I thank the authors for including PAMTRA in the list of publically available models. However, I must comment on some points concerning the model's description.

Thanks for your interest in our work. We addressed all the comments as specified below.

PAMTRA includes a variety of gas absorption models where the default selection is the one of Rosenkranz (2015, https://doi.org/10.1109/TGRS.2014.2339015) with various corrections after Turner (2009, https://doi.org/10.1109/TGRS.2009.2022262) and not MPM as mentioned.

We rephrased the sentence to the revised manuscript as follows:

"The user can select several operational modes among scattering and absorption models, within a variety of spectroscopic parameters and databases. The Millimeter-wave Propagation Model (MPM93) developed by Liebe et al. (1993) is used to simulate atmospheric absorption , considering later modifications (e.g., Turner et al., 2009; Rosenkranz, 2015). "

line 115: please correct PAMTRAM to PAMTRA

Thank you for spotting this typo. Amended accordingly.

line 116-118: What is meant by "relative moments" in "regarding radar measurements instead, the active forward model yields Doppler spectra and relative moments, e.g. reflectivity, mean Doppler velocity, skewness, and kurtosis."?

We agree that the sentence could be confusing as is. We modified it in the interest of clarity:

"PAMTRA exploits the passive forward model to compute both upward and downward looking polarized brightness temperatures and radiances for the passive part. The active part can simulate the full radar Doppler spectrum and its higher moments (mean Doppler velocity, skewness, kurtosis)."

line 121-122: Although PyRTlib focuses on non-scattering applications, we would appreciate it if the authors mention that PAMTRA implements the self-similar Rayleigh–Gans approximation (Hogan et al., 2018; https://doi.org/10.1002/qj.2968) for both active and passive applications, a unique feature to our knowledge.

Agreed. We added the following text to the revised version.

"Moreover, PAMTRA implements the self-similar Rayleigh–Gans approximation (SSRGA) for both active and passive applications (Hogan et al., 2017)."

Reference added:
Hogan, R. J., Honeyager, R., Tyynelä, J., and Kneifel, S.: Calculating the Millimetre-Wave Scattering Phase Function of Snowflakes Using the Self-Similar Rayleigh–Gans Approximation, Q. J. Roy. Meteor. Soc., 143, 834–844, https://doi.org/10.1002/qj.2968, 2017.