

Interactive comment on “Atmospheric methanol measurement using selective catalytic methanol to formaldehyde conversion” by S. J. Solomon et al.

Anonymous Referee #1

Received and published: 14 July 2005

This is a very well written and researched paper. A novel instrument is described for detecting methanol and formaldehyde in a portable, relatively simple instrument. The authors have successfully identified the parameters required for the operation of the catalyst for converting methanol to formaldehyde. I believe that the instrument could be used rather broadly in atmospheric monitoring and photochemical studies. I have only a couple comments.

p. 3536 line 1: Some CIMS instruments, such as the Ionicon PTRMS are certainly expensive but are as field transportable as some of the other instruments listed.

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper

p. 3542 line 16: It is noted that at flow rates lower than 1.6 L min^{-1} , the optimum conversion efficiency decreased slightly. The authors note a partial explanation in the following sentence (lines 17-20). The authors of this paper (Solomon et al.) may want to cite a reference (T. H. Kim et al., *Catalysis Letters*, 2004, vol. 98, pp.161-165) in which Kim et al. address the specific issue of longer residence times decreasing the formaldehyde yield. These authors attribute this observation to the subsequent oxidation of formaldehyde to carbon monoxide.

Interactive comment on *Atmos. Chem. Phys. Discuss.*, 5, 3533, 2005.

[Full Screen / Esc](#)[Print Version](#)[Interactive Discussion](#)[Discussion Paper](#)