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DMS oxidation products from the spring and summer 2003 over the North Atlantic

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Dimethylsulphide (DMS) released from the ocean surface as a function of wind speed, photo-oxidation, and phytoplankton productivity has the potential to increase CCN in the atmosphere and affect the global radiation budget. Shipboard measurements of sulphur dioxide, aerosol sulphate and methanesulphonic acid (MSA) from DMS oxidation were measured over the North Atlantic during two cruises in the spring and summer of 2003 as part of Canadian Surface Ocean Lower Atmosphere Study (C-SOLAS). Oxidation products from DMS, including the results from aerosol and sulphur dioxide sampling were compared to atmospheric DMS mixing ratios from the same cruise. Natural sulphur stable isotope abundance ratios were used to apportion the contribution of DMS to sulphur dioxide. These results are discussed with respect to the branching ratio for biogenic salt sulphate/MSA.