

OceanPredict Intercomparison and Validation workshop

11–13 November 2026, Shanghai, China

Objectives: This meeting will bring together experts from operational ocean forecasting centres, users of ocean forecasts, and the broader scientific community to exchange knowledge on current intercomparison and validation practices across different prediction systems. Our understanding of ocean from large and decadal scales to submesoscale is growing with new observing capabilities, finer resolution, new AI-based forecasting systems and more dedicated and advanced numerical tools, including biogeochemistry and biodiversity surveys: for this reason, it is vital to consolidate existing practices for validation and intercomparison as well as design new user-oriented and process-based metrics for properly assess accuracy and skills.

The meeting will provide a platform to review and compare existing methodologies, identify gaps, and discuss emerging challenges in the evaluation of ocean forecasts. In particular, it aims to support the advancement of intercomparison and validation metrics (e.g. Class 4 metrics) to better address the rapidly evolving landscape of ocean forecasting systems, including the growing role of AI-based approaches.

Through the discussions, the meeting seeks to foster collaboration and contribute to the development of more robust, user-oriented, and future-proof validation and evaluation frameworks.

Agenda

Day 1, Wed, 11 Nov — From established IV-TT verification to next-generation methods			
Time	Presenter	Presentation	Session chair/rapporteur
09:00–09:30		Registration	
09:30–10:00		Welcome notes	
10:00–10:10		Workshop objectives	
Session 1 — CLASS4, Intercomparison & Operational Verification			
10:10–10:30	Gregory Smith	Near Real-time Evaluation of Operational Oceanographic Predictions: Over a Decade of Intercomparison by Global Ocean Forecasting Centers	
10:30–11:00		Coffee break	
11:00–11:20	Yvonnick Le Clainche	New reference SST and T/S profiles datasets for Class-4 verification and	

		intercomparison of global ocean forecast system	
11:20–11:40	Sang-Hun Jeong	A Multi-Variable Class-4 Verification-Uncertainty Budget for Operational Ocean-Forecast Skill with CMEMS In Situ Observations	
11:40–12:00	Charly Regnier	A comparative validation study based on process-oriented metrics for Mercator's deterministic, global and data-driven systems	
12:00–12:20	Christine Pequignat	Verification of Ocean Forecasts with Spectral Analysis	
12:20–14:00		Lunch	
Session 2 — Beyond Statistical Accuracy: Verification of AI & Data-Driven Systems			
14:00–14:20	Ziqing Zu	Beyond Statistical Accuracy: How Should We Evaluate AI Ocean-State-Forecasting Models?	
14:20–14:40	Xiang Wang	The End-to-end AI-Based Global Ocean Forecasting System XiHe and Its Intercomparison Evaluation	
14:40–15:00	Nan Yang	LangYa: A Large AI Model for Global Ocean Forecasting	
15:00–15:30		Coffee break	
15:30–15:50	Gabriela Martinez Balbontin	What should a biogeochemical forecast be calibrated against?	
15:50–16:10	Ziyue Meng	A global 3D chlorophyll-a dataset derived from multimodal deep-learning reconstruction	
16:10–16:30	Zhao Jing	WenHai: An End-to-End AI-Based Global Eddy-Resolving Ocean Forecast System	
16:30–17:30		OceanBench Hands-on Session	

Day 2, Thu, 12 Nov — From coordinated evaluation to operational applications			
Time	Presenter	Presentation	Session chair/rapporteur
Session 3 — Coordinated Evaluation, Reanalyses & Prediction Systems			
09:00–09:20	Shijin Yuan	TongHai: Towards Physics-AI Hybrid Modeling With Explicit Physical Guidance And Dual Neural Networks	
09:00–09:40	Yuhang Zhu	Volador 1.0: A Data-Driven Air-Sea Full-Coupling Regional Forecast Model with Submesoscale-Permitting Based on MOE-Swin-Transformer framework	
09:40–10:00	Qiang Wang and Junkai Qian	Deep Learning-Based Kuroshio Ensemble Forecast and Predictability Analysis	
10:00–10:20	Jiu Ke	TBD	
10:20–11:00		Coffee break	
11:00–11:20	Zhijin Li	Prediction and Reanalysis from a Mesoscale Data Assimilation and Forecasting System for the Pacific Ocean	
11:20–11:40	Furqon Alfahmi	Advancing Indonesia's Operational Coupled Ocean Forecasting System through Ensemble Data Assimilation: Initial Results from InaCAWO	
11:40–12:00	Emanuela Clementi	The Mediterranean and Black Seas forecasting physical systems: description and validation assessment	
12:00–12:20	Fangli Qiao	Forecasts and evaluation of Strong Tropical Cyclones Improved by Incorporating Ocean Surface Waves at Air-Sea Interface	
12:20–14:00		Lunch	
Session 4 — Coupled, Extreme, Regional & User-Oriented Verification			
14:00–14:20	Shun Ohishi	LETKF-based Ocean Research Analysis (LORA) version 2 for a quasi-global domain (LORA-QG)	
14:20–14:40	Jiawei Jiang	Physics-AI Collaborative Evaluation-Prediction Framework for Rapid Underwater Acoustic Transmission Loss Modeling	

14:40–15:00	Yosuke Fujii	UN Ocean Decade Project SynObs and its potential Collaboration with IV-TT	
15:00–15:30	Chunxue Yang	MER-EP: a Marine Environment Reanalysis Evaluation initiative fostering synergies with observation-based approaches for enhanced ocean monitoring	
15:30–15:50	Stefania Ciliberti	How an Operational Validation Framework Supports Reliable Regional Forecasts and Coastal Services	
15:50–16:20		Poster highlights	
16:20–16:40		Coffee break	
16:30–17:30		Day 2 synthesis / preparation for Day 3 (Session discussion /) and Poster session	

Day 3, Fri, 13 Nov — Synthesis and IV-TT roadmap			
Time		Activity	
09:30–10:15		Session rapporteurs: key messages and recommendations from Sessions 1–4 + posters	
10:15–10:45		Coffee break	
10:45–11:45		IV-TT Roadmap Discussion: Priorities and Next Steps	
11:45–12:00		Conclusions and closing remarks	
12:00–14:00		Lunch	
14:00–17:00		Visit to Fudan University	