

## ***Interactive comment on “Observation of unusual chlorine activation by ground-based infrared and microwave spectroscopy in the late Arctic winter 2000/01” by T. Blumenstock et al.***

**T. Blumenstock et al.**

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Response to comments by Referee #2

We thank Referee #2 for the review and very helpful comments.

Following your suggestion we calculated a mean column amount and a standard deviation of the data from March 16 and 17:

MWR results: mean column of  $2.61E15$  with a standard deviation of  $0.15E15$

FTIR results: mean column of  $1.10E15$  with a standard deviation of  $0.37E15$

Model results: mean column of  $3.92E14$  with a standard deviation of  $0.06E14$

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(MWR means Millimeter Wave Radiometry and FTIR Fourier Transform InfraRed.)

On March 16 and 17 ClO column amounts obtained from MWR are about a factor of 7 increased as compared to model data. During this period MWR results are about a factor of 10 larger as compared to periods with no chlorine activation (Fig. 4 of the manuscript).

We hope we understood and addressed your suggestion properly.

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Interactive comment on Atmos. Chem. Phys. Discuss., 5, 9993, 2005.

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