

We would like to thank the reviewer for the useful comments. In the following response we will address each comment specifically (in bold).

Anonymous Referee #2

General comment. The paper provides new observations of phosgene in the stratosphere and in the UTLS, using the MIPAS instruments. Improved spectroscopy and multi-target-retrieval techniques are used to determine the very low concentration of this minor atmospheric constituent. The paper demonstrates that, despite the weak signal observed in the emission spectra of MIPAS, the large number of acquired spectra makes possible the retrieval of good quality profiles and that the continuous (in time and space) coverage of MIPAS observations provides new information on the geographical and seasonal variation of this constituent. A scientifically sound approach is used for the retrieval and a careful comparison is made with existing measurements. The paper is clearly written and is suitable for publication in Atmospheric Measurement Techniques.

Specific comment to Fig. 5. It should be underlined that the a-priori, which is based on the existing climatology, does not properly reproduce the observed geographical variability.

In the revised paper we modified the label of Fig. 5 to underline the features of the a-priori profile mentioned by the reviewer.

Technical correction. Pag 1, line 11 : “Volume mixing ratios” => “Volume mixing ratio”

Done.