

Dear editors,

We are pleased to hear that our paper got accepted without further changes.

Herewith, I upload the final manuscript.

Long-lived contrails and convective cirrus above the tropical tropopause

Except for minor text and figure editing, the paper is unchanged as accepted.

For figures 4, 11, 12, 14, I submit two file versions: pdf and png. Please use the better one.

For Figure 1, I only have the photo (jpg)

For Figure 13, I only have two jpg files (a and b). Can you please put them together?

For all other figures, I submit pdf files. I could also provide eps-files if that is better.

Best regards,

on behalf of all co-authors,

Ulrich Schumann, 24.1.2017