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S,T-climatologies of the North Sea using the Variational Inverse Method

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SeaDataNet(1) is a pan–European network connecting the existing professional marine data centres of 35 countries. It is currently setting up a data management infrastructure consisting of a standardized distributed system. Development and adoption of standards for communication and Quality Assurance issues, will offer the users access to consistent datasets and products through the unique portal of a virtual data centre.

In order to demonstrate the proof of concept the consortium has started to elaborate integrated products, using common procedures and methods, as if data were already available through that unique portal. Among these, the computation of climatologies for the various European regional seas, the Atlantic and the global ocean.

The poster shows the progresses made so far in establishing salinity and temperature climatologies for the North Sea. Therefore, CTD data from various sources are analyzed using the Variational Inverse Method (Brasseur et al., Deep-Sea Research I,
textbf43:159-192, 1996) over the period 1975-2005.

The analysis provide better resolution of basin-scale processes absent in global climatologies. Moreover, physical constraints such as advection and boundaries are directly considered during the interpolation process, making the resulting fields more relevant.

This standardization effort will greatly improve the overall quality of the final product and, hence, its usefulness for the users (like modellers). The methodology will be later applied to parameters like nutrients concentration.

(1) www.seadatanet.org