**Interactive comment on “Severe ozone air pollution in the Persian Gulf region” by J. Lelieveld et al.**

**J. Lelieveld et al.**

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We are grateful to referee #1 for the constructive comments that we generally agree with and will take into account in the revised manuscript.

As requested, in the revised manuscript we will provide additional diagnostics of the ozone budget over the region as well as additional information about the local source apportionment.

The stratospheric influence on regional ozone levels is a recurrent feature in our model (analyzing the period 1998-2006), supported by meteorological analyses based on ECMWF data, which we will discuss in more detail in the revised manuscript.

Figure 4 refers to near-surface mixing ratios of trace gases, i.e. those computed for the lowest model layer, which has a mean thickness of about 60 m (terrain-following
coordinates).

We agree that it is of key importance to compare the model results with satellite data by applying coherent averaging kernels. In fact this has been done carefully, and in the revised version we will report more details about the applied procedure.

We will double-check the final version of the manuscript for typographical and reference errors.

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