

## Sea-Spray Calculations Using the MESO-NH Model

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**Abstract :** A number of questions arise concerning the long-term impact of the contribution of marine aerosol fluxes generated at the air-sea interface on the occurrence of intense events (storms, floods, etc.) in the coastal environment. To this end, knowledge is needed on sea-spray emission rates and the atmospheric dynamics of the corresponding particles. Our aim is to implement the mesoscale model MESO-NH on the study area using an accurate sea-spray source function to estimate heat fluxes and impact on the precipitations. Based on an original and complete sea-spray source function, which covers a large size spectrum since taking into consideration the sea-spray produced by both bubble bursting and surface tearing process, we propose a comparison between model simulations and experimental data obtained during an oceanic scientific cruise on board the navy ship Atalante. The results show the relevance of the sea-spray flux calculations as well as their impact on the heat fluxes and AOD.

**Keywords :** atmospheric models, sea-spray source, sea-spray dynamics, aerosols

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