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ACPD

7, S8966–S8967, 2008

Interactive Comment

## *Interactive comment on* "Method for evaluating trends in greenhouse gases from ground-based remote FTIR measurements over Europe" by T. Gardiner et al.

## T. Gardiner et al.

Received and published: 31 January 2008

The general points raised by the reviewer are the lack of detail in the scientific interpretation of the results, and the relative simplicity of the intra-annual function used in the analysis. Both points are well made, however, it is beyond the scope of this paper to address them in detail. The intention of this work was to present a generic statistical analysis tool that could be used for deriving trends from this type of atmospheric data, and the results of the application of this tool to derive the linear trends in the UFTIR data using a compact and consistent set of parameters across all species and sites. If a more complex model of the atmospheric behaviour is required, be it by introducing other cycles into the periodic function or a non-linear trend behaviour, then such features can easily be introduced into the analysis procedure. Also, as noted in the



final sentence of the paper, there are a series of companion papers planned covering scientific interpretation of the results and these will be able to address these issues in much more detail. The first of these, covering the ozone measurements, has already been submitted by Vigouroux et al.

The question of the title of the paper has been considered, and the following revised title is proposed as it captures both the method development and trend result aspects of the paper - Trend analysis of greenhouse gases over Europe measured by a network of ground-based FTIR instruments.

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 15781, 2007.

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