

Review of the revised egosphere manuscript 2026-3261

Ozone Downward Flux Revealed by High-Resolution Differential Absorption Lidar over Tibet during Stratosphere-Troposphere Exchange

by Ruichun Dong, Xin Fang, Chengyun Yang and Tao Li

September 1, 2026

General Remarks

First of all I appreciate the considerable and thoughtful revision efforts of the authors. In this version the manuscript is ready for publication. I add here just few comments, the line numbering being that of the manuscript in the “track changes” version.

Specific Comments

Line 43: “Ozone is a particularly effective tracer for investigating stratosphere-to-troposphere transport” is not fully true. There are numerous stratospheric intrusions resulting just in small ozone peaks. It has become obvious (Trickl et al., 2014) that the cross-tropopause transport starts in a thin layer just above the tropopause. The amount of ozone transported downward seems to depend on the width of this layer. Please, rephrase your sentence more cautiously or add “in combination with low humidity”.

Line 343: Please, add a reference on the retrieval method.

Style

Line 31: “On the global scale“

Lines 318, 384: “, therefore, “

Line 398: “, but”

Reference:

Trickl, T., Vogelmann, H., Giehl, H., Scheel, H.-E., Sprenger, M., and Stohl, A.: How stratospheric are deep stratospheric intrusions?, *Atmos. Chem. Phys.*, 14, 9941–9961, <https://doi.org/10.5194/acp-14-9941-2014>, 2014.