The SKIRON/dust recent development and operations

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Some surface characteristics are considered as crucial in limited area modeling. This is especially true for the "moving surfaces". Moving surfaces are considered the sea surface, desert areas and areas covered by fresh snow. In this presentation, we concentrate on two issues: one is the role of SST spatiotemporal variability and its impact on rain distribution patterns and the other is the role of dust and sea salt particle production and their role on cloud, precipitation and radiation.

We will discuss new model development and results from model simulations concerning the utilization of various sets of SST on precipitation patterns in the Mediterranean and Europe. Model simulations have been performed with high resolution SST for the Mediterranean Region and the results have been compared with runs where the 0.5x0.5 degree SST was used. The results showed considerable differences that are difficult to be evaluated. Regional climatic simulations have been performed in order to identify potential impacts of the Pacific SST climatic perturbations on the European precipitation patterns. As it was found, the resolution is a critical issue to identify such impacts.