



## THE INFLUENCE OF THE SEA SURFACE MICROLAYER ON OCEANIC IODINE EMISSIONS

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The reaction of ozone with iodide at the ocean's surface is one of the main drivers for iodine emissions into the marine troposphere. Recent studies<sup>1-3</sup> in the Indian Ocean showed differences between observed and modelled iodine oxide in the marine boundary layer, pointing out an incomplete understanding of iodine emissions. Here, we present results of laboratory and modelling studies on iodine emissions ( $I_2$ ) from the  $O_3 + I^-$  reaction at the sea surface and the influence of organic compounds using artificial seawater, natural subsurface seawater and, for the first time, surface microlayer samples (SML). Compared to  $I_2$  emissions over buffered KI solutions, emissions over artificial seawater were reduced, but the strongest reductions were observed over natural seawater samples. Our results highlight the importance of using environmentally representative concentrations in studies of the  $O_3 + I^-$  reaction and demonstrate the influence the SML exerts on emissions of iodine, and potentially other volatile species.

### References:

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