

ABSTRACT SYMPOSIUM NAME: Chemistry in the Marine Boundary Layer - Oral

ABSTRACT SYMPOSIUM PROGRAM AREA NAME: [ENVR] Division of Environmental Chemistry

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PRESENTATION TYPE: Oral Only : Do not consider for Sci-Mix

TITLE: Ocean-Atmosphere Interaction and Marine Multiphase Chemistry

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ABSTRACT BODY:

Abstract: First, a report is given on concerted measurements on the composition of the sea surface microlayer (SML) which was studied by several ship-based campaigns. As the SML is the interface for all gaseous, liquid and particulate mass transfer between the ocean and the atmosphere, it plays a key role in the export of organic material from the ocean to the atmosphere. Results here focus on the chemical composition of the SML in terms of organic matter (e.g. dissolved organic carbon) and atmospheric relevant organic compounds such as carbonyls, amines or sugars. These compounds are often found to be enriched in the SML. Second, recent results from the Cap Verde Atmospheric Observatory are given which refer to dust aerosol characterisation as well as marine aerosol measurements. Emphasis is on time series measurements, dust and metal analysis and a consideration of long range transport to Barbados. In the third part the development of the CAPRAM Halogen Module 2 (CAPRAM HM 2) is described, its results discussed and an outlook on the further development is given. Finally, a summary will be given identifying ways to better interlink atmospheric multiphase chemistry with real world ocean-atmosphere exchange and aerosol measurements as observed in field experiments.

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