Atmospheric Measurement Techniques Discussions

Atmos. Meas. Tech. Discuss., referee comment RC1
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Comment on amt-2021-48

Anonymous Referee #1

Referee comment on "Are elevated moist layers a blind spot for hyperspectral infrared sounders? A model study" by Marc Prange et al., Atmos. Meas. Tech. Discuss., https://doi.org/10.5194/amt-2021-48-RC1, 2021

1. Since the performance of EML retrieval is heavily replying on the additional information from temperature profile, the temperature averaging kernel results should also be shown. Moreover, if temperature retrieval is not performed, instead, reanalysis or forecast temperature profiles are used, will the EML retrieval be improved more?
2. On the additional temperature information, does the retrieval need the detailed vertical structure of temperature or a a smoothed "truth" temperature profile is enough?