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# ***Interactive comment on “Technical note: Functional sliced inverse regression to infer temperature, water vapour and ozone from IASI data” by U. Amato et al.***

**Anonymous Referee #2**

Received and published: 30 April 2009

## General comments:

This paper proposes a retrieval algorithm that uses a statistical strategy based on dimension reduction. The methodology and details of the implementation of the new algorithm are presented and discussed in details. The paper is of good quality and the presentation well structured and clear. I am a statistician and I am not familiar with the data processed in this paper, and I appreciate very much the precise description of the data, the methodology as well the algorithm and the results obtained on various kinds of data. Nevertheless, I have only one general comment and suggestion : the proposed methodology is fully detailed and described very well, but the competitors

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currently used in similar contexts could be of interest and some comparisons can be carried out especially for the Chevalier dataset.

Specific comments:

I have only one specific comment. The sentence on page 7593, line 19 "This curse means that high-dimensional spaces have too few data for local averaging" can be explained more precisely by giving some insights on some parametric situations for which it does not occur.

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Interactive comment on *Atmos. Chem. Phys. Discuss.*, 9, 7589, 2009.

**ACPD**

9, S1836–S1837, 2009

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