



Airborne DOAS measurements of iodine monoxide off the North Coast of Norway

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We report on airborne Differential Optical Absorption Spectroscopy (DOAS) measurements of iodine monoxide (IO) performed off the North coast of Norway in April 2008. The DOAS instrument was installed on the Safire ATR-42 aircraft during the POLARCAT-France spring campaign and recorded scattered light spectra in near-limb geometry using a scanning telescope. Weak IO absorption signatures were detected on several flights, mostly when the plane was in the boundary layer.

We present the data analysis performed on the spectra to ensure the geophysical origin of the signal and to quantify a corresponding IO loading. Assuming a homogeneous layer in the boundary layer, the detected volume mixing ratio is 1 ± 0.3 pptv. This value is close to the few ground-based IO measurements in Arctic that have been published so far.