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WHEN Wednesday, Sept. 26, 2018

WHERE Widtsoe Hall 330

TIME 4:00p.m. –5:00p.m

Hosted By: Dr. Kimberly Hageman

Microbes that burp and slurp: biogenic production and consumption of volatile organic compounds (VOCs) by marine plankton

Marine-derived volatile organic compounds (VOCs) impact atmospheric chemistry and our climate through the formation of radicals, secondary organic aerosols, and cloud condensation nuclei. Yet, biogenic VOC production (source) and consumption (sink) rates are not well-constrained and are often overlooked in chemical transport models. This talk will focus on research carried out as part of the interdisciplinary North Atlantic Aerosol and Marine Ecosystem Study (NAAMES). I will present new approaches that couple innovative real-time mass spectrometry techniques with incubation chambers to measure the diversity of VOCs and their net biogenic production rates in natural seawater plankton communities during four field campaigns to the North Atlantic Ocean. This talk will discuss spatial and temporal trends in the biogenic production of seven target VOCs during different seasonal stages of the massive annual phytoplankton bloom and will provide insights into life aboard a floating laboratory.