



Joint Meeting of IQUOD/GTSPP/SOOP/XBT science groups

Bologna (Italy), 11-15 November, 2024

The Joint Meeting IQUOD/GTSPP/SOOP/XBT science groups is locally hosted by INGV (Bologna, Italy) and most participants travel costs are covered by the International Oceanographic Data and Information Exchange (IODE) of the Intergovernmental Oceanographic Commission (IOC) of UNESCO.

This joint workshop (1) brings together scientists from different aspects of ocean observations, data processing/management/applications, data platforms and provides an interactive framework to explore possible collaborations in the future; (2) the steering groups and members will meet and discuss the past achievements and set the future plans. The workshop will focus on some specific topics in each time slot and include both presentations and panel discussions to fully develop the ideas and set the way forward.

Organizing Committee

Name	Affiliation	Email
Simona Simoncelli and Claudia Fratianni (local organizer)	INGV, Italy	simona.simoncelli@ingv.it claudia.fratianni@ingv.it
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Agenda

Day-1 (November 11) aims to review and introduce the previous activities of different groups, help people to get familiar with the four groups, and set the stage for the follow-on discussions. We recommend each group take less than -20 min for presentation and -20 min for Q&A. (not just about

the introduction, but also about what is missing, what is lacking, which facilitate collaboration across the groups)

Time	Topic/Title	Presenter	Moderator
13:00-14:00	Welcome Lunch		
14:00-14:10	Opening	Organizer/ Sponsor	Simona Simoncelli
14:10-14:40	ODIS introductory talk	Pier Luigi Buttigieg	
14:40-15:10	IQuOD Review	Guilherme Castelao Lijing Cheng	
15:10-15:50	GTSP Review	Chris Paver	
15:50-16:20	Coffee break		
16:20-17:00	SOOP Review	Justine Parks	
17:00-17:40	XBT Review	S. Dong	

Day-2 (November 12): morning session focus on data QC, data flagging practices/standards, implementation of QC/flagging in the morning session (also including QC across different instruments, commonalities with QC, developments of machine learning and other new techniques; metrics to evaluate QC). The **afternoon session** will focus on the pathways to the public sharing of data, code, metadata, data management, data format etc.

Time	Topic/Title	Presenter	Moderator
9:00-10:10	QC and more		Guilherme Castelão and Rebecca Cowley
	9:00-9:15 - AutoQC implementation and future with WOD cloud	Tim Boyer (NOAA/NCEI)	
	9:15-9:30 - Salinity QC, report on pilot and prospect for the future	Zhetao Tan, Yingfan, Lijing Cheng (IAP/CAS)	
	9:30-9:45 - IODE QC flag scheme	Toru Suzuki (MIRC, Japan)	
	9:45-10:00 - Argo QC, latest changes and wish list for the future	Thierry Carval (Ifremer)	
	10:00-10:15 - OTGA and IQuOD	Uday Bhaskar (INCOIS)	
10:15-10:40	Discussion		
10:40-11:00	Coffee break		
11:00-13:00	Panel discussion on QC		
13:00-14:00	Lunch Break		

14:00-15:15	14:00-14:15 Developing a GOOS Data and Metadata Hypernode through ERDDAP Federation	Kevin O'Brian (NOAA)	Christopher Paver and Simona Simoncelli
	14:15-14:30 Sharing NRT and DM XBT data through ERDDAP	Claudia Fratianni (INGV)	
	14:30-15:45 Data integration and metadata harmonization in cloud-based workflows: the Blue-Cloud workbenches	Simona Simoncelli (INGV)	
	14:45-15:00 GTSP data product access and looking forward	Chris Paver (NOAA/NCEI)	
	15:00-15:15 Roles and Data Flow of GTSP, GOSUD, and IQuOD: How to Improve Collaboration and Data Management Practices	Ludovic Drouineau (Ifremer)	
15:15-15:30	Discussion		
15:30-16:00	Coffee break		
16:00-17:30	Panel discussion on data/code/metadata sharing and data management		

Day-3 (November 13): the **morning session** will focus on **XBT science** and data bias that is common for the other groups. The **afternoon session** will focus on reanalysis and other key applications of in situ data (how the four groups can better support other communities such as ocean reanalysis? What are the reanalysis community data requirements?). This session also includes the Global Ocean Observing System (What is the best way to integrate the ocean observing system? Where are the gaps?).

Time	Topic/Title	Presenter	Moderator
9:00-10:00	9:00-9:15 Marine Heatwaves in the Kuroshio	Janet Sprintall (SCRIPPS)	Shenfu Dong and Justine Parks
	9:15-9:30 XBTS Provide First-Order Characterization of Seabed Physical Properties	Taylor Lee (US Naval Research Lab.)	
	9:30-9:45 Update on bias corrections (XBT/MBT/bottle/APB and CH14 update)	Viktor Gouretski (IAP/CAS)	
	9:45-10:00	Lijing Cheng (IAP/CAS)	

	IAP OHC update and a new OHC uncertainty estimate		
	10:00-10:15 Reliability of XBT system measurements in oceanographic datasets	Franco Reseghetti (INGV)	
10:15-10:30	Discussion		
10:30-11:00	Coffee break		
11:00-13:00	Panel discussion: broaden international involvement and support, creating/distributing gridded data for each transect in a unified easy access format, consistent auto QC procedure, real-time data distribution via GTS.		
13:00-14:00	Lunch Break		
14:00-15:00	Perspectives and requirements from the data user side		A. Storto C. Yang S. Simoncelli
	14:00-14:15 GLORAN and OceanDecade	Chunxue Yang (CNR)	
	14:15-14:30 CNR reanalysis	Andrea Storto (CNR)	
	14:30-14:45 In-situ observations in CMCC reanalysis systems	A. Aydogdu (CMCC)	
	14:45-15:00 ECCO reanalysis	Gael Forget (MIT)	
	EMODnet Physics	Antonio Novellino	
15:00-15:30	Discussion		
15:30-16:00	Coffee break		
16:00-17:30	Panel discussion on how to better support user communities such as reanalysis/climate model requirements, metrics and also observing system integration/gaps.		

Day-4 (November 14): The morning session will be scientific talks, including the new scientific understandings based on data/observations, including ocean heat content, salinity and freshwater flow, sea level budget, heat/freshwater transport, ocean circulations, mesoscale and sub-meso-scale eddies, uncertainty estimate etc. The afternoon session will focus on public access platforms (major databases), instruments, Ferrybox, CPR, pCO₂, TSG SOOP talks.

Time	Topic/Title	Presenter	Moderator
9:00-11:00	9:00-9:15 OHC: GEWEX group assessment on OHC/EEI	Tim Boyer (NOAA)	Lijing Cheng and Marlos Goes
	9:15-9:30	B. Buongiorno Nardelli (CNR)	

	Improving data-driven reconstructions of ocean dynamics: from operational to scientific applications		
	9:30-9:45 ICOADS: A Globally Merged Surface Marine and Meteorological Dataset	Chunying Liu (ICOADS)	
	9:45-10:00 Salinity/ Freshwater transport	Marlos Goes (NOAA/AOML)	
	10:00-10:15 Sea level and its acceleration budget in light of recent observational advances since 1960	Huayi Zheng (IAP/CAS)	
	10:15-10:30 Visual Data QC with ODV/webODV – New Features	Reiner Schlitzer (AWI)	
	10:30-10:45 High Latitudes	Igor Yashayev (DFO-MPO)	
	10:45-11:00 Questions/Discussion/catch up time		
11:00-11:30	Coffee break		
11:30-13:00	Panel discussion on gaps/research needs in answering some key scientific questions.		
13:00-14:00	Lunch Break		
14:00-15:15	14:00-14:15 “The Eurogoos Ferrybox Task Team” Short overview of the activities within the Eurogoos Ferrybox Task Team.	Anna Wranne (Voice of the Ocean Foundation)	Justine Parks
	14:15-14:30 Ocean-Ops, its purpose, its users, and how to use it to enter and retrieve platform metadata.	Martin Kramp (Ocean-Ops)	
	14:30-14:45 WIS 2.0 Introduction	David Berry (WMO)	
	14:45-15:00 “Ocean data management and dataset developments in IAP/CAS”	Lijing Cheng (IAP/CAS)	
	15:15-15:25 “Introduction to the organization of IOC/GOOS and SOOP’s place within it”	Emma Heslop (UNESCO/IOC)	
	World Ocean Database update	Alexey Mishonov (NOAA)	
15:25-15:45	Discussion		

15:45-16:15	Coffee break
16:15-17:30	Panel discussion on platforms and instruments: how to better coordinate across the major groups

Day-5 (November 15): Summary and wrap-up.

Time	Topic/Title	Presenter	Moderator
10:15-10:30	Share EuroGOOS strategy, side meeting outcomes	Thierry Carval (Ifremer)	Simona Simoncelli
10:30-11:00	IQuOD Summary Report and Final discussion	Lijing Cheng (IAP/CAS)	
11:00-11:30	GTSP Summary Report and Final discussion	Chris Paver (NOAA)	
11:30-12:00	Coffee break		
12:00-12:30	SOOP Summary Report and Final discussion	Justine Parks (SCRIPPS)	
13:00-13:00	XBT Summary Report and Final discussion	Shenfu Dong (NOAA)	
13:0-13:30	Wrap-up		
13:30-14:30	Goodbye Lunch		