



AIR-SEA EXCHANGE OF VOLATILE ORGANIC COMPOUNDS (VOCS) OVER THE ARABIAN SEA

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Biogenic volatile organic compounds (BVOCs) play an important role in atmospheric chemistry as precursors of ozone and secondary organic aerosols. Ocean microbes and dissolved organic carbons are important sources of several non-methane hydrocarbons (NMHCs) in the remote marine atmosphere. The northern Indian Ocean, mainly the Arabian Sea, could be a strong source of reactive BVOCs due to relatively high ocean biological productivity. We have studied the concentrations of light alkenes measured in the marine air with the physical and biological parameters of surface seawater during the inter-monsoon period. The seawater and atmospheric parameters were used to explain the spatio-temporal variations of light NMHCs in the marine air over the highly productive northeast region of the Arabian Sea. The estimated emission fluxes of ethene and isoprene were higher than those reported for several other oceanic regions. Our observations highlight the need to evaluate the impact of biogeochemical processes controlling the oceanic emissions of NMHCs over the northern Indian Ocean. I will present the importance of biogeochemical processes and details of our study over the Arabian Sea.