics south of Africa: what we have learned from the GoodHope project and what we plan within the SAMOC international programme	<b>S. Speich</b> , Laboratoire de Physique des Océans, UMR 6523, France
09:20	South Pacific Tropical Water as seen from Argo data and global GCMs	<b>T. Qu</b> , University of Hawaii, U.S.A.
09:40	Effect of Decadal Kuroshio Extension Jet and Eddy Variability on the Modification of North Pacific Intermediate Water	<b>B. Qiu</b> , Dept of Oceanography, Univ. of Hawaii at Manoa, U.S.A.
10:00	Argo profiles nonlinear feedback processes associated with the Indian Ocean Dipole	<b>W. Cai</b> , CSIRO Marine and Atmospheric Research, Australia
10:20	Ocean general circulation near 1000 m depth	<b>M. Ollitrault</b> , IFREMER, France
<b>10:40 – 11:10 Coffee Break</b>		
<b>Session E: MESOSCALE CIRCULATION</b>		<i>(Sala delle Feste)</i>
<b>Chair: Breck OWENS (WHOI)</b>		
11:10	Mozambique Channel eddies as a transport mechanism: The case of Red Sea Water	<b>T. Morris</b> , Bayworld Centre for Research and Education, South Africa
11:30	The southward transport of sub-mesoscale lenses of Bass Strait Water in the centre of anti-cyclonic mesoscale eddies	<b>K. Ridgway</b> , CSIRO Marine & Atmospheric Research, Australia
11:50	High resolution mapping of 3D semi-geostrophic dynamics from a combination of ARGO measurements and satellite observations	<b>N. Buongiorno Nardelli</b> , Consiglio Nazionale delle Ricerche, Italy
12:10	Western North Pacific Integrated Physical-Biogeochemical Ocean Observation Experiment (INBOX)	<b>T. Suga et al.</b> , Tohoku University/JAMSTEC
<b>12:30 – 14:00 Lunch</b>		
<b>Session F: IMPACTS IN MODELS</b>		<i>(Sala delle Feste)</i>
<b>Chair: Pierre-Yves LE TRAON (IFREMER)</b>		
14:00	Development of Observation Impact Statements under GODAE OceanView	<b>P. Oke</b> , CSIRO, Australia
14:20	Impact of Assimilation of Argo Data in Global HYCOM	<b>J. Cummings</b> , Naval Research Laboratory, USA
14:40	Impact of Argo data in Mercator Ocean global and regional systems	<b>M. Benkiran</b> , CLS & Mercator Océan, France
15:00	Using observing system evaluation experiments to test the value of Argo data in FOAM	<b>D. Lea</b> , Met Office, UK

<b>Friday 28<sup>th</sup> September 2012</b>		
<b>Time</b>	<b>Item</b>	<b>Speaker</b>
15:20	Evaluation of the Argo float impacts on the ocean data assimilation systems in JMA/MRI	<b>Y. Fujii</b> , Japan Meteorological Agency/ Meteorological Research Institute, Japan
15:40	Impact of ARGO Data on the East Sea Circulation Modeling	<b>K.R. Kang</b> , National Institute of Meteorological Research / KMA, Rep. of Korea
<b>16:00 – 16:30 Coffee Break</b>		
16:30	<b>Argo Poster Session (Sala Adriatico)</b>	
17:30		

Saturday 29 <sup>th</sup> September 2012		
Time	Item	Speaker
<b>Session G: EXTENSION OF ARGO TO MARGINAL SEAS, SEA ICE AND BIOGEOCHEMISTRY</b>		
<b>Chair: Dean ROEMMICH (SCRIPPS)</b>		<b>(Sala delle Feste)</b>
09:00	Extending Argo into marginal Seas: the Mediterranean and Black Seas	<b>P.M. Poulain</b> , Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS Italy
09:20	Mediterranean intermediate circulation estimated from Argo data	<b>M. Menna</b> , Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS Italy
09:40	Oxygen dynamics in the Black Sea: Two years of Argo profiling floats data.	<b>E. Stanev</b> , Helmholtz-Zentrum Geesthacht, Germany
10:00	Observing the ice-covered oceans around Antarctica by profiling floats	<b>A. Wong</b> , University of Washington, U.S.A.
10:20	Bio-Argo and the emergence of profiling float as key platforms to measure ocean biogeochemistry.	<b>E. Boss</b> , MISC Lab, Univ. of Maine, U.S.A.
<b>10:40 – 11:00 Coffee Break</b>		
11:00	<b>FINAL ROUND TABLE : PREPARING THE NEXT DECADE FOR ARGO</b> <i>(Sala delle Feste)</i>	
<b>12:30</b>	<b>Meeting close</b>	

## Poster Session on Friday 28<sup>th</sup> (Sala Adriatico)

Name	Institute / Company	Poster Title
Dr <b>Altshuler</b> Thomas	Teledyne Webb Research U.S.A	Development of a Deep Ocean Profiling Float
Mr <b>Bernard</b> Yann	CLS, Space Oceanography Division France	Argos technology evolution for ARGO floats
Mr <b>Bittig</b> Henry C.	Helmholtz Centre for Ocean Research Kiel - GEOMAR - Germany	Oxygen sensor characterization and calibration - Providing the Argo-O2 essentials
Dr <b>Bouruet- Aubertot</b> Pascale	LOCEAN-UPMC France	Microstructure velocity measurements from an ARGO float
Mr <b>Brault</b> Patrice	Nke France	Nke profiling floats update
Ms <b>Carse</b> Fiona	Met Office United Kingdom	SST profiles from pumped and un-pumped near-surface Argo measurements
Mr <b>Faure</b> Vincent	Japan Agency for Marine- Earth Science and Technology (JAMSTEC) - Japan	Ocean mixed layer heat budget near the North Pacific Ocean subarctic front east of Japan.
Mr <b>Fiedler</b> Björn	Helmholtz Centre for Ocean Research Kiel   GEOMAR - Germany	Going beyond Argo-O2 - In situ CO2 and O2 measurements on Argo floats
Ms <b>Gaillard</b> Fabienne	Laboratoire de Physique des Océans, Ifremer- CNRS-IRD-UBO - UMR6523 France	Argo based statistics for climate monitoring
Ms <b>Goszczko</b> Ilona	Institute of Oceanology, PAS Poland	Properties and pathways of the Atlantic Water in the Greenland Sea observed with Argo floats
Dr <b>Grayek</b> Sebastian	Institute of Chemistry & Biology of the Marine Environment (ICBM), Univ. of Oldenburg Germany	Observing System Evaluation for the Black Sea: Focus on ARGO floats and altimetry during 2005 -2012
Dr <b>Hayashi</b> Kazuhiko	Research Institute for Global Change (RIGC)/Japan Agency for Marine-Earth Science and Technology (JAMSTEC) - Japan	Impacts of meso-scale eddy on air-sea fluxes of CO2: Utilizing Argo profiling float
Mr <b>Hosoda</b> Shigeki	RIGC/JAMSTEC Japan	Heat penetration of downward net heat flux below shallow seasonal thermocline during spring- summer season in the North Pacific Ocean



Mr <b>Hudson</b> Edison	iRobot maritime Systems U.S.A	Advancing Glider Technology to Complement and Enhance the Future Argo System
Mr <b>Kimizuka</b> Masafumi	Graduate School of Marine Science and Technology, Tokyo University of Marine Science and Technology Japan	Water characteristics and temporal variations of the warm core rings in the Kuroshio-Oyashio Extension region observed by Argo floats
Mr <b>Kobashi</b> Fumiaki	Tokyo University of Marine Science and Technology and Japan Agency for Marine-Earth Science and Technology Japan	Decadal variations of the North Pacific subtropical mode water and their dynamical influence on the subtropical gyre
Mr <b>Kobayashi</b> Taiyo	JAMSTEC Japan	Deep NINJA: A new profiling float for deep ocean observation
Mr <b>Le Reste</b> Serge	IFREMER France	Evolutions of Arvor & Provor floats
Mr <b>Le Traon</b> Pierre-Yves	IFREMER France	NAOS: preparing the new decade for Argo
Mr <b>Liu</b> Zenghong	The Second Institute of Oceanography, SOA China	Distribution and seasonal variation of water mass near the Luzon Strait revealed by Argo data
Dr <b>Martin</b> Matthew	Met Office United Kingdom	Use of Argo data for inter-comparison of GHRSSST gap-free analysis fields
Mr <b>Mata</b> Mauricio M.	Federal University of Rio Grande-FURG Brazil	The Southern Ocean Observing System: towards implementation
Mr <b>Maze</b> Guillaume	Ifremer/LPO France	The North Atlantic Ocean main pycnocline from Argo data
Mr <b>Monselesan</b> Didier	CSIRO Centre for Marine and Atmospheric Research - Australia	How well can we track global steric sea level and heat content of the upper ocean from the Argo observing system?
Mr <b>Nishikawa</b> Shiro	Japan Agency for Marine- Earth Science and Technology (JAMSTEC) - Japan	Experiments of ocean state estimation and forecast in 2010-2011 using K7 global 4D-VAR coupled data assimilation system and effects of Argo data
Mr <b>Nishina</b> Kei	Kyoto University Japan	Impact of simultaneous assimilation of intermediate velocities derived from Argo float trajectories together with temperature and salinity profiles in a high-resolution 4-dimensional variational data assimilation system
Dr <b>Notarstefano</b> Giulio	O.G.S Italy	Is the Ionian Sea getting warmer and saltier? A case study using 26 years of data obtained from profiling floats and CTD casts
Dr <b>Parent</b> Laurent	MERCATOR-Océan France	Global Eddy-Permitting Ocean Reanalysis and Simulations of the Period 1992 to Present

Dr <b>Sato</b> Kanako	Japan Agency for Marine-Earth Science and Technology Japan	Western North Pacific Integrated Physical-Biogeochemical Ocean Observation Experiment (INBOX): Adjustment of dissolved oxygen data and calibration of dissolved oxygen sensors on JAMSTEC profiling floats deployed in the western North Pacific
Dr <b>Schmid</b> Claudia	NOAA/AOML/PHOD U.S.A	On the structure and variability of zonal and meridional transports in the subtropical South Atlantic
Mr <b>Schwatke</b> Christian	DGFI Germany	Eddy detection by means of a Kalman filter approach applied to multi-mission altimetry
Mr <b>Sugimoto</b> Shusaku	Graduate School of Science, Tohoku University Japan	Inter-annual variation of North Pacific Subtropical Mode Water: Changes in the formation and distribution regions
Mr <b>Toyama</b> Katsuya	Tohoku University Japan	Annual subduction rate of the North Pacific and its interannual variation
Dr <b>Uchida</b> Hiroshi	Research Institute for Global Change, Japan Agency for Marine-Earth Science and Technology Japan	A study for establishment of high-quality dissolved oxygen measurement by using an optical oxygen sensor and a reference material
Ms <b>Wu</b> Xiaofen	Second Institute of Oceanography, SOA China	Volume variation of the Western Pacific Warm Pool and warm water getting into and out of the pool revealed by Argo data
Pr <b>Yuan</b> Dongliang	Institute of Oceanography, Chinese Academy of Sciences China	Geostrophic Meridional Transport in the Tropical Northwest Pacific Based on Argo Profiles
Dr <b>Mamaca</b> Emina	IFREMER France	Euro-Argo ERIC

## Instructions to speakers and participants

### **POSTERS**

Viewing will be on Friday from 16h30 to 17h30, in Sala Adriatico. Authors are invited to be on stand-by close to their posters.

#### **Poster dimensions:**

- \* Height: 150cm
- \* Width: 80cm
- \* ORIENTATION: PORTRAIT

### **ORAL PRESENTATIONS**

As the schedule is tight, be sure to respect the time allowed; Bring your visual supports on a USB key. And make sure that your presentation will be downloaded ahead of your session.

Presenters are advised when uploading their presentation to check if formulas/animations are shown correctly.

All speakers are requested to meet with the session chairs at the assigned session room ten minutes prior to the start of the session.

#### **Please note:**

- Presentations from personal laptops are not possible
- Presentations should be provided in MS PowerPoint or PDF format
- Upload is possible from USB keys
- Presentations shall be stored in the folder corresponding to the assigned session
- Presentation naming should include the main author's surname, presentation date and time (ie: **Argo\_surname\_YYMMDD\_HHMM**)