

## ***Interactive comment on “Properties of individual contrails: A compilation of observations and some comparisons” by Ulrich Schumann et al.***

**Ulrich Schumann et al.**

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We thank the reviewer for his positive comments on the paper and for his helpful suggestions.

We repeat the minor comments and then explain our responses:

1) Page 9, lines 3-4 "threshold temperature is slightly higher for finite overall propulsion efficiency". I understand fully what is being meant here, but don't all engines have finite overall propulsion efficiency? Isn't the point that the change in threshold temperature is dependent on the \*change\* in overall propulsion efficiency? I find this sentence confusing as written, even though I believe I understand the point intended.

Response: The text is changed to: The data showed that the SAC threshold tempera-

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ture is slightly higher when accounting for the overall propulsion efficiency.

2) Page 10, line 9. "an undefined aircraft" ... isn't the issue that the aircraft wasn't identified? If it had been identified, then its type and characteristics would have been known (and maybe even defined, I don't know).

Response: The text is changed to: For cases A1 and U of Schröder et al. (2000) (60 and 1200 s aged contrails behind an Airbus A319 and an aircraft of unknown type),...

3) Page 16 lines 10 - 12. "The BAe146 is propelled by four turbofan engines. ... comparable jet aircraft." Most current commercial airliners use turbofan engines as well. I don't understand the point here. Is the comparison a) of the BAe146 to those few airplanes (old Learjets, some military trainers, etc.) that use pure (no bypass) jet engines? Or is the comparison b) of older technology engines on the BAe146, which might have higher PM emissions, to more modern turbofans on today's commercial fleet? The current wording suggests that the first a) comparison is to be made, but that doesn't seem very broadly interesting. The latter b) is more interesting but the wording is incorrect for this comparison.

Response: The text is changed to:

The BAe146 is propelled by four turbofan engines. It would be interesting to know whether turbofan engines emit the same number of soot particles as comparable jet engines.

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