



Numerical simulations coupling atmospheric and ocean mesoscale models over the Canary Archipelago

D. Grisolía-Santos and L. Cana

Universidad de Las Palmas de GC, Physics Department, Las Palmas de Gran Canaria, Spain (lcan@dfis.ulpgc.es, +34 92845 2922)

Previous works in the University of Las Palmas de GC have shown the relevance of the wind to simulate the Atlantic Ocean eddies shed by the Canary Archipelago. These simulations were carried out through a previous evaluation of the surface wind field using the MM5 mesoscale model and then passing the simulated wind field to ROMS as the wind field input instead of the data obtained from the global atlas of surface marine data. In our new simulation, both WRF and ROMS were coupled using the Model Coupling Toolkit (MCT) developed at Argonne National Laboratory. The coupler design itself is parallel, avoiding bottlenecks by allowing for parallel exchange of fields between models on different grids, and time averaging over the coupling period. The initial coupling passes wind-stress from WRF to ROMS and sea surface temperature from ROMS to WRF. This alternative method benefits of the real-time coupling between both models ROMS and WRF. The poster shows the preliminary results.