

Interactive comment on “A transboundary transport episode of nitrogen dioxide as observed from GOME and its impact in the Alpine region” by D. Schaub et al.

D. Schaub et al.

Received and published: 10 December 2004

I would like to thank the anonymous referee #2 for his helpful comments which improved clarity of the described method and the embedding of the paper in a larger context.

Below are the responses to the specific comments.

- 1) The referee suggests to elaborate the larger context of the paper. We improved the introduction and the summary/outlook chapters to eliminate this flaw, see below.
- 2) The referee asks for an outlook on future plans with the method or their applicability

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper

for other cases. We follow this suggestion by clarifying in the introduction the limitations of our method. We give an outlook in the summary chapter about applicability in other cases (concerning clouds) and the future potential (including more cloud information).

3) The referee asks for a context how relevant the observed transport mechanism is for the general pollution situation in the Alps. We agree this is an interesting and yet not resolved scientific issue, the answer depends also on the characteristics of the station (as location, pollution situation and height). We know from classification according to our operational trajectories that high-alpine sites (Jungfrauoch) are influenced by synoptical lifting and frontal transport episodes on about 1/3 of the days causing on average a NO_x concentration increase in order of 100%. We elaborated the introduction on this issue.

4) Specific comments: The referee suggests to point out already in the introduction that a single event is investigated (and to give the date) and to point out cloudiness as important part of the method. We followed the suggestion.

5) The referee recommends the inclusion of GOME data from the days before/after the described episode. We have included into Fig. 3 the GOME data from the day before (16 February 2001) which nicely show the highly polluted source region. The GOME data of the following day do not cover our region of interest.

Interactive comment on Atmos. Chem. Phys. Discuss., 4, 5103, 2004.

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