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DOAS measurements of halogens in the framework of the MAP (Marine Aerosol Production) project

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Recent field and laboratory studies are indicating a great relevance of reactive iodine in new particle formation processes. Since particles in the marine atmosphere affect the microphysical properties of clouds, they have a potential impact on climate. Objective of MAP was to quantify the key processes associated with primary (PMA) and secondary marine aerosol (SMA) production from natural sources.

To get seasonal information of the correlation between biological activity and the iodine oxides as precursor of SMA two Mini-MAX-DOAS instruments were established at Mace Head research station. In order to validate the results of the Mini-MAX-DOAS and also due to the better detection limit and the possibility to also measure at nighttime during an intensive campaign in june additional longpath DOAS measurements have been performed. Simultaneous there were Mini-MAX-DOAS measurements on board the Celtic Explorer research vessel cruising the Northern Atlantic in front of the Irish west coast.

Results from Mace Head as well as the Celtic Explorer will be presented.