Data, Observation & Modelling

Fri. Nov 13, 2026 9:00 AM - 10:30 AM JST | Fri. Nov 13, 2026 12:00 AM - 1:30 AM UTC | Room A (Oshidori) (2F)

Oral A4 Ocean Observing Systems and Data Quality

Chair: Sigmund Kluckner, Takeshi Doi

9:15 AM - 9:30 AM JST | 12:15 AM - 12:30 AM UTC

[MBtCkkTq-02] The Fishing Vessel Ocean Observing Network: Advancing Collaborative Ocean Observations to Fill Critical Data Gaps and Improve Forecasts

*Shin Kida[1] (1. Kyushu University (Japan))

Ocean observations are a foundation for our understanding of the marine environment and are essential for improving ocean forecasts and supporting sustainable management. Despite major advances in global observing systems, critical spatial-temporal data gaps remain, particularly in coastal and shelf regions as well as subsurface. These gaps limit forecast skill and increase uncertainty in scientific, operational, and policy decision-making. Fishing vessels offer a unique opportunity to help close these gaps because their activities overlap extensively with data-sparse regions. They can host a wide range of oceanographic sensors, while many fishing gear types routinely profile through the water column, providing cost-effective access to much-needed subsurface observations. By integrating ocean measurements with fishing operations, fishing vessels can substantially expand the coverage of existing observing systems. However, scaling these efforts globally requires addressing challenges related to diverse fisheries and fishing practices, heterogeneous data management and quality control, and sustained engagement with fishing communities. The Fishing Vessel Ocean Observing Network (FVON) was established to coordinate these efforts by maximizing the value of fishing vessel observations, developing best practices, and promoting the integration of observations into operational forecasting systems. Through partnerships among fishers, scientists, governments, and industry, FVON seeks to democratize ocean observations, improve ocean forecasts, support sustainable fisheries, and advance a data-driven blue economy. We will introduce FVON and highlight collaborative observing initiatives from around the world that demonstrate the value of integrating ocean observations with fishing operations, enabled by advances in sensor technology, and discuss recent progress, remaining challenges, and opportunities for expanding these efforts to help fill critical ocean data gaps and strengthen ocean forecasting.

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