

Interactive comment on “Dynamics and chemistry of vortex remnants in late Arctic spring 1997 and 2000: Simulations with the Chemical Lagrangian Model of the Stratosphere (CLaMS)” by P. Konopka et al.

P. Konopka et al.

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Reply

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Reply on the reviewer comments on the paper
"Dynamics and chemistry of vortex remnants in late
Arctic spring 1997 and 2000: Simulations with the
Chemical Lagrangian Model of the Stratosphere
(CLaMS)"

P. Konopka

4 June 2003

We thank the referee for a thoughtful review of our manuscript.

1. Specific answers to the comments of referee # 1

On Minor Specific Comments:

1. Two sentences quantifying the the halogen-induced ozone deficit at 450 K poleward of 30⁰ N and the contribution of vertex remnants to this effect are added to the abstract. In particular, we conclude that the additional ozone loss occurs in well-isolated (i.e. weak mixed) vortex remnants.

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2. The figure describing the diabatic descent in the vortex was removed from the paper. There are some sentences in the text describing the results of the 3d-trajectory calculations.

On Specific Comments:

All technical corrections recommended by the reviewer are now included into the text.

Here one comment on the use of circles to plot the HALOE observations (fig 1, 7, 8): The circles denote the tangent point of the HALOE observations and not the cylindrical sampling volumes with horizontal and vertical scales of the order 500 km and 4 km (2 km for ozone). It is a little bit tricky to determine such volumes and we plan to include this kind of analysis in our future papers.

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