



## **Toward an improved representation of ocean/atmosphere interactions in high-resolution global ocean forecasting systems**

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Within the ALBATROS project, an objective is to derive a simplified model of the marine atmospheric boundary layer which would have the ability to represent key processes associated to air/sea interactions at the characteristic scales of the oceanic mesoscale. This model called SIMBAD (SIMplified Boundary Atmospheric layer moDel) is of intermediate complexity between a bulk parameterization and a full three-dimensional atmospheric model. A one-dimensional version of SIMBAD forced by large-scale atmospheric real-time data from ECMWF operational models has been integrated to the NEMO surface module and appropriate preprocessing tools have been developed.

In this talk we first introduce the formulation of SIMBAD1d model and the results obtained for some atmosphere-only analytical testcases available in the literature. Then we describe the implementation of the NEMO-SIMBAD1d coupling infrastructure. This coupled system has been tested on a toy model at  $1/12^\circ$  resolution covering a small area of the north-east atlantic ocean. We conclude by giving the various possibilities to relax the assumption of horizontal homogeneity behind SIMBAD1d in order to further improve the realism of the coupling.