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Atmospheric Measurement Techniques Discussions

Interactive comment on "Neural Network Radiative Transfer for Imaging Spectroscopy" *by* Brian D. Bue et al.

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Many thanks to both reviewers for the helpful comments and for their time reviewing this work. They each identified several fundamental issues that were not clearly addressed in the original manuscript, and their input has substantially improved the quality of this work. The primary changes we made to address the concerns of both reviewers are summarized below. - We updated section 1 to more clearly state our novel contributions and their relation to prior work. - We added additional content to section 2 that formally describes how we train and validate the channelwise subnetworks to construct the neural RTM. - We added additional content to section 3 that states our modeling assumptions and the specific parameters used to train the channelwise subnetworks. - We provide a commented LibRadTran config file associated with the PRISM flightline

we considered in our case study as a supplement, citing the references therein in detail in the narrative. - We reorganized the paper in a manner that makes interpreting the content in the provided figures and tables easier to understand.

We provide an updated manuscript (nnrt_amt_r1.pdf) and detailed responses to individual referee comments (nnrt_amt_r1_responses.pdf) and also provide the libradtran configuration file used in our model runs (to be added as a supplemental file) in the attached zip file.

Our responses to referee comments are highlighted in red text, and our modifications to the text and figures in the revised manuscript are shown in blue text.

Please also note the supplement to this comment:
https://www.atmos-meas-tech-discuss.net/amt-2018-436/amt-2018-436-AC2-supplement.zip

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