

Interactive comment on “Global contrail radiative forcing and the impact of diurnal variations of air traffic” by N. Stuber and P. Forster

N. Stuber and P. Forster

Received and published: 13 December 2006

Referee #2 does not make any recommendations but questions the use of global mean radiative forcing numbers, especially in light of the many assumptions made in the paper. We feel this criticism is unjustified.

Using global mean RF values has a well established historical precedent - especially in the IPCC reports. Furthermore, nearly all the contrail studies we cite quote global mean values, and make similar assumptions. Additionally, metrics currently used in climate policies use global annual mean values of radiative forcing. To address, let alone to discuss, the implications and shortcomings of such a policy is clearly beyond the scope of our paper.

While numerous studies have reported global, annual mean values of contrail radiative

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

forcing, our study is the first one to translate diurnal variations of air traffic into diurnal variations of contrail cover, thus addressing the transient nature of contrails.

We devote considerable space in the paper to justifying assumptions and to examining uncertainties and caveats of our results.

However, we acknowledge that the choice of optical depth was not adequately discussed or justified and we have added text to address this point (see the response to referee #1).

Interactive comment on Atmos. Chem. Phys. Discuss., 6, 9123, 2006.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper