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Latitudinal variation of atmospheric NO_2, O_3 and BrO between October 2003 and May 2004

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Abstract. Continuous measurements of atmospheric trace gases NO_2, O_3, $O_4$and BrO were carried out between October 2003 and May 2004 using UV-spectroscopy. The measurements were carried out by ship born Multi-Axis Differential Optical Absorption spectroscopy (Max-DOAS) instrument on board of the German Research Vessel "Polarstern" during its 21^{st} Antarctic cruise ANTXXI from Bremerhaven (Germany) to the German Polar Research Station "Neumeyer" in Antarctic and back to Bremerhaven covering a large latitudinal range (54^oN to 70^o S).

The retrieved latitudinal variation of stratospheric vertical columns of the mentioned trace gases is reported here in comparison to those retrieved during the same time period from SCHIAMACHY (SCanning **I**maging **A**bsorption Spectro**M**eter for **A**tmospheric **CH**artograph**Y**) on board of ESA satellite ENVISAT.

The instrumental set-up, the column retrieval and the final results are discussed in this work.