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High-frequency continuous observations from Ferrybox for determining ocean variability

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Within the recent years a rapid improvement of ocean observing systems has taken place, in which observations from existing commercial ships such as ferries and cargo ships have raised increased interest. Instrument packages onboard of these vessels are nowadays also referred to as Ferryboxes. The most advanced ferryboxes integrate both measurements of physical, chemical and biological parameters of the marine environment, and observations of optical properties of ocean and atmosphere. A network of Ferryboxes has been established and maintained within the North Sea/Skagerrak, the Norwegian Sea, and towards the boundary of the Barents Sea. The network provides continuous, high-frequency observations along repeated transects, which form a unique and highly valuable dataset for apprehending short-term to longer-term variability of ocean temperature and salinity. An overview of the collected dataset will be presented with emphasis on the intra- and interannual variability along the Norwegian Coast and within the Skagerrak area. In addition, a combined approach of Ferrybox and remote sensing data for improving process understanding will be addressed. Furthermore, the potential of the Ferrybox data for model validation and assimilation will be highlighted