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Atmospheric Measurement Techniques Discussions

Interactive comment on "Simultaneous detection of atmospheric HONO and NO_2 utilizing an IBBCEAS system based on an iterative algorithm" *by* Ke Tang et al.

Anonymous Referee #2

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This work proposed an improved iterative retrieval algorithm for IBBCEAS HONO and NO2 measurement and applied to real ambient situations. It can be published after sorting out following concerns and corrections.

1. As author cited a lot previous works, such as Horbanski et al. (2019); Wu et al., 2010; Leleux et al., 2002, can author be more clarity for the novelty of this work as its quite ambiguous to find out?

2. In L-96: "prevent the instability of light source" Does iterative retrieval algorithm prevent instability of light source which could included both intensity fluctuations and wavelength variations?

3. In L-121: "Whereas in IBBCEAS it is not a constant and has a dependence on the optical density" What quantification of the optical density can effect? Is it true for the most of ambient measurements?

4. In L-135: Please specify the bandpass filter.

5. In L-165: What is the Helium purity?

6. The Eq. 5 and 6 were both simplified, should be explained more clearly.

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