



## **Cloud condensation nuclei properties of marine aerosol in the Mediterranean: a mesocosm study**

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In the atmospheric sciences, marine clouds still retain a level of uncertainty regarding the effects that aerosols and organic species can have on formation processes and cloud properties. To better understand these issues, the cloud condensation nuclei, CCN, characteristics of marine aerosol must be evaluated. We performed isolated mesocosm experiments in the Mediterranean Sea at two locations and in different months (STARESO, Summer 2012 and Villefranche-sur-Mer, Spring 2013) to measure and compare the CCN ability of marine aerosol both in a bloom period and without a bloom. We found that the organic fraction of the marine aerosol was strongly correlated to the artificially added chlorophyll-a concentrations within the mesocosms. We also found that the presence of an organic microlayer did not affect the CCN ability, showing no kinetic limit to water uptake from any of the surface-active organic species present. Aerosol size distributions, number concentrations, information on the hygroscopicity parameter, kappa, and other factors will also be presented.