The authors have answered all my comments to the previous version of the paper in a sufficient way. I only have a few technical comments to the revised version of the paper.

- 1. There are still several sentences (esp. in the newly added text) where e.g. 'the' is missing. I assume this will be handled during language editing.
- 2. l. 51:

'Note that SPARC data uses earlier (v3.6) version of the ACE-FTS data' \rightarrow 'Note that SPARC data use an earlier version (v3.6) of the ACE-FTS data.'

3. 1. 52:

'data contains' \rightarrow 'data contain'

4. l. 215: 'We have added discussion in a revised manuscript'

This sentence should be deleted, or do you refer to another manuscript?

5. 1316/317: 'Though exact causes of unusually low CH4 values in S-MIPAS-CH4 and S-ACE-CH4 data files are unclear, but might be associated with the downwards transport of CH4 poor air...'

Unclear sentence, probably 'Though' should be deleted.