



Sensitivity of an atmospheric model to a change in sea surface temperature in the case of marine stratocumulus

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The diurnal cycle of marine stratocumulus has been simulated with the single column version of AROME (Application of Research to Operations at Mesoscale), the mesoscale model currently tested at Meteo France. It was initialized and compared with observations performed during the First International satellite cloud climatology project Regional Experiment (FIRE). We then studied the model's sensitivity to a change of sea surface temperature (SST) in order to understand its effect on the evolution of the cloud for example. We examined different aspects, especially the influence of an important decrease of SST, of the manner it has been applied, or of the moment it was done.