

The regional coupled system WRF-NEMO (OCATA) over the Tropical Atlantic : impact of the regional coupled processes on the surface heat and water budget

Remi Meynadier (1,2), Gaëlle De Coëtlogon (1), Julien Jouanno (3), and Alban Lazar (2)

(1) Université Pierre et Marie Curie, LATMOS, CNRS, Paris, France (remi.meynadier@latmos.ipsl.fr), (2) Université Pierre et Marie Curie, LOCEAN, CNRS, Paris, France, (3) LEGOS, Toulouse, Paris

As a lot of studies emphasized the long-term (interannual / decadal) relationship between the SST in the Eastern Tropical Atlantic (ETA) and the West African Monsoon (WAM), the connexion between both latter misrepresentations in numerical models appears more and more related. Furthermore, the rapidity of the bias apparition (within a few weeks) undermines the importance of ocean-atmosphere couplings in the ETA at intraseasonal timescales. Up to recently, very few studies investigated the involved processes, i.e. from a few hours to a few days / weeks, due to the lack of relevant data. In the framework of PREFACE, we build here the OCATA (Ocean-Continent-Atmosphere multi-couplings in the Tropical Atlantic) platform over the ETA area. It includes the regional air-sea coupled system WRF-OASIS-NEMO. The horizontal resolution for both models is around 25km. The Sea Surface Temperature (SST) and fluxes exchanges between the two models are managed via the OASIS-MCT coupler. First results are shown, and a preliminary comparison between forced and coupled runs is done, in order to evaluate the role of regional coupled processes on the surface energy and water budget.